



Transcript of **Day 1**

Tuesday, May 2, 2023

EPA Hearing

www.TP.One
www.alderonreporting.com
www.acutrancr.com
800.FOR.DEPO (800.367.3376)
Scheduling@TP.One

Reference Number: 127744

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

GREENHOUSE GAS EMISSIONS STANDARDS FOR HEAVY-DUTY

VEHICLES - PHASE 3

NOTICE OF PROPOSED RULEMAKING

DAY 1 OF 2

DOCKET NO. :

EPA-HQ-OAR-2022-0985

10:00 a.m.

Tuesday, May 2, 2023

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

PARTICIPANTS

ENVIRONMENTAL PROTECTION AGENCY:

WILLIAM CHARMLEY, Director, Assessment and Standards Division, Office of Transportation and Air Quality

BRIAN NELSON, Director, Heavy-Duty, Onroad and Nonroad Center, Office of Transportation and Air Quality

ALEJANDRA NUNEZ, Deputy Assistant Administrator for Mobile Sources, Office of Air and Radiation

ABT ASSOCIATES:

KAYLA THOMPSON, Virtual Event Production Specialist

1 PARTICIPANTS

2 BLOCK 1 TESTIFIERS (in order of appearance):

3 PAUL BILLINGS, American Lung Association

4 TIFFANY NICHOLS, American Lung Association

5 LAURA KATE BENDER, American Lung Association

6 WILLIAM BARRETT, American Lung Association

7 KATE SHENK, Clean Fuels Alliance America

8 MICHAEL LIVINGSTON, Riverside Church NYC, Retired

9 JED MANDEL, Truck and Engine Manufacturers

10 Association

11 BROOKE PETRY, Moms Clean Air Force Pennsylvania

12 MICHAEL GELLER, MECA

13 ERIK WHITE, National Association of Clean Air

14 Agencies (NACAA)

15 KATHERINE GARCIA, Sierra Club

16 EMILY PICKETT, Moms Clean Air Force

17 TRISHA DELLOIACONO, CALSTART

18 TRACY SABETTA, Moms Clean Air Force

19 MARIBETH DIGGLE, Moms Clean Air Force Washington

20 D.C.

21 WILLIAM S. BECKETT, M.D., M.P.H., Mount Auburn

22 Hospital (Emeritus)

1 PARTICIPANTS

2 BLOCK 1 TESTIFIERS (in order of appearance)

3 [continued]:

4 ANASTASIA GORDON, WE ACT for Environmental Justice

5 SARAH BUCIC, Alliance of Nurses for Healthy

6 Environments

7

8

9 BLOCK 2 TESTIFIERS (in order of appearance):

10 MONTE WIEDERHOLD, Owner Operator Independent

11 Drivers Association; B.L. Reeve Transport

12 DANNY SCHANUTZ, Owner Operator Independent

13 Drivers Association

14 LEWIE PUGH, Owner Operator Independent Drivers

15 Association

16 MELODY REIS, Moms Clean Air Force

17 ELIZABETH BRANDT, Moms Clean Air Force

18 PATRICE TOMCIK, Moms Clean Air Force

19 LUCIA VALENTINE, Moms Clean Air Force West

20 Virginia

21 SHAINA OLIVER, Moms Clean Air Force Colorado

22 LAURIE ANDERSON, Moms Clean Air Force

1 PARTICIPANTS

2 BLOCK 2 TESTIFIERS (in order of appearance)

3 [continued]:

4 ALMETA E. COOPER, Moms Clean Air Force

5 KEVIN F. BROWN, MECA

6 BRITT CARMON, Natural Resources Defense Council

7 ELIZABETH BECHARD, Moms Clean Air Force

8 AZJARGAL TSOG TSAIKHAN, Moms Clean Air Force,

9 EcoMadres, Breathe Mongolia - Clean Air coalition

10 PATRICK KELLY, American Fuel & Petrochemical

11 Manufacturers

12 ALEXANDER PAINE BOESENBERG, MEMA

13 SHYAMALA RAJAN, American Lung Institute

14 CARA COOK, Alliance of Nurses for healthy

15 Environments

16 KATHERINE STAINKEN, Electrification Coalition

17

18 BLOCK 3 TESTIFIERS (in order of appearance):

19 CAROLINA CHACON MENDOZA, Alliance for Electric

20 School Buses

21 HAZEL CHANDLER, Moms Clean Air Force

22 BRYAN BURTON, American Lung Association

1 PARTICIPANTS

2 BLOCK 3 TESTIFIERS (in order of appearance)

3 [continued]:

4 JENNA RIEMENSCHNEIDER, Asthma and Allergy

5 Foundation of America

6 DAVID G. HILL, Waterbury Pulmonary Associates

7 URVASHI NAGRANI, Unflappy

8 EAST PETERSON-TRUJILLO, Public Citizen

9 MARGUERITE PENNOYER, Private individual

10 ILEAGH MACIVERS, Interfaith Power & Light

11 JACOB JONES, Private Individual

12 LEIGH KAUFFMAN, NRDC Action Fund

13 BOB YUHNKE, Elders Climate Action

14 WILLIAM MORRIS, GreenFaith

15 SAM WILSON, Union of Concerned Scientists

16 LINDSEY MENDELSON, Sierra Club Maryland

17 COLETON WHITAKER, EVHybridNoire

18 ROB WHEELER, Sustainably Wise

19 HENRY GLYNN, Catholic Climate Covenant

20 ELIZABETH CHUN HYE LEE, United Women in Faith

21

22

1 PARTICIPANTS

2 BLOCK 4 TESTIFIERS (in order of appearance):

3 ANA RIOS, Moms Clean Air Force - EcoMadres

4 ALI SIMPSON, Moms Clean Air Force

5 JULIE KIMMEL, Moms Clean Air Force

6 BRANDON BUCHANAN, American Bus Association

7 SHRUTI VAIDYANATHAN, American Council for an

8 Energy-Efficient Economy (ACEEE)

9 LIZ HURTADO, Moms Clean Air Force

10 IDA SAMI, Moms Clean Air Force

11 JACQUELINE GELB, American Trucking Associations

12 MARK ROSE, National Parks Conservation Association

13 ANDREA MARPILLERO-COLOMINA, GreenLatinos

14 TAYLOR THOMAS, East Yard Communities for

15 Environmental Justice

16 CHELSEA JOANNE LYONS, Moms Clean Air Force

17 KELLY BOBEK, Volvo Group North America

18 JONATHAN MOODY, Holiday Tours, Inc , Motorcoach

19 Transportation Provider

20 MICHELLE UBERUAGA, Moms Clean Air Force, Montana

21 ATHENA MOTAVVEF, Earthjustice

22

1 PARTICIPANTS

2 BLOCK 4 TESTIFIERS (in order of appearance)

3 [continued]:

4 KEVIN MAGGAY, Navistar

5 KELLY BOBEK, Volvo Group North America

6 ANNA MUDD, Sierra Club PA

7

8 BLOCK 5 TESTIFIERS (in order of appearance):

9 STEVEN S. CLIFF, Ph.D., California Air Resources

10 Board

11 SCOTT SLAWSON, UE Local 506

12 JIM MULLEN, Clean Freight coalition

13 JAYLA ATKINSON, CleanAirNow

14 LARRY HOPKINS, UE Local 1177

15 CEDRIC WHELCHER, UE Local 1177

16 TIM GOULD, Private individual

17 MAX KIEFER, Private Individual

18 LINDSAY GARCIA, The Evangelical Environmental

19 Network

20 JULIANNA GARREFFA, NRDC Action Fund

21

22

1 BLOCK 5 TESTIFIERS (in order of appearance)

2 [continued]:

3 CONNOR MIGHELL, Texas Public Policy Foundation

4 CECILIA GARIBAY, Moving Forward Network

5 CASSANDRA CARMICHAEL, National Religious

6 Partnership for the Environment

7 ANDREW BOYLE, Boyle Transportation

8 GARY EWART, American Thoracic Society

9 ANTONIA HERZOG, Health Care Without Harm

10

11

PARTICIPANTS

12

BLOCK 6 TESTIFIERS (in order of appearance):

13

STEPHANIE SEARS, Lynden, Inc.

14

REVEREND RICH KILLMER, PCUSA Pastor (Retired)

15

SUSAN ENTIN, Sierra Club

16

RUTH HUND, Sierra Club

17

KAREN CAMPBELL, Sierra Club

18

RAY MINJARES, International Council on Clean

19

Transportation

20

DAVE COOKE, Union of Concerned Scientists

21

REVEREND MICHAEL MCCLAIN, National Religious

22

Partnership for the Environment

1 PARTICIPANTS

2 BLOCK 6 TESTIFIERS (in order of appearance)

3 [continued]:

4 LAUREL MOORHEAD, Transfer Flow, Inc.

5 ELAINE WEIR, Sierra Club New York

6 GLORIA E. BARRERA, Alliance of Nurses for Healthy
7 Environments

8 CHRISTINE FEELY, Sierra Club

9 ELIZABETH, OSCAR, AND ANDREW HAUPTMAN, Moms Clean
10 Air Force, Michigan

11

12 BLOCK 7 TESTIFIERS (in order of appearance):

13 ALONDRA MORALES SANCHEZ, Moms Clean Air Force and
14 Poder Latinx

15 CARISSA SIPP, Moms Clean Air Force

16 CAROLINA PENA-ALARCON, Moms Clean Air Force

17 JOEL CHARLES, Healthy Climate Wisconsin

18 BRIAN RUSSO, Sierra Club New Jersey

19 ERANDI M. TREVINO, Moms Clean Air Force

20 KATHY TAYLOR, Washington state Dept of Ecology

21 MOLLY GREENBERG, Moving Forward Network

22 MARGARITA PARRA, Clean Energy Works

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

PARTICIPANTS

BLOCK 7 TESTIFIERS (in order of appearance)

[continued]:

BILL BRADLEE, Interfaith Power & Light

TAKI DARAKOS, Pitt Ohio Express

ATENAS MENA, CleanAirNow

STANISLAV JARACZ, Electric Vehicle Association

DOUG O'MALLEY, Environment New Jersey

1 P R O C E E D I N G S

2 MS. THOMPSON: Good morning, everyone, and welcome
3 to the United States Environmental Protection Agency's
4 Virtual Public Hearing for the Greenhouse Gas Emission
5 Standards for Heavy-Duty Vehicles, Phase 3 Proposed
6 Rule. My name is Kayla Thompson from Abt Associates,
7 contractor to the U.S. EPA.

8 In order to accommodate testimony in both Spanish
9 and English throughout this hearing, all attendees must
10 select their preferred language via the interpretation
11 icon at the bottom of your screen. If you are
12 providing testimony today, please make sure that you
13 are speaking the language of the channel you are
14 listening to. For example, listening to English while
15 speaking in Spanish could prevent other participants
16 from hearing your statement in their preferred language
17 of choice.

18 The public hearing will be recorded for the -- for
19 the court reporter, and while the recording will not be
20 made publicly available, a transcript of the public
21 hearing will be posted to the docket several weeks
22 after the hearing.

1 We are now ready to begin. I'll turn it over to
2 EPA to get us started.

3 MS. NUNEZ: Good morning. On behalf of the U.S.
4 Environmental Protection Agency and the Office of Air
5 and Radiation, I would like to welcome you to today's
6 virtual public hearing. I'm grateful for everyone
7 who's taking the time out of their day to testify and
8 participate here today. I am Alejandra Nunez, the
9 deputy assistant administrator for mobile sources with
10 EPA's Office of Air and Radiation. With me today is
11 Bill Charmley, director of the Assessment and Standards
12 Division within EPA's Office of Transportation and Air
13 Quality. Bill will be the presiding officer for
14 today's hearing. In addition, with me today and
15 listening to the testimony on this proposed rule are
16 several of my EPA colleagues who work on our Heavy-Duty
17 Engines and Vehicles Program. EPA is also being
18 assisted by our contractor, Abt Associates, in the
19 running of today's virtual public hearing.

20 On April 12th, EPA announced an important proposed
21 rule to set new emission standards for heavy-duty
22 vehicles for Model Year 2027 and later. The proposed

1 rule titled, "Greenhouse Gas Emission Standards for
2 Heavy-Duty Vehicles, Phase 3," is the most ambitious
3 federal heavy-duty vehicle emissions standards for
4 greenhouse gases ever established. It is a key piece
5 of the Agency's Clean Trucks Plan, which will reduce
6 greenhouse gases and harmful air pollution from across
7 the on-roads sector.

8 The Clean Trucks Plan, response to the goals set
9 forth in President Biden's executive order,
10 Strengthening American Leadership in Clean Cars and
11 Trucks. Specifically, EPA is proposing new Phase 3
12 standards to the Heavy-Duty Greenhouse Gas Program with
13 more stringent but feasible standards to further reduce
14 greenhouse gas emissions from heavy-duty vehicles
15 starting with Model Year 2027.

16 The Phase 3 Program applies to heavy-duty
17 vocational vehicles, such as delivery trucks, refuse
18 holders, dump trucks, public utility trucks, transit,
19 shuttle, school buses, and semi-trucks. The proposed
20 Phase 3 Greenhouse Gas Program maintains the flexible
21 structure created in EPA's Phase 2 Program, which is
22 effectively designed to reflect the diverse nature of

1 the heavy-duty industry. In developing this proposed
2 action, EPA is applying its Clean Air Act authority to
3 establish emission standards to reduce harmful
4 greenhouse gas emissions.

5 The proposed standards described in this
6 rulemaking are expected to provide significant net
7 benefits for the climate, public health, and consumers.

8 It captures advances in clean vehicle technologies and
9 increasing growth in the market for zero-emission
10 vehicles, as well as investments made by Congress in
11 the Bipartisan Infrastructure Law and the Inflation
12 Reduction Act to unlock meaningful benefits for public
13 health from cleaner air, while providing drivers and
14 vehicle operators with lower operating costs, resulting
15 from significant fuel savings.

16 The proposed standards would have significant
17 benefits to public health, welfare, and environment if
18 finalized. The net benefits from the heavy-duty
19 proposal range from \$180 billion to \$320 billion. The
20 proposed standards would reduce heavy-duty vehicle
21 emissions of CO₂ by approximately 1.8 billion metric
22 tons, from 2027 through 2055, equivalent to eliminating

1 all greenhouse gas emissions from the entire current
2 U.S. transportation sector for an entire year.

3 EPA estimates the climate benefits alone at \$87
4 billion for the heavy-duty proposal. Society would
5 realize up to \$29 billion in health benefits from the
6 proposal from fewer premature deaths and serious health
7 effects, such as hospital admissions due to respiratory
8 and cardiovascular illnesses, as well as reduce
9 America's reliance on approximately 4.3 billion barrels
10 of oil imports. The standards would result in cleaner
11 air nationwide, including for those who are
12 disproportionately impacted by vehicle pollution and
13 the impacts of climate change.

14 The proposed standards align with and support the
15 commitments and billions of dollars' worth of
16 investments from trucking fleets, vehicle
17 manufacturers, and U.S. states, as they plan to
18 increase the use of zero-emission technologies in
19 heavy-duty fleets. As these technologies have been
20 advancing, battery costs have continued to decline.
21 Early step models are in use today for some heavy-duty
22 applications and are expected to expand to many more.

1 These ongoing technological innovations allow for
2 appropriate and feasible reductions in greenhouse gas
3 emission standards considering cost, lead time, and
4 other factors.

5 Finally, as part of this action, we also are
6 proposing to revise our regulations addressing
7 preemption of state regulation of locomotives, in part
8 because the Agency is concerned these preemption
9 regulations adopted in 1998 may no longer be
10 appropriate. The revisions would enable EPA's
11 preemption regulations to more closely track the
12 language in the Clean Air Act.

13 This proposal reflects input from stakeholders,
14 including community groups, the trucking industry,
15 environmental and public health organizations, and
16 State, local, and tribal governments. Today we look
17 forward to hearing additional input through your
18 comments on this proposal. EPA will consider all the
19 comments we hear today from the many people
20 participating in this hearing as we develop the final
21 rule. We also look forward to considering additional
22 written comments that we receive during the public

1 comment period, which is open until June 16, 2023. We
2 intend to finalize this proposal before the end of
3 2023.

4 Thank you all for attending this important public
5 hearing, and thank you to everyone who will provide
6 testimony today and tomorrow. I now will turn it over
7 to Bill Charmley, the presiding officer, for today's
8 hearing. Thank you.

9 MR. CHARMLEY: Thank you, Ale, and good morning,
10 everyone. As Ale said, the purpose of our hearing
11 today is to receive comments from interested parties on
12 the proposed rulemaking titled, "Greenhouse Gas
13 Emission Standards for Heavy-Duty Vehicles, Phase 3,"
14 which was published in the Federal Register on April
15 27th, 2023. This hearing provides interested parties
16 the opportunity for the oral presentation of views and
17 arguments. Witnesses will be allowed to make oral
18 statements which they may later expand in writing for
19 the official record of this hearing.

20 When you are finished with your comments, members
21 of this panel may ask clarifying questions. This
22 hearing is not intended to be a discussion of the

1 proposed rulemaking. While we might ask questions or
2 request additional data or supporting materials, we
3 will not respond to comments in this forum. Instead,
4 we'll be providing a written response to comments as
5 part of the process of finalizing this proposed
6 rulemaking.

7 Finally, I would like to remind everyone that in
8 addition to today's hearing, there's also an
9 opportunity to send EPA written comments. The written
10 comment period closes on June 16th, 2023 at 11:59 p.m.
11 Eastern Time. Details on where to submit written
12 comments can be found in the Federal Register notice
13 announcing the proposal as well as on our website. Now
14 I'd like to go over how we'll be conducting today's
15 hearing.

16 We are conducting this hearing under Section
17 307(d) of the Clean Air Act: "Provide interested
18 parties an opportunity for oral presentation in
19 addition to written submissions on the proposed
20 rulemaking." Your written submission of this hearing
21 will be available electronically on EPA's website and
22 at the Regulations.gov website under the docket for

1 this rulemaking, which is Docket Number EPA-HQ-OAR-
2 2022-0985. The official record of this hearing will be
3 kept open for 30 days after the date of the hearing to
4 provide opportunities -- excuse me -- to submit
5 rebuttal and supplementary testimony. You may submit
6 this additional testimony to the same docket for this
7 action by using one of the methods described in the
8 Federal Register notice announcing the proposal.

9 Today's hearing will be conducted informally, and
10 formal rules of evidence will not apply. I will be
11 serving as the presiding officer for today's hearing,
12 and, as such, I'm authorized to apply reasonable limits
13 on the duration of the statements of any witness. We
14 ask that each person limit their verbal testimony to 3
15 minutes given the large number of testifiers for today,
16 and we'll need to hold speakers to that time limit.
17 Our contractor, Abt Associates, will be facilitating
18 the lineup of the speakers and helping to keep -- us to
19 keep testimony to 3 minutes. We appreciate all of your
20 cooperation allowing us to give everyone an opportunity
21 to speak today.

22 Please note that EPA has distributed a list and a

1 tentative order of those registered to speak today and
2 tomorrow, and we'll be making slight adjustments
3 through the hearing for accommodations. We plan to
4 take a 30-minute lunch break around 12:45 p.m. today
5 and a 15-minute break this afternoon around 3:45. All
6 of those are Eastern Time. Because of the large number
7 of testifiers, we will continue today's session into
8 the evening, and we plan to break briefly around 6:30
9 and then resume at 7:00 p.m. to finish today's hearing.

10 We will then continue the hearing tomorrow starting at
11 10:00 a.m., Eastern.

12 Finally, all EPA representatives speaking today
13 may attempt to ensure the accuracy of -- will attempt
14 to ensure the accuracy of any descriptions that we
15 provide for the proposed rulemaking. The official
16 version of the proposal is that which was published in
17 the Federal Register on April 27th of 2023, and it
18 controls in any case of conflict between it and what
19 you make hear today. Please refer to the official
20 version in developing your written comments on this
21 proposal.

22 Should there be members of the press that have

1 further questions about today's hearing, we ask that
2 you please contact Julia Burch at EPA. Julia's email
3 is Burch.Julia -- that's B-U-R-C-H-dot-J-U-L-I-A --
4 Burch.Julia@EPA.gov. Thank you very much, and with
5 that I am going to turn it back to Kayla Thompson with
6 Abt Associates, and Kayla is going to go over some
7 logistics for today's virtual public hearing. Thank
8 you.

9 MS. THOMPSON: Thank you. Before we begin, we'd
10 like to go over some logistics for today's public
11 hearing.

12 As a reminder, all attendees are muted
13 automatically. If you are speaking today, you will
14 receive a notification on your screen that you are
15 being promoted to the role of panelist shortly prior to
16 your speaking time. You must accept that invitation to
17 be able to unmute when you are called to testify. This
18 will also allow you to turn on your camera, which we
19 encourage you to do. Speakers connected by telephone
20 should unmute their phones when called to testify.

21 If you are having technical difficulties, please
22 send an email to public_hearing@abtassoc.com or call

1 (919) 294-7849. If you are not registered to speak but
2 you would like to, please send an email to
3 public_hearing@abtassoc.com or call (919) 294-7849.

4 We will now begin our public testimony. The
5 expected speaking order is currently displayed on
6 screen. We ask that each person limit their verbal
7 testimony to 3 minutes. We encourage you to provide
8 any portion of your prepared statement that you are
9 unable to deliver along with any additional comments to
10 Docket Number EPA-HQ-OAR-2022-0985 on Regulations.gov.

11 I will be introducing each speaker in turn. A
12 transcript of the testimony from these public hearings
13 will be made available to the public and included in
14 the docket. Please speak slowly and clearly so our
15 court reporter can record these proceedings accurately.

16 The first speaker will be Paul Billings. Please
17 state your name and affiliation for the record.

18 MR. BILLINGS: Good morning. I'm Paul Billings,
19 P-A-U-L, B-I-L-L-I-N-G-S. I'm the national senior vice
20 president of public policy at the American Lung
21 Association. The American Lung Association strongly
22 supports the cleanup of pollution from heavy-duty

1 vehicles. We urge EPA to finalize the rule this year
2 in 2023. Thank you, EPA, for conducting this hearing
3 on World Asthma Day. Millions of people with asthma
4 will benefit from this rule.

5 Climate change poses a disproportionate burden on
6 people of color and low-income communities (AUDIO
7 MALFUNCTION) pollution. Our most recent State of the
8 Air report continues to document this burden showing
9 that people of color are 3.7 times more likely than
10 white people to live in a county with three failing
11 grades for ozone, annual, and daily particle pollution.

12 Climate change is making air quality worse in many
13 communities, and transportation is the largest source
14 of greenhouse gas pollution. The need to address
15 greenhouse gas pollution from trucks is urgent. EPA's
16 analysis shows 72 million people live near truck
17 routes, and this puts their health at risk. They are
18 more likely to be people of color and those with lower
19 incomes. Cleaning up trucks is an urgent environmental
20 justice issue.

21 Last spring, the American Lung Association
22 released "Zeroing in on Healthy Air Report" that shows

1 the enormous public health and climate benefits of a
2 transition to zero-emission vehicles powered by a
3 clean, non-combustion, renewable electricity grid. We
4 found over the next 30 years, 110,000 premature deaths
5 could be avoided. The following report, "Delivering
6 Clean Air", found that the transition to zero-emission
7 heavy trucks is going to clean non-combustion energy by
8 2050, and counties with major truck routes would result
9 in \$735 billion in cumulative health benefits and
10 66,800 avoided deaths. Cleaning up trucks is a
11 lifesaver.

12 Because the enormous toll truck pollution places
13 on the health of the public and the planet, the
14 American Lung Association supports the most stringent
15 heavy-duty vehicle greenhouse gas emission standards.
16 We encourage EPA to at least match California's
17 Advanced Clean Truck Program, which will ensure the
18 greater share of heavy-duty vehicles that are zero
19 emission.

20 Finally, I'd like to briefly note the American
21 Lung Association's support for the proposal to revise
22 EPA's regulations addressing preemption of state

1 regulations of locomotives. State authority to address
2 locomotive pollution is critical to protect public
3 health. Locomotives are a major source of pollution
4 that adversely impacts the health of people living in
5 communities near railroads and railyards. We urge EPA
6 to finalize this provision this year as well.

7 In conclusion, this proposal is a positive step
8 forward. We urge EPA to finalize the strongest
9 possible final rule in 2023. Thank you for conducting
10 this hearing, and thank you for considering our
11 comments.

12 MS. THOMPSON: Thank you for your comment. The
13 next speaker will be Tiffany Nichols. Tiffany, you may
14 now unmute. Please state your name and affiliation for
15 the record.

16 (No response.)

17 MS. THOMPSON: Tiffany, you are muted.

18 MS. NICHOLS: Good morning. I am Tiffany Nichols.
19 I'm with the American Lung Association, and thank you
20 for the opportunity to speak to you all today. I live
21 in Indianapolis, Indiana. It is often referred to as
22 the crossroads of America because it is the hub of

1 several major interstate highways. As such, many
2 heavy-duty vehicles travel through our beautiful city
3 daily as they move interstate commerce and people.

4 The American Lung Association recently released
5 our annual "State of the Air" report where Indianapolis
6 ranked 10th in the nation for annual particle pollution
7 and experiences high ozone days.

8 Frequent heavy-duty vehicle that travels -- excuse
9 me -- can contribute significantly to areas -- to an
10 area's poor air quality. Combustion can lead to
11 particle pollution and ozone pollution and is
12 particularly harmful for communities alongside
13 freeways. The EPA's proposal is designed to reduce
14 greenhouse gases from vehicles, addressing the climate
15 crisis, which is important to protect health, but it
16 will also reduce other pollutants at the same time,
17 like particle pollution.

18 Exposure to particle pollution, even at low
19 levels, can be deadly and put certain populations at
20 risk, such as asthmatics, seniors, and those with lung
21 cancer. Additionally, since many highways and freeways
22 run directly through communities where people of color

1 reside, such as in Indianapolis, those communities are
2 vulnerable to the ill effects of particle pollution
3 from heavy-duty trucks and other vehicles traveling
4 through the city. I grew up within blocks of the I-70
5 corridor and remember numerous family members that
6 suffered from asthma flareups all year long.

7 I want to encourage the EPA to adopt more
8 stringent standards to reduce greenhouse gas emissions
9 from heavy-duty vehicles. Thank you for this
10 opportunity to speak this morning.

11 MS. THOMPSON: Thank you for your comment. The
12 next speaker will be Laura Kate Bender. Laura, you may
13 now unmute, and please state your name and affiliation
14 for the record.

15 MS. BENDER: Good morning. My name is Laura Kate
16 Bender -- L-A-U-R-A, K-A-T-E, B-E-N-D-E-R -- and I'm
17 national assistant vice president for healthy air at
18 the American Lung Association. My colleagues and I are
19 each highlighting different points on the health need
20 to reduce emissions from heavy-duty vehicles here
21 today, so I'll use my time to highlight the support of
22 the health community for a nationwide transition to

1 zero-emission trucks and buses. But I'll start by
2 thanking you for your work on today's rule and for the
3 excellent signup process for this hearing. The quick
4 availability of the signup form, the fact that it had
5 all the information needed in one place, and the fact
6 that speakers didn't have to register well in advance
7 all made it easier for people to sign up to speak
8 today. And the medical and health professionals we
9 work with have challenging schedules, so this process
10 really made things easier.

11 The Lung Association works in coalition with
12 national health organizations representing many of the
13 populations at greater risk from pollution from heavy-
14 duty vehicles, including babies and kids, people with
15 heart disease, people in environmental justice areas,
16 and people with lung disease. For years, including in
17 the most recent EPA rulemakings on trucks, our
18 coalition has highlighted the urgent need to clean up
19 diesel trucks and buses to protect health.

20 The Lung Association applauded EPA's final rules
21 to reduce nitrogen oxides from heavy-duty vehicles last
22 year, and throughout that rulemaking, health voices

1 called for you to not only finalize the strongest
2 possible NOx rules but also to set the next round of
3 standards to truly drive a nationwide transition to
4 clean trucks and buses. Hundreds of health
5 professionals from 35 states signed comments to that
6 effect. Also, national health and medical
7 organizations said in our comments, "The shift to zero-
8 emission trucks will have major clean air and climate
9 benefits and provide much-needed relief to communities
10 most directly affected by trucking pollution today."
11 EPA must move quickly to establish a clear and direct
12 pathway to the full transition for zero-emission trucks
13 in the near term.

14 We deeply appreciate EPA proposing this rule to
15 strengthen greenhouse gas limits on heavy-duty
16 vehicles. We strongly urge EPA -- or excuse me -- we
17 strongly support EPA setting Phase 3 greenhouse gas
18 standards and urge you to make the rule even stronger.

19 We appreciate your consideration of more stringent
20 alternative proposals and urge the Agency to finalize
21 one of these more protective options until -- in 2023.

22 We're calling for these standards to hew as closely as

1 possible to the Advanced Clean Trucks Rule in place in
2 many states and, if possible, go even further.

3 In comments in support of EPA granting
4 California's clean trucks waiver to run its ACT
5 Program, one of my colleagues noted, "We recognize that
6 without strong state and national standards for cutting
7 pollution from the trucking sector, California simply
8 cannot meet health protective clean air standards. We
9 also know that without EPA taking strong actions on
10 trucking emissions in conjunction with the California
11 rules, California will also fail to attain clean air
12 standards."

13 The transition to zero-emission vehicles is
14 happening, and we need EPA to match the work of the
15 states leading the charge. That transition offers a
16 real opportunity for improvements for public health and
17 environmental justice, and people will celebrate it
18 because they get that trucks and buses powered by
19 diesel are making their families sick. Ensuring that
20 no neighborhood has to bear a pollution burden of a
21 nearby highway, port, or distribution center will save
22 lives and help address the public health crisis of

1 climate change. Thank you.

2 MS. THOMPSON: Thank you for your comment. The
3 next speaker will be William Barrett. William, you may
4 now unmute, and please state your name and affiliation
5 for the record.

6 MR. BARRETT: Good morning. My name is Will
7 Barrett. I'm the national senior director for Clean
8 Air Advocacy with the American Lung Association. We
9 appreciate EPA's attention to heavy-duty sources of
10 harmful air pollution, and I'm glad to speak with you
11 today from Sacramento, which, unfortunately, is the
12 nation's seventh smoggiest city, according to our
13 "State of the Air" report.

14 I'm going to focus my attention today on the off-
15 road locomotive preemption proposal, which we greatly
16 appreciate that EPA continues to review past decisions
17 and correct course when necessary to protect public
18 health.

19 We agree that the proposed amendment would track
20 more closely with the Clean Air Act and avoid
21 unintended barriers to state policy development. Just
22 last week, the California Air Resources Board concluded

1 a rulemaking meant to modernize and clean up locomotive
2 emissions through a variety of operational standards.
3 This rule represents the single largest clean air
4 action identified in the state implementation plan to
5 achieve ozone standards by 2037. It's roughly 30
6 percent -- or more than 30 percent of the total SIP
7 commitments identified in the plan.

8 California's rules focus on rail operations in the
9 state due to the significant harms caused by aging
10 fleets of line, haul, passenger and other locomotives.

11 The policies are designed to ensure that polluting
12 locomotives over 23 years old will no longer operate in
13 California, bringing cleaner engines into the fleet.
14 This is crucial given that Tier 4 engines represent
15 less than 5 percent of the locomotives operating in
16 California, while Tier Zero, or earlier engines, make
17 up nearly quarter of in-state locomotives. Clearly, we
18 need more -- cleaner technologies on the rails today in
19 California, CARB-approved enforceable idling limits, a
20 pollution-based system for investment in cleaner
21 technologies, and a phase-in to zero-emission
22 technologies across California rail operations over the

1 coming decades.

2 CARB heard impassioned testimony last week from
3 residents of rail-impacted communities throughout the
4 state demanding action to reduce the suffering caused
5 by locomotives. CARB estimates that the operational
6 emissions from just one train in California is
7 equivalent to the emissions output of 400 heavy-duty
8 trucks.

9 When implemented, the in-use locomotive standards
10 in California will bring major public health and health
11 equity improvements. The rules are projected to result
12 in over 3,000 lives saved, tens of billions of dollars
13 in public health benefits, and, critically, a 90-
14 percent cancer risk reduction in communities nearest
15 railroads -- railyard in California by 2045. These are
16 major public health benefits on the table.

17 So we appreciate EPA's review of the locomotive
18 preemption language to avoid any and unintended
19 impediment to these or other efforts to reduce harm
20 caused by locomotives. We believe this is really a
21 prevent pragmatic approach that will continue to
22 require EPA to consider more health-protective

1 standards through the waiver process but will not
2 prohibit more health-protective standards and concept
3 development by default. So in closing, the American
4 Lung Association really urges EPA to move forward with
5 this change this year but also to work towards more
6 stringent Tier 5 and zero-emission standards for
7 locomotive engines to improve health throughout the
8 nation, and especially in our most rail-impacted
9 communities. This is a major opportunity to clean the
10 air and a major environmental justice need. Thank you
11 very much.

12 MS. THOMPSON: Thank you for your comments. The
13 next speaker will be Kate Shenk. You may now unmute,
14 and please state your name and affiliation for the
15 record.

16 MS. SHENK: Good morning. My name is Kate Shenk,
17 and I'm the director of regulatory affairs for Clean
18 Fuels Alliance America. On behalf of Clean Fuels
19 members, thank you for the opportunity to testify on
20 the immediate benefits of biodiesel and renewable
21 diesel have and will continue to bring as we de-
22 carbonize the heavy-duty sector. Biodiesel and

1 renewable diesel are among the cleanest and lowest
2 carbon fuels available today to help reduce greenhouse
3 gas emissions and are available now to meet President
4 Biden's near- and long-term climate goals, particularly
5 in the hard-to-decarbonize heavy-duty sector.

6 We appreciate EPA's acknowledgement that the
7 internal combustion engine will continue to play an
8 important role in the markets that Clean Fuels member
9 serve. Low-carbon liquid fuels are the lowest cost
10 option towards decarbonization that can be used in
11 every diesel-fueled application and every engine
12 technology. The heavy-duty sector will continue to
13 rely on liquid fuels for decades to come.

14 Clean Fuels has a long history of working with
15 users, fleets, and the OEM community to conduct
16 technically-credible research that validates the
17 performance and positive impacts of biodiesel when used
18 in existing and future diesel engines. To date, the
19 utilization of increasing volumes of ultra-low carbon
20 liquid fuels, like biodiesel and renewable diesel,
21 reduces greenhouse gas emissions by more than 70
22 percent on average, directly and immediately reducing

1 GHG emissions from the vehicles that use our fuels.

2 Our fuels reduce more than just greenhouse gas
3 emissions. Biodiesel and renewable diesel also reduce
4 criteria pollutants from existing diesel engines,
5 reduce health and environmental impacts in major
6 trucking corridors, warehouse distribution centers, and
7 other diesel hotspots close to major population
8 sectors. This means that using these fuels today can
9 lower healthcare costs and costs for all populations
10 living in and near these areas including, minority,
11 low-income, and indigenous populations.

12 Through our continued partnership with Trinity
13 Consultants, Clean Fuels quantified the health benefits
14 and corresponding economic savings from converting
15 petroleum-based diesel to 100-percent biodiesel at 23
16 sites across the country. This research finds that
17 switching to 100-percent biodiesel can provide
18 immediate community health improvements, including more
19 than 436,000 fewer reduced asthma cases per year, more
20 than 137,000 few sick days per year, nearly 9,400 less
21 cancer cases, the prevention of more than 885 premature
22 deaths, over \$7.4 four billion in avoided healthcare

1 costs annually, and a 45-percent reduction in cancer
2 risk.

3 And legacy heavy-duty trucks, such as older semis,
4 use B100. The immediate benefits of B100 usage can
5 bring -- cannot be underscored enough, especially for
6 disadvantaged communities when you consider the longer,
7 full, useful life requirements of existing diesel
8 engines and the decades-old take to pursue across-the-
9 board electrification and other decarbonization
10 strategies. Clean Fuels looks forward to working with
11 EPA to continue to optimize the immediate benefits of
12 biodiesel and renewable diesel to decarbonize the
13 heavy-duty sector today and in the years to come.
14 Thank you.

15 MS. THOMPSON: Thank you for your comments. As a
16 reminder, if you are speaking today, you will receive a
17 notification on your screen that you are being promoted
18 to the role of panelist shortly prior to your speaking
19 time. You must accept that invitation to be able to
20 unmute when you are called to testify. This will also
21 allow you to turn on your camera, which we encourage
22 you to do. Speakers connected by telephone should

1 unmute their phones when called to testify. We ask
2 that each person limit their verbal testimony to 3
3 minutes. Please speak slowly and clearly so our court
4 reporter and interpreters can capture these proceedings
5 accurately. We encourage you to provide any portion of
6 your prepared statement that you are unable to deliver
7 along with any additional comments to Docket Number
8 EPA-HQ-OAR-2022-0985 on Regulations.gov.

9 If you are having technical difficulties, please
10 send an email to public_hearing@abtassoc.com or call
11 (919) 294-7849. If you are not registered to speak but
12 you would like to, please send an email with your name
13 and phone number to public_hearing@abtassoc.com or call
14 (919) 294-7849.

15 The next speaker will be Michael Livingston. You
16 may now unmute, and please state your name and
17 affiliation for the record.

18 MR. LIVINGSTON: Good morning. My name is Michael
19 Livingston. I'm the recently retired interim senior
20 minister at the Riverside Church in New York City. I'm
21 also the former -- a former president of the National
22 Council of Churches, and I'm a supporter of the

1 National Religious Partnerships for the Environment.
2 Thanks very much for this opportunity. This begins for
3 me with the Constitution where we, the people, are
4 fundamentally committed to the general welfare,
5 promoting the general welfare, and that's what this
6 rule is all about.

7 I grew up in Los Angeles, and as an elementary
8 school student, I remember my path to school being
9 altered by Interstate 10, which destroyed historic
10 African-American communities in that part of South
11 Central Los Angeles. I pastored a church in Queens,
12 New York in the early 80s and was active with the Queen
13 Citizens Organization, organizing with the Port
14 Authority of New York and New Jersey to alter the route
15 of trucks heading to JFK, again, tearing up the streets
16 in African-American and Hispanic communities and
17 contributing to pollution in the environment. I live
18 now and for the last 22 years in Trenton, New Jersey,
19 so I'm very familiar with the I-95 corridor, the New
20 Jersey Turnpike, the heavy truck traffic that travels
21 that corridor every day, not to mention the Amtrak as
22 well.

1 What do these things have in common? They
2 demonstrate our commitment historically to commerce
3 over community, to profits over the health of the men,
4 women, and children who make up this great nation and
5 the many communities that are a part of it. It is
6 fundamental at this moment in our history that we take
7 more seriously both protecting the environment, our
8 earth, and the matter of justice with regard to
9 protecting all of us, and especially those communities,
10 communities of color, that are harmed the greatest by
11 the kind of disregard for our environment that we've
12 shown for decades.

13 So I applaud what the EPA is doing now and
14 enthusiastically support finalizing this rule this
15 year. Thank you very much.

16 MS. THOMPSON: Thank you for your comment. The
17 next speaker will be Jed Mandel. Jed, you may now
18 unmute, and please state your name and affiliation for
19 the record.

20 MR. MANDEL: Good morning. I'm Jed Mandel. I'm
21 president of the Truck and Engine Manufacturers
22 Association. EMA's members manufacture the heavy-duty

1 vehicles and powertrains that are the subject of
2 today's proposal. Our members have a long history of
3 successfully implementing EPA's technology-forcing
4 rules.

5 Today's proposal would establish regulations
6 designed to transition the market for new commercial
7 vehicles to zero emissions. We fully support that goal
8 demonstrated by the billions of dollars already
9 invested by EMA members to develop and bring to market
10 zero-emission powertrains and vehicles. In that regard
11 EPA's historic goal forcing new technology to lower
12 emissions already is being met.

13 Unlike previous technology-forcing rules, the
14 challenge is not forcing the development of zero-
15 emission vehicles and powertrains. The challenge is
16 forcing the development of the infrastructures needed
17 to recharge and refuel them. Without electricity
18 recharging and hydrogen refueling infrastructures in
19 place, our customers are not likely to make the needed
20 investment to purchase the zero-emission vehicles that
21 EMA members will have for sale.

22 To successfully achieve a zero-emission future,

1 the infrastructure needed to allow commercial ZEVs to
2 complete the important work of hauling the nation's
3 freight must be in place, and trucking fleets must see
4 a positive business case to invest capital in their
5 purchase. EPA has the authority to force ZEV
6 technology, but EPA has no authority to ensure the
7 necessary infrastructures are in place. That presents
8 unique regulatory challenges and unique implementation
9 problems.

10 We need a whole-of-government approach to solve
11 the problem and meet the challenge, but EPA still has a
12 role to play. EPA must adopt a final rule that
13 includes a requirement to assess progress on the
14 development of the needed infrastructure and a
15 commitment to adjust proposed ZEV penetration rates or
16 timelines is required. Transitioning to heavy-duty
17 ZEVs require a regulatory program with a much more
18 expansive approach than just mandating the manufacture
19 of new technologies. To be successful, the
20 government's approach to transitioning the commercial
21 vehicle industry to zero-emissions must address the
22 market conditions essential to enable their employment

1 deployment. We cannot afford a scenario where
2 manufacturers must sell zero-emission vehicles, but
3 fleets won't purchase them because there's no
4 infrastructure in place to operate them. That is a
5 recipe for disaster.

6 We also note that the rule proposes to reopen the
7 current 2027 Phase 2 standards. EM and its members
8 defended against reopening and rolling back those
9 standards in the previous administration. This
10 administration to not set the precedent that
11 established standards can be changed from
12 administration to administration, thus completely
13 undermining regulatory certainty and stability, and
14 undermining manufacturers necessary multiyear
15 investment plans.

16 We are fully committed to working with EPA and
17 other stakeholders to support a GHG phase rule that
18 will accomplish our shared objective of a zero-emission
19 commercial vehicle future. Thank you.

20 MS. THOMPSON: Thank you for your comment. The
21 next speaker will be Brooke Petry. You may now unmute,
22 and please state your name and affiliation for the

1 record.

2 MS. PETRY: Hi. Thank you. Brooke Petrie from
3 Moms Clean Air Force Pennsylvania. Thank you for the
4 opportunity to testify. My name is Brooke Petrie. I'm
5 a state coordinator for Moms Clean Air Force. I live
6 in Pennsylvania with my family, and I'm testifying
7 today in support of the proposed standards.

8 I join others from Moms Clean Air Force to call on
9 EPA to finalize strong truck standards this year.
10 Stronger transportation standards are crucial in
11 protecting the health of our children and communities,
12 and it is urgent that we act now. According to a
13 recently-released IPCC synthesis report, limiting
14 warming to 1.5 degrees Celsius and 2 degrees Celsius
15 involves rapid, deep, and, in most cases, immediate
16 greenhouse gas emission reduction. The chair of the
17 IPCC said this synthesis report underscores the urgency
18 of taking more ambitious action and shows that if we
19 act now, we can still secure a livable and sustainable
20 future for all.

21 In Philadelphia where I live, the impacts of
22 climate change have already arrived. In addition to

1 ever-strengthening storms, Philadelphia is plagued each
2 summer by the urban heat island effect, especially in
3 neighborhoods that have faced generational harms and
4 disinvestment from racist policies, like redlining, and
5 already endure disproportionate exposure to pollution.

6 Setting the strongest possible pollution standards for
7 trucks and rapidly transitioning to zero emissions
8 trucks is key for addressing climate justice.

9 Certain populations, including the very young, the
10 pregnant, the elderly, disabled, low-wealth people, and
11 people of color may be particularly vulnerable to the
12 health impacts and other harms associated with climate
13 change. As a person with asthma and the parent of a
14 child with asthma, my family experiences heightened
15 impacts of climate change on a daily basis. Reducing
16 greenhouse gas emissions from the transportation sector
17 will help us address the crisis of climate change.

18 In addition to important climate benefits, these
19 standards will help reduce other tailpipe pollution
20 that harms our health by helping to speed our
21 transition to zero-emission vehicles. My family does
22 not own a car and, therefore, while we contribute less

1 than most to climate-warming pollution, we are up close
2 and personal with air pollution every day, particularly
3 from the transportation sector as we walk through our
4 city going about our daily lives. The vehicles covered
5 by this rule will be on the road for decades to come.
6 Families in Pennsylvania, those who own cars, those who
7 travel by bike, by public transit, or on foot like
8 mine, want to see a rapid transition to zero-emissions
9 vehicles because it benefits all of us.

10 Moms Clean Air Force is calling on the EPA to
11 finalize the strongest possible clean truck standards
12 this year. Thank you.

13 MS. THOMPSON: Thank you for your comment. The
14 next speaker will be Michael Geller. You may now
15 unmute, and please state your name and affiliation for
16 the record.

17 MR. GELLER: Good morning. I'm Mike Geller,
18 deputy director of MECA Clean Mobility. I'm going to
19 provide some general comments to highlight the breadth
20 of GHG-reducing technologies that suppliers are
21 commercializing. Just after noon today, my colleague,
22 Kevin Brown, will provide additional comments on the

1 Phase 3 proposal.

2 For nearly 50 years, MECA has been the trade
3 association representing leading suppliers of clean
4 mobility technologies. Our members have a proven track
5 record in developing and commercializing emission
6 control efficiency and electric technology for a wide
7 variety of on- and off-road vehicles and equipment in
8 all world markets. In particular, our members provide
9 the technologies that enable heavy-duty on-road
10 vehicles to meet the most stringent criteria in
11 greenhouse gas emission standards, including
12 technologies that improve the engine efficiency as well
13 as battery, electric, and hydrogen technologies that
14 will help several types of heavy-duty vehicles
15 transition to zero tailpipe emissions.

16 The portfolio of technology options available to
17 reduce GHG emissions from heavy-duty trucks continues
18 to grow in response to federal standards. For ICE-
19 equipped trucks that will continue to be sold for many
20 vehicle applications in the years to come, technologies
21 like cylinder deactivation, turbochargers, and
22 hybridization will yield higher efficiency and reduced

1 greenhouse gases in the heavy-duty fleet.

2 Cylinder deactivation, now well established on
3 light-duty vehicles, has been demonstrated to enable
4 both improved SCR efficiency as well as reduced
5 greenhouse gas emissions in diesel applications.

6 Driven turbochargers are able to perform all the
7 functions of a supercharger, turbocharger, and turbo
8 compounder, and enable simultaneous control of criteria
9 and greenhouse gas emissions. Based on extensive
10 experience with passenger cars, hybrid electric
11 vehicles from 48 volt mild hybrid to plug-in hybrids
12 can yield significant fuel savings and CO2 reductions
13 from commercial vehicles.

14 MECA members are also supplying technologies for
15 vehicles that are powered by electricity and hydrogen,
16 including battery electric fuel cells in hydrogen
17 combustion vehicles. This includes the materials for
18 batteries and fuel cells which are critical as demand
19 of ZEVs is projected to increase rapidly. Suppliers
20 are innovating high-efficiency power electronics that
21 will benefit the next generation of electric vehicles
22 as well as fast-charging technology. Fuel cell

1 materials, and technologies to improve fuel cell
2 efficiency will help to increase affordability of these
3 vehicles. Finally, for the most challenging to
4 electrify heavy-duty segments, our members are
5 commercializing technologies to enable clean hydrogen
6 combustion, including fuel tanks, injectors, engine,
7 and after-treatment components.

8 MECA commends EPA for releasing this Phase 3
9 proposal and supports technology-neutral GHG standards.

10 Our members are focused on delivering a wide range of
11 mobility solutions to improve the overall emissions
12 footprint of vehicles. Our industry has played an
13 important role in the environmental success story of
14 heavy-duty vehicles in the U.S. and has continually
15 supported efforts to develop innovative technology-
16 advancing regulatory programs to deal with air quality
17 and climate challenges. Thank you very much for the
18 opportunity to comment today.

19 MS. THOMPSON: Thank you for your comment. The
20 next speaker will be Erik White. Eric, you may now
21 unmute. Please state your name and affiliation for the
22 record.

1 MR. WHITE: Thank you. Good morning. My name is
2 Eric White, and I'm the director of the Placer County
3 Air Pollution Control District in California. I am
4 testifying on behalf of the National Association of
5 Clean Air Agencies, for which I serve as co-chair of
6 the Mobile Sources and Fuels Committee. NACAA is the
7 national, nonpartisan, nonprofit association of air
8 pollution control agencies in states, including 115
9 local agencies, the District of Columbia, and five
10 territories. The air quality professionals and our
11 member agencies have vast experience dedicated to
12 advancing the equitable protection of clean air and
13 public health in the U.S. This testimony is based on
14 that experience.

15 NACAA has supported both EPA's adoption in 2011 of
16 the first phase of greenhouse gas emission standards
17 for heavy-duty vehicles and engines, which took effect
18 with Model Year 2014, and the Agency's 2016 adoption of
19 the Phase 2 greenhouse gas standards, which took effect
20 with Model Year 2021. We now welcome the Phase 3
21 proposal and the opportunity to further advance this
22 important program in a way that optimally reflects the

1 potential of technological innovation and the
2 unprecedented financial incentives provided under the
3 Bipartisan Infrastructure Law and Inflation Reduction
4 Act, to best protect human health and our planet.

5 In NACAA's January 15, 2021 transition paper to
6 the Biden-Harris administration, the association wrote
7 that, "Despite the technological and regulatory
8 progress made over the past nearly 60 years, mobile
9 sources continue to dominate emission inventories
10 across the U.S. and are the largest contributing sector
11 to greenhouse gas emissions. Our nation needs a
12 strong, sustainable transportation strategy. The top
13 priority must be placed on new federal programs to
14 continue to reduce emissions from the mobile source
15 sector."

16 The proposed Phase 3 rule offers an opportunity
17 for the Federal Government to take a robust step
18 towards this goal, and NACAA is optimistic that working
19 with states, cities, counties and other stakeholders,
20 EPA can finalize another phase of heavy-duty greenhouse
21 gas emission standards that will protect and save
22 lives, foster innovation, create prosperity, and reduce

1 the risks facing our climate. We appreciate the
2 opportunity to participate today as we continue to
3 study the proposal, including provisions to revise
4 regulations addressing preemption of state regulation
5 of new locomotives and new engines used in locomotives,
6 and we'll provide written comments by the close of the
7 comment period. Thank you very much for your
8 consideration today.

9 MS. THOMPSON: Thank you for your comment. As a
10 reminder, if you are speaking today, you will receive a
11 notification on your screen that you are being promoted
12 to the role of panelist shortly prior to your speaking
13 time. You must accept that invitation to be able to
14 unmute when you are called to testify. This will also
15 allow you to turn on your camera, which we encourage
16 you to do. Speakers connected by telephone should
17 unmute their phones when called to testify. We ask
18 that each person limit their verbal testimony to 3
19 minutes. Please speak slowly and clearly so our court
20 reporter and interpreters can capture these proceedings
21 accurately. We encourage you to provide any portion of
22 your prepared statement that you are unable to deliver

1 along with any additional comments to Docket Number
2 EPA-HQ-OAR-2022-0985 on Regulations.gov.

3 If you are having technical difficulties, please
4 send an email to public_hearing@abtassoc.com or call
5 (919) 294-7849. If you are not registered to speak but
6 you would like to, please send an email with your name
7 and phone number to public_hearing@abtassoc.com or call
8 (919) 294-7849.

9 The next speaker will be Katherine Garcia. You
10 may now unmute, and please state your name and
11 affiliation for the record.

12 MS. GARCIA: Good morning. My name is Katherine
13 Garcia, and I'm the director of Sierra Club's Clean
14 Transportation For All Campaign. Thank you for the
15 opportunity to testify today.

16 Sierra Club is focused on advocating for strong
17 vehicle standards that ensure we are slashing
18 transportation pollution as urgently as possible to
19 save lives and address the climate crisis. While our
20 campaign highlights the benefits of zero-emission
21 vehicles, we also emphasize the importance of walking,
22 biking, and taking public transportation, and

1 personally, this is how I live my life. My testimony
2 today is grounded in my family's lived experience in
3 D.C.

4 Just last week, the American Lung Association
5 released the "State of the Air" report for 2023, and
6 the District scored an F in high ozone days. This is
7 distressing because I commute by biking, walking, and
8 taking public transportation in D.C. I bike over 100
9 miles a month. Every day I'm walking or biking with my
10 3-year-old. We breathe in the flagrant pollution from
11 trucks and buses, and I worry about his growing lungs
12 and the effects of breathing in toxic diesel fumes, and
13 I worry about my health, too.

14 EPA can and must curb this health-threatening
15 pollution as soon as possible. It will be summer soon,
16 and it's important to note that summers in the U.S. are
17 becoming harder and longer. Heat exacerbates the
18 effects of pollution because the high temperatures
19 convert tail pipe pollution into smog, breeding
20 unhealthy levels of ground-level ozone. On behalf of
21 everyone who commutes by walking, cycling, or taking
22 transit, I urge you to strengthen this heavy-duty

1 vehicles standard.

2 Across the country, 72 million people live closest
3 to trucking routes, and we know that air pollution
4 disproportionately impacts low-income black and Latino
5 communities. We see that clearly in D.C. where the
6 asthma rate in Ward 2, an affluent community, is 5
7 percent, but in Ward 8, a low-income area, the asthma
8 rate is 23 percent. Given the recent advancements in
9 zero-emission technology, industry commitments, and the
10 tremendous clean transportation investments, we need
11 the EPA standards to build on that momentum.

12 As the standard is slated to begin for Model Year
13 2027, we will have the infrastructure needed to support
14 zero-emission trucks and buses. Through federal and
15 state investments, billions of dollars are going
16 towards building out charging infrastructure, and
17 investments are increasing. Just in the past 6 months,
18 utilities have received approval to invest more than
19 \$700 million in transportation electrification in
20 states across the country.

21 Zero-emission trucks and buses are a public health
22 and climate necessity. The EPA needs to set the

1 strongest possible pollution-reduction targets to
2 adequately address the climate crisis and
3 transportation solution. Now is not the time for half-
4 measures. Thank you for this opportunity to testify.

5 MS. THOMPSON: Thank you for your comment. The
6 next speaker will be Emily Pickett. You may now
7 unmute, and please state your name and affiliation for
8 the record.

9 MS. PICKETT: Hi. My name is Emily Pickett, and
10 I'm the Florida state coordinator for Moms Clean Air
11 Force in Tampa, Florida. I'm grateful for the chance
12 to testify before you today. As a lifelong Floridian,
13 I have a deep appreciation for our state and want to
14 ensure it's a healthy place for future generations.
15 That's why I'm here today speaking in support of strong
16 transportation standards, including cleaner trucks, and
17 urging you to finalize these important protections this
18 year.

19 As a mother of two, I cannot emphasize enough how
20 important it is to prioritize the health of our
21 children and the environment they will inherit. Our
22 suburban community borders the Hillsborough River

1 surrounded by sprawling oaks, cypress marshes, ponds,
2 and wildlife. It feels like a healthy place to live
3 thanks to the presence of nature, but the alarming
4 truth is that our air quality is at risk. Our county
5 recently received a D grade from the American Lung
6 Association's "State of the Air" report for high ozone
7 days, which is something we cannot ignore.

8 Ozone pollution, or smog, is one of the most
9 widespread pollutants in the U.S. and is a powerful
10 lung irritant. Despite living in a seemingly healthy
11 environment, our community is nestled between two
12 interstates with an eight-lane highway cutting through
13 it. My house sits just 3 miles from I-75, which is one
14 of the country's busiest interstates for truck traffic.

15 Many homes here are less than 200 feet from the
16 interstate. Most residents can hear the traffic
17 despite the sound-blocking walls.

18 It's a stark reality that my family and I, along
19 with countless others, are at risk of dangerous air
20 pollution. Each of my family members, along with many
21 who live in our community, experience persistent
22 symptoms, like sore throats, eye irritation, and

1 congestion. Doctors routinely diagnose these symptoms
2 as seasonal allergies, but allergy tests are rarely
3 performed so we can't be sure that allergens like
4 pollen are to blame. Because we live in an area with
5 high levels of air pollution, we could very well be
6 experiencing the ill effects of smog. While we've been
7 lucky that our symptoms are mild, many people are not
8 as fortunate. Nearly 300,000 people in Hillsborough
9 County suffer from asthma, COPD, lung cancer, or
10 cardiovascular disease.

11 The transportation sector is the largest source of
12 climate pollution in the U.S., and this is something
13 that needs to change. We need to transition to zero-
14 emission vehicles to make a significant impact in
15 cleaning our air. Zero-emission trucks are among the
16 best available technologies to reduce greenhouse gases
17 and dangerous air pollution. With cleaner trucks on
18 our roadways, we can decrease the prevalence of
19 pollution-driven negative health impacts.

20 As a concerned mom and Floridian, I wholeheartedly
21 support strong standards for cleaner trucks and implore
22 you to take action this year. Thank you for the

1 opportunity to testify.

2 MS. THOMPSON: Thank you for your comment. The
3 next speaker will be Trisha DelloIacono. You may now
4 unmute. Please state your name and affiliation for the
5 record.

6 MS. DELLOIACONO: Thank you for the opportunity to
7 provide brief comments on the Draft Phase 3 Notice of
8 Proposed Rulemaking. My name is Tricia DelloIacono.
9 I'm the federal policy director for CALSTART, a
10 national nonprofit organization now operating programs
11 globally. We are a non-profit consortium with more
12 than 300 companies, agencies, and organizations working
13 together to support the transition to clean
14 transportation, including the associated public health
15 and economic benefits delivers. While CALSTART is a
16 member-based organization, we are not a trade
17 association, and not all our members are fully aligned
18 with our views on this proposed rule but do share the
19 perspective that clean transportation solutions are
20 part of the strategy to protect communities, clean the
21 air, and address climate change.

22 CALSTART is noted for our knowledge in spurring

1 faster technology commercialization, supporting markets
2 with smart incentives, and helping shape effective
3 policies, especially in the medium- and heavy-duty
4 vehicle sector. We urge the EPA to adopt heavy-duty
5 vehicle Phase 3 greenhouse gas standards that are --
6 that are stronger than those proposed. The final rule
7 should be based on a deeper penetration of zero-
8 emission medium, heavy -- medium- and heavy-duty
9 vehicles than is currently assumed, considering
10 unprecedented federal incentives are now available, as
11 well as actions by numerous States requiring sales of
12 an increasing percentages of zero-emission trucks.

13 Matching the advanced clean truck penetration
14 rates must be the minimum level of stringency
15 considered. In other words, the final rule should
16 include heavy-duty penetration projections that are
17 aligned with the momentum put forward from ACT and the
18 nine states that have already adopted the rule, or the
19 proposal will send a signal to the market it has a lack
20 of commitment, thereby stifling investments. In short,
21 we recommend that EPA adjust the 2027 to 2032 Model
22 Year CO2 emission standards accordingly, consistent

1 with the current market trend.

2 Zero-emission vehicles have now reached technology
3 readiness in all key applications, with hundreds of
4 models already in early production, including the first
5 long-haul Class 8 trucks. The final rule should extend
6 beyond Model Year 2032 to Model Year 2034 and include
7 -- I'm sorry -- 2040 and including increasing
8 stringency to reflect the market readiness.

9 We realize that infrastructure is a real near-term
10 challenge but that -- not a long-term barrier.

11 Infrastructure is a solvable challenge, not a barrier,
12 affecting ZEV timing. Major federal, state, and
13 private investments outline a realistic path to scale
14 at a pace faster than set in the proposed stringency
15 levels. Strong federal standards will provide a
16 critical market signal to electric vehicle service,
17 equipment manufacturers utilities, and PUCs to increase
18 production of chargers and streamline interconnection
19 processes.

20 Thank you again for the opportunity to speak
21 today. We believe that the Phase 3 rulemaking will be
22 the most impactful rule the EPA has considered in

1 years, and a stringent rule will protect countless
2 communities and address climate change for decades to
3 come. We look forward to working with the EPA as it
4 shapes this critical regulation. Thank you.

5 MS. THOMPSON: Thank you for your comment. The
6 next speaker will be Tracy Sabetta. You may now
7 unmute, and please state your name and affiliation for
8 the record.

9 MS. SABETTA: Good morning. I'm Tracy Sabetta
10 with Moms Clean Air Force in Ohio. Thank you for the
11 opportunity to testify today. My name is Tracy
12 Sabetta, and I'm the state coordinator for Moms Clean
13 Air Force in Ohio. I live in Pickerington just outside
14 of Columbus. I'm a mother and someone who's worked in
15 public health and advocacy for nearly 3 decades. On
16 behalf of Moms Clean Air Force, I'm testifying in
17 support of the proposed clean truck standards and call
18 on EPA to finalize strong standards this year.
19 Stronger transportation standards are crucial in
20 protecting the health of our children and communities,
21 and it is urgent that we act now.

22 While I certainly don't need to tell you this,

1 many people may be surprised to know that
2 transportation is the largest source of greenhouse gas
3 emissions in the United States, making up 27 percent of
4 all emissions. Heavy-duty vehicles rank second within
5 that sector right behind light-duty vehicles -- excuse
6 me -- like cars. The Biden administration's Clean
7 Trucks Plan and the inclusion of this proposed rule
8 will move us forward in reducing these harmful
9 emissions by outlining stronger greenhouse gas
10 standards for these vehicles, like school buses,
11 transit buses, delivery trucks, and semi-trucks. These
12 standards will also help reduce other tailpipe
13 pollution that harms our health by accelerating our
14 transition to zero-emissions electric vehicles.

15 This cannot come too soon for a state like Ohio.
16 While the air quality in our state has improved over
17 the last 30 years, it has not improved at the same rate
18 as other states. We consistently rank in the bottom 10
19 for state-level pollution. According to the 2023
20 American Lung Association's "State of the Air" report
21 released just last month, there are still more than
22 152,000 Ohio children who struggle with asthma every

1 day. We know tailpipe pollution from trucks can
2 exacerbate asthma attacks, respiratory illness, and
3 increase hospital admissions and emergency department
4 visits. Tailpipe exhaust is also a significant source
5 of nitrogen oxides, which react in the atmosphere to
6 form ground-level ozone.

7 In the 2023 "State of the Air" report, 8 of Ohio's
8 10 most populated counties received grades of either D
9 or F for ozone pollution. These emissions are
10 impacting Buckeyes every day but not equally. Research
11 shows that people of color experience higher-than-
12 average levels of climate change pollution exposure
13 from a variety of sources, including heavy-duty trucks.

14 Black Americans specifically are exposed to higher-
15 than-average amounts of pollution from all sources,
16 according to the EPA's National Emissions Inventory.

17 Greenhouse gas emissions are driving climate
18 change, and Ohioans are driving trucks. That's why the
19 EPA's proposed greenhouse gas regulations for new
20 heavy-duty vehicles are such an important step forward
21 in protecting our families from climate change
22 pollution. Moms Clean Air Force is calling on EPA to

1 finalize the strongest possible clean truck standards
2 this year. Thank you so much.

3 MS. THOMPSON: Thank you for your comment. The
4 next speaker will be Maribeth Diggle. You may now
5 unmute, and please state your name and affiliation for
6 the record.

7 MS. DIGGLE: Hi. My name is Maribeth Diggle. I'm
8 a proud volunteer at Moms Clean Air Force in
9 Washington, D.C., and I'm also a Ph.D. student at the
10 Ritz School of Art in Brussels, specializing in breath
11 art. I research the diversity of breath qualities as a
12 -- as a tool in all performing bodies in relation to
13 the growing topic of breath politics. I am testifying
14 in support of the proposed standards and call on the
15 EPA to finalize strong clean truck standards this year.

16 Stronger transportation standards are crucial in
17 protecting the health of our children and communities,
18 and it is urgent that we act now.

19 The COVID-19 pandemic was tragic in all ways, but
20 it did give air quality its moment. Air quality and
21 breathing issues came home with us regardless of
22 income, nationality, and background. It gave us a

1 redefined sense of shared breath space on a global
2 scale, collective and individual health efforts finally
3 holding hands. Through the extraordinary opportunity
4 of being selected to conduct research as a Ph.D.
5 student, I realize that it is impossible to speak about
6 breath function and breath expression without speaking
7 about the realities of transportation pollution, which
8 leads to preventable breath injustices like asthma
9 attacks, respiratory issues, lung cancer, and more.

10 In fact, transportation is the largest source of
11 greenhouse gas emissions in the United States, creating
12 27 percent of all emissions, and heavy-duty vehicles
13 make up a quarter of that. In the words of my academic
14 mentor, Magdalena Gorska, breathing is a political act
15 in and of itself. Breath function can be a direct
16 window into the vulnerabilities of our communities and
17 the state of our planet. Breath is an unavoidable
18 event of bringing the outside world in through the
19 medium of air, and it is also a way to embody the
20 science of air quality.

21 Air quality touches us all, whether you are
22 fortunate enough to live in a zip code that is

1 unburdened by heavy-duty transport or not. Air quality
2 means the qualities of lives are changed.

3 Air quality matters because bodies matter. It
4 matters whose breath matters. Therefore, as we listen
5 to experts as well as the members of our communities
6 speak about the importance of air quality, I would like
7 to finish by reminding us that breathing is not only
8 unavoidable for survival, but it is an autonomous
9 function that we own. It is a space we inhabit. It is
10 a form of engagement and community. It is a reflection
11 of power relations and vulnerabilities, and it has been
12 a practice of health and spirituality for centuries.
13 Please embody the ethics of air quality when setting
14 the strongest standards to reduce greenhouse gas
15 emissions for heavy-duty vehicles. Thank you for your
16 time.

17 MS. THOMPSON: Thank you for your comment. As a
18 reminder, if you are speaking today, you will receive a
19 notification on your screen that you are being promoted
20 to the role of panelist shortly prior to your speaking
21 time. You must accept that invitation to be able to
22 unmute when you are called to testify. This will also

1 allow you to turn on your camera, which we encourage
2 you to do. Speakers connected by telephone should
3 unmute their phones when called to testify. We ask
4 that each person limit their verbal testimony to 3
5 minutes. Please speak slowly and clearly so our court
6 reporter and interpreters can capture these proceedings
7 accurately. We encourage you to provide any portion of
8 your prepared statement that you are unable to deliver
9 along with any additional comments to Docket Number
10 EPA-HQ-OAR-2022-0985 on Regulations.gov.

11 If you are having technical difficulties, please
12 send an email to public_hearing@abtassoc.com or call
13 (919) 294-7849. If you are not registered to speak but
14 you would like to, please send an email with your name
15 and phone number to public_hearing@abtassoc.com or call
16 (919) 294-7849.

17 The next speaker will be Alondra Morales Sanchez.
18 Unfortunately, we do not currently see you in the list
19 of attendees. If you have joined this hearing under a
20 different name, please indicate your presence by
21 pressing the raise hand button at the bottom of your
22 screen. If you have called in, please indicate your

1 presence by dialing 9 -- star-9.

2 (No response.)

3 MS. THOMPSON: The next speaker will be William S.
4 Beckett. William, we do not currently see you in the
5 list of attendees. However, if you have joined this
6 hearing under a different name, please indicate your
7 presence by pressing the raise hand button at the
8 bottom of your screen, or if you have called in, dial
9 star-9. I can see that you have raised your hand. I
10 am now promoting you to the role of panelist.

11 (Brief pause.)

12 MS. THOMPSON: When you are ready, you may unmute.
13 Please state your name and affiliation for the record.

14 DR. BECKETT: My name is Dr. William Beckett. I'm
15 a member of the Science Network of the Union of
16 Concerned Scientists and emeritus staff at Mount Auburn
17 Hospital, and I'm here to speak in favor of further
18 strengthening Phase 3. As a Board-certified lung
19 doctor, I've spent many years treating patients with
20 lung diseases, including many with asthma, and also
21 doing research on the health effects of air pollution.

22 Busy highways with heavy truck traffic are

1 disproportionately close to the homes of communities of
2 color. Local air pollution most harms the health of
3 the people who live closest to those highways. The
4 health effects of this tailpipe air pollution start
5 with exposure in the womb affecting birth outcomes,
6 causing and worsening asthma in children, and
7 contributing to heart disease, lung disease, and cancer
8 in adults. This is urgent. EPA needs to strengthen
9 his proposal to eliminate tailpipe emissions from
10 heavy-duty trucks. Thank you very much.

11 MS. THOMPSON: Thank you for your comment. The
12 next speaker will be Anastasia Gordon. You may now
13 unmute, and please state your name and affiliation for
14 the record.

15 MS. GORDON: Hello. My name is Anastasia Gordon,
16 energy and transportation policy manager with WE ACT
17 for Environmental Justice. We convened the Clean Air
18 for the Long Haul, a national group of environmental
19 justice organizations working together to put forward
20 campaigns and embed environmental justice in EPA
21 rulemakings in the power and transportation sectors.
22 Thank you for the opportunity to provide comments on

1 the proposed greenhouse gas standards for heavy-duty
2 vehicles.

3 Transportation is the largest contributor to
4 greenhouse gases in this country. The heavy-duty
5 sector, in particular, is an egregious form of
6 environmental injustice, being a major source of
7 harmful and deadly air pollutants, such as soot and
8 smog-forming particulate matter and nitrogen oxides.
9 Due to a legacy of discriminatory transportation
10 planning and zoning, communities of color and low-
11 wealth are not only on the front lines of the climate
12 crisis, but they are disproportionately overburdened by
13 the health-damaging effects of pollution from trucks
14 and buses, such as asthma, lung damage, heart attacks,
15 cancer, and premature death.

16 High rates of exposure and health risks from
17 diesel exhaust is a stark reality for many
18 environmental justice communities across the country
19 who live, work, and go to school near high-traffic
20 roadways, bus depots, distribution centers, and ports,
21 areas scientists are literally calling diesel death
22 zones. And EPA's own analysis found that 72 million,

1 many of which are low income and people of color, live
2 within 200 meters of major trucking routes, while the
3 American Lung Association found that 45 percent of
4 residents in counties with high traffic -- high traffic
5 -- truck traffic, that is -- are people of color
6 compared to 38.4 percent of the total U.S. population.

7 In New York City where my organization is
8 headquartered, exposure to soot pollution contributes
9 to premature deaths every year, and most of that comes
10 from trucks. Our communities have contended with
11 emissions from diesel trucks for far too long. This
12 rule is critical to reduce air pollution and climate
13 pollution from heavy-duty trucks and their supporting
14 infrastructure, but also the EPA and the entire
15 administration to protect public health and honor its
16 commitments to equity and environmental justice.

17 By the end of this year, EPA must swiftly finalize
18 strong clean truck standards that reduce greenhouse gas
19 emissions and toxic air pollution from the heavy-duty
20 sector, and it must send a clear signal to
21 manufacturers to move toward zero-emission electric
22 models and, ultimately, bring clean air to overburdened

1 environmental justice communities. Thank you for the
2 opportunity to testify.

3 MS. THOMPSON: Thank you for your comment. The
4 next speaker will be Sarah Bucic. Sarah, you may now
5 unmute, and please state your name and affiliation for
6 the record.

7 MS. BUCIC: Thank you for the opportunity to
8 provide comments. My name is Sarah Bucic, and I've
9 been a registered nurse for over 20 years, and I'm here
10 today with the Alliance of Nurses for Healthy
11 Environments. ANHE is a national coalition of nursing
12 organizations and individual nurses working to promote
13 health through addressing environmental health
14 concerns. As nurses, we're led by professional
15 obligations, which make addressing health, environment,
16 and safety a professional focus of ours, and it's for
17 this reason that we're here today supporting EPA
18 setting Phase 3 greenhouse gas standards for heavy-duty
19 vehicles.

20 As a long-time Delawarean, most of the population
21 of my state resides within close proximity to dense
22 traffic of I-95 and Route 1. The American Lung

1 Association in their most recent "State of the Air"
2 report ranked my county, New Castle County, with a D
3 for ozone. Vehicle emissions contribute to this ozone
4 formation, and ground-level ozone makes air quality
5 worse. With transportation being the single biggest
6 source of greenhouse gas emissions in the U.S., 72
7 million people are estimated to live near truck freight
8 routes, putting their health at risk. In Delaware, it
9 is well documented that areas near our Port of
10 Wilmington are mostly communities of color, and they've
11 long suffered from the intersection and cumulative
12 health impacts of car, truck, and industrial traffic.

13 As the parent of a small child who has experienced
14 asthma, I cannot express the level of fear that I have
15 experienced when my child could not breathe. It's also
16 frustrating to know that, as a nurse, the pollution
17 that contributes to asthma of my child and those
18 throughout the country are beyond individual patients'
19 control. This is why we need EPA to set strong
20 standards for health protections.

21 As a community member, parent, and a nurse, I've
22 been supporting environmental health advocates in my

1 community around electric school buses. We know that
2 buses are heavy-duty trucks and carry precious cargo,
3 and as a psych nurse, I would be remiss if I didn't
4 underscore the harmful health impacts of fossil fuel
5 emissions and traffic-related pollution on childhood
6 cognitive development.

7 While EPA's proposal is a good start, the Agency
8 should strengthen the standards even further. The
9 benefits of reducing air pollutants, like particle
10 pollution, go far beyond even what EPA models, and many
11 of the health benefits aren't quantified in EPA's
12 analysis, like avoided case of lung cancer due to
13 particle pollution exposure, and the benefits likely
14 outweigh the costs by an even greater margin than noted
15 by the EPA.

16 We urge EPA to waste no time in finalizing this
17 the rulemaking no later than the end of the year. We
18 cannot miss out on this opportunity to protect health,
19 particularly for our most vulnerable populations.

20 Thank you.

21 MS. THOMPSON: Thank you for comment. The next
22 speaker will be Mona Sarfaty. Mona, we do not

1 currently see you listed in -- among the attendees. If
2 you have joined this hearing under a different name,
3 please indicate your presence by pressing the raise
4 hand button at the bottom of your screen. If you have
5 called in, please dial star-9 to raise your hand.

6 (No response.)

7 MS. THOMPSON: This concludes our first speaker
8 block. We will now call on the names of those who
9 were not present when initially called to testify. If
10 you have joined, when you hear your name, please
11 indicate your presence by pressing the raise hand
12 button at the bottom of your screen. If you have
13 dialed in, please dial star-9 to raise your hand.

14 The first name is Alondra Morales Sanchez. Again,
15 if you have joined, please indicate your presence by
16 pressing the raise hand button at the bottom of your
17 screen. I can see that you have raised your hand. I
18 will now promote you to the role of panelist.

19 (Brief pause.)

20 MS. THOMPSON: Just a reminder that you will need
21 to accept the invitation to become a panelist in order
22 to provide your testimony. When you are ready, you may

1 unmute. Please state your name and affiliation for the
2 record.

3 (No response.)

4 MS. THOMPSON: Alondra, you have been promoted but
5 are still on mute. To provide your testimony, please
6 hit the unmute button at the bottom of your screen.

7 (No response.)

8 MS. THOMPSON: Alondra, we are sending you a
9 notification to unmute. Just one more warning that you
10 are still muted.

11 (No response.)

12 MS. THOMPSON: I'll now call on the next speaker
13 who was unable to provide testimony when called on.
14 The next speaker will be Mona Sarfaty. Mona, if you
15 have joined, please indicate your presence by pressing
16 the raise hand button at the bottom of your screen, or
17 if you have called in, please dial star-9 to raise your
18 hand.

19 (No response.)

20 MS. THOMPSON: We will now move to the next
21 speaker block. As a reminder, if you are speaking
22 today, you will receive a notification on your screen

1 that you're being promoted to the role of panelist
2 shortly prior to your speaking time. You must accept
3 that invitation to be able to unmute when you are
4 called to testify. This will also allow you to turn on
5 your camera, which we encourage you to do. Speakers
6 connected by telephone should unmute their phones when
7 called to testify. We ask that each person limit their
8 verbal testimony to 3 minutes. Please speak slowly and
9 clearly so our court reporter and interpreters can
10 capture these proceedings accurately. We encourage you
11 to provide any portion of your prepared statement that
12 you are unable to deliver along with any additional
13 comments to Docket Number EPA-HQ-OAR-2022-0985 on
14 Regulations.gov.

15 If you are having technical difficulties, please
16 send an email to public_hearing@abtassoc.com or call
17 (919) 294-7849. If you are not registered to speak but
18 you would like to, please send an email with your name
19 and phone number to public_hearing@abtassoc.com or call
20 (919) 294-7849.

21 The next speaker will be Monte Weiderhold. You
22 may now unmute, and please state your name and

1 affiliation for the record.

2 MR. WIEDERHOLD: My name is Monte Wiederhold. I
3 am a small fleet owner of B.L. Reeve Transport and a
4 member of the Owner-Operator Independent Drivers
5 Association. I'd like to take this opportunity to
6 thank you for the ability to comment on the Proposed
7 EPA Greenhouse Gas Phase 3 Rule.

8 Ever since 1998, the EPA ruling against
9 practically every truck manufacturer in the United
10 States has made truck engines more costly to purchase,
11 maintain, and less drivable. As each model year
12 progressed, new standards that were enacted have forced
13 truck engine manufacturers to build engines with more
14 and more moving parts for exhaust treatment systems.
15 During these times, the EPA has refused to listen when
16 systems not yet perfected were rushed into production.
17 Downtime became so costly, many truckers lost their
18 businesses and their livelihoods. Trucks became less
19 reliable.

20 Now we're told that EVs are the way to go. Many
21 drivers, nearly 80 percent, say they are skeptical or
22 have reservations about driving or purchasing an

1 electric truck. I'm one of those. We are nowhere near
2 ready for electric vehicle trucks, and I doubt we will
3 ever be. Recently a trucking exec testified on Capitol
4 Hill and said an over-the-road truck will require two
5 4-ton batteries. My current rig weighs 31,000 empty,
6 and that means if I were to have those batteries, I
7 could legally haul 33,000 pounds. Hello, supply chain.

8 While there's nothing wrong with looking for
9 alternative fuels, it seems this administration seeks
10 punitive measures to force truckers comply with these
11 standards. These vehicles aren't readily available nor
12 is the infrastructure in place. Long-haul EVs will
13 never work, in my opinion. They may be able to work in
14 a local environment where a truck returns to a terminal
15 each day and has dedicated parking or charging spots,
16 and that's if the grid doesn't fail.

17 If you really think EVs and trucking are feasible
18 anytime soon, I encourage you to visit a truck stop
19 near you. Go between the hours of 8:00 p.m. and 6:00
20 a.m., see the trucks parked along the driveways
21 anywhere and everywhere they can find a place to park,
22 then please explain how all these trucks will get their

1 batteries charged. Better yet, visit an interstate
2 off-ramp and explain where the charging stations will
3 be.

4 The upfront cost for a EV local truck are about
5 \$600 higher than internal combustion truck but
6 skyrockets almost \$15,000 more for a long-haul electric
7 vehicle truck. EVs may not have a tailpipe via
8 electricity being supplied -- as being supplied by
9 fossil fuel plants, power plants, mostly coal and
10 natural gas. I fail to see what we're gaining here.
11 To continue with proposed regulations would be
12 foolhardy and seems to be at odds with the Trucking
13 Workforce Action Plan that aims to improve trucking
14 jobs and retain drivers. Thank you.

15 MS. THOMPSON: Thank you for your comment. The
16 next speaker will be Danny Schnautz. You may now
17 unmute, and please state your name and affiliation for
18 the record.

19 MR. SCHNAUTZ: Hello. My name is Danny Schnautz.
20 I'm the president of Clark Freight Lines in Pasadena,
21 Texas, and I'm a member of the Owner-Operator
22 Independent Drivers Association. Good day, and thank

1 you for hearing me. We operate over 50 company-owned
2 trucks as well as more owner-operators in local,
3 regional, and long-haul intermodal and general freight
4 trucking, and we have for over 35 years. I was a full-
5 time driver for many years before I came into the
6 office 32 years ago, and I still have my CDL. I grew
7 up in trucking.

8 The over-ambitious emission standards have already
9 created unreliable equipment in heavy trucks for many
10 years now and has even driven one of the primary engine
11 manufacturers out of the on-road industry. These
12 ongoing advanced technology EPA systems failures are
13 devastating, especially with part shortages and with
14 the on-the-road trials. There are at least five
15 separate areas of problems that may not be considered
16 by industry outsiders. These five areas are the money,
17 the family personal impact, the supply chain impact,
18 the danger of these breakdowns, and environmental
19 concerns, which I cannot cover completely today in the
20 3 minutes, but here I go.

21 Some of our new truck payments are over \$4,000 per
22 month, and these trucks need to be productive in order

1 to pay for themselves and to move the consumers' goods.

2 Very often these technologies fail us because they're
3 not proven, and they're too far reaching. The new rule
4 estimates at least \$15,000 increase for long-haul
5 trucks on top of what we're already paying. These
6 trucks should be more reliable and better able to reach
7 their goals, but they're not.

8 What are the financial needs that a trucking
9 company suffers so that trucks can be green? Well, two
10 things are safety and driver pay, and both of those
11 need as much funding as possible. There's a family and
12 personal aspect of drivers being stuck away from home
13 due to breakdowns. When a truck isn't reliable or
14 isn't running, our industry and our company is upset.
15 This may not be a big deal to people who are listening
16 who have not lived their life on the highways, but
17 that's what our drivers do. We already have trouble
18 keeping drivers in our industry, and this further
19 brings us more problems. Drivers' pay are affected by
20 breakdowns, the family budget is affected and the
21 family schedule.

22 Another issue is the supply chain where broken

1 heavy trucks delay loads. We're all worried about
2 supply chain reliability, and here we are with advanced
3 technologies that fail often. These breakdowns, the
4 tow trucks that are sent, the drives to and from the
5 shop, all of these are not green, and technology has to
6 move more quickly to get caught up.

7 In conclusion, the prior diesel emission system
8 pushes have had a high cost to society, and we all
9 realistically see the same with EVs. These are not
10 successful on a cost-benefit measure and not even
11 reaching their green goals. We need for the government
12 to listen to the industry on what is technologically
13 possible and work from that basis instead of putting a
14 goal out there and letting the chips fall where they
15 may. Thank you very much.

16 MS. THOMPSON: Thank you for your comment. The
17 next speaker will be Lewie Pugh. You may now unmute.
18 Please state your name and affiliation for the record.

19 MR. PUGH: Yes. I'm Lewie Pugh, and I'm the
20 executive vice president of the Owner-Operator
21 Independent Drivers Association. I've been in the
22 trucking industry pretty much my entire career with

1 most of them being spent as a driver and an owner-
2 operator.

3 We at OOIDA represent over 150,000 small business
4 truckers and professional drivers. Small trucking
5 businesses account for 96 percent of the motor carriers
6 in the U.S. We are undoubtedly the safest and most
7 diverse operators on the nation's roads, and our
8 activities impact all sectors of the American economy
9 on a daily basis. We move everything and anything.

10 In November 2018, I met with EPA leadership during
11 the early stages of the Clean Trucks Initiative. At
12 that time, I was promised by the Secretary that
13 trucking would be part of this. I was optimistic that
14 the Agency's willingness to engage with the trucking
15 industry would result in more practical and more
16 achievable environmental regulations. Well, here we
17 are 5 years later, and, unfortunately, we're still
18 seeing costly and burdensome proposals being forced
19 upon small businesses.

20 About a year ago, we told EPA that the proposed
21 implementation periods of heavy-duty NOx emissions rule
22 would force drivers to use older trucks rather than buy

1 new ones. We encouraged the Agency to give
2 manufacturers more time to comprehensively test the
3 engines and better ensure performance and reliability.

4 However, EPA has maintained the Model 2027 timeline,
5 ignoring concerns from truckers and others. It's deja
6 vu all over again with the latest Phase 3 GHG proposal.

7 We are here once again seeing high projected costs
8 for newer vehicles along with inefficient lead-up time
9 to properly implement the manufacturing standards. The
10 Phase 3 rule is also a blatant attempt to force
11 consumers to purchase electric vehicles while the
12 national charging infrastructure network remains absent
13 for heavy-duty trucks and commercial trucks.

14 Professional drivers are skeptical of EVs' mileage
15 range, battery weight, safety, charging time, and
16 availability. It's baffling that the EPA is pushing
17 forward the more impractical emissions timelines
18 without addressing the overwhelming concerns with
19 electric commercial motor vehicles.

20 OOIDA has supported the U.S. Senate's recent
21 actions to overturn the flawed 2022 NOx emissions rule.

22 We urge the United States House of Representatives to

1 follow suit. We also urge EPA to consider the input of
2 the men and women who make their living behind the
3 wheel and buy these trucks this time around. Thank
4 you.

5 MS. THOMPSON: Thank you for your comment. The
6 next speaker will be Melody Reis. Melody, you may now
7 unmute, and please state your name and affiliation for
8 the record.

9 MS. REIS: I'm Melody Reis with Moms Clean Air
10 Force. Thank you for the opportunity to testify today.

11 My name is Melody Reis, and I'm the senior legislative
12 and regulatory policy manager for Moms Clean Air Force.

13 I am here to testify in support of the proposed clean
14 truck standards and to call on EPA to finalize strong
15 standards this year. Strong safeguards are crucial in
16 protecting the health of our children and communities,
17 and we must act urgently.

18 As I'm sure you're aware, the transportation
19 sector is the largest source of greenhouse gas
20 emissions in the U.S., responsible for nearly one-third
21 of all emissions. And despite making up less than 10
22 percent of the vehicles on the road, heavy-duty

1 vehicles are responsible for an outsized share of this
2 climate pollution. Cleaner trucks cannot come soon
3 enough.

4 I live in the D.C. Metro Area, and there's no
5 question that climate change is here. We have regional
6 weather data going back 150 years, and 4 of the 5
7 hottest years on record have been in the last 11 years,
8 and 2023 is on track to top them all with 77 percent of
9 days warmer than average so far, often by 5 to 6
10 degrees. Increasing temperatures can lead to dangerous
11 levels of ozone pollution or smog, so it's unsurprising
12 that in the American Lung Association's 2023 "State of
13 the Air" report released last month, the D.C. Metro
14 Region received a failing grade, an F, based on the
15 number of high ozone days in recent years.

16 Ozone is a dangerous pollutant linked to lung
17 damage and respiratory problems, and children whose
18 little lungs are still growing are among the
19 populations most vulnerable to its harms. When
20 parents, teachers, and other caregivers look at the
21 forecast in the morning and see an air quality alert,
22 and we just had one recently, or smell smoke from

1 wildfires, which are often made worse by climate
2 change, it's hard not to feel anxiety about sending
3 kids out to play in polluted air or anxiety about
4 having to keep them indoors, which has its own health
5 drawbacks.

6 The good news is that the technology for zero-
7 emission vehicles exists. Zero emissions means zero
8 greenhouse gases and zero air pollutants coming out of
9 tailpipes. That's good for our climate and for our
10 lungs, and it's especially good for those who live near
11 highways and truck routes, often communities of color
12 and low-income communities, who have been burdened for
13 far too long with unhealthy air.

14 Heavy duty trucks are driving climate change, but
15 it doesn't have to be this way. I urge you to finalize
16 strong standards, consistent with the Advanced Clean
17 Trucks Rule, this year and help put us on a path to a
18 cleaner future. Thank you.

19 MS. THOMPSON: Thank you for your comment. The
20 next speaker will be Elizabeth Brandt. You may now
21 unmute, and please state your name and affiliation for
22 the record.

1 (No response.)

2 MS. THOMPSON: Elizabeth you are still on mute.

3 MS. BRANDT: Thank you. I'm Elizabeth Brandt with
4 Moms Clean Air Force. Thank you for hearing my
5 testimony today. I'm a social worker, and I'm a
6 national field manager with Moms. Moms Clean Air Force
7 is an organization of more than 1 million parents
8 across America who are taking action against air
9 pollution and climate change. The EPA's proposed
10 greenhouse gas regulations for heavy-duty vehicles are
11 an important step forward in protecting our families
12 from climate pollution.

13 Climate change threatens our health in many ways
14 and is also making it more difficult to clean up air
15 pollution. Parents around the country want to see a
16 rapid transition to zero-emission vehicles. Moms Clean
17 Air Force is calling on EPA to finalize the strongest
18 possible clean truck standards this year.

19 These days I live in Maryland, but I've lived most
20 of my life in Tacoma and Seattle in Washington. Both
21 cities are major ports with tremendous numbers of
22 trucks traveling through the center of the cities. Our

1 West Seattle home was just over the hill from the Port
2 of Seattle, and I worked at the Office of Indian Child
3 Welfare, less than half a mile from one of the main
4 gates for the Port of Seattle. It is not a coincidence
5 that the state child welfare office primarily dedicated
6 to serving indigenous families is so close to a major
7 source of truck pollution. Many social services are
8 located around truck routes in Seattle and in other
9 cities. Allowing economics and race to push people
10 into pollution hotspots shows how little we regard the
11 health and overall value of some of our fellow
12 Americans.

13 I lived over the hill where the pollution was much
14 less pervasive. Not everyone gets to leave these
15 sources of pollution at the end of the day, though.
16 Many lower-income communities in Seattle and Tacoma are
17 directly on the truck routes and I-5, a major trucking
18 corridor. Schools like Maple Elementary are right next
19 to the interstate. The Puyallup tribal lands are
20 deeply impacted by the pollution around the Port of
21 Tacoma, and the Port of Seattle is on unrecognized
22 Duwamish land.

1 According to EPA, more than 45 million people in
2 the U.S. live within 300 feet of a major roadway or
3 transportation facility, and 72 million people live
4 within 200 meters of a truck freight rail. People of
5 color are more likely to be exposed to traffic
6 pollution. Truck pollution can be very visible, but
7 the invisible climate pollution that trucks generate is
8 even more deeply concerning to me.

9 I became a parent 10 years ago, and within days of
10 the birth of my child, I came to the very distressing
11 realization that climate change threatens our future.
12 Today's children will live through at least 3 times as
13 many climate disasters as their grandparents. I am
14 calling on the EPA to show courage and love for
15 generations to come by creating the strongest possible
16 greenhouse gas truck rules. I urge you to finalize
17 strong standards consistent with the Advanced Clean
18 Trucks Rule this year and put us on a path to a cleaner
19 future. Thank you very much.

20 MS. THOMPSON: Thank you for your comment. As a
21 reminder, if you are speaking today, you will receive a
22 notification on your screen that you are being promoted

1 to the role of panelist shortly prior to your speaking
2 time. You must accept that invitation to be able to
3 unmute when you are called to testify. This will also
4 allow you to turn on your camera, which we encourage
5 you to do. Speakers connected by telephone should
6 unmute their phones when called to testify. We ask
7 that each person limit their verbal testimony to 3
8 minutes. Please speak slowly and clearly so our court
9 reporter and interpreters can capture these proceedings
10 accurately. We encourage you to provide any portion of
11 your prepared statement that you are unable to deliver
12 along with any additional comments to Docket Number
13 EPA-HQ-OAR-2022-0985 on Regulations.gov.

14 If you are having technical difficulties, please
15 send an email to public_hearing@abtassoc.com or call
16 (919) 294-7849. If you are not registered to speak but
17 you would like to, please send an email with your name
18 and phone number to public_hearing@abtassoc.com or call
19 (919) 294-7849.

20 The next speaker will be Patrice Tomcik. Patrice,
21 you may now unmute, and please state your name and
22 affiliation for the record.

1 MS. TOMCIK: Thank you for the opportunity to
2 testify today. My name is Patrice Tomcik -- P-A-T-R-I-
3 C-E, T-O-M-C-I-K -- and I'm the national field director
4 for Moms Clean Air Force, an organization over 1.5
5 million moms and dads united to protect our children's
6 health from air pollution and climate change.

7 I live in the town of Gibsonia located in
8 Southwestern Pennsylvania with my husband and two
9 children where vehicle pollution degrades our air
10 quality and contributes to climate change. The EPA's
11 proposed greenhouse gas emission standards for heavy-
12 duty vehicles are an important step forward to better
13 protect children from the health harms of air pollution
14 and climate change. Moms across the country are
15 calling on EPA to finalize the strongest possible clean
16 truck standards for this year.

17 Transportation is the largest source of greenhouse
18 gas emissions in the United States, with heavy-duty
19 trucks contributing 25 percent of the climate-warming
20 pollution within this sector. Climate change has
21 contributed to shorter, warmer winters, providing ideal
22 conditions for Lyme disease-carrying ticks to thrive and

1 multiply faster, especially in the Northeast. I've
2 seen evidence of this as over 10 people I know have
3 been treated for Lyme disease in the past 5 years,
4 including my husband. Tick checks have become a
5 standard routine in our house as I have repeatedly had
6 to remove them from my family and dogs. In addition to
7 reducing greenhouse gas emissions that contribute to
8 shorter, warmer winters in the Northeast, strong clean
9 truck standards will help reduce tailpipe pollution
10 that harms our health by accelerating our transition to
11 zero-emission vehicles.

12 My children's school is located approximately 175
13 feet from the heavy traffic State Route 228. Studies
14 have shown that the highest daytime exposure of traffic
15 pollution are within 500 feet of a busy road. On an
16 average day, at least 10,000 vehicles and 500 trucks
17 travel this really heavily congested roadway. Tailpipe
18 pollution can readily penetrate the indoors where it
19 can be breathed in by young lungs. In the evening, my
20 kids attend outdoor sports at the sports complex
21 located near the end of the roadway. This is the
22 environment my children have been exposed to since

1 kindergarten and now for their high school years.
2 Unfortunately, my story is not unique since many
3 schools across the nation are built near busy roadways
4 because the land is cheap.

5 I know that children are especially impacted by
6 pollution since their lungs and brains are still
7 developing until early adulthood. I'm very worried
8 about what my children are breathing into their lungs
9 every day. My younger son had cancer and he's a
10 survivor, and I know his immune system is compromised.

11 I'm urging the EPA to finalize this year the strongest
12 possible greenhouse gas rules for heavy-duty trucks to
13 protect our children's health and futures. Thank you
14 very much.

15 MS. THOMPSON: Thank you for your comment. The
16 next speaker will be Lucia Valentine. You may now
17 unmute, and please state your name and affiliation for
18 the record.

19 MS. VALENTINE: Hello. My name is Luciana
20 Valentine and with Moms Clean Air Force, and thank you
21 for the opportunity to testify today. I work as the
22 West Virginia organizer for Moms Clean Air Force, and I

1 live in Shepherdstown, and I have lived in the Mountain
2 State my whole life. On behalf of Moms Clean Air
3 Force, I'm testifying in support of the proposed
4 standards and calling on EPA to finalize strong clean
5 truck standards this year. Stronger transportation
6 standards are crucial in protecting the health of our
7 children and communities, and it's urgent that we act
8 now.

9 Growing up along the banks of the Potomac River,
10 I've experienced exacerbated climate disasters, such as
11 flooding, due to the negative impacts that greenhouse
12 gases have on our environment, and this is in major
13 part due to the lack of vehicle pollution standards.
14 The transportation sector is the largest source of
15 carbon pollution in the United States, making up 27
16 percent of all emissions, and within the transportation
17 sector, heavy-duty vehicles are the second largest
18 greenhouse gas contributor at 25 percent. The largest
19 contributor is light-duty vehicles like cars.

20 EPA's proposed greenhouse gas regulations for
21 heavy-duty vehicles are an important step forward in
22 protecting our families from climate change. Parents

1 across West Virginia want to see a rapid transition to
2 zero-emission vehicles in order to cut climate
3 pollution. Climate change is an issue of generational
4 justice because today's children will live through at
5 least 3 times as many climate disasters as their
6 grandparents. West Virginia is currently one of the
7 wettest states in the country, and unless we mitigate
8 the impacts of the climate crisis, our state expects to
9 see flood disasters increase in severity and frequency.

10 And in addition to important climate benefits,
11 strong clean truck standards will help reduce other
12 tailpipe pollution that harms our health because they
13 will help speed our transition to zero-emission
14 vehicles. Air pollution from trucks is a major public
15 health problem, and although air quality in the United
16 States has improved in the last several decades, 36
17 percent of Americans, which is nearly 120 million
18 people, live in places with unhealthy levels of air
19 pollution according to the 2023 American Lung
20 Association's "State of the Air" report.

21 Tailpipe exhaust from heavy-duty vehicles is also
22 a significant source of nitrogen oxides, which react in

1 the atmosphere to form ground-level ozone which is
2 harmful to breathe. This pollution from trucks is also
3 a source of dangerous particle pollution, which can
4 also be known as soot. These trucks are covered by
5 this rule, which will be on the -- which will be on the
6 road for decades, impacting air quality for
7 generations. These vehicles must be cleaned up as soon
8 as possible.

9 So once again I am urging EPA to adopt the
10 strongest possible greenhouse gas rules for heavy-duty
11 trucks. Please protect our health and our future by
12 finalizing this standard as soon as possible, and thank
13 you for your time today.

14 MS. THOMPSON: Thank you for your comment. The
15 next speaker will be Shaina Oliver. You may now
16 unmute, and please state your name and affiliation for
17 the record.

18 MS. OLIVER: Hi. Thank you for taking my comment.
19 My is Shaina Oliver. I'm a field coordinator for Moms
20 Clean Air Force and EcoMadres Colorado and Moms Clean
21 Air Force, where over 1 million parents, guardians, and
22 caregivers fighting -- united in fighting for our

1 children's right to breathe clean air and to live in a
2 safe environment. Here in Colorado, we are 41,000
3 parents strong. On behalf of Moms Clean Air Force,
4 EcoMadres Colorado, I am testifying in support of the
5 proposed standards and call on EPA to finalize strong
6 clean truck standards this year.

7 Stronger transportation standards are crucial in
8 protecting the health of our children and communities,
9 and it's urgent that we act now. Importantly, I'm an
10 indigenous mother, four kids, together with my husband,
11 and we are a family of six. My children and I are
12 descendants of the survivors of the genocide known as
13 the Indian Removal Act, known to the Dene as the Long
14 Walk of the Navajo. As indigenous people, we know
15 environmental harms are embedded in our laws, policies,
16 and governance. As a Dene, my people, we've seen our
17 wealth, our lands, and our health become degraded due
18 to these environmental harms.

19 Our family lives in a disproportionately impacted
20 community in the Northeast Denver Metro Area. As an
21 indigenous parent, my family continues to be pushed to
22 live near busy intersections and highways that are

1 dangerous to our children and our community's members
2 in many ways. On top of this, the Colorado Front Range
3 continues to fail ozone pollution standards set by the
4 EPA. Colorado now ranks as the 6th worst state for
5 ozone pollution, and this year we made (AUDIO
6 MALFUNCTION) to the American Lung Association "State of
7 the Air" report.

8 As a community member living with asthma, I am,
9 too, at risk of asthma attacks, stroke, and premature
10 death. My youngest son, who is 11 now, was diagnosed
11 with asthma last year. Indigenous black and brown
12 communities are at higher risk due to asthma, diabetes,
13 cancer, heart disease, leukemia, respiratory disease,
14 adverse birth outcomes, and premature deaths than our
15 white counterparts. When indigenous people leave the
16 reservation, we are redlined, segregated, or gentrified
17 out of -- out of less polluted neighborhoods. Because
18 people of color are pushed to live near highways,
19 industrial areas that receive a hefty amount of truck
20 traffic and particulate matter pollution, we experience
21 a heavy health burden from pollution. Our kids are
22 especially impacted.

1 So bottom line, parents in Colorado, we want to
2 see a rapid transition to net-zero emissions, and Moms
3 Clean Air Force is calling on the EPA to finalize the
4 strongest possible clean, strict standards this year,
5 and thank you for taking my comment.

6 MS. THOMPSON: Thank you for your comment. The
7 next speaker will be Laurie Anderson. You may now
8 unmute, and please state your name and affiliation for
9 the record.

10 MS. ANDERSON: Thank you for this opportunity to
11 testify. My name is Laurie Anderson, and I'm a
12 Colorado field organizer with Moms Clean Air Force. I
13 am from Broomfield, Colorado. On behalf of Moms Clean
14 Air Force, I am testifying in support of the proposed
15 standards and call on EPA to finalize strong clean
16 truck standards this year. Strong transportation
17 standards are crucial in protecting the health of our
18 children and communities, and it is urgent that we act
19 now.

20 As a mom of five, I am concerned that our future
21 generations, including our own children, will be
22 significantly more impacted by climate-change-fueled

1 extreme weather events in their lifetimes than we are
2 today. I live in the Denver Metro/North Front Range
3 Ozone Non-Attainment Area, which has been downgraded to
4 severe non-attainment. Here we contend with NOx
5 emissions from heavy vehicle traffic along with EOC
6 emissions from the oil and gas development, which
7 results in many high ozone days all summer long, days
8 in which our air is unhealthy to breathe. Therefore,
9 we must reduce both of these pollution sources to bring
10 our area into ozone non-attainment -- into ozone
11 attainment.

12 We know that transportation is the largest source
13 of greenhouse gas pollution and that within the sector,
14 heavy-duty trucks are the second largest contributor.
15 Greenhouse gas emissions are driving climate change,
16 and we need to reduce this climate pollution from
17 vehicles in order to have a stable climate and protect
18 our families' health. Red flag warning alerts are now
19 all too common in my area. These warnings indicate
20 that critical fire weather conditions exist in which a
21 combination of strong winds, low relative humidity, and
22 warm temperatures exist, which can contribute to

1 extreme fire behavior.

2 We take these warnings very seriously based on
3 extreme fire events here. I live near the devastating
4 December Marshall wildfire, which destroyed more than
5 1,000 homes and has become a sobering example of how
6 climate change is impacting our communities and fueling
7 more frequent and more intense wildfires, including
8 destructive, fast-moving outbreaks even in the dead of
9 winter. 2020 was the second hottest year on record,
10 and the future will likely be even hotter. Across the
11 nation, we are also seeing increasingly powerful
12 hurricanes, more destructive droughts, and severe
13 flooding.

14 We know far too well that addressing the climate
15 crisis can't wait. Therefore, we need the EPA to adopt
16 the strongest possible greenhouse gas rules for heavy-
17 duty trucks to help meet this critical climate moment
18 and protect communities that are already living with
19 extreme and dangerous weather conditions. The
20 transportation sector is currently the leading domestic
21 source of the carbon pollution that is driving climate
22 change, and the trucks manufactured under this rule

1 would be on the road for decades. These trucks and
2 buses must be cleaned up as soon as possible. Moms and
3 dads across the country want to see a rapid transition
4 to zero-emitting trucks, and we need cleaner air for
5 children -- for our children and our communities.

6 Everyone has the right to breathe clean air.
7 Please protect our health and our future by finalizing
8 these standards as soon as possible. Thank you for
9 this opportunity to testify.

10 MS. THOMPSON: Thank you for your comments. The
11 next speaker will be Almeta Cooper. You may now
12 unmute, and please state your name and affiliation for
13 the record.

14 MS. COOPER: Good morning. My name is Almeta
15 Cooper -- A-L-M-E-T-A, Almeta -- Cooper, C-O-O-P-E-R.
16 I'm the national manager for Moms Clean Air Force --
17 national manager for health equity for Moms Clean Air
18 Force, which consists of about 1-and-a-half million
19 moms, dads, and caregivers nationally, and you have
20 heard from many of my colleagues this morning already.

21 As an African-American woman, a mother, and a
22 member of Moms Clean Air Force living in Washington,

1 D.C., I applaud the Environmental Protection Agency for
2 proposing stronger greenhouse gases -- greenhouse gas
3 emissions standards for heavy-duty vehicles, effective
4 with Model Year 2027, as an important step forward in
5 protecting families, especially black and brown
6 families who are living, playing, and working near
7 locations that are the most affected by harmful health
8 effects of climate pollution.

9 As parents and caregivers, we are asking for a
10 rapid transition to zero-emitting heavy-duty vehicles
11 because the U.S. transportation sector is the largest
12 source of climate pollution in the United States,
13 making up about 27 percent of all greenhouse gas
14 emissions. It is also a significant source of air
15 pollution. Even worse, heavy-duty vehicles, which
16 include trucks, buses, transit buses, school buses,
17 semi-trailer trucks, or big rigs, or tractor trailers,
18 18-wheelers, garbage and recycling trucks, and delivery
19 trucks, are the second-largest contributor in the
20 transportation sector, second only to passenger
21 vehicles.

22 The specific reason that I'm here today is that I

1 care deeply about environmental justice, especially the
2 connection between climate change and health equity for
3 our most vulnerable populations. Climate change is a
4 major contributor to the health crisis in African-
5 American communities, not in some distant future, but
6 right now because of extreme weather events. African-
7 Americans bear 21 percent more of the climate change
8 harms when compared to other racial groups. Across the
9 country, communities of color experience higher-than-
10 average levels of pollution exposure from a variety of
11 sources, including heavy-duty trucks. African
12 Americans specifically are exposed to higher-than-
13 average amounts of pollution from all sources,
14 according to the EPA's National Emissions Inventory.

15 And not only do heavy-duty trucks contribute to
16 climate pollution, but they also pollute our air. In
17 Washington, D.C. where I live, about 126,000 children,
18 9,000 pregnant women, and 86,000 people 65 years of age
19 or older are being exposed to poor air quality daily
20 because of air pollution, according to the American
21 Lung Association. Strong standards could be a catalyst
22 to accelerate the transition to zero-emission vehicles,

1 which would have health benefits both for our climate
2 and for -- and for our communities.

3 In closing, I strongly urge the EPA to finalize
4 the strongest possible greenhouse gas emission
5 standards for heavy-duty truck vehicles this year and
6 to strengthen the final greenhouse gas emissions
7 standards for heavy-duty vehicles to protect children,
8 people with asthma, older adults, and other vulnerable
9 groups from the health harms of air pollution.

10 Everyone should be able to breathe clean air. I thank
11 the EPA and its staff for inviting public comment and
12 permitting remote testimony to allow for more
13 participation in these public hearings.

14 MS. THOMPSON: Thank you for your comment. As a
15 reminder, if you are speaking today, you will receive a
16 notification on your screen that you are being promoted
17 to the role of panelist shortly prior to your speaking
18 time. You must accept that invitation to be able to
19 unmute when you're called to testify. This will also
20 allow you to turn on your camera, which we encourage
21 you to do. Speakers connected by telephone should
22 unmute their phones when called to testify. We ask

1 that each person limit their verbal testimony to 3
2 minutes. Please speak slowly and clearly so our court
3 reporter and interpreters can capture these proceedings
4 accurately. We encourage you to provide any portion of
5 your prepared statement that you are unable to deliver
6 along with any additional comments to Docket Number
7 EPA-HQ-OAR-2022-0985 on Regulations.gov.

8 If you are having technical difficulties, please
9 send an email to public_hearing@abtassoc.com or call
10 (919) 294-7849. If you are not registered to speak but
11 you would like to, please send an email with your name
12 and phone number to public_hearing@abtassoc.com or call
13 (919) 294-7849.

14 The next speaker will be Kevin Brown. You may now
15 unmute, and please state your name and affiliation for
16 the record.

17 MR. BROWN: Good morning. I'm Kevin Brown with
18 MECA Clean Mobility, which is a nonprofit trade
19 Association representing the leading suppliers of clean
20 mobility technologies for electric and conventional
21 vehicles. We will be submitting detailed written
22 comments summarized by my brief statement today.

1 MECA support this proposal to reduce CO2 emissions
2 from heavy-duty trucks by setting performance standards
3 that continue to improve the efficiency of today's
4 engines, while accelerating the introduction of
5 electric and hydrogen powertrains across applications
6 where they best meet the needs of end users. MECA
7 believes that a wide range of engine and powertrain
8 technologies not included in Phase 2 can be further
9 deployed to reduce CO2 emissions of combustion engines,
10 and EPA should set another round of engine standards
11 for vehicle uses that may take longer to electrify.

12 In particular, MECA believes that hybrid
13 powertrains and hydrogen internal combustion engines
14 will see increased development in the next few years,
15 and EPA should add these carbon-reduction technologies
16 to their analyses in the final rule. MECA supports the
17 removal of multipliers for PHEV and BEVs as these
18 technologies are sufficiently incentivized under
19 government funding programs, and the continued use of
20 these multipliers may ultimately result in fewer trucks
21 with electric and other advanced powertrains.

22 EPA correctly points out that the multiplier

1 incentives are still needed for hydrogen fuel cell
2 vehicles due to the early development stage of the
3 technology. MECA believes it would be consistent to
4 assign a multiplier to hydrogen-engine-powered trucks
5 to reflect the infrastructure accelerating potential of
6 this hydrogen technology that would support faster
7 deployment of fuel-cell-powered trucks in vocations
8 less suited to battery electric technology. Finally,
9 MECA supports that all heavy-duty vehicles should meet
10 similar durability and warranty requirements to reflect
11 confidence in the reliability of all technologies to
12 fleet and truck owners.

13 In closing, MECA appreciates the hard work and
14 dedication that EPA staff put into this important
15 rulemaking proposal on the heels of the truck criteria
16 pollutant standards finalized late last year. The
17 supplier industry remains committed to delivering the
18 cost-effective clean mobility technologies to meet the
19 goals of this proposed rule. Thank you for your time,
20 and I'm happy to answer any questions you might have.

21 MS. THOMPSON: Thank you for your comment. The
22 next speaker is Britt Carmon. You may now unmute, and

1 please state your name and affiliation for the record.

2 MS. CARMON: Thank you. Good afternoon. My name
3 is Britt Carmon, and I'm a senior advocate at the
4 Natural Resources Defense Council, or NRDC. I'm here
5 today on behalf of NRDC's more than 3 million members
6 and activists who support our efforts to safeguard the
7 rights of all people to clean air, clean water, and a
8 healthy planet.

9 The transportation sector is the largest source of
10 greenhouse gas emissions in the United States and is
11 responsible for 27 percent of all emissions. Within
12 the sector, medium- and heavy-duty vehicles have an
13 outsized impact, contributing to 26 percent of mobile
14 source greenhouse gas emissions when only making up 10
15 percent of the vehicles on the road. Given the impact
16 that emissions from these vehicles have on our climate
17 and public health, it is important that EPA use every
18 tool at its disposal to finalize a strong Phase 3
19 greenhouse gas rule for heavy-duty vehicles by the end
20 of the year.

21 Unfortunately, EPA's current proposal for the
22 Phase 3 Rule falls short, and, as it stands, the

1 projected zero-emission vehicle levels within the
2 Agency's proposal will fail to deliver the full
3 emissions reductions needed from the sector to meet our
4 Paris Agreement commitments.

5 It is imperative that the Agency significantly
6 strengthen its proposal and finalize a rule that does
7 the following: significantly exceed the strongest
8 alternative offer for comment in the Agency's proposal;
9 require internal combustion engine vehicles get cleaner
10 and provide increased certainty that their projected
11 zero-emission vehicle targets will be met; incorporate
12 the recommendations from the Agency's Science Advisory
13 Board to address the cumulative impacts of free transit
14 system on environmental justice communities; and put
15 the nation on a path to zero emissions from all new
16 heavy-duty vehicles by 2035.

17 EPA's proposal is plagued by a number of
18 shortcomings. To start, it's structured in a manner
19 that fails to provide sufficient certainty that the
20 projected zero-emission vehicle levels and their
21 associated environmental and public health benefits
22 will actually occur. The proposal also fails to

1 appropriately account for the fact that over 20 percent
2 of U.S. medium -- U.S. medium- and heavy-duty vehicle
3 sales are in a state that has already adopted the
4 Advanced Clean Trucks Rule and with a number of other
5 states potentially moving forward or considering
6 adoption.

7 Additionally, the electrification projections in
8 the Agency's proposal fail to appropriately incorporate
9 the impacts of the Inflation Reduction Act and the
10 Bipartisan Infrastructure Law, two critical laws that
11 provided a multitude of investments to help transition
12 heavy-duty vehicles to zero emissions, and to ensure
13 that the infrastructure needs of these vehicles are
14 met. Instead, EPA relies on overly-conservative
15 assumptions that even undercut industry's publicly-
16 announced plans to transition their fleets to zero
17 emissions.

18 A stronger rule is technologically, legally, and
19 economically feasible, and NRDC will work together with
20 the Agency and the Moving Forward Network and others to
21 address these concerns, and we look forward to a final
22 EPA rule that puts us on a path to zero out pollution

1 from heavy-duty vehicles by 2035. We also thank the
2 EPA for working to ensure that states are not impeded
3 from addressing air pollution from locomotives. Thank
4 you.

5 MS. THOMPSON: Thank you for your comment. The
6 next speaker will be Elizabeth Bechard.

7 MR. MEASE: One second.

8 MS. THOMPSON: You may now --

9 MR. MEASE: One second, please. This is
10 conferencing support. I have received requests from
11 our translators if we could please ask the attendees to
12 slow down their speech -- speaking as this has to be
13 recorded by our court reporter and translated
14 simultaneously into Spanish. Thank you.

15 MS. THOMPSON: Thank you. Elizabeth, you may now
16 begin.

17 MS. BECHARD: Thank you for the opportunity to
18 testify. My name is Elizabeth Bechard, and I am a
19 senior policy analyst with Moms Clean Air Force. I
20 live in Essex, Vermont with my partner and 7-year-old
21 twins. I ask EPA to set the strongest possible
22 standards for greenhouse gas pollution from trucks and

1 ask that you finalize these important protections this
2 year.

3 Pollution from heavy-duty vehicles is a
4 significant contributor to climate change, and one of
5 the areas I focus on in my work is the intersection
6 between climate change and mental health. A growing
7 body of research, including the most recent IPCC
8 report, underscores that the mental health impacts of
9 climate change are significant and only expected to
10 increase.

11 Recent polling from the Yale Program on Climate
12 Change Communication finds that approximately 1 in 3
13 people in the U.S. report feeling angry, afraid,
14 outraged, anxious, and even hopeless about climate
15 change. In 2021, more than 4 in 10 people in the U.S.
16 lived in a county that experienced climate-related
17 extreme weather, including fires, floods, hurricanes,
18 and other strong storms. Although the costs of climate
19 disasters is often measured in injuries, premature
20 deaths, or building damage, research suggests that the
21 number of people psychologically affected by disasters
22 can surpass those physically injured by 40 to 1, and

1 numerous publications, including EPA's own report on
2 Climate Change and Children's Health just last week
3 suggests that children may be especially vulnerable to
4 the mental health impacts of climate change.

5 As a mother, the mental health impacts of climate
6 change are personal for me. I have struggled with
7 climate anxiety and grief myself for several years,
8 sometimes to the point where I've needed professional
9 help to cope. I worry about how climate stressors,
10 like extreme, heat, hurricanes, and worsened air
11 quality, may affect my children in the future, and
12 every day, I talk to parents around the country with
13 similar worries. These worries can affect our quality
14 of life and the quality of our family's lives, but I'm
15 not hopeless because I know that we have the tools to
16 act on climate, and we need to use them.

17 Stronger greenhouse gas standards for heavy-duty
18 vehicles are one of the most important tools we can
19 leverage today to fight the climate crisis. Finalizing
20 the strongest possible standards as soon as possible is
21 an opportunity we simply cannot miss to safeguard both
22 our physical and mental health and, more importantly,

1 to protect the well-being of our children and future
2 generations. Once again, I ask for the strongest
3 possible standards for cleaner heavy-duty vehicles
4 consistent with the Advanced Clean Trucks Rule and ask
5 that you finalize these important protections this
6 year. Thank you for the opportunity to testify.

7 MS. THOMPSON: Thank you for your comment. The
8 next speaker will be Azjargal Tsogtsaikhan. You may
9 now unmute, and please state your name and affiliation
10 for the record.

11 MS. TSOG TSAIKHAN: Thank you for the opportunity
12 to testify. My name is Azjargal Tsogtsaikhan. I'm the
13 founder of Breathe Mongolia Clean Air Coalition, a
14 nonprofit organization that fights air pollution in
15 Mongolia. We work on raising awareness on negative
16 health impact and monetary policy implementation.

17 My people from Mongolia are basically climate
18 change and air pollution refugees as we moved to the
19 U.S. and other countries to escape the deadly air
20 pollution that kills their unborn and born children
21 every year. And 3 to 4 percent of our population lives
22 only beyond 65 years old. Our country ranked number 4

1 and 5 on air pollution level globally, right next to
2 the countries with billions and millions of people,
3 like India and Pakistan.

4 Pneumonia is the number two killer of children
5 under 2 -- under 5, so I'm very much familiar with the
6 health impacts of air pollution and climate change.
7 And I've lived it and I'm still living it as my
8 relatives are suffering the consequences right now.

9 I recently moved to San Jose, California in the
10 U.S. and started supporting the activities of Moms
11 Clean Air Force, and I live next to very busy roads and
12 freeways. I have to cross at least two or three busy
13 streets within a 5- to 6-minute walk to get to the park
14 or playground, and they're all located right next to
15 busy roads with busy vehicles and trucks emitting all
16 kinds of emissions. It's almost impossible to (AUDIO
17 MALFUNCTION) and to home that's safe, or we basically
18 cannot afford it.

19 In the 2023 State of Air Report, they rated my
20 neighborhood's air quality F for ozone and particle
21 pollution. It is a human right to breathe clean air,
22 and it's not a privilege. Now the only choice left is

1 for EPA and other relevant agencies and industries,
2 including the trucking industry, to enforce strong
3 standards and provide all the necessary financial
4 technical support to the trucking and other relevant
5 industries to make sure that we reach the goal of zero-
6 emissions.

7 I understand the complexity of bringing systemic
8 change and getting buy-in from various stakeholders.
9 How would you like to spend your resources and energy
10 cleaning up the air now and enjoy good health and well-
11 being for years to come, or not do enough and pay for
12 it later anyways with your lives and lifelong savings?

13 Remember, the North Star is clean air and zero
14 emissions. No level of emission or pollution is safe
15 for any living being. I'm thankful that I live in a
16 country that works hard to protect its people and have
17 healthy dialogues with relevant industries. And our
18 families want to see rapid transition to zero-emitting
19 heavy-duty vehicles, and we urgently need cleaner air
20 for our children and our communities.

21 MS. THOMPSON: Thank you for your comment. The
22 next speaker will be Patrick Kelly. You may now

1 unmute, and please state your name and affiliation for
2 the record.

3 MR. KELLY: Good afternoon, and thank you for the
4 opportunity to testify. I am Patrick Kelly, senior
5 director, fuel and vehicle policy, at the American Fuel
6 and Petrochemical Manufacturers. AFPM represents the
7 U.S. refining and petrochemical industries, and we're
8 committed to developing sound climate policies that
9 take a balanced approach to our energy and economic
10 security and environmental needs.

11 Vehicles should be evaluated using a full life
12 cycle assessment. A significant amount of carbon is
13 emitted in the manufacturing of batteries for electric
14 vehicles, and EVs utilize carbon emitted from the power
15 sector. Internal combustion engines have a smaller
16 upfront carbon impact but then emit CO2 at the
17 tailpipe. Because a ton of carbon has the same climate
18 impact regardless of where it is emitted in a vehicle's
19 life cycle, it is only through a full life cycle
20 assessment that EPA can properly evaluate these
21 tradeoffs and ensure it achieves the objective of cost-
22 effective carbon emission reductions.

1 A proper life cycle assessment should be based on
2 sound science and account for all emissions, regardless
3 of the powertrain. This includes emissions associated
4 with vehicle production, recharging or refueling,
5 drivetrain or battery replacements, infrastructure
6 modifications, and end-of-life disposal and recycling.

7 And for heavy-duty, this includes the additional
8 vehicles needed to move the same tons of freight.
9 Focusing only on tailpipe emissions results in a
10 distorted view of the actual environmental impacts of
11 different vehicle technologies.

12 Requirements that force increased reliance on
13 battery electric vehicles place unnecessary risks on
14 our energy and economic security. In the past few
15 years, the U.S. became a net exporter of crude oil and
16 petroleum products. This measure of energy
17 independence is something the U.S. has not seen since
18 the 1950s. China has a dominant position in the global
19 supply chain for battery production, including 90
20 percent of anode production. The U.S. should be very
21 careful not to trade away our hard-earned energy
22 security and leave our economy more dependent and

1 financially beholden to countries that control the
2 minerals required to manufacture EV batteries.
3 Consumers and fleets should be able to choose the
4 transportation technologies that meet their needs and
5 the refueling capability of the electric grid, which is
6 not ready for the magnitude of these technology-forcing
7 standards.

8 EPA should not finalize these proposed heavy-duty
9 vehicle standards. The Agency should re-propose
10 standards for 2027 and beyond that preserve consumer
11 choice by taking a technology-neutral approach to
12 emissions and not pick specific market winners by
13 arbitrarily ignoring a significant source of GHG
14 emissions associated with EV production and use. AFPM
15 will provide additional written comments, and I'm happy
16 to answer any questions.

17 MS. THOMPSON: Thank you for your comments. The
18 next speaker will be Alexander Paine Boesenberg. You
19 may now unmute, and please state your name and
20 affiliation for the record.

21 MR. BOESENBERG: Good afternoon. I'm Alex
22 Boesenberg, and I'm the vice president of regulatory

1 affairs for MEMA: The Vehicle Suppliers Association.
2 MEMA and its members support the objectives of the
3 Agency to improve national air quality through
4 improvements to heavy-duty trucks. We directly support
5 and enable the transformation and electrification of
6 the transportation sector.

7 We are concerned that the EPA's models for cost
8 and technological feasibility are either not fully
9 informed or rely too heavily on assumptions, and that
10 the proposed rule does not address existing barriers
11 for consumer uptake of new technology, adoption of EVs,
12 necessary infrastructure improvements, and vocational
13 performance demands placed on working trucks. We urge
14 the Agency to give greater consideration to other
15 technologies -- pardon me -- including internal
16 combustion engines fueled by hydrogen.

17 We're also concerned that the EPA is placing too
18 much reliance on emerging technology and the necessary
19 growth in manufacturing capacity. We will comment on
20 our concerns in writing to the best extent possible and
21 supply data and references wherever able. It is our
22 goal to assist EPA in its efforts to finalize the rule

1 from a more fully-informed viewpoint. Thank you.

2 MS. THOMPSON: Thank you for your comment. The
3 next speaker will be -- excuse me. The next speaker
4 will be Shyamalan Raja. You may now unmute, and please
5 state your name and affiliation for the record.

6 DR. RAJA: Good afternoon. I am Dr. Shyamalan
7 Raja -- S-H-Y-A-M-A-L-A, R-A-J-A-N -- national director
8 of policy for healthy air at the American Lung
9 Association. The Lung Association strongly supports
10 this proposed rule to reduce greenhouse gas emissions
11 from heavy-duty vehicles. We urge EPA to adopt the
12 most stringent provisions included in this rule and
13 finalize the rule in the current calendar year.

14 Accelerated climate change caused by anthropogenic
15 emissions of greenhouse gases impacts public health in
16 multiple direct and indirect ways. Setting the most
17 stringent carbon dioxide emission standards, and their
18 aggressive phase in, and increasing adoptions of zero-
19 emission vehicles are all important and originated
20 actions to reduce greenhouse gas emissions from the
21 heavy-duty mobile sector.

22 Combustion-driven mobile sources, including heavy-

1 duty vehicles, are the largest sources of conventional
2 air pollutants, like high particulate matter, PM 2.5,
3 and nitrogen oxides, NOx, which is a precursor of
4 another air pollutant, ozone, which is also a
5 greenhouse gas. Additionally, climate change poses a
6 climate penalty on conventional air pollution by
7 increasing ambient levels of PM 2.5 and ozone and
8 contributing to additional mortalities and morbidities.

9 The proposed rule to reduce carbon emissions does
10 offer co-benefits of reducing co-emitted pollutants,
11 which contribute to numerous adverse health impacts.

12 I go often to Maplewood, a city in the western
13 suburbs of Chicago, to visit my elderly mother.
14 Irrespective of the time I land at either of the two
15 area airports or the highways I take to cross the 30
16 miles to get home, the roadways seem to be in perpetual
17 rush hour traffic with heavy-duty trucks clogging the
18 routes, squelching thick black smoke. With no
19 accessible public transportation connecting the suburbs
20 to the airports and the other areas in the city,
21 visitors to the area, along with daily commuters,
22 including my family and friends, are obliged to breathe

1 in the highly-polluted air on interstate highways. The
2 American Lung Association's recently-released "State of
3 the Air" report for 2023 shows the Chicago Metro Area
4 to be among the top 25 most-polluted regions in the
5 country for both long-term PM 2.5 and also in
6 exposures.

7 The extremely variable vehicle emissions
8 inspection programs between states and even within a
9 state attribute to interstate traffic-related air
10 pollution. The American Lung Association's "Zeroing in
11 on Healthy Air Reform" and the follow-on report,
12 "Delivering Clean Air" released last year, show
13 enormous public health and climate benefits of
14 transitioning to zero-emission vehicles, powered by
15 clean, non-combustion renewable electricity, gaining
16 nearly \$735 billion in cumulative health benefits and
17 66,800 avoided deaths from such a transition by 2050 in
18 just heavy-duty transportation in counties with major
19 truck routes. This proposal is a positive step in
20 saving lives by reducing greenhouse gases and committed
21 air pollutants from heavy-duty vehicles. Thank you.

22 MS. THOMPSON: Thank you for your comment. The

1 next speaker will be Cara Cook. You may now unmute,
2 and please state your name and affiliation for the
3 record.

4 MS. COOK: Hi. This is Cara Cook -- C-A-R-A --
5 last name, C-O-O-K. I'm with the Alliance of Nurses
6 for Healthy Environments. Thank you for the
7 opportunity to provide comments today. I'm a
8 registered nurse and part of the Alliance of Nurses for
9 Healthy Environments, a national nursing organization
10 focused solely on how the environment impacts human
11 health.

12 Our organization thanks the EPA for taking an
13 important step forward to address heavy-duty vehicle
14 pollution driving climate change. We support EPA's
15 setting three greenhouse gas standards for heavy-duty
16 vehicles and encourage the Agency to make the rule even
17 stronger to maximize the benefits for public health.

18 Transportation is the single biggest source of
19 greenhouse gas emissions in the U.S., and cleaning up
20 trucks and buses is a critical part of addressing
21 climate change. Medium- and heavy-duty vehicles make
22 up less than 10 percent of the vehicles on the road,

1 yet they generate the majority of harmful on-road
2 emissions. Climate change amplifies a wide range of
3 health risks, including death and illness relating to
4 -- relating to extreme heat and weather events, and
5 increased cases of vector-borne disease. We need the
6 strongest tools available to protect public health in
7 the face of climate change.

8 Setting greenhouse gas emission standards is not
9 only necessary to address climate change but has the
10 added benefit of reducing other toxic pollutants.
11 Pollution from heavy-duty vehicles disproportionately
12 impacts the health of the 72 million people who live
13 near truck freight routes. Heavy-duty vehicles emit a
14 mixture of dangerous pollutants, including nitrogen
15 oxides, ozone, and PM, which contribute to lung
16 irritation or aggravation of asthma and other lung
17 diseases.

18 Our organization is encouraging EPA to move
19 quickly and finalize the strongest possible clean air
20 truck standards by the end of the year. The finalized
21 rule also needs to be at least the strongest
22 alternatives proposed by EPA. As EPA notes, these

1 options are still low lower than what several major
2 truck manufacturers have put out publicly as their
3 goals for transitioning their fleets to zero-emission
4 vehicles. These even more protective levels would
5 maximize the benefits to public health, which our
6 organization supports.

7 The benefits of reducing pollution from heavy-duty
8 vehicles dramatically outweighs the cost, with benefits
9 likely outweighing the costs by an even greater margin
10 than EPA estimates (AUDIO MALFUNCTION) since many of
11 the health benefits, such as the health benefits of
12 reducing particle pollution exposure, aren't quantified
13 in EPA's analysis. A report by the American Lung
14 Association found that a nationwide transition to zero-
15 emission light-, medium-, and heavy-duty vehicles,
16 coupled with the transition to zero-emission
17 electricity, would result in 110,000 premature deaths
18 prevented and 1.2 trillion in health benefits.

19 So in closing, we just encourage EPA to finalize
20 this strongest rule as quickly as possible and no later
21 by the end of 2023. Thank you.

22 MS. THOMPSON: Thank you for your comment. The

1 next speaker will be Katherine Stainken. You may now
2 unmute, and please state your name and affiliation for
3 the record.

4 MS. STAINKEN: Hi. My name is Katherine Stainken.

5 That's K-A-T-H-E-R-I-N-E, last name, Stainken -- S as
6 in "Sam," T-A-I-N-K-E-N, and I am the vice president of
7 policy at the Electrification Coalition. Thank you for
8 the opportunity to provide public comment today in
9 support of the EPA's Proposed Rule on the Greenhouse
10 Gas Emission Standards for Heavy-Duty Vehicles, Phase
11 3. We are a non-profit bipartisan organization that is
12 working to accelerate adoption of EVs in order to
13 reduce the economic and national security threats
14 caused by dependence on oil in the transportation
15 sector. Today we are here to offer our support for the
16 EPA's proposed rule as we support the strongest
17 policies that will accelerate our path to
18 transportation electrification across all vehicle
19 classes.

20 The stranglehold that oil has on our
21 transportation sector continues to put us at great
22 economic, national security, and climate risk. As the

1 global community rapidly commits to transportation
2 electrification, we must recognize the scale of what is
3 at stake in terms of American leadership and our global
4 competitiveness as well. In short, we need to
5 recognize that our electric transportation future is a
6 matter of national strategic importance.

7 While recent key policies passed by Congress lay
8 the foundation for a transition to an electric
9 transportation future, the U.S. is still well behind
10 Europe and China in EV adoption, and particularly in
11 the heavy-duty sector. The EPA's Greenhouse Gas
12 Emission Standards for Heavy-Duty Vehicles, Phase 3, is
13 a critical action and policy that clearly signals that
14 it is time to transition away from a dependency on oil
15 in the transportation sector. The proposed rule will
16 indeed lead to the accelerated adoption of EVs in the
17 heavy-duty sector.

18 We know that this electric technology is ready
19 now. National pilot programs have shown that
20 electrified freight is market ready and that the total
21 cost of ownership is lower over the lifetime for an EV.

22 The EC is working directly with a group of businesses

1 looking to electrify their fleet in the heavy-duty
2 sector through our Electric Freight Consortium with
3 members such as Nike, AB, and many more, supporting
4 pilot projects around the country by major companies,
5 including Nestle.

6 In addition to the impacts of the oil sector to
7 our national security, our public health is also at
8 risk. Strong policies that encourage EV adoption is
9 the best way for ensuring the reduction of carbon
10 emissions and other harmful pollutants from the
11 tailpipes of diesel heavy-duty vehicles. We know that
12 the carbon emissions and harmful pollutants
13 particularly overburden low-income communities and
14 communities of color.

15 In closing, we urge this administration to support
16 the strongest policies that will accelerate the
17 transition to transportation electrification as our
18 national security, public health, economic prosperity,
19 leadership, and global competitiveness is at stake.
20 Along with EC's sister organization, SAFE, we look
21 forward to providing additional comment via written
22 testimony on the steps the U.S. is taking to ensure

1 that we have access to a robust, reliable supply chain
2 of critical minerals that will go into the batteries
3 for heavy-duty EVs. Thank you for the opportunity to
4 comment.

5 MS. THOMPSON: Thank you for your comments. At
6 this time, we will begin a scheduled recess. EPA, when
7 would you like to reconvene?

8 MR. CHARMLEY: Kayla, we are going to start again
9 at -- I want to make sure I get this right -- 1:15 p.m.
10 this afternoon. Make sure everyone agrees? Yep, 1:15.

11 (Break.)

12 MS. THOMPSON: Hello, everyone. This is Kayla
13 Thompson from Abt Associates, EPA's contractor. It is
14 now 1:15 p.m., Eastern Time, and we are now rejoining
15 EPA's public hearing about the Greenhouse Gas Emission
16 Standards for Heavy-Duty Vehicles, Phase 3, Proposed
17 Rule.

18 In order to accommodate testimony in both Spanish
19 and English throughout this hearing, we -- all
20 attendees must select their preferred language via the
21 interpretation icon at the bottom of your screen. If
22 you are providing testimony today, please make sure

1 that you are speaking the language of the channel you
2 are listening to. For example, listening to English
3 while speaking in Spanish could prevent other
4 participants from hearing your statement in their
5 language of choice. The public hearing will be
6 recorded by the court reporter, and while the recording
7 will not be made publicly available, a transcript of
8 the public hearing will be posted to the docket several
9 weeks after the hearing.

10 Before we resume the hearing, we'd like to go over
11 some logistics. As a reminder, all attendees are muted
12 automatically. If you are speaking today, you will
13 receive a notification on your screen that you are
14 being promoted to the role of panelist shortly prior to
15 your speaking time. You must accept that invitation to
16 be able to unmute when you are called to testify. This
17 will also allow you to turn on your camera, which we
18 encourage you to do. Speakers connected by telephone
19 should unmute their phones when called to testify.

20 If you are having technical difficulties, please
21 send an email to public_hearing@abtassoc.com or call
22 (919) 294-7849. If you are not registered to speak but

1 you would like to, please send an email to
2 public_hearing@abtassoc.com or call (919) 294-7849.

3 We will now continue our public testimony. The
4 expected speaking order is currently displayed on
5 screen. We ask that each person limit their verbal
6 testimony to 3 minutes. We encourage you to provide
7 any portion of your prepared statement that you are
8 unable to deliver along with any additional comments to
9 Docket Number EPA-HQ-OAR-2022-0985 on Regulations.gov.

10 I will be introducing each speaker in turn. A
11 transcript of the testimony from these public hearings
12 -- from this public hearing will be made available to
13 the public and included in the docket. Please speak
14 slowly and clearly so our court reporter and
15 interpreters can record these proceedings accurately.

16 The first speaker will be Carolina Chacon Mendoza.
17 Please state your name and affiliation for the record.

18 MS. MENDOZA: Hello, and thank you for this
19 opportunity to testify. My name is Carolina Chacon
20 Mendoza, and I am the coalition manager for the
21 Alliance for Electric School Buses. We are a national
22 coalition of not-for-profit organizations united by our

1 commitment to an equitable electrification of the
2 nation's school bus fleet, starting in the communities
3 most affected by diesel pollution. I am here today to
4 present our over -- to represent our over 2 dozen
5 members, all who want to see EPA enact the strongest
6 possible air pollution standards for medium- and heavy-
7 duty trucks and buses, which includes school buses.

8 I myself am a resident of Las Vegas, Nevada. I
9 live just 1 mile from Interstate 15, which crosses the
10 entire country from the very bottom of California all
11 the way to the northernmost edge of Montana. I'm also
12 just 1.7 miles from U.S. Highway 95, a major artery of
13 our state. Every day, thousands of polluting medium-
14 and heavy-duty trucks pass by my home as well as dozens
15 of diesel school buses. It's no surprise that my zip
16 code is in the 97th percentile for diesel particulate
17 matter -- particulate matter exposure.

18 Las Vegas has been ranked the 15th most-polluted
19 city for ozone pollution in the United States by the
20 American Lung Association's "State of the Air" report
21 in 2023. We also experience the highest-ever number of
22 unhealthy spikes in particle pollution in these last

1 few years. I see this pollution daily in the smog that
2 forms over the Las Vegas Valley, the air quality
3 advisories that we're constantly placed under, and the
4 soot that spews out of so many trucks and buses as we
5 drive or walk behind them. These vehicles are
6 everywhere in my community, which is predominantly low
7 or medium income and black and brown, but worst of all,
8 these vehicles are carrying precious cargo. Children
9 as young as toddlers and as old as high schoolers are
10 riding in fossil fuel buses that emit toxins up to 10
11 times higher than they would have been exposed to
12 riding in a normal car.

13 Diesel pollution has been linked not only to
14 respiratory ailments like asthma but also to deadly
15 diseases like lung cancer. It also has been shown to
16 impact students' academic performance and their ability
17 to actually attend school. These buses are putting
18 children's health at risk -- at risk and their ability
19 to do well in school and further in life. Moreover a
20 fossil fuel pollution like that from diesel, CNG,
21 propane, and others, heavily contribute to climate
22 change, which is also disproportionately harming

1 already impacted communities, their health and their
2 futures. It's time for the EPA to provide a clean ride
3 for our kids and clean air for our communities.

4 We ask you to enact the strongest possible
5 standards that will limit heavy-duty vehicle pollution
6 and put the American truck and bus fleet on a clear
7 pathway to a hundred percent zero-emissions, and to act
8 with urgency by the end of this year. A strong clean
9 truck standard would ensure that the administration is
10 delivering on their promise to electrify the nation's
11 school bus fleet and prioritizing the health and safety
12 of low-income black, indigenous, Latino communities,
13 and immigrants, and people of color. The technology is
14 here, our communities are waiting to breathe free, and
15 you have the power to act. Thank you so much for your
16 time.

17 MS. THOMPSON: Thank you for your comment. The
18 next speaker will be Hazel Chandler. You may now
19 unmute, and please state your name and affiliation for
20 the record.

21 MS. CHANDLER: Thank you for the opportunity to
22 testify. My name's Hazel Chandler -- H-A-Z-E-L, C-H-A-

1 N-D-L-E-R -- and I'm a field organizer for Moms Clean
2 Air Force in Arizona, representing over 1.5 million
3 moms and dads and grandmas and grandpas nationwide. On
4 behalf of Moms Clean Air Force, I'm testifying in
5 support of the proposed standards and call on the EPA
6 to finalize strong clean truck standards this year.

7 Our country is at a tipping point regarding the
8 climate emergency, and if we do not act immediately to
9 reduce greenhouse gas emissions by at least 50 percent
10 by 2030, the future looks very bleak. The clock is
11 ticking. We must act now if my children and
12 grandchildren and great-grandchildren and yours have
13 any hope of a livable future. With recent investments
14 in clean energy infrastructure and recent actions the
15 EPA has taken to meet these greenhouse gas goals, I
16 have lots of hope that our children will have a very
17 bright future in a post-fossil-fuel world.

18 Strong clean truck standards are critical in
19 meeting these greenhouse gas reduction targets and
20 essential to stimulate the transition to zero-emission
21 trucks. The vehicles covered by this rule will be on
22 the road for decades to come, so we must transition

1 without delay. Heavy-duty trucks account for more than
2 60 percent of the deadly particle pollution that comes
3 from vehicles. Particle pollution cuts short tens of
4 thousands of lives per year and contributes to a heavy
5 burden on -- of asthma. As a person living with asthma
6 and an asthma educator, I've seen firsthand how low-
7 income communities and communities of color are more
8 likely to live in diesel death zones where pollution
9 from trucks and buses put them at greater risk for lung
10 disease, asthma, and cancer.

11 Asthma rates of our most impacted areas of Phoenix
12 are 4 times that of the national average, and I watch
13 repeatedly children struggling to breathe in these
14 diesel death zones. Think about the children and the
15 impacts of inaction. Be courageous. Make the
16 strongest decision possible to cut tailpipe emission
17 consistent to the Clean Truck Rule. I plead with you,
18 have the courage to enact strong clean truck
19 regulations without delay. This would be a dream come
20 true, a world where our children can breathe clean air
21 while we address climate change while we still have
22 time. Thank you.

1 MS. THOMPSON: Thank you for your comment. The
2 next speaker will be Bryan Burton. You may now unmute,
3 and please state your name and affiliation for the
4 record.

5 MR. BURTON: My name is Bryan Burton, advocacy
6 manager for healthy air at the American Lung
7 Association. ALA strongly supports the cleanup of
8 pollution from heavy-duty vehicles. My predominant
9 goal in addressing you today is to make clear the
10 crucial role that heavy trucks play in polluting
11 America's air.

12 Diesel engine emissions are one of the largest
13 components of not just transportation sector emissions
14 but overall emissions across the nation. Medium- and
15 heavy-duty vehicles represent approximately 6 percent
16 of the on-road fleet as of 2020 but generate 59 percent
17 of ozone and particulate-forming NOx emissions and 55
18 percent of particulate pollution. Reducing greenhouse
19 gases from heavy-duty vehicles will drive reductions in
20 these other pollutants at the same time, improving the
21 lung health of all Americans. We urge EPA to adopt the
22 most stringent provisions included in this rule and

1 finalize the rule in the current calendar year.

2 In my home State of Pennsylvania, there's a high
3 proportion of these trucks and buses and a greater than
4 average number of annual miles driven. In addition to
5 greenhouse gases which worsen and accelerate the
6 negative effects of climate change, heavy-duty vehicles
7 also admit other pollutants, like fine particulate
8 matter and nitrogen oxides, which is a precursor of
9 ozone, also a greenhouse gas. A warmer climate has
10 increased the effect of creating -- has the increased
11 effect of creating conditions for the formation of
12 ozone. These pollutants can wreak havoc on the
13 respiratory systems of all Pennsylvanians but
14 especially our millions of vulnerable persons and
15 people living in poverty or people of color.

16 In the Philadelphia region alone, more than 2.2
17 million residents live in communities with failing
18 grades for ozone, according to the 2023 "State of the
19 Air" report from ALA. As one of the busiest
20 transportation corridors in America, the intense
21 impacts of trucks' pollution are perhaps nowhere more
22 evident than in South Central Pennsylvania. The

1 proliferation of warehouse distribution centers and the
2 concentration of major highways and railyard have
3 brought some of the nation's worst air pollution along
4 the previously rural Harrisburg-Lancaster-Reading
5 routes.

6 Despite making tremendous slides -- strides in
7 cleaning up their industrial sector, Pittsburgh still
8 ranks in the top 15 nationally for soot pollution.
9 Allegheny county is a powerful and tragic example of
10 how over 300,000 people of color and those living in
11 poverty must daily face a life -- life-threatening air
12 pollution from trucks originating from and bound for
13 other states other than Pennsylvania. Vehicle
14 emissions do not respect state borders.

15 ALA's "Delivering Clean Air" report has identified
16 \$50 billion in health benefits for Pennsylvania through
17 2050 with the transition to zero-emission trucks and
18 power generation. These financial savings have real
19 effects on real people with the avoidance of 4,581
20 premature deaths, 88,000 fewer asthma attacks, and
21 432,000 fewer missed days of work.

22 The EPA and the Biden administration have taken

1 many steps in 2001 to curb curb air pollution, but
2 only by adopting the most stringent greenhouse gas
3 regulations proposed can the transportation sector
4 continue to drive -- its drive to deliver the economic
5 and health benefits outlined by multiple American Lung
6 Association reports. We urge you -- I urge the EPA to
7 finalize this rule this year. Thank you.

8 MS. THOMPSON: Thank you for your comment. The
9 next speaker will be Jenna Riemenschneider. You may
10 now unmute, and please state your name and affiliation
11 for the record.

12 MS. RIEMENSCHNEIDER: Hello, and Happy World
13 Asthma Day. Thank you for the opportunity to testify
14 today. I'm Jenna Riemenschneider, senior director of
15 advocacy and policy at the Asthma and Allergy
16 Foundation of America, also known as AAFA. Founded in
17 1953, AAFA is the oldest and largest patient advocacy
18 organization for the hundred million Americans with
19 asthma and allergies. AAFA thanks EPA for proposing
20 these Phase 3 greenhouse gas standards for heavy-duty
21 vehicles, and we urge you to make the rule even
22 stronger.

1 Stronger standards will further health equity and
2 improve health outcomes for many but especially for the
3 patient population AAFA represents, and they will do so
4 on two fronts. Firstly, these standards have direct
5 health benefits in the immediate term by reducing
6 emissions of harmful pollutants from trucks, like
7 nitrogen oxides and other particle pollution. And
8 secondly, by reducing greenhouse gas emissions from
9 heavy-duty vehicles, the standards can help address the
10 health impacts of climate change.

11 On the first front, heavy-duty vehicles are a
12 leading source of harmful air pollution threatening the
13 health of the public, including the nearly 26 million
14 Americans with asthma. Exposure to particle pollution
15 and ozone pollution from trucks diminishes lung
16 function, triggers asthma episodes, and causes greater
17 use of asthma medication. It also causes increased
18 rates of emergency room visits, hospital admissions,
19 and school absenteeism related to asthma.
20 Additionally, those who live near roads, ports, and
21 freight hubs are especially vulnerable to the health
22 harms of truck emissions, and people of color and those

1 with low incomes bear a disproportionate burden of
2 those -- of transportation pollution.

3 It is no coincidence that the burden of asthma in
4 the United States falls disproportionately on these
5 same populations. These groups have disproportionately
6 high rates of poor asthma outcomes, including
7 hospitalizations and deaths. In fact, black
8 individuals are 5 times more likely to be treated in an
9 emergency room for asthma and 3 times more likely to
10 die from asthma than white individuals.

11 On the second front, climate change is a major
12 threat to public health, and communities across the
13 nation are already experiencing the impacts of climate
14 change on their daily lives and to their health.
15 Climate change is directly linked to increased levels
16 of ozone and particle pollution that contribute to
17 asthma attacks, cardiovascular disease, and premature
18 death.

19 Every year, we're experiencing longer and more
20 intense allergy seasons, and allergies are a common
21 asthma trigger. We're also seeing extreme weather
22 patterns, such as heat and severe storms, that cause

1 illness, injury, and death, not to mention destabilize
2 communities and reduce access to healthcare. Wildfires
3 and dangerous smoke that spreads for thousands of miles
4 are all too common and aggravate both heart and lung
5 conditions.

6 It is an environmental justice and health equity
7 imperative that we transition to zero emissions in
8 trucks, and I want to reiterate AAFA's call for EPA to
9 move quickly and finalize the strongest possible
10 cleaner truck standards to maximize health benefits by
11 the end of the year. Thank you.

12 MS. THOMPSON: Thank you for your comment. The
13 next speaker will be David Hill. You may now unmute,
14 and please state your name and affiliation for the
15 record.

16 DR. HILL: Good afternoon. My name is Dr. David
17 Hill. I reside in Middlebury, Connecticut. I've been
18 a practicing pulmonary and critical care physician in
19 Waterbury, Connecticut for over 25 years. I'm in
20 support of the EPA setting Phase 3 greenhouse gas
21 standards for heavy-duty vehicles, and I urge you to
22 make these standards even stronger.

1 Waterbury is a city in Central Connecticut which
2 is divided by Interstate 84 and Connecticut State Route
3 8. My patients who live along the highway corridors
4 and nearer to individual facilities are lower-income
5 residents and more likely to be people of color. The
6 majority of the patients I see regularly suffer from
7 asthma, chronic obstructive pulmonary disease, and are
8 at higher risk to become ill as a result of exposure to
9 air pollution, which is being driven by climate change.

10 In addition, both I and my two children have exercise-
11 induced asthma and experience increased symptoms on bad
12 air quality days.

13 Transportation is the largest source of greenhouse
14 gas emissions in the United States, and medium- and
15 heavy-duty vehicles produce the largest amount of these
16 emissions. Nitrogen oxide, volatile organic compounds,
17 combined with the presence of heat to produce ozone,
18 which is harmful when inhaled. This reaction is being
19 driven by climate change as increased heat leads to
20 more high-ozone days. This is particularly impactful
21 in patients with chronic lung disease. Ozone exposure
22 is associated with exacerbations of asthma and chronic

1 obstructive pulmonary disease and is associated with
2 new onset asthma in children.

3 New Haven County, which is the home of both
4 Middlebury and Waterbury, received an F in the American
5 Lung Association's 2023 "State of the Air" report
6 regarding ozone pollution. Some of my patients and my
7 oldest child reside in Fairfield County, which has the
8 worst ozone pollution east of the Mississippi. This
9 pollution is mainly being produced by heavy vehicles on
10 our highways, many of which are simply traveling
11 through our state, along with power plant and
12 industrial emissions from upwind sources out of our
13 state.

14 My patients are more likely to become ill, go
15 urgent care, or be hospitalized on bad ozone days, and
16 those are more than 10 percent of the days of the year.

17 In my practice, our electronic health record had to be
18 edited to include discussions on the effects of hot,
19 humid days because so many patients were suffering
20 during these days, including being unable to leave
21 their homes.

22 For patients with asthma, climate change is not

1 only during the allergy season. Increasing exposure to
2 mold due to extreme storms and floodings is a public
3 health issue which is the biggest issue of our
4 lifetimes, and its effects on health are most
5 pronounced with the -- for those of lung disease due to
6 the effects on temperature, air pollution, and
7 allergens. Addressing climate change is cost
8 effective. Reducing greenhouse gas emissions from
9 heavy vehicles will lead to reductions in other air
10 pollutants and some present substantial health
11 benefits.

12 I urge EPA to finalize this rulemaking as soon as
13 possible and prior to the end of this year for the
14 benefit of my family, the patients I care for, and
15 everyone who breathes. Thank you.

16 MS. THOMPSON: Thank you for your comment. As a
17 reminder, if you are speaking today, you will receive a
18 notification on your screen that you're being promoted
19 to the role of panelist shortly prior to your speaking
20 time. You must accept that invitation to be able to
21 unmute when you are called to testify. This will allow
22 you to turn on your camera, which we encourage you to

1 do. Speakers connected by telephone should unmute
2 their phones when called to testify.

3 If you are having technical difficulties, please
4 send an email to public_hearing@abtassoc.com or call
5 (919) 294-7849. If you are not registered to speak but
6 you would like to, please send an email with your name
7 and phone number to public_hearing@abtassoc.com or call
8 (919) 294-7849.

9 The next speaker will be Urvashi Nagrani. You may
10 now unmute, and please state your name and affiliation
11 for the record.

12 MS. NAGRANI: Hi. My name is Urvashi Nagrani, and
13 I am the CEO of a small start-up, Unflappy, but I've
14 spent the last decade working on transportation
15 electrification on the vehicle technology side with
16 Motive Power Systems, then on the data and planning
17 side as a board advisor for EIQ Mobility, and later on
18 the infrastructure side with PowerFlex, an EDF company,
19 and with Volta Charging.

20 In my experience, I have seen many naysayers
21 saying that the things that are necessary for zero-
22 emission solutions simply cannot be done, and often

1 these people tell us that it cannot be done as we are
2 doing them. Unfortunately, the incentive pools are
3 variable in when they are released, and the business as
4 usual means that if a vehicle is to be replaced on a
5 rolling basis, sometimes it will happen when an
6 incentive pool is available and sometimes it will not.

7 Without regulations bringing up that baseline floor,
8 that business-as-usual scenario will continue to be a
9 polluting scenario using fossil fuels driving the
10 climate crisis, polluting our air and our communities.

11 Right now, I believe that the EPA has an
12 opportunity to increase the stringency in a way that
13 will be meaningful to helping the country achieve its
14 climate goals while at the same time protecting the
15 health and economic well-being of the nation.
16 Specifically, I would also encourage the EPA to
17 consider the implications of this rule in a way that is
18 friendly to new market entrants.

19 Startups in the electric vehicle space, taking
20 market share from incumbents, has been key to the
21 introduction of new medium- and heavy-duty vehicles in
22 the school bus, transit, work truck, and last-mile

1 sector. That will continue to be true for new and
2 emerging vehicles. And so by making sure that the EPA
3 has staff available to explain rules to new technology
4 entrants so that engineers who understand products very
5 well but do not understand the regulatory process of
6 compliance can get assistance, will be key to enable
7 future startups into this market with more sustainable
8 solutions.

9 Challenging OEMs is important for increasing the
10 share of sustainable solutions because, as we've seen
11 through the VW scandal, the Cummins scandal, the Fiat
12 Chrysler scandal, all of these emission rules are only
13 as valuable as their enforcement, and the market
14 challenge is on the other side of somebody in good
15 faith complying with the rules, willing to take market
16 share away from bad-faith actors.

17 When thinking about this, the EPA should increase
18 stringency of the regulations as well as improve the
19 pathways for compliance with new companies so that it
20 is easy and cost effective to do the right thing,
21 making it so that good-faith startups who are being
22 funded by SBIR grants today will be the OEMs of the

1 future, giving us solutions without all of the
2 ancillary harms that come with our current technology
3 portfolio.

4 Once again, thank you for your time. I urge you
5 to increase the stringency as you are able and to pass
6 the rule this calendar year.

7 MS. THOMPSON: Thank you for your comment. The
8 next speaker will be East Peterson-Trujillo. You may
9 now unmute, and please state your name and affiliation
10 for the record.

11 MS. PETERSON-TRUJILLO: My name is East Peterson-
12 Trujillo, and I'm here today on behalf of Public
13 Citizen and our more than half a million members and
14 supporters to urge EPA to create the strongest possible
15 limits on heavy-duty vehicle pollution.

16 I grew up in California, and I remember looking
17 out over the San Francisco Bay and seeing smog
18 blanketing the water. When I visit my family, I'm
19 saddened to still see its presence. My family home in
20 Richmond, California is a mere 3,500 feet away from
21 Highway 80, a route that thousands of polluting trucks
22 traverse every day. Our neighborhoods are full of

1 heavy-duty vehicles that spew dangerous emissions and
2 are major contributors to diesel death zones, areas
3 where asthma rates and cancer risks are elevated due to
4 automobile pollution.

5 Tailpipe pollution causes tens of thousands of
6 premature deaths nationwide each year, especially in
7 communities of color. Disproportionate exposure of
8 black and brown communities to diesel pollution is a
9 clear example of environmental racism. The 72 million
10 people living closest to trucking routes and,
11 therefore, more -- most affected by freight pollution
12 are more likely to be lower-income people of color, so
13 strong standards would deliver massive emission
14 reductions and lifesaving relief to frontline
15 communities.

16 Vehicle manufacturers have the technology to meet
17 strong standards, and many recent analyses have shown
18 that fully zero-emission trucks will be cheaper to
19 purchase and operate than diesel trucks within the time
20 frame of these standards. So we need the EPA standards
21 to match the momentum of industry commitments, state
22 ACT adoption, and federal investments, so these

1 standards need to be at least the strongest of the
2 alternatives proposed by the EPA. EPA should also
3 require that manufacturers make diesel trucks
4 increasingly cleaner as they transition to produce
5 zero-emission vehicles. Increasing the stringency of
6 the proposed standards in line with the remaining
7 potential for cost-effective combustion engine
8 efficiency improvements deliver greater benefits sooner
9 to communities.

10 Air pollution from trucks is a major threat to our
11 climate. To meet U.S. climate commitments and the
12 Biden administration's goals, transportation climate
13 pollution will need to be cut by at least 29 percent by
14 2030. The proposed Phase 3 standards, while an
15 important step, are not sufficiently stringent to keep
16 pace with the greenhouse gas reductions needed. The
17 proposal reflects a conservative assessment of zero-
18 emission vehicles deployment, and it's critical that
19 EPA strengthen the final rule by requiring those
20 progressively cleaner diesel trucks and choosing the
21 strongest alternative. This will provide relief from
22 the burden of -- burden of diesel fumes, climate

1 impacts, and air pollution. Thank you so much for the
2 hard work.

3 MS. THOMPSON: Thank you for your comment. The
4 next speaker will be Marguerite Pennoyer. You may now
5 unmute, and please state your name and affiliation for
6 the record.

7 DR. PENNOYER: Good afternoon. My name is Dr.
8 Marguerite Pennoyer. I'm a physician specializing in
9 asthma care in Maine Medical Center in Portland, Maine.

10 I support the EPA setting Phase 3 greenhouse gas
11 standards for heavy-duty vehicles, and I urge you to
12 make the rules even stronger.

13 During my New York City medical internship in the
14 early 80s, I vividly remember treating long rows of
15 asthma patients who were seated bolt upright in school
16 desks in the emergency room, puffing away on nebulizers
17 while we watched them struggle to breathe. The city,
18 next to the heavily-traveled I-95 section over the
19 George Washington Bridge, was tough to tolerate for
20 this underserved area of New York City. Significant
21 improvements have been made in air quality, but so much
22 more needs to be done for communities living with

1 unhealthy air. We know 1 in 3 Americans still live
2 with unhealthy air.

3 I went on to specialize in allergy, asthma, and
4 immunology, and saw the impact that air pollution
5 continued to have on my asthma patients and my patients
6 with lung disease. Not only do higher carbon dioxide
7 levels make pollen season stronger and longer, but
8 particle pollution can also directly potentiate the
9 allergic effects of pollens, so my asthmatic patients
10 become even sicker when pollution and pollen combine.
11 High heat, high ozone days, longer and more intense
12 pollen seasons, and forest fires are all dangerous for
13 my asthma patients.

14 We face a health emergency due to climate change
15 that I could never have imagined when I first started
16 medicine and began caring for my patients over 35 years
17 ago. We had so many promising medications and
18 treatments available, effective cures right around the
19 corner. Now it feels like, despite the many advances
20 I've seen, that medicine can't keep up. Lung cancer is
21 on the rise. Lung diseases are worsening. My role
22 feels trivial in comparison to what you at the EPA can

1 accomplish for my patients.

2 The EPA offers the best treatment for my patients
3 by setting standards that will result in both immediate
4 and long-term health improvement. It's critical,
5 therefore, to address transportation as the biggest
6 source of greenhouse gases. Medium- and heavy-duty
7 vehicles produce the majority of harmful on-road
8 emissions. Cleaning up these large trucks and buses
9 will greatly reduce the majority of harmful on-road
10 emissions.

11 I urge the EPA to consider even more stringent
12 standards, and, if possible, I support matching either
13 California's Advanced Clean Trucks Program standards or
14 even the more stringent goals proposed recently by
15 several major truck manufacturers if EPA determines
16 that it can finalize these even more protective levels.

17 Thank you for all of your work to help my patients.

18 MS. THOMPSON: Thank you for your comment. The
19 next speaker will be Ileagh MacIvers. You may now
20 unmute, and please state your name and affiliation for
21 the record.

22 MS. MACIVERS: My name is Ileagh MacIvers, and I'm

1 the clean cars organizer at the nonprofit Interfaith
2 Power & Light. IPL's nonprofit mission is to inspire
3 and mobilize people of faith and conscience to take
4 bold and just action on climate change. I'm here today
5 to speak on behalf of my organization as well as
6 Interfaith Power & Light affiliates in 40 states that
7 reach out to more than 22,000 congregations and
8 millions of people of faith throughout our nation. I'm
9 asking the EPA to move quickly and finalize the
10 strongest possible cleaner truck standards to address
11 the climate crisis.

12 As a Quaker myself, I know that people of faith
13 and conscience are ready for bold new transportation
14 solutions, and clean trucks and buses are an integral
15 step towards addressing climate change for our
16 communities, future generations, and our sacred earth.

17 Federal and manufacture investments and state-advanced
18 clean trucks adoption all support more stringent
19 standards than what has been initially proposed.
20 Therefore, these standards need to be at least the
21 strongest of the alternatives proposed by EPA.

22 While trucks and buses account for a very small

1 portion of vehicles on the road, they create a
2 disproportionate amount of climate pollution. Not
3 implementing the strongest possible heavy-duty vehicle
4 standards would create major negative implications for
5 our country's climate goals. We must also keep in mind
6 that these rules target air pollution that
7 disproportionately harms marginalized communities of
8 color and low-wealth communities that reside in
9 counties closest to major freeways and trucking
10 corridors. Implementing the strongest HDB standards is
11 a matter of environmental justice, and these standards
12 would deliver massive emission reductions and
13 lifesaving relief to frontline communities.

14 In addition, electrifying medium- and heavy-duty
15 trucks will be key to improving air quality and saving
16 lives across the nation. More than 119 million
17 American residents currently live in areas with
18 unhealthy levels of air pollution. In particular,
19 diesel exhaust contains more than 40 known cancer-
20 causing organic substances. It is also critical that
21 standards require tighter limits on diesel vehicles in
22 order to continually make diesel trucks cleaner as

1 manufacturers transition to zero-emission vehicles.

2 So again, on behalf of millions of people of faith
3 and conscience around the country, I urge the EPA to
4 move quickly and finalize the strongest possible heavy-
5 duty vehicle standards in order to reap the benefits of
6 heavy-duty vehicle electrification and accelerate the
7 transition to zero-emission vehicles. Thank you for
8 the opportunity to testify.

9 MS. THOMPSON: Thank you for your comment. The
10 next speaker will be Jacob Jones. You may now unmute,
11 and please state your name and affiliation for the
12 record.

13 MR. JONES: Hi. My name is Jacob Jones, and give
14 me one second while I pull up my -- okay. Jacob Jones,
15 yes. Thank you for the opportunity to testify. My
16 name's Jacob Jones, and I'm here today as a private
17 citizen and volunteer within Inter-D.C. Action Fund.
18 First, I want to thank this administration for their
19 swift action on cleaning up truck pollution, and I want
20 to urge the EPA to create the strongest possible limits
21 on heavy-duty vehicle pollution.

22 I'm here today speaking because I worry about the

1 impact of the pollutants from transportation sector.
2 Not only do heavy-duty vehicles, like trucks and buses,
3 emit PM -- or 2.5 pollution, but they also release
4 greenhouse gas pollution. I worry about the impact of
5 pollutants in communities I used to live in, like
6 Indianapolis, and for the future of where I live
7 currently in Pennsylvania.

8 For some background, my old apartment in
9 Indianapolis had 18 days where PM 2.5 pollution was
10 above the World Health Organization's guideline just in
11 this last month of April. And I worry about the effect
12 of greenhouse gases where I currently live now here in
13 Pennsylvania as our weather becomes even more extreme.

14 Events caused by extreme weather create more air and
15 water pollution, destabilize food sources, and put our
16 homes and lives at risk.

17 We need these regulations to address the reality
18 ahead us. That's why we need the EPA standards to
19 match the match the momentum already picking up steam
20 from truck manufacturers as they commit to cleaner
21 trucks and provide the market signal to support those
22 commitments. And we really need these standards to

1 accomplish two things: finalized -- we need you guys
2 to finalize a significantly stronger standard than the
3 most stringent alternative in the proposal, and put our
4 national bus and truck fleet on a clear path to a
5 hundred percent zero-emissions and all-electric vehicle
6 -- all-electric vehicles by 2035.

7 I really appreciate the opportunity to testify
8 today, and I hope you consider folks like myself when
9 you weigh the health and environmental impacts of your
10 decision. Thank you.

11 MS. THOMPSON: Thank you for your comment. As a
12 reminder, if you are speaking today, you will receive a
13 notification on your screen that you are being promoted
14 to the role of panelist shortly prior to your speaking
15 time. You must accept that invitation to be able to
16 unmute when you are called to testify. This will also
17 allow you to turn on your camera, which we encourage
18 you to do. We ask that each person limit their verbal
19 testimony to 3 minutes. Please speak slowly and
20 clearly so our court reporter and interpreters can
21 capture these proceedings accurately. Speakers
22 connected by telephone should unmute their phones when

1 called to testify.

2 If you are having technical difficulties, please
3 send an email to public_hearing@abtassoc.com or call
4 (919) 294-7849. If you are not registered to speak but
5 would like to, please send an email with your name and
6 phone number to public_hearing@abtassoc.com or call
7 (919) 294-7849.

8 The next speaker will be Leigh Kauffman. Leigh,
9 may now unmute, and please state your name and
10 affiliation for the record.

11 MS. KAUFFMAN: Thank you for the opportunity to
12 testify. I am Leigh Kauffman, and I am here today as a
13 volunteer with the NRDC Action Fund. I thank this
14 Administration for acting swiftly on cleaning up truck
15 pollutions but urge the EPA to create the strongest
16 possible limits on heavy-duty vehicle pollution. I am
17 here speaking today because of the impact these
18 regulations will have on the future for my daughter.

19 Trucks and buses account for one-third of
20 transportation climate pollutions, and we need a -- and
21 we need regulations to address the reality that we live
22 in, which is a rapidly-approaching climate crisis.

1 Extreme weather events caused by climate change create
2 more air and water pollution, destabilize food sources,
3 and put our homes and lives at risk. Here in Indiana,
4 these standards will provide much-needed relief from
5 the burden of diesel fumes and air pollution.

6 The market is moving quickly towards more zero-
7 pollution trucks, and truck manufacturers have
8 committed to make their trucks cleaner over the next
9 decade and eventually zero pollution. We need the EPA
10 standards to match that momentum and provide the market
11 signal to support these commitments. Once again, I
12 urge the EPA to set the strongest standards possible
13 because many lives depend on it. These standards must
14 accomplish two things: finalize a standard
15 significantly stronger than the most stringent
16 alternatives and the proposals, and put our national
17 bus and truck fleets on a clear path to 100 percent
18 zero-emission, all electric vehicle by 2035.

19 Thank you for the opportunity to testify. I do
20 hope that you consider the health and environmental
21 impacts of your decision on young families just like
22 mine.

1 MS. THOMPSON: Thank you for your comment. The
2 next speaker is Jorge Vasquez, Junior. Unfortunately,
3 we do not currently see you in the list of attendees.
4 However, if you have joined this hearing under a
5 different name, please indicate your presence by
6 pressing the raise hand button at the bottom of your
7 screen. If you have called in, please dial star-9 to
8 raise your hand.

9 (No response.)

10 MS. THOMPSON: The next speaker will be Bob
11 Yuhnke. You may now unmute, and please state your name
12 and affiliation for the record.

13 (No response.)

14 MS. THOMPSON: Bob, you are on mute.

15 MR. YUHNKE: Sorry about that. Thank you. My
16 name is Robert Yuhnke. I am on the policy team at
17 Elders Climate Action. We've been involved in climate
18 policy work for a number of years in an effort to
19 preserve a sustainable planet for our grandchildren.

20 My focus here today is to bring to your attention
21 the fact that the United States has made a commitment
22 internationally as part of our involvement in the Paris

1 Agreement and United Nations Convention on Climate to
2 reduce our greenhouse gas emissions by 50 -- 52
3 percent. That was our nationally-determined
4 contribution that was submitted at COP 26. And what
5 we're trying to determine and haven't yet been able to
6 find a clear analysis in this rulemaking is what
7 reductions EPA is planning to achieve with regard to
8 our ability to meet the commitment that we've made
9 internationally.

10 The rule here is an important step forward in
11 reducing greenhouse gas emissions, but as best we can
12 determine from the analysis that's included, we do not
13 see that these reductions, taken by themselves or
14 collectively, with the light-duty vehicle standards
15 that have been proposed by EPA, would achieve enough
16 reductions from the transport sector to meet our
17 international commitments under the framework
18 convention. And this is particularly disturbing not
19 only because the United States is the second largest
20 emitter of greenhouse gas emissions in the world and
21 that we need to provide leadership to actually achieve
22 the global reductions needed to stabilize the climate,

1 but that if the United States fails to meet its
2 commitments internationally, it will provide proof to
3 other leaders around the world that the task cannot be
4 met.

5 We must provide the leadership to demonstrate that
6 the reductions needed to protect the planet are
7 actually achievable, and that this proposal, as best we
8 can determine at this point, does not accomplish that.

9 And if the United States does not measure up to the
10 commitments it has already made, it's going to provide
11 an excuse for other countries around the world not to
12 meet their commitments. They will point to the United
13 States and say this is the richest country in the
14 world, they can't get it done, how can you expect us to
15 do it.

16 We must honor those commitments. We must achieve
17 the reductions by 2030 that are needed, according to
18 the IPCC, to allow us to stay under 1.5 degrees
19 centigrade as the cap on global warming. If we fail to
20 meet that test, we will suffer severe environmental
21 consequences, and we urge you to please adopt standards
22 that are adequate to meet the U.S. commitments. Thank

1 you.

2 MS. THOMPSON: Thank you for your comment. The
3 next speaker will be William Morris. You may now
4 unmute, and please state your name and affiliation for
5 the record.

6 MR. MORRIS: Thank you for the opportunity to
7 testify. My name is William Morris with GreenFaith, a
8 multi-faith grassroots climate justice organization.
9 I'm here today as a person of faith, as someone who has
10 a degree in environmental science, and someone who is
11 part of a frontline community in Southern California.
12 I thank this administration for acting swiftly on clean
13 trucks now but urge the EPA to create the strongest
14 possible limits on heavy-duty vehicle pollution.

15 As a person of faith, I know we as humans are
16 called to be active participants in the flourishing of
17 all creation and to protect human health and dignity.
18 Here in California, these standards will provide much-
19 needed relief from the burden of diesel fumes and air
20 pollution and help address the ever-worsening climate
21 crisis.

22 I'm here to testify today because, according to

1 the EPA's Environmental Justice Mapping Tool, I live in
2 an area that is in the 90th percentile for diesel
3 particulate matter. Due to historical systemic racism
4 that placed highways through communities of color along
5 with discriminatory housing practices, means
6 communities like mine bear the greatest burden from
7 vehicle pollution. In fact, I live near three major
8 highways, and I'm here because diesel pollution affects
9 every breath that I take.

10 When I was in high school, over summers I would
11 help clean pools with my uncle, and some of these were
12 located near the Port of Los Angeles where all the
13 heavy-duty diesel burning trucks would pick up
14 containers from the port and transport them to the rest
15 of the country. Every week, we'd clean the pools, and
16 you could see this black coating that would float on
17 the water, which was the result of buildup from diesel
18 pollution just in the past week, the same pollution
19 that is entering people's bodies. The Port of L.A. and
20 Long Beach handle around 40 percent of all inbound
21 containers in the United States, and so imagine how
22 many heavy-duty diesel trucks it takes to move that

1 many containers which then spew that diesel pollution
2 on to communities that are already dealing with health
3 effects from neighborhood oil drilling and refineries,
4 communities including my own.

5 While trucks and buses only account for 4 percent
6 of vehicles on the road, they're responsible for a
7 quarter of total transportation sector greenhouse gas
8 emissions and a major contributor to climate change.
9 Because diesel pollution is a disproportionate burden
10 of harm on communities of color, clean transportation,
11 including zero-emission trucks, isn't just a matter of
12 caring for God's creation. It's a matter of justice.

13 EPA has an opportunity to help address the
14 injustice of pollution and climate change by enacting
15 the strongest possible heavy-duty truck standards. The
16 standards EPA sets should achieve a hundred percent
17 zero-emission truck sales by 2035, which would be at a
18 pace that would deliver much-needed health benefits to
19 communities of color, and I urge this administration to
20 set the strongest possible standards because many
21 lives, including the lives of my community, depend on
22 it.

1 The EPA must put our national bus and truck fleet
2 on a clear path to a hundred-percent zero-emission,
3 all-electric vehicles by 2035. Thank you for the
4 opportunity to testify.

5 MS. THOMPSON: Thank you for your comment. The
6 next speaker is Elizabeth Chun Hye Lee. Unfortunately,
7 we do not currently see you in the list of attendees.
8 However, if you have joined this hearing under a
9 different name, please indicate your presence by
10 pressing the raise hand button at the bottom of your
11 screen. If you have called in, please dial star-9 to
12 raise your hand.

13 (No response.)

14 MS. THOMPSON: The next speaker will be Sam
15 Wilson. Sam, you may now unmute, and please state your
16 name and affiliation for the record.

17 MR. WILSON: Hi. Good morning and good afternoon.
18 My name is Sam Wilson, and I'm a senior vehicles
19 analyst with the Union of Concerned Scientists. Our
20 mission is to center rigorous science and public
21 policymaking. On behalf of our nearly 500,000
22 supporters nationwide, thank you so much for the

1 opportunity to comment today in support of a Phase 3
2 greenhouse gas standard that accelerates the market for
3 clean -- for clean trucks rather than this proposed
4 alternative, which significantly trails current market
5 projections, state actions, and manufacturer
6 commitments.

7 I'm speaking to you today from California, which
8 is home to 6 out of the 10 cities with the worst air
9 quality in the nation, due in large part to our
10 country's reliance on California agriculture ports and
11 goods movement. However, it's not just Californians
12 who are suffering from unhealthy air. Commercial
13 trucks are a primary source of air pollution across our
14 country and particularly in communities of color.
15 Nationwide, Class 4 and above heavy-duty vehicles are
16 responsible for around one-fifth of greenhouse gas
17 emissions and over half of fine particulate and
18 nitrogen oxide emissions from on-road vehicles, despite
19 making up less than 4 percent of the vehicles on our
20 roads and highways.

21 Market projections and movements toward zero-
22 emission heavy-duty vehicles are changing rapidly. Two

1 weeks ago, Colorado became the eighth state to adopt
2 California's Advanced Clean Trucks Rule. And this past
3 Friday, the California Air Resources Board adopted the
4 Advanced Clean Fleets Rule, which will phase out the
5 sale of fossil fuel trucks by 2036 and requires large
6 fleets in the state to transition zero-emissions trucks
7 over the next 2 decades. Both ACT and ACF will serve
8 to accelerate the market for zero-emissions trucks and
9 buses, leading to massive reductions in air quality and
10 climate-warming pollution.

11 However, the huge air quality benefits -- air
12 quality and climate benefits of these regulations are
13 not necessarily the most unique results. Analyses from
14 both CARB and independent sources, including USCIS,
15 estimate that these regulations will deliver meaningful
16 savings to regulated truck fleets by accelerating cost
17 parity between zero emissions and combustion models,
18 and drastically lowering fuel and maintenance cost of
19 fleets. Even when considering cost to install charging
20 infrastructure, potential grid upgrades, and re-
21 training staff, CARB estimates that the ACF will save
22 California fleets around \$32 billion through 2050.

1 When counting potential clean fuel standard revenue for
2 electrified fleets, this estimate jumps to nearly \$50
3 billion.

4 States have shown that meaningful regulations that
5 are tuned to accelerate the market for zero-emissions
6 trucks are feasible for fleets, cost-effective economy-
7 wide, and meaningful for air quality and climate
8 mitigation. Unfortunately, EPA's proposal does not
9 meet the moment of recent state actions and the
10 critical need for swift action on climate change and
11 environmental injustices. We have the strategies,
12 technologies, and know-how today to advance the market
13 for zero-emissions trucks and buses.

14 Rather than adopting a standard that serves only
15 as a worst-case failsafe floor, we urge EPA to re-value
16 its proposal and include stronger emission standards
17 that accelerate the market for zero-emissions trucks.
18 We plan to provide detailed comments in writing and
19 look forward to working with EPA to adopt a Phase 3
20 rule that both accounts for current market projections
21 and accelerates our work towards clean air and climate
22 change mitigation. Thank you.

1 MS. THOMPSON: Thank you for your comment. As a
2 reminder, if you are speaking today, you will receive a
3 notification on your screen that you are being promoted
4 to the role of panelist shortly prior to your speaking
5 time. You must accept that invitation to be able to
6 unmute when you are called to testify. This will also
7 allow you to turn on your camera, which we encourage
8 you to do. We ask that each person limit their verbal
9 testimony to 3 minutes. Please speak slowly and
10 clearly so our court reporter and interpreters can
11 capture these proceedings accurately. Speakers
12 connected by telephone should unmute their phones when
13 called to testify.

14 If you are having technical difficulties, please
15 send an email to public_hearing@abtassoc.com or call
16 (919) 294-7849. If you are not registered to speak but
17 you would like to, please send an email with your name
18 and phone number to public_hearing@abtassoc.com or call
19 (919) 294-7849.

20 The next speaker will be Lindsey Mendelson.
21 Lindsey, we do not currently see you in the list of
22 attendees. However, I do see a hand up, so I will go

1 ahead and promote you to the panelist role now.

2 (Brief pause.)

3 MS. THOMPSON: Lindsey, when you are ready, you
4 may unmute, and please state your name and affiliation
5 for the record.

6 MS. MENDELSON: Thank you very much. Can you hear
7 me?

8 MS. THOMPSON: We can.

9 MS. MENDELSON: Thank you for the opportunity to
10 testify. My name is Lindsey Mendelson, and I'm the
11 transportation representative with the Maryland chapter
12 of the Sierra Club. And I urge EPA to finalize a
13 strong greenhouse gas rule for heavy-duty vehicles that
14 will put us on a pathway for 100 percent of truck sales
15 to be zero-emission by 2035. The current standards
16 fall short and is projected to results in half of
17 vocational trucks sold in the country to be zero
18 emission by 2032.

19 Right now, exhaust from diesel trucks and buses is
20 a leading source of harmful air pollution that sends
21 countless Maryland residents to the hospital each year.

22 Medium- and heavy-duty trucks and buses contribute to

1 40 percent of NOx pollution and 20 percent of
2 greenhouse gas emissions from Maryland's entire on-road
3 transportation sector. And this rule would help to cut
4 co-pollutants, like NOx, which is necessary because
5 right now, the Baltimore Region and Cecil County are in
6 non-attainment for the 2015 ozone standard. Also, in
7 some areas in Baltimore City, as many as 1 in 4 new
8 childhood asthma cases are attributable to this
9 pollution.

10 I live a few blocks from Route 1 Highway in Prince
11 George's County, Maryland, and I often smell and hear
12 noisy trucks and buses when I go outside. And I'm
13 worried that breathing in this pollution from heavy
14 traffic is going to damage my lungs and cause health
15 problems for me and my family. I also know that many
16 people in Maryland are at high risk for breathing this
17 unhealthy pollution, especially communities located
18 near highways that have experienced decades of
19 residential segregation.

20 Maryland is currently in the process of adopting a
21 zero-emission medium- and heavy-duty sales mandate, and
22 it would result in a higher percentage of zero-emission

1 heavy-duty trucks than the projected EPA rule. And
2 that's why I encourage EPA to revisit this rule to make
3 sure that the standards are more aggressive and similar
4 to the very feasible standards that Maryland and other
5 states have adopted through the Advanced Clean Trucks
6 Rule. There's over 100 models of zero-emission
7 commercial heavy-duty vehicles and buses, and about
8 half of Class 7/8 tractors travel less than 200 miles a
9 day, which is well within the range of technology.
10 There's also billions of dollars from the IRA and IIJA
11 for heavy-duty vehicle electrification.

12 If we don't take bold climate action now, we're
13 going to see more impacts like deadly heatwaves, more
14 bad air days, and destructive floods. In the region
15 where I live, tick-borne illness, like Lyme disease,
16 are on the rise. I know a lot of people who have Lyme
17 disease, and the risk is only going to get worse with
18 climate change.

19 In summary, please finalize the strongest possible
20 greenhouse gas rule for heavy-duty vehicles to protect
21 public health and mitigate the impacts of the climate
22 crisis. Thank you.

1 MS. THOMPSON: Thank you for your comment. The
2 next speaker will be Coleton Whitaker. You may now
3 unmute, and please state your name and affiliation for
4 the record.

5 MR. WHITAKER: My name is Coleton Whitaker, and I
6 am the senior lead of special projects and initiatives
7 at EVHybridNoire. Thank you for the opportunity to
8 testify today. EVHbridNoire is the nation's largest
9 network of diverse EV drivers and enthusiasts. We have
10 over 3,500 members across the United States and
11 internationally. I'm here to amplify the voices of
12 diverse EV drivers and members of communities who
13 struggle against poor air quality and its harmful
14 health effects.

15 The enactment of the heavy-duty greenhouse gas
16 emission standards is the difference between life and
17 death for many residents nationwide, especially those
18 in overburdened and underrepresented communities, such
19 as black, Latinx, indigenous communities, rural
20 communities, elderly populations, and the LGBTQ+
21 community. Greenhouse gas emissions contribute to
22 climate change, which poses threats to America's

1 health, well-being, affecting everything from the air
2 we breathe to the places we live.

3 Extreme weather events caused by climate change,
4 creating more air and water pollution, destabilize food
5 sources and put our homes and lives at risk. As a
6 current resident of New York State and previously the
7 State of Texas, we know far too well from recent
8 incidents that we are vulnerable to the impacts of
9 climate change. These extreme weather events can
10 present unforeseen impacts that must be included in
11 future resiliency planning.

12 The new "State of the Air" report released by the
13 American Lung Association this month shows that more
14 than 1 in 3 Americans live in places with unhealthy
15 levels of air pollution. People of color are 3.7 times
16 more likely than white people to live in a county --
17 live in a county with three failing air quality grades.

18 Not only are the existing inequalities shocking, but
19 polluting cars and trucks are making these disparities
20 even worse.

21 Light-duty gasoline vehicles and heavy-duty
22 gasoline vehicles were found to be two of the sectors

1 that produce the greatest disparity and levels of
2 pollutants impacting communities of color compared to
3 other communities. These results hold regardless of
4 income level, urban/rural settings, states, and
5 exposure levels. These standards will provide much-
6 needed relief from the burden of diesel fumes, climate
7 impacts, and air pollution.

8 The community members that my organization
9 represents know that zero-emissions transportation is
10 crucial for the health, livelihoods, and well-being.
11 It is critical that the EPA keeps the pressure on
12 manufacturers to stop polluting our air. The status
13 quo for the majority of our transportation methods that
14 continue to make us and our planet very sick does not
15 and should not need to remain our reality.

16 For these reasons and many more, emission
17 standards must be enacted to further catalyze zero-
18 emission transportation and begin the long road of
19 correcting historical inequalities. Thank you for your
20 time.

21 MS. THOMPSON: Thank you for your comment. The
22 next speaker will be Rob Wheeler. Rob, you may now

1 unmute, and please state your name and affiliation for
2 the record.

3 MR. WHEELER: Thank you. I am Rob Wheeler. I am
4 the Maine representative for the Global Eco Village
5 Network at the United Nations and have participated
6 actively in the U.N. Commission on Sustainable
7 Development, High-Level Political Forum, and the
8 climate summit conferences around the world multiple
9 times. I wanted to state that I believe humanity is
10 ratchet -- rapidly approaching quite a number of
11 climate tipping points, and disasters -- climate
12 disasters. Disastrous climate disasters are increasing
13 in both frequency and intensity both across the U.S.
14 and around the world. We have a responsibility to do
15 everything possible to fully address this, both for our
16 own and for future generations. Indeed, we have
17 already done far too much damage, and we all need to
18 correct this.

19 It is projected that trucking demand in China,
20 Europe, India, and the U.S. is expected to more than
21 double by 2050. A swift, decisive move to zero-
22 emissions trucks and a rapid rollout of infrastructure

1 are needed now to achieve net zero by 2050. The EU has
2 already introduced targets for heavy-duty vehicles to
3 reduce emissions by 15 percent as of 2025. We in the
4 United States need to match that level of ambition and
5 develop the most stringent and far-reaching options
6 available to the EPA and to our administration now.

7 This public hearing cannot be just or only about
8 these set of regulations, but it must be an indication
9 of a whole-of-administration approach and whole-of-
10 government approach toward striving towards a zero --
11 circular economy. The United Nations Environment
12 Assembly in the past year signed onto and adopted a
13 resolution on a circular economy. It is essential that
14 we move in that direction.

15 Plastic waste and pollution is having tremendous
16 impacts not only on the natural environment but also on
17 climate change, on people's health and well-being. It
18 is essential that the U.S. support the strongest treaty
19 possible to eliminate plastic pollution and that our
20 efforts to put in place strong resolutions and
21 regulations on heavy-duty vehicles and all other
22 vehicles are fully in place. We're seeing in just the

1 last couple of years a transition to new batteries for
2 electric bikes and for other electric vehicles. This
3 must be also adopted in terms of all heavy vehicles and
4 heavy-duty equipment.

5 We are in a situation where we're facing multiple
6 tipping points around the planet. If you look at the
7 IPCC assessments, and I hope that will drive the EPA
8 decisions on the options that are approached and
9 adopted, the more we do now is the less we will have to
10 do much more quickly later. We are going to have a
11 complete shift to a fully-sustainable world and to
12 fully achieve a zero economy -- zero-carbon economy.
13 And the quicker we can do it, the better. We've known
14 for 50 years we're going to have to make this change,
15 and the time for us to begin to do it now. I call
16 again for the government to adopt the most stringent
17 and far-reaching policies in terms of these regulations
18 possible. Thank you very much.

19 MS. THOMPSON: Thank you for your comment. The
20 next speaker will be Henry Glynn. You may now unmute.

21 Please state your name and affiliation for the record.

22 MR. GLYNN: Thank you for the opportunity to

1 testify. My name is Henry Glynn, and I'm a student at
2 Creighton University and a policy advisor for Catholic
3 Climate Covenant. The Covenant was founded in 2006 to
4 address growing ecological awareness and the need to
5 implement Catholic social teaching on ecology within
6 the U.S. church. Formed with the help of the U.S.
7 Conference of Catholic Bishops and supported by 20
8 national partners, we help guide the U.S. church's
9 response to the moral call for action on climate change
10 by sharing authentic Catholic teaching on creation and
11 the poor, by informing and inspiring community leaders
12 to take action, by sharing stories of those most
13 affected by climate impacts, and by providing concrete
14 tools, techniques, and technical assistance to help
15 Catholic peoples and institutions reduce their carbon
16 footprint and work for justice.

17 It is from this institutional basis that Catholic
18 Climate Covenant supports and encourages strengthening
19 of EPA's new proposed Phase 3 greenhouse gas standards
20 for heavy-duty vehicles. These proposed standards'
21 performance-based nature allows manufacturers to
22 efficiently (AUDIO MALFUNCTION) compliance through

1 flexibility and robust stakeholder engagement. They
2 reflect the reality of a changing American trucking
3 landscape and align with recent investments in the
4 Bipartisan Infrastructure Law, complementing
5 commitments made by (AUDIO MALFUNCTION) U.S. states to
6 accelerate clean vehicle technologies and other
7 automobile fleets in the near future.

8 Heavy-duty vocational vehicles and freight trucks
9 are an integral part of the American transportation
10 system. These proposed standards will improve the
11 efficiency of this job-sustaining industry and ensure
12 effective transportation of people and goods across the
13 nation by saving over \$180 billion. The proposal is
14 also projected to avoid 1.8 billion tons of carbon
15 dioxide emissions through 2055. In doing so, these
16 standards address climate change in a concrete and
17 deliverable fashion, providing tangible hope to many.

18 These emissions reductions will contribute to
19 significant health benefits by increasing air quality
20 nationwide, benefiting especially those who live near
21 major roadways and are exposed to vehicle pollution.
22 These communities often include low-income populations

1 and people of color. Taking steps to protect them
2 aligns with Jesus' call in the Gospel of Matthew to
3 care for the most vulnerable among us.

4 As promulgated by the U.S. Catholic Bishops,
5 Catholic social doctrine includes principles of
6 intrinsic human dignity, solidarity, and care for God's
7 creation. As a leader in the Catholic climate advocacy
8 space, Catholic Climate Covenant supports EPA's new
9 proposed standards for heavy-duty vehicles because they
10 protect and promote human dignity by reducing harmful
11 greenhouse gas emissions, which cause climate change.
12 These standards also reflect the solidarity exercised
13 by millions of professional truck drivers and their
14 incorporations with other communities, especially those
15 living near large roadways, by lowering their
16 environmental impact and preserving God's creation for
17 future generations, thus contributing to a safe and
18 thriving future for all people, especially those most
19 vulnerable. Thank you.

20 MS. THOMPSON: Thank you for your comment. The
21 next speaker will be Elizabeth Chun Hye Lee. You may
22 now unmute, and please state your name and affiliation

1 for the record.

2 MS. CHUN HYE LEE: My name is Elizabeth Chun Hye
3 Lee. I serve as the director of mobilization and
4 advocacy at United Women in Faith, formerly known as
5 United Methodist Women. We are a faith-based woman's
6 organization with members located in every state in the
7 U.S. Our scripture calls us to be stewards of God's
8 creation and to love our neighbors as ourselves, and
9 that is why I joined to testify today.

10 I thank this administration for acting on clean
11 trucks and urge EPA to create the strongest possible
12 limits on heavy-duty vehicle pollution. These
13 standards have the potential to provide much-needed
14 relief from the burden of diesel fumes and air
15 pollution for our members and our communities.

16 I live in Queens, New York, where the air
17 pollution from trucks and three city bus lines that
18 idle in front of my apartment forces us to keep our
19 windows closed and have air purifiers running at all
20 times. I live two blocks from Northern Boulevard, also
21 known as State Highway 25A, where heavy-duty trucks and
22 buses introduce massive amounts of air pollution,

1 warming the planet, dirtying our air, and leading to
2 elevated asthma rates. This highway is our
3 neighborhood road, lined with local stores,
4 restaurants, bodegas, libraries, and with over 20
5 schools on or near the road. Thousands of students and
6 community members cross the street every day.

7 According to the ALA "State of the Air" report,
8 Queens, with over 2.3 million people, the majority of
9 whom are people of color, has an ozone grade of F,
10 putting our community's health at risk. Our county has
11 over 210,000 children and adults with asthma, including
12 my deceased father who also suffered with COPD. Trucks
13 and buses are responsible for a third of transportation
14 climate pollution that intensifies storms.

15 Our neighborhood was devastated by Hurricane Ida,
16 where women and children were drowned to death, unable
17 to get out of their basement apartments because of the
18 sheer force of the torrential rain. Our communities
19 are already suffering because of weak regulations on
20 trucks and buses, and unless EPA creates the strongest
21 possible limits on heavy-duty vehicle pollution, more
22 lives will be lost.

1 The good news is that technology already exists
2 for zero-emission heavy-duty vehicles, and the cost for
3 vehicles is dropping. The U.S. is 4 percent of the
4 world's population but producer of over 25 percent of
5 cumulative emissions, and the U.S. Government must do
6 its global climate fair share. Thus, I urge the EPA to
7 create the strongest possible limits on heavy-duty
8 vehicle pollution. It'll protect our health, earth,
9 our communities, and lead to net savings. Trucking oil
10 and gas interests must not have the last say. Our
11 communities depend on it. Thank you for the
12 opportunity to testify.

13 MS. THOMPSON: Thank you for your comment. This
14 concludes our third speaker block. We will now call on
15 the names of those who were not present when initially
16 called to testify. If you have joined, please indicate
17 your presence by pressing the raise hand button at the
18 bottom of your screen. If you have called in, please
19 dial star-9 to raise your hand.

20 The first name is Jorge Vazquez, Junior. Jorge,
21 if you have joined, please indicate that you have by
22 clicking the raise hand button at the bottom of your

1 screen.

2 (No response.)

3 MS. THOMPSON: We do not currently see any hands
4 raised in the attendee list, so we will now move on to
5 the next speaker block. The next speaker will be Ana
6 Rios. Ana, you may now unmute, and please state your
7 name and affiliation for the record.

8 MS. RIOS: Thank you for the opportunity to
9 testify today. My name Ana Rios -- A-N-A, R-I-O-S. I
10 am the New Mexico field organizer for Moms Clean Air
11 Force and its Latino engagement program, EcoMadres. I
12 am here representing the nearly 20,000 members in my
13 state to testify in support of the EPA's proposed
14 greenhouse gas regulation for heavy-duty vehicles,
15 calling on EPA to finalize strong clean truck standards
16 by this year. Stronger transportation standards are
17 crucial for protecting the health of our children and
18 communities, and it is urgent that we act now.

19 I live in Albuquerque, New Mexico with my three
20 children. We live in the San Jose neighborhood, very
21 well known in the city as a low-income area where
22 people of color and Latino communities live and, most

1 notably, because it is surrounded by pollution. My
2 house is next to a heavy-duty vehicle company, less
3 than a mile from an interstate highway and a couple of
4 miles away from the two interstate highways junction
5 that cross through the city. As a Latino family, we
6 are overburdened by exposure to pollution from the
7 transportation sector. In addition, my home is located
8 a few steps from the railroad tracks and approximately
9 3 miles away from the airport. Also, it is important
10 to point out that New Mexico is experiencing impacts of
11 climate change, including more severe heatwaves,
12 drought, extreme climate weather events, floods, and
13 wildfires.

14 The transportation sector is the largest source of
15 greenhouse gas emissions in the United States, making
16 up 27 percent of all emissions. Tailpipe pollution --
17 tailpipe exhaust from heavy-duty vehicles is a
18 significant source of nitrogen oxides, which react in
19 the atmosphere to form ground-level ozone. On this
20 matter, Albuquerque has been getting an F for several
21 years in a row, continuously exposing my family to this
22 harmful pollution. I'm very concerned about how this

1 pollution is affecting my kids' health and development.

2 Setting the strongest possible greenhouse gas
3 pollution standards for trucks and rapidly transition
4 to zero emission trucks that will help reduce other
5 forms of tailpipe pollution is a key for addressing
6 climate justice for communities and families like mine.

7 Once again, I support the EPA's proposed greenhouse
8 gas regulations for heavy-duty vehicles consistent with
9 the Advanced Clean Trucks Rule. Thank you.

10 MS. THOMPSON: Thank you for your comment. Thank
11 you for your comment. As a reminder, if you are
12 speaking today, you will receive a notification on your
13 screen that you are being promoted to the role of
14 panelist shortly prior to your speaking time. You must
15 accept that invitation to be able to unmute when you
16 are called to testify. This will also allow you to
17 turn on your camera, which we encourage you to do. We
18 ask that each person limit their verbal testimony to 3
19 minutes. Please speak slowly and clearly so our court
20 reporter and interpreters can capture these proceedings
21 accurately. Speakers connected by telephone should
22 unmute their phones when called to testify.

1 If you are having technical difficulties, please
2 send an email to public_hearing@abtassoc.com or call
3 (919) 294-7849. If you are not registered to speak but
4 you would like to, please send an email with your name
5 and phone number to public_hearing@abtassoc.com or call
6 (919) 294-7849.

7 The next speaker will be a Ali Simpson. You may
8 now unmute, and please state your name and affiliation
9 for the record.

10 MS. SIMPSON: Hi there. Thank you for the
11 opportunity to give testimony today. My name is Ali
12 Simpson -- A-L-I, S-I-M-P-S-O-N -- and I'm a national
13 field manager for Moms Clean Air Force, an organization
14 of over 1.5 million parents and caregivers advocating
15 for clean air and a healthy climate on behalf of
16 children nationwide. I'm here today to speak in
17 support of the strongest possible trucks rule finalized
18 this year.

19 I live in Westchester County, New York with my
20 wife and 2-year-old son, Leo. When our neighbors
21 welcomed us to this neighborhood, they said to brace
22 for the winter and the amount of snow our town gets.

1 They've lived here for over 30 years and explain that
2 our town that sits north of a major highway is the snow
3 zone. It snowed just twice this entire winter. Our
4 neighbors simply could not believe it. We were excited
5 to take our son Leo skiing for the first time this
6 year, but the mountain nearest us barely had any snow
7 days. The live shots of the mountain snowed -- showed
8 huge patches of dirt where snow usually is.

9 We live in a rural area with a creek in our
10 backyard. We love nature and wanted to raise our son
11 in a place where it surrounded him every day. Last
12 month, our dog came into the house with two ticks
13 climbing on her. I checked her. I checked my son
14 thoroughly for more ticks. Thankfully there weren't
15 any, and when I got on the phone with our tick control
16 company, they were completely shocked. This was a full
17 two months before they begin tick control and pointed
18 to climate change and the unexpected heat so early in
19 the year that brought about the ticks early. I asked
20 them if that's why many of the plants had died, and
21 they said the heat and drought just scorched plants
22 across the county.

1 The impacts of climate change, they're here.
2 They're all around us. We deal with them on a daily
3 basis in ways obvious and not so obvious. We have to
4 do everything in our power to cut greenhouse gas
5 emissions to stave off the worst impacts of climate
6 change to a number -- and a major catastrophe. And
7 transportation is the largest source of greenhouse gas
8 emissions in the United States, making up 27 percent of
9 all emissions.

10 This proposed EPA rule on nd heavy-duty trucks
11 will go a long way towards curbing greenhouse gas
12 emissions and stopping climate change to secure a face
13 -- a safe future for my child, Leo, and children around
14 the country. I dream of the day when the trucks that
15 my son excitedly points out on the road are fully
16 electric with no black exhaust, and no toxic smells,
17 and no harmful air pollution that has such terrible
18 impacts on the health of our communities and the most
19 vulnerable among us. By the time he gets old enough to
20 testify to EPA himself, I hope that's the reality. I'm
21 doing everything in my power to make this happen.

22 Moms Clean Air Force is calling on EPA to finalize

1 the strongest possible clean truck standards consistent
2 with the Advanced Clean Trucks Rule this year. Thank
3 you for your time.

4 MS. THOMPSON: Thank you for your comment. The
5 next speaker will be Julie Kimmel. You may now unmute,
6 and please state your name and affiliation for the
7 record.

8 MS. KIMMEL: Hello. My name is Julie Kimmel. I
9 live in Reston, Virginia with my husband and daughter,
10 and I'm with Moms Clean Air Force. Thank you for the
11 opportunity to testify. I'm here today to support the
12 strongest possible standards for greenhouse gas
13 emissions from heavy-duty trucks, and I'm calling on
14 EPA to finalize these standards this year. Stronger
15 transportation standards are crucial in protecting the
16 health and future of our children, and it is urgent
17 that we act now.

18 Last week, EPA released a report about how climate
19 change will impact children's health. I'm going to be
20 honest. I haven't read the report in full. I made the
21 mistake of first reading my colleague, Elizabeth
22 Bechard's analysis. She wrote on Twitter, "The report

1 anticipates potential climate impacts for children in
2 the U.S. at 2 and 4 degrees of warming. We don't know
3 exactly when these levels of warming will happen. Some
4 estimates suggest we'll reach 2 degrees of warming by
5 2040." And in parentheses she writes, "My own kids
6 will be 24 in 2040."

7 This paralyzed me. My own daughter will be 25 in
8 2040. Today she is 8 years old and already planning to
9 have kids. She talks about the children she wants to
10 have all the time, like, almost every day. As a -- as
11 any mother concerned about climate change would, I try
12 to gently temper her enthusiasm, but how do you tell
13 your baby don't plan for your future just yet because
14 even if you have one, it will probably be vastly less
15 comfortable than your life is today?

16 Climate change is an issue of generational
17 justice. Today's children will live through at least 3
18 times as many climate disasters as their grandparents
19 did. These children are already suffering learning
20 loss from both the pandemic and the uptick in extreme
21 weather we're already experiencing. How many more
22 missed school days does 3 times as many climate

1 disasters equal, and what does 3 times as many climate
2 disasters mean for their health? I already worry about
3 heat exhaustion and heat stroke during our hot and
4 humid Virginia summers.

5 Climate change also worsens air quality and makes
6 allergy seasons longer and more intense, meaning we'll
7 see more respiratory illness like asthma, not to
8 mention injuries and premature deaths from extreme
9 weather events like wildfires and floods. This is a
10 lot to carry as a parent. I'm sure you feel it, too,
11 whether you're a parent or not.

12 To protect the health and future of our children,
13 we have to reduce greenhouse gas emissions, and we have
14 to do it now, and strong heavy-duty truck pollution
15 standards that put us on a path to zero-emissions
16 vehicles are one important way we can get there. So
17 once again, I'm urging EPA to adopt the strongest
18 possible greenhouse gas rules consistent with the
19 Advanced Clean Trucks Rule for heavy-duty trucks.
20 Please protect our children's health and future by
21 finalizing these standards by the end of the year.
22 Thank you.

1 MS. THOMPSON: Thank you for your comment. The
2 next speaker will be Brandon Buchanan. You may now
3 unmute, and please state your name and affiliation for
4 the record.

5 MR. BUCHANAN: Yes. Good afternoon. My name is
6 Brandon Buchanan. I'm with the American Bus
7 Association. I am the director of regulatory affairs
8 based here in Washington, D.C. Thank you for the
9 opportunity to speak to you all today and appreciate
10 you having an open forum to collect comments. We do
11 hope that you will be able to extend the comment period
12 beyond the June 16th date to ensure kind of meaningful
13 participation and a wholesale ability to comment from
14 the public.

15 We do also want to thank you for the flexible
16 approach and exchange that we had with your Agency on
17 the engine -- recent heavy-duty engine emissions rule,
18 and we do thank you very much for listening to us and
19 adopting a de-rate schedule that we think is very
20 workable. We hope to see similar exchange and
21 discussion on Greenhouse Gas Phase 3.

22 We do have some concerns over the expansion and

1 development of new standards kind of without taking
2 into account and evaluating the newly-developed
3 standards and their impact. We also share the concerns
4 of some of our friends at the Engine Manufacturers
5 Association in reopening the 2022 -- excuse me -- 2027
6 Model Year to look at those standards as well that were
7 already a part of the most recent rulemaking.

8 We also have some concerns about assumptions over
9 fleet composition and the adoption of specific
10 technologies when the technology hasn't yet been proven
11 in all operational capacities, and the infrastructure
12 has not yet demonstrated to be capable of supporting
13 our operational realities, and also the capacities
14 planned by this proposal. In addition to concerns
15 about technology and the infrastructure, we also have
16 very specific concerns about the added weight that some
17 of those technologies will bring to our vehicles and
18 over-the-road buses, and the potential safety concerns
19 if operating ranges and reliability are impacted by
20 these new technologies.

21 We hope that efficiencies can be recognized in
22 this plan, particularly before modes of transportation

1 that remove other passenger vehicles from the road,
2 such as motor coaches, transit buses, and school buses.

3 It is of our -- in our interest and it is of interest
4 to us that locomotives, planes, and ships are kind of
5 more of a limited focus of this proposal. Lastly, we
6 hope that incentives will be -- continue to be added to
7 encourage future adoption of proven technologies.
8 Currently there's very limited federal or state
9 incentives for private over-the-road or motorcoach
10 companies, whereas new zero-emission and alternate
11 fuel-powered equipment are generally 3 to 4 times the
12 current cost and, again, bring added weight concerns as
13 well.

14 We hope that the EPA will continue to be lead on
15 the development of environmental standards, and we look
16 forward to leading the charge in harmonizing all the
17 different environmental standards so we have one set of
18 standards across the nation. Thank you very much for
19 your time.

20 MS. THOMPSON: Thank you for your comment. The
21 next speaker will be Michelle Uberuaga. Unfortunately,
22 we do not currently see you in the list of attendees.

1 However, if you have joined this hearing under a
2 different name, please indicate your presence by
3 pressing the raise hand button at the bottom of your
4 screen. If you have called in, please dial star-9 to
5 raise your hand.

6 (No response.)

7 MS. THOMPSON: The next speaker will be Shruti
8 Vaidyanathan. You now unmute, and please state your
9 name and affiliation for the record.

10 MS. VAIDYANATHAN: Hi there. Can everyone hear
11 me?

12 MS. THOMPSON: We can.

13 MS. VAIDYANATHAN: Thank you so much for the
14 opportunity to testify on the Environmental Protection
15 Agency's proposed Phase 3 heavy-duty greenhouse gas
16 emission standards today. My name is Shruti
17 Vaidyanathan, and I am the director of transportation
18 for the American Council for an Energy Efficient
19 Economy. ACEEE believes this proposal is an important
20 step forward in several ways.

21 Medium- and heavy-duty trucks are responsible for
22 26 percent of all transportation greenhouse gas

1 emissions, and updated standards are needed to put the
2 country on a path to achieving economy-wide climate
3 goals. EPA standards could also go a long way towards
4 reducing health impacts for communities overburdened by
5 localized transportation pollution by ramping up
6 deployment of zero-emission trucks and buses. However,
7 the proposal fails to take advantage of the opportunity
8 to set standards that meet current needs. ACEEE
9 believes that the final rule can and should be stronger
10 in a few key respects.

11 An ICCT report released last week found that the
12 existing landscape of electrification policies,
13 including the Phase 2 standards, state adoption of the
14 Advanced Clean Truck Standards, and incentives in the
15 Inflation Reduction Act will not be sufficient to align
16 with our nationwide climate goals. Therefore, the
17 Phase 3 standards must push for the highest feasible
18 level of EV adoption for heavy-duty vehicles. To do
19 this, we urge EPA in finalizing the rule to update its
20 analysis of Model Year 2032 EV sale shares to reflect
21 additional states' adoption of California Advanced
22 Clean Truck Rule and the more ambitious trajectory set

1 out in their Advanced Clean Fleet Rule. EPA should
2 also consider incorporating upstream emissions from
3 ZEVs in setting the standards. This would help drive
4 the efficiency of these vehicles, reduce their real-
5 world emissions impact, and increase their range, which
6 would accelerate adoption.

7 Additionally, EPA's Phase 3 standards must push
8 for continued improvements for internal combustion
9 technology vehicles. EPA has projected that the ZEVs
10 will account for between 25 to 57 percent of total
11 vehicles in 2032 for each of the regulatory subcategory
12 groupings, which indicates that the majority of
13 vehicles sold over the life of the rule will be diesel
14 vehicles. Yet hidden deep in the current proposal is
15 the fact that EPA assumes absolutely no improvement in
16 ICEVs for both tractors and vocational vehicles post-
17 2027.

18 This completely fails to take advantage of cost-
19 effective technologies that could substantially improve
20 the efficiency of internal combustion engine vehicles
21 beyond what compliance with Model Year 2027 standards
22 require, such as further improvements to engine and

1 transmission efficiency and adoption of mild hybrids.
2 Neither does the proposal call for more widespread
3 adoption of ICEV technologies already on the market
4 today and included in the Phase 2 standards compliance
5 packages. If the standards were to push improvements
6 in ICEV efficiency of just, say, 4 percent a year
7 between 2027 and 2032, this would lead to approximately
8 10-percent lower emissions in Model Year 2032 vehicles
9 on average, equivalent to an increase in EV penetration
10 from 46 percent to 56 percent.

11 ACEEE would once again like to thank the EPA for
12 the opportunity to speak today. More detailed input
13 will be available in our submitted written comments.
14 Thank you so much.

15 MS. THOMPSON: Thank you for your comment. Thank
16 you for your comment. As a reminder, if you are
17 speaking today, you will receive a notification on your
18 screen that you are being promoted to the role of
19 panelist shortly prior to your speaking time. You must
20 accept that invitation to be able to unmute when you
21 are called to testify. This will also allow you to
22 turn on your camera, which we encourage you to do. We

1 ask that each person limit their verbal testimony to 3
2 minutes. Please speak slowly and clearly so our court
3 reporter and interpreters can capture these proceedings
4 accurately. Speakers connected by telephone should
5 unmute their phones when called to testify.

6 If you are having technical difficulties, please
7 send an email to public_hearing@abtassoc.com or call
8 (919) 294-7849. If you are not registered to speak but
9 you would like to, please send an email with your name
10 and phone number to public_hearing@abtassoc.com or call
11 (919) 294-7849.

12 The next speaker will be Gloria Barrera.
13 Unfortunately, we do not currently see you in the list
14 of attendees. However, if you have joined this hearing
15 under a different name, please indicate your presence
16 by pressing the raise hand button on your screen. If
17 you have called in, please dial star-9 to raise your
18 hand.

19 (No response.)

20 MS. THOMPSON: The next speaker will be Liz
21 Hurtado. You may now unmute, and please state your
22 name and affiliation for the record.

1 MS. HURTADO: Hi. Good afternoon. My name is Liz
2 Hurtado, and I'm a national field manager for Moms
3 Clean Air Force and its Latino engagement program,
4 EcoMadres. I'm a mother of four living in Virginia
5 Beach, Virginia, and I'm here today to voice my support
6 of the proposed greenhouse gas regulations for heavy-
7 duty vehicles, and to urge the EPA to finalize these
8 rules as quickly as possible.

9 The transportation sector is the largest source of
10 greenhouse gas emissions in the U.S., and this
11 pollution is a major driver of both climate change and
12 health inequities. Climate change caused by greenhouse
13 gas emissions poses many risk to Americans' health,
14 safety, and well-being. Here in Virginia Beach, we're
15 already dealing with the profound effects of climate
16 change in our rising sea level, intensifying
17 hurricanes, and increased flooding.

18 Reducing greenhouse emissions is crucial in our
19 effort to lessen the impacts from climate change and
20 protect our most vulnerable. We must slash emissions
21 from the transportation sector and move toward zero-
22 emission trucks to protect our air and public health.

1 Stronger standards and cleaner trucks would have
2 critical benefits, including a reduced number of
3 premature deaths, fewer asthma attacks, and fewer lost
4 work days.

5 Heavy-duty vehicle pollution harms everyone but
6 especially those who live near highways, ports, freight
7 hubs, and other high-traffic areas. As a result of
8 housing discrimination and other unjust policies,
9 communities of color and low-income communities make up
10 a higher percentage of the population near our roads
11 and highways and, therefore, suffer disproportionately
12 from harm -- from harmful tailpipe pollution. Strong
13 emission standards would put cleaner trucks on the road
14 and deliver lifesaving relief to frontline communities

15 In my community, we are already seeing the effects
16 of climate change. We should not have to face the
17 added layer of worrying about the dirty air our
18 children breathe. Soccer games, walks to the park, or
19 bike rides around town should be bringing us joy, not a
20 sense of worried about the potential health harms my
21 children are breathing. We cannot continue to
22 sacrifice public health. Protecting public health

1 needs a stable climate and clean air that is safe to
2 breathe.

3 I am hopeful for a future in which my kids breathe
4 clean air, so I once again urge the EPA to finalize the
5 strongest possible clean truck standards, consistent
6 with the Advanced Clean Trucks Rule by the end of 2023.

7 Thank you for the opportunity to testify.

8 MS. THOMPSON: Thank you for your comment. The
9 next speaker will be Ida Sami. You may now unmute, and
10 please state your name and affiliation for the record.

11 DR. SAMI: Hi. My name is Ida Sami. I'm a Moms
12 Clean Air Force program coordinator at Tucson, Arizona.
13 Should I start my testimony right now?

14 MS. THOMPSON: Yes.

15 DR. SAMI: Okay. Hi. My name is Ida Sami, and I
16 am here to express my support for EPA's proposed clean
17 truck is -- the truck standards. I'm the Moms Clean
18 Air Force field coordinator in Arizona, and I hold a
19 Ph.D. in environmental science. I support the strong
20 greenhouse gas standards for heavy-duty vehicles.

21 Heavy-duty vehicles are the second-largest source
22 of greenhouse gas emission in the transportation

1 sector, which is largest source of greenhouse gas
2 emission in the United States. Greenhouse gas traps
3 heat in the atmosphere and cause global warming, which
4 threaten our health, our economy, and our environment.

5 The proposed rule will also speed the transition to
6 zero-emission vehicles for heavy-duty vehicles, such as
7 trucks and buses.

8 Zero-emission vehicles are fully electric vehicles
9 that don't burn fossil fuels and don't have a
10 (inaudible) emissions of greenhouse gases or other
11 pollutants. By switching to zero-emission vehicles, we
12 can reduce our dependence to oil, save money on fuel
13 and maintenance, and, most importantly, protect our
14 children from the harmful effects of air pollution and
15 climate change.

16 Here is why the proposed rule matters for
17 children's health. Heavy-duty trucks are a major
18 contributor to smog and soot pollution, which can cause
19 asthma attacks, respiratory illnesses, heart diseases,
20 cancers, and other health issues, even can cause
21 deaths. Children are especially vulnerable to air
22 pollution because their lungs are still developing, and

1 they breathe more air per pound of body weight than
2 adults. These pollutants are -- disproportionately
3 affect low-income communities and communities of color
4 who are located near highways and (inaudible) and other
5 (inaudible). According to the EPA, 72 million people
6 live near truck freight routes in America.

7 The proposed rulemaking, alongside the other
8 rulemaking that are part of the Clean Trucks Plan, will
9 take advantage of the growing availability of zero-
10 emission vehicle technologies and the historic evidence
11 from President's Biden implementing Inflation Reduction
12 Act and Bipartisan Infrastructure Law. I urge the EPA
13 to adopt the most stringent and ambitious standards
14 consistent with the Advanced Clean Truck Rules possible
15 as quickly as possible.

16 Strong safeguards will save lives, improve health,
17 fight climate change, and advance environmental
18 justice. It's time to act. We need clean trucks now,
19 and I appreciate your consideration.

20 MS. THOMPSON: Thank you for your comment. The
21 next speaker will be Jacqueline Gelb. You may now
22 unmute, and please state your name and affiliation for

1 the record.

2 MS. GELB: Thank you. Good afternoon. Thank you
3 for allowing me the opportunity to speak at today's
4 hearing. I am Jacqueline Gelb, vice president of
5 energy and environment for the American Trucking
6 Associations. ATA is a 90-year old federation and the
7 largest national trade association representing the
8 7.65 million men and women working in trucking-related
9 jobs. Our members range from the nation's largest
10 motor carriers to small mom-and-pop one-truck
11 operations and everyone in between.

12 The heavy-duty trucking industry has a long
13 history of working with EPA to deliver regulations that
14 provide real-world emission benefits and regulatory
15 certainty to our industry. Through this collaboration,
16 60 trucks today emit what one truck emitted in 1988.
17 These cleaner trucks are meeting the demand to move
18 freight than ever before. Trucking currently moves
19 more than 70 percent of the nation's annual freight
20 tonnage, and over the next decade, trucks will be
21 tasked with moving 2.4 billion more tons of freight
22 than they do today.

1 Our nation's efficient and productive supply chain
2 depends on getting this regulation right. Fleets share
3 the vision of a zero-emission future that many are here
4 to support today, but how we get there will determine
5 the durability of those long-term goals. Reliability,
6 durability, cost parity, and performance are the
7 important drivers of any new technology in our
8 industry. And as an industry, we enhance reliability
9 by proving new technologies meet the operational
10 demands of commercial vehicles through millions of
11 miles of real-world test -- real-world testing.

12 ATA is concerned that EPA's proposed heavy-duty
13 greenhouse gas Phase 3 regulation will push
14 electrification in an industry that, unfortunately,
15 isn't right to adopt the technology yet. Among our
16 concerns is that despite recent federal and state
17 incentives, the infrastructure is just not there to
18 support the transition timeline that this regulation is
19 proposing.

20 Our members are early adopters of the technology
21 today but are grappling with serious technical
22 challenges incorporating zero-emission technology into

1 many operations because of a host of factors, including
2 the lack of sufficient power generation and charging
3 infrastructure, long lead times for installation, the
4 significant capital investment of purchasing electric
5 trucks, site readiness and design challenges, and the
6 reliability of charging equipment.

7 As the Agency reviews the GHG 3 regulation, you
8 must take these factors into account and provide
9 flexibility for influence that inhibit adoption. This
10 includes the fact that as the technology exists today,
11 many fleets will be asked to do with less,
12 reconfiguring freight and logistics operations with
13 less payload capacity, longer downtimes, and, in some
14 instances, less range than comparable clean diesel
15 vehicles.

16 ATA will continue to advocate for regulations that
17 are achievable and provide regulatory certainty.
18 Reopening the 2027 greenhouse gas Phase 2 standard will
19 erode the trust and disrupt industry investment and
20 planning for compliance. The Association and our
21 members remain committed to engaging with the Agency
22 through the process of sharing data and use cases from

1 early adopters. Thank you for the time today.

2 MS. THOMPSON: Thank you for your comment. The
3 next speaker will be Athena Motavvef. Unfortunately,
4 we do not currently see you in the list of attendees.
5 If you have joined this hearing under a different name,
6 please indicate your presence by pressing the raise
7 hand button at the bottom of your screen. If you have
8 called in, please dial star-9 to raise your hand.

9 (No response.)

10 MS. THOMPSON: The next speaker will be Mark Rose.
11 Mark, you may now unmute, and please state your name
12 and affiliation for the record.

13 MR. ROSE: Thank you for this opportunity to
14 comment. My name is Mark Rose, and I'm the Sierra
15 Nevada program manager for National Parks Conservation
16 Association. On behalf of NPCA and our more than 1.6
17 million members and supporters, I want to thank the
18 administration for acting quickly on this important
19 rule to reduce climate pollution from heavy-duty
20 trucks.

21 I'm currently a resident of Sacramento,
22 California, but until recently I lived and worked for

1 years in Fresno, California, which lies within one of
2 the most polluted air basins in the nation, the San
3 Joaquin Valley. Because of this, I have extensive
4 first-hand experience with the impacts of truck
5 pollution. Both where I live now and where I lived in
6 Fresno are located in close proximity to highways that
7 see thousands of semi-trucks pass by every day.

8 Having worked on air pollution issues in the San
9 Joaquin Valley and in the nearby national park, I know
10 the impacts trucks have on air quality in communities
11 across the state and the role trucks play in causing
12 regions, like the San Joaquin Valley and South Coast
13 air districts, to remain an extreme or serious non-
14 attainment for ozone and fine particulate NOx
15 standards.

16 Trucks are also one of California's largest
17 sources of visibility impairing pollution, or haze as
18 defined the Clean Air Act's Regional Haze Program. For
19 instance, in two of the parks I work on, Sequoia and
20 Kings Canyon National Parks, on-road mobile sources,
21 including trucks, are projected to account for the
22 largest portion of haze that reduces an average of 90

1 miles of visibility in those parts annually. The same
2 pollution also harms the health and well-being of park
3 visitors and employees as well as park ecosystems where
4 it affects wildlife, plant life, and degrades important
5 habitats. Reducing any amount of pollution from large
6 trucks will have significant co-benefits for the
7 state's Regional Haze Program and will help protect our
8 national parks' treasured landscapes.

9 I'm also aware, through my work, of the oversized
10 role truck pollution plays in driving the global
11 climate crisis. Living in California, I've personally
12 been affected by climate-change-driven drought, high
13 temperatures, wildfires, flooding, and other harms that
14 are only expected to worsen. Despite accounting for
15 only about 4 percent of vehicles on the road, trucks
16 and buses make up roughly one-third of transportation
17 climate pollution.

18 With the transportation sector now the largest
19 contributor of greenhouse gases in the U.S., it is
20 critical that EPA get this rule right to meet our
21 nation's climate goals. Thus, NPCA strongly urges you
22 to take steps to make this rule even more stringent

1 than the proposed alternative to require all heavy-duty
2 truck sales to be zero-emission by no later than 2045.

3 Numerous states, including California, have already
4 committed to similar standards that, alongside
5 significant public investment through the Inflation
6 Reduction Act, is already driving the industry to
7 rapidly transition to zero-emission vehicles.

8 To ensure a livable climate and cleaner air for
9 parks and community, NPCA asks that you strengthen this
10 rule and finalize it as quickly as possible. Thank
11 you.

12 MS. THOMPSON: Thank you for your comment. Thank
13 you for your comment. As a reminder, if you are
14 speaking today, you will receive a notification on your
15 screen that you are being promoted to the role of
16 panelist shortly prior to your speaking time. You must
17 accept that invitation to be able to unmute when you
18 are called to testify. This will also allow you to
19 turn on your camera, which we encourage you to do. We
20 ask that each person limit their verbal testimony to 3
21 minutes. Please speak slowly and clearly so our court
22 reporter and interpreters can capture these proceedings

1 accurately. Speakers connected by telephone should
2 unmute their phones when called to testify.

3 If you are having technical difficulties, please
4 send an email to public_hearing@abtassoc.com or call
5 (919) 294-7849. If you are not registered to speak but
6 you would like to, please send an email with your name
7 and phone number to public_hearing@abtassoc.com or call
8 (919) 294-7849.

9 The next speaker will be Andrea Marpillero-
10 Colomina. You may now unmute, and please state your
11 name and affiliation for the record.

12 MS. MARPILLERO-COLOMINA: Hello. My name is
13 Andrea Marpillero-Colomina, and I am the sustainable
14 communities program director at GreenLatinos. Thank
15 you for this opportunity to testify. We're heartened
16 to see the Biden administration taking strong action to
17 reduce vehicle emissions. This is a crucial tool to
18 address climate crisis and protect public health.

19 Vehicle emissions literally make us sick and kill
20 us. Nationwide, Latinos experience disproportionate
21 exposure to fine particulate matter, PM 2.5 emissions,
22 leading to higher rates of asthma, lung disease, heart

1 disease, and other pollution-triggered conditions,
2 which can be fatal. Nearly one-third of Latino
3 children nationwide live in counties or hazardous air
4 pollutant concentrations exceed a 1 in 10,000 cancer
5 risk level. Heavy-duty vehicles spew harmful diesel
6 pollution, degrading air quality and contributing to
7 the climate crisis. Trucks make up less than 10
8 percent of the vehicles on the road but are responsible
9 for nearly 30 percent of transportation-related
10 greenhouse gas emissions

11 For Latino communities, the implementation of
12 stringent heavy-duty vehicle standards is particularly
13 urgent. Latino communities are disproportionately
14 pollutant -- pollution burdened and are more likely to
15 live in diesel death zones where truck emissions create
16 greater risk of lung disease, asthma, and cancer.
17 Strong tailpipe and standards for heavy-duty vehicles
18 are necessary to mitigate impacts of environmental
19 racism and provide relief to frontline communities
20 living in freight corridors and adjacent to major
21 roadways.

22 By finalizing the strongest possible heavy-duty

1 vehicle standards, the EPA can effectively address the
2 inequitable pollution impacts borne by Latino
3 communities and mitigate lived impacts of environmental
4 racism. Enacting the strongest possible long-term
5 standards holds huge potential to significantly improve
6 health and well-being for all people and our planet,
7 and we urge the EPA to finalize this rulemaking by the
8 end of the year. Thank you so much for your time.

9 MS. THOMPSON: Thank you for your comment. The
10 next speaker is Anna Mudd. You may now unmute, and
11 please state your name and affiliation for the record.

12 (No response.)

13 MS. THOMPSON: Anna, you are still on mute.

14 (No response.)

15 MS. THOMPSON: Just one more note. Anna, if you
16 can hear me, you are still muted, but you can unmute
17 yourself by clicking the microphone icon in the lower
18 left-hand side of your Zoom window.

19 (No response.)

20 MS. THOMPSON: Anna, we will reach out to you
21 directly. For now, we will move on to the next
22 speaker, who is Taylor Thomas. Unfortunately, Taylor,

1 we do not currently see you in the list of attendees.
2 However, if you have joined this hearing under a
3 different name, please indicate your presence by
4 pressing the raise hand button on the bottom of your
5 screen. If you have called in, please dial star-9 to
6 raise your hand.

7 (No response.)

8 MS. THOMPSON: The next speaker will be Chelsea
9 JoAnne Lyons. Chelsea, you may now unmute. Please
10 state your name and affiliation for the record.

11 MS. LYONS: Thank you. Thank you for the
12 opportunity to testify. My name is Chelsea Lyons, and
13 I am the North Carolina field organizer for Moms Clean
14 Air Force. On behalf of Moms Clean Air Force, I'm
15 testifying in support of the proposed standards and
16 call on EPA to finalize strong clean truck standards by
17 the end of 2023.

18 Transportation is one of the largest contributors
19 to greenhouse gas emissions. I'm concerned about the
20 increase in GHGs because they result in extreme weather
21 events and serious health effects that concern my son.

22 As a mom of a 16-month-old boy, I am scared to see the

1 impact climate change has on my son and any future
2 children my husband and I -- my husband and I may have.

3 With the increase of climatic anxiety, heat strokes,
4 heart attacks, premature death, and adverse birth
5 outcomes, I'm scared to think of what the future won't
6 be like. Will we be fighting the same fight that we
7 are now, or we will we finally have a clean future?

8 Climate change has affected all of our lives every
9 single day. This includes tailpipe pollution, and that
10 would be a great example of something that my son has
11 had severe asthma attacks, considering that we have
12 severe -- excuse me -- we have a lot of highways in
13 North Carolina that promotes a lot of transportation
14 for giant trucks, especially in our area. With his
15 developing lungs, he should not be exposed to this type
16 of pollution on a daily basis. Unfortunately, there is
17 little for me to do that I -- that I can do as a mom.
18 Due to the amount of polluted trucks on the road, this
19 creates fear and climatic anxiety for my family, and it
20 is time to change.

21 The vehicles covered by this rule be -- it will be
22 on the road for decades to come. A strong rule will

1 help address climate pollution from heavy-duty
2 vehicles, and it will also help speed up our transition
3 to zero-emission vehicles, reducing other health-
4 harming forms of tailpipe pollution that affect the
5 health of children, like my own. Parents in North
6 Carolina want to see a rapid transition to zero-
7 emission vehicles, and Moms Clean Air Force is calling
8 on EPA to finalize the strongest possible clean truck
9 standards, consistent with the Advanced Clean Trucks
10 Rule this year. Thank you.

11 MS. THOMPSON: Thank you for your comment. The
12 next speaker will be Kelly Bobek. Unfortunately,
13 Kelly, we do not currently see you in the list of
14 attendees. If you have joined this hearing under a
15 different name, please indicate your presence by
16 pressing the raise hand button at the bottom of your
17 screen. If you have called in, please dial star-9 on
18 your phone.

19 (No response.)

20 MS. THOMPSON: The next speaker will be Kevin
21 Maggay. Unfortunately, Kevin, we also do not see you
22 in the list of attendees. However, if you have joined

1 under a different name, please indicate your presence
2 by pressing the raise hand button at the bottom of your
3 screen. If you have called in, please dial star-9 to
4 raise your hand.

5 (No response.)

6 MS. THOMPSON: The next speaker will be Jonathan
7 Moody. Jonathan, you may now unmute, and please state
8 your name and affiliation for the record.

9 MR. MOODY: Thank you for the ability to testify
10 today. My name is Jonathan Moody, and I represent
11 Holiday Tours in Randleman, North Carolina. We are a
12 family-owned motor coach company that has been in
13 business for the last 45 years. Today we have over 250
14 employees and have traveled over 28 million miles in
15 the last 10 years. Those trips were all taking
16 elementary, middle, and high school students on field
17 trips, moving our nation's military from base to base,
18 transporting college athletic teams to games and
19 tournaments, as well as bringing groups to weddings,
20 corporate events, and so many other things.

21 We are a forgotten industry. Need a little proof
22 of that? In the opening statements today citing all

1 types of vehicles that this affects, we were not
2 mentioned. As I've listened to dozens of advocates
3 asking the EPA to move forward, I've heard statements
4 like "cleaning up trucks" or fixing this for trucks.
5 Some people have said buses but most times are alluding
6 to transit or school buses, which operate on very small
7 loops and are vastly different from the over-the-road
8 motor coaches that my organization and hundreds of
9 thousands of groups rely on to move them locally,
10 regionally, and nationally.

11 Because we are such a small fraction of the heavy-
12 duty vehicles on the road, oftentimes the legislation
13 that's put against heavy-duty trucks affects us in ways
14 that no one understands or considers. As an industry,
15 the thing that people don't understand about us is that
16 motor coaches are green. Anytime we're transporting 40
17 to 50 people as a group, we're removing dozens of
18 vehicles that would have been on the road or people
19 using less green methods of transportation.

20 As an industry, we support green initiatives and
21 the purpose behind these rules, but we need to look at
22 the effects these rules are creating. Need an example?

1 Washington, D.C. recently passed legislation to remove
2 the majority of bus parking spots on Ohio Drive because
3 bicyclers were complaining about the fumes that were
4 created by these buses. Now that they're removed,
5 instead of being able to park and sit, these buses are
6 driving around constantly looking for available spaces
7 that are remaining based on the limited number that are
8 still there.

9 In addition, electric and other capabilities in
10 our industry are simply not functional or feasible at
11 this time. The vehicles, which have only become
12 available in the last year or two, can only travel a
13 fraction of the miles that we travel in a day and
14 remove significant storage space that our groups
15 require for overnight bags, sports equipment, band
16 equipment, and so much more.

17 So what's the solution? The EPA should do as it
18 has done before and recognize that motor coaches are
19 different from other heavy-duty transportation mediums.

20 On December 20th, 2022, the EPA adopted a final rule
21 called Control for Air Pollution From New Motor
22 Vehicles: Heavy-Duty Engine and Vehicle Standards.

1 That final rule set aside a special set of rules for
2 motor coach operators because they recognize that the
3 rapid de-rate schedule harshly and dangerously affected
4 the passengers that we transport every day.

5 In conclusion, we know that changes are needed and
6 we know that they are coming, and I implore you to
7 consider our industry and think of the effects that
8 these rules will have on our groups. Thank you.

9 MS. THOMPSON: Thank you for your comment. The
10 next speaker will be John Bailey. John, we do not
11 currently see you among the list of attendees.
12 However, if you have joined under a different name,
13 please indicate your presence by pressing the raise
14 hand button on your screen. I can see that you have
15 raised your hand, or perhaps not. John, if you are
16 present, again, please indicate your presence by
17 clicking the raise hand button at the bottom of your
18 screen, or if you have dialed in, please dial star-9 on
19 your phone.

20 (No response.)

21 MS. THOMPSON: Okay. The next speaker will be
22 Michelle Uberuaga. Michelle, you may now unmute, and

1 please state your name and affiliation for the record.

2 MS. UBERUAGA: Hi. My name is Michelle Uberuaga,
3 and I'm a member of Moms Clean Air Force. Thank you so
4 much for the opportunity to testify today. I'm
5 grateful for your work. You have a very important job
6 and a laudable our mission to protect human health and
7 the environment. I'm a mother of three, member of Moms
8 Clean Air Force, and I live on indigenous land in
9 Southwest Montana. I work full time running a
10 community-based organization here in Yellowstone's
11 Northern Gateway. I'm testifying today to encourage
12 EPA to adopt the strongest possible rules for heavy-
13 duty trucks, consistent with the Advanced Clean Trucks
14 Rule.

15 We need to rapidly transition to zero pollution
16 vehicles. As many speakers have already stated, we are
17 at a tipping point. Every decision you make to reduce
18 pollution today matters. I really want you to
19 understand the urgency of this work to my family and so
20 many other Montana families.

21 We have already experienced our first wildland
22 fires in Montana. Our rivers are rising. We're still

1 recovering from the floods from last year, and we're
2 gearing up for more floods and another hot and smoky
3 summer. My kids are still pretty young, but they know
4 that something is not right. Montana's drought is
5 killing farmers. Meanwhile, the floods are changing
6 the landscape. Climate change is impacting every part
7 of our lives, our economy, and our way of life in
8 Montana, and our kids are counting on you to take
9 action to protect their future. For these reasons, I
10 urge the EPA to set the strongest possible federal
11 truck standards.

12 I'm also testifying because my family, like many
13 Montana families, is impacted from air pollution from
14 trucks. Strong standards would encourage a rapid
15 transition to zero-emission vehicles, which would not
16 only cut climate pollution but reduce the toxic air
17 pollution that comes from vehicle exhaust.

18 Livingston is a small town. We're in a rural
19 county on the northern edge of Yellowstone national
20 Park. You might imagine that we have very good air
21 quality, but like every other place, we experience
22 local pollution from vehicles, and it's inescapable.

1 My son has three kids on his soccer team that have
2 asthma. My husband is the coach, and he has to make
3 judgment calls about whether it's safe to practice or
4 play games. Parents should not be making these
5 decisions.

6 Thinking back on my childhood, I can remember one
7 time that a kid had an asthma attack at school. It was
8 very scary. Now as a parent, inhalers are part of play
9 dates, even here in Montana, and the number of kids
10 that I know that experience asthma is astonishing. And
11 those numbers are much higher in historically-
12 marginalized communities in urban areas, and the data
13 the data is very clear that communities of color are
14 among the hardest hit. Livingston lives -- or our
15 community sits just minutes from I-90, and that's a
16 very common situation for Montana communities.

17 We need your help. Local families and communities
18 can work together to protect themselves from pollution,
19 but we shouldn't have to, and many, especially
20 vulnerable communities, just don't have the resources
21 or time. We need your leadership to protect vulnerable
22 children across our country from air pollution and

1 climate change. Strengthening truck standards is a
2 simple step, and I want my kids to know that we did
3 everything we could to protect their future. Moms
4 Clean Air Force is calling on EPA to finalize the
5 strongest possible clean truck standards this year,
6 consistent with the Advanced Clean Trucks Rules. Thank
7 you again for your time and consideration.

8 MS. THOMPSON: Thank you for your comment. As a
9 reminder, if you are speaking today you will receive a
10 notification on your screen that you are being promoted
11 to the role of panelist shortly prior to your speaking
12 time. You must accept that invitation to be able to
13 unmute when you are called to testify. This will also
14 allow you to turn on your camera, which we encourage
15 you to do. We ask that each person limit their verbal
16 testimony to 3 minutes. Please speak slowly and
17 clearly so our court reporter and interpreters can
18 capture these proceedings accurately. Speakers
19 connected by telephone should unmute their phones when
20 called to testify.

21 If you are having technical difficulties, please
22 send an email to public_hearing@abtassoc.com or call

1 (919) 294-7849. If you are not registered to speak but
2 you would like to, please send an email with your name
3 and phone number to public_hearing@abtassoc.com or call
4 (919) 294-7849.

5 The next speaker will be Athena Motavvef. You may
6 now unmute, and please state your name and affiliation
7 for the record.

8 MS. MOTAVVEF: Hi. This is Athena Motavvef. I'm
9 with Earthjustice. Thank you so much for the
10 opportunity to testify. I am a federal policy advocate
11 at Earthjustice, and I work to electrify our
12 transportation system, to eliminate health-harming air
13 pollution, and tackle the climate crisis. I'm here
14 today to urge EPA to create the strongest possible
15 standards on heavy-duty vehicle pollution. At a
16 minimum, EPA should ensure a clear pathway to zero-
17 emissions by 2035.

18 At Earthjustice, we work closely with our partners
19 and clients, many of whom are living in communities
20 often referred to as diesel death zones. Communities
21 around freight corridors have dramatically increased
22 asthma rates and risk of pulmonary disease and cancer.

1 We need a bold and equitable transition to a
2 pollution-free, 100-percent clean energy economy that
3 works for everyone, especially communities most
4 impacted by climate change and toxic pollution.

5 While there are fewer of the heavy-duty vehicles
6 than light-duty vehicles on the road, heavy-duty
7 vehicles, like trucks, buses, and even motorcoaches,
8 disproportionately impact air quality. Heavy-duty
9 vehicles make up only 10 percent of vehicles on the
10 road but contribute 45 percent of NOx emissions and 57
11 percent of primary particulate matter from the
12 transportation sector. Heavy-duty vehicles also
13 accelerate climate change, emitting many 28 percent of
14 greenhouse gases. A disproportionate number of the 72
15 million Americans that live closest to trucking routes
16 are low-income people of color, making them more
17 susceptible to the health effects of air pollution.

18 EPA's inclusion of the rail and locomotive section
19 in this rulemaking is also critical. Railyards and
20 freight rail routes are also disproportionately located
21 near communities of color. Switcher and line haul
22 locomotives spew diesel particulate matter where people

1 work and live. This is unacceptable when we have the
2 zero-emission technology to address these issues today.

3 The Biden administration has made it -- has made
4 clear its commitment to environmental justice, and this
5 is a clear step they can take to demonstrate that
6 commitment. To address environmental racism and
7 injustice, this Heavy-Duty Vehicle Greenhouse Gas Phase
8 3 Rule must guarantee emission reductions from heavy-
9 duty vehicles in environmental justice communities.
10 Zero-emission vehicles are available, cost effective,
11 and ready to deploy.

12 Communities dying from air pollution can't wait.
13 We urge EPA to adopt and finalize the strongest rule
14 possible without delay to make good on the Biden
15 administration's environmental justice commitments.
16 Thank you.

17 MS. THOMPSON: Thank you for your comment. The
18 next speaker will be Anna Mudd. Anna, you may now
19 unmute, and please state your name and affiliation for
20 the record.

21 (No response.)

22 MS. THOMPSON: Anna, it appears that you are off

1 mute, but we cannot hear you just yet.

2 (No response.)

3 MS. THOMPSON: Unfortunately, Anna, we still are
4 unable to hear you. Maybe we'll give it a few more
5 seconds.

6 (No response.)

7 MS. THOMPSON: Apologies, Anna. We're still
8 unable to hear your testimony. We will continue to
9 work with you directly to see if we can get you on
10 online. The next speaker will be Kevin Maggay. Kevin,
11 you may now unmute, and please state your name and
12 affiliation for the record.

13 MR. MAGGAY: Hello. My name is Kevin Maggay. I'm
14 representing Navistar. Navistar is a leading
15 commercial vehicle manufacturer. We have Class 4
16 through 8 commercial trucks under the International
17 Truck brand and school buses under the IC bus brand.
18 The company is based in Lisle, Illinois, and has more
19 than 14,000 employees throughout North America. In
20 addition to our traditional product line, Navistar is
21 already manufacturing and delivering zero-emission,
22 battery-electric school buses, and medium-duty

1 commercial trucks to customers. Additionally, we're
2 currently developing better electric trackers.

3 We're still in the process of our detailed review
4 of the regulation, but Navistar wholehearted --
5 wholeheartedly supports the transition to a zero-
6 emission future. It must be understood, though, that
7 this regulation is very different than the previous GHG
8 rulemakings. The reality is that this regulation, as
9 proposed, is going to significantly change the trucking
10 sector. The regulation would essentially mandate the
11 move away from liquid fuels, which would fundamentally
12 change the fueling, operational, and business models of
13 the trucking industry.

14 Truck drivers have never had to think much about
15 where they're getting -- going to get their fuel from
16 when they're purchasing a truck. OEMs, like Navistar,
17 have never had to work with electric utilities and
18 think about lead times for things like electrical
19 substations before selling a truck. The fuel has
20 always been ready and available. We and other OEMs
21 have invested into the technology, and we have product
22 available.

1 The success of the transition to zero-emission
2 trucks really now hinges almost exclusively on
3 infrastructure. If there's a federal regulation that
4 drives the deployment of zero-emission trucks, it must
5 be complementary mechanisms, whether it be regulations
6 or policies, to ensure that the rate of infrastructure
7 deployment keeps pace with the rate of vehicle
8 deployment. And because trucking is so integral to
9 daily life, the electricity infrastructure to support
10 trucking needs to be affordable, reliable, resilient,
11 and everywhere.

12 We understand the other agencies will need to be
13 involved in infrastructure policy, but, again,
14 infrastructure is critical to the success of zero-
15 emission trucks. Thank you, and we look forward to
16 working with EPA on rule development.

17 MS. THOMPSON: Thank you for your comment. This
18 concludes our fourth speaker block. We will now call
19 on the names of those who were not present when
20 initially called on to testify. If you have joined,
21 please indicate your presence by pressing the raise
22 hand button at the bottom of your screen, and if you've

1 called in, please dial star-9 to raise your hand.

2 The first speaker is Gloria Barrera. Again,
3 Gloria, you have joined. Please indicate that your
4 presence by pressing the raise hand button on your
5 screen. And I can see a call-in user has raised their
6 hand, so I will allow you to unmute, and if you're
7 having trouble unmuting, you should be able to dial
8 star-6 on your phone.

9 MS. BOBEK: Hello? Can you hear me?

10 MS. THOMPSON: We can.

11 MS. BOBEK: My name is Kelly Bobek, government
12 relations director for Volvo Group North America. The
13 Volvo Group is committed to its global product
14 portfolio being 100 percent fossil free by 2040 with an
15 interim goal of achieving 35 percent global zero-
16 emission product sales by 2030. These commitments are
17 in line with the Paris Climate Agreement and the
18 Science-Based Target Initiative, which Volvo Group
19 supports.

20 The Volvo Groups of Volvo and Mack brand have been
21 actively working with stakeholders to accelerate market
22 penetration of battery electric truck sales since 2019.

1 The Volvo LIGHTS Project in Southern California
2 brought together 14 partners between 2019 and 2022,
3 resulting in the commercial operation of 30 Class 8
4 battery electric trucks across 10 different fleets.
5 Today Volvo Group is a North American heavy-duty zero-
6 emission truck market leader, with 251 trucks delivered
7 to date.

8 The MPRM cited Volvo truck's goal of having 50
9 percent of trucks sold being electric by 2030. While
10 this is a global goal for only one Volvo group brand,
11 we agree we must set stretch goals and do everything we
12 can to limit global warming to 1.5 degrees Celsius.
13 However, OEMs cannot do their part without assurances
14 that charging station providers and utilities, as well
15 as Federal, state, and local governments, can deploy
16 electric- and hydrogen-fueling infrastructure at scale
17 in a timeline that matches the regulations requirement.

18 The state of California has dedicated vast
19 financial resources to foster ZEV adoption, and the IRA
20 and IIJA will help expand financial assistance across
21 the country, but other states are just beginning to
22 take similar action. These developments are crucial

1 yet insufficient to ensure ZEV penetration rates
2 outlined in the proposed regulation.

3 EPA's previous greenhouse gas regulations
4 drastically reduced emissions from heavy-duty vehicles,
5 and we support the Agency's decision to further expand
6 those reductions and this regulation through ZEV
7 penetration rather than through conventional engine and
8 vehicle emission reductions. But unlike past EPA
9 regulations where compliance was based on our own
10 investment and effort, this regulation as drafted
11 prevents us from being able to ensure our own
12 compliance. Our customers will not purchase zero-
13 emission trucks unless both the vehicles and the fuels
14 are cost effective and readily available so as not to
15 negatively impact their business operations.

16 The lead time for an electric truck delivery is
17 generally shorter than the installation of charging
18 infrastructure due to hurdles, such as energization
19 delays, permitting impediments, and supply chain
20 challenges. Unfortunately, we are starting to see
21 customers delay and even cancel ZEV truck purchases in
22 California because of delayed infrastructure.

1 The administration's transportation
2 decarbonization blueprint calls for a holistic strategy
3 with coordinated action and collaboration amongst
4 stakeholders. We look forward to working with EPA to
5 develop a final rule we can support which addresses the
6 interdependence of vehicle and infrastructure
7 availability and alleviates the sole risk of
8 noncompliance being borne by vehicle manufacturers.

9 Thank you.

10 MS. THOMPSON: Thank you for your comment. The
11 next speaker will be Anna Mudd. I have just allowed
12 you the ability to unmute on your phone, and you should
13 be able to unmute by dialing star-6.

14 MS. MUDD: Can you hear me?

15 MS. THOMPSON: We can.

16 MS. MUDD: My name is Anna Mudd. Thank you for
17 allowing me to speak today. So many people who are
18 much more knowledgeable than I am have spoken with so
19 many more statistics than I have or have, who have
20 tangible health problems because of air pollution, and
21 I feel like a pretty small fish in this distinguished
22 pond because I do not have any of those. I have a B.A.

1 in art history, I'm not a parent, and I don't have
2 respiratory problems, at least not yet.

3 However, I have lived in Philadelphia for about 10
4 years, first on a third-floor in Center City on a main
5 artery where there's constant traffic, public buses,
6 trucks, and, of course, cars. I lived there for
7 several years, and except for a few times when I first
8 moved in, I never opened my windows because a layer of
9 soot would cover everything, even up on the third floor
10 so far from the street. It was gross, and I didn't
11 want to breathe that, but like Elizabeth from Queens
12 who spoke in the last block, I learned my lesson, and
13 if it was warm enough to open them I kept them closed
14 and turned on my air conditioner.

15 Three years ago, my husband and I were able to buy
16 a small home in South Philadelphia. In one sense, I
17 feel kind of immune because now we live on a dead-end
18 street without a bus route, and when we open our
19 windows we hear birds singing and children playing.
20 Our street is so narrow, a special little truck comes
21 for our garbage. It looks like a Lego, but in another
22 sense, I know I am also living with pollution because

1 you can still see the black smoke that the Lego truck
2 releases. And, again, just a few blocks away is
3 Washington Avenue, another huge artery with many
4 commercial vehicles.

5 I hope that this rule for heavy-duty trucks is
6 passed. I'm not nearly as knowledgeable as others who
7 have spoken today and will speak, but I know who Greta
8 Thunberg is, and she told us we have 10 years to turn
9 this around. That was in 2019, 4 years ago. This is
10 not an approaching crisis or something that could
11 happen. It's happening now, and no one can say that
12 this is sudden or the rule too drastic. Climate
13 scientists have been saying that this was an impending
14 disaster since the 1970s, so please pass the strongest
15 possible emission standards. Thank you. Bye.

16 MS. THOMPSON: Thank you for your comments. That
17 concludes Speaker Block 4. Again, we will now call on
18 the names of those who were not present when initially
19 called to testify who we haven't heard from already.
20 If you have joined, please indicate your presence by
21 pressing the raise hand button at the bottom of your
22 screen, and if you've called in, please dial star-9 to

1 raise your hand.

2 The first name is Gloria Barrera. Again, Gloria,
3 if you have joined, please indicate your presence by
4 raising your hand or dialing star-9 on your phone.

5 (No response.)

6 MS. THOMPSON: The next name is Taylor Thomas.

7 Taylor, if you have joined, please indicate your
8 presence by pressing the raise hand button or by
9 dialing star-9 on your phone.

10 (No response.)

11 MS. THOMPSON: Our final name in this speaker
12 block is John Bailey. John, if you have joined, please
13 indicate your presence by raising your hand -- either
14 by clicking the raise hand button at the bottom of your
15 screen or by dialing star-9 on your phone.

16 (No response.)

17 MS. THOMPSON: At this time, we will begin a
18 scheduled recess. EPA, when would you like to
19 reconvene?

20 MR. NELSON: We can reconvene at 4:00 p.m.

21 (Break.)

22 MS. THOMPSON: Hello, everyone. This is Kayla

1 Thompson from Abt Associates, CPA's contractor. It is
2 now 4:00 p.m., Eastern Time, and we are now rejoining
3 EPA's public hearing about the Greenhouse Gas Emission
4 Standards for Heavy-Duty Vehicles, Phase 3 Proposed
5 Rule.

6 In order to accommodate testimony in both Spanish
7 and English, throughout this hearing, all attendees
8 must select their preferred language via the
9 interpretation icon at the bottom of your screen. If
10 you are providing testimony today, please make sure
11 that you are speaking the language of the channel you
12 are listening to. For example, listening to English
13 while speaking in Spanish could prevent other
14 participants from hearing your statement in their
15 language of choice. The public hearing will be
16 recorded by the court reporter, and while the recording
17 will not be made publicly available, a transcript of
18 the public hearing will be posted to the docket several
19 weeks after the hearing.

20 Before we resume the hearing, we'd like to go over
21 some logistics. As a reminder, all attendees are muted
22 automatically. If you are speaking today, you will

1 receive a notification on your screen that you are
2 being promoted to the role of panelist shortly prior to
3 your speaking time. You must accept that invitation to
4 be able to unmute when you are called to testify. This
5 will also allow you to turn on your camera, which we
6 encourage you to do. Speakers connected by telephone
7 should unmute their phones when called to testify.

8 If you are having technical difficulties, please
9 send an email to public_hearing@abtassoc.com or call
10 (919) 294-7849. If you are not registered to speak but
11 you would like to, please send an email to
12 public_hearing@abtassoc.com or call (919) 294-7849.

13 We will now continue our public testimony. The
14 expected speaking order is currently displayed on
15 screen. Excuse me. We ask that each person limit
16 their verbal testimony to 3 minutes. We encourage you
17 to provide any portion of your prepared statement that
18 you are unable to deliver along with any additional
19 comments to Docket Number EPA-HQ-OAR-2022-0985 on
20 Regulations.gov. I will be introducing each speaker in
21 turn. A transcript of the testimony from this public
22 hearing will be made available to the public and

1 included in the docket. Please speak slowly and
2 clearly so our court reporter can record these
3 proceedings accurately.

4 The first speaker will be Steven Cliff. Steven,
5 you may now unmute, and please state your name and
6 affiliation for the record.

7 DR. CLIFF: Good afternoon. I'm Steve Cliff,
8 executive officer of the California Air Resources
9 Board. Thank you for this opportunity to bring you
10 California's perspective based on our experience
11 driving deep reductions in greenhouse gases, the
12 aggressive deployment of heavy-duty zero-emission
13 vehicles. I commend U.S. EPA for proposing stricter
14 heavy-duty GHG standards aimed at accelerating the
15 nation's transition to heavy-duty ZEVs.

16 We are pleased to see U.S. EPA's analysis matches
17 CARB's staff's findings that heavy-duty ZEVs are
18 feasible for a wide range of applications and provides
19 significant cost savings, which the Inflation Reduction
20 Act, and declining capital, and operational costs are
21 making more attractive by the day.

22 California is pursuing economy-wide

1 decarbonization by 2045. Governor Newsom has directed
2 us to target a zero-emission heavy-duty fleet by 2035
3 for drayage trucks and by 2045 for all heavy-duty
4 trucks. CARB's advanced clean trucks zero-emission
5 sales requirements were approved in June 2020, and last
6 week, the Board approved the Advanced Clean Fleets
7 Regulation, further driving turnover to heavy-duty ZEVs
8 and requiring 100 percent of new heavy-duty purchases
9 be zero-emission vehicle starting in 2036. Eight
10 states have exercised their Clean Air Act rights,
11 joining California's heavy-duty programs, with every
12 fourth U.S. truck today registered in an advanced clean
13 truck state.

14 CARB's technical team is reviewing the Phase 3 GHG
15 proposal and assembling comprehensive written comments.

16 Today I highlight two main areas where we would like
17 to see U.S. EPA strengthen the proposal. First, the
18 Phase 3 GHG rulemaking provides an historic chance for
19 U.S. EPA to promote the transition to heavy-duty ZEVs
20 in line with other Biden administration commitments,
21 such as the Blueprint for Transportation
22 Decarbonization. U.S. EPA should finalize a Phase 3

1 GHG rulemaking with bold targets for heavy-duty ZEVs
2 extending to 2040. U.S. EPA Should finalize Phase 3
3 standards to push significantly more heavy-duty ZEVs
4 than proposed. Heavy-duty ZEV penetration in the final
5 rule should be on par with the vehicle manufactured
6 targets many major heavy-duty truck manufacturers have
7 themselves been publicly stating.

8 Second, U.S. EPA should ensure that the Phase 3
9 rule accelerates heavy-duty ZEV deployment and does not
10 promote competing technologies, like hydrogen internal
11 combustion engines. CARB is concerned that, instead of
12 deploying heavy duty ZEVs, manufacturers may respond to
13 Phase 3 by making H2ICE. Although H2ICE engines have
14 near zero CO2 tailpipe emissions, their NOx emissions
15 are of concern. I ask that U.S. EPA fully analyzed the
16 criteria pollutant and well-to-wheel GHG impacts of
17 vehicles using hydrogen internal combustion engines as
18 part of the final rulemaking.

19 Thank you very much. My staff will continue to
20 work with U.S. EPA on the development of the final
21 Phase 3 rule.

22 MS. THOMPSON: Thank you for your comment. The

1 next speaker will be Scott Slawson. You may now
2 unmute, and please state your name and affiliation for
3 the record.

4 MR. SLAWSON: Hello. My name is Scott Slawson.
5 I'm president of UE Local 506 in Erie, Pennsylvania. I
6 want to say that we were in full support of the EPA's
7 proposed rulemaking allowing states to set stricter
8 emission standards for diesel-powered locomotives, and
9 I want to speak in particular to the economic impact of
10 that proposed rule.

11 The 1,400 members of UE Local 506 are currently
12 building the cleanest, most fuel-efficient locomotives
13 in the country, the Tier 4 locomotive. The Tier 4
14 locomotive reduces emissions by 50 to 90 percent when
15 compared to the old Tier Zero locomotives, and we are
16 also in the process of building and testing zero-
17 emission type locomotives, such as the X -- or FLX
18 battery-operated locomotives, which could easily be
19 used to entirely remove diesel exhaust from railyards
20 and significantly reduce carbon emissions.

21 Unfortunately, the railroads continue to run
22 thousands upon thousands of old dirty locomotives on

1 our country's rails with fewer than 10 percent meeting
2 Tier 4 standards. In fact, when the Tier 4 standard
3 was set for launch in 2015, it was projected around 30
4 percent of Class f Freight locomotives would meet the
5 Tier 4 standard by 2023. Because Class 1's are so slow
6 to change, this is not only pumping additional carbon
7 into the atmosphere, it also fills railyards with
8 diesel exhaust, affecting the health of rail workers
9 and nearby communities.

10 Our local union recently worked with economists at
11 the University of Massachusetts-Amherst to do a study
12 on the economic impact of increased purchases of green
13 locomotives, both Tier 4 locomotives and zero-emission
14 FLX drives. The study found that building the green
15 locomotives that our country clearly needs would create
16 between 6,000 and 10,000 in and around Erie and an
17 additional 3,000 to 5,000 jobs elsewhere in the
18 country, and these jobs in our plant are good jobs with
19 family-supporting wages.

20 We agree with Pennsylvania Senator Bob Casey that
21 we do not have to choose between good jobs and
22 meaningful action to address the climate crisis or

1 between good jobs and health conditions for those
2 working and living around railyards. When you consider
3 the economic impact of this rule, I ask you to consider
4 which is more important to the American economy, the
5 profits that railroads funnel to waters -- Wall Street
6 or the livelihoods of American workers?

7 This proposed rule is not only the right thing to
8 do for the climate and for the health of railyard
9 workers and their communities. It's the right thing to
10 do for American manufacturing, and we urge you to adopt
11 it. Thank you.

12 MS. THOMPSON: Thank you for your comment. The
13 next speaker will be Jim Mullen. Jim, you may now
14 unmute, and please state your name and affiliation for
15 the record.

16 MR. MULLEN: Thank you. My name is Jim Mullen. I
17 am the executive director of the Clean Freight
18 Coalition, the CFC. Members of the CFC are the
19 following trade associations: the American Trucking
20 Associations, the American Truck Dealers, which is a
21 division of ATA, the Truck and Engine Manufacturers
22 Association, the National Tank Truck Carriers, the

1 Truckload Carriers Association, the National
2 Association of the Truck Stop Operators, and the
3 National Motor Freight Traffic Association.
4 Collectively, CFC members manufacture, sell, service,
5 and operate the trucks that haul over 70 percent of the
6 freight in the United States. CFC members have the
7 unique real-life experience, provide valuable
8 perspectives to the EPA as the nation transitions to a
9 zero-emission future, ZEV.

10 Critical to the CFC mission statement is the
11 commitment of its members to a transition to zero-
12 emission heavy trucks that will deliver reliable and
13 affordable transportation of the nation's freight. CFC
14 members are currently spending billions of dollars to
15 fulfill that commitment, and fleets are currently
16 testing zero-emission trucks in their fleet networks.
17 As such CFC, has identified several issues which must
18 be addressed to feasibly transition to ZEV, and I'll
19 limit my comments the two of those issues, and the
20 first is infrastructure.

21 For the transition to ZEV to be successful, there
22 here must be sufficient infrastructure in place,

1 including the power grid, charging and refueling
2 stations, and the necessary raw materials. The
3 American Transportation Research Institute conducted a
4 study which concluded that the transition to battery
5 electric heavy trucks in the U.S. would consume 40
6 percent of the nation's existing grid capacity.

7 Fleets today who are seeking to add charging
8 stations for their networks are being told by utility
9 companies that they cannot provide even a fraction of
10 the power necessary for their fleets. The funding for
11 these stations has become robust, but building them out
12 is another issue. The U.S. cannot domestically source
13 all of the required raw materials, including the
14 required minerals. We must resolve this power grid and
15 sourcing of the required materials as we discuss
16 getting to ZEV.

17 The second issue is near-term greener trucks and
18 affordability. The CFC supports of sound policies that
19 increase fuel efficiency, reduce GHGs, and incentivize
20 fleets to retire older trucks and operate trucks with
21 greener technologies. New trucks that reduce GHGs must
22 be affordable and reliable for customers to buy them.

1 We urge the EPA to avoid moving forward with overly
2 stringent regulations that create affordability and
3 reliability issues which, in the long run, slow fleet
4 turn over to the detriment of the environment.

5 CFC members are committed to the transition to
6 zero-emission trucks which are reliable and affordable,
7 and will provide their collective data and experience
8 to the EPA and other stakeholders to achieve that end.

9 Thank you.

10 MS. THOMPSON: Thank you for your comment. The
11 next speaker will be Jayla Atkinson. You may now
12 unmute, and please state your name and affiliation for
13 the record.

14 MS. ATKINSON: Hi. My name is Jayla Atkinson, and
15 I'm here today to share my experience as a community
16 member. Growing up in a very industrial city, my
17 health has suffered my entire life. I've missed out on
18 birthdays, holidays, and many fun experiences I
19 should've had as a kid because I was sick, and even
20 still today, my health impacts my job, my
21 relationships, everything I do.

22 When I was young, we didn't know the full impact

1 pollution was having on our health, but today we are
2 aware of the health impacts that diesel pollution has
3 on our youth, and we are still not protecting them. To
4 have the privilege to know means you have the
5 responsibility to do, and we are letting them be
6 exposed to pollutants that could not only impact their
7 physical health, but it's been concluded that these
8 pollutants can cause behavioral problems and mental
9 illnesses that can cause them problems for the rest of
10 their lives. These kids didn't ask for this, and it's
11 up to us to start making some serious changes to
12 protect our most vulnerable population.

13 The rule -- this rule should require a 100 percent
14 zero-emission target by 2035, and that means no natural
15 gas either. All sources of pollution should be
16 measured and considered when the goal is zero
17 emissions. Grassroots organizations are out here doing
18 all that they can, and we need the EPA to help create a
19 clear path to justice for our most vulnerable
20 communities by ensuring that their well-being is
21 considered in every aspect of this rule, right down to
22 things like including a scrap program so they are not

1 further burdened by an increased number of trucks. We
2 need the EPA to make sure solutions are being
3 implemented in ways that guarantee lower emissions for
4 environmental justice communities. Thank you for the
5 opportunity to speak today.

6 MS. THOMPSON: Thank you for your comment. The
7 next speaker will be Larry Hopkins. Larry, you may now
8 unmute, and please state your name and affiliation for
9 the record.

10 MR. HOPKINS: Good afternoon. My name is Larry
11 Hopkins. I am the president of UE Local 1177,
12 representing more than 600 rail crew drivers across
13 Illinois, Wisconsin, and Minnesota. I am also the
14 vice-president of UE's Western Region, and I represent
15 thousands of drivers in California, Colorado, New
16 Mexico, down to Texas and Louisiana and over to Ohio.
17 Our work is basically to be a taxi for the railroads.
18 We drive the rail crews around inside the railyards or
19 from the yards to a hotel or out in the middle of
20 nowhere. I have been doing this work for 13 years. I
21 am testifying today in support of the EPA allowing
22 states to set stricter limits on emissions from diesel-

1 powered locomotive engines.

2 I myself live and work in Chicago. I live in the
3 community of Chicago-Loren, just east of Midway
4 Airport, and we're surrounded by six different
5 railyards. These diesel emissions negatively impact
6 the health of my co-workers and me who are sitting so
7 close to where these engines idle, blowing toxic
8 pollutants into the air. But it is also a safety
9 hazard to all the communities that are surrounded by
10 these railyards. There are really a lot of people
11 packed in this area, and most of us are people of
12 color.

13 It makes me angry to know that the technology
14 exists to make the air in and around these railyards
15 cleaner, but it's not being used. We know why that is.

16 It's because the railroads don't want to pay for new
17 engines. All they care about is their profits, not the
18 health of the people near their trains. They don't
19 care about people in East Palestine, Ohio, and they
20 don't care about us in Chicago, or Joliet, Illinois, or
21 up in Milwaukee or Stevens Point, Wisconsin. We know
22 they are not going to pay for the newer, less-polluting

1 locomotives unless the government makes them do it, and
2 that is why I'm testifying.

3 Please, if the EPA won't do it, allow the states
4 to regulate locomotive emissions. We have got to make
5 these railroads clean up. We have got to make -- we
6 have to make the railroads clean up their act.
7 Railroads are going to continue to be a part of
8 transporting goods and people across the country as big
9 as ours, but we don't have to let the railroads get
10 away with polluting the air that affects us all. Thank
11 you.

12 MS. THOMPSON: Thank you for your comment. As a
13 reminder, if you are speaking today, you will receive a
14 notification on your screen that you are being promoted
15 to the role of panelist shortly prior to your speaking
16 time. You must accept that invitation to be able to
17 unmute when you are called to testify. This will also
18 allow you to turn on your camera, which we encourage
19 you to do. We ask that each person limit their verbal
20 testimony to 3 minutes. Please speak slowly and
21 clearly so our court reporter and interpreters can
22 capture these proceedings accurately. Speakers

1 connected by telephone should unmute their phones when
2 called to testify.

3 If you are having technical difficulties, please
4 send an email to public_hearing@abtassoc.com or call
5 (919) 294-7849. If you are not registered to speak but
6 you would like to, please send an email with your name
7 and phone number to public_hearing@abtassoc.com or call
8 (919) 294-7849.

9 The next speaker will be Cedric Whelchel. You may
10 now unmute, and please state your name and affiliation
11 for the record.

12 MR. WHELCHER: Good afternoon. My name is Cedric
13 Whelchel, and I'm the recording secretary for UE Local
14 1177. We represent the rail crews in Illinois and
15 Wisconsin. I am here today to fully support the EPA
16 allowing states to set strict -- stricter limits on
17 emissions from diesel-powered locomotive engines.

18 I'm a shadow driver in Chicago, so my job is to
19 take rail crews back and forth from the railyard to the
20 hotel at the end of their shift or from the hotel to
21 the yard at the start of their shift. I spend a lot of
22 time waiting near these idle diesel locomotive engines.

1 For me this is about safety and health. I know when
2 I'm at work this pollution is affecting my breathing.
3 I can feel it, and I'm not the only one. We have a lot
4 of drivers who have health problems.

5 But it's not just about us near the trains. While
6 we're at work, it impacts everybody, especially the
7 communities and they're -- that are around the
8 railyards. This pollution is not new. It's been --
9 it's here for some decades. That's because though
10 there are cleaner-burning engines available, the old
11 one still work, so the railyards don't bother to
12 upgrade them.

13 So basically, you know, it's impacting the
14 communities that exist around the railyards, you know,
15 have to breathe in this pollution. And it's really not
16 healthy because if I can -- if I can feel it in my
17 breathing, I know, you know, the people that live
18 there, you know, can feel it in theirs, but no study
19 has been done to see the impact, you know, the cause
20 and effects of it. And it's sad to say that we as a
21 state have the power to set the standards, you know,
22 for cleaner air, but yet we don't -- we let the

1 railyards get away, you know, scot-free, polluting the
2 air, leaving a carbon footprint that is slowly but
3 surely destroy -- destroying the air that we breathe.

4 I'm just here today to testify that I support, you
5 know, cleaner locomotive engines and what like -- would
6 like for it to be -- it to be something that is
7 enacted. That's all I have. Thank you.

8 MS. THOMPSON: Thank you for your comment. The
9 next speaker will be Tim Gould. Tim, you may now
10 unmute, and please state your name and affiliation for
11 the record.

12 MR. GOULD: Thank you for the opportunity to
13 testify today. My name is Tim Gould. I do a lot of
14 advocacy work on behalf of the number of different
15 environmental organizations, but my comments today are
16 my own.

17 The EPA rules about heavy-duty trucks certainly
18 are a good -- a good start, but they really don't go
19 far enough. And one of the main problems is that in
20 limiting the attention of the Phase 3 proposal to just
21 greenhouse gases and leaving out nitrogen oxides and
22 particulate pollution, this is not going to accelerate

1 the transition to zero emissions that's needed for
2 public health. It also would leave open the
3 possibility of technologies, like hydrogen combustion
4 engines, that would not result in an improvement in air
5 quality. Even the most stringent scenario in the
6 proposal really fails to create a workable transition
7 to zero-emissions by 2035.

8 Instead, EPA needs to set a more ambitious
9 standard that will help ensure that the level of
10 investment needed in infrastructure and in the
11 manufacturing will meet that goal of zero emissions by
12 2035. More health benefit and lower emissions could be
13 realized with -- and to realize those much sooner as
14 well, with a focus on oxides of nitrogen and on
15 particulate matter reductions. Those reductions,
16 especially stricter PM 2.5 tailpipe emission standards,
17 would also effectively drive the CO2 emission
18 reductions to be significant as well. So an approach
19 that looks at criteria pollutants as well as CO2 is
20 very much needed.

21 Unfortunately, the Phase 3 proposal as it exists
22 right now sacrifices certainty in its efforts to try to

1 achieve these emission reductions. As I said, it
2 leaves out -- open the possibility of some kind of
3 hydrogen combustion, which would not help with local
4 air pollution improvements. And what we need to focus
5 on are those solutions that will reduce tailpipe
6 pollution that is harming local communities right now.

7 The transition to electrified new vehicles by 2035
8 would both address our climate crisis and recognize and
9 address the unjust burden felt by frontline communities
10 today as a result of the emissions from heavy-duty
11 trucks.

12 So I encourage you to strengthen the emission
13 standards, and also I would like to affirm my support
14 for the stricter standards for locomotives, and also to
15 set these standards in a way that encourages mode shift
16 of freight from truck to rail because the energy
17 efficiency advantages of rail just can't be beat.

18 Thank you.

19 MS. THOMPSON: Thank you for your comment. The
20 next speaker is Max Kiefer. You may now unmute, and
21 please state your name and affiliation for the record.

22 MR. KIEFER: Good afternoon. My name is Max

1 Kiefer, and I appreciate the opportunity to testify
2 today as a private citizen regarding the EPA Proposed
3 Rule, Greenhouse Gas Emission Standards for Heavy-Duty
4 Engines and Vehicles, Phase 3. It is heartening to see
5 the administration acting on clean truck standards, and
6 I would very much like to see the EPA establish
7 stronger limits on heavy-duty vehicle pollution.

8 I have an undergraduate degree in environmental
9 health and a graduate degree in industrial hygiene and
10 toxicology, and recently retired after a career in
11 public health. As such, I have a strong interest in
12 regulatory efforts to reduce or eliminate exposure to
13 pollution from vehicles and other sources. I spent
14 most of my working lifetime investigating worker health
15 concerns and evaluating exposure to a wide variety of
16 contaminants, including diesel and gas engine
17 combustion products in trucking depots, bus maintenance
18 facilities, and fire stations. I'm acutely aware of
19 the exposures that occur in these workplaces and the
20 adverse health effects that can result from exposure to
21 heavy-duty vehicle exhaust.

22 While the EPA's passenger vehicle proposal

1 directly addresses pollution, such as oxides of
2 nitrogen and particulate matter as well as greenhouse
3 gases, the proposed rule for heavy-duty vehicles only
4 targets greenhouse gas emissions. This is one of
5 several reasons why the current Phase 3 proposal is
6 inadequate and may not drive the transition to zero
7 emissions needed to address a public health crisis that
8 disproportionately impacts black, Asian-American, and
9 Latin-American communities.

10 Vehicle emissions pose a significant threat to
11 workers and to the public. Both diesel and gasoline
12 engines are major contributors to elevated
13 concentrations of carbon monoxide and oxides of
14 nitrogen. NOx is particularly dangerous as it is both
15 a hazardous pollutants and a precursor chemical leading
16 to the creation of ground-level ozone. Exposure to NOx
17 can result in a number of respiratory health issues,
18 including reduced lung function and inflammation.
19 Diesel exhaust exposure has been linked to health
20 effects, such as lung irritation and asthma, and diesel
21 particulate matter has been classified as a possible
22 carcinogen by both the National Toxicology Program and

1 Environmental Protection Agency.

2 These health consequences expand directly to the
3 public at large. Pollution caused by trucks and buses
4 are among the greatest threats to public health for the
5 more than 45 million people in the U.S. living within
6 300 feet of a major roadway or transportation facility.

7 Transportation is the largest source of greenhouse gas
8 emissions in the United States, and despite making up
9 only 10 percent of vehicles on the road, buses, trucks,
10 and tractor trailers are the largest contributor to
11 smog-forming NOx emissions from all highway vehicles.

12 Electric trucks are already available, and across
13 nearly every vehicle class, zero-emission electric
14 trucks and buses are projected to be cheaper to own and
15 operate than their combustion engine counterparts
16 within 5 years. I urge this administration to go even
17 further with the proposed Phase 3 regulation and set
18 the strongest standards possible and address all
19 tailpipe pollution, not just greenhouse gases. Thank
20 you for your work and the opportunity to testify.

21 MS. THOMPSON: Thank you for your comment. The
22 next speaker is Lindsay Garcia. You may now unmute,

1 and please state your name and affiliation for the
2 record.

3 MS. GARCIA: Hello. My name is Lindsay Garcia. I
4 am the director of communications for the Evangelical
5 Environmental Network and Young Evangelicals for
6 Climate Action, and I live in Denver, Colorado. Thank
7 you for the opportunity to speak today.

8 In the Gospel of John, Jesus declares that He has
9 come so that people may have life and have it to the
10 full. At EEN and YACA, we believe that this full
11 abundant life includes air that is healthy and safe to
12 breathe as well as the promise of a hopeful future.
13 That's why we support the EPA's proposed rule to limit
14 emissions from heavy-duty vehicles in order to provide
15 much-needed relief from the burden of diesel fumes,
16 climate impacts, and air pollution.

17 In 2020, the transportation sector contributed 27
18 percent of the U.S.' total fossil fuel emissions, more
19 than any other single sector, and we are seeing the
20 impacts of these emissions around the country,
21 including in my home State of Colorado. Just a few
22 weeks ago, the American Lung Association released their

1 annual "State of the Air" report, and in this report,
2 Denver was ranked the 6th worst city in the entire
3 country for ozone pollution. As someone who has dealt
4 with asthma since moving to Colorado as a child, I know
5 that poor air quality is no small thing. However, the
6 American Lung Association Also estimates that if fleets
7 move toward zero-emission trucks by 2050, we could see
8 the cumulative benefits that include \$735 billion in
9 public health benefits, over 66,000 fewer premature
10 deaths, and 1.75 million fewer asthma attacks.

11 The pollution of heavy-duty vehicles also greatly
12 contributes to climate warming emissions. In order to
13 meet U.S. commitments and the Biden administration's
14 crucially important climate goals, it's estimated that
15 transportation climate pollution will need to be cut by
16 29 to 40 percent by 2030. That's why I'm calling on
17 the EPA to make sure this rule is as strong as
18 possible, similar to California's Advanced Clean Trucks
19 Program and work to finalize the standard this year.
20 Thank you for your time and work on this important rule
21 and for taking advantage of this opportunity for the
22 EPA to help address the injustice of pollution and

1 climate change.

2 MS. THOMPSON: Thank you for your comment. The
3 next speaker will be Julianna Garreffa. You may now
4 unmute, and please state your name and affiliation for
5 the record.

6 MS. GARREFFA: Hi. My name is Julianna Garreffa,
7 and I'm here as a private citizen from Northern New
8 Jersey and a member of the NRDC Action Fund. I'm here
9 today to advocate for the strictest possible standards
10 for heavy-duty vehicle emissions. On one hand, I
11 believe that incentivizing only the cleanest vehicles
12 and avoiding the use of offsets is critical in
13 combating climate change, but today I'd like to focus
14 on a more personal reason.

15 Three people in my household asthma, and I have a
16 degenerative heart condition. Meanwhile, the historic
17 air quality data and ozone levels in my town are far
18 above the safe levels set by the World Health
19 Organization. In fact, according to New Jersey's
20 environmental justice law, my family lives in one of
21 the state's overburdened communities with regard to
22 pollution.

1 Emissions from heavy-duty vehicles play a
2 significant role in these dangerous air quality levels,
3 and, thus, are largely responsible for the negative
4 consequences to public health. An article reported by
5 the organization Environment NJ reported earlier this
6 year that medium- and heavy-duty vehicles are
7 responsible for 44 percent of the nitrogen oxide and 39
8 percent of the particulate matter emitted by on-road
9 vehicles in New Jersey.

10 On the flip side, I do understand the concerns
11 about the speed at which the required infrastructure
12 updates for charging stations can be made. However, a
13 study by the independent consulting firm, ERM, found
14 that past truck pollution standards did not
15 significantly impact production, employment, prices, or
16 vehicle sales. Combined with the financial incentives
17 in the Inflation Reduction Act, I have confidence that
18 adopting the proposed standards will not harm the
19 overall economy.

20 So again, I implore you to protect the health of
21 countless vulnerable citizens, like my family members,
22 by putting our national bus and truck fleet on a clear

1 and swift path to 100 percent zero-emission, all-
2 electric vehicles by 2035. Thank you for the
3 opportunity to testify today.

4 MS. THOMPSON: Thank you for your comment. As a
5 reminder, if you are speaking today, you will receive a
6 notification on your screen that you are being promoted
7 to the role of panelist shortly prior to your speaking
8 time. You must accept that invitation to be able to
9 unmute when you are called to testify. This will also
10 allow you to turn on your camera, which we encourage
11 you to do. We ask that each person limit their verbal
12 testimony to 3 minutes. Please speak slowly and
13 clearly so our court reporter and interpreters can
14 capture these proceedings accurately. Speakers
15 connected by telephone should unmute their phones when
16 called to testify.

17 If you are having technical difficulties, please
18 send an email to public_hearing@abtassoc.com or call
19 (919) 294-7849. If you are not registered to speak but
20 you would like to, please send an email with your name
21 and phone number to public_hearing@abtassoc.com or call
22 (919) 294-7849.

1 The next speaker will be Connor Mighell. You may
2 now unmute, and please state your name and affiliation
3 for the record.

4 MR. MIGHELL: Hi there. My name is Connor
5 Mighell. That's C-O-N-N-O-R, M-I-G-H-E-L-L. I'm an
6 attorney at the Center for the American Future of the
7 Texas Public Policy Foundation, a not-for-profit
8 organization dedicated to ensuring personal liberty,
9 preserving private property rights, and advocating for
10 a balanced, commonsense approach to environmental
11 regulations.

12 The EPA's proposal to revise the tailpipe
13 greenhouse gas emissions rule for heavy-duty vehicles
14 is ill-advised, statutorily impermissible, and likely
15 unconstitutional. It's based on faulty science and an
16 incorrect reading of the Clean Air Act, and it will
17 devastate the American trucking industry.

18 Former Supreme Court Justice Breyer stated in
19 Whitman v. American Trucking that the Clean Air Act
20 does not require the EPA to eliminate every health
21 risk, however slight, at any economic cost, however
22 great, to the point of hurtling industry over the brink

1 of ruin. In the Whitman case, the Supreme Court
2 vacated the 1997 NOx because of the poor science and
3 lack of discernible criteria underlying them.

4 Likewise here, no scientific data requires the EPA
5 to limit tailpipe emissions to the degree that heavy-
6 duty vehicles with internal combustion engines will be
7 barred from sale. The approach EPA seeks to adopt is
8 like using a ballistic missile to kill a mouse. Worse
9 still, this proposed rule is based on the scientific
10 mistake that has haunted environmental policymaking for
11 over a decade, the incorrect belief that carbon
12 dioxide, the most prevalent, naturally-occurring
13 greenhouse gas in the world, can be classified as a
14 pollutant under the Clean Air Act and regulated as
15 such.

16 The Supreme Court reached this incorrect
17 conclusion by misconstruing the CAA in 2007's
18 Massachusetts v. EPA, and subsequently, in 2009, the
19 EPA violated 42 U.S.C. Section 4365 by making an
20 endangerment finding regarding CO2 without first
21 seeking peer review from the Science Advisory Board, an
22 expert panel established by Congress to ensure EPA

1 regulations are based on sound data. Every EPA CO2
2 regulation since has been ultra vires.

3 If the EPA puts this proposed tailpipe rule in
4 place, it will force truckers and trucking companies to
5 unnecessarily spend substantial financial and human
6 resources to deal with a barely-understood global issue
7 that the United States cannot conceivably tackle alone.

8 Such expenditures and manhours will sink smaller
9 trucking companies and further cripple the supply
10 chain.

11 The EPA should've learned from the Supreme Court's
12 decision in West Virginia v. EPA that Congress did not
13 delegate to EPA the ability to force market change by
14 regulation under the Clean Air Act. The Clean Power
15 Plan was unconstitutional under the major questions
16 doctrine, and this proposed rule is, too, for the same
17 reasons the Court articulated in West Virginia.

18 The United States cannot possibly affect worldwide
19 climate change by acting unilaterally. This proposed
20 rule will not meaningfully alter the climate either
21 globally or locally, but it will disrupt the American
22 trucking industry in substantial ways that will

1 reverberate to the detriment of the entire American
2 economy. Accordingly, the EPA must refrain from
3 adopting this rule. Thank you.

4 MS. THOMPSON: Thank you for your comment. The
5 next speaker will be Cecilia Garibay. You may now
6 unmute, and please state your name and affiliation for
7 the record.

8 MS. GARIBAY: Good afternoon. My name is Cecilia
9 Garibay, and I am the project coordinator with the
10 Moving Forward Network. MFN is a national network of
11 over 50 member organizations that centers grassroots
12 frontline community expertise, knowledge, and
13 engagement from communities across the U.S. that bear
14 the negative impacts of the freight transportation
15 system. MFN is led by our frontline and fence-line
16 members from across the country. These communities are
17 impacted by asthma, cancer, and other emission-related
18 illnesses at an alarmingly disproportionate rate.

19 There continues to be overwhelming evidence
20 displaying the correlation between those health
21 disparities and the multitude of pollution sources from
22 freight. For these reasons and all those that you will

1 continue to hear throughout this hearing from community
2 experts, MFN urges the EPA to require a hundred percent
3 zero-emission target by 2035 in the final rule. This
4 is feasible legally, economically, and practically as
5 states are surpassing the basic assumptions and goals
6 that the EPA is proposing.

7 EPA should be the leader in the transition to zero
8 emissions, not trailing behind. The assumptions that
9 were taken are conservative, given that it did not
10 consider the full impacts of the Inflation Reduction
11 Act, nor did the Agency consider how state standards
12 would already provide a strong platform for growth --
13 for environment -- for zero-emission vehicles. We are
14 seeing this now as California just passed two key
15 regulations on trucks and locomotives.

16 For our members, race and zip code continue to be
17 the best predictors of their health and life
18 expectancy. To say this is unjust does not go far
19 enough, especially considering we are at a time where
20 solutions are readily available via zero emissions.
21 The Greenhouse Gas Phase 3 must be stronger, must be
22 more protective, and must reach the EJ commitments the

1 administration continues to make.

2 EPA identifies the inequity and environmental
3 injustice of truck pollution in its rule but does
4 nothing to ensure the elimination of the harmful
5 particulate and smog-forming pollution that's
6 identified. Also, there's nothing that clearly targets
7 freight trucks nor guarantees emission reductions for
8 environmental justice communities. We have an
9 obligation, a responsibility to do more than merely
10 listen, but act in support of the true experts:
11 frontline and fence-line communities, who have been
12 battling the public health and environmental impacts
13 from the deadly emissions caused by freight for
14 decades.

15 Lastly, EPA limited us to a shortened public
16 comment process. For a critical rule, we only have a
17 50-day public comment period, while the light duty rule
18 is getting 60. We risk impactful policy when certain
19 voices are left out of the table in the name of getting
20 policy done. We risk meaningful discussion and
21 opportunity to strengthen policy that takes decades to
22 reconsider. Let me remind you, the last emission

1 regulation for trucks was over 20 years ago prior to
2 last December, and locomotives had not been touched for
3 decades prior to Last Friday.

4 We cannot have another missed opportunity. We
5 need the strongest, most protective policy now. Thank
6 you for your time.

7 MS. THOMPSON: Thank you for your comment. The
8 next speaker will be Cassandra Carmichael. You may now
9 unmute, and please state your name and affiliation for
10 the record.

11 MS. CARMICHAEL: Good afternoon. My name is
12 Cassandra Carmichael. I'm with the National Religious
13 Partnership for the Environment. My name is spelled C-
14 A-S-S-A-N-D-R-A. Last name is C-A-R-M-I-C-H-A-E-L.

15 The National Religious Partnership for the
16 Environment is an alliance of five major faith
17 institutions: the U.S. Conference of Catholic Bishops,
18 the Evangelical Environmental Network, the Jewish
19 Council for Public Affairs, the Jewish Social Justice
20 Roundtable, and the National Council of Churches.
21 Together, we have recognized our call to protect God's
22 creation and also God's people. We strive for

1 environmental justice, and we know that religious
2 communities across the country center environmental
3 justice in their ministry and in their mission.

4 Communities of color bear the brunt of our
5 collective transportation choices, which many of the
6 hearing participants have already documented. Highways
7 and major roads bisect communities of color, leaving
8 behind a legacy of pollution. This pollution has
9 negative impacts on human health and contributes to
10 climate change. While trucks and buses account for
11 only about 4 percent of vehicles on the road, they are
12 responsible for an outsized impact on both pollution
13 and climate change. They have 25 percent of total
14 transportation emissions.

15 Because pollution from trucks has a
16 disproportionate burden on communities of color, we
17 need clean trucks to be zero-emission trucks. And it's
18 not just a matter of protecting God's earth, but it's a
19 matter of justice the EPA must quickly finalize the
20 strongest clean truck standard possible so that we are
21 on the road to a hundred percent zero-emission vehicles
22 and trucks by 2035. Thank you very much for your time.

1 MS. THOMPSON: Thank you for your comment. The
2 next speaker will be Andrew Boyle. You may now unmute,
3 and please state your name and affiliation for the
4 record.

5 MR. BOYLE: Good afternoon. My name is Andrew
6 Boyle from Boyle Transportation. We're a nationwide
7 trucking firm. Thank you for the opportunity to be
8 here today.

9 Our company has been -- is a big fan of the EPA
10 Smart Way Program. We've been participants for about
11 15 years, including the last 5 years as top-tier
12 performers. We have also achieved a rare -- the only
13 trucking company in North America to achieve the ISO
14 14001 Standard for Environmental Management System, and
15 our solar --our headquarters is solar powered. In
16 other words, we're part of the solution and we can help
17 others do so.

18 Our fleet is only -- the oldest trucks in our
19 fleet are about 4 years old, and I'd like to kind of
20 dispel some misconceptions, and that today's trucks --
21 as a guy who grew up around the fumes and exhaust that
22 many other participants here have referenced, we

1 totally share that the notion that we should reduce
2 emissions as much as possible and, ultimately, get to
3 zero emissions. There are many ways to get there, and
4 I think it's a huge mistake to try to dictate the
5 winners in terms of which specific technologies because
6 that reduces the likelihood that we're going to get
7 there.

8 For example, about 47 percent of the nation's
9 heavy-duty trucks are pre-2010 emission standards, so
10 the Diesel Emission Reductions Act and other sorts of
11 vehicles exist, pun intended, to help reduce emissions
12 already by, say, eight -- you know, half the fleet we
13 can reduce them by 80 percent. We could achieve a 40-
14 percent reduction in a very near term using the
15 existing infrastructure.

16 And we are -- as a -- as fleet owner and runner,
17 we're agnostic as far as what the power source is,
18 provided its environmentally friendly and it's
19 economical for the American people. If battery
20 electric trucks, which cost \$300,000 more, were created
21 in an environmentally-friendly fashion and there was
22 the infrastructure to use them, by all means, we'd be

1 fine with that, and the American public would just pay
2 significantly more for their -- the items that they
3 consume. So we're agnostic on that front.

4 However, we just need to make something clear.
5 There is zero -- close to zero infrastructure currently
6 to charge heavy-duty electric trucks, so it's not even
7 a consideration. For California and even EPA to
8 dictate that you have to use electric trucks in the
9 near term, well, congratulations. Everybody can high-
10 five each other because the paper that it's printed on
11 is worthless. So that -- you know, those types of
12 rules are not going to be as effective as working
13 together with industry and the brilliant engineers to
14 get us close to zero as possible using existing
15 infrastructure.

16 So we welcome the opportunity to get to achievable
17 national standards with you. Thank you.

18 MS. THOMPSON: Thank you for your comment. The
19 next speaker will be Thomas Walker. You may now
20 unmute, and please state your name and affiliation for
21 the record.

22 MR. WALKER: Hello. I'm Thomas Walker, the

1 transportation technology manager at the Clean Air Task
2 Force. Thank you for the opportunity to testify today.

3 CATF supports EPA's proposal to strengthen the
4 greenhouse gas emission standards for heavy-duty
5 vehicles. Given the widespread availability of zero-
6 emission vehicles, including both battery electric
7 vehicles -- BEV -- and hydrogen fuel cell electric
8 vehicles -- FCEV -- EPA should consider further
9 strengthening the final rule. The marriage of both BEV
10 and FCEV drivetrain provide manufacturers with options
11 for meeting stringent emission standards and
12 eliminating dangerous pollutants from heavy-duty
13 vehicles.

14 Pursuant to the Clean Air Act, EPA must adopt
15 emission standards strong enough to redress the
16 magnitude of the endangerment to the public from motor
17 vehicle emissions. In addition to being a significant
18 source of greenhouse gas emissions, diesel trucks are
19 leading contributor to particulate matter pollution.
20 This pollution often occurs in industrial or urban hubs
21 and causes health disparities that further inequitable
22 harms for historically-marginalized communities.

1 Diesel-related deaths and illnesses will be
2 dramatically reduced by a shift to trucks that have
3 electric drivetrains, either powered by batteries or by
4 hydrogen.

5 EPA must also set standards that are based on
6 anticipated developments in zero-emission vehicle
7 technologies. As EPA recognizes in its proposed rule,
8 manufacturers have many options for curbing these
9 harmful emissions. I would like to emphasize FCEV
10 technology as critical to decarbonization efforts in
11 the heavy trucking market segment. The FCV drivetrain
12 has no tailpipe GHG or criteria emissions. It's fully
13 electric where the electricity is karmically converted
14 from hydrogen via the fuel cell. It's operationally
15 similar to diesel in terms of fueling and has little to
16 no life cycle emissions, as long as the hydrogen
17 production method is -- has a low carbon intensity.

18 As FCEVs begin to penetrate the market, so
19 operational advantages will become clear in trucking
20 segments of long haul. Relative to diesel, these
21 vehicles can complete long routes without a substantial
22 number of additional refueling stops. They can be

1 refueled in approximately the same amount of time, and
2 their power trains are only slightly heavier, such that
3 FCEVs can carry up to 94 percent of the cargo that
4 diesel trucks can carry when fully loaded. As such,
5 these advantages make FCEVs an excellent diesel
6 replacement on long-haul routes.

7 The use of FCEVs increases the percentage of a
8 given truck fleet that can be reasonably decarbonized,
9 improves operational flexibility, potentially optimizes
10 timelines as hours do not need to be budgeted for
11 charging, and alleviates some electrical grid
12 infrastructure concerns by offering an alternative of
13 tool for significantly reducing GHG emissions from
14 heavy-duty highway vehicles. Importantly, the
15 technological development and commercialization of
16 FCEVs will be accelerated because do several provisions
17 in the Infrastructure Investment and Jobs Act as well
18 as the Inflation Reduction Act, including the Regional
19 Clean Hydrogen Hubs Program and the clean hydrogen
20 production tax credit, respectively.

21 Overall, the option of hydrogen FCEVs alongside
22 BEVs act to increase the efficiency of transportation

1 decarbonization, allowing for the EPA to set reasonable
2 yet strict regulations. Thank you.

3 MS. THOMPSON: Thank you for your comment. As a
4 reminder, if you are speaking today, you will receive a
5 notification on your screen that you are being promoted
6 to the role of panelist shortly prior to your speaking
7 time. You must accept that invitation to be able to
8 unmute when you are called to testify. This will also
9 allow you to turn on your camera, which we encourage
10 you to do. We ask that each person limit their verbal
11 testimony to 3 minutes. Please speak slowly and
12 clearly so our court reporter and interpreters can
13 capture these proceedings accurately. Speakers
14 connected by telephone should unmute their phones when
15 called to testify.

16 If you are having technical difficulties, please
17 send an email to public_hearing@abtassoc.com or call
18 (919) 294-7849. If you are not registered to speak but
19 you would like to, please send an email with your name
20 and phone number to public_hearing@abtassoc.com or call
21 (919) 294-7849.

22 The next speaker will be Antonia Herzog. Antonia,

1 we do not currently see you in the list of attendees.
2 However, if you have joined this hearing under a
3 different name, please indicate your presence by
4 pressing the raise hand button at the bottom of your
5 screen. If you have called in, please dial star-9 on
6 your phone.

7 (No response.)

8 MS. THOMPSON: The next speaker will be Gary
9 Ewart. Gary, you may now unmute, and please state your
10 name and affiliation for the record.

11 MR. EWART: Thank you very much. My name is Gary
12 Ewart -- E-W-A-R-T. I am staff for the American
13 Thoracic Society. The American Thoracic Society is a
14 medical professional organization of over 15,000
15 pulmonary, critical care, and sleep physicians
16 dedicated to the detection, prevention, and cure of
17 respiratory diseases, critical care illness, and sleep-
18 disordered breathing. In nd short, we're lung experts.

19 For starters, let me say the American Thoracic
20 strong -- Society strongly supports EPA's Proposed
21 Greenhouse Gas Standards for Heavy-Duty Vehicles, Phase
22 3. Climate change is a real health threat. Climate

1 change, driven by emissions of carbon dioxide and other
2 GHG emissions, is rapidly changing earth's climate in
3 ways that threaten human health. Our average
4 temperatures, more frequent and more intense heat
5 spells, more frequent intense severe weather, longer
6 wildland fire seasons and accompanying smoke exposures,
7 longer and more intense pollen seasons. We've seen
8 recently the dual threat in California of both
9 persistent droughts and damaging flooding easily
10 coexist in a climate-changed world.

11 Air pollution is also a major health concern. Air
12 pollution triggers exacerbations of respiratory
13 diseases, like asthma and COPD, leading to avoidable
14 missed school days, work days, days of restricted
15 activity exacerbations, increase medical -- medication
16 use, emergency room visits, hospitalizations, and
17 premature death. Exposure to air pollution can even
18 lead to the development of decrements in lung function
19 in children who have persistent exposure to air
20 pollution.

21 EPA's proposed rule to address greenhouse gas
22 emissions for Model Year 2027 beyond heavy-duty trucks

1 is one of a series of important regulatory actions EPA
2 is taking to address climate change head on. Reducing
3 GHG emissions from trucks will both reduce future
4 greenhouse gas emissions and simultaneously reduce
5 criteria air pollutants, like ozone, particulate
6 matter, and NOx. The transportation sector is the
7 single largest source of greenhouse gas emissions in
8 the U.S., and medium- and heavy-duty trucks play a
9 disproportionate role in the share of vehicle GHG
10 emissions.

11 EPA's proposal is both necessary, achievable, and
12 will have immediate and long-term public health
13 benefits for the American public. The ATS will provide
14 more detailed written comments, but we urge EPA to move
15 forward swiftly to finalize and begin implementing
16 strong GHG emission standards for trucks, Phase 3.

17 Thank you.

18 MS. THOMPSON: Thank you for your comment. This
19 concludes our fifth speaker block. We will now call on
20 the names of those who were not present when initially
21 called to testify. If you have joined, please indicate
22 your presence by pressing the raise hand button at the

1 bottom of your screen. If you have called in, please
2 dial star-9 to raise your hand.

3 The only individual from Speaker Block 5 who we
4 will call on is Antonia Herzog. Again, Antonia, if you
5 have joined, please indicate your presence by pressing
6 the raise hand button at the bottom of your screen or
7 by dialing star-9, and I can see your hand is raised,
8 so I will promote you to panelist now.

9 (Brief pause.)

10 MS. THOMPSON: Okay. Antonia, when you are ready,
11 please unmute and state your name and affiliation for
12 the record.

13 MS. HERZOG: Antonia Herzog, Health Care Without
14 Harm.

15 MS. THOMPSON: You can begin.

16 MS. HERZOG: Thank you. Good afternoon. My name
17 is Antonia Herzog, and I'm the associate director of
18 climate policy and advocacy in the Health Care Without
19 Harm's U.S. Climate and Health Program. Thank you very
20 much for the opportunity to testify in front of you
21 today.

22 Health Care Without Harm works with hospitals

1 across the U.S. and around the world to reduce their
2 carbon footprint and prepare their facilities and
3 communities for climate impacts. We aggregate the
4 power of the healthcare sector to advocate for clean
5 energy and climate-smart policies to accelerate the
6 transition to a low-carbon economy that protects health
7 and promotes equity. To successfully reduce
8 healthcare's transportation greenhouse gas emissions
9 and protect patient health, it is essential that EPA
10 implement strong heavy-duty vehicle standards.

11 We have a membership organization called Practice
12 Green Health in the U.S. with a network of more than
13 1,500 hospitals, 20 percent of U.S. hospitals, that we
14 support in implementing sustainability practices.
15 Practice Green Health helps hospitals and health
16 systems reduce their transportation-related greenhouse
17 gas emissions. We also convene a National Healthcare
18 Climate Council made up of 21 health systems, climate
19 leaders, representing over 600 hospitals and 10,000
20 health centers in 43 states with more than 1.3 million
21 employees, serving over 81 million patients annually.

22 Health Care Without Harm supports the EPA setting

1 strong Phase 3 greenhouse gas standards for heavy-duty
2 vehicles. The EPA needs to move quickly to finalize
3 these critical standards by the end of this year, and
4 they need to be one of the strongest of the
5 alternatives being considered by EPA, such as those
6 that match California's Advanced Clean Trucks Program.

7 The market is evolving quickly with options for zero-
8 emission trucks expanding rapidly. We absolutely need
9 the EPA standards to match that momentum and provide
10 the strong market signal to support heavy-duty vehicle
11 manufacturing commitments.

12 Transportation intersects with healthcare in the
13 ways that employees, patients, and supplies travel to
14 and from healthcare facilities, all of which contribute
15 to poor air quality, health system greenhouse gas
16 emissions, and adverse environmental and community
17 health outcomes, especially for low-income and
18 communities of color. To reduce these emissions,
19 healthcare needs to move to zero-emission vehicles.
20 Moving to an all-electric vehicle fleet, for example,
21 can reduce maintenance and fuel costs as well as local
22 air pollution.

1 Idling delivery trucks, vehicles, and ambulances
2 are a common sight around hospitals, some of which need
3 to run while parked, like ambulances and refrigerated
4 delivery. Many of these vehicles use diesel engines
5 that pump out particularly hazardous tailpipe
6 pollution. Zero-emission electric vehicles solves
7 these problems, and that is why we need to move towards
8 them. When we eliminate greenhouse gases and the other
9 air pollution from fossil fuels associated with vehicle
10 tailpipe emissions, we greatly reduce some of our most
11 expensive and tragic healthcare challenges: premature
12 death, neurological disorders, chronic bronchitis,
13 asthma, cardiovascular disease --

14 MS. THOMPSON: Thank you for your comment. You
15 have reached the 3-minute limit. Please complete your
16 testimony within the next 30 seconds, and you can
17 submit additional testimony to our docket as shown on
18 screen.

19 MS. HERZOG: Okay, and their associated with
20 emergency room visits and much more. To avoid the
21 worst impacts of climate change, to ensure that
22 healthcare transportation emissions decrease in line

1 with the need to reach 50-percent emissions reductions
2 by 2030 and net zero by 2050, EPA must finalize the
3 strongest rule possible to protect our health and
4 address the climate crisis by driving the necessary
5 transition to zero-emission heavy-duty vehicles. Thank
6 you very much for this opportunity to testify on behalf
7 of Health Care Without Harm.

8 MS. THOMPSON: Thank you for your comments. That
9 concludes Speaker Block 5. We will now move to the
10 next speaker block. The next speaker will be Stephanie
11 Sears. Stephanie, you may now unmute, and please state
12 your name and affiliation for the record. Just as a
13 reminder, you'll need to accept the -- great.
14 Stephanie, when you're ready, you may begin.

15 MS. SEARS: Hello. My name is Stephanie Sears.
16 I'm the environmental impact manager for Lynden
17 Incorporated. Lynden Family of Companies provides
18 logistics solutions via air, land, and sea. As an EPA
19 Smart Way participant and Excellence Award winner,
20 Lynden is a pioneer in fuel efficiency and emission
21 reduction efforts.

22 We understand that the proposed rule is considered

1 technology neutral. However, it fails to consider
2 renewable fuels and other current technologies that can
3 reduce emissions now. For example, renewable diesel
4 emits 56 percent less CO2 than traditional diesel and
5 38 percent less CO2 than a battery electric truck when
6 considering the full life-cycle emissions of vehicle
7 production, use, and disposal. Renewable natural gas
8 provides negative carbon emissions by capturing methane
9 from biogas and landfills.

10 Engines manufactured after 2010 are 25 percent
11 more fuel efficient and cut emissions up to 90 percent,
12 yet it's estimated that 47 percent of trucks still
13 operate these pre-2010 engines. According to ATRI, any
14 significant reduction in CO2 is not realized until
15 after 2050 when it is predicted that the mix of power
16 is transformed to more renewable sources.

17 Lynden operates in some of the harshest conditions
18 in Alaska where reliability is a safety issue for our
19 drivers and customers who depend on delivery of
20 critical goods. A regular route is Fairbanks to
21 Prudhoe Bay, traversing the Dalton Highway, a 400-mile
22 long treacherous road, mostly gravel, with grades of

1 more than 12 percent. There's limited resources and
2 only about three fuel stops. A truck running out of
3 battery in minus-50 degrees Fahrenheit is not an
4 option. The extreme temperatures would reduce the
5 battery's range by at least 30 percent. Charging time
6 would increase and the battery life itself diminished.

7 To provide electric charging facilities in these
8 remote off-grid conditions would prove completely
9 unrealistic and probably require diesel-powered
10 generators. The additional cost associated with these
11 capital investments, loss of payload, reduced range,
12 and increased labor would be passed down to the
13 American consumer.

14 In conclusion, Lynden values the goal of cleaner
15 air and cleaner trucks. However, the proposed emission
16 standards for heavy trucks limits innovation and puts
17 other viable options to reduce emissions out of reach.

18 Thank you for this opportunity to provide comments,
19 and we'll be submitting written testimony. Thank you.

20 MS. THOMPSON: Thank you for your comment. The
21 next speaker will be Rich Killmer. You may now unmute,
22 and please state your name and affiliation for the

1 record.

2 REVEREND KILLMER: Good afternoon. My name is
3 Reverend Richard Killmer. I'm a retired Presbyterian
4 minister living in both Yarmouth, Maine and in Grand
5 Rapids, Michigan. I spend most of my time combating
6 the climate crisis. As people of faith, we care about
7 protecting God's creation and human health, so those
8 facts leave -- lead us to care significantly about
9 transportation issues, including heavy trucks.

10 The trucking industry is the leading source of
11 deadly air pollution and has an outsized climate
12 impact. Medium- and heavy-duty trucks are a major
13 source of harmful pollution, which is more intensely
14 felt in low-wealth communities and communities of color
15 because they are often located near major
16 transportation corridors. Because diesel pollution is
17 a disproportionate burden on communities of color,
18 clean transportation, including zero-emission trucks,
19 is a requirement of justice.

20 But while trucks and buses only account for 4
21 percent of vehicles on the road, they are responsible
22 for 25 percent of total transportation sector

1 greenhouse gas emissions. The Intergovernmental Panel
2 on Climate Change reports that now is the time for the
3 nations of the world to respond to the climate crisis
4 if we have any hope of protecting the 1.5-degree
5 Celsius increase.

6 Ensuring that trucks emit as close to net zero as
7 quickly as possible will have a significant effect on
8 that goal. So I support the maximum possibility for
9 the EPA for decreasing the emissions of both greenhouse
10 gases and pollution as quickly as possible. As
11 responsible stewards of God's creation, we have an
12 opportunity to put in place strong standards to
13 accelerate the transportation industry's transition
14 toward zero-emission vehicles as a significant part of
15 the work for justice and for equity. Thank you very
16 much.

17 MS. THOMPSON: Thank you for your comment. As a
18 reminder, if you are speaking today, you will receive a
19 notification on your screen that you are being promoted
20 to the role of panelist shortly prior to your speaking
21 time. You must accept that invitation to be able to
22 unmute when you are called to testify. This will also

1 allow you to turn on your camera, which we encourage
2 you to do. We ask that each person limit their verbal
3 testimony to 3 minutes. Please speak slowly and
4 clearly so our court reporter and interpreters can
5 capture these proceedings accurately. Speakers
6 connected by telephone should unmute their phones when
7 called to testify.

8 If you are having technical difficulties, please
9 send an email to public_hearing@abtassoc.com or call
10 (919) 294-7849. If you are not registered to speak but
11 you would like to, please send an email with your name
12 and phone number to public_hearing@abtassoc.com or call
13 (919) 294-7849.

14 The next speaker will be Susan Entin. You may now
15 unmute, and please state your name and affiliation for
16 the record.

17 MS. ENTIN: My name is Susan Entin. I'm a member
18 of the Sierra Club of Massachusetts. I live in Quincy,
19 Massachusetts on land stolen from Native Americans. On
20 March 2nd, 2018, Quincy, Massachusetts experienced a
21 super storm that was actually regional. It put the
22 neighborhood of Houghs Neck, a poor white community,

1 under water up to the rooftops.

2 Quincy is a short drive along all of Wollaston
3 Beach that stretched from Houghs Neck to near where I
4 live, was closed for three days because of the
5 flooding. The richer section of Quincy, just beyond
6 where I live, was an island. This water receded in
7 2018, but it may not do that the next time there is a
8 big enough superstorm.

9 For decades, I'm -- I have been listening to
10 people argue about emissions. Climate change is here.

11 I know for decades that -- from the Sierra Club and
12 other legal councils that people of color and poor
13 people are suffering the most from air pollution. The
14 EPA kept rolling back its emission standards, and I
15 still was concerned about public health, although not a
16 public health official.

17 Al Gore ran for president with green goals and
18 green dreams in 2000 A.D. and lost. Climate change was
19 predicted and lobbied against in the early 1970s. The
20 higher rates of asthma and lung cancer, even for non-
21 smokers in the black community, were reported in other
22 poor neighborhoods not long after. In 2002, Arianna

1 Huffington wrote that if automakers, including truck
2 manufacturers, took all the money they used to bribe
3 congressman and regulatory agencies, they could have a
4 1000-percent emission-free vehicle in the showroom in 2
5 weeks.

6 Recently, major polluting countries, including
7 ours, has agreed to pay reparations to countries
8 destroyed by climate change, but they did not change
9 the behavior of what causes the climate change and the
10 pollution. After admitting responsibility, the United
11 States is abdicating in favor of destroying itself than
12 the whole world.

13 Heavy-duty trucks cause 50 percent of all vehicle-
14 cause pollution, although they are not the most of the
15 vehicles used. We don't need any more of this. We
16 need to save ourselves and humanity together, but other
17 animals are dying off.

18 MS. THOMPSON: Thank you for your comment. You
19 have reached the 3-minute limit. Please complete your
20 testimony within the next 30 seconds, and you can
21 submit additional testimony to our docket as shown on
22 screen. Thank you.

1 MS. ENTIN: This is a moment when we need to get
2 rid of all greenhouse gases, all carbon-fueled
3 vehicles, not with nuclear ones or hydrogen ones, but
4 actually non-polluting, non-carbon everywhere in all
5 levels of the technology of our country so that climate
6 change doesn't destroy the entire planet. Thank you
7 very much for letting me speak.

8 MS. THOMPSON: Thank you for your comment. The
9 next speaker will be Ruth Hund. Ruth, you may now
10 unmute, and please state your name and affiliation for
11 the record.

12 MS. HUND: Thank you for allowing me to testify.
13 My name is Ruth, and I'm a resident of Golden,
14 Colorado. I have a master's degree in environmental
15 science and engineering from the Colorado School of
16 Mines. I'm a volunteer for the Sierra Club.

17 Golden is in the Denver Metro Area and is part of
18 Colorado's severe non-attainment area for ozone. A
19 strong heavy trucks rule will not only decrease
20 greenhouse gas emissions, it will lower ozone levels.
21 I have asthma. It is mild and manageable with an
22 inhaler. A few weeks ago, I was canvassing with my

1 friend, Lucy, in a disproportionately impacted
2 community that is bordered by I-70, petroleum refinery,
3 and a Purina pet food plant. The wind changed, and it
4 smelled awful. We joked about the aromas and overtones
5 of I-70 in the air as if it were a fine wine, but then
6 it didn't get so funny. Lucy started getting a
7 headache and feeling nauseous. She said she was going
8 to go home to Commerce City, a nearby and also
9 disproportionately impacted community bordered by the
10 same refinery on I-70.

11 I had to use my inhaler. I got home and had one
12 of the worst asthma incidences in my life. If I lived
13 were Lucy lives, my asthma would be much worse,
14 probably incapacitating at times. But I'm white and
15 have the privilege of living in Golden. Lucy is Latina
16 and lives right by I-70 where soot, NOx, and resulting
17 ozone from dirty heavy trucks affect her health. She
18 has to live with it.

19 Science tells us that the transportation sector is
20 the greatest contributor to greenhouse gas emissions.
21 Heavy trucks represent 20 percent of vehicles and cause
22 50 percent of the sector's pollution. One does not

1 need to rely on science to know that heavy trucks spew
2 out soot. You can see it, and it's disgusting.
3 Combustion engines also spew out VOCs and NOx, which
4 cause ground-level ozone formation. Particulates and
5 ozone are my asthma triggers. Wildfires in Colorado,
6 Utah, and California caused by climate change are
7 brutal for me.

8 Colorado is trying to shore up the regulations on
9 trucks with the passage of a new advanced clean truck
10 rule. Unfortunately, most trucks going through
11 Colorado on I-70 come from and/or are on their way to
12 someplace else. This must be a national effort.
13 Electrifying our national fleet will really help. A
14 strong heavy trucks rule is a first step.

15 I'm partly here to fight for myself. I would like
16 to not have to worry about an asthma attack during high
17 ozone and wildfire season. Mostly I'm here to fight
18 for Lucy and everyone who lives in the I-70 corridor.
19 I care about her and her community. Do you? Please
20 pass a heavy trucks rule with as strong provisions as
21 possible for our communities and the environment.
22 Thank you very much.

1 MS. THOMPSON: Thank you. Thank you for your
2 comment. The speaker will be Karen Campbell. Karen,
3 you may now unmute. Please state your name and
4 affiliation for the record.

5 MS. CAMPBELL: Hi. My name is Karen Campbell.
6 I'm a member of the Sierra Club. Thank you for the
7 opportunity to speak about green gas -- greenhouse gas
8 emissions standards for heavy-duty vehicles.

9 I live in a rural area of New Hampshire. However,
10 in 1991, I moved from Iowa to Los Angeles to begin my
11 working career. I loved the weather of Southern
12 California, and I spent much of my free time outside
13 training for and performing in triathlons. However,
14 within a year of moving to the city, I had experienced
15 enough bouts of bronchitis that I was diagnosed with
16 asthmatic bronchitis, and I was put on an inhaler and
17 an oral medication eventually to try to prevent further
18 bouts of the illness. I had never suffered from
19 bronchitis before, but even with the medications, I
20 still had several bouts of illness every year.

21 While I loved L.A., I did look at the skies full
22 of hazy pollution and my windowsills covered with a

1 light layering of soot every day, and I had some
2 feelings of trepidation. I knew the polluted air
3 wasn't good for my health. However, what I didn't know
4 was just how much air quality was contributing to my
5 illness.

6 I moved from LA to rural New Hampshire in 2005,
7 and I've never had a bout of bronchitis since. I was
8 weaned off all medication 15 months after moving, and I
9 still train outdoors regularly. This is a very real-
10 world example of what the doctors and scientists have
11 been telling us for years. Breathing air that's
12 contaminated by the byproducts of burning fossil fuels
13 is very unhealthy. I'm lucky because I was able to
14 move to a cleaner, safer environment, but many people
15 can't do that, especially people in low-income
16 communities. And, frankly, people should not have to
17 move away from their jobs, their family, their friends,
18 et cetera, in order to be able to breathe clean air.

19 Approximately 30 percent of air pollution comes
20 from the transportation sector, and even though trucks
21 and buses only make up 10 percent of the vehicles on
22 our roads, they're responsible for about 50 percent of

1 the air pollution created. And because of redlining,
2 much of the transportation corridors for these vehicles
3 run through low-income communities of color.

4 The EPA's proposed heavy-duty truck standards are
5 a step in the right direction, but they're insufficient
6 to address the persistence of deadly pollution in the
7 air. They don't adequately protect public health or
8 prevent premature deaths. So I really want EPA to set
9 the strongest, science-based standards possible to
10 protect our health. In order to reduce greenhouse gas
11 pollution causing dangerous and costly climate change,
12 the EPA must ensure that the heavy-duty vehicle rules
13 are strong as possible and reflect major advancements
14 in zero-emission technologies. Thank you.

15 MS. THOMPSON: Thank you for your comment. The
16 next speaker will be Ray Minjares. You may now unmute.

17 Please state your name and affiliation for the record.

18 MR. MINJARES: My name is Raymond Minjares, and
19 I'm the director of the International Council on Clean
20 Transportation's Heavy-Duty Vehicles Program. ICCT has
21 published research this year that shows the feasibility
22 of GHG reductions is greater than what EPA reflects in

1 its proposal. Let me highlight two areas where I think
2 our research can help.

3 First, the proposal does not assume the
4 availability of public-charging infrastructure,
5 including megawatt charging, to support electrification
6 of most tractor trailers before 2013. Under a
7 business-as-usual scenario, tractor trailers will
8 contribute 67 percent of cumulative GHG emissions
9 through 2050. Investments from Daimler Trucks,
10 Terawatt Infrastructure, Foreign Mobility, WattEV, and
11 many others reflect millions of dollars entering the
12 public charging as a service market for this category
13 of vehicles.

14 This infrastructure will allow tractors to use
15 smaller batteries, minimize their dwell time, and
16 achieve diesel-equivalent range and payload at lower
17 costs per mile than diesel. Assuming the availability
18 of high-powered charging, like megawatt charging, ICCT
19 research finds that long-haul tractors will achieve TCO
20 parity with diesel beginning in Model Year 2028. In
21 states with lower-cost electricity, like Texas and
22 Florida, this TCO parity will arrive even sooner. The

1 final rule can deliver greater GHG reductions at lower
2 cost by setting standards for tractor trailers that
3 assume the availability of this publicly-accessible
4 high-powered charging starting in 2027.

5 Second, the proposal does not assume that the
6 deployment of any new efficiency technologies for
7 internal combustion engine vehicles beyond those
8 identified in existing Phase 2 standards. ICCT
9 research has identified cost-effective vehicle-
10 efficiency technologies with a 2-year payback period,
11 such as reduced accessory load, tire rolling
12 resistance, improved aerodynamics, and light waiting,
13 just to name a few. Our research has identified a
14 range of ice-efficiency technologies that could deliver
15 between a 22- to 23-percent improvement beyond 2027
16 requirements that exist today for Class A day cab
17 tractors, for example. The final rule can deliver
18 greater GHG reductions by assuming the adoption of
19 these technologies will be necessary to meet the
20 standards.

21 This proposal is a key opportunity to realign U.S.
22 transport policy with its climate commitments, but more

1 policy action is needed to deliver the necessary GHG
2 reductions. The ICCT has found that IRA incentives
3 have the potential to stimulate around a 44-percent ZEV
4 sales share for heavy-duty vehicles in 2030. The
5 proposal in its current form does not ensure this
6 number of ZEVs will be delivered. A smaller but still
7 important share of GHG reductions will come from
8 deployment of new ice-efficiency technologies.

9 ICCT looks forward to supporting EPA with the data
10 and underlying assumptions that will be necessary to
11 ensure the final rule reflects the full potential to
12 reduce greenhouse gas emissions from the sector. Thank
13 you very much.

14 MS. THOMPSON: Thank you for your comment. The
15 next speaker will be Dave Cooke. You may now unmute,
16 and please state your name and affiliation for the
17 record.

18 DR. COOKE: Hi. I'm Dr. David Cooke with the
19 Union of Concerned Scientists, a nonprofit focused on
20 ensuring public policy is based on the best-available
21 science. On behalf of our half a million members, I
22 appreciate the opportunity to talk to you today, and I

1 want to acknowledge the effort that staff is putting in
2 over these hearings and soliciting feedback from the
3 public on this important rule.

4 We are here now at a pivotal moment where state
5 and federal policymakers are aiding a transition to a
6 zero-emission future in order to address the climate
7 and public health impacts of the freight sector. Under
8 the Advanced Clean Trucks Rule, states are already
9 ensuring the availability of zero-emission trucks
10 across a range of vehicle types and occupations, and as
11 Ray ICCT just mentioned, there are a wide range of
12 incentives and grants in the Inflation Reduction Act
13 and Bipartisan Infrastructure Law by Congress to
14 support the broad deployment of electric trucks. And
15 yet rather than pushing beyond these developments,
16 EPA's proposal simply locks in the status quo momentum.

17 It is, therefore, more appropriate to see EPA's
18 proposal not as a regulatory alternative but as a no-
19 action alternative or baseline upon which EPA should
20 then build a regulatory alternative to accelerate the
21 deployment of zero-emission trucks.

22 EPA's analysis shows levels of electric truck

1 adoption more conservative than not just what truck
2 makers have promised but what industry's own analysis
3 has projected as likely to occur. This is particularly
4 problematic since EPA's rule is structured in a way
5 that ensures industry will comply with far fewer zero-
6 emission trucks than the analysis supposes would be
7 necessary. While it has wisely proposed multi-
8 pollutant regulatory action in other sectors, EPA has
9 decided not to directly regulate the harmful NOx and PM
10 pollution from the new heavy-duty vehicle fleet. This
11 means that combustion solutions remain a likely
12 compliance mechanism with its proposed greenhouse gas
13 rule, negating many of the air quality benefits assumed
14 by the Agency in its analysis.

15 EPA has neglected to consider the use of
16 combustion technologies in this proposal beyond Phase 2
17 requirements, virtually assuring that manufacturers
18 will use such readily-available off-the-shelf options
19 as a compliance strategy. EPA is already well aware of
20 the additional reductions it is currently leaving on
21 the table. As part of the 2027 engine regulation,
22 suppliers submitted reams of data showing solutions

1 which could simultaneously achieve EPA's targets and
2 reduce greenhouse gases beyond Phase 2, and EPA did not
3 exhaust a non-powertrain strategy identified when
4 setting the Phase 2 requirements. Moreover, companies
5 like Cummins have taken to touting the fuel agnosticism
6 of their latest engine platforms because they would
7 prefer to extend the lifetime of their current
8 investments via dirty technology like hydrogen
9 combustion than invest in a truly zero-emission future.

10 Unfortunately, EPA's current proposal does nothing to
11 dissuade them from such a harmful calculus.

12 EPA must re-evaluate its proposal and finalize
13 something significantly stronger that takes into
14 consideration the combustion technology improvements
15 that manufacturers are likely to deploy, and it should
16 further strengthen the rule to target zero-emission
17 truck sales that go beyond what the market is already
18 projected to do by itself. Otherwise, it risks
19 prolonging, rather than accelerating, the transition to
20 zero-emissions already underway. Thanks.

21 MS. THOMPSON: Thank you for your comment. As a
22 reminder, if you are speaking today, you will receive a

1 notification on your screen that you are being promoted
2 to the role of panelist shortly prior to your speaking
3 time. You must accept that invitation to be able to
4 unmute when you are called to testify. This will also
5 allow you to turn on your camera, which we encourage
6 you to do. We ask that each person limit their verbal
7 testimony to 3 minutes. Please speak slowly and
8 clearly so our court reporter and interpreters can
9 capture these proceedings accurately. Speakers
10 connected by telephone should unmute their phones when
11 called to testify.

12 If you are having technical difficulties, please
13 send an email to public_hearing@abtassoc.com or call
14 (919) 294-7849. If you are not registered to speak but
15 you would like to, please send an email with your name
16 and phone number to public_hearing@abtassoc.com or call
17 (919) 294-7849.

18 The next speaker will be Christine Feely.
19 Unfortunately, we do not see you in the list of
20 attendees. However, if you have joined this hearing
21 under a different name, please indicate your presence
22 by pressing the raise hand button at the bottom of your

1 screen. If you have called in, please dial star-9 on
2 your phone.

3 (No response.)

4 MS. THOMPSON: The next speaker will be Michael
5 McClain. You may now unmute, and please state your
6 name and affiliation for the record

7 REVEREND MCCLAIN: I am Michael McClain. I come
8 -- Michael McClain. I am a retired Baptist pastor.
9 I'm the liaison to the National Baptist Convention,
10 Incorporated, USA. I serve as the national outreach
11 coordinator for the National Religious Partnership for
12 the Environment where I've been working in the
13 environmental justice field since 2008. I am the
14 immediate past national director for African-American
15 faith engagement for our President, Joseph R. Biden's,
16 2020 presidential campaign.

17 As a person of faith, I view the EPA through the
18 lens of the Christian church. One of the tenets of
19 Christianity is to care for God's creation and the
20 protection of human health, which I believe is also
21 your mission. I, along with the National Baptist
22 Convention USA, are here to let you know that we see

1 the harm and dangers that come from underregulated
2 truck emissions in our country.

3 While trucks and buses only account for 4 percent
4 of vehicles on the road, they are responsible for 25
5 percent of the total transportation sector greenhouse
6 gas emissions and a major contributor to climate
7 change. Because diesel pollution is a disproportionate
8 burdens on colors of community, clean transportation,
9 including zero-emission trucks, isn't just a matter of
10 caring for God's creation, it is a matter of justice.

11 Communities of color face an undue,
12 disproportionate, and unjust burden of air pollution
13 and climate impacts from the production of fossil
14 fuels. Reducing emissions from the transportation
15 sector offers an opportunity to reduce the pollution
16 and climate impact burdens on our communities. Because
17 of historical systemic racism that has placed highways
18 through communities of color, these communities are
19 often closest to the highways and bear the greatest
20 burden from vehicle pollution. Exhaust from heavy-duty
21 vehicles is one of the main pollution sources in our
22 African-American neighborhoods.

1 The Environmental Protection Agency has an
2 opportunity to help address the injustice of pollution
3 and climate change by enacting the strongest possible
4 heavy-duty truck standards. The standards EPA set
5 should achieve 100 percent zero-emission truck sales by
6 2035, which would be at the pace that would deliver
7 much-needed health benefits to communities of color.
8 Thank you for your time, and thank you for the work
9 that you're doing to protect God's creation as well as
10 we as human beings. Thank you.

11 MS. THOMPSON: Thank you for your comment. The
12 next speaker will be Laurel Moorhead. You may now
13 unmute, and please state your name and affiliation for
14 the record.

15 MS. MOORHEAD: Good afternoon. My name is Laurel
16 Moorhead, and I represent Transfer Flow, Incorporated.

17 Transfer Flow has been in business in beautiful
18 Northern California for 40 years, manufacturing high-
19 quality liquid fuel systems and creating good-paying
20 local jobs. I would like to start by taking this
21 opportunity to thank EPA staff for your hard work on
22 this regulation and your important work combating

1 atmospheric pollution.

2 As a business located in California, I have been
3 keeping my finger on the pulse of the California Air
4 Resource Board, or CARB's, regulatory activities and
5 can speak to the shortcomings of CARB's recently-passed
6 regulations. A regulation is only as effective as it
7 is practical. Just because CARB has passed the
8 Advanced Clean Fleets Regulation doesn't mean it's
9 possible to implement that regulation.

10 If you aren't part of California's rulemaking
11 process, you may not realize that almost every public
12 utility district in California submitted written public
13 comments to CARB stating that if the Advanced Clean
14 Fleets Rule is implemented, they will be unable to
15 bring water to California citizens, plow snow, conduct
16 mosquito abatement, and a number of other essential
17 societal functions. These are public utility districts
18 whose only skin in the game is that they are trying to
19 provide essential services to citizens. Electric
20 equipment simply doesn't have the energy density
21 required to perform these essential functions.

22 Pretending that electric technologies or continued

1 usage of fossil fuels are the only technology choices
2 we have is a false dichotomy. There are a number of
3 alternative technologies that do meet the needs of
4 public utility districts, long-haul truckers, and
5 heavy-duty off-road equipment, while simultaneously
6 offering significant climate benefits. The zero
7 tailpipe emissions, including NOx, hydrogen-powered
8 internal combustion engine has been invented and does
9 exist. Both Cummins and Toyota have expressed interest
10 in developing this technology. When I asked CARB Board
11 member, Sandra Berg, why they were trying to make zero
12 tailpipe emission internal combustion engines illegal,
13 Mrs. Berg's response was that all internal combustion
14 engines must be made illegal, regardless of how clean
15 they are, in order to send a market signal.

16 It should not be CARB's responsibility to send the
17 market signal. They are not economists. It should be
18 CARB's authority to set emission standards, and however
19 industry chooses to meet those emission levels should
20 be allowed. That freedom is an essential American
21 value.

22 The term "zero-emission" is a misnomer that leads

1 to the greenwashing of non-technology savvy people.
2 What is actually meant is zero tailpipe emissions, but
3 that doesn't account for important life cycle emissions
4 analysis or the horrific human rights abuses associated
5 with mining the lithium and cobalt required for
6 electric vehicle batteries. CARB is overlooking viable
7 climate-friendly solutions industry is offering, and
8 their oversight will come back to prove their
9 rulemaking impractical. If the EPA follows CARB's
10 lead, the rulemaking activity will surely be
11 overturned, but if EPA passes a practical and robust
12 regulation, that regulation will stand regardless of
13 administration changes.

14 In closing, I would like to thank the EPA for the
15 opportunity to comment, and I will submit more detailed
16 written comments. Thank you.

17 MS. THOMPSON: Thank you for your comment. The
18 next speaker will be Harrison Humphreys.
19 Unfortunately, we do not currently see you in the list
20 of attendees. However, if you have joined this hearing
21 under a different name, please indicate your presence
22 by pressing the raise hand button at the bottom of your

1 screen. If you have called in, please dial star-9 to
2 raise your hand.

3 (No response.)

4 MS. THOMPSON: The next speaker will be Elaine
5 Weir. Elaine, you may now unmute, and please state
6 your name and affiliation for the record.

7 MS. WEIR: My name is Elaine Weir, and I live in
8 Westchester County, New York, and I'm very concerned
9 about air pollution because my daughter has suffered
10 from asthma since childhood. The air pollution is so
11 bad in our county that my daughter moved to the
12 Adirondacks to escape asthma attacks. She cannot visit
13 us in the summer because of the poor quality of air
14 here. When my mother died in June, her memorial
15 service was delayed until the fall so my daughter could
16 attend. We are lucky because our daughter, now an
17 adult, is able to live where the air is cleaner.

18 People with asthma are not the only ones affected
19 by heavy truck pollution. Other health risks are heart
20 attacks, strokes, heart disease, and higher rates of
21 infant mortality. Medicines are expensive as are the
22 emergency room and doctor visits. Pollution costs

1 families both their health and their money. From my
2 own family's experience, I know families can save many
3 dollars on healthcare costs and will be healthier and
4 more productive with clean air.

5 Transportation is one of our country's greatest
6 polluters. Within the transportation sector are heavy
7 trucks that contribute a great percentage of this
8 pollution. Heavy-truck pollution harms everyone,
9 especially those who live near highways and other high-
10 traffic areas. Limits on truck pollution can save many
11 lives and reduce the rate of climate change. I urge
12 the EPA to strengthen the heavy-duty truck regulations
13 for the welfare of all our citizens and protect our
14 environment. The faster we transition to clean trucks,
15 the more people and our planet will benefit, and thank
16 you for allowing me to express my opinion, and I'm
17 done.

18 MS. THOMPSON: Thank you for your comment. The
19 next speaker will be Alondra Morales Sanchez.
20 Unfortunately, we do not currently see you in the list
21 of attendees. However, if you have joined this hearing
22 using a different name, please indicate your presence

1 by pressing the raise hand button at the bottom of your
2 screen. If you've called in, please dial star-9 to
3 raise your hand.

4 (No response.)

5 MS. THOMPSON: The next speaker will be Gloria
6 Barrera Gloria. You may now unmute, and please state
7 your name and affiliation for the record.

8 MS. BARRERA: Good afternoon. My name is Gloria
9 E. Barrera. I currently work as a certified school
10 nurse at a public high school outside of Chicago, and
11 I'm also currently in an Alliance of Nurses for Healthy
12 Environment fellow and am tackling environmental health
13 issues with an emphasis on climate and health equity at
14 the community grassroots level.

15 My community-based organization that I partnered
16 with is Pilsen Neighborhood Community Council, and with
17 them, I've educated the public on the direct impact
18 that heavy-duty vehicles have on our most vulnerable
19 populations. We know that the transportation sector is
20 the largest source of greenhouse gases in the U.S.
21 Numerous studies show that poor health outcomes and
22 higher incidences of chronic conditions, like asthma,

1 can be linked to the volume of the concentrated
2 pollution in those high-traffic areas. Clean car
3 standards are the most effective policy to reduce
4 dangerous air pollutions and protect public health
5 nationwide, especially in our most vulnerable black and
6 brown communities, who are often more exposed to air
7 pollution and the hardest hit by effects of climate
8 change.

9 I'd like to just quickly talk about what I'm
10 seeing here on the front lines as a school nurse. In a
11 classroom of 30 students, at least four have chronic
12 asthma, and symptoms are exacerbated by hazardous air
13 pollutants caused by the vehicles that drive them to
14 and from school: school buses. The American Lung
15 Association's report, "Zeroing in on Healthy Air,"
16 found that a nationwide transition to zero-emission,
17 light-, medium- and heavy-duty vehicles, coupled with
18 the transition to zero-emissions electricity, would
19 result in \$1.2 trillion in health benefits. We
20 appreciate EPA's consideration of more stringent
21 alternative proposals and urge the Agency to finalize
22 one of these more protective options into law. Thank

1 you.

2 MS. THOMPSON: Thank you for your comment. The
3 next speaker will be Christine Feely. Christine, you
4 may now unmute, and please state your name and
5 affiliation for the record.

6 MS. FEELY: Good afternoon. I am Christine Feely,
7 and I am -- I live in Connecticut. I'm a volunteer
8 with the Sierra Club, and I work on actions to reduce
9 air pollution and mitigate climate change, including
10 actions to take carbon out of the air. I appreciate
11 this opportunity to comment on strengthening the heavy-
12 duty vehicle rule.

13 Clean air in reducing greenhouse gases are very
14 important to me, but they are mostly not under my
15 control. Are you able to control the amount of
16 particulate matter in the air when you go out the door
17 for a walk or go to work? Are you able to noticeably
18 affect the amount of greenhouse gases? Like me, you
19 may drive an electric car and you may have an electric
20 lawnmower, you may, walk, bike, or use public
21 transportation, but it takes regulations to really make
22 a difference in the case of the heavy-duty vehicles.

1 This spring, increased levels of CO2 are
2 associated with the reported 20-percent increase in
3 pollen, which doesn't surprise me or others who are
4 having one their worst allergy seasons. The proposed
5 rules will improve air quality, but they don't go
6 nearly far enough.

7 So let's think about the history of efforts to
8 make the air cleaner. I imagine you know that
9 scientists and activists have been working on this for
10 a long time. The Air Pollution Control Act of 1955,
11 followed by legislation in 1963 and 1967, and then, of
12 course, the Clean Air Act of 1970, expanded efforts to
13 monitor and control air pollution. In fact,
14 legislative efforts have been happening for my entire
15 life, and yet we find ourselves in 2023 with unhealthy
16 air that causes lung cancer, aggravates other
17 respiratory problems, and contribute significantly to
18 climate change.

19 The facts are stark and clear even if the air is
20 not. Heavy-duty vehicles contribute 50 percent of the
21 total air pollution in the U.S. but account for only 10
22 percent of on-road vehicles. So what's holding us back

1 from solving this problem? EPA reports have documented
2 that benefits of cleaning up the air far outweigh cost.

3 It seems more likely the change is hard and that
4 people in industries would rather just keep doing the
5 same old thing and hope that the negative consequences
6 won't be so bad, but we know that the negative
7 consequences of heavy-duty vehicles are very bad.

8 So are stronger regulations being held back by
9 current capabilities and technologies? From my
10 standpoint, the pace of innovation is breathtaking. I
11 can't keep track of it. So we shouldn't think only of
12 what's possible today. The new rules must be more
13 ambitious and meet the goal of 100-percent clean truck
14 sales by 2035. And so I urge you in the strongest
15 possible terms to strengthen the heavy-duty vehicle
16 rules. Thank you.

17 MS. THOMPSON: Thank you for your comment. This
18 concludes our sixth speaker block. We will now call
19 and (AUDIO MALFUNCTION) button at the bottom of your
20 screen. If you have called in, please dial star-9 to
21 your hand. The first -- please indicate your presence
22 by either pressing the raise hand button or by dialing

1 star-9 on your phone.

2 The next name on our list is Alondra Morales
3 Sanchez. Again, Alondra, if you have joined, please
4 indicate your presence by pressing the raise hand
5 button on your phone, or -- excuse me -- at the bottom
6 of your screen or by dialing star-9 on your phone. I
7 can see a raised hand, so I will go ahead and promote
8 to panelist.

9 (Brief pause.)

10 MS. THOMPSON: When you're ready, you may unmute
11 and state your name and affiliation for the record.

12 MS. HAUPTMAN: Hi. My name is Elizabeth Hauptman,
13 spelled E-L-I-Z-A-B-E-T-H, Hauptman -- H-A-U, P as in
14 "Peter," T as in "Tom," M-A-N. Thank you for the
15 opportunity to testify.

16 I'm Elizabeth Hauptman, and I live in Livingston
17 County, Michigan, and I'm the field manager with Moms
18 Clean Air Force Michigan. We have over 34,000 members
19 here in Michigan and over half a million nationally,
20 fighting for clean air and climate action for the sake
21 of our children's health and future. Thank you for
22 taking my family's testimonies today. We will all be

1 consecutively talking.

2 I support the strong standards for cleaner trucks
3 and ask that you finalize these protections this year.

4 Stronger greenhouse gas standards are crucial in
5 fighting both climate and air pollution. Because this
6 rule will help slow down climate crisis, it will also
7 help combat the ways climate change makes air quality
8 worse, such as wildfires, droughts, and extreme heat,
9 which all contribute to unhealthy levels of air
10 pollution that are especially harmful to children. A
11 strong rule will help speed the transition to zero-
12 emission trucks, which means less tailpipe pollution,
13 which means cleaner air for our kids.

14 As a mother of a son who has asthma, this cannot
15 come soon enough. Tailpipe pollution is related to
16 illnesses like asthma and serious concerns where I
17 live. Detroit has asthma hospitalization rates
18 significantly higher than the rest of the state.
19 Sixty-nine thousand Detroit residents live within 150
20 meters of a major freeway. Fifty-eight Detroit public
21 schools with an estimated 24,490 students are within
22 200 meters of a major roadway. Because of housing

1 discrimination and other unjust policies, these are
2 more likely to be people from historically-marginalized
3 communities. This is a social and environmental
4 justice issue.

5 Childhood asthma rates are significantly higher
6 for children of color. Latino children are twice as
7 likely to die from asthma and black children are 10
8 times more likely to die from asthma than white non-
9 Hispanic kids. I think about my extended family. They
10 live near a busy highway where big rigs drive past
11 nearly non-stop. My niece, like many children in the
12 Detroit area, suffers from asthma, which can be
13 triggered by tailpipe pollution. This means more
14 doctor's visits, more absences from school, and the
15 risk of lifelong respiratory problems.

16 Pollution harms all of us, but it
17 disproportionately impacts children. Kids are smaller,
18 they breathe more rapidly, and their bodies and brains
19 are still growing. Zero-emission trucks are among the
20 best-value available technologies to reduce greenhouse
21 gases and dangerous air pollution. Once again, I
22 support the strongest standards for cleaner trucks with

1 advanced clean truck rules that you finalize these
2 important protections this year. Thank you for taking
3 my testimony today.

4 MS. THOMPSON: Thank you for your comments.

5 Elizabeth --

6 MS. HAUPTMAN: Yeah. I may have my son go next?

7 MS. THOMPSON: Yes.

8 MS. HAUPTMAN: Okay. Oscar?

9 MR. OSCAR HAUPTMAN: My name is Oscar Hauptman O-
10 S-C-A-R, H-A-U-P-T-M-A-N. Hello. My name is Oscar,
11 and I'm 12 years old. I live in Michigan with my
12 family. Dirty diesel trucks spew cancer-causing
13 pollution into the air. When that pollution heats up
14 on hot days, it's hard for me to breathe. I have
15 asthma. I love to play sports, but poor air quality
16 makes it hard. I just started soccer season again, and
17 most of the soccer fields are next to highways. That's
18 bad because tailpipe pollution can trigger my asthma.
19 My team and I are exposed to dirty diesel zones. It
20 makes me mad that we are near these freeways breathing
21 dirty air while we are trying to be healthy and strong.

22 The dirty air is especially bad for kids. Kids

1 breathing more rapidly and our hearts and brains are
2 still developing. We are breathing in the poisons from
3 these trucks and buses that harm our bodies. It also
4 heats up on our planet. I can't ice fish or ski as
5 often because we see less snow in the spring. We get
6 too much rain and flooding, and my summers can be
7 dangerously hot. That's why you need to protect our
8 developing lungs and planet. The trucks rule could
9 help kids across Michigan and the United States for
10 many years to come.

11 Once again, I support the strongest standards for
12 cleaner trucks with the Advanced Clean Trucks Rules and
13 ask that you finalize these important protections this
14 year. Thank you for the opportunity to testify today.

15 There is no time to waste. Please protect my lungs
16 and heart and brain.

17 MS. THOMPSON: Thank you for your comment.

18 MS. HAUPTMAN: Next will be my husband, Andrew.

19 MR. ANDREW HAUPTMAN: Hi. My name is Andrew
20 Hauptman, spelled H-A-U, P as in "Peter," T as in
21 "Tom," M-A-N. Thank you for the opportunity to
22 testify. My name's Andrew Hauptman, as I said. I live

1 in Livingston County, Michigan, and I volunteer with my
2 wife at Moms Clean Air Force Michigan. Thank you again
3 for taking my -- or thank you for taking my testimony
4 today.

5 I want to say that I support stronger standards,
6 EVs in cleaner trucks. I ask that you finalize these
7 important protections this year. A strong rule -- a
8 strong rule will also help speed the transition to
9 zero-emission trucks, which means less tailpipe
10 pollution, which means cleaner air for our kids.

11 As the father of a son with asthma, this can't
12 come soon enough. I think about my son and the
13 proximity of highways near his soccer field and school
14 and worry about the air that he breathes. I also think
15 about my niece, like many children in the Detroit area,
16 suffers from asthma which can be triggered by tailpipe
17 pollution. That means more doctor's visits, more
18 absences from school, and the risk of a lifelong
19 respiratory problems.

20 Pollution harms all of us. Disproportionally, it
21 impacts children. Zero-emission vehicles are the best-
22 available way to reduce greenhouse gases and dangerous

1 air pollution. Once again, I support the strongest
2 standards for cleaner trucks with the Advanced Clean
3 Trucks Rules and ask that you finalize this -- these
4 important protections this year. Thank you for the
5 opportunity to testify today.

6 MS. THOMPSON: Thank you for your comment. This
7 concludes our sixth speaker block. We will now call
8 them the names of those who were not present when
9 initially called on to testify. If you have joined,
10 please indicate your presence by pressing the raise
11 hand button at the bottom of your screen. If you have
12 called in, please dial star-9 to raise your hand. The
13 first name on our list is Harrison Humphreys. Again,
14 Harrison, if you have joined please either press the
15 raise hand button or dial star-9 on your phone.

16 (No response.)

17 MS. THOMPSON: The next speaker is Alondra Morales
18 Sanchez. Again, if you have joined, please indicate
19 your presence by pressing the raise hand button at the
20 bottom of your screen, or if you have called in, please
21 dial star-9 to raise your hand.

22 (No response.)

1 MS. THOMPSON: At this time, we will begin a brief
2 recess. EPA, when would you like to reconvene?

3 MR. CHARMLEY: We'd like to begin again at 7:00
4 p.m., Eastern Time. That's 7:00 p.m., Eastern Time.
5 Thank you.

6 (Break.)

7 MS. THOMPSON: Hello, everyone. This is Kayla
8 Thompson from Abt Associates, EPA's contractor. It is
9 currently 7:00 p.m., Eastern Time, and we are now
10 rejoining EPA's public hearing about the Greenhouse Gas
11 Emission Standards for Heavy-Duty Vehicles, Phase 3,
12 Proposed Rule.

13 DEAN: Sorry for the interruption. This is the
14 interpreter, Dean. I was kicked out and then I'm back
15 on, but I'm not an interpreter anymore. If you could
16 reassign me, please.

17 MS. THOMPSON: Thank you, Dean. Will do.

18 DEAN: Thank you.

19 MS. THOMPSON: One moment.

20 DEAN: Sure.

21 (Brief pause.)

22 MS. THOMPSON: Thank you. In order to accommodate

1 testimony in both Spanish and English throughout this
2 hearing, all attendees must select their preferred
3 language via the interpretation icon at the bottom of
4 your screen. If you are providing testimony today,
5 please make sure that you are speaking the language of
6 the channel you are listening to. For example,
7 listening to English while speaking in Spanish could
8 prevent other participants from hearing your statement
9 in their language of choice. The public hearing will
10 be recorded by the court reporter, and while the
11 recording will not be made publicly available, a
12 transcript of the public hearing will be posted to the
13 docket several weeks after the hearing.

14 Before we resume the hearing, we'd like to go over
15 some logistics. As a reminder, all attendees are muted
16 automatically. If you are speaking today, you will
17 receive a notification on your screen that you are
18 being promoted to the role of panelist shortly prior to
19 your speaking time. You must accept that invitation to
20 be able to unmute when you are called to testify. This
21 will also allow you to turn on your camera, which we
22 encourage you to do. Speakers connected by telephone

1 should unmute their phones when called to testify.

2 If you are having technical difficulties, please
3 send an public_hearing@abtassoc.com or call (919) 294-
4 7849. If you are not registered to speak but would
5 like to, please send an email to
6 public_hearing@abtassoc.com or call (919) 294-7849.

7 We will now continue our public testimony. The
8 expected speaking order is currently displayed on
9 screen. We ask that each person limit their verbal
10 testimony to 3 minutes. We encourage you to provide
11 any portion of your prepared statement that you are
12 unable to deliver along with any additional comments to
13 Docket Number EPA-HQ-OAR-2022-0985 on Regulations.gov.

14 I will be introducing each speaker in turn. A
15 transcript of the testimony from these public hearings
16 -- from this public hearing will be made available to
17 the public and included in the docket. Please speak
18 slowly and clearly so our court reporter and
19 interpreters can record these proceedings accurately.

20 The first speaker will be Alondra Morales Sanchez.

21 You may now unmute, and please state your name and
22 affiliation for the record.

1 MS. SANCHEZ: Hi there. My name is Alondra
2 Morales Sanchez, and I am here on behalf of Moms Clean
3 Air Force, Poder Latinx, myself, my family, and my
4 community. So thank you so much for hosting these
5 hearings as it allows us to be able to talk about our
6 concerns and our support or just our thoughts on the
7 standard that was just released.

8 So I am here wanting to say, first of all, that my
9 community is greatly impacted by the pollution and
10 greatly impacted by car pollution as it makes up for a
11 lot of the pollution here in Phoenix, Arizona and the
12 metropolitan area. And I want to say that I support
13 the standard that the EPA has set. I am sorry -- I am
14 struggling with all these screens that are tapped and
15 are open on my computer. I'm sure many of you can
16 relate.

17 But I am -- what I'm most concerned about when it
18 comes to pollution is the health risk that come with
19 it: the increased risk for cancer, the increased risk
20 for asthma and respiratory diseases. I have heard a
21 lot of community members be impacted in this way by the
22 pollution. I myself can sense a difference in the air

1 after it rains, before it rains, of what it smells
2 like, what it looks like, and what it feels like on my
3 eyes, specifically because that's very easy to feel.

4 And so on behalf of myself, my family, and my
5 community, I would like to say that I support the
6 standard to go into BEV by 2027. If anything, I urge
7 it to happen sooner, and, again, thank you for hosting
8 these meetings.

9 MS. THOMPSON: Thank you for your comment. The
10 next speaker will be Carissa Sipp. You may now unmute,
11 and please state your name and affiliation for the
12 record.

13 MS. SIPP: Hi. Can you hear me?

14 MS. THOMPSON: Yes.

15 MS. SANCHEZ: Okay. Great. I can't see myself,
16 so I'm going to assume you can see me. Okay. There I
17 go. Reaction is late.

18 My name is Carissa Sipp. I'm with Moms Clean Air
19 Force. I live also in Arizona. I live in Tucson,
20 Arizona, and I'm also -- I guess I'm testifying here
21 today to really promote Phase 3, what you guys have
22 proposed. We've been taking too much inaction. We've

1 kind of had the handbrake on on a lot of requirements
2 for many, many years now. We've known that this is an
3 issue.

4 Ozone is heavily impacting and it burns. Like,
5 that is irreparable damage that will happen from the
6 emissions of these greenhouse gases. So these rules
7 not only will allow the particulate and the burning
8 that we previously heard that Phoenix has the highest
9 ozone levels in the country year round just because of
10 the transportation, the cars, so people struggle with
11 that. The closer you are to the highway, the closer
12 that damage becomes. And we know are in certain
13 pockets are affected and impacted extremely hard.

14 I am a mom of two girls. We have asthma in my
15 family. One of them has a heart condition and the
16 other one has a multitude of issues that we're trying
17 to address right now going through multiple doctors,
18 and a lot of I think has to -- or we contribute a lot
19 of it to. Every time she's exposed, she has reactions,
20 especially when it's a high-pollution day.

21 We just had a F rating in pollution for the year
22 from the Lung Association. We had a F rating yesterday

1 from the Lung Association on particulate matter. We
2 just keep getting hit hard, and people are struggling
3 daily. We have over, I think it's 25,000 cases of
4 pediatric asthmatics in just Pima County alone in
5 Tucson, and we have over 85,000 adults with asthma, and
6 those people are the most susceptible and at risk, and
7 that's such a strain on our healthcare environment, our
8 healthcare structure, and even the people.

9 So when we talk about these regulations and these
10 restrictions, I guess people would call them
11 restrictions, the economic advantage to this is
12 trillions of dollars because we will be able to offset.

13 And there's been actual analysis that by offsetting
14 all this, we will incorporate \$26 trillion by 2030.
15 Now, ow those are estimates. I get it. Nothing's hard
16 and nothing's true, but to think inaction is not making
17 this possible, we will have an impact of higher
18 infrastructure costs because of damage because of
19 climate change, higher health, I guess, impact because
20 higher medical bills for many people who are already
21 struggling and struggling to make it happen daily.

22 So I know I only have 3 minutes, but I really --

1 I'm encouraged by these Phase 3 steps that you've
2 taken. I am greatly appreciative. I really appreciate
3 the effort that is being made. Obviously I would like
4 to say that we are waving a wand and can make
5 everything happen, but I do admire the courage to make
6 this happen at least and accelerate the process. So
7 thank you very much for my time.

8 MS. THOMPSON: Thank you for your comment. The
9 next speaker will be Carolina Pena-Alarcon. You may
10 now unmute, and please state your name and affiliation
11 for the record.

12 MS. PENA-ALARCON: Thank you for the opportunity
13 to testify. My name is Carolina Pena, manager of
14 EcoMadres, the Latino engagement programs of Moms Clean
15 Air Force. I'm Bolivian, and I live in Arlington,
16 Virginia.

17 The transportation sector is the largest source of
18 greenhouse gas emissions in the United States. These
19 emissions are driving climate change, and while trucks
20 are an essential part of our economy, they also
21 contribute to both noise and harmful air pollutions. A
22 strong limit of tailpipe pollution and a rapid switch

1 to zero-emissions vehicles will reduce harm to our
2 climate and, mostly, our health.

3 According to the American Lung Association's 2023
4 "State of the Air" report, nearly 36 percent of the
5 Americans, or 119.6 million people, still live in with
6 failing grades or healthy levels of ozone or
7 particulate pollutions. While this is 17.6 million
8 fewer people breathing unhealthy air compared to the
9 last year's report, there's a still a great work that
10 needed to be done.

11 Millions of Americans live, play, and go to school
12 nearby highway and trucks routes where they are exposed
13 to high level of toxic exhales from the constant stream
14 of traffic. Often these communities are communities of
15 colors and low-income communities that face these
16 pollution burden. The origin transition to zero-
17 emissions trucks is a significant opportunity to reduce
18 the negative health outcomes and the disparities in the
19 communities adjacent to major trucks traffic areas.

20 I recognize that in 2020, 15 state, including
21 Washington, D.C. and Puerto Rico, sign a memorandum of
22 understanding committing to a 30-percent medium- and

1 heavy-duty zero-emissions vehicle sales by 2030. And
2 also, in 2021, the Bipartisan Infrastructure Law
3 provides \$5 billion to help transform the school fleets
4 across America and put the student and drivers on the
5 road to a cleaner commute.

6 We are moving in the right direction, and we
7 applaud for this strong leadership that has been shown
8 in this administration to ensure that the public health
9 benefits are adopting zero-emissions. And as a rider
10 of a D.C. Circulator bus, I have experience with
11 electric vehicles, a transportation most that offer
12 equity, growth, sustainability. I wish all cities and
13 states could have a similar options for their citizens,
14 especially since Latinos are frequent bus drivers.

15 We have the technology to transition to cleaner
16 vehicles, goals including heavy-duty vehicles like
17 trucks and buses, so it is time for this Environmental
18 Protection Agency to set the stronger possible vehicles
19 emissions standards consistent with the Advanced Clean
20 Trucks Rule that protects our air but also the public
21 health that everybody is suffering right now because of
22 the air pollution. So thank you.

1 MS. THOMPSON: Thank you for your comment. The
2 next speaker is Jennifer Cantley. Unfortunately, we do
3 not currently see you in the list of attendees.
4 However, if you have joined with a different name, we
5 ask that you indicate your presence by pressing the
6 raise hand button at the bottom of your screen or by
7 dialing star-9 if you have called in.

8 (No response.)

9 MS. THOMPSON: The next speaker will be Joel
10 Charles. Joel, you may now unmute. Please state your
11 name and affiliation for the record.

12 DR. CHARLES: Thanks, everyone and, you, the EPA
13 for all your work for Americans. (AUDIO MALFUNCTION).

14 My name is Dr. Joel Charles. I speak today to protect
15 my patients as a rural family doctor from Wisconsin. I
16 speak as a father on behalf of my children, I speak as
17 a leader on behalf of Healthy Climate Wisconsin and our
18 over 600 health professionals committed to building a
19 healthier Wisconsin for all. I urge the EPA to adopt
20 at least the strongest of the alternatives proposed. I
21 grew up in a neighborhood sandwiched between a busy
22 freight railyard and two of the busiest roads in Green

1 Bay, and I and my siblings have asthma. Now, as a
2 rural family doc, every day I see my patients suffer
3 from fossil fuel air pollutions.

4 As you know, heavy-duty vehicles are deeply
5 harmful to health, and as you know, that harm is
6 unjustly borne by the poor and people of color. As a
7 doctor, what I know is what harm that does to people's
8 lives. What hat I know is that we need to do better.

9 It's worth looking at precedent. Students of the
10 Clean Air Act know it's among the most successful
11 public health policies in U.S. history. The history
12 has repeatedly shown us that when better technology is
13 available, mandating its use nearly always is more
14 beneficial than anticipated. Precedent has also shown
15 us that industry routinely overestimates the logistical
16 challenges, negative impact, and cost of transitioning.

17 It's almost always easier, quicker, cheaper, and more
18 beneficial than expected. Frankly, given that well-
19 established precedent, the EPA should discount what is
20 said by those who urge delay.

21 Today you've repeatedly heard the number of lives
22 those rules would save, the number of asthma attacks

1 and heart attacks they would prevent. But when you do
2 the work I do, you know those numbers really mean
3 something because you see the individual people in
4 front of you every day. The recurring question with
5 the Clean Air Act is this: is the air clean enough?
6 If you are a parent or a health professional who has
7 ever watched a child have an asthma attack, and if you
8 know that the vehicle industry now has the technology
9 to clean itself up while saving consumers money, the
10 answer is, no, the air is not clean enough. The answer
11 is that we have to do more, and the faster the better.

12 I don't fault people in industry for looking out
13 for their bottom line, but from where I sit as s a
14 former kid with asthma in a poor neighborhood polluted
15 by heavy vehicles, as a father concerned about the
16 world I leave my children, including the child you just
17 heard, as a doctor who takes care of kids suffering
18 from asthma, I find the argument for delay not only
19 lacking in evidence, but, frankly, morally
20 insufficient.

21 I urge the EPA to come with a new proposal that
22 requires the fastest feasible transition. Failing

1 that, I urge the EPA to adopt the strongest of the
2 alternatives proposed. Thank you.

3 MS. THOMPSON: Thank you for your comment. The
4 next speaker will be Brittany Keyes. Unfortunately, we
5 do not currently see you in the list of attendees.
6 However, if you have joined using a different name,
7 please indicate your presence by pressing the raise
8 hand button at the bottom of your screen, or if you
9 have called in, please dial star-9 to raise your hand
10 on your phone.

11 (No response.)

12 MS. THOMPSON: The next speaker will be Brian
13 Russo. Brian, you may now unmute, and please state
14 your name and affiliation for the record.

15 MR. RUSSO: Hi. My name is Brian Russo. I'm a
16 member of Sierra Club. I'm also a member of Climate
17 Reality Project and Food and Water Watch in New Jersey.

18 So I'd like to thank the EPA and I'd like to express
19 my support for the strongest rules regarding cutting
20 emissions in clean air. I'd also like to add some
21 context.

22 The first vehicle was manufactured to run off of

1 peanut oil. Soon later, Ford developed a vehicle made
2 out of hemp that ran off of a carbon-neutral biofuel
3 made from hemp. This was then soon later criminalized
4 due to influence of petrochemical companies, and we are
5 in the situation which we are burning fossil fuels to
6 power these vehicles.

7 Now, let me tell you something about the auto
8 industry. The vehicle manufacturers, when they make
9 vehicles, they design them such that parts are required
10 to be thrown away when they are repaired. They do not
11 care about the overall impact of these vehicles and the
12 materials that are sourced. So while I support the EPA
13 as far as cutting emissions, it doesn't do enough.

14 Vehicle manufacturers can make vehicles to be
15 biodegradable, use much more earth-friendly materials,
16 but they do not care. When they were required to cut
17 emissions during the Obama administration, they
18 introduced composite materials into the environment
19 that are not biodegradable and not recyclable for the
20 sake of accommodating the law. But they prevent you
21 from knowing that they can use hemp to make the panels,
22 to make the interior, the exterior, replace steel,

1 replace the carpet, replace the headliner. There's
2 also biodegradable plastics that we could be using for
3 the windows that are absorbing solar power energy.

4 The point is that there are plenty of
5 alternatives, but they do not care. When the vehicle
6 is involved in a collision, they require that you
7 replace a lot of panels, and they're not -- there's no
8 concern as far as where the materials go. So I
9 basically want to express my support in requiring
10 vehicle manufacturers to cut emissions for these
11 trucks, but I also want there to be some consideration
12 or bring to -- bring knowledge in fact that these
13 vehicles could be used -- could be made to be much more
14 earth friendlier, and they are not.

15 So we absolutely must require vehicle
16 manufacturers to do everything they can to cut
17 emissions. They cannot be trusted on their own accord.

18 That's all I have to say. Thank you.

19 MS. THOMPSON: Thank you for your comment. As a
20 reminder, if you are speaking today, you will receive a
21 notification on your screen that you are being promoted
22 to the role of panelist shortly prior to your speaking

1 time. You must accept that invitation to be able to
2 unmute when you are called to testify. This will also
3 allow you to turn on your camera, which we encourage
4 you to do. We ask that each person limit their verbal
5 testimony to 3 minutes. Please speak slowly and
6 clearly so our court reporter and interpreters can
7 capture these proceedings accurately. Speakers
8 connected by telephone should unmute their phones when
9 called to testify.

10 If you are having technical difficulties, please
11 send an email to public_hearing@abtassoc.com or call
12 (919) 294-7849. If you are not registered to speak but
13 would like to, please send an email with your name and
14 phone number to public_hearing@abtassoc.com or call
15 (919) 294-7849.

16 The next speaker will be a Erandi Trevino. You
17 may now unmute, and please state your name and
18 affiliation for the record.

19 MS. TREVINO: Good evening. My name Erandi
20 Trevino. I am the Texas State organizer for Moms Clean
21 Air Force and EcoMadres, I live in Southeast Houston.
22 I'm here to ask EPA to set the strongest possible

1 greenhouse gas standards for heavy-duty vehicles
2 consistent with the Advanced Clean Trucks Rule. We
3 need strong greenhouse gas standards to do better -- to
4 better protect children, people with asthma, older
5 adults, and other vulnerable groups from the harmful
6 effects of climate change.

7 Parents across the country want to see a rapid
8 transition to zero-emission trucks to provide a stable
9 climate and cleaner air for our children and for our
10 communities. My multi-generational home in Southeast
11 Houston sits immediately next to an 18-wheeler parking
12 lot on one side. I can easily see them over the fence,
13 and many days I can even smell them. To the other
14 side, there is a demolition company and on the other a
15 crate company. The fourth side is a small road that
16 sees a lot of movement from heavy-duty trucks all day
17 long. My home is surrounded on all four sides. As I
18 worked on preparing my notes, I could hear crates
19 beeping and trucks moving in and out of my
20 neighborhood. Some days a big wave of dust from their
21 activities washes over our home, and every day we hear
22 the heavy-duty trucks operating and n 18-wheelers

1 idling next door.

2 My youngest niece is 3, and she has severe
3 allergies and breathing problems that sometimes disrupt
4 her sleep. My 7-year-old niece has eczema and in her
5 young life has already had anxiety about extreme
6 weather events. My mother and I both have
7 fibromyalgia. We often experience shortness of breath
8 and a heavy pressure on our chest. Southeast is known
9 to have poor air quality. The location of the Houston
10 Ship Channel and refineries and other industrial
11 facilities make the region vulnerable to excessive
12 pollution. Air pollution from trucks is a major public
13 health problem, one that zero-emitting trucks can help
14 address. According to the EPA, more than 45 million
15 people in the U.S. live within 300 feet of major
16 roadway or transportation facilities.

17 Reducing greenhouse gas emissions is also critical
18 to addressing the climate change impacts on Houston and
19 Harris County as a whole. My county sees some of the
20 highest occurrences of extreme weather events in the
21 entire country. We grew up with hurricanes, but we now
22 have to deal with freezes and even tornadoes. During

1 Hurricane Harvey, so much water poured into our
2 communities that my mom's home flooded, and many
3 people, including my oldest niece, had PTSD for years.

4 More than 40 percent of Americans, over 135
5 million people, live in places with unhealthy levels of
6 air pollution, so moving is not the solution. The
7 solution is to address the root of the problem. So
8 once again, I just urge the EPA to finalize the
9 strongest possible standards this year consistent with
10 the Advanced Clean Trucks Rules. Thank you.

11 MS. THOMPSON: Thank you for your comment. The
12 next speaker will be Kathy Taylor. You may now unmute,
13 and please state your name and affiliation for the
14 record.

15 MS. TAYLOR: Good afternoon. My name is Kathy
16 Taylor, and I am the air quality program manager at
17 Washington State Department of Ecology. I am
18 testifying today to encourage EPA to strengthen your
19 Proposed Heavy-Duty Phase 2 Greenhouse Gas Rule to make
20 it at least as stringent as California's Advanced Clean
21 Trucks Rule, passed in 2020.

22 As you know, the transportation sector is the

1 largest contributor to the nation's planet-warming
2 Greenhouse gas emissions. In Washington, these
3 emissions account for about 40 percent of our total.
4 Like many of our peers, we have set necessarily
5 ambitious requirements for decarbonization, and we
6 cannot achieve them without aggressive, innovative
7 transportation policies.

8 Heavy-duty trucks are the largest contributors of
9 nitrogen oxides and diesel particulate matter emissions
10 which affect the quality of the air that people
11 breathe, especially in communities surrounding
12 highways, ports, warehouse districts, and freight
13 corridors. In fact, nearly 5 million Washingtonians
14 are exposed to diesel exhaust because they live or work
15 close to transportation corridors. Although Washington
16 has adopted California's advanced clean trucks
17 regulations along with seven other states, we're still
18 impacted by out-of-state long-haul trucks that do not
19 need to meet these strongly protective laws.
20 Washington is home to major ports in Seattle and
21 Tacoma, with additional port facilities located
22 throughout the state. Both in-state and out-of-state

1 trucks access these ports and nearby warehouses to haul
2 freight around the country.

3 In addition to our Advanced clean trucks
4 regulations, we need robust federal standards to reduce
5 emissions from out-of-state heavy-duty trucks to
6 improve our air quality, meet our decarbonization
7 requirements, and prevent the worst impacts of climate
8 change. Zero-emission heavy-duty trucks are widely
9 available. Thirty-five manufacturers, including some
10 in Washington, are already producing at least 135
11 models, delivering them to customers nationwide. While
12 the charging and refueling infrastructure to keep these
13 trucks moving is still under development, the billions
14 of dollars allocated in the Infrastructure Investment
15 and Jobs Act and the Inflation Reduction Act will
16 stimulate rapid development of the support of
17 technology across the country in the next few years,
18 even before the Phase 3 rule is implemented in 2027.

19 In summary, we encourage EPA to modify the
20 proposed Phase 3 standards to be at least as stringent
21 as the Advanced clean trucks regulations, achieving at
22 least 60 percent zero-emission vehicle sales for

1 vocational vehicles and 40 percent for tractors by
2 2032. These rigorous standards will help put the
3 nation on the right path to meet the essential
4 greenhouse gas reduction targets that the United States
5 committed to in the Paris Agreement, create jobs in the
6 clean transportation sector, and ensure that all
7 Americans benefit from reduced air pollution in their
8 neighborhoods. Thank you for the opportunity to
9 testify on this important proposal.

10 MS. THOMPSON: Thank you for your comment. The
11 next speaker will be Molly Greenberg. Molly, you may
12 now unmute, and please state your name and affiliation
13 for the record.

14 MS. GREENBERG: Good evening. My name is Molly
15 Greenberg. I'm the campaign manager with the Moving
16 Forward Network. MFN is a national network of over 50
17 member organizations committed to achieving
18 environmental and climate justice in communities
19 impacted by freight-related pollution. I appreciate
20 the opportunity to testify today.

21 The urgency and critical need for EPA to take on a
22 more stringent and protective Phase 3 greenhouse gas

1 rule cannot be overstated. As we listen today to
2 testimony, we must be grounded in the reality that
3 millions of people and friends in frontline communities
4 are being poisoned with lethal toxic emissions from
5 heavy-duty trucks today. It is not only feasible with
6 the technology readily available to ensure 100 percent
7 zero-emission trucks by 2035, which is over a decade
8 away, it is economically viable. For EPA to finalize a
9 rule that is anything less than the strongest possible
10 standard risks furthering an already deadly and
11 dangerous status quo for these communities.

12 Besides a clear mandate for a hundred percent
13 zero-emission trucks by 2035, this rule must prioritize
14 freight trucks. These trucks have never been clearly
15 prioritized in heavy-duty truck regulations and are
16 some of the oldest and most polluting vehicles in
17 frontline and fence-line communities. Since there is
18 no multi-pollutant standard within this rule, the
19 ambiguous language leaves the opportunity for false
20 solutions, like natural gas and new -- "new fuel source
21 technologies" to be considered zero-emission, which is
22 only a gift to industry, while adding additional risk

1 to harm -- and harm to environmental justice
2 communities. EPA must reflect in the final rule a
3 definition of "zero emissions" that is based on
4 renewable energy and does not allow for additional
5 pollution to impact already overburdened communities.

6 For residents living in diesel death zones, it's
7 plain to see that the systems put in place to protect
8 health and safety do not serve everyone equally. Many
9 grapple with processes that lock them out of policy and
10 decision making and favor for the logistics industry.
11 This administration has committed time and time again
12 to work to change this reality, to alter the dynamic by
13 prioritizing environmental justice. However, the
14 current draft of the Phase 3 has fallen short of all of
15 the demands from EJ communities, and without EPA
16 strengthening the rule and incorporating EJ into the
17 final rule, this will be another example of rhetoric
18 over action.

19 We support EPA taking the critical action of
20 reinforcing states' rights to regulate emissions from
21 locomotives and rail that's recognizing that prior way
22 it looked at the law was incorrect and prevented states

1 from developing lifesaving locomotive regulations.
2 While we have the right to protect ourselves from
3 deadly emissions from rail and locomotive, we know that
4 EPA not only has the same right but also the
5 responsibility to regulate this largely unregulated
6 rail and locomotive industry. Our communities deserve
7 to see the environmental justice commitments of the
8 administration being represented in this and all of the
9 regulation coming from EPA. MFN remains committed to
10 working with EPA to strengthen this and future rules
11 which address the deadly pollution from the freight
12 transportation system.

13 And to end with a quote from our members, "Aero
14 must mean zero, not near zero." Thank you.

15 MS. THOMPSON: Thank you for your comment. The
16 next speaker will be Margarita Parra. You may now
17 unmute, and please state your name and affiliation for
18 the record.

19 MS. PARRA: Thank you. Thank you, Nyma, Bill,
20 George, and Brian. I can only see you, but I also
21 thank all the EPA staff that is making time even in the
22 evening to listen to all our voices. I'm grateful. My

1 name is Margarita Parra. I'm the transportation
2 director at Clean Energy Works, an NGO that promotes
3 zero-emission technologies, but I want you to remember
4 as a mother and as a cyclist, this is me and my kids.

5 I've been cycling all my life since I was young
6 for recreation, to get to places, and something that I
7 learned very young was to smell that diesel pollution,
8 not because I wanted it, because it was difficult to
9 avoid. Every time you get into the road, you pass a
10 bus, a truck, and you can get that distinct smell. And
11 it really pains me that my kid, which has been going by
12 bike to school since he was in TK, still has to get
13 that smell, still has to get that harmful pollution
14 that I will repeat has all those impacts that many of
15 my colleagues have said to our brains, to our lungs, to
16 our bodies.

17 So I'm here to support the work of the EPA to have
18 the strongest mandate possible because we need zero-
19 emission trucks and buses now in all neighborhoods and
20 in all cities. Without that mandate, the industry will
21 not act. We need to have something as strong as the
22 Advanced Clean Air Rule in California and other states

1 that have also follow because those mandates really
2 made the industry to ramp up production and to get
3 those products out in the market and to lower prices.

4 We're using the federal funds from programs from
5 the IIJA, the Bipartisan Law, the Inflation Reduction
6 Act, programs like the Clean School Bus Program, the
7 low NOx programs, and I'm really grateful we have that
8 federal resources. But as generous as those federal
9 resources are, they're just a downpayment for the
10 transformation of all those fleet, and without
11 prosperity, without more production and the strongest
12 mandate, the market will not act. So I urge you to
13 have the strongest mandate possible to provide that
14 signal and to get zero-emission buses and trucks on the
15 road soon. We need them now. I thank you for your
16 time.

17 MS. THOMPSON: Thank you for your comment. The
18 next speaker will be Bill Bradley. You may now unmute,
19 please state your name and affiliation for the record.

20 MR. BRADLEE: Sure. Thank you for letting me
21 speak today. My name is Bill Bradley. I'm the
22 national organizing director for the nonprofit

1 Interfaith Power and Light. Interfaith Power and
2 Light's mission is to inspire and mobilize people of
3 faith and conscience to take bold and just action on
4 climate change. We recognize that people of all faiths
5 and spiritual traditions share a common bond to care
6 for their neighbor as well as this planet that we all
7 share. I'm here today to talk with you on behalf of my
8 organization as well as our state affiliates and more
9 than 6.5 million people of faith who are a part of our
10 national network. We ask the EPA to move quickly and
11 finalize the strongest possible cleaner truck standards
12 by the end of this year.

13 I have two main points to make, and I see someone
14 wants me to go a little slower. The first point is
15 that this is achievable. Obviously we need to have
16 something that is achievable, that can be done. As you
17 know, trucks and buses account for one-third of the
18 transportation climate pollution. To meet the Biden
19 administration's climate goals, transportation and
20 climate pollution will need to be cut by 29 to 40
21 percent by 2030, and we see that this is achievable,
22 particularly with the flexible structure the EPA has

1 built into this proposed rule.

2 The market is already transitioning to zero-
3 emission vehicles. Medium- and heavy-duty vehicle
4 manufacturers, including Daimler Ford and Volvo, have
5 committed to increasing their share of zero-emission
6 vehicle sales, eventually achieving a hundred percent,
7 and major companies, like Amazon and FedEx, each with
8 over 30,000 delivery vehicles, have committed to
9 electrifying their fleets.

10 The second big point I want to make is that this
11 is critically important. You might ask why a faith-
12 based organization is testifying about this proposed
13 rule. Simply put, it's a matter of justice. According
14 to the American Lung Association, the 72 million people
15 living closest to trucking routes and, therefore, most
16 affected by this pollution are more likely to be lower-
17 income people of color. With a strong rule, we would
18 see increased benefit through financial savings from
19 improved health and reduced healthcare spending, fuel
20 savings, and reduce the impacts from climate change.

21 Again, we ask the EPA to move quickly and finalize
22 the strongest possible cleaner heavy-duty vehicle

1 standard by the end of this year. I urge the EPA to
2 take on this moral opportunity and help our country
3 lead on climate solutions. Thanks again for allowing
4 me to speak today.

5 MS. THOMPSON: Thank you for your comment. As a
6 reminder, if you are speaking today, you will receive a
7 notification on your screen that you are being promoted
8 to the role of panelist shortly prior to your speaking
9 time. You must accept that invitation to be able to
10 unmute when you are called to testify. This will also
11 allow you to turn on your camera, which we encourage
12 you to do. We ask that each person limit their verbal
13 testimony to 3 minutes. Please speak slowly and
14 clearly so our court reporter and interpreters can
15 capture these proceedings accurately. Speakers
16 connected by telephone should unmute their phones when
17 called to testify.

18 If you are having technical difficulties, please
19 send an email to public_hearing@abtassoc.com or call
20 (919) 294-7849. If you are not registered to speak but
21 you would like to, please send an email with your name
22 and phone number to public_hearing@abtassoc.com or call

1 (919) 294-7849.

2 The next speaker will be Taki Darakos. You may
3 now unmute, and please state your name and affiliation
4 for the record.

5 MR. DARAKOS: Taki Darakos, Pitt Ohio Express.
6 Good evening. Thank you for allowing me to testify
7 today. Pitt Ohio Express is a freight transportation
8 provider that operates in 14 states out of 25 depots.
9 Our fleet consists of approximately 850 tractors as
10 well as 600 box trucks. A portion of our fleet runs on
11 compressed natural gas. We're committed to doing our
12 best to achieve environmental and social responsibility
13 to our employees, our customers, and the communities
14 that we operate in.

15 Our industry in Pitt, Ohio have worked with EPA
16 and other stakeholders during the drafting of the
17 federal Phase 1 and 2 GHG emissions regulations to
18 achieve substantial emissions improvements, regulations
19 that we supported due to its ability to achieve real-
20 world fuel savings with proven technologies. EPA's
21 currently-proposed greenhouse gas Phase 3 regulation is
22 not that.

1 Currently, there are very limited quantities for
2 battery electric trucks on the road today, and hydrogen
3 fuel-cell trucks are an even smaller number. The
4 industry continues to study other technology options
5 that can reduce GHG emissions, like biofuels, renewable
6 diesel, and hydrogen combustion. All these
7 technologies could potentially deliver cost-effective
8 emissions reductions.

9 In May of 2022, we put into service our First Class
10 7 battery electric vehicles in Cleveland, Ohio. This
11 technology only became available to us last year and
12 came at 3 to 4 times the cost of a traditional diesel-
13 powered unit before infrastructure costs were taken for
14 -- taken into consideration. Duty cycle, terrain, and
15 weather factor into their performance.

16 In the heavy-duty space, our tractors average
17 close to 650 miles a day, and the technology that will
18 be needed to support these extended ranges are not
19 available in large quantities. Infrastructure projects
20 to support electrification come with extremely long
21 lead times and require a significant amount of energy
22 onsite. Hydrogen as a fuel is on the horizon in our

1 region, but the realities are that this will not happen
2 before the end of the decade.

3 As you begin your work on the new GHG standards,
4 charging an alternative fueling infrastructure must be
5 at the center of successful adoption. Long lead times
6 and significant investment are barriers that currently
7 exist and are unaddressed. We encourage you to account
8 for what stage this technology is at given your
9 aggressive market penetration assumptions, guarantee a
10 robust infrastructure charging or alternative fueling
11 systems built is out to support deployment of zero-
12 emission trucks, and ensure cost parity with clean
13 diesel technology is maintained.

14 Thank you for allowing me to speak today. Have a
15 good evening.

16 MS. THOMPSON: Thank you for your comment. The
17 next speaker is Atenas Mena. You are -- you may now
18 unmute, and please state your name and affiliation for
19 the record.

20 (No response.)

21 MS. THOMPSON: Unfortunately, we are still unable
22 to hear you. You may want to double check that you are

1 unmuted.

2 MS. MENA: Hello? Can you hear me now?

3 MS. THOMPSON: Yes, we can hear you now.

4 MS. MENA: Okay. Thank you. Technology has not
5 gotten better. So good evening. My name is Atenas
6 Mena, and the co-executive director of Clean Air Now.
7 I'm also a first-generation Mexican-American, a Kansas
8 Cityean born and raised, and a nurse. Thank you for
9 the opportunity to speak this late in the day and
10 making this public comment accessible to Spanish-
11 speaking community members. I'm here to encourage EPA
12 to responsibly, effectively, and quickly implement the
13 strongest standards possible for the Phase 3 greenhouse
14 gas rule.

15 Over 12 million Americans with asthma live in
16 counties that fail to meet minimal standards for air
17 quality, according to the American Lung Association.
18 Our failure to effectively address air pollution
19 contributes to heart disease, lung diseases, cancer,
20 neurodegenerative diseases, like Parkinson's, and many
21 other chronic and acute illnesses affecting the young
22 and old alike. This failure to control pollution makes

1 breathing a health risk. Add to these health
2 consequences the profound impact of climate change and
3 humanity is at an inflection point where all of us,
4 especially our government and industry, must take
5 action.

6 My hometown, Kansas City, is home to the largest
7 rail transportation center -- is home to the second
8 largest rail transportation center in the -- in the
9 country. In fact, the rail industry remains one of the
10 most significant sources of this environmental
11 injustice for many of our communities. Diesel-powered
12 locomotives emit large quantities of nitrogen oxide,
13 diesel particulate matter, and volatile organic
14 compounds. Residents of Armourdale, which is a
15 neighborhood in Kansas City, Kansas, predominantly
16 Latino, Hispanic, working class, is enclosed between
17 large railyards, dirty industry, and heavily-trafficked
18 highways. They experience a life expectancy 22 years
19 shorter, according to the CDC. This is the same
20 neighborhood where you will not find any electric
21 charging stations, where access to transportation,
22 healthcare, and other resources are limited, and

1 climate change weather patterns are felt regularly with
2 record-breaking heat waves, flood droughts -- floods,
3 droughts, and, concerning, poor air quality days.

4 KCK is not siloed in this large and impactful
5 discrepancy. Our nation has been overburdening
6 environmental justice communities by having them bear
7 the brunt of systemic racism with the legacy of
8 redlining, zoning, and dumping practices, leaving
9 families without access to clean air, water, and land.

10 As a member of MFN, I want to elevate what has been
11 and continues to be demanded: ensure a clear pathway
12 zero emissions with a sales mandate with 100 percent
13 zero-emission trucks by 2035, not 50 percent;
14 prioritization of zero-emissions for the freight trucks
15 Classes 7 and 8 short haul; environmental justice and
16 public health analysis to ensure sufficient stringent
17 rules.

18 We all have the right to take a deep breath,
19 inhale clean air, and supply us with oxygen, not
20 toxins. Our communities do not need false promises of
21 alternative fuels. We need zero missions now. Thank
22 you.

1 MS. THOMPSON: Thank you for your comment. The
2 next speaker will be Carol Devine. Unfortunately, we
3 do not currently see you in the list of attendees.
4 However, if you have joined under a different name,
5 please indicate your presence by pressing the raise
6 hand button at the bottom of your screen. If you have
7 called in, please dial star-9 to raise your hand.

8 (No response.)

9 MS. THOMPSON: The next speaker will be Stanislav
10 Jaracz. You may now unmute, and please state your name
11 and affiliation for the record.

12 MR. JARACZ: Good evening. My name is Stanislav
13 Jaracz. I'm here to support the strong emission
14 standards. I'm testifying as a member of Electric
15 Vehicle Association as well as president of the New
16 Jersey chapter of Electric Vehicle Association. I
17 would like to thank this Administration for acting
18 swiftly on a clean truck -- on clean trucks and urge
19 EPA to create strong limits on a heavy-duty vehicles'
20 pollution.

21 Electric Vehicle Association has a hundred
22 chapters nationwide, and we have thousands of members.

1 We are the grassroots organization founded in 1967,
2 and our goal is to advocate for electric vehicles
3 through education and demonstration. Electric Vehicle
4 Association is committed to organize at least a hundred
5 show-and-tell events in the -- in the nation to
6 communicate the benefits of electric drive.

7 From technology viewpoint, all vehicles with
8 classes up to 8 -- except of 8 -- are ready for
9 deployment. ACT research noted that Classes 6 and 7
10 are most likely to go electric in the near term at
11 very, very high levels. I'm also a member of Franklin
12 Township Environmental Commission, and in our town, we
13 have been impacted by where-have sprawl, and this
14 where-haves is impacting more and more people.
15 Traditionally, low-income communities are particularly
16 affected, but due to the where-haves sprawl, even other
17 residential communities has been recently impacted,
18 such as seniors and children.

19 It has been shown that particulate matter impacts
20 learning ability and effect -- and, in effect, prevents
21 low-income communities to actually ever escape from the
22 curse of the unfortunate situation. Diesel trucks,

1 they produce lots of harmful emissions, such as
2 particulate matter, nitrogen oxides, and hydrocarbons,
3 and that comes on top of carbon dioxide emission, which
4 is greenhouse gas.

5 It has been shown over and over again that strong
6 regulation is the only way to make significant change
7 in our society. We don't have the time to wait. The
8 electrification is already happening around the world.

9 Europe has very strong standards, and China -- China
10 has the highest production of electric vehicles,
11 including heavy-duty vehicles and buses. So even from
12 the competitive viewpoint, we must act to stay
13 competitive to ensure high-quality jobs here in the
14 United States and in the automotive and transportation
15 industry.

16 I also wanted to mention that as a child, I grew
17 up in a community that was heavily polluted. I
18 remember the diesel buses that -- back then were even
19 more polluting than they are today. I was very
20 fortunate that I do not have asthma, but many, many
21 other people got asthma, and even with the diesel
22 engines technology available today, it is very, very

1 bad. So, therefore, I urge EPA to adopt the strongest
2 possible emission standards, and thank you for the
3 opportunity to speak today.

4 MS. THOMPSON: Thank you for your comment. The
5 next speaker will be Doug O'Malley. You may now
6 unmute, and please state your name and affiliation for
7 the record.

8 MR. O'MALLEY: Thank you so much. Hopefully you
9 can hear me clearly. My name is Doug O'Malley,
10 director of Environment New Jersey. We represent more
11 than 80,000 citizen members and activists across the --
12 across the Garden State. I believe I'm closing out the
13 evening here for EPA. Hopefully you've heard this
14 before, but Happy World Asthma, which obviously that is
15 a -- you know, that does not go together. There's
16 nothing happy about asthma. I did actually just come
17 from webinar talking about the impacts of our recently-
18 passed Environmental Justice Law and environmental
19 justice rules for New Jersey, and when we mark asthma,
20 we really are talking about impacts across our urban
21 communities especially.

22 Just, you know, 2 weeks ago, the American Lung

1 Association, as you well know, released their "State of
2 the Air" report. It did show that ozone pollution in
3 the Garden state had gotten a little bit better. It
4 also showed particulate pollution had gotten worse.
5 And one of the key aspects of the Environmental Justice
6 Law is looking at cumulative impacts of pollution,
7 especially in environmental justice communities.

8 One of the largest cumulative impacts of pollution
9 across all of our communities, but especially in our
10 cities, is highways. The EJ law is not going to force
11 highways to come down, so if we are serious about
12 reducing pollution, we need to look at electrification.

13 And that's a big reason why New Jersey, along with a
14 multitude of states, adopt advance -- the Advanced
15 Clean Truck Rule at the end of 2021. Obviously the
16 Advanced Clean truck Rule only works if we're having
17 federal action, and that's why it's obviously critical
18 that EPA is moving forward on this current rule.

19 That being said, the proposal reflects a
20 conservative assessment of the deployment of electric
21 trucks, and it is critical that EPA strengthen the
22 final rule. I also want to say here that it's critical

1 that EPA move quickly and finalize the strongest
2 possible clean truck standard to address the climate
3 crisis by the end of this calendar year. We would
4 strongly encourage the standards need to be at least as
5 strong as the alternatives proposed by the EPA. This
6 is in line with the federal and manufacture investments
7 and obviously states like New Jersey that have adopted
8 the Advanced Clean Truck Rule. The standards also
9 should require tighter limits on nd diesel vehicles
10 generally so that we're making diesel vehicles will be
11 a close cleaner across the board as manufacturers
12 transition to zero-pollution vehicles.

13 I wanted to say, too, it's not just about our
14 highways, as important as that is. It's also about our
15 ports, and New Jersey has the largest port, not just
16 this side of the Mississippi, but even west of the
17 Mississippi with the amount of traffic that's coming
18 in. That's obviously a lot of pollution on the ships.

19 It's even more pollution on the trucks that are going
20 out, and my good ally, Stan, referenced the impacts on
21 Central Jersey. Those trucks start in the Ironbound
22 community of Newark, and that -- those have real

1 impacts.

2 And this, I don't know if you can see, my son,
3 Malcolm, has decided to zoom on here at the very end,
4 and, of course, my daughter. That's right. So you can
5 only imagine how the rest of the evening will go here,
6 and I'll have to go shortly because my time is up. But
7 I just wanted to emphasize in New Jersey, there's more
8 than 600,000 adults that suffer from asthma. There's
9 more than 150,000 children that suffer from asthma.
10 Those are not statistics. Those are real people. This
11 rule is critical. You should not be listening to
12 disinformation from EMA. You should be listening to
13 the public and public health professionals, and work to
14 ensure this rule gets stronger and gets adopted by the
15 end of this calendar year.

16 So thank you for all of your work. You've heard
17 from a lot of folks tonight. You'll hear from more
18 folks tomorrow. And I just wanted to thank you for
19 your work to get the strongest possible protection for
20 all of our lungs. And then Malcolm wants to say
21 something. What do you want to say, Malcolm?

22 MALCOLM: [--- Redacted for personal privacy ---]

1 MR. O'MALLEY: Oh boy.

2 MALCOLM: [--- Redacted for personal privacy

3

4 ---]

5 MR. O'MALLEY: So this is obviously the fun part,
6 so I'm going to go mediate between my 7-year-old and my
7 10-year-old. Hopefully it's not as bad as the comments
8 that you all get in the written document. Thank you
9 again.

10 MS. THOMPSON: Thank you for your comment. This
11 concludes our final Day 1 speaker block. We will now
12 call on the names of those who were not present when
13 initially called to testify. If you have joined,
14 please indicate your presence by pressing the raise
15 hand button at the bottom of your screen. If you have
16 called in, please dial star-9 to raise your hand.

17 The first speaker is Jennifer Cantley. Jennifer,
18 again if you have joined, we would ask that you raise
19 your hand at this time by pressing the raise hand
20 button, by dialing star-9 on your phone.

21 (No response.)

22 MS. THOMPSON: The next speaker is Brittany Keyes.

1 Brittany, if you have joined, please indicate your
2 presence by pressing the raise hand button at the
3 bottom of your screen or by dialing star-9 on your
4 phone.

5 (No response.)

6 MS. THOMPSON: The final speaker is Carol Devine.

7 Carol, again, if you have joined, please indicate your
8 presence by pressing star-9 on your phone if you have
9 called in or by pressing the raised hand button at the
10 bottom of your screen.

11 (No response.)

12 MS. THOMPSON: We are now at the end of our
13 evening session. EPA, are you ready to adjourn this
14 session of the virtual hearing?

15 MR. CHARMLEY: Yes, we're ready to finish for this
16 evening. So thanks, everyone, for their participation
17 today, and we're going to resume for our second day
18 tomorrow, May 3rd, Wednesday, at 10:00 a.m. So thank
19 you, everyone.

20 (Whereupon, at 7:56 p.m., the meeting was
21 recessed, to reconvene at 10:00 a.m., Wednesday, May 3,
22 2023.)

WORD INDEX

< \$ >

\$1.2 331:19
\$15,000 82:6 84:4
\$180 15:19 190:13
\$26 348:14
\$29 16:5
\$300,000 288:20
\$32 177:22
\$320 15:19
\$4,000 83:21
\$5 351:3
\$50 145:16 178:2
\$600 82:5
\$7.4 37:22
\$700 56:19
\$735 25:9 128:16 275:8
\$87 16:3

< 1 >

1 1:10 3:2 4:2 74:22
 91:7 100:21 117:12, 22
 138:9 160:1 181:7, 10
 184:14 225:4 373:17
 386:11
1,000 105:5
1,400 256:11
1,500 298:13
1.2 131:18
1.3 298:20
1.5 45:14 95:4 141:2
 171:18 198:14 245:12
1.5-degree 305:4
1.6 220:16
1.7 138:12
1.75 275:10
1.8 15:21 190:14
1:15 135:9, 10, 14
10 40:9 64:18 65:8
 88:21 93:9 96:2 113:14
 117:15 129:22 139:10
 151:16 176:8 225:7
 230:15 239:9 245:4
 248:3 249:8 257:1
 273:9 313:21 333:21
 337:7
10,000 96:16 225:4
 257:16 298:19
10:00 1:18 21:11
 387:18, 21
100 55:8 168:17 180:14
 182:6 244:14 254:8
 262:13 278:1 324:5
 365:6 378:12
1000-percent 308:4
100-percent 37:15, 17
 239:2 334:13
10-percent 210:8
10th 27:6

10-year-old 386:7
11 89:7 102:10
11:59 19:10
110,000 25:4 131:17
115 51:8
1177 8:14, 15 263:11
 266:14
119 163:16
119.6 350:5
12 303:1 338:11 376:15
12:45 21:4
120 99:17
126,000 108:17
12th 13:20
13 263:20
135 361:4 363:10
137,000 37:20
14 245:2 373:8
14,000 241:19
14001 287:14
15 52:5 138:9 145:8
 187:3 287:11 313:8
 350:20
15,000 294:14
150 89:6 336:19
150,000 86:3 385:9
152,000 64:22
15-minute 21:5
15th 138:18
16 18:1
16-month-old 227:22
16th 19:10 204:12
17.6 350:7
175 96:12
18 165:9
18-wheeler 359:11
18-wheelers 107:18
 359:22
1950s 123:18
1953 146:17
1955 333:10
1963 333:11
1967 333:11 380:1
1970 333:12
1970s 249:14 307:19
1988 217:16
1991 312:10
1997 280:2
1998 17:9 80:8
1-and-a-half 106:18
1's 257:5

< 2 >

2 1:10, 19 4:9 5:2
 14:21 44:7 45:14 51:19
 56:6 111:8 120:5 138:4
 177:7 202:2, 4 208:13
 210:4 219:18 308:4
 316:8 319:16 320:2, 4
 361:19 373:17 382:22
2.2 144:16
2.3 193:8
2.4 217:21
2.5 127:2, 7 128:5
 165:3, 9 224:21 269:16
20 74:9 115:1 181:1
 189:7 193:4 285:1
 298:13 310:21
20,000 195:12
200 58:15 73:2 93:4
 182:8 336:22
2000 307:18
2001 146:1
2002 307:22
2005 313:6
2006 189:3
2007's 280:17
2008 322:13
2009 280:18
2010 302:10
2011 51:15
2013 315:6
2014 51:18
2015 181:6 257:3
2016 51:18
2018 86:10 306:20
 307:7
2019 244:22 245:2
 249:9
2020 105:9 143:16
 254:5 274:17 322:16
 350:20 361:21
2021 51:20 52:5 117:15
 351:2 383:15
2022 87:21 205:5
 232:20 245:2 374:9
2022-0985 20:2
2023 1:19 18:1, 3, 15
 19:10 21:17 24:2 26:9
 30:21 55:5 64:19 65:7
 89:8, 12 99:19 120:19
 128:3 131:21 138:21
 144:18 151:5 214:6
 227:17 257:5 333:15
 350:3 387:22
2025 187:3
2027 13:22 14:15 15:22
 44:7 56:13 61:21 87:4
 107:4 124:10 205:5
 209:17, 21 210:7 219:18
 295:22 316:4, 15 319:21
 346:6 363:18
2028 315:20
2030 141:10 158:14
 171:17 244:16 245:9
 275:16 301:2 317:4
 348:14 351:1 370:21
2032 61:21 62:6 180:18
 208:20 209:11 210:7, 8
 364:2
2034 62:6

2035 114:16 116:1
 166:6 168:18 174:17
 175:3 180:15 238:17
 254:2 262:14 269:7, 12
 270:7 278:2 283:3
 286:22 324:6 334:14
 365:7, 13 378:13
2036 177:5 254:9
2037 33:5
2040 62:7 202:5, 6, 8
 244:14 255:2
2045 34:15 223:2 254:1,
 3
2050 25:8 128:17
 145:17 177:22 186:21
 187:1 275:7 301:2
 302:15 315:9
2055 15:22 190:15
20-percent 333:2
20th 232:20
21 108:7 298:18
210,000 193:11
22 40:18 316:15 377:18
22,000 162:7
228 96:13
23 33:12 37:15 56:8
23-percent 316:15
24 202:6
24,490 336:21
25 95:19 98:18 128:4
 149:19 194:4 202:7
 209:10 286:13 302:10
 304:22 323:4 373:8
25,000 348:3
250 230:13
251 245:6
25A 192:21
26 113:13 147:13 170:4
 207:22
27 64:3 67:12 98:15
 107:13 113:11 196:16
 200:8 274:17
27th 18:15 21:17
28 230:14 239:13
29 158:13 275:16
 370:20
294 344:3
294-7849 23:1, 3 39:11,
 14 54:5, 8 69:13, 16
 79:17, 20 94:16, 19
 110:10, 13 136:22 137:2
 153:5, 8 167:4, 7 179:16,
 19 198:3, 6 211:8, 11
 224:5, 8 238:1, 4 252:10,
 12 266:5, 8 278:19, 22
 293:18, 21 306:10, 13
 321:14, 17 344:6 358:12,
 15 372:20 373:1
2nd 306:20
2-year 316:10

2-year-old 198:20

< 3 >

3 1:8 5:18 6:2 12:5
14:2, 11, 16, 20 18:13
20:14, 19 23:7 30:17
39:2 48:1 50:8 51:20
52:16 53:18 58:13 60:7
61:5 62:21 63:15 69:4
70:18 74:18 79:8 80:7
83:20 87:6, 10 93:12
94:7 99:5 110:1 113:5,
18, 22 117:12 119:21
132:11 133:12 135:16
137:6 146:20 148:9
149:20 158:14 159:10
160:1 166:19 176:1
178:19 179:9 184:14
189:19 196:9 197:18
202:17, 22 203:1 204:21
206:11 207:15 208:17
209:7 211:1 218:13
219:7 223:20 237:16
240:8 251:4 252:16
254:14, 18, 22 255:2, 8,
13, 21 265:20 268:20
269:21 271:4 272:5
273:17 278:12 283:21
293:11 294:22 296:16
299:1 306:3 321:7
342:11 344:10 346:21
348:22 349:1 358:5
360:2 363:18, 20 364:22
366:14 372:13 373:21
374:12 376:13 387:21
3,000 34:12 257:17
3,500 156:20 183:10
3.7 24:9 184:15
3:45 21:5
30 20:3 25:4 33:5, 6
64:17 127:15 199:1
225:9 245:3 257:3
300:16 303:5 308:20
313:19 331:11
30,000 371:8
300 60:12 93:2 273:6
360:15
300,000 59:8 145:10
307(d) 19:17
30-minute 21:4
30-percent 350:22
31,000 81:5
32 83:6
33,000 81:7
34,000 335:18
35 30:5 83:4 160:16
244:15
36 99:16 350:4
38 302:5
38.4 73:6

39 277:7**3-minute** 300:15 308:19**3rd** 387:18**3-year-old** 55:10

< 4 >

4 7:2 8:2 33:14 89:6
117:15 119:21, 22
142:12 174:5 176:15, 19
181:7 194:3 202:2
206:11 210:6 222:15
241:15 249:9, 17 256:13
257:2, 5, 13 286:11
287:19 304:20 323:3
374:12
4,581 145:19
4.3 16:9
4:00 250:20 251:2
40 117:22 162:6 163:19
173:20 181:1 231:16
260:5 275:16 288:13
324:18 361:4 362:3
364:1 370:20
400 34:7
400-mile 302:21
41,000 101:2
42 280:19
43 298:20
432,000 145:21
436,000 37:19
4365 280:19
44 277:7
44-percent 317:3
45 73:3 93:1 230:13
239:10 273:5 360:14
45-percent 38:1
46 210:10
47 288:8 302:12
48 49:11
4-ton 81:5

< 5 >
5 8:8 9:1 33:15 35:6
56:6 86:17 89:6, 9 96:3
120:1, 5, 13 148:8
273:16 287:11 297:3
301:9 362:13
5,000 257:17
50 48:2 83:1 141:9
170:2 188:14 231:17
245:8 256:14 282:11
308:13 310:22 313:22
333:20 364:16 378:13
500 96:15, 16
500,000 175:21
506 8:11 256:5, 11
50-day 284:17
50-percent 301:1
52 170:2
55 143:17

56 210:10 302:4**57** 209:10 239:10**59** 143:16

< 6 >

6 9:12 10:2 56:17 89:9
143:15 176:8 380:9
6,000 257:16
6.5 370:9
6:00 81:19
6:30 21:8
60 52:8 142:2 217:16
284:18 363:22
600 263:12 298:19
352:18 373:10
600,000 385:8
65 108:18 119:22
650 374:17
66,000 275:9
66,800 25:10 128:17
67 315:8
6-minute 120:13
6th 102:4 275:2

< 7 >
7 10:12 11:2 374:10
378:15 380:9
7.65 217:8
7/8 182:8
7:00 21:9 342:3, 4, 9
7:56 387:20
70 36:21 217:19 259:5
72 24:16 56:2 72:22
75:6 93:3 130:12 157:9
216:5 239:14 371:14
77 89:8
7849 344:4
7-year-old 116:20 360:4
386:6

< 8 >
8 56:7 62:5 65:7 150:3
202:8 241:16 245:3
378:15 380:8
8:00 81:19
80 80:21 156:21 288:13
80,000 382:11
80s 40:12 159:14
81 298:21
84 150:2
85,000 348:5
850 373:9
86,000 108:18
88,000 145:20
885 37:21

< 9 >
9 70:1
9,000 108:18
9,400 37:20

90 34:13 123:19 221:22

256:14 302:11

90th 173:2**90-year** 217:6

919 23:1, 3 39:11, 14
54:5, 8 69:13, 16 79:17,
20 94:16, 19 110:10, 13
136:22 137:2 153:5, 8
167:4, 7 179:16, 19
198:3, 6 211:8, 11 224:5,
8 238:1, 4 252:10, 12
266:5, 8 278:19, 22
293:18, 21 306:10, 13
321:14, 17 344:3, 6
358:12, 15 372:20 373:1
94 292:3
95 138:12
96 86:5
97th 138:16

< A >

A.D 307:18
a.m 1:18 21:11 81:20
387:18, 21
AAFA 146:16, 17, 19
147:3
AAFA's 149:8
AB 134:3
abatement 325:16
abdication 308:11
ability 80:6 139:16, 18
170:8 204:13 230:9
247:12 281:13 373:19
380:20
able 22:17 38:19 49:6
53:13 68:21 79:3 81:13
84:6 94:2 109:10, 18
124:3 125:21 136:16
152:20 156:5 166:15
170:5 179:5 197:15
204:11 210:20 223:17
232:5 237:12 244:7
246:11 247:13 248:15
252:4 265:16 278:8
293:7 305:21 313:13, 18
321:3 328:17 332:15, 17
343:20 345:5 348:12
358:1 372:9
absences 337:14 340:18
absent 87:12
absenteeism 147:19
absolutely 209:15 299:8
357:15
absorbing 357:3
ABT 2:12 12:6 13:18
20:17 22:6 135:13
251:1 342:8
abundant 274:11
abuses 327:4
academic 67:13 139:16

<p>accelerate 108:22 132:12, 17 134:16 144:5 164:6 177:8 178:5, 17 190:6 209:6 239:13 244:21 268:22 298:5 305:13 318:20 349:6 Accelerated 126:14 133:16 292:16 accelerates 176:2 178:21 255:9 accelerating 64:13 96:10 111:4 112:5 177:16 253:14 320:19 accept 22:16 38:19 53:13 68:21 77:21 79:2 94:2 109:18 136:15 152:20 166:15 179:5 197:15 210:20 223:17 237:12 252:3 265:16 278:8 293:7 301:13 305:21 321:3 343:19 358:1 372:9 access 135:1 149:2 363:1 377:21 378:9 accessible 127:19 376:10 accessory 316:11 accommodate 12:8 135:18 251:6 342:22 accommodating 356:20 accommodations 21:3 accompanying 295:6 accomplish 44:18 161:1 166:1 168:14 171:8 accord 357:17 account 86:5 115:1 123:2 142:1 162:22 167:19 174:5 205:2 209:10 219:8 221:21 286:10 304:20 323:3 327:3 333:21 362:3 370:17 375:7 accounting 222:14 accounts 178:20 accuracy 21:13, 14 accurately 23:15 39:5 53:21 69:7 79:10 94:10 110:4 137:15 166:21 179:11 197:21 211:4 224:1 237:18 253:3 265:22 278:14 293:13 306:5 321:9 344:19 358:7 372:15 ACEEE 7:8 207:19 208:8 210:11 ACF 177:7, 21 achievable 86:16 171:7 219:17 289:16 296:11 370:15, 16, 21 achieve 33:5 42:22 154:13 170:7, 15, 21 171:16 174:16 187:1</p>	<p>188:12 261:8 270:1 287:13 288:13 315:16, 19 320:1 324:5 362:6 373:12, 18, 19 achieved 287:12 achieves 122:21 achieving 208:2 244:15 363:21 364:17 371:6 acknowledge 318:1 acknowledgement 36:6 across-the 38:8 ACT 4:4 15:2, 12 17:12 19:17 31:4 32:20 45:12, 19 52:4 61:17 63:21 66:18 67:14 71:16 88:17 98:7 101:9, 13 103:18 115:9 118:16 140:7, 15 141:8, 11 157:22 177:7 195:18 201:17 208:15 216:12, 18 223:6 253:20 254:10 265:6 277:17 279:16, 19 280:14 281:14 283:11 284:10 288:10 290:14 292:17, 18, 22 318:12 333:10, 12 353:10 354:5 363:15 368:21 369:6, 12 380:9 381:12 acting 167:14 172:12 192:10 220:18 271:5 281:19 379:17 Action 6:12, 13 8:20 15:2 17:5 20:7 33:4 34:4 45:18 59:22 82:13 91:8 133:13 162:4 164:17, 19 167:13 169:17 178:10 182:12 189:9, 12 224:16 235:9 245:22 247:3 257:22 274:6 276:8 317:1 318:19 319:8 335:20 366:18, 19 370:3 377:5 383:17 actions 31:9 61:11 87:21 126:20 141:14 176:5 178:9 296:1 332:8, 10 active 40:12 172:16 actively 186:6 244:21 activists 113:6 333:9 382:11 activities 86:8 120:10 325:4 359:21 activity 295:15 327:10 actors 155:16 Act's 221:18 actual 123:10 348:13 acute 376:21 acutely 271:18 add 111:15 260:7 355:20 377:1</p>	<p>added 130:10 205:16 206:6, 12 213:17 adding 365:22 addition 13:14 19:8, 19 45:22 46:18 96:6 99:10 134:6 144:4 150:10 163:14 196:7 205:14 232:9 241:20 290:17 363:3 additional 17:17, 21 19:2 20:6 23:9 39:7 47:22 54:1 69:9 79:12 94:12 110:6 123:7 124:15 127:8 134:21 137:8 208:21 252:18 257:6, 17 291:22 300:17 303:10 308:21 319:20 344:12 362:21 365:22 366:4 Additionally 27:21 115:7 127:5 147:20 209:7 242:1 address 24:14 26:1 31:22 43:21 46:17 54:19 57:2 60:21 63:2 114:13 115:21 125:10 129:13 130:9 142:21 147:9 161:5 162:10 165:17 167:21 172:20 174:13 186:15 189:4 190:16 224:18 226:1 229:1 240:2, 6 257:22 270:8, 9 272:7 273:18 275:22 295:21 296:2 301:4 314:6 318:6 324:2 347:17 360:14 361:7 367:11 376:18 384:2 addressed 259:18 addresses 247:5 272:1 addressing 17:6 25:22 27:14 46:8 53:4 74:13, 15 87:18 105:14 116:3 129:20 143:9 152:7 162:15 197:5 360:18 adequate 171:22 adequately 57:2 314:7 Adirondacks 328:12 adjacent 225:20 350:19 adjourn 387:13 adjust 43:15 61:21 adjustments 21:2 administration 44:9, 10, 12 52:6 73:15 81:9 134:15 140:9 145:22 164:18 167:14 172:12 174:19 187:6 192:10 220:18 224:16 240:3 254:20 271:5 273:16 284:1 327:13 351:8</p>	<p>356:17 366:11 367:8 379:17 administration's 64:6 158:12 240:15 247:1 275:13 370:19 Administrator 2:9 13:9 admire 349:5 admissions 16:7 65:3 147:18 admit 144:7 admitting 308:10 adopt 28:7 43:12 61:4 100:9 105:15 126:11 143:21 171:21 177:1 178:19 188:16 203:17 216:13 218:15 234:12 240:13 258:10 280:7 290:14 352:19 355:1 382:1 383:14 adopted 17:9 61:18 115:3 177:3 182:5 187:12 188:3, 9 232:20 362:16 384:7 385:14 adopters 218:20 220:1 adopting 146:2 178:14 181:20 204:19 277:18 282:3 351:9 adoption 51:15, 18 115:6 125:11 132:12 133:10, 16 134:8 157:22 162:18 205:9 206:7 208:13, 18, 21 209:6 210:1, 3 219:9 245:19 316:18 319:1 375:5 adoptions 126:18 adult 328:17 adulthood 97:7 adults 71:8 109:8 193:11 216:2 348:5 359:5 385:8 advance 29:6 51:21 178:12 216:17 383:14 Advanced 25:17 31:1 61:13 83:12 85:2 90:16 93:17 111:21 115:4 119:4 161:13 177:2, 4 182:5 197:9 201:2 203:19 208:14, 21 209:1 214:6 216:14 229:9 234:13 237:6 254:4, 6, 12 275:18 299:6 311:9 318:8 325:8, 13 338:1 339:12 341:2 351:19 359:2 361:10, 20 362:16 363:3, 21 368:22 383:14, 16 384:8 advancements 56:8 314:13 advances 15:8 160:19 advancing 16:20 50:16 51:12</p>
--	--	---	--

advantage 208:7 209:18 216:9 275:21 348:11	352:11 355:14 358:18 361:13 364:12 367:17 369:19 373:3 375:18 379:11 382:6	ahead 165:18 180:1 335:7	240:12 247:20 248:14 253:8 254:10 264:8, 14 265:10 267:22 268:2, 3 269:4 270:4 274:11, 16 275:1, 5 276:17 277:2 279:16, 19 280:14 281:14 290:1, 14 295:11, 17, 19 296:5 299:15, 22 300:9 301:18 303:15 304:11 307:13 310:5 313:2, 4, 11, 18, 19 314:1, 7 319:13 323:12 325:3 328:9, 10, 13, 17 329:4 331:4, 6, 12, 15 332:9, 10, 13, 16 333:5, 8, 10, 12, 13, 16, 19, 21 334:2 335:18, 20 336:5, 7, 9, 13 337:21 338:13, 15, 21, 22 340:2, 10, 14 341:1 345:3, 22 346:18 349:15, 21 350:4, 8 351:20, 22 353:3, 10 354:5, 10 355:20 358:21 359:9 360:9, 12 361:6, 16 362:10 363:6 364:7 368:22 376:6, 16, 18 378:3, 9, 19 383:2
advantages 270:17 291:19 292:5	affirm 270:13	aiding 318:5	ailments 139:14
adverse 102:14 127:11 228:4 271:20 299:16	affluent 56:6	aimed 253:14	aims 82:13
adversely 26:4	afford 44:1 120:18	Air 2:4, 7, 10 3:11, 13, 16, 18, 19 4:16, 17, 18, 19, 21, 22 5:4, 7, 8, 9, 21 7:3, 4, 5, 9, 10, 16, 20 8:9 10:10, 13, 15, 16, 19 13:4, 10, 12 14:6 15:2, 13 16:11 17:12 19:17 24:8, 12, 22 25:6 27:5, 10 28:17 30:8 31:8, 11 32:8, 10, 13, 20, 22 33:3 35:10 45:3, 5, 8 47:2, 10 50:16 51:3, 5, 7, 10, 12 55:5 56:3 57:10 58:4, 6, 19 59:5, 15, 17 60:21 63:10, 13, 16 64:16, 20 65:7, 22 66:8, 20 67:19, 20, 21 68:1, 3, 6, 13 70:21 71:2, 4, 17 72:7 73:12, 19, 22 75:1, 4 76:9 88:9, 12 89:13, 21 90:3, 8, 13 91:4, 6, 8, 14, 17 95:4, 6, 9, 13 97:20, 22 98:2 99:14, 15, 18, 20 100:6, 20, 21 101:1, 3 102:7 103:3, 12, 14 104:8 106:4, 6, 16, 17, 22 107:14 108:16, 19, 20 109:9, 10 113:7 116:3, 19 118:10 119:13, 14, 18, 19 120:1, 6, 11, 19, 20, 21 121:10, 13, 19 125:3 126:8 127:2, 4, 6 128:1, 3, 9, 11, 12, 21 130:19 138:6, 20 139:2 140:3 141:2, 4 142:20 143:6, 11 144:19 145:3, 11, 15 146:1 147:12 150:9, 12 151:5 152:6, 9 154:10 158:10 159:1, 21 160:1, 2, 4 163:6, 15, 18 165:14 168:2, 5 172:19 176:8, 12, 13 177:3, 9, 11 178:7, 21 180:20 182:14 183:13 184:1, 4, 12, 15, 17 185:7, 12 190:19 192:14, 16, 19, 22 193:1, 7 195:10 198:13, 15 200:17, 22 201:10 203:5 212:3, 22 213:17 214:1, 4, 12, 18 215:14, 21 216:1 221:2, 8, 10, 13, 18 223:8 225:3, 6 227:14 229:7 232:21 234:3, 8 235:13, 16, 20 236:22 237:4 238:12 239:8, 17	airports 127:15, 20 AI 307:17 ALA 143:7 144:19 193:7 alarming 58:3 alarmingly 282:18 ALA's 145:15 Alaska 302:18 Albuquerque 195:19 196:20 Ale 18:9, 10 ALEJANDRA 2:9 13:8 alert 89:21 alerts 104:18 Alex 124:21 ALEXANDER 5:12 124:18 ALI 7:4 198:7, 11 A-I-I 198:12 align 16:14 190:3 208:15 aligned 60:17 61:17 aligns 191:2 alike 376:22 Allegheny 145:9 all-electric 166:5, 6 175:3 299:20 allergens 59:3 152:7 allergic 160:9 allergies 59:2 146:19 148:20 360:3 Allergy 6:4 59:2 146:15 148:20 152:1
advisor 153:7 189:2	affordability 50:2 260:18 261:2	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	airport 196:9 264:4
advisories 139:3	affordable 243:10 259:13 260:22 261:6	after-treatment 50:7	airports 127:15, 20
Advisory 114:12 280:21	AFPM 122:6 124:14	age 108:18	AI 307:17
Advocacy 32:8 63:15 143:5 146:15, 17 191:7 192:4 268:14 297:18	afraid 117:13	Agencies 3:14 51:5, 8, 9, 11 60:12 121:1 243:12 308:3	ALA 143:7 144:19 193:7
advocate 113:3 219:16 238:10 276:9 298:4 380:2	African 108:4, 6, 11	AGENCY 1:4 2:2 13:4 17:8 30:20 76:7 87:1 107:1 114:5 115:20 124:9 125:3, 14 129:16 204:16 219:7, 21 273:1 283:11 319:14 324:1 331:21 351:18	alarming 58:3
advocates 75:22 231:2	African-American 40:10, 16 106:21 322:14 323:22	Agency's 12:3 14:5 51:18 86:14 114:2, 8, 12 115:8 207:15 246:5	alarmingly 282:18
advocating 54:16 198:14 279:9	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	aggravate 149:4	ALA's 145:15
Aero 367:13	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	aggravates 333:16	Alaska 302:18
aerodynamics 316:12	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	aggravation 130:16	Albuquerque 195:19 196:20
affairs 35:17 125:1 204:7 285:19	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	aggregate 298:3	Ale 18:9, 10
affect 118:11, 13 216:3 229:4 281:18 310:17 332:18 362:10	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	aggressive 126:18 182:3 253:12 362:6 375:9	ALEJANDRA 2:9 13:8
affiliates 162:6 370:8	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	aging 33:9	alert 89:21
affiliation 23:17 26:14 28:13 32:4 35:14 39:17 41:18 44:22 47:15 50:21 54:11 57:7 60:4 63:7 66:5 70:13 71:13 74:5 78:1 80:1 82:17 85:18 88:7 90:21 94:22 97:17 100:16 103:8 106:12 110:15 113:1 119:9 122:1 124:20 126:5 129:2 132:2 137:17 140:19 143:3 146:10 149:14 153:10 156:9 159:5 161:20 164:11 167:10 169:12 172:4 175:16 180:4 183:3 186:1 188:21 191:22 195:7 198:8 201:6 204:3 207:9 211:22 214:10 216:22 220:12 224:11 226:11 227:10 230:8 234:1 238:6 240:19 241:12 253:6 256:2 258:14 261:12 263:8 266:10 268:10 270:21 274:1 276:4 279:2 282:6 285:9 287:3 289:20 294:10 297:11 301:12 303:22 306:15 309:10 312:4 314:17 317:16 322:6 324:13 328:6 330:7 332:5 335:11 344:22 346:11 349:10	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	agnostic 288:17 289:3	alerts 104:18
affiliates 162:6 370:8	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	agnosticism 320:5	Alex 124:21
affiliation 23:17 26:14 28:13 32:4 35:14 39:17 41:18 44:22 47:15 50:21 54:11 57:7 60:4 63:7 66:5 70:13 71:13 74:5 78:1 80:1 82:17 85:18 88:7 90:21 94:22 97:17 100:16 103:8 106:12 110:15 113:1 119:9 122:1 124:20 126:5 129:2 132:2 137:17 140:19 143:3 146:10 149:14 153:10 156:9 159:5 161:20 164:11 167:10 169:12 172:4 175:16 180:4 183:3 186:1 188:21 191:22 195:7 198:8 201:6 204:3 207:9 211:22 214:10 216:22 220:12 224:11 226:11 227:10 230:8 234:1 238:6 240:19 241:12 253:6 256:2 258:14 261:12 263:8 266:10 268:10 270:21 274:1 276:4 279:2 282:6 285:9 287:3 289:20 294:10 297:11 301:12 303:22 306:15 309:10 312:4 314:17 317:16 322:6 324:13 328:6 330:7 332:5 335:11 344:22 346:11 349:10	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	ago 83:6 86:20 93:9 160:17 177:1 248:15 249:9 274:22 285:1 309:22 382:22	ALEXANDER 5:12 124:18
aggravate 149:4	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	agree 32:19 245:11 257:20	ALI 7:4 198:7, 11
aggravates 333:16	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	agreed 308:7	A-I-I 198:12
aggravation 130:16	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	Agreement 114:4 170:1 244:17 364:5	align 16:14 190:3 208:15
aggravate 149:4	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	agrees 135:10	aligned 60:17 61:17
aggravates 333:16	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15	agriculture 176:10	aligns 191:2
aggravation 130:16	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		alike 376:22
aggregate 298:3	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		Allegheny 145:9
aggressive 126:18 182:3 253:12 362:6 375:9	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		all-electric 166:5, 6 175:3 299:20
aging 33:9	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		allergens 59:3 152:7
agnostic 288:17 289:3	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		allergic 160:9
agnosticism 320:5	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		allergies 59:2 146:19 148:20 360:3
ago 83:6 86:20 93:9 160:17 177:1 248:15 249:9 274:22 285:1 309:22 382:22	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		Allergy 6:4 59:2 146:15 148:20 152:1
agree 32:19 245:11 257:20	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		
agreed 308:7	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		
Agreement 114:4 170:1 244:17 364:5	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		
agrees 135:10	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		
agriculture 176:10	afternoon 21:5 113:2 122:3 124:21 126:6 135:10 149:16 159:7 175:17 204:5 212:1 217:2 253:7 263:10 266:12 270:22 282:8 285:11 287:5 297:16 304:2 324:15 330:8 332:6 361:15		

160:3 203:6 333:4 alleviates 247:7 292:11 Alliance 3:7 4:5 5:14, 19 10:6 35:18 74:10 129:5, 8 137:21 285:16 330:11 allocated 363:14 allow 17:1 22:18 38:21 43:1 53:15 69:1 79:4 94:4 109:12, 20 136:17 152:21 166:17 171:18 179:7 197:16 210:21 223:18 237:14 244:6 252:5 265:3, 18 278:10 293:9 306:1 315:14 321:5 343:21 347:7 358:3 366:4 372:11 allowed 18:17 247:11 326:20 allowing 20:20 92:9 217:3 247:17 256:7 263:21 266:16 293:1 309:12 329:16 372:3 373:6 375:14 allows 189:21 345:5 alluding 231:5 ally 384:20 ALMETA 5:4 106:11, 14, 15 A-L-M-E-T-A 106:15 ALONDRA 10:13 69:17 77:14 78:4, 8 329:19 335:2, 3 341:17 344:20 345:1 alongside 27:12 216:7 223:4 292:21 alter 40:14 281:20 366:12 altered 40:9 alternate 206:10 alternative 30:20 81:9 114:8 158:21 166:3 176:4 223:1 292:12 318:18, 19, 20 326:3 331:21 375:4, 10 378:21 alternatives 130:22 158:2 162:21 168:16 299:5 352:20 355:2 357:5 384:5 Amazon 371:7 ambient 127:7 ambiguous 365:19 ambition 187:4 ambitious 14:2 45:18 208:22 216:13 269:8 334:13 362:5 ambulances 300:1, 3 amendment 32:19 America 3:7 6:5 7:17 8:5 26:22 35:18 91:8 144:20 146:16 216:6	241:19 244:12 287:13 351:4 American 3:3, 4, 5, 6 5:10, 13, 22 7:6, 7, 11 9:8 14:10 23:20, 21 24:21 25:14, 20 26:19 27:4 28:18 32:8 35:3 55:4 58:5 64:20 73:3 74:22 86:8 89:12 99:19 102:6 108:5, 20 122:5 126:8 128:2, 10 131:13 133:3 138:20 140:6 143:6 146:5 151:4 163:17 184:13 190:2, 9 204:6 207:18 217:5 245:5 258:4, 6, 10, 19, 20 260:3 274:22 275:6 279:6, 17, 19 281:21 282:1 288:19 289:1 294:12, 13, 19 296:13 303:13 326:20 331:14 350:3 371:14 376:17 382:22 Americans 65:14 92:12 99:17 108:7, 12 143:21 146:18 147:14 160:1 184:14 212:13 239:15 306:19 350:5, 11 352:13 361:4 364:7 376:15 America's 16:9 143:11 183:22 amount 102:19 122:12 150:15 163:2 198:22 222:5 228:18 292:1 332:15, 18 374:21 384:17 amounts 65:15 108:13 192:22 amplifies 130:2 amplify 183:11 Amtrak 40:21 ANA 7:3 195:5, 6, 9 A-N-A 195:9 analyses 111:16 157:17 177:13 analysis 24:16 72:22 76:12 131:13 170:6, 12 201:22 208:20 253:16 318:22 319:2, 6, 14 327:4 348:13 378:16 analyst 116:19 175:19 analyzed 255:15 ANASTASIA 4:4 71:12, 15 ancillary 156:2 and/or 311:11 ANDERSON 4:22 103:7, 10, 11 ANDREA 7:13 224:9, 13 ANDREW 9:7 10:9 287:2, 5 339:18, 19, 22	Angeles 40:7, 11 173:12 312:10 angry 117:13 264:13 ANHE 74:11 animals 308:17 ANNA 8:6 226:10, 13, 15, 20 240:18, 22 241:3, 7 247:11, 16 announced 13:20 115:16 announcing 19:13 20:8 annual 24:11 27:5, 6 144:4 217:19 275:1 annually 38:1 222:1 298:21 anode 123:20 answer 112:20 124:16 354:10 anthropogenic 126:14 anticipated 291:6 353:14 anticipates 202:1 ANTONIA 9:9 293:22 297:4, 10, 13, 17 anxiety 90:2, 3 118:7 228:3, 19 360:5 anxious 117:14 anymore 342:15 anytime 81:18 231:16 anyways 121:12 apartment 165:8 192:18 apartments 193:17 Apologies 241:7 appearance 3:2 4:2, 9 5:2, 18 6:2 7:2 8:2, 8 9:1, 12 10:2, 12 11:2 appears 240:22 applaud 41:13 107:1 351:7 applauded 29:20 application 36:11 applications 16:22 48:20 49:5 62:3 111:5 253:18 applies 14:16 apply 20:10, 12 applying 15:2 appreciate 20:19 30:14, 19 32:9, 16 34:17 36:6 53:1 166:7 204:9 216:19 271:1 317:22 331:20 332:10 349:2 364:19 appreciates 112:13 appreciation 57:13 appreciative 349:2 approach 34:21 43:10, 18, 20 122:9 124:11 187:9, 10 204:16 269:18 279:10 280:7 approached 188:8 approaching 186:10 249:10	appropriate 17:2, 10 318:17 appropriately 115:1, 8 approval 56:18 approved 254:5, 6 approximately 15:21 16:9 96:12 117:12 143:15 196:8 210:7 292:1 313:19 373:9 April 13:20 18:14 21:17 165:11 arbitrarily 124:13 area 56:7 59:4 89:4 101:20 104:3, 10, 19 127:15, 21 128:3 159:20 173:2 195:21 199:9 228:14 264:11 309:17, 18 312:9 337:12 340:15 345:12 areas 27:9 29:15 37:10 72:21 75:9 83:15, 16 102:19 117:5 127:20 142:11 157:2 163:17 181:7 213:7 236:12 254:16 315:1 329:10 331:2 350:19 area's 27:10 argue 307:10 argument 354:18 arguments 18:17 Arianna 307:22 Arizona 141:2 214:12, 18 345:11 346:19, 20 Arlington 349:15 Armourdale 377:14 aromas 310:4 arrive 315:22 arrived 45:22 Art 66:10, 11 248:1 artery 138:12 248:5 249:3 article 277:4 articulated 281:17 Asian-American 272:8 aside 233:1 asked 199:19 219:11 326:10 asking 107:9 162:9 231:3 asks 223:9 aspect 84:12 262:21 aspects 383:5 A-S-S-A-N-D-R-A 285:14 assembling 254:15 Assembly 187:12 assess 43:13 Assessment 2:3 13:11 122:12, 20 123:1 158:17 383:20 assessments 188:7
--	---	---	--

<p>assign 112:4 assist 125:22 assistance 155:6 189:14 245:20 Assistant 2:9 13:9 28:17 assisted 13:18 associate 297:17 associated 46:12 60:14 114:21 123:3 124:14 150:22 151:1 300:9, 19 303:10 327:4 333:2 ASSOCIATES 2:12 6:6 12:6 13:18 20:17 22:6 135:13 251:1 342:8 Association 3:3, 4, 5, 6, 10, 13 4:11, 13, 15 5:22 7:6, 12 11:7 23:21 24:21 25:14 26:19 27:4 28:18 29:11, 20 32:8 35:4 41:22 48:3 51:4, 7 52:6 55:4 60:17 73:3 75:1 80:5 82:22 85:21 102:6 108:21 110:19 125:1 126:9 131:14 143:7 146:6 184:13 204:7 205:5 217:7 219:20 220:16 258:22 259:1, 2, 3 274:22 275:6 347:22 348:1 371:14 376:17 379:15, 16, 21 380:4 383:1 Associations 7:11 217:6 258:19, 20 Association's 25:21 58:6 64:20 89:12 99:20 128:2, 10 138:20 151:5 331:15 350:3 assume 315:3 316:3, 5 346:16 assumed 61:9 319:13 assumes 209:15 Assuming 315:17 316:18 assumptions 115:15 125:9 205:8 283:5, 8 317:10 375:9 assurances 245:13 assuring 319:17 Asthma 6:4 24:3 28:6 37:19 46:13, 14 56:6, 7 59:9 64:22 65:2 67:8 70:20 71:6 72:14 75:14, 17 102:8, 9, 11, 12 109:8 130:16 139:14 142:5, 6, 10, 11 145:20 146:13, 15, 19 147:14, 16, 17, 19 148:3, 6, 9, 10, 17, 21 150:7, 11, 22 151:2, 22 157:3 159:9, 15 160:3, 5, 13 181:8 193:2, 11 203:7 213:3 215:19</p>	<p>224:22 225:16 228:11 236:2, 7, 10 238:22 272:20 275:4, 10 276:15 282:17 295:13 300:13 307:20 309:21 310:12, 13 311:5, 16 328:10, 12, 18 330:22 331:12 336:14, 16, 17 337:5, 7, 8, 12 338:15, 18 340:11, 16 345:20 347:14 348:5 353:1, 22 354:7, 14, 18 359:4 376:15 381:20, 21 382:14, 16, 19 385:8, 9 asthmatic 160:9 312:16 asthmatics 27:20 348:4 astonishing 236:10 ATA 217:6 218:12 219:16 258:21 ATENAS 11:6 375:17 376:5 ATHENA 7:21 220:3 238:5, 8 athletic 230:18 ATKINSON 8:13 261:11, 14 atmosphere 65:5 100:1 196:19 215:3 257:7 atmospheric 325:1 ATRI 302:13 ATS 296:13 attack 236:7 311:16 354:7 attacks 65:2 67:9 72:14 102:9 145:20 148:17 213:3 215:19 228:4, 11 275:10 328:12, 20 353:22 354:1 attain 31:11 attainment 104:11 221:14 attempt 21:13 87:10 attend 96:20 139:17 328:16 attendee 195:4 attendees 12:9 22:12 69:19 70:5 77:1 116:11 135:20 136:11 169:3 175:7 179:22 206:22 211:14 220:4 227:1 229:14, 22 233:11 251:7, 21 294:1 321:20 327:20 329:21 343:2, 15 352:3 355:5 379:3 attending 18:4 attention 32:9, 14 169:20 268:20 attorney 279:6 attractive 253:21 attributable 181:8 attribute 128:9 Auburn 3:21 70:16</p>	<p>AUDIO 24:6 102:5 120:16 131:10 189:22 190:5 334:19 352:13 authentic 189:10 authority 15:2 26:1 40:14 43:5, 6 326:18 authorized 20:12 auto 356:7 automakers 308:1 automatically 22:13 136:12 251:22 343:16 automobile 157:4 190:7 automotive 381:14 autonomous 68:8 availability 29:4 87:16 216:9 247:7 290:5 315:4, 17 316:3 318:9 available 12:20 19:21 23:13 36:2, 3 48:16 59:16 61:10 81:11 130:6 136:7 137:12 154:6 155:3 160:18 187:6 210:13 232:6, 12 240:10 242:20, 22 246:14 251:17 252:22 267:10 273:12 283:20 337:20 340:22 343:11 344:16 353:13 363:9 365:6 374:11, 19 381:22 Avenue 249:3 average 36:22 65:12 89:9 96:16 108:10, 13 142:12 144:4 210:9 221:22 295:3 374:16 avoid 32:20 34:18 190:14 261:1 300:20 368:9 avoidable 295:13 avoidance 145:19 avoided 25:5, 10 37:22 76:12 128:17 avoiding 276:12 Award 301:19 aware 88:18 222:9 262:2 271:18 319:19 awareness 119:15 189:4 awful 310:4 AZJARGAL 5:8 119:8, 12 < B > B.A 247:22 B.L 4:11 80:3 B100 38:4 babies 29:14 baby 202:13 back 22:5 44:8 89:6 236:6 266:19 307:14 327:8 333:22 334:8 342:14 381:18</p>	<p>background 66:22 165:8 backyard 199:10 bad 150:11 151:15 182:14 328:11 334:6, 7 338:18, 22 382:1 386:7 bad-faith 155:16 baffling 87:16 bags 232:15 Bailey 233:10 250:12 balanced 122:9 279:10 ballistic 280:8 Baltimore 181:5, 7 band 232:15 banks 98:9 Baptist 322:8, 9, 21 barely 199:6 barely-understood 281:6 barred 280:7 barrels 16:9 BARRERA 10:6 211:12 244:2 250:2 330:6, 8, 9 BARRETT 3:6 32:3, 6, 7 barrier 62:10, 11 barriers 32:21 125:10 375:6 base 230:17 Based 49:9 51:13 61:7 89:14 105:2 123:1 204:8 232:7 241:18 246:9 253:10 279:15 280:9 281:1 291:5 317:20 366:3 371:12 baseline 154:7 318:19 basement 193:17 basic 283:5 basically 119:17 120:17 263:17 267:13 357:9 basins 221:2 basis 46:15 85:13 86:9 154:5 189:17 200:3 228:16 batteries 49:18 81:5, 6 82:1 122:13 124:2 135:2 188:1 291:3 315:15 327:6 battery 16:20 48:13 49:16 87:15 112:8 123:5, 13, 19 244:22 245:4 260:4 288:19 290:6 302:5 303:3, 6 374:2, 10 battery-electric 241:22 battery-operated 256:18 battery's 303:5 battling 284:12 Bay 156:17 302:21 353:1 Beach 173:20 212:5, 14 307:3</p>
---	--	--	--

<p>bear 31:20 108:7 148:1 173:6 282:13 286:4 323:19 378:6</p> <p>beat 270:17</p> <p>beautiful 27:2 324:17</p> <p>BECHARD 5:7 116:6, 17, 18</p> <p>Bechard's 201:22</p> <p>BECKETT 3:21 70:4, 14</p> <p>becoming 55:17</p> <p>beeping 359:19</p> <p>began 160:16</p> <p>beginning 245:21 315:20</p> <p>begins 40:2</p> <p>behalf 13:3 35:18 51:4 55:20 63:16 98:2 101:3 103:13 113:5 141:4 156:12 162:5 164:2 175:21 198:15 220:16 227:14 268:14 301:6 317:21 345:2 346:4 352:16, 17 370:7</p> <p>behavior 105:1 308:9</p> <p>behavioral 262:8</p> <p>beholden 124:1</p> <p>beings 324:10</p> <p>belief 280:11</p> <p>believe 34:20 62:21 154:11 186:9 199:4 274:10 276:11 322:20 382:12</p> <p>believes 111:7, 12 112:3 207:19 208:9</p> <p>BENDER 3:5 28:12, 15, 16</p> <p>B-E-N-D-ER 28:16</p> <p>beneficial 353:14, 18</p> <p>benefit 24:4 49:21 130:10 152:14 269:12 329:15 364:7 371:18</p> <p>benefiting 190:20</p> <p>benefits 15:7, 12, 17, 18 16:3, 5 25:1, 9 30:9 34:13, 16 35:20 37:13 38:4, 11 46:18 47:9 54:20 60:15 76:9, 11, 13 99:10 109:1 114:21 128:13, 16 129:17 131:5, 7, 8, 11, 18 145:16 146:5 147:5 149:10 152:11 158:8 164:5 174:18 177:11, 12 190:19 213:2 217:14 275:8, 9 296:13 319:13 324:7 326:6 331:19 334:2 351:9 380:6</p> <p>Berg 326:11</p> <p>Berg's 326:13</p> <p>best 52:4 59:16 111:6 125:20 134:9 161:2</p>	<p>170:11 171:7 283:17 340:21 373:12</p> <p>best-available 317:20</p> <p>best-value 337:20</p> <p>Better 82:1 84:6 87:3 95:12 188:13 242:2 353:8, 12 354:11 359:3, 4 376:5 383:3</p> <p>BEV 290:7, 9 346:6</p> <p>BEVs 111:17 292:22</p> <p>beyond 62:6 75:18 76:10 119:22 124:10 204:12 209:21 295:22 307:5 316:7, 15 318:15 319:16 320:2, 17</p> <p>bicyclers 232:3</p> <p>Biden 64:6 145:22 158:12 216:11 224:16 240:3, 14 254:20 275:13 370:18</p> <p>Biden-Harris 52:6</p> <p>Biden's 14:9 36:4 322:15</p> <p>big 84:15 107:17 265:8 287:9 307:8 337:10 359:20 371:10 383:13</p> <p>biggest 75:5 129:18 152:3 161:5</p> <p>bike 47:7 55:8 213:19 332:20 368:12</p> <p>bikes 188:2</p> <p>biking 54:22 55:7, 9</p> <p>BILL 11:4 13:11, 13 18:7 367:19 369:18, 21</p> <p>BILLINGS 3:3 23:16, 18</p> <p>B-I-L-L-I-N-G-S 23:19</p> <p>billion 15:19, 21 16:4, 5, 9 25:9 37:22 128:16 145:16 177:22 178:3 190:13, 14 217:21 275:8 351:3</p> <p>billions 16:15 34:12 42:8 56:15 120:2 182:10 259:14 363:13</p> <p>bills 348:20</p> <p>biodegradable 356:15, 19 357:2</p> <p>biodiesel 35:20, 22 36:17, 20 37:3, 15, 17 38:12</p> <p>biofuel 356:2</p> <p>biofuels 374:5</p> <p>biogas 302:9</p> <p>Bipartisan 15:11 52:3 115:10 132:11 190:4 216:12 318:13 351:2 369:5</p> <p>birds 248:19</p> <p>birth 71:5 93:10 102:14 228:4</p>	<p>birthdays 261:18</p> <p>bisect 286:7</p> <p>Bishops 189:7 191:4 285:17</p> <p>bit 383:3</p> <p>black 56:4 65:14 102:11 107:5 127:18 139:7 140:12 148:7 157:8 173:16 183:19 200:16 249:1 272:8 307:21 331:5 337:7</p> <p>blame 59:4</p> <p>blanketing 156:18</p> <p>blatant 87:10</p> <p>bleak 141:10</p> <p>BLOCK 3:2 4:2, 9 5:2, 18 6:2 7:2 8:2, 8 9:1, 12 10:2, 12 11:2 77:8 78:21 194:14 195:5 243:18 248:12 249:17 250:12 296:19 297:3 301:9, 10 334:18 341:7 386:11</p> <p>blocks 28:4 181:10 192:20 249:2</p> <p>blowing 264:7</p> <p>blueprint 247:2 254:21</p> <p>Board 8:10 32:22 38:9 114:13 153:17 177:3 253:9 254:6 280:21 325:4 326:10 384:11</p> <p>Board-certified 70:18</p> <p>BOB 6:13 169:10, 14 257:20</p> <p>BOBEK 7:17 8:5 229:12 244:9, 11</p> <p>bodegas 193:4</p> <p>bodies 66:12 68:3 173:19 337:18 339:3 368:16</p> <p>body 117:7 216:1</p> <p>BOESENBERG 5:12 124:18, 21, 22</p> <p>bold 162:4, 13 182:12 239:1 255:1 370:3</p> <p>Bolivian 349:15</p> <p>bolt 159:15</p> <p>bond 370:5</p> <p>bordered 310:2, 9</p> <p>borders 57:22 145:14</p> <p>born 119:20 376:8</p> <p>borne 226:2 247:8 353:6</p> <p>bother 267:11</p> <p>bottom 12:11 64:18 69:21 70:8 77:4, 12, 16 78:6, 16 103:1 135:21 138:10 169:6 175:10 194:18, 22 207:3 220:7 227:4 229:16 230:2 233:17 243:22 249:21</p>	<p>250:14 251:9 294:4 297:1, 6 321:22 327:22 330:1 334:19 335:5 341:11, 20 343:3 352:6 354:13 355:8 379:6 386:15 387:3, 10</p> <p>Boulevard 192:20</p> <p>bound 145:12</p> <p>bout 313:7</p> <p>bouts 312:15, 18, 20</p> <p>box 373:10</p> <p>boy 227:22 386:1</p> <p>BOYLE 9:7 287:2, 5, 6</p> <p>brace 198:21</p> <p>BRADLEE 11:4 369:18, 20</p> <p>Bradley 369:21</p> <p>brain 339:16</p> <p>brains 97:6 337:18 339:1 368:15</p> <p>brand 241:17 244:20 245:10</p> <p>BRANDON 7:6 204:2, 6</p> <p>BRANDT 4:17 90:20 91:3</p> <p>breadth 47:19</p> <p>break 21:4, 5, 8 135:11 250:21 342:6</p> <p>breakdowns 83:18 84:13, 20 85:3</p> <p>breath 66:10, 11, 13 67:1, 6, 8, 15, 17 68:4 173:9 360:7 378:18</p> <p>Breathe 5:9 55:10 75:15 100:2 101:1 104:8 106:6 109:10 119:13 120:21 127:22 140:14 142:13, 20 159:17 184:2 213:18 214:2, 3 216:1 248:11 267:15 268:3 274:12 313:18 337:18 338:14 362:11</p> <p>breathed 96:19</p> <p>breathes 152:15 340:14</p> <p>breathing 55:12 66:21 67:14 68:7 97:8 181:13, 16 213:21 267:2, 17 294:18 313:11 338:20 339:1, 2 350:8 360:3 377:1</p> <p>breathtaking 334:10</p> <p>breeding 55:19</p> <p>Breyer 279:18</p> <p>BRIAN 2:6 10:18 355:12, 13, 15 367:20</p> <p>bribe 308:2</p> <p>Bridge 159:19</p> <p>brief 60:7 70:11 77:19 110:22 180:2 297:9</p>
--	---	---	--

335:9 342:1, 21
briefly 21:8 25:20
bright 141:17
brilliant 289:13
bring 34:10 35:21 38:5
 42:9 73:22 104:9
 169:20 205:17 206:12
 253:9 325:15 357:12
bringing 33:13 67:18
 121:7 154:7 213:19
 230:19
brings 84:19
brink 279:22
BRITT 5:6 112:22
 113:3
Brittany 355:4 386:22
 387:1
broad 318:14
broken 84:22
bronchitis 300:12
 312:15, 16, 19 313:7
BROOKE 3:11 44:21
 45:2, 4
Broomfield 103:13
brought 145:3 199:19
 245:2
BROWN 5:5 47:22
 102:11 107:5 110:14, 17
 139:7 157:8 331:6
brunt 286:4 378:7
Brussels 66:10
brutal 311:7
BRYAN 5:22 143:2, 5
BUCHANAN 7:6 204:2,
 5, 6
BUCIC 4:5 74:4, 7, 8
Buckeyes 65:10
budget 84:20
budgeted 292:10
build 56:11 80:13
 318:20
building 56:16 117:20
 256:12, 16 257:14
 260:11 352:18
buildup 173:17
built 97:3 371:1 375:11
Burch 22:2
Burch.Julia 22:3
Burch.Julia@EPA.gov
 22:4
B-U-R-C-H-dot-J-U-L-I-
A 22:3
burden 24:5, 8 31:20
 102:21 142:5 148:1, 3
 158:22 168:5 172:19
 173:6 174:9 185:6
 192:14 270:9 274:15
 286:16 304:17 323:12,
 20 350:16
burdened 90:12 225:14

263:1
burdens 323:8, 16
burdensome 86:18
burn 215:9
burning 173:13 313:12
 347:7 356:5
burns 347:4
BURTON 5:22 143:2, 5
Bus 7:6 72:20 138:2
 140:6, 11 154:22 166:4
 168:17 175:1 192:17
 204:6 232:2 241:17
 248:18 271:17 277:22
 351:10, 14 368:10 369:6
Buses 5:20 14:19 29:1,
 19 30:4 31:18 55:11
 56:14, 21 64:10, 11
 72:14 76:1, 2 106:2
 107:16 129:20 137:21
 138:7, 15 139:4, 10, 17
 142:9 144:3 161:8
 162:14, 22 165:2 167:19
 174:5 177:9 178:13
 180:19, 22 181:12 182:7
 192:22 193:13, 20
 205:18 206:2 208:6
 215:7 222:16 231:5, 6
 232:4, 5 239:7 241:17,
 22 248:5 273:3, 9, 14
 286:10 304:20 313:21
 323:3 331:14 339:3
 351:17 368:19 369:14
 370:17 381:11, 18
busiest 58:14 144:19
 352:22
business 43:4 86:3
 154:3 230:13 242:12
 246:15 324:17 325:2
business-as-usual 154:8
 315:7
businesses 80:18 86:5,
 19 133:22
Busy 70:22 96:15 97:3
 101:22 120:11, 12, 15
 337:10 352:21
button 69:21 70:7 77:4,
 12, 16 78:6, 16 169:6
 175:10 194:17, 22 207:3
 211:16 220:7 227:4
 229:16 230:2 233:14, 17
 243:22 244:4 249:21
 250:8, 14 294:4 296:22
 297:6 321:22 327:22
 330:1 334:19, 22 335:5
 341:11, 15, 19 352:6
 355:8 379:6 386:15, 20
 387:2, 9
buy 86:22 88:3 248:15
 260:22
buy-in 121:8

Bye 249:15
byproducts 313:12
 < C >
CAA 280:17
cab 316:16
calculus 320:11
calendar 126:13 144:1
 156:6 384:3 385:15
California 8:9 31:7, 10,
 11 32:22 33:13, 16, 19,
 22 34:6, 10, 15 51:3
 120:9 138:10 156:16, 20
 172:11, 18 176:7, 10
 177:3, 22 208:21 220:22
 221:1 222:11 223:3
 245:1, 18 246:22 253:8,
 22 263:15 283:14 289:7
 295:8 311:6 312:12
 324:18 325:2, 3, 12, 15
 368:22
Californians 176:11
California's 25:16 31:4
 33:8 161:13 177:2
 221:16 253:10 254:11
 275:18 299:6 325:10
 361:20 362:16
call 22:22 23:3 39:10,
 13 45:8 54:4, 7 63:17
 66:14 69:12, 15 77:8
 78:12 79:16, 19 88:14
 94:15, 18 101:5 103:15
 110:9, 12 136:21 137:2
 141:5 149:8 153:4, 7
 167:3, 6 179:15, 18
 188:15 189:9 191:2
 194:14 198:2, 5 210:2
 211:7, 10 224:4, 7
 227:16 237:22 238:3
 243:18 249:17 252:9, 12
 266:4, 7 278:18, 21
 285:21 293:17, 20
 296:19 297:4 306:9, 12
 321:13, 16 334:18 341:7
 344:3, 6 348:10 358:11,
 14 372:19, 22 386:12
called 22:17, 20 30:1
 38:20 39:1 53:14, 17
 68:22 69:3, 22 70:8
 77:5, 9 78:13, 17 79:4, 7
 94:3, 6 109:19, 22
 136:16, 19 152:21 153:2
 166:16 167:1 169:7
 172:16 175:11 179:6, 13
 194:16, 18 197:16, 22
 207:4 210:21 211:5, 17
 220:8 223:18 224:2
 227:5 229:17 230:3
 232:21 237:13, 20
 243:20 244:1 249:19, 22
 252:4, 7 265:17 266:2

278:9, 16 293:8, 15
 294:5 296:21 297:1
 298:11 305:22 306:7
 321:4, 11 322:1 328:1
 330:2 334:20 341:9, 12,
 20 343:20 344:1 352:7
 355:9 358:2, 9 372:10,
 17 379:7 386:13, 16
 387:9
call-in 244:5
calling 30:22 47:10
 65:22 72:21 91:17
 93:14 95:15 98:4 103:3
 195:15 200:22 201:13
 229:7 237:4 275:16
calls 192:7 236:3 247:2
CALSTART 3:17 60:9,
 15, 22
camera 22:18 38:21
 53:15 69:1 79:5 94:4
 109:20 136:17 152:22
 166:17 179:7 197:17
 210:22 223:19 237:14
 252:5 265:18 278:10
 293:9 306:1 321:5
 343:21 358:3 372:11
Campaign 54:14, 20
 322:16 364:15
campaigns 71:20
CAMPBELL 9:17
 312:2, 5
cancel 246:21
cancer 27:21 34:14
 37:21 38:1 59:9 67:9
 71:7 72:15 76:12 97:9
 102:13 139:15 142:10
 157:3 160:20 163:19
 225:4, 16 238:22 282:17
 307:20 333:16 345:19
 376:19
cancer-causing 338:12
cancers 215:20
Cantley 352:2 386:17
canvassing 309:22
Canyon 221:20
cap 171:19
capabilities 232:9 334:9
capability 124:5
capable 205:12
capacities 205:11, 13
capacity 125:19 219:13
 260:6
capital 43:4 219:4
 253:20 303:11
Capitol 81:3
capture 39:4 53:20
 69:6 79:10 94:9 110:3
 166:21 179:11 197:20
 211:3 223:22 237:18
 265:22 278:14 293:13

306:5 321:9 358:7
372:15
captures 15:8
capturing 302:8
car 46:22 75:12 139:12
331:2 332:19 345:10
CARA 5:14 129:1, 4
C-A-R-A 129:4
CARB 34:2, 5 177:14,
21 255:11 325:7, 13
326:10 327:6
CARB-approved 33:19
carbon 36:2, 19 98:15
105:21 122:12, 14, 16, 17,
22 126:17 127:9 134:9,
12 160:6 189:15 190:14
256:20 257:6 268:2
272:13 280:11 291:17
295:1 298:2 302:8
332:10 381:3
carbon-fueled 309:2
carbonize 35:22
carbon-neutral 356:2
carbon-reduction 111:15
CARB's 253:17 254:4,
14 325:4, 5 326:16, 18
327:9
carcinogen 272:22
cardiovascular 16:8
59:10 148:17 300:13
Care 9:9 108:1 149:18
151:15 152:14 159:9
191:3, 6 264:17, 19, 20
294:15, 17 297:13, 18, 22
298:22 301:7 304:6, 8
311:19 322:19 354:17
356:11, 16 357:5 370:5
career 85:22 271:10
312:11
careful 123:21
caregivers 89:20 100:22
106:19 107:9 198:14
cargo 76:2 139:8 292:3
caring 160:16 174:12
323:10
CARISSA 10:15 346:10,
18
CARMICHAEL 9:5
285:8, 11, 12
C-A-R-M-I-C-H-A-E-L
285:14
CARMON 5:6 112:22
113:2, 3
Carol 379:2 387:6, 7
CAROLINA 5:19 10:16
137:16, 19 227:13
228:13 229:6 230:11
349:9, 13
carpet 357:1
carriers 86:5 217:10
258:22 259:1

carry 76:2 203:10
292:3, 4
carrying 139:8
Cars 14:10 47:6 49:10
64:6 98:19 162:1
184:19 248:6 347:10
case 21:18 43:4 76:12
280:1 332:22
cases 37:19, 21 45:15
130:5 181:8 219:22
348:3
Casey 257:20
CASSANDRA 9:5
285:8, 12
Castle 75:2
catalyst 108:21
catalyze 185:17
catastrophe 200:6
category 315:12
CATF 290:3
Catholic 6:19 189:2, 5, 7,
10, 15, 17 191:4, 5, 7, 8
285:17
caught 85:6
cause 148:22 181:14
191:11 215:3, 18, 20
262:8, 9 267:19 308:13,
14 310:21 311:4
caused 33:9 34:4, 20
126:14 132:14 165:14
168:1 184:3 212:12
273:3 284:13 311:6
331:13
causes 147:16, 17 157:5
290:21 308:9 333:16
causing 71:6 163:20
221:11 314:11
CDC 377:19
CDL 83:6
C-E 95:3
Cecil 181:5
CECILIA 9:4 282:5, 8
CEDRIC 8:15 266:9, 12
celebrate 31:17
cell 49:22 50:1 112:1
290:7 291:14
cells 49:16, 18
Celsius 45:14 245:12
305:5
Center 2:7 31:21 91:22
159:9 175:20 248:4
279:6 286:2 375:5
377:7, 8
centers 37:6 72:20
145:1 282:11 298:20
centigrade 171:19
Central 40:11 144:22
150:1 384:21
centuries 68:12
CEO 153:13

certain 27:19 46:9
284:18 347:12
certainly 63:22 268:17
certainty 44:13 114:10,
19 217:15 219:17
269:22
certified 330:9
cetera 313:18
CFC 258:18 259:4, 6, 10,
13, 17 260:18 261:5
C-H-A 140:22
CHACON 5:19 137:16,
19
chain 81:7 83:17 84:22
85:2 123:19 135:1
218:1 246:19 281:10
chair 45:16
challenge 42:14, 15
43:11 62:10, 11 155:14
challenges 43:8 50:17
218:22 219:5 246:20
300:11 353:16
challenging 29:9 50:3
155:9
chance 57:11 254:18
CHANDLER 5:21
140:18, 21, 22
change 16:13 24:5, 12
32:1 35:5 45:22 46:13,
15, 17 59:13 60:21 63:2
65:12, 18, 21 89:5 90:2,
14 91:9, 13 93:11 95:6,
10, 14, 20 98:22 99:3
104:15 105:6, 22 108:2,
3, 7 117:4, 6, 9, 12, 15
118:2, 4, 6 119:18 120:6
121:8 126:14 127:5
129:14, 21 130:2, 7, 9
139:22 142:21 144:6
147:10 148:11, 14, 15
150:9, 19 151:22 152:7
160:14 162:4, 15 168:1
174:8, 14 178:10, 22
182:18 183:22 184:3, 9
187:17 188:14 189:9
190:16 191:11 196:11
199:18 200:1, 6, 12
201:19 202:11, 16 203:5
212:11, 12, 16, 19 213:16
215:15 216:17 228:1, 8,
20 235:6 237:1 239:4,
13 242:9, 12 257:6
276:1, 13 281:13, 19
286:10, 13 294:22 295:1
296:2 300:21 305:2
307:10, 18 308:8, 9
309:6 311:6 314:11
323:7 324:3 329:11
331:8 332:9 333:18
334:3 336:7 348:19
349:19 359:6 360:18

363:8 366:12 370:4
371:20 377:2 378:1
381:6
changed 44:11 68:2
310:3
changes 233:5 262:11
327:13
changing 176:22 190:2
235:5 295:2
channel 12:13 136:1
251:11 343:6 360:10
chapter 180:11 379:16
chapters 379:22
charge 31:15 206:16
289:6
charged 82:1
chargers 62:18
charging 56:16 81:15
82:2 87:12, 15 153:19
177:19 219:2, 6 245:14
246:17 260:1, 7 277:12
292:11 303:5, 7 315:5,
12, 18 316:4 363:12
375:4, 10 377:21
CHARLES 10:17
352:10, 12, 14
CHARMLEY 2:3 13:11
18:7, 9 135:8 342:3
387:15
cheap 97:4
cheaper 157:18 273:14
353:17
check 375:22
checked 199:13
checks 96:4
CHELSEA 7:16 227:8,
9, 12
chemical 272:15
chest 360:8
Chicago 127:13 128:3
264:2, 20 266:18 330:10
Chicago-Loren 264:3
child 46:14 75:13, 15, 17
92:2, 5 93:10 151:7
200:13 275:4 354:7, 16
381:16
childhood 76:5 181:8
236:6 328:10 337:5
children 41:4 45:11
57:21 63:20 64:22
66:17 71:6 88:16 89:17
93:12 95:9, 13 96:22
97:5, 8 98:7 99:4 101:8,
11 102:1 103:18, 21
106:5 108:17 109:7
118:3, 11 119:1, 20
120:4 121:20 139:8
141:11, 16 142:13, 14, 20
150:10 151:2 193:11, 16
195:17, 20 198:16
200:13 201:16 202:1, 9,

17, 19 203:12 213:18, 21
215:14, 21 225:3 228:2
229:5 236:22 248:19
295:19 336:10 337:6, 7,
11, 17 340:15, 21 352:16
354:16 359:4, 9 380:18
385:9
children's 95:5 96:12
97:13 101:1 118:2
139:18 201:19 203:20
215:17 335:21
China 123:18 133:10
186:19 381:9
chips 85:14
choice 12:17 120:22
124:11 136:5 251:15
343:9
choices 286:5 326:1
choose 124:3 257:21
chooses 326:19
choosing 158:20
Christian 322:18
Christianity 322:19
CHRISTINE 10:8
321:18 332:3, 6
chronic 150:7, 21, 22
300:12 330:22 331:11
376:21
Chrysler 155:12
CHUN 6:20 175:6
191:21 192:2
Church 3:8 39:20
40:11 189:6 322:18
Churches 39:22 285:20
church's 189:8
circular 187:11, 13
Circulator 351:10
cited 245:8
cities 52:19 91:21, 22
92:9 176:8 351:12
368:20 383:10
citing 230:22
Citizen 6:8 156:13
164:17 271:2 276:7
382:11
Citizens 40:13 277:21
325:15, 19 329:13
351:13
city 27:2 28:4 32:12
39:20 47:4 73:7 127:12,
20 138:19 150:1 159:13,
17, 20 181:7 192:17
195:21 196:5 248:4
261:16 275:2 310:8
312:14 377:6, 15
Cityean 376:8
clarifying 18:21
Clark 82:20
Class 62:5 176:15
182:8 241:15 245:3

257:4, 5 273:13 316:16
374:9 377:16
classes 132:19 378:15
380:8, 9
classified 272:21 280:13
classroom 331:11
Clean 3:7, 11, 13, 16, 18,
19 4:16, 17, 18, 19, 21, 22
5:4, 7, 8, 9, 21 7:3, 4, 5, 9,
10, 16, 20 8:12 9:18
10:9, 13, 15, 16, 19, 22
14:5, 8, 10 15:2, 8 17:12
19:17 25:3, 6, 7, 17
29:18 30:4, 8 31:1, 4, 8,
11 32:7, 20 33:1, 3 35:9,
17, 18 36:8, 14 37:13
38:10 45:3, 5, 8 47:10,
11, 18 48:3 50:5 51:5,
12 54:13 56:10 57:10
60:13, 19, 20 61:13
63:10, 12, 16, 17 64:6
65:22 66:1, 8, 15 71:17
73:18, 22 86:11 88:9, 12,
13 90:16 91:4, 6, 14, 16,
18 93:17 95:4, 15 96:8
97:20, 22 98:2, 4 99:11
100:20 101:1, 3, 6 103:3,
4, 12, 13, 15 106:6, 16, 17,
22 109:10 110:18, 19
112:18 113:7 115:4
116:19 119:4, 13 120:11,
21 121:13 128:12, 15
130:19 140:2, 3, 8 141:1,
4, 6, 14, 18 142:17, 18, 20
145:15 161:13 162:1, 14,
18 172:12 173:11, 15
174:10 176:3 177:2, 4
178:1, 21 182:5 190:6
192:10 195:10, 15 197:9
198:13, 15 200:22 201:1,
2, 10 203:19 208:14, 22
209:1 212:3 214:1, 4, 5,
6, 12, 16, 17 216:8, 14, 18
219:14 221:18 227:13,
14, 16 228:7 229:7, 8, 9
234:3, 8, 13 237:4, 5, 6
239:2 254:4, 6, 10, 12
258:17 265:5, 6 271:5
275:18 279:16, 19
280:14 281:14 286:17,
20 290:1, 14 292:19
298:4 299:6 304:18
311:9 313:18 314:19
318:8 323:8 325:8, 13
326:14 329:4, 14 331:2
332:13 333:12 334:13
335:18, 20 338:1 339:12
340:2 341:2 345:2
346:18 349:14 351:19
353:10 354:5, 9, 10
355:20 358:20 359:2

361:10, 20 362:16 363:3,
21 364:6 368:2, 22
369:6 375:12 376:6
378:9, 19 379:18 383:15,
16 384:2, 8
CleanAirNow 8:13 11:6
cleaned 100:7 106:2
cleaner 15:13 16:10
33:13, 18, 20 57:16
59:17, 21 89:2 90:18
93:18 106:4 114:9
119:3 121:19 149:10
158:4, 20 162:10 163:22
165:20 168:8 213:1, 13
217:17 223:8 264:15
267:22 268:5 303:14, 15
313:14 328:17 333:8
336:2, 13 337:22 339:12
340:6, 10 341:2 351:5,
15 359:9 370:11 371:22
384:11
cleaner-burning 267:10
cleanest 36:1 256:12
276:11
Cleaning 24:19 25:10
59:15 121:10 129:19
145:7 161:8 164:19
167:14 231:4 334:2
cleanup 23:22 143:7
clear 30:11 73:20 140:6
143:9 157:9 166:4
168:17 170:6 175:2
236:13 238:16 240:4, 5
262:19 277:22 289:4
291:19 333:19 365:12
378:11
clearly 23:14 33:17
39:3 53:19 56:5 69:5
79:9 94:8 110:2 133:13
137:14 166:20 179:10
197:19 211:2 223:21
237:17 253:2 257:15
265:21 278:13 284:6
293:12 306:4 321:8
344:18 358:6 365:14
372:14 382:9
Cleveland 374:10
clicking 194:22 226:17
233:17 250:14
clients 238:19
CLIFF 8:9 253:4, 7
Climate 6:13, 19 10:17
15:7 16:3, 13 24:5, 12
25:1 27:14 30:8 32:1
36:4 45:22 46:8, 12, 15,
17, 18 50:17 53:1 54:19
56:22 57:2 59:12 60:21
63:2 65:12, 17, 21 72:11
73:12 89:2, 5 90:1, 9, 14
91:9, 12, 13 93:7, 11, 13
95:6, 10, 14, 20 98:10, 22

99:2, 3, 5, 8, 10 104:15,
16, 17 105:6, 14, 17, 21
107:8, 12 108:2, 3, 7, 16
109:1 113:16 117:4, 6, 9,
11, 14, 18 118:2, 4, 5, 7, 9,
16, 19 119:17 120:6
122:8, 17 126:14 127:5,
6 128:13 129:14, 21
130:2, 7, 9 132:22
139:21 141:8 142:21
144:6, 9 147:10 148:11,
13, 15 150:9, 19 151:22
152:7 154:10, 14 158:11,
12, 22 160:14 162:4, 11,
15 163:2, 5 167:20, 22
168:1 169:17 170:1, 22
172:8, 20 174:8, 14
177:12 178:7, 10, 21
182:12, 18, 21 183:22
184:3, 9 185:6 186:8, 11,
12 187:17 189:3, 9, 13,
18 190:16 191:7, 8, 11
193:14 194:6 196:11, 12
197:6 198:15 199:18
200:1, 5, 12 201:18
202:1, 11, 16, 18, 22
203:1, 5 208:2, 16
212:11, 12, 15, 19 213:16
214:1 215:15 216:17
220:19 222:11, 17, 21
223:8 224:18 225:7
228:1, 8 229:1 235:6, 16
237:1 238:13 239:4, 13
244:17 249:12 257:22
258:8 270:8 274:6, 16
275:12, 14, 15 276:1, 13
281:19, 20 286:10, 13
294:22 295:2 296:2
297:18, 19 298:3, 18
300:21 301:4 304:6, 11
305:2, 3 307:10, 18
308:8, 9 309:5 311:6
314:11 316:22 318:6
323:6, 13, 16 324:3
326:6 329:11 330:13
331:7 332:9 333:18
335:20 336:5, 6, 7
348:19 349:19 350:2
352:17 355:16 359:6, 9
360:18 363:7 364:18
370:4, 18, 19, 20 371:20
372:3 377:2 378:1
384:2
climate-changed 295:10
climate-change-driven
222:12
climate-change-fueled
103:22
climate-friendly 327:7
climate-related 117:16
climate-smart 298:5

climate-warming 47:1
95:19 177:10
climatic 228:3, 19
climbing 199:13
clock 141:10
logging 127:17
close 37:7 47:1 53:6
71:1 74:21 92:6 221:6
264:7 289:5, 14 305:6
362:15 374:17 384:11
closed 192:19 248:13
307:4
closely 17:11 30:22
32:20 238:18
closer 347:11
closes 19:10
closest 56:2 71:3
157:10 163:9 239:15
323:19 371:15
closing 35:3 109:3
112:13 131:19 134:15
327:14 382:12
Club 3:15 6:16 8:6
9:15, 16, 17 10:5, 8, 18
54:16 180:12 306:18
307:11 309:16 312:6
332:8 355:16
Club's 54:13
CNG 139:20
CO2 15:21 49:12 61:22
111:1, 9 122:16 255:14
269:17, 19 280:20 281:1
302:4, 5, 14 333:1
coach 230:12 233:2
236:2
coaches 206:2 231:8, 16
232:18
coal 82:9
coalition 5:9, 16 8:12
29:11, 18 74:11 119:13
132:7 137:20, 22 258:18
Coast 221:12
coating 173:16
cobalt 327:5
co-benefits 127:10 222:6
co-chair 51:5
code 67:22 138:16
283:16
co-emitted 127:10
co-executive 376:6
coexist 295:10
cognitive 76:6
coincidence 92:4 148:3
COLETON 6:17 183:2,
5
collaboration 217:15
247:3
colleague 47:21 201:21
colleagues 13:16 28:18
31:5 106:20 368:15
collect 204:10

collective 67:2 261:7
286:5
collectively 170:14 259:4
college 230:18
collision 357:6
Colomina 224:10
color 24:6, 9, 18 27:22
41:10 46:11 65:11 71:2
72:10 73:1, 5 75:10
90:11 93:5 102:18
108:9 134:14 140:13
142:7 144:15 145:10
147:22 150:5 157:7, 12
163:8 173:4 174:10, 19
176:14 184:15 185:2
191:1 193:9 195:22
213:9 216:3 236:13
239:16, 21 264:12 286:4,
7, 16 299:18 304:14, 17
307:12 314:3 323:11, 18
324:7 337:6 353:6
371:17
Colorado 4:21 100:20
101:2, 4 102:2, 4 103:1,
12, 13 177:1 263:15
274:6, 21 275:4 309:14,
15 311:5, 8, 11
Colorado's 309:18
colors 323:8 350:15
Columbia 51:9
Columbus 63:14
combat 336:7
combating 276:13 304:5
324:22
combination 104:21
combine 160:10
combined 150:17 277:16
Combustion 27:10 36:7
49:17 50:6 82:5 111:9,
13 114:9 122:15 125:16
158:7 177:17 209:8, 20
255:11, 17 269:3 270:3
271:17 273:15 280:6
311:3 316:7 319:11, 16
320:9, 14 326:8, 12, 13
374:6
Combustion-driven
126:22
come 36:13 38:13 47:5
48:20 63:3 64:15 89:2
93:15 121:11 141:22
142:19 156:2 228:22
274:9 311:11 317:7
322:7 323:1 327:8
336:15 339:10 340:12
345:18 354:21 374:20
382:16 383:11
comes 73:9 142:2
235:17 248:20 313:19
345:18 381:3
comfortable 202:15

coming 34:1 90:8 233:6
367:9 384:17
commend 253:13
commends 50:8
comment 18:1 19:10
26:12 28:11 32:2 41:16
44:20 47:13 50:18, 19
53:7, 9 57:5 60:2 63:5
66:3 68:17 71:11 74:3
76:21 80:6 82:15 85:16
88:5 90:19 93:20 97:15
100:14, 18 103:5, 6
109:11, 14 112:21 114:8
116:5 119:7 121:21
125:19 126:2 128:22
131:22 132:8 134:21
135:4 140:17 143:1
146:8 149:12 152:16
156:7 159:3 161:18
164:9 166:11 169:1
172:2 175:5 176:1
179:1 183:1 185:21
188:19 191:20 194:13
197:10, 11 201:4 204:1,
11, 13 206:20 210:15, 16
214:8 216:20 220:2, 14
223:12, 13 226:9 229:11
233:9 237:8 240:17
243:17 247:10 255:22
258:12 261:10 263:6
265:12 268:8 270:19
273:21 276:2 278:4
282:4 284:16, 17 285:7
287:1 289:18 293:3
296:18 300:14 303:20
305:17 308:18 309:8
312:2 314:15 317:14
320:21 324:11 327:15,
17 329:18 332:2, 11
334:17 339:17 341:6
346:9 349:8 352:1
355:3 357:19 361:11
364:10 367:15 369:17
372:5 375:16 376:10
379:1 382:4 386:10
comments 17:18, 19, 22
18:11, 20 19:3, 4, 9, 12
21:20 23:9 26:11 30:5,
7 31:3 35:12 38:15
39:7 47:19, 22 53:6
54:1 60:7 69:9 71:22
74:8 79:13 94:12
106:10 110:6, 22 124:15,
17 129:7 135:5 137:8
178:18 204:10 210:13
249:16 252:19 254:15
259:19 268:15 296:14
301:8 303:18 325:13
327:16 338:4 344:12
386:7

commerce 27:3 41:2
310:8
commercial 42:6 43:1,
20 44:19 49:13 87:13,
19 176:12 182:7 218:10
241:15, 16 242:1 245:3
249:4
commercialization 61:1
292:15
commercializing 47:21
48:5 50:5
Commission 186:6
380:12
commit 165:20
commitment 41:2 43:15
61:20 138:1 169:21
170:8 240:4, 6 259:11,
15
commitments 16:15
33:7 56:9 73:16 114:4
157:21 158:11 165:22
168:11 170:17 171:2, 10,
12, 16, 22 176:6 190:5
240:15 244:16 254:20
275:13 283:22 299:11
316:22 367:7
commits 133:1
committed 40:4 44:16
112:17 122:8 128:20
168:8 219:21 223:4
244:13 261:5 352:18
364:5, 17 366:11 367:9
371:5, 8 373:11 380:4
Committee 51:6
committing 350:22
common 41:1 104:19
148:20 149:4 236:16
300:2 370:5
commonsense 279:10
communicate 380:6
Communication 117:12
communications 274:4
Communities 7:14 24:6,
13 26:5 27:12, 22 28:1
30:9 34:3, 14 35:9 38:6
40:10, 16 41:5, 9, 10
45:11 56:5 60:20 63:2,
20 66:17 67:16 68:5
71:1 72:10, 18 73:10
74:1 75:10 88:16 90:11,
12 92:16 98:7 101:8
102:12 103:18 105:6, 18
106:5 108:5, 9 109:2
114:14 121:20 134:13,
14 138:2 140:1, 3, 12, 14
142:7 144:17 148:12
149:2 154:10 157:7, 8,
15 158:9 159:22 162:16
163:7, 8, 13 165:5 173:4,
6 174:2, 4, 10, 19 176:14
181:17 183:12, 18, 19, 20

<p>185:2, 3 190:22 191:14 192:15 193:18 194:9, 11 195:18, 22 197:6 200:18 208:4 213:9, 14 216:3 221:10 224:14 225:11, 13, 19 226:3 236:12, 13, 16, 17, 20 238:19, 20 239:3, 21 240:9, 12 257:9 258:9 262:20 263:4 264:9 267:7, 14 270:6, 9 272:9 276:21 282:13, 16 284:8, 11 286:2, 4, 7, 16 290:22 298:3 299:18 304:14, 17 311:21 313:16 314:3 323:11, 16, 18 324:7 331:6 337:3 350:14, 15, 19 359:10 361:2 362:11 364:18 365:3, 11, 17 366:2, 5, 15 367:6 373:13 377:11 378:6, 20 380:15, 17, 21 382:21 383:7, 9 community 17:14 28:22 36:15 37:18 41:3 56:6 57:22 58:11, 21 68:10 75:21 76:1 101:20 102:8 133:1 139:6 172:11 174:21 183:21 185:8 189:11 193:6 213:15 223:9 236:15 261:15 264:3 282:12 283:1 299:16 306:22 307:21 310:2, 9 311:19 323:8 330:14, 16 345:4, 9, 21 346:5 376:11 381:17 384:22 community-based 234:10 330:15 community's 102:1 193:10 commute 55:7 351:5 commuters 127:21 commutes 55:21 companies 60:12 134:4 155:19 206:10 260:9 281:4, 9 301:17 320:4 356:4 371:7 company 84:9, 14 153:18 196:2 199:16 230:12 241:18 287:9, 13 359:14, 15 company-owned 83:1 comparable 219:14 compared 73:6 108:8 185:2 256:15 350:8 comparison 160:22 competing 255:10 competitive 381:12, 13 competitiveness 133:4</p>	<p>134:19 complaining 232:3 complementary 243:5 complementing 190:4 complete 43:2 188:11 291:21 300:15 308:19 completely 44:12 83:19 199:16 209:18 303:8 complex 96:20 complexity 121:7 compliance 155:6, 19 189:22 209:21 210:4 219:20 246:9, 12 319:12, 19 comply 81:10 319:5 complying 155:15 components 50:7 143:13 composite 356:18 composition 205:9 compounder 49:8 compounds 150:16 377:14 comprehensive 254:15 comprehensively 87:2 compressed 373:11 compromised 97:10 computer 345:15 conceivably 281:7 concentrated 331:1 concentration 145:2 concentrations 225:4 272:13 concept 35:2 concern 227:21 255:15 295:11 357:8 Concerned 6:15 9:20 17:8 59:20 70:16 103:20 125:7, 17 175:19 196:22 202:11 218:12 227:19 255:11 307:15 317:19 328:8 345:17 354:15 concerning 93:8 378:3 concerns 74:14 83:19 87:5, 18 115:21 125:20 204:22 205:3, 8, 14, 16, 18 206:12 218:16 271:15 277:10 292:12 336:16 345:6 concluded 32:22 260:4 262:7 concludes 77:7 194:14 243:18 249:17 296:19 301:9 334:18 341:7 386:11 conclusion 26:7 85:7 233:5 280:17 303:14 concrete 189:13 190:16 condition 276:16 347:15 conditioner 248:14</p>	<p>conditions 43:22 95:22 104:20 105:19 144:11 149:5 225:1 258:1 302:17 303:8 330:22 conduct 36:15 67:4 325:15 conducted 20:9 260:3 conducting 19:14, 16 24:2 26:9 Conference 189:7 285:17 conferences 186:8 conferencing 116:10 confidence 112:11 277:17 conflict 21:18 congested 96:17 congestion 59:1 congratulations 289:9 congregations 162:7 Congress 15:10 133:7 280:22 281:12 318:13 congressman 308:3 conjunction 31:10 connected 22:19 38:22 53:16 69:2 79:6 94:5 109:21 136:18 153:1 166:22 179:12 197:21 211:4 224:1 237:19 252:6 266:1 278:15 293:14 306:6 321:10 343:22 358:8 372:16 Connecticut 149:17, 19 150:1, 2 332:7 connecting 127:19 connection 108:2 CONNOR 9:3 279:1, 4 C-O-N-N-O-R 279:5 conscience 162:3, 13 164:3 370:3 consecutively 336:1 consequences 120:8 171:21 273:2 277:4 334:5, 7 377:2 Conservation 7:12 220:15 conservative 158:17 283:9 319:1 383:20 consider 17:18 34:22 38:6 88:1 154:17 161:11 166:8 168:20 209:2 233:7 258:2, 3 283:10, 11 290:8 302:1 319:15 consideration 30:19 53:8 125:14 216:19 237:7 289:7 320:14 331:20 357:11 374:14 considered 61:15 62:22 83:15 262:16, 21 299:5 301:22 365:21</p>	<p>considering 17:3, 21 26:10 61:9 115:5 177:19 228:11 283:19 302:6 considers 231:14 consistent 61:22 90:16 93:17 112:3 119:4 142:17 197:8 201:1 203:18 214:5 216:14 229:9 234:13 237:6 351:19 359:2 361:9 consistently 64:18 consists 106:18 373:9 consortium 60:11 134:2 constant 248:5 350:13 constantly 139:3 232:6 Constitution 40:3 Consultants 37:13 consulting 277:13 consume 260:5 289:3 consumer 124:10 125:11 303:13 consumers 15:7 84:1 87:11 124:3 354:9 contact 22:2 containers 173:14, 21 174:1 contains 163:19 contaminants 271:16 contaminated 313:12 contend 104:4 contended 73:10 context 355:21 continually 50:14 163:22 continue 21:7, 10 34:21 35:21 36:7, 12 38:11 48:19 52:9, 14 53:2 82:11 111:3 137:3 146:4 154:8 155:1 185:14 206:6, 14 213:21 219:16 241:8 252:13 255:19 256:21 265:7 283:1, 16 344:7 continued 4:3 5:3 6:3 8:3 9:2 10:3 11:3 16:20 37:12 111:19 160:5 209:8 325:22 continues 24:8 32:16 48:17 101:21 102:3 132:21 282:19 284:1 374:4 378:11 continuously 196:21 contractor 12:7 13:18 20:17 135:13 251:1 342:8 contribute 27:9 46:22 75:3 96:7 104:22 108:15 127:11 130:15 139:21 148:16 180:22 183:21 190:18 239:10 299:14 315:8 329:7</p>
---	--	---	---

333:17, 20 336:9 347:18
349:21
contributed 95:21
274:17
contributes 73:8 75:17
95:10 142:4 275:12
286:9 376:19
contributing 40:17
52:10 71:7 95:19
113:13 127:8 191:17
225:6 313:4
contribution 170:4
contributor 72:3 98:18,
19 104:14 107:19 108:4
117:4 174:8 215:18
222:19 273:10 290:19
310:20 323:6 362:1
contributors 157:2
227:18 272:12 362:8
control 48:6 49:8 51:3,
8 75:19 124:1 199:15,
17 232:21 332:15
333:10, 13 376:22
controls 21:18
convene 298:17
convened 71:17
Convention 170:1, 18
322:9, 22
conventional 110:20
127:1, 6 246:7
convert 55:19
converted 291:13
converting 37:14
COOK 5:14 129:1, 4
C-O-O-K 129:5
COOKE 9:20 317:15, 18
COOPER 5:4 106:11,
14, 15
C-O-O-P-E-R 106:15
cooperation 20:20
coordinated 247:3
coordinator 45:5 57:10
63:12 100:19 214:12, 18
282:9 322:11
COP 170:4
COPD 59:9 193:12
295:13
cope 118:9
co-pollutants 181:4
corner 160:19
corporate 230:20
correct 32:17 186:18
correcting 185:19
correctly 111:22
correlation 282:20
corresponding 37:14
corridor 28:5 40:19, 21
92:18 311:18
corridors 37:6 144:20
150:3 163:10 225:20

238:21 304:16 314:2
362:13, 15
cost 17:3 36:9 82:4
85:8 122:21 125:7
131:8 133:21 152:7
155:20 177:16, 18, 19
194:2 206:12 209:18
218:6 240:10 246:14
253:19 279:21 288:20
303:10 316:2 334:2
353:16 374:12 375:12
cost-benefit 85:10
cost-effective 112:18
158:7 178:6 316:9
374:7
costly 80:10, 17 86:18
314:11
costs 15:14 16:20 37:9
38:1 76:14 87:7 117:18
131:9 253:20 299:21
315:17 328:22 329:3
348:18 374:13
Council 5:6 7:7 9:18
39:22 113:4 207:18
285:19, 20 298:18
314:19 330:16
councils 307:12
counterparts 102:15
273:15
counties 25:8 52:19
65:8 73:4 128:18 163:9
225:3 376:16
counting 178:1 235:8
countless 58:19 63:1
180:21 277:21
countries 119:19 120:2
124:1 171:11 308:6, 7
country 37:16 56:2, 20
72:4, 18 75:18 91:15
95:14 99:7 106:3 108:9
118:12 119:22 121:16
128:5 134:4 138:10
141:7 154:13 164:3
171:13 173:15 176:14
180:17 184:16 200:14
208:2 236:22 245:21
256:13 257:15, 18 265:8
274:20 275:3 282:16
286:2 309:5 323:2
347:9 359:7 360:21
363:2, 17 372:2 377:9
country's 58:14 163:5
176:10 257:1 329:5
county 24:10 51:2 58:4
59:9 75:2 117:16 145:9
151:3, 7 181:5, 11
184:17 193:10 198:19
199:22 235:19 328:8, 11
335:17 340:1 348:4
360:19

couple 188:1 196:3
coupled 131:16 331:17
courage 93:14 142:18
349:5
courageous 142:15
course 32:17 248:6
333:12 385:4
court 12:19 23:15 39:3
53:19 69:5 79:9 94:8
110:2 116:13 136:6
137:14 166:20 179:10
197:19 211:2 223:21
237:17 251:16 253:2
265:21 278:13 279:18
280:1, 16 281:17 293:12
306:4 321:8 343:10
344:18 358:6 372:14
Court's 281:11
Covenant 6:19 189:3, 18
191:8
cover 83:19 248:9
covered 47:4 100:4
141:21 228:21 312:22
COVID-19 66:19
co-workers 264:6
CPA's 251:1
crate 359:15
crates 359:18
create 52:22 156:14
163:1, 4 164:20 165:14
167:15 168:1 172:13
192:11 194:7 225:15
238:14 257:15 261:2
262:18 269:6 364:5
379:19
created 14:21 83:9
232:4 288:20 314:1
creates 193:20 228:19
creating 67:11 93:15
144:10, 11 184:4 231:22
324:19
creation 172:17 174:12
189:10 191:7, 16 192:8
272:16 285:22 304:7
305:11 322:19 323:10
324:9
credit 292:20
creek 199:9
Creighton 189:2
crew 263:12
crews 263:18 266:14, 19
criminalized 356:3
cripple 281:9
crisis 27:15 31:22
46:17 54:19 57:2 72:12
99:8 105:15 108:4
118:19 154:10 162:11
167:22 172:21 182:22
222:11 224:18 225:7
238:13 249:10 257:22
270:8 272:7 301:4

304:6 305:3 336:6
384:3
criteria 37:4 48:10
49:8 112:15 255:16
269:19 280:3 291:12
296:5
critical 26:2 49:18
62:16 63:4 73:12
104:20 105:17 115:10
129:20 133:13 135:2
141:18 149:18 158:18
161:4 163:20 178:10
185:11 213:2 222:20
239:19 243:14 259:10
276:12 284:16 291:10
294:15, 17 299:3 302:20
360:17 364:21 366:19
383:17, 21, 22 385:11
critically 34:13 371:11
cross 120:12 127:15
193:6 196:5
crosses 138:9
crossroads 26:22
crucial 33:14 45:10
63:19 66:16 88:15 98:6
101:7 103:17 143:10
185:10 195:17 201:15
212:18 224:17 245:22
336:4
crucially 275:14
crude 123:15
Cummins 155:11 320:5
326:9
cumulative 25:9 75:11
114:13 128:16 194:5
275:8 315:8 383:6, 8
curb 55:14 146:1
curbing 200:11 291:8
cure 294:16
cures 160:18
current 16:1 44:7 62:1
81:5 113:21 126:13
144:1 156:2 176:4
178:20 180:15 184:6
206:12 208:8 209:14
272:5 302:2 317:5
320:7, 10 334:9 366:14
383:18
currently 23:5 61:9
69:18 70:4 77:1 99:6
105:20 137:4 163:17
165:7, 12 169:3 175:7
179:21 181:20 195:3
206:8, 22 211:13 217:18
220:4, 21 227:1 229:13
233:11 242:2 252:14
256:11 259:14, 15 289:5
294:1 319:20 327:19
329:20 330:9, 11 342:9
344:8 352:3 355:5
374:1 375:6 379:3

<p>currently-proposed 373:21</p> <p>curse 380:22</p> <p>curve 146:1</p> <p>customers 42:19 242:1 246:12, 21 260:22 302:19 363:11 373:13</p> <p>cut 99:2 142:16 158:13 181:3 200:4 235:16 275:15 302:11 356:16 357:10, 16 370:20</p> <p>cuts 142:3</p> <p>cutting 31:6 58:12 355:19 356:13</p> <p>cycle 122:12, 19 123:1 291:16 327:3 374:14</p> <p>cycling 55:21 368:5</p> <p>cyclist 368:4</p> <p>cylinder 48:21 49:2</p> <p>cyprus 58:1</p> <p>< D ></p> <p>D.C 3:20 55:3, 8 56:5 66:9 89:4, 13 107:1 108:17 204:8 232:1 350:21 351:10</p> <p>dads 95:5 106:3, 19 141:3</p> <p>daily 24:11 27:3 46:15 47:4 86:9 108:19 127:21 139:1 145:11 148:14 200:2 228:16 243:9 348:3, 21</p> <p>Daimler 315:9 371:4</p> <p>Dalton 302:21</p> <p>damage 72:14 89:17 117:20 181:14 186:17 347:5, 12 348:18</p> <p>damaging 295:9</p> <p>danger 83:18</p> <p>dangerous 58:19 59:17 89:10, 16 100:3 102:1 105:19 130:14 149:3 157:1 160:12 272:14 277:2 290:12 314:11 331:4 337:21 340:22 365:11</p> <p>dangerously 233:3 339:7</p> <p>dangers 323:1</p> <p>DANNY 4:12 82:16, 19</p> <p>DARAKOS 11:5 373:2, 5</p> <p>data 19:2 89:6 125:21 153:16 219:22 236:12, 13 261:7 276:17 280:4 281:1 317:9 319:22</p> <p>date 20:3 36:18 204:12 245:7</p> <p>dates 236:9</p>	<p>daughter 167:18 201:9 202:7 328:9, 11, 15, 16 385:4</p> <p>DAVE 9:20 317:15</p> <p>DAVID 6:6 149:13, 16 317:18</p> <p>DAY 1:10 13:7 24:3 40:21 47:2 55:9 65:1, 10 81:15 82:22 92:15 96:16 97:9 118:12 138:13 146:13 156:22 182:9 193:6 199:11 200:14 202:10 221:7 228:9 232:13 233:4 253:21 313:1 316:16 347:20 353:2 354:4 359:16, 21 374:17 376:9 386:11 387:17</p> <p>days 20:3 27:7 37:20 55:6 58:7 89:9, 15 91:19 93:9 104:7 145:21 150:12, 20 151:15, 16, 19, 20 160:11 165:9 182:14 199:7 202:22 213:4 295:14 307:4 338:14 359:13, 20 378:3</p> <p>daytime 96:14</p> <p>de 35:21</p> <p>deactivation 48:21 49:2</p> <p>dead 105:8</p> <p>dead-end 248:17</p> <p>deadly 27:19 72:7 119:19 139:14 142:2 182:13 284:13 304:11 314:6 365:10 367:3, 11</p> <p>deal 50:16 84:15 200:2 281:6 360:22</p> <p>Dealers 258:20</p> <p>dealing 174:2 212:15</p> <p>dealt 275:3</p> <p>DEAN 342:13, 14, 17, 18, 20</p> <p>death 72:15, 21 102:10 130:3 142:8, 14 148:18 149:1 157:2 183:17 193:16 225:15 228:4 238:20 295:17 300:12 366:6</p> <p>deaths 16:6 25:4, 10 37:22 73:9 102:14 117:20 128:17 131:17 145:20 148:7 157:6 203:8 213:3 215:21 275:10 291:1 314:8</p> <p>decade 153:14 168:9 217:20 280:11 365:7 375:2</p> <p>decades 34:1 36:13 41:12 47:5 63:2, 15 99:16 100:6 106:1</p>	<p>141:22 177:7 181:18 228:22 267:9 284:14, 21 285:3 307:9, 11</p> <p>decades-old 38:8</p> <p>decarbonization 36:10 38:9 247:2 254:1, 22 291:10 293:1 362:5 363:6</p> <p>decarbonize 38:12</p> <p>decarbonized 292:8</p> <p>deceased 193:12</p> <p>December 105:4 232:20 285:2</p> <p>decided 319:9 385:3</p> <p>decision 142:16 166:10 168:21 234:17 246:5 281:12 366:10</p> <p>decisions 32:16 188:8 236:5</p> <p>decisive 186:21</p> <p>declares 274:8</p> <p>decline 16:20</p> <p>declining 253:20</p> <p>decrease 59:18 300:22 309:19</p> <p>decreasing 305:9</p> <p>decrements 295:18</p> <p>dedicated 51:11 81:15 92:5 245:18 279:8 294:16</p> <p>dedication 112:14</p> <p>deep 45:15 57:13 209:14 253:11 378:18</p> <p>deeper 61:7</p> <p>deeply 30:14 92:20 93:8 108:1 353:4</p> <p>default 35:3</p> <p>defended 44:8</p> <p>Defense 5:6 113:4</p> <p>defined 221:18</p> <p>definition 366:3</p> <p>degenerative 276:16</p> <p>degraded 101:17</p> <p>degrades 95:9 222:4</p> <p>degrading 225:6</p> <p>degree 172:10 271:8, 9 280:5 309:14</p> <p>degrees 45:14 89:10 171:18 202:2, 4 245:12 303:3</p> <p>deja 87:5</p> <p>Delaware 75:8</p> <p>Delawarean 74:20</p> <p>delay 85:1 142:1, 19 240:14 246:21 353:20 354:18</p> <p>delayed 246:22 328:15</p> <p>delays 246:19</p> <p>delegate 281:13</p> <p>deliver 23:9 39:6 53:22 69:8 79:12 94:11 110:5</p>	<p>114:2 137:8 146:4 157:13 158:8 163:12 174:18 177:15 213:14 217:13 252:18 259:12 316:1, 14, 17 317:1 324:6 344:12 374:7</p> <p>deliverable 190:17</p> <p>delivered 245:6 317:6</p> <p>Delivering 25:5 50:10 112:17 128:12 140:10 145:15 241:21 363:11</p> <p>delivers 60:15</p> <p>delivery 14:17 64:11 107:18 246:16 300:1, 4 302:19 371:8</p> <p>DELLOIACONO 3:17 60:3, 6, 8</p> <p>demand 49:18 186:19 217:17</p> <p>demanded 378:11</p> <p>demanding 34:4</p> <p>demands 125:13 218:10 366:15</p> <p>demolition 359:14</p> <p>demonstrate 41:2 171:5 240:5</p> <p>demonstrated 42:8 49:3 205:12</p> <p>demonstration 380:3</p> <p>Dene 101:13, 16</p> <p>dense 74:21</p> <p>density 325:20</p> <p>Denver 101:20 104:2 274:6 275:2 309:17</p> <p>department 65:3 361:17</p> <p>depend 168:13 174:21 194:11 302:19</p> <p>dependence 132:14 215:12</p> <p>dependency 133:14</p> <p>dependent 123:22</p> <p>depends 218:2</p> <p>deploy 240:11 245:15 320:15</p> <p>deployed 111:9</p> <p>deploying 255:12</p> <p>deployment 44:1 112:7 158:18 208:6 243:4, 7, 8 253:12 255:9 316:6 317:8 318:14, 21 375:11 380:9 383:20</p> <p>depots 72:20 271:17 373:8</p> <p>Dept 10:20</p> <p>Deputy 2:9 13:9 47:18</p> <p>de-rate 204:19 233:3</p> <p>descendants 101:12</p> <p>described 15:5 20:7</p> <p>descriptions 21:14</p> <p>deserve 367:6</p> <p>design 219:5 356:9</p>
--	--	---	--

<p>designed 14:22 27:13 33:11 42:6</p> <p>desks 159:16</p> <p>Despite 52:7 58:10, 17 88:21 145:6 160:19 176:18 218:16 222:14 273:8</p> <p>destabilize 149:1 165:15 168:2 184:4</p> <p>destroy 268:3 309:6</p> <p>destroyed 40:9 105:4 308:8</p> <p>destroying 268:3 308:11</p> <p>destructive 105:8, 12 182:14</p> <p>detailed 110:21 178:18 210:12 242:3 296:14 327:15</p> <p>Details 19:11</p> <p>detection 294:16</p> <p>determine 170:5, 12 171:8 218:4</p> <p>determines 161:15</p> <p>detriment 261:4 282:1</p> <p>Detroit 336:17, 19, 20 337:12 340:15</p> <p>devastate 279:17</p> <p>devastated 193:15</p> <p>devastating 83:13 105:3</p> <p>develop 17:20 42:9 50:15 187:5 247:5</p> <p>developed 356:1</p> <p>developing 15:1 21:20 48:5 97:7 122:8 215:22 228:15 242:2 326:10 339:2, 8 367:1</p> <p>development 32:21 35:3 42:14, 16 43:14 76:6 104:6 111:14 112:2 186:7 197:1 205:1 206:15 243:16 255:20 292:15 295:18 363:13, 16</p> <p>developments 245:22 291:6 318:15</p> <p>Devine 379:2 387:6</p> <p>diabetes 102:12</p> <p>diagnose 59:1</p> <p>diagnosed 102:10 312:15</p> <p>dial 70:8 77:5, 13 78:17 169:7 175:11 194:19 207:4 211:17 220:8 227:5 229:17 230:3 233:18 244:1, 7 249:22 294:5 297:2 322:1 328:1 330:2 334:20 341:12, 15, 21 355:9 379:7 386:16</p> <p>dialed 77:13 233:18</p> <p>dialing 70:1 247:13 250:4, 9, 15 297:7</p>	<p>334:22 335:6 352:7 386:20 387:3</p> <p>dialogues 121:17</p> <p>dichotomy 326:2</p> <p>dictate 288:4 289:8</p> <p>die 148:10 337:7, 8</p> <p>died 199:20 328:14</p> <p>diesel 29:19 31:19 35:21 36:1, 18, 20 37:3, 4, 7, 15 38:7, 12 49:5 55:12 72:17, 21 73:11 85:7 134:11 138:3, 15, 16 139:13, 20 142:8, 14 143:12 157:2, 8, 19 158:3, 20, 22 163:19, 21, 22 168:5 172:19 173:2, 8, 13, 17, 22 174:1, 9 180:19 185:6 192:14 209:13 219:14 225:5, 15 238:20 239:22 256:19 257:8 262:2 263:22 264:5 266:22 271:16 272:11, 19, 20 274:15 288:10 290:18 291:15, 20 292:4, 5 300:4 302:3, 4 304:16 315:17, 20 323:7 338:12, 19 362:9, 14 366:6 368:7 374:6, 12 375:13 377:13 380:22 381:18, 21 384:9, 10</p> <p>diesel-equivalent 315:16</p> <p>diesel-fueled 36:11</p> <p>diesel-powered 256:8 266:17 303:9 377:11</p> <p>Diesel-related 291:1</p> <p>difference 183:16 332:22 345:22</p> <p>different 28:19 69:20 70:6 77:2 123:11 169:5 175:9 206:17 207:2 211:15 220:5 227:3 229:15 230:1 231:7 232:19 233:12 242:7 245:4 264:4 268:14 294:3 321:21 327:21 329:22 352:4 355:6 379:4</p> <p>difficult 91:14 368:8</p> <p>difficulties 22:21 39:9 54:3 69:11 79:15 94:14 110:8 136:20 153:3 167:2 179:14 198:1 211:6 224:3 237:21 252:8 266:3 278:17 293:16 306:8 321:12 344:2 358:10 372:18</p> <p>DIGGLE 3:19 66:4, 7</p> <p>dignity 172:17 191:6, 10</p> <p>diminished 303:6</p> <p>diminishes 147:15</p>	<p>dioxide 126:17 160:6 190:15 280:12 295:1 381:3</p> <p>direct 30:11 67:15 126:16 147:4 330:17</p> <p>directed 254:1</p> <p>directed 187:14 314:5 351:6</p> <p>directly 27:22 30:10 36:22 92:17 125:4 133:22 148:15 160:8 226:21 241:9 272:1 273:2 319:9</p> <p>Director 2:3, 6 13:11 32:7 35:17 47:18 51:2 54:13 60:9 95:3 122:5 126:7 146:14 192:3 204:7 207:17 224:14 244:12 258:17 274:4 297:17 314:19 322:14 368:2 369:22 376:6 382:10</p> <p>dirt 199:8</p> <p>dirty 213:17 256:22 310:17 320:8 338:12, 19, 21, 22 377:17</p> <p>dirtying 193:1</p> <p>disabled 46:10</p> <p>disadvantaged 38:6</p> <p>disaster 44:5 249:14</p> <p>disasters 93:13 98:10 99:5, 9 117:19, 21 186:11, 12 202:18 203:1, 2</p> <p>Disastrous 186:12</p> <p>discernible 280:3</p> <p>discount 353:19</p> <p>discrepancy 378:5</p> <p>discrimination 213:8 337:1</p> <p>discriminatory 72:9 173:5</p> <p>discuss 260:15</p> <p>discussion 18:22 204:21 284:20</p> <p>discussions 151:18</p> <p>disease 29:15, 16 59:10 71:7 96:3 102:13 130:5 142:10 148:17 150:7, 21 151:1 152:5 160:6 182:15, 17 224:22 225:1, 16 238:22 300:13 328:20 376:19</p> <p>disease-carrying 95:22</p> <p>diseases 70:20 130:17 139:15 160:21 215:19 294:17 295:13 345:20 376:19, 20</p> <p>disgusting 311:2</p> <p>disinformation 385:12</p>	<p>disinvestment 46:4</p> <p>disk 139:18</p> <p>disordered 294:18</p> <p>disorders 300:12</p> <p>disparities 184:19 282:21 290:21 350:18</p> <p>disparity 185:1</p> <p>dispel 287:20</p> <p>displayed 23:5 137:4 252:14 344:8</p> <p>displaying 282:20</p> <p>disposal 113:18 123:6 302:7</p> <p>disproportionally 71:1 163:7 340:20</p> <p>disproportionate 24:5 46:5 148:1 157:7 163:2 174:9 224:20 239:14 282:18 286:16 296:9 304:17 323:7, 12</p> <p>disproportionately 16:12 56:4 72:12 101:19 130:11 139:22 148:4, 5 213:11 216:2 225:13 239:8, 20 272:8 310:1, 9 337:17</p> <p>disregard 41:11</p> <p>disrupt 219:19 281:21 360:3</p> <p>dissuade 320:11</p> <p>distant 108:5</p> <p>distinct 368:10</p> <p>distinguished 247:21</p> <p>distorted 123:10</p> <p>distressing 55:7 93:10</p> <p>distributed 20:22</p> <p>distribution 31:21 37:6 72:20 145:1</p> <p>District 51:3, 9 55:6 325:12</p> <p>districts 221:13 325:17 326:4 362:12</p> <p>disturbing 170:18</p> <p>diverse 14:22 86:7 183:9, 12</p> <p>diversity 66:11</p> <p>divided 150:2</p> <p>Division 2:4 13:12 258:21</p> <p>doc 353:2</p> <p>DOCKET 1:14 12:21 19:22 20:1, 6 23:10, 14 39:7 54:1 69:9 79:13 94:12 110:6 136:8 137:9, 13 251:18 252:19 253:1 300:17 308:21 343:13 344:13, 17</p> <p>doctor 70:19 328:22 352:15 353:7 354:17</p> <p>Doctors 59:1 313:10</p>
---	--	--	--

347:17
doctor's 337:14 340:17
doctrine 191:5 281:16
document 24:8 386:8
documented 75:9 286:6 334:1
dog 199:12
dogs 96:6
doing 41:13 70:21 154:2 190:15 200:21 262:17 263:20 324:9 334:4 373:11
dollars 16:15 34:12 42:8 56:15 182:10 259:14 315:11 329:3 348:12 363:14
domestic 105:20
domestically 260:12
dominant 123:18
dominate 52:9
door 332:16 360:1
double 186:21 375:22
doubt 81:2
DOUG 11:8 382:5, 9
downgraded 104:3
downpayment 369:9
Downtime 80:17
downtimes 219:13
dozen 138:4
dozens 138:14 231:2, 17
DR 70:14 126:6 149:16 159:7 214:11, 15 253:7 317:18 352:12, 14
Draft 60:7 366:14
drafted 246:10
drafting 373:16
dramatically 131:8 238:21 291:2
drastic 249:12
drastically 177:18 246:4
drawbacks 90:5
drayage 254:3
dream 142:19 200:14
dreams 307:18
drilling 174:3
drivable 80:11
drive 30:3 139:5 143:19 146:4 188:7 209:3 232:2 263:18 269:17 272:6 307:2 331:13 332:19 337:10 380:6
Driven 49:6 83:10 144:4 150:9, 19 295:1
driver 83:5 84:10 86:1 212:11 266:18
Drivers 4:11, 13, 14 15:13 80:4, 21 82:14, 22 84:12, 17, 18, 19 85:21 86:4, 22 87:14 183:9, 12 191:13 218:7 242:14

263:12, 15 267:4 302:19 351:4, 14
drives 85:4 243:4 257:14
drivetrain 123:5 290:10 291:11
drivetrains 291:3
driveways 81:20
driving 65:17, 18 80:22 90:14 104:15 105:21 129:14 154:9 222:10 223:6 232:6 253:11 254:7 301:4 349:19
dropping 194:3
drought 196:12 199:21 222:12 235:4
droughts 105:12 295:9 336:8 378:2, 3
drowned 193:16
dual 295:8
due 16:7 33:9 72:9 76:12 84:13 98:11, 13 101:17 102:12 112:2 152:2, 5 157:3 160:14 173:3 176:9 228:18 246:18 356:4 373:19 380:16
dump 14:18
dumping 378:8
durability 112:10 218:5, 6
duration 20:13
dust 359:20
duty 29:14 90:14 95:12 105:17 127:1 138:7 164:5 212:7 231:12 234:13 240:9 255:12 280:6 284:17 332:12 374:14
Duwamish 92:22
dwelt 315:15
dying 240:12 308:17
dynamic 366:12

< E >

earlier 33:16 277:5
Early 16:21 40:12 62:4 86:11 97:7 112:2 159:14 199:18, 19 218:20 220:1 307:19
earth 41:8 162:16 194:8 286:18 357:14
earth-friendly 356:15
Earthjustice 7:21 238:9, 11, 18
earth's 295:2
easier 29:7, 10 353:17
easily 256:18 295:9 359:12
EAST 6:8 7:14 151:8 156:8, 11 264:3, 19

Eastern 19:11 21:6, 11 135:14 251:2 342:4, 9
easy 155:20 346:3
EC 133:22
Eco 186:4
ecological 189:4
Ecology 10:20 189:5 361:17
EcoMadres 5:9 7:3 100:20 101:4 195:11 212:4 349:14 358:21
economic 37:14 60:15 122:9 123:14 132:13, 22 134:18 146:4 154:15 256:9 257:12 258:3 279:21 348:11
economical 288:19
economically 115:19 283:4 365:8
economics 92:9
economists 257:10 326:17
Economy 7:8 86:8 123:22 178:6 187:11, 13 188:12 207:19 215:4 235:7 239:2 258:4 277:19 282:2 298:6 349:20
economy-wide 253:22
economy-wife 208:2
ecosystems 222:3
EC's 134:20
eczema 360:4
EDF 153:18
edge 138:11 235:19
edited 151:18
educated 330:17
education 380:3
educator 142:6
EEN 274:10
effect 30:6 46:2 51:17, 19 144:10, 11 165:11 305:7 380:20
effective 61:2 107:3 122:22 152:8 155:20 160:18 190:12 209:19 240:10 246:14 289:12 325:6 331:3
effectively 14:22 226:1 269:17 376:12, 18
effects 16:7 28:2 55:12, 18 59:6 70:21 71:4 72:13 107:8 144:6 145:19 151:18 152:4, 6 160:9 174:3 183:14 212:15 213:15 215:14 227:21 231:22 233:7 239:17 267:20 271:20 272:20 331:7 359:6
efficiencies 205:21

efficiency 48:6, 12, 22 49:4 50:2 111:3 158:8 190:11 209:4, 20 210:1, 6 260:19 270:17 292:22 301:20 316:6, 10
Efficient 207:18 218:1 302:11
efficiently 189:22
effort 169:18 212:19 246:10 311:12 318:1 349:3
efforts 34:19 50:15 67:2 113:6 125:22 187:20 269:22 271:12 291:10 301:21 333:7, 12, 14
egregious 72:5
Eight 254:9 288:12
eighth 177:1
eight-lane 58:12
EIQ 153:17
either 65:8 125:8 127:14 161:12 250:13 262:15 281:20 291:3 334:22 341:14
EJ 283:22 366:15, 16 383:10
ELAINE 10:5 328:4, 5, 7
elderly 46:10 127:13 183:20
Elders 6:13 169:17
Electric 5:19 11:7 48:6, 13 49:10, 16, 21 62:16 64:14 73:21 76:1 81:1, 2 82:6 87:11, 19 110:20 111:5, 21 112:8 122:13 123:13 124:5 133:5, 8, 18 134:2 137:21 154:19 168:18 188:2 200:16 215:8 219:4 232:9 242:2, 17 244:22 245:4, 9, 16 246:16 260:5 273:12, 13 278:2 288:20 289:6, 8 290:6, 7 291:3, 13 300:6 302:5 303:7 318:14, 22 325:19, 22 327:6 332:19 351:11 374:2, 10 377:20 379:14, 16, 21 380:2, 3, 6, 10 381:10 383:20
electrical 242:18 292:11
electricity 25:3 42:17 49:15 82:8 128:15 131:17 243:9 291:13 315:21 331:18
Electrification 5:16 38:9 56:19 115:7 125:5 132:7, 18 133:2 134:17 138:1 153:15 164:6 182:11 208:12 218:14

315:5 374:20 381:8
383:12
electrified 133:20 178:2
270:7
electrify 50:4 111:11
134:1 140:10 238:11
electrifying 163:14
311:13 371:9
electronic 151:17
electronically 19:21
electronics 49:20
elementary 40:7 92:18
230:16
elevate 378:10
elevated 157:3 193:2
272:12
eliminate 71:9 187:19
238:12 271:12 279:20
300:8
eliminating 15:22 290:12
elimination 284:4
ELIZABETH 4:17 5:7
6:20 10:9 90:20 91:2, 3
116:6, 15, 18 175:6
191:21 192:2 201:21
248:11 335:12, 16 338:5
E-L-I-Z-A-B-E-T-H
335:13
EM 44:7
EMA 42:9, 21 385:12
email 22:2, 22 23:2
39:10, 12 54:4, 6 69:12,
14 79:16, 18 94:15, 17
110:9, 11 136:21 137:1
153:4, 6 167:3, 5 179:15,
17 198:2, 4 211:7, 9
224:4, 6 237:22 238:2
252:9, 11 266:4, 6
278:18, 20 293:17, 19
306:9, 11 321:13, 15
344:5 358:11, 13 372:19,
21
EMA's 41:22
embed 71:20
embedded 101:15
embody 67:19 68:13
emergency 65:3 141:8
147:18 148:9 159:16
160:14 295:16 300:20
328:22
emerging 125:18 155:2
Emeritus 3:22 70:16
EMILY 3:16 57:6, 9
Emission 12:4 13:21
14:1 15:3 17:3 18:13
25:15, 19 30:8 42:15
45:16 48:5, 11 51:16
52:9, 21 59:14 61:8, 22
83:8 85:7 90:7 95:11
109:4 121:14 122:22
126:17, 19 130:8 131:15

132:10 133:12 135:15
142:16 153:22 155:12
157:13 158:18 163:12
176:22 178:16 180:18
183:16 185:16, 18 197:4
207:16 212:22 213:13
214:22 215:2 216:10
217:14 229:7 240:8
242:6 243:15 244:16
245:6 246:8, 13 249:15
251:3 256:8, 17 259:12
269:16, 17 270:1, 12
271:3 284:7, 22 288:9,
10 290:4, 6, 11, 15
296:16 299:8 301:20
303:15 307:14 319:6
326:12, 18, 19 336:12
342:11 368:19 371:3
375:12 379:13 381:3
382:2
emission-free 308:4
emission-related 282:17
EMISSIONS 1:7 14:3,
14 15:4, 21 16:1 28:8,
20 31:10 33:2 34:6, 7
36:3, 21 37:1, 3 42:7, 12
46:7, 16 48:15, 17 49:5,
9 50:11 52:11, 14 64:3,
4, 9 65:9, 16, 17 67:11,
12 68:15 71:9 73:11, 19
75:3, 6 76:5 86:21
87:17, 21 88:20, 21 90:7
95:18 96:7 98:16 103:2
104:5, 6, 15 107:3, 14
108:14 109:6 111:1, 9
113:10, 11, 14, 16 114:3,
15 115:12, 17 120:16
121:6, 14 123:2, 3, 9
124:12, 14 126:10, 15, 20
127:9 128:7 129:19
130:2 134:10, 12 141:9
143:12, 13, 14, 17 145:14
147:6, 8, 22 149:7
150:14, 16 151:12 152:8
157:1 161:8, 10 170:2,
11, 20 174:8 176:17, 18
177:17 181:2 183:21
186:22 187:3 190:15, 18
191:11 194:5 196:15, 16
200:5, 8, 9, 12 201:13
203:13 204:17 208:1
209:2, 5 210:8 212:10,
13, 18, 20 215:10 224:17,
19, 21 225:10, 15 227:19
238:17 239:10 246:4
255:14 256:14, 20
262:17 263:3, 22 264:5
265:4 266:17 269:1, 11,
12 270:10 272:4, 7, 10
273:8, 11 274:14, 18, 20
275:12 276:10 277:1

279:13 280:5 283:8, 20
284:13 286:14 288:2, 3,
11 290:17, 18 291:9, 12,
16 292:13 295:1, 2, 22
296:3, 4, 7, 10 298:8, 17
299:16, 18 300:10, 22
301:1 302:3, 6, 8, 11
303:17 305:1, 9 307:10
309:20 310:20 312:8
315:8 317:12 323:2, 6,
14 326:7 327:2, 3 347:6
349:18, 19 350:17
351:19 355:20 356:13,
17 357:10, 17 360:17
362:2, 3, 9 363:5 365:4
366:3, 20 367:3 373:17,
18 374:5, 8 378:12
381:1
emit 122:16 130:13
139:10 165:3 217:16
305:6 377:12
emits 302:4
emitted 122:13, 14, 18
217:16 277:8
emitter 170:20
emitting 120:15 239:13
emphasis 330:13
emphasize 54:21 57:19
291:9 385:7
employees 222:3 230:14
241:19 298:21 299:13
373:13
employment 43:22
277:15
empty 81:5
enable 17:10 43:22
48:9 49:3, 8 50:5 125:5
155:6
enact 138:5 140:4
142:18
enacted 80:12 185:17
268:7
enacting 174:14 226:4
324:3
enactment 183:15
enclosed 377:16
encourage 22:19 23:7
25:16 28:7 38:21 39:5
53:15, 21 69:1, 7 79:5,
10 81:18 94:4, 10
109:20 110:4 129:16
131:19 134:8 136:18
137:6 152:22 154:16
166:17 179:7 182:2
197:17 206:7 210:22
223:19 234:11 235:14
237:14 252:6, 16 265:18
270:12 278:10 293:9
306:1 321:5 343:22
344:10 358:3 361:18

363:19 372:11 375:7
376:11 384:4
encouraged 87:1 349:1
encourages 189:18
270:15
encouraging 130:18
endangerment 280:20
290:16
end-of-life 123:6
endure 46:5
energization 246:18
Energy 10:22 25:7
71:16 121:9 122:9
123:14, 16, 21 141:14
207:18 217:5 239:2
270:16 298:5 325:20
357:3 366:4 368:2
374:21
Energy-Efficient 7:8
enforce 121:2
enforceable 33:19
enforcement 155:13
engage 86:14
engagement 68:10 190:1
195:11 212:3 282:13
322:15 349:14
engaging 219:21
Engine 3:9 36:7, 11
41:21 48:12 50:6 80:13
83:10 111:7, 10 114:9
143:12 158:7 204:17
205:4 209:20, 22 232:22
246:7 258:21 271:16
273:15 316:7 319:21
320:6 326:8
engineering 309:15
engineers 155:4 289:13
Engines 13:17 33:13, 14,
16 35:7 36:18 37:4
38:8 51:17 53:5 80:10,
13 87:3 111:4, 9, 13
122:15 125:16 255:11,
13, 17 264:1, 7, 17
266:17, 22 267:10 268:5
269:4 271:4 272:12
280:6 300:4 302:10, 13
311:3 326:12, 14 381:22
English 12:9, 14 135:19
136:2 251:7, 12 343:1, 7
enhance 218:8
enjoy 121:10
enormous 25:1, 12
128:13
ensure 21:13, 14 25:17
33:11 43:6 54:17 57:14
87:3 115:12 116:2
122:21 134:22 140:9
190:11 204:12 223:8
238:16 243:6 246:1, 11
255:8 269:9 280:22
284:4 300:21 314:12

317:5, 11 351:8 364:6
365:6 375:12 378:11, 16
381:13 385:14
ensures 319:5
Ensuring 31:19 134:9
262:20 279:8 305:6
317:20 318:9
entering 173:19 315:11
enthusiasm 202:12
enthusiastically 41:14
enthusiasts 183:9
ENTIN 9:15 306:14, 17
309:1
entire 16:1, 2 73:14
85:22 138:10 181:2
199:3 261:17 275:2
282:1 309:6 333:14
360:21
entirely 256:19
entrants 154:18 155:4
Environment 9:6, 22
11:8 15:17 40:1, 17
41:7, 11 57:21 58:11
74:15 81:14 96:22
98:12 101:2 129:10
187:11, 16 215:4 217:5
234:7 261:4 277:5
283:13 285:13, 16
311:21 313:14 322:12
329:14 330:12 348:7
356:18 382:10
ENVIRONMENTAL 1:4
2:2 4:4 7:15 8:18 12:3
13:4 17:15 24:19 29:15
31:17 35:10 37:5 50:13
71:17, 18, 20 72:6, 18
73:16 74:1, 13 75:22
83:18 86:16 101:15, 18
107:1 108:1 114:14, 21
122:10 123:10 149:6
157:9 163:11 166:9
168:20 171:20 172:10
173:1 178:11 191:16
206:15, 17 207:14
214:19 216:17 225:18
226:3 240:4, 6, 9, 15
263:4 268:15 271:8
273:1 274:5 276:20
279:10 280:10 284:2, 8,
12 285:18 286:1, 2
287:14 299:16 301:16
309:14 322:13 324:1
330:12 337:3 351:17
364:18 366:1, 13 367:7
373:12 377:10 378:6, 15
380:12 382:18 383:5, 7
environmentally 288:18
environmentally-friendly
288:21
Environments 4:6 5:15

10:7 74:11 129:6, 9
EOC 104:5
EPA 12:7 13:2, 16, 17,
20 14:11 15:2 16:3
17:18 19:9 20:22 21:12
22:2 24:1, 2 25:16 26:5,
8 28:7 29:17 30:11, 14,
16, 17 31:3, 9, 14 32:16
34:22 35:4 38:11 41:13
43:5, 6, 11, 12 44:16
45:9 47:10 50:8 52:20
55:14 56:11, 22 61:4, 21
62:22 63:3, 18 65:22
66:15 71:8, 20 73:14, 17
74:17 75:19 76:10, 15,
16 80:7, 8, 15 83:12
86:10, 20 87:4, 16 88:1,
14 91:17 93:1, 14 95:15
97:11 98:4 100:9 101:5
102:4 103:3, 15 105:15
109:3, 11 111:10, 15, 22
112:14 113:17 115:14,
22 116:2, 21 121:1
122:20 124:8 125:17, 22
126:11 129:12 130:18,
22 131:10, 19 135:6
138:5 140:2 141:5, 15
143:21 145:22 146:6, 19
149:8, 20 152:12 154:11,
16 155:2, 17 156:14
157:20 158:2, 19 159:10
160:22 161:2, 11, 15
162:9, 21 164:3, 20
165:18 167:15 168:9, 12
170:7, 15 172:13 174:13,
16 175:1 178:15, 19
180:12 182:1, 2 185:11
187:6 188:7 192:11
193:20 194:6 195:15
200:10, 20, 22 201:14, 18
203:17 206:14 208:3, 19
209:1, 9, 15 210:11
212:7 214:4 216:5, 12
217:13 222:20 226:1, 7
227:16 229:8 231:3
232:17, 20 234:12
235:10 237:4 238:14, 16
240:13 243:16 246:8
247:4 250:18 253:13
254:17, 19, 22 255:2, 8,
15, 20 259:8 261:1, 8
262:18 263:2, 21 265:3
266:15 268:17 269:8
271:2, 6 275:17, 22
279:20 280:4, 7, 18, 19,
22 281:1, 3, 11, 12, 13
282:2 283:2, 6, 7 284:2,
15 286:19 287:9 289:7
290:8, 14 291:5, 7 293:1
296:1, 14 298:9, 22
299:2, 5, 9 301:2, 18

305:9 307:14 314:8, 12,
22 317:9 318:19 319:8,
15, 19 320:2, 12 322:17
324:4, 21 327:9, 11, 14
329:12 334:1 342:2
345:13 352:12, 19
353:19 354:21 355:1, 18
356:12 358:22 360:14
361:8, 18 363:19 364:21
365:8 366:2, 15, 19
367:4, 9, 10, 21 368:17
370:10, 22 371:21 372:1
373:15 376:11 379:19
382:1, 13 383:18, 21
384:1, 5 387:13
EPA-HQ-OAR 20:1
EPA-HQ-OAR-2022-0985
1:15 23:10 39:8 54:2
69:10 79:13 94:13
110:7 137:9 252:19
344:13
EPA's 13:10, 12 14:21
17:10 19:21 24:15
25:22 27:13 29:20 32:9
34:17 36:6 42:3, 11
51:15 65:16, 19 72:22
76:7, 11 91:9 95:10
98:20 108:14 113:21
114:17 118:1 125:7
129:14 131:13 132:9, 16
133:11 135:13, 15 173:1
178:8 189:19 191:8
195:13 197:7 209:7
214:16 218:12 239:18
246:3 251:3 253:16
256:6 271:22 274:13
279:12 290:3 294:20
295:21 296:11 314:4
318:16, 17, 22 319:4
320:1, 10 331:20 342:8,
10 373:20
episodes 147:16
equal 203:1
equally 65:10 366:8
equipment 48:7 62:17
83:9 188:4 206:11
219:6 232:15, 16 325:20
326:5
equipped 48:19
equitable 51:12 138:1
239:1
equity 34:11 73:16
106:17 108:2 147:1
149:6 298:7 305:15
330:13 351:12
equivalent 15:22 34:7
210:9
ERANDI 10:19 358:16,
19
Eric 50:20 51:2

Erie 256:5 257:16
ERIK 3:13 50:20
ERM 277:13
erode 219:19
escape 119:19 328:12
380:21
especially 35:8 38:5
41:9 46:2 61:3 83:13
90:10 96:1 97:5 102:22
107:5 108:1 118:3
144:14 147:2, 21 157:6
181:17 183:17 190:20
191:14, 18 213:6 215:21
228:14 236:19 239:3
267:6 269:16 283:19
299:17 313:15 329:9
331:5 336:10 338:22
347:20 351:14 362:11
377:4 382:21 383:7, 9
essential 43:22 141:20
187:13, 18 298:9 325:16,
19, 21 326:20 349:20
364:3
essentially 242:10
Essex 116:20
establish 15:3 30:11
42:5 271:6
established 14:4 44:11
49:2 280:22 353:19
estimate 177:15 178:2
estimated 75:7 275:14
302:12 336:21
estimates 16:3 34:5
84:4 131:10 177:21
202:4 275:6 348:15
et 313:18
ethics 68:13
EU 187:1
Europe 133:10 186:20
381:9
EV 82:4 124:2, 14
133:10, 21 134:8 183:9,
12 208:18, 20 210:9
evaluate 122:20
evaluated 122:11
evaluating 205:2 271:15
Evangelical 8:18 274:4
285:18
Evangelicals 274:5
evening 21:8 96:19
358:19 364:14 367:22
373:6 375:15 376:5
379:12 382:13 385:5
387:13, 16
Event 2:13 67:18
events 104:1 105:3
108:6 130:4 165:14
168:1 184:3, 9 196:12
203:9 227:21 230:20
360:6, 20 380:5

eventually 168:9 312:17
 371:6
ever-strengthening 46:1
ever-worsening 172:20
everybody 267:6 289:9
 351:21
EVHybridNoire 183:8
EVHybridNoire 6:17
 183:7
evidence 20:10 96:2
 216:10 282:19 354:19
evident 144:22
evolving 299:7
EVs 80:20 81:12, 17
 82:7 85:9 87:14 122:14
 125:11 132:12 133:16
 135:3 340:6
EWART 9:8 294:9, 11,
 12
E-W-A-R-T 294:12
exacerbate 65:2
exacerbated 98:10
 331:12
exacerbates 55:17
exacerbations 150:22
 295:12, 15
exactly 202:3
example 12:14 105:5
 136:2 145:9 157:9
 228:10 231:22 251:12
 288:8 299:20 302:3
 313:10 316:17 343:6
 366:17
exceed 114:7 225:4
Excellence 301:19
excellent 29:3 292:5
excessive 360:11
exchange 204:16, 20
excited 199:4
excitedly 200:15
exclusively 243:2
excuse 20:4 27:8 30:16
 64:5 126:3 171:11
 205:5 228:12 252:15
 335:5
exec 81:3
executive 14:9 85:20
 253:8 258:17
exercise 150:10
exercised 191:12 254:10
exhales 350:13
exhaust 65:4 72:17
 80:14 99:21 163:19
 180:19 196:17 200:16
 235:17 256:19 257:8
 271:21 272:19 287:21
 320:3 323:20 362:14
exhaustion 203:3
exist 104:20, 22 267:14
 288:11 316:16 326:9
 375:7

existing 36:18 37:4
 38:7 125:10 184:18
 208:12 260:6 288:15
 289:14 316:8
exists 90:7 194:1
 219:10 264:14 269:21
expand 16:22 18:18
 245:20 246:5 273:2
expanded 333:12
expanding 299:8
expansion 204:22
expansive 43:18
expect 171:14
expectancy 283:18
 377:18
expected 15:6 16:22
 23:5 117:9 137:4
 186:20 222:14 252:14
 344:8 353:18
expects 99:8
expenditures 281:8
expensive 300:11 328:21
experience 49:10 51:11,
 14 55:2 58:21 65:11
 102:20 108:9 138:21
 150:11 153:20 221:4
 224:20 235:21 236:10
 253:10 259:7 261:7, 15
 329:2 351:10 360:7
 377:18
experienced 75:13, 15
 98:10 117:16 181:18
 234:21 306:20 312:14
experiences 27:7 46:14
 261:18
experiencing 59:6
 148:13, 19 196:10
 202:21
expert 280:22
expertise 282:12
experts 68:5 283:2
 284:10 294:18
explain 81:22 82:2
 155:3 199:1
exporter 123:15
exposed 65:14 93:5
 96:22 108:12, 19 139:11
 190:21 228:15 262:6
 331:6 338:19 347:19
 350:12 362:14
exposing 196:21
Exposure 27:18 46:5
 65:12 71:5 72:16 73:8
 76:13 96:14 108:10
 131:12 138:17 147:14
 150:8, 21 152:1 157:7
 185:5 196:6 224:21
 271:12, 15, 20 272:16, 19
 295:17, 19
exposures 128:6 271:19
 295:6

Express 11:5 75:14
 214:16 329:16 355:18
 357:9 373:5, 7
expressed 326:9
expression 67:6
extend 62:5 204:11
 320:7
extended 337:9 374:18
extending 255:2
extensive 49:9 221:3
extent 125:20
exterior 356:22
extraordinary 67:3
extreme 104:1 105:1, 3,
 19 108:6 117:17 118:10
 130:4 148:21 152:2
 165:13, 14 168:1 184:3,
 9 196:12 202:20 203:8
 221:13 227:20 303:4
 336:8 360:5, 20
extremely 128:7 347:13
 374:20
eye 58:22
eyes 346:3

< F >

face 130:7 145:11
 160:14 200:12 213:16
 323:11 350:15
faced 46:3
facilitating 20:17
facilities 150:4 271:18
 298:2 299:14 303:7
 360:11, 16 362:21
facility 93:3 273:6
facing 53:1 188:5
fact 29:4, 5 67:10 115:1
 148:7 169:21 173:7
 209:15 219:10 257:2
 276:19 333:13 357:12
 362:13 377:9
factor 374:15
factors 17:4 219:1, 8
facts 304:8 333:19
Fahrenheit 303:3
fail 31:11 81:16 82:10
 84:2 85:3 102:3 114:2
 115:8 171:19 376:16
failing 24:10 89:14
 144:17 184:17 350:6
 354:22
fails 114:19, 22 171:1
 208:7 209:18 269:6
 302:1
failsafe 178:15
failure 376:18, 22
failures 83:12
fair 194:6
Fairbanks 302:20
Fairfield 151:7

Faith 6:20 155:15
 162:3, 8, 12 164:2 172:9,
 15 192:4 285:16 304:6
 322:15, 17 370:3, 9
 371:11
faith-based 192:5
faiths 370:4
fall 85:14 180:16
 328:15
fallen 366:14
falls 113:22 148:4
false 326:2 365:19
 378:20
familiar 40:19 120:5
families 31:19 47:6
 65:21 91:11 92:6 98:22
 104:18 107:5, 6 121:18
 168:21 197:6 234:20
 235:13 236:17 329:1, 2
 378:9
family 28:5 45:6 46:14,
 21 58:18, 20 83:17
 84:11, 20, 21 96:6
 101:11, 19, 21 127:22
 152:14 156:18, 19
 181:15 196:5, 21 228:19
 234:19 235:12 276:20
 277:21 301:17 313:17
 337:9 338:12 345:3
 346:4 347:15 352:15
 353:2
family-owned 230:12
family's 55:2 118:14
 329:2 335:22
family-supporting 257:19
fan 287:9
far 73:11 76:10 84:3
 89:9 90:13 105:14
 184:7 186:17 248:10
 268:19 276:17 283:18
 288:17 319:5 333:6
 334:2 356:13 357:8
farmers 235:5
far-reaching 187:5
 188:17
fashion 190:17 288:21
fast-charging 49:22
faster 61:1 62:14 96:1
 112:6 329:14 354:11
fastest 354:22
fast-moving 105:8
fatal 225:2
father 193:12 340:11
 352:16 354:15
fault 354:12
faulty 279:15
favor 70:17 308:11
 366:10
FCEV 290:8, 10 291:9
FCEVs 291:18 292:3, 5,

7, 16, 21 FCV 291:11 fear 75:14 228:19 feasibility 125:8 314:21 feasible 14:13 17:2 81:17 115:19 178:6 182:4 208:17 232:10 253:18 283:4 354:22 365:5 feasibly 259:18 federal 14:3 18:14 19:12 20:8 21:17 48:18 52:13, 17 56:14 60:9 61:10 62:12, 15 157:22 162:17 206:8 218:16 235:10 238:10 243:3 245:15 318:5 363:4 369:4, 8 373:17 383:17 384:6 federation 217:6 FedEx 371:7 feedback 318:2 feel 90:2 203:10 247:21 248:17 267:3, 16, 18 346:3 feeling 117:13 310:7 feelings 313:2 feels 58:2 160:19, 22 346:2 FEELY 10:8 321:18 332:3, 6 feet 58:15 93:2 96:13, 15 156:20 273:6 360:15 fellow 92:11 330:12 felt 270:9 304:14 378:1 fence 359:12 fence-line 282:15 284:11 365:17 fewer 16:6 37:19 111:20 145:20, 21 213:3 239:5 257:1 275:9, 10 319:5 350:8 Fiat 155:11 fibromyalgia 360:7 field 91:6 95:3 100:19 103:12 141:1 195:10 198:13 212:2 214:18 227:13 230:16 322:13 335:17 340:13 fields 338:17 fifth 296:19 Fifty-eight 336:20 fight 118:19 216:17 228:6 311:15, 17 fighting 100:22 228:6 335:20 336:5 fighter 119:14 fills 257:7 final 17:20 26:9 29:20 43:12 61:6, 15 62:5 109:6 111:16 115:21	158:19 208:9 232:20 233:1 247:5 250:11 255:4, 18, 20 283:3 290:9 316:1, 17 317:11 366:2, 17 383:22 386:11 387:6 finalize 18:2 24:1 26:6, 8 30:1, 20 45:9 47:11 52:20 57:17 63:18 66:1, 15 73:17 88:14 90:15 91:17 93:16 95:15 97:11 98:4 101:5 103:3, 15 109:3 113:18 114:6 117:1 119:5 124:8 125:22 126:13 130:19 131:19 141:6 144:1 146:7 149:9 152:12 161:16 162:9 164:4 166:2 168:14 180:12 182:19 195:15 200:22 201:14 212:7 214:4 223:10 226:7 227:16 229:8 237:4 240:13 254:22 255:2 275:19 286:19 296:15 299:2 301:2 320:12 331:21 336:3 338:1 339:13 340:6 341:3 361:8 365:8 370:11 371:21 384:1 finalized 15:18 112:16 130:20 166:1 198:17 finalizing 19:5 41:14 76:16 100:12 106:7 118:19 203:21 208:19 225:22 Finally 17:5 19:7 21:12 25:20 50:3 67:2 112:8 228:7 financial 52:2 84:8 121:3 145:18 245:19, 20 277:16 281:5 371:18 financially 124:1 find 81:21 170:6 333:15 354:18 377:20 finding 280:20 findings 253:17 finds 37:16 117:12 315:19 fine 144:7 176:17 221:14 224:21 289:1 310:5 finger 325:3 finish 21:9 68:7 387:15 finished 18:20 fire 104:20 105:1, 3 271:18 295:6 fires 117:17 160:12 234:22 firm 277:13 287:7	first 23:16 51:16 62:4 77:7, 14 137:16 147:11 160:15 164:18 194:20 199:5 201:21 234:21 244:2 248:4, 7 250:2 253:4 254:17 259:20 280:20 311:14 315:3 334:21 341:13 344:20 345:8 355:22 370:14 374:9 386:17 first-generation 376:7 firsthand 142:6 first-hand 221:4 Firstly 147:4 fish 247:21 339:4 five 51:9 83:14, 16 103:20 285:16 289:10 fixing 231:4 flag 104:18 flagrant 55:10 flareups 28:6 flawed 87:21 fleet 33:13 49:1 80:3 112:12 134:1 138:2 140:6, 11 143:16 166:4 175:1 205:9 209:1 254:2 259:16 261:3 277:22 287:18, 19 288:12, 16 292:8 299:20 311:13 319:10 369:10 373:9, 10 fleets 16:16, 19 33:10 36:15 43:3 44:3 115:16 124:3 131:3 168:17 177:4, 6, 16, 19, 22 178:2, 6 190:7 218:2 219:11 245:4 254:6 259:15 260:7, 10, 20 275:6 325:8, 14 351:3 371:9 flexibility 190:1 219:9 292:9 flexible 14:20 204:15 370:22 flip 277:10 float 173:16 flood 99:9 378:2 flooded 361:2 flooding 98:11 105:13 212:17 222:13 295:9 307:5 339:6 floodings 152:2 floods 117:17 182:14 196:12 203:9 235:1, 2, 5 378:2 floor 154:7 178:15 248:9 Florida 57:10, 11 315:22 Floridian 57:12 59:20 flourishing 172:16 Flow 10:4 324:16, 17 FLX 256:17 257:14	focus 32:14 33:8 74:16 117:5 169:20 206:5 269:14 270:4 276:13 focused 50:10 54:16 129:10 317:19 Focusing 123:9 folks 166:8 385:17, 18 follow 88:1 369:1 followed 333:11 following 25:5 114:7 258:19 follow-on 128:11 follows 327:9 food 165:15 168:2 184:4 310:3 355:17 foolhardy 82:12 foot 47:7 footprint 50:12 189:16 268:2 298:2 Force 3:11, 16, 18, 19 4:16, 17, 18, 19, 21, 22 5:4, 7, 8, 21 7:3, 4, 5, 9, 10, 16, 20 10:10, 13, 15, 16, 19 43:5 45:3, 5, 8 47:10 57:11 63:10, 13, 16 65:22 66:8 81:10 86:22 87:10 88:10, 12 91:4, 6, 17 95:4 97:20, 22 98:3 100:20, 21 101:3 103:3, 12, 14 106:16, 18, 22 116:19 120:11 123:12 141:2, 4 193:18 195:11 198:13 200:22 201:10 212:3 214:12, 18 227:14 229:7 234:3, 8 237:4 281:4, 13 290:2 335:18 340:2 345:3 346:19 349:15 358:21 383:10 forced 80:12 86:18 forces 192:18 forcing 42:11, 14, 16 Ford 356:1 371:4 forecast 89:21 Foreign 315:10 forest 160:12 forgotten 230:21 form 29:4 65:6 68:10 72:5 100:1 196:19 317:5 formal 20:10 formation 75:4 144:11 311:4 Formed 189:6 former 39:21 279:18 354:14 formerly 192:4 forms 139:2 197:5 229:4 forth 14:9 266:19
--	---	--	--

fortunate 59:8 67:22
381:20
forum 19:3 186:7
204:10
Forward 9:4 10:21
17:17, 21 26:8 35:4
38:10 61:17 63:3 64:8
65:20 71:19 87:17
91:11 95:12 98:21
107:4 115:5, 20, 21
129:13 134:21 170:10
178:19 206:16 207:20
231:3 243:15 247:4
261:1 282:10 296:15
317:9 364:16 383:18
fossil 76:4 82:9 139:10,
20 154:9 177:5 215:9
244:14 274:18 300:9
313:12 323:13 326:1
353:3 356:5
foster 52:22 245:19
found 19:12 25:4, 6
72:22 73:3 131:14
184:22 208:11 257:14
277:13 317:2 331:16
Foundation 6:5 9:3
133:8 146:16 279:7
Founded 146:16 189:3
380:1
founder 119:13
four 37:22 101:10
212:4 331:11 359:17
fourth 243:18 254:12
359:15
fraction 231:11 232:13
260:9
frame 157:20
framework 170:17
Francisco 156:17
Franklin 380:11
frankly 313:16 353:18
354:19
free 114:13 140:14
244:14 312:12
freedom 326:20
freeway 336:20
freeways 27:13, 21
120:12 163:9 338:20
freezes 360:22
Freight 8:12 43:3 75:7
82:20 83:3 93:4 123:8
130:13 133:20 134:2
147:21 157:11 190:8
213:6 216:6 217:18, 19,
21 219:12 225:20
238:21 239:20 257:4
258:17 259:3, 6, 13
270:16 282:14, 22 284:7,
13 318:7 352:22 362:12
363:2 365:14 367:11

373:7 378:14
freight-related 364:19
frequency 99:9 186:13
Frequent 27:8 105:7
295:4, 5 351:14
Fresno 221:1, 6
Friday 177:3 285:3
friend 310:1
friendlier 357:14
friendly 154:18 288:18
friends 127:22 205:4
313:17 365:3
front 72:11 102:2
104:2 147:11 148:11
192:18 289:3 297:20
331:10 354:4
frontline 157:14 163:13
172:11 213:14 225:19
270:9 282:12, 15 284:11
365:3, 17
fronts 147:4
frustrating 75:16
Fuel 5:10 15:15 49:12,
16, 18, 22 50:1, 6 76:4
82:9 112:1 122:5
139:10, 20 177:5, 18
178:1 215:12 242:15, 19
260:19 274:18 290:7
291:14 299:21 301:20
302:11 303:2 320:5
324:19 353:3 365:20
371:19 373:20 374:22
fuel-cell 374:3
fuel-cell-powered 112:7
fueled 125:16
fuel-efficient 256:12
fueling 105:6 242:12
291:15 375:4, 10
fuel-powered 206:11
Fuels 3:7 35:18 36:2, 8,
9, 13, 14, 20 37:1, 2, 8, 13
38:10 51:6 81:9 154:9
215:9 242:11 246:13
300:9 302:2 313:12
323:14 326:1 356:5
378:21
fulfill 259:15
full 30:12 38:7 83:4
114:2 122:11, 19 156:22
199:16 201:20 234:9
256:6 261:22 274:10
283:10 302:6 312:21
317:11
fully 42:7 44:16 60:17
125:8 157:18 186:15
187:22 188:12 200:15
215:8 255:15 266:15
291:12 292:4
fully-informed 126:1
fully-sustainable 188:11

fumes 55:12 158:22
168:5 172:19 185:6
192:14 232:3 274:15
287:21
fun 261:18 386:5
function 67:6, 15 68:9
147:16 272:18 295:18
functional 232:10
functions 49:7 325:17,
21
Fund 6:12 8:20 164:17
167:13 276:8
fundamental 41:6
fundamentally 40:4
242:11
funded 155:22
funding 84:11 111:19
260:10
funds 369:4
funnel 258:5
funny 310:6
further 14:13 22:1 31:2
51:21 70:17 76:8 84:18
111:8 139:19 147:1
185:17 209:22 246:5
254:7 263:1 273:17
281:9 290:8, 21 312:17
320:16
furthering 365:10
future 36:18 42:22
44:19 45:20 57:14
90:18 93:11, 19 100:11
103:20 105:10 106:7
108:5 118:11 119:1
133:5, 9 141:10, 13, 17
155:7 156:1 162:16
165:6 167:18 184:11
186:16 190:7 191:17, 18
200:13 201:16 202:13
203:12, 20 206:7 214:3
218:3 228:1, 5, 7 235:9
237:3 242:6 259:9
274:12 279:6 296:3
318:6 320:9 335:21
367:10
futures 97:13 140:2

< G >
gaining 82:10 128:15
game 325:18
games 213:18 230:18
236:4
garbage 107:18 248:21
GARCIA 3:15 8:18
54:9, 12, 13 273:22
274:3
Garden 382:12 383:3
GARIBAY 9:4 282:5, 8,
9
GARREFFA 8:20 276:3,

6
GARY 9:8 294:8, 9, 11
GAS 1:7 12:4 14:1, 12,
14, 20 15:4 16:1 17:2
18:12 24:14, 15 25:15
28:8 30:15, 17 36:3, 21
37:2 45:16 46:16 48:11
49:5, 9 51:16, 19 52:11,
21 61:5 64:2, 9 65:17,
19 67:11 68:14 72:1
73:18 74:18 75:6 80:7
82:10 88:19 91:10
93:16 95:11, 18 96:7
97:12 98:18, 20 100:10
104:6, 13, 15 105:16
107:2, 13 109:4, 6
113:10, 14, 19 116:22
118:17 126:10, 20 127:5
129:15, 19 130:8 132:10
133:11 135:15 141:9, 15,
19 144:9 146:2, 20
147:8 149:20 150:14
152:8 158:16 159:10
165:4 170:2, 11, 20
174:7 176:2, 16 180:13
181:2 182:20 183:15, 21
189:19 191:11 194:10
195:14 196:15 197:2, 8
200:4, 7, 11 201:12
203:13, 18 204:21
207:15, 22 212:6, 10, 13
214:20, 22 215:1, 2
218:13 219:18 225:10
227:19 240:7 246:3
251:3 262:15 271:3, 16
272:4 273:7 279:13
280:13 283:21 290:4, 18
294:21 295:21 296:4, 7
298:8, 17 299:1, 15
302:7 305:1 309:20
310:20 312:7 314:10
317:12 319:12 323:6
336:4 342:10 349:18
359:1, 3 360:17 361:19
362:2 364:4, 22 365:20
373:11, 21 376:14 381:4
gases 14:4, 6 27:14
49:1 59:16 72:4 90:8
98:12 107:2 126:15
128:20 143:19 144:5
161:6 165:12 215:10
222:19 239:14 253:11
268:21 272:3 273:19
300:8 305:10 309:2
320:2 330:20 332:13, 18
337:21 340:22 347:6
gasoline 184:21, 22
272:11
gates 92:4
Gateway 234:11
gearing 235:2

GELB 7:11 216:21
217:2, 4
GELLER 3:12 47:14, 17
general 40:4, 5 47:19
83:3
generally 206:11 246:17
384:10
generate 93:7 130:1
143:16
generation 49:21 145:18
219:2
generational 46:3 99:3
202:16
generations 57:14 93:15
100:7 103:21 119:2
162:16 186:16 191:17
generators 303:10
generous 369:8
genocide 101:12
gently 202:12
gentrified 102:16
George 159:19 367:20
George's 181:11
getting 121:8 196:20
218:2 242:15 260:16
284:18, 19 310:6 348:2
GHG 37:1 44:17 48:17
50:9 87:6 124:13 219:7
242:7 253:14 254:14, 18
255:1, 16 291:12 292:13
295:2 296:3, 9, 16
314:22 315:8 316:1, 18
317:1, 7 373:17 374:5
375:3
GHG-reducing 47:20
GHGs 227:20 260:19, 21
giant 228:14
Gibsonia 95:7
gift 365:22
girls 347:14
give 20:20 66:20 87:1
125:14 164:13 198:11
241:4
given 20:15 33:14 56:8
113:15 283:9 290:5
292:8 353:18 375:8
giving 156:1
glad 32:10
global 67:1 123:18
133:1, 3 134:19 170:22
171:19 186:4 194:6
215:3 222:10 244:13, 15
245:10, 12 281:6
globally 60:11 120:1
281:21
GLORIA 10:6 211:12
244:2, 3 250:2 330:5, 6,
8
GLYNN 6:19 188:20, 22
189:1

go 19:14 22:6, 10 31:2
72:19 76:10 80:20
81:19 83:20 127:12
135:2 136:10 151:14
179:22 181:12 200:11
208:3 251:20 268:18
273:16 283:18 310:8
320:17 332:16, 17 333:5
335:7 338:6 343:14
346:6, 17 350:11 357:8
370:14 380:10 382:15
385:5, 6 386:6
goal 42:7, 11 52:18
85:14 121:5 125:22
143:9 244:15 245:8, 10
262:16 269:11 303:14
305:8 334:13 380:2
goals 14:8 36:4 84:7
85:11 112:19 131:3
141:15 154:14 158:12
161:14 163:5 208:3, 16
218:5 222:21 245:11
275:14 283:5 307:17
351:16 370:19
God's 174:12 191:6, 16
192:7 285:21, 22 286:18
304:7 305:11 322:19
323:10 324:9
going 22:5, 6 25:7
32:14 47:4, 18 56:15
89:6 135:8 171:10
181:14 182:13, 17
188:10, 14 201:19 242:9,
15 264:22 265:7 268:22
288:6 289:12 310:7
311:10 346:16 347:17
368:11 383:10 384:19
386:6 387:17
Golden 309:13, 17
310:15
Good 12:2 13:3 18:9
23:18 26:18 28:15 32:6
35:16 39:18 41:20
47:17 51:1 54:12 63:9
76:7 82:22 90:6, 9, 10
106:14 110:17 113:2
121:10 122:3 124:21
126:6 149:16 155:14
159:7 175:17 194:1
204:5 212:1 217:2
235:20 240:14 253:7
257:18, 21 258:1 263:10
266:12 268:18 270:22
282:8 285:11 287:5
297:16 304:2 313:3
324:15 330:8 332:6
358:19 361:15 364:14
373:6 375:15 376:5
379:12 384:20
good-faith 155:21
good-paying 324:19

goods 84:1 176:11
190:12 265:8 302:20
GORDON 4:4 71:12, 15
Gore 307:17
Gorska 67:14
Gospel 191:2 274:8
gotten 376:5 383:3, 4
GOULD 8:16 268:9, 12,
13
governance 101:16
Government 52:17
85:11 111:19 187:10
188:16 194:5 244:11
265:1 377:4
governments 17:16
245:15
government's 43:20
Governor 254:1
grade 58:5 89:14 193:9
grades 24:11 65:8
144:18 184:17 302:22
350:6
graduate 271:9
Grand 304:4
grandchildren 141:12
169:19
grandmas 141:3
grandparents 93:13
99:6 202:18
grandpas 141:3
granting 31:3
grants 155:22 318:12
grapple 366:9
grappling 218:21
grassroots 172:8 262:17
282:11 330:14 380:1
grateful 13:6 57:11
234:5 367:22 369:7
gravel 302:22
great 41:4 132:21
228:10 279:22 301:13
329:7 346:15 350:9
greater 25:18 29:13
76:14 125:14 131:9
142:9 144:3 147:16
158:8 225:16 314:22
316:1, 18
greatest 41:10 173:6
185:1 273:4 310:20
323:19 329:5
great-grandchildren
141:12
greatly 32:15 161:9
275:11 300:10 345:9, 10
349:2
green 84:9 85:5, 11
231:16, 19, 20 257:12, 14
298:12, 15 307:17, 18
312:7 352:22
GREENBERG 10:21

364:11, 14, 15
greener 260:17, 21
GreenFaith 6:14 172:7
GREENHOUSE 1:7
12:4 14:1, 4, 6, 12, 14, 20
15:4 16:1 17:2 18:12
24:14, 15 25:15 27:14
28:8 30:15, 17 36:2, 21
37:2 45:16 46:16 48:11
49:1, 5, 9 51:16, 19
52:11, 20 59:16 61:5
64:2, 9 65:17, 19 67:11
68:14 72:1, 4 73:18
74:18 75:6 80:7 88:19
90:8 91:10 93:16 95:11,
17 96:7 97:12 98:11, 18,
20 100:10 104:13, 15
105:16 107:2, 13 109:4,
6 113:10, 14, 19 116:22
118:17 126:10, 15, 20
127:5 128:20 129:15, 19
130:8 132:9 133:11
135:15 141:9, 15, 19
143:18 144:5, 9 146:2,
20 147:8 149:20 150:13
152:8 158:16 159:10
161:6 165:4, 12 170:2,
11, 20 174:7 176:2, 16
180:13 181:2 182:20
183:15, 21 189:19
191:11 195:14 196:15
197:2, 7 200:4, 7, 11
201:12 203:13, 18
204:21 207:15, 22 212:6,
10, 12, 18 214:20, 22
215:1, 2, 10 218:13
219:18 222:19 225:10
227:19 239:14 240:7
246:3 251:3 253:11
268:21 271:3 272:2, 4
273:7, 19 279:13 280:13
283:21 290:4, 18 294:21
295:21 296:4, 7 298:8,
16 299:1, 15 300:8
305:1, 9 309:2, 20
310:20 312:7 314:10
317:12 319:12 320:2
323:5 330:20 332:13, 18
336:4 337:20 340:22
342:10 347:6 349:18
359:1, 3 360:17 361:19
362:2 364:4, 22 373:21
376:13 381:4
GreenLatinos 7:13
224:14
greenwashing 327:1
Greta 249:7
grew 28:4 40:7 83:6
156:16 287:21 352:21
360:21 381:16

grid 25:3 81:16 124:5
177:20 260:1, 6, 14
292:11
grief 118:7
gross 248:10
grounded 55:2 365:2
ground-level 55:20 65:6
75:4 100:1 196:19
272:16 311:4
Group 7:17 8:5 71:18
133:22 231:17 244:12,
13, 18 245:5, 10
groupings 209:12
groups 17:14 108:8
109:9 148:5 230:19
231:9 232:14 233:8
244:20 359:5
grow 48:18
growing 55:11 66:13
89:18 98:9 117:6 189:4
216:9 261:16 337:19
growth 15:9 125:19
283:12 351:12
guarantee 240:8 263:3
375:9
guarantees 284:7
guardians 100:21
guess 346:20 348:10, 19
guide 189:8
guideline 165:10
guy 287:21
guys 166:1 346:21

< H >
H2ICE 255:13
habitats 222:5
half 57:3 92:3 156:13
176:17 180:16 182:8
288:12 317:21 335:19
Hampshire 312:9 313:6
hand 69:21 70:7, 9
77:4, 5, 11, 13, 16, 17
78:16, 18 169:6, 8
175:10, 12 179:22
194:17, 19, 22 207:3, 5
211:16, 18 220:7, 8
227:4, 6 229:16 230:2, 4
233:14, 15, 17 243:22
244:1, 4, 6 249:21 250:1,
4, 8, 13, 14 276:10 294:4
296:22 297:2, 6, 7
321:22 327:22 328:2
330:1, 3 334:21, 22
335:4, 7 341:11, 12, 15,
19, 21 352:6 355:8, 9
379:6, 7 386:15, 16, 19
387:2, 9
handbrake 347:1
handle 173:20
hands 67:3 195:3

happen 154:5 200:21
202:3 249:11 346:7
347:5 348:21 349:5, 6
375:1
happening 31:14 249:11
333:14 381:8
happy 112:20 124:15
146:12 382:14, 16
hard 90:2 112:13
121:16 159:2 324:21
334:3 338:14, 16 347:13
348:2, 15
hard-earned 123:21
harder 55:17
hardest 236:14 331:7
hard-to-decarbonize 36:5
Harm 9:9 34:19 174:10
213:12 277:18 297:14,
22 298:22 301:7 323:1
339:3 350:1 353:5, 7
366:1
harmed 41:10
harmful 14:6 15:3
27:12 32:10 64:8 72:7
76:4 100:2 107:7 130:1
134:10, 12 147:6, 12
150:18 161:7, 9 180:20
183:13 191:10 196:22
200:17 213:12 215:14
225:5 284:4 291:9
304:13 319:9 320:11
336:10 349:21 353:5
359:5 368:13 381:1
harming 139:22 229:4
270:6
harmonizing 206:16
harms 33:9 46:3, 12, 20
64:13 71:2 89:19 95:13
96:10 99:12 101:15, 18
108:8 109:9 147:22
156:2 163:7 213:5, 20
222:2, 13 290:22 329:8
337:16 340:20
Harm's 297:19
Harris 360:19
Harrisburg-Lancaster-
Reading 145:4
Harrison 327:18 341:13,
14
harsh 302:17
harshly 233:3
Harvey 361:1
hat 353:8
H-A-U 335:13 339:20
haul 33:10 71:18 81:7
239:21 259:5 291:20
363:1 378:15
hauling 43:2
haunted 280:10

HAUPTMAN 10:9
335:12, 13, 16 338:6, 8, 9
339:18, 19, 20, 22
H-A-U-P-T-M-A-N
338:10
Haven 151:3
havoc 144:12
hazard 264:9
hazardous 225:3 272:15
300:5 331:12
haze 221:17, 18, 22
222:7
HAZEL 5:21 140:18, 22
H-A-Z-E-L 140:22
hazy 312:22
HDB 163:10
head 296:2
headache 310:7
heading 40:15
headliner 357:1
headquartered 73:8
headquarters 287:15
Health 9:9 15:7, 13, 17
16:5, 6 17:15 24:17
25:1, 9, 13 26:3, 4 27:15
28:19, 22 29:8, 12, 19, 22
30:4, 6 31:8, 16, 22
32:18 34:10, 13, 16 35:7
37:5, 13, 18 41:3 45:11
46:12, 20 51:13 52:4
55:13 56:21 57:20
59:19 60:14 63:15, 20
64:13 66:17 67:2 68:12
70:21 71:2, 4 72:16
73:15 74:13, 15 75:8, 12,
20, 22 76:4, 11, 18 88:16
90:4 91:13 92:11 95:6,
13 96:10 97:13 98:6
99:12, 15 100:11 101:8,
17 102:21 103:17
104:18 106:7, 17 107:7
108:2, 4 109:1, 9 113:17
114:21 117:6, 8 118:2, 4,
5, 22 119:16 120:6
121:10 126:15 127:11
128:13, 16 129:11, 17
130:3, 6, 12 131:5, 11, 18
134:7, 18 139:18 140:1,
11 143:21 145:16 146:5
147:1, 2, 5, 10, 13, 21
148:12, 14 149:6, 10
151:17 152:3, 4, 10
154:15 160:14 161:4
165:10 166:9 168:20
172:17 174:2, 18 181:14
182:21 183:14 184:1
185:10 187:17 190:19
193:10 194:8 195:17
197:1 200:18 201:16, 19
203:2, 12, 20 208:4
212:12, 13, 22 213:20, 22

215:4, 17, 20 216:16
222:2 224:18 226:6
227:21 229:3, 5 234:6
239:17 247:20 257:8
258:1, 8 261:17, 20
262:1, 2, 7 264:6, 18
267:1, 4 269:2, 12 271:9,
11, 14, 20 272:7, 17, 19
273:2, 4 275:9 276:18
277:4, 20 279:20 282:20
283:17 284:12 286:9
290:21 294:22 295:3, 11
296:12 297:13, 18, 19, 22
298:6, 9, 12, 15, 18, 20, 22
299:15, 17 301:3, 7
304:7 307:15, 16 310:17
313:3 314:7, 10 318:7
322:20 324:7 328:19
329:1 330:12, 13, 21
331:4, 19 335:21 345:18
348:19 350:2, 18 351:8,
21 352:18 353:5, 11
354:6 360:13 366:8
371:19 377:1 378:16
385:13
healthcare 37:9, 22
149:2 298:4, 17 299:12,
14, 19 300:11, 22 329:3
348:7, 8 371:19 377:22
healthcare's 298:8
health-damaging 72:13
health-harming 238:12
healthier 329:3 352:19
health-protective 34:22
35:2
health-threatening 55:14
Healthy 4:5 5:14 10:6,
17 24:22 28:17 57:14
58:2, 10 74:10 113:8
121:17 126:8 128:11
129:6, 9 143:6 198:15
267:16 274:11 330:11
331:15 338:21 350:6
352:17
hear 17:19 21:19 58:16
77:10 180:6 181:11
207:10 226:16 241:1, 4,
8 244:9 247:14 248:19
283:1 346:13 359:18, 21
375:22 376:2, 3 382:9
385:17
heard 34:2 106:20
231:3 249:19 345:20
347:8 353:21 354:17
382:13 385:16
Hearing 12:4, 9, 16, 18,
21, 22 13:6, 14, 19 17:17,
20 18:5, 8, 10, 15, 19, 22
19:8, 15, 16, 20 20:2, 3, 9,
11 21:3, 9, 10 22:1, 7, 11
24:2 26:10 29:3 69:19

70:6 77:2 83:1 91:4
135:15, 19 136:4, 5, 8, 9,
10 137:12 169:4 175:8
187:7 207:1 211:14
217:4 220:5 227:2
229:14 251:3, 7, 14, 15,
18, 19, 20 252:22 283:1
286:6 294:2 321:20
327:20 329:21 342:10
343:2, 8, 9, 12, 13, 14
344:16 387:14
hearings 23:12 109:13
137:11 318:2 344:15
345:5
heart 29:15 71:7 72:14
102:13 149:4 215:19
224:22 228:4 276:16
328:19, 20 339:16
347:15 354:1 376:19
heartened 224:15
heartening 271:4
hearts 339:1
heat 46:2 55:17 118:10
130:4 148:22 150:17, 19
160:11 199:18, 21 203:3
215:3 228:3 295:4
336:8 378:2
heats 338:13 339:4
heatwaves 182:13 196:11
heavier 292:2
heavily 96:17 125:9
139:21 347:4 381:17
heavily-trafficked 377:17
heavily-traveled 159:18
heavy 25:7 29:13 40:20
61:8 70:22 83:9 85:1
90:14 95:11 96:13
102:21 104:5 105:16
126:22 138:6 142:4
143:10 151:9 152:9
164:4 181:13 188:3
212:6 231:11 234:12
240:8 255:12 259:12
260:5 280:5 291:11
303:16 304:9 309:19
310:17, 21 311:1, 14, 20
328:19 329:6 332:11
354:15 360:8
HEAVY-DUTY 1:7 2:6
12:5 13:16, 21 14:2, 3,
12, 14, 16 15:1, 18, 20
16:4, 19, 21 18:13 23:22
25:15, 18 27:2, 8 28:3, 9,
20 29:21 30:15 32:9
34:7 35:22 36:5, 12
38:3, 13 41:22 43:16
48:9, 14, 17 49:1 50:4,
14 51:17 52:20 55:22
61:3, 4, 8, 16 64:4 65:13,
20 67:12 68:1, 15 71:10
72:1, 4 73:13, 19 74:18

76:2 86:21 87:13 88:22
91:10 95:18 97:12
98:17, 21 99:21 100:10
104:14 107:3, 10, 15
108:11, 15 109:5, 7
111:2 112:9 113:12, 19
114:16 115:2, 12 116:1
117:3 118:17 119:3
121:19 123:7 124:8
125:4 126:11, 21 127:17
128:18, 21 129:13, 15, 21
130:11, 13 131:7, 15
132:10 133:11, 12, 17
134:1, 11 135:3, 16
138:14 140:5 142:1
143:8, 15, 19 144:6
146:20 147:9, 11 149:21
150:15 154:21 156:15
157:1 159:11 161:6
163:3, 14 164:6, 21
165:2 167:16 172:14
173:13, 22 174:15
176:15, 22 180:13, 22
181:21 182:1, 7, 11, 20
183:15 184:21 187:2, 21
188:4 189:20 190:8
191:9 192:12, 21 193:21
194:2, 7 195:14 196:2,
17 197:8 200:10 201:13
203:14, 19 204:17
207:15, 21 208:18 213:5
214:20, 21 215:6, 17
217:12 218:12 220:19
223:1 225:5, 12, 17, 22
229:1 231:13 232:19, 22
238:15 239:5, 6, 8, 12
240:7 245:5 246:4
249:5 251:4 253:12, 14,
15, 17 254:2, 3, 7, 8, 11,
19 255:1, 3, 4, 6, 9
268:17 270:10 271:3, 7,
21 272:3 274:14 275:11
276:10 277:1, 6 279:13
288:9 289:6 290:4, 12
292:14 294:21 295:22
296:8 298:10 299:1, 10
301:5 304:12 308:13
312:8 314:4, 12, 20
317:4 319:10 323:20
324:4 326:5 329:12
330:18 331:17 332:22
333:20 334:7, 15 342:11
351:1, 16 353:4 359:1,
16, 22 361:19 362:8
363:5, 8 365:5, 15 371:3,
22 374:16 379:19
381:11
Heavy-truck 329:8
heels 112:15
hefty 102:19

heightened 46:14
held 334:8
Hello 71:15 81:7 82:19
97:19 135:12 137:18
146:12 201:8 224:12
241:13 244:9 250:22
256:4 274:3 289:22
301:15 338:10 342:7
376:2
help 31:22 36:2 46:17,
19 48:14 50:2 64:12
90:17 96:9 99:11, 13
105:17 115:11 118:9
147:9 161:17 172:20
173:11 174:13 181:3
189:6, 8, 14 197:4 209:3
222:7 229:1, 2 236:17
245:20 262:18 269:9
270:3 275:22 287:16
288:11 311:13 315:2
324:2 336:6, 7, 11 339:9
340:8 351:3 360:13
364:2 372:2
helping 20:18 46:20
61:2 154:13
helps 298:15
hemp 356:2, 3, 21
HENRY 6:19 188:20
189:1
HERZOG 9:9 293:22
297:4, 13, 16, 17 300:19
hew 30:22
Hi 45:2 57:9 66:7
100:18 129:4 132:4
153:12 164:13 175:17
198:10 207:10 212:1
214:11, 15 234:2 238:8
261:14 276:6 279:4
312:5 317:18 335:12
339:19 345:1 346:13
355:15
hidden 209:14
high 27:7 55:6, 18 58:6
59:5 72:16 73:4 85:8
87:7 89:15 97:1 104:7
127:2 139:9 144:2
148:6 160:11 173:10
181:16 222:12 230:16
289:9 311:16 324:18
329:9 330:10 350:13
380:11
high-efficiency 49:20
higher 48:22 65:14
82:5 102:12 139:11
150:8 160:6 181:22
213:10 224:22 236:11
307:20 328:20 330:22
336:18 337:5 348:17, 19,
20
higher-than 65:11 108:9,
12

highest 96:14 208:17
347:8 360:20 381:10
highest-ever 138:21
High-Level 186:7
highlight 28:21 47:19
254:16 315:1
highlighted 29:18
highlighting 28:19
highlights 54:20
highly-polluted 128:1
high-ozone 150:20
high-pollution 347:20
high-powered 315:18
316:4
high-quality 381:13
high-traffic 72:19 213:7
331:2
highway 31:21 58:12
138:12 150:3 156:21
181:10 192:21 193:2
196:3 199:2 273:11
292:14 302:21 337:10
347:11 350:12
highways 27:1, 21 70:22
71:3 84:16 90:11
101:22 102:18 127:15
128:1 145:2 151:10
173:4, 8 176:20 181:18
196:4 213:6, 11 216:4
221:6 228:12 286:6
323:17, 19 329:9 338:17
340:13 362:12 377:18
383:10, 11 384:14
HILL 6:6 81:4 92:1, 13
149:13, 16, 17
Hillsborough 57:22 59:8
hinges 243:2
Hispanic 40:16 337:9
377:16
historic 40:9 42:11
216:10 254:18 276:16
historical 173:3 185:19
323:17
historically 41:2 236:11
historically-marginalized
290:22 337:2
history 36:14 41:6 42:2
217:13 248:1 333:7
353:11
hit 78:6 236:14 331:7
348:2
hold 20:16 185:3
214:18
holders 14:18
holding 67:3 333:22
holds 226:5
Holiday 7:18 230:11
holidays 261:18
holistic 247:2
home 66:21 84:12 92:1
120:17 127:16 138:14

144:2 151:3 156:19 176:8 196:7 248:16 274:21 310:8, 11 359:10, 17, 21 361:2 362:20 377:6, 7 homes 58:15 71:1 105:5 151:21 165:16 168:3 184:5 hometown 377:6 honest 201:20 honor 73:15 171:16 hope 141:13, 16 166:8 168:20 188:7 190:17 200:20 204:11, 20 205:21 206:6, 14 249:5 305:4 334:5 hopeful 214:3 274:12 Hopefully 382:8, 13 386:7 hopeless 117:14 118:15 HOPKINS 8:14 263:7, 10, 11 horizon 374:22 horrific 327:4 Hospital 3:22 16:7 65:3 70:17 147:18 180:21 hospitalization 336:17 hospitalizations 148:7 295:16 hospitalized 151:15 hospitals 297:22 298:13, 15, 19 300:2 host 219:1 hosting 345:4 346:7 hot 151:18 203:3 235:2 338:14 339:7 hotel 263:19 266:20 hotspots 37:7 92:10 hotter 105:10 hottest 89:7 105:9 Houghs 306:22 307:3 hour 127:17 hours 81:19 292:10 house 58:13 87:22 96:5 196:2 199:12 household 276:15 housing 173:5 213:8 336:22 Houston 358:21 359:11 360:9, 18 hub 26:22 hubs 147:21 213:7 290:20 292:19 Huffington 308:1 huge 177:11 199:8 226:5 249:3 288:4 human 52:4 120:21 129:10 172:17 191:6, 10 234:6 281:5 286:9 295:3 304:7 322:20 324:10 327:4	humanity 186:9 308:16 377:3 humans 172:15 humid 151:19 203:4 humidity 104:21 Humphreys 327:18 341:13 HUND 9:16 309:9, 12 hundred 140:7 146:18 166:5 174:16 283:2 286:21 365:12 371:6 379:21 380:4 hundred-percent 175:2 Hundreds 30:4 62:3 231:8 hurdles 246:18 Hurricane 193:15 361:1 hurricanes 105:12 117:17 118:10 212:17 360:21 HURTADO 7:9 211:21 212:1, 2 hurtling 279:22 husband 95:8 96:4 101:10 201:9 228:2 236:2 248:15 339:18 hybrid 49:10, 11 111:12 hybridization 48:22 hybrids 49:11 210:1 hydrocarbons 381:2 hydrogen 42:18 48:13 49:15, 16 50:5 111:5, 13 112:1, 6 125:16 255:10, 17 269:3 270:3 290:7 291:4, 14, 16 292:19, 21 309:3 320:8 374:2, 6, 22 hydrogen-engine-powered 112:4 hydrogen-fueling 245:16 hydrogen-powered 326:7 HYE 6:20 175:6 191:21 192:2 hygiene 271:9 < I > I-5 92:17 I-70 28:4 310:2, 5, 10, 16 311:11, 18 I-75 58:13 I-90 236:15 I-95 40:19 74:22 159:18 IC 241:17 ICCT 208:11 314:20 315:18 316:8 317:2, 9 318:11 ICE 48:18 339:4 ice-efficiency 316:14 317:8 ICEV 210:3, 6 ICEVs 209:16	icon 12:11 135:21 226:17 251:9 343:3 IDA 7:10 193:15 214:9, 11, 15 ideal 95:21 identified 33:4, 7 145:15 259:17 284:6 316:8, 9, 13 320:3 identifies 284:2 idle 192:18 264:7 266:22 idling 33:19 300:1 360:1 ignore 58:7 ignoring 87:5 124:13 IJJA 182:10 245:20 369:5 ILEAGH 6:10 161:19, 22 ill 28:2 59:6 150:8 151:14 ill-advised 279:14 illegal 326:12, 14 Illinois 241:18 263:13 264:20 266:14 illness 65:2 130:3 149:1 182:15 203:7 294:17 312:18, 20 313:5 illnesses 16:8 215:19 262:9 282:18 291:1 336:16 376:21 imagine 173:21 235:20 333:8 385:5 imagined 160:15 immediate 35:20 37:18 38:4, 11 45:15 147:5 161:3 296:12 322:14 immediately 36:22 141:8 359:11 immigrants 140:13 immune 97:10 248:17 immunology 160:4 impact 59:14 83:17 86:8 113:13, 15 119:16 122:16, 18 139:16 160:4 165:1, 4 167:17 191:16 201:19 205:3 209:5 228:1 239:8 246:15 256:9 257:12 258:3 261:22 262:6 264:5 267:19 277:15 286:12 301:16 304:12 323:16 330:17 348:17, 19 353:16 356:11 366:5 377:2 impacted 16:12 92:20 97:5 101:19 102:22 103:22 140:1 142:11 205:19 235:13 239:4 282:17 310:1, 9 345:9, 10, 21 347:13 362:18 364:19 380:13, 17 impactful 62:22 150:20 284:18 378:4 impacting 65:10 100:6 105:6 185:2 235:6 267:13 347:4 380:14 impacts 16:13 26:4 36:17 37:5 45:21 46:12, 15 56:4 59:19 75:12 76:4 98:11 99:8 114:13 115:9 117:8 118:4, 5 120:6 123:10 126:15 127:11 129:10 130:12 134:6 142:15 144:21 147:10 148:13 159:1 166:9 168:21 182:13, 21 184:8, 10 185:7 187:16 189:13 196:10 200:1, 5, 18 202:1 208:4 212:19 221:4, 10 225:18 226:2, 3 255:16 261:20 262:2 267:6 272:8 274:16, 20 282:14 283:10 284:12 286:9 298:3 300:21 318:7 323:13 337:17 340:21 360:18 363:7 368:14 371:20 380:19 382:17, 20 383:6, 8 384:20 385:1 impairing 221:17 impassioned 34:2 impeded 116:2 impediment 34:19 impediments 246:19 impending 249:13 imperative 114:5 149:7 impermissible 279:14 implement 87:9 189:5 298:10 325:9 376:12 implementation 33:4 43:8 86:21 119:16 225:11 implemented 34:9 263:3 325:14 363:18 implementing 42:3 163:3, 10 216:11 296:15 298:14 implications 154:17 163:4 implore 59:21 233:6 277:20 importance 54:21 68:6 133:6 important 13:20 18:4 27:15 36:8 43:2 46:18 50:13 51:22 55:16 57:17, 20 65:20 91:11 95:12 98:21 99:10 107:4 112:14 113:17 117:1 118:18 119:5
--	--	--

126:19 129:13 155:9 158:15 170:10 196:9 203:16 207:19 218:7 220:18 222:4 234:5 258:4 275:14, 20 296:1 317:7 318:3 324:22 327:3 332:14 338:2 339:13 340:7 341:4 364:9 371:11 384:14 Importantly 101:9 118:22 215:13 292:14 imports 16:10 impossible 67:5 120:16 impractical 87:17 327:9 improve 35:7 48:12 50:1, 11 82:13 111:3 125:3 147:2 155:18 190:10 209:19 216:16 226:5 333:5 363:6 improved 49:4 64:16, 17 99:16 316:12 371:19 improvement 161:4 209:15 269:4 316:15 improvements 31:16 34:11 37:18 125:4, 12 158:8 159:21 209:8, 22 210:5 270:4 320:14 373:18 improves 292:9 improving 143:20 163:15 inaction 142:15 346:22 348:16 inadequate 272:6 inaudible 215:10 216:4, 5 inbound 173:20 incapacitating 310:14 incentive 154:2, 6 incentives 52:2 61:2, 10 112:1 206:6, 9 208:14 218:17 277:16 317:2 318:12 incentivize 260:19 incentivized 111:18 incentivizing 276:11 incidences 310:12 330:22 incidents 184:8 include 61:16 62:6 107:16 151:18 178:16 190:22 275:8 included 23:13 111:8 126:12 137:13 143:22 170:12 184:10 210:4 253:1 344:17 includes 43:13 49:17 123:3, 7 138:7 191:5 219:10 228:9 274:11 including 16:11 17:14 29:14, 16 37:10, 18 46:9 48:11 49:16 50:6 51:8	53:3 57:16 60:14 62:4, 7 65:13 70:20 96:4 103:21 105:7 108:11 117:7, 17 118:1 121:2 123:19 125:15 126:22 127:22 130:3, 14 134:5 147:13 148:6 151:20 174:4, 11, 21 177:14 193:11 196:11 208:13 213:2 219:1 221:21 223:3 260:1, 13 262:22 271:16 272:18 274:21 287:11 290:6 292:18 304:9, 18 308:1, 6 315:5 323:9 326:7 332:9 350:20 351:16 354:16 361:3 363:9 371:4 381:11 inclusion 64:7 239:18 income 66:22 73:1 139:7 142:7 185:4 371:17 incomes 24:19 148:1 incorporate 114:11 115:8 348:14 Incorporated 301:17 322:10 324:16 incorporating 209:2 218:22 366:16 incorporations 191:14 incorrect 279:16 280:11, 16 366:22 increase 16:18 49:19 50:2 62:17 65:3 84:4 99:9 117:10 154:12 155:17 156:5 209:5 210:9 227:20 228:3 260:19 292:22 295:15 303:6 305:5 333:2 increased 111:14 114:10 123:12 130:5 144:10 147:17 148:15 150:11, 19 212:17 238:21 257:12 263:1 303:12 333:1 345:19 371:18 increases 292:7 increasing 15:9 36:19 56:17 61:12 62:7 89:10 126:18 127:7 152:1 155:9 158:5 186:12 190:19 371:5 increasingly 105:11 158:4 incumbents 154:20 independence 123:17 Independent 4:10, 12, 14 80:4 82:22 85:21 177:14 277:13 India 120:3 186:20 Indian 92:2 101:13 Indiana 26:21 168:3	Indianapolis 26:21 27:5 28:1 165:6, 9 indicate 69:20, 22 70:6 77:3, 11, 15 78:15 104:19 169:5 175:9 194:16, 21 207:2 211:15 220:6 227:3 229:15 230:1 233:13, 16 243:21 244:3 249:20 250:3, 7, 13 294:3 296:21 297:5 321:21 327:21 329:22 334:21 335:4 341:10, 18 352:5 355:7 379:5 386:14 387:1, 7 indicates 209:12 indication 187:8 indigenous 37:11 92:6 101:10, 14, 21 102:11, 15 140:12 183:19 234:8 indirect 126:16 individual 6:9, 11 8:16, 17 67:2 74:12 75:18 150:4 297:3 354:3 individuals 148:8, 10 indoors 90:4 96:18 induced 150:11 industrial 75:12 102:19 145:7 151:12 261:16 271:9 290:20 360:10 industries 121:1, 5, 17 122:7 334:4 industry 15:1 17:14 43:21 50:12 56:9 83:11, 16 84:14, 18 85:12, 22 86:15 112:17 121:2 157:21 190:11 217:12, 15 218:8, 14 219:19 223:6 230:21 231:14, 20 232:10 233:7 242:13 279:17, 22 281:22 289:13 304:10 319:5 326:19 327:7 353:15 354:8, 12 356:8 365:22 366:10 367:6 368:20 369:2 373:15 374:4 377:4, 9, 17 381:15 industry's 115:15 305:13 319:2 inefficient 87:8 inequalities 184:18 185:19 inequitable 226:2 290:21 inequities 212:12 inequity 284:2 inescapable 235:22 infant 328:21 inflammation 272:18 Inflation 15:11 52:3 115:9 208:15 216:11 223:5 253:19 277:17	283:10 292:18 318:12 363:15 369:5 inflection 377:3 influence 219:9 356:4 informally 20:9 information 29:5 informed 125:9 informing 189:11 Infrastructure 15:11 43:1, 14 44:4 52:3 56:13, 16 62:9, 11 73:14 81:12 87:12 112:5 115:10, 13 123:5 125:12 141:14 153:18 177:20 186:22 190:4 205:11, 15 216:12 218:17 219:3 243:3, 6, 9, 13, 14 245:16 246:18, 22 247:6 259:20, 22 269:10 277:11 288:15, 22 289:5, 15 292:12, 17 315:4, 10, 14 318:13 348:18 351:2 363:12, 14 374:13, 19 375:4, 10 infrastructures 42:16, 18 43:7 inhabit 68:9 inhale 378:19 inhaled 150:18 inhaler 309:22 310:11 312:16 inhalers 236:8 inherit 57:21 inhibit 219:9 initially 77:9 162:19 194:15 243:20 249:18 296:20 341:9 386:13 Initiative 86:11 244:18 initiatives 183:6 231:20 injectors 50:6 injured 117:22 injuries 117:19 203:8 injury 149:1 injustice 72:6 174:14 240:7 275:22 284:3 324:2 377:11 injustices 67:8 178:11 innovating 49:20 innovation 52:1, 22 303:16 334:10 innovations 17:1 innovative 50:15 362:6 input 17:13, 17 88:1 210:12 inside 263:18 inspection 128:8 inspire 162:2 370:2 inspiring 189:11 install 177:19 installation 219:3 246:17
--	---	--	---

instance 221:19	9 138:9 150:2 196:3, 4	259:17, 19 261:3 272:17	296:21 297:5 321:20
instances 219:14	interstates 58:12, 14	304:9 330:13 347:16	327:20 329:21 335:3
in-state 33:17 362:22	intrinsic 191:6	items 289:2	341:9, 14, 18 352:4
Institute 5:13 260:3	introduce 192:22	It'll 194:8	355:6 379:4 386:13, 18
institutional 189:17	introduced 187:2 356:18	its 15:2 31:4 44:7	387:1, 7
institutions 189:15	introducing 23:11	66:20 73:15 89:19 90:4	joining 254:11
285:17	137:10 252:20 344:14	109:11 113:18 114:6	joked 310:4
insufficient 246:1 314:5	introduction 111:4	121:16 125:2, 22 146:4	Joliet 264:20
354:20	154:21	152:4 154:13 156:19	JONATHAN 7:18 230:6,
integral 162:14 190:9	in-use 34:9	171:1 178:16 183:13	7, 10
243:8	invented 326:8	194:6 195:11 208:19	JONES 6:11 164:10, 13,
intend 18:2	inventories 52:9	212:3 240:4 244:13	14, 16
intended 18:22 288:11	Inventory 65:16 108:14	259:11 269:22 284:3	Jorge 169:2 194:20
intense 105:7 144:20	invest 43:4 56:18 320:9	288:18 291:7 307:14	Jose 120:9 195:20
148:20 160:11 203:6	invested 42:9 242:21	315:1 316:22 317:5	Joseph 322:15
295:4, 5, 7	investigating 271:14	319:12, 14 320:12	joy 213:19
intensely 304:13	investment 33:20 42:20	353:13 373:19	judgment 236:3
intensifies 193:14	44:15 219:4, 19 223:5	< J >	Julia 22:2
intensifying 212:16	246:10 269:10 292:17	JACOB 6:11 164:10, 13,	JULIANNA 8:20 276:3,
intensity 186:13 291:17	363:14 375:6	14, 16	6
interconnection 62:18	investments 15:10 16:16	JACQUELINE 7:11	Julia's 22:2
Inter-D.C 164:17	56:10, 15, 17 61:20	216:21 217:4	JULIE 7:5 201:5, 8
interdependence 247:6	62:13 115:11 141:13	January 52:5	jumps 178:2
interest 206:3 271:11	157:22 162:17 190:3	JARACZ 11:7 379:10,	junction 196:4
326:9	303:11 315:9 320:8	12, 13	June 18:1 19:10 204:12
interested 18:11, 15	384:6	JAYLA 8:13 261:11, 14	254:5 328:14
19:17	invisible 93:7	JED 3:9 41:17, 20	Junior 169:2 194:20
interests 194:10	invitation 22:16 38:19	JENNA 6:4 146:9, 14	Justice 4:4 7:15 24:20
Interfaith 6:10 11:4	53:13 68:21 77:21 79:3	Jennifer 352:2 386:17	29:15 31:17 35:10 41:8
162:1, 6 370:1	94:2 109:18 136:15	Jersey 10:18 11:8	46:8 71:17, 19, 20 72:18
Intergovernmental 305:1	152:20 166:15 179:5	40:14, 18, 20 276:8	73:16 74:1 99:4 108:1
interim 39:19 244:15	197:15 210:20 223:17	277:9 355:17 379:16	114:14 149:6 163:11
interior 356:22	237:12 252:3 265:16	382:10, 19 383:13 384:7,	172:8 173:1 174:12
intermodal 83:3	278:8 293:7 305:21	15, 21 385:7	189:16 197:6 202:17
internal 36:7 82:5	321:3 343:19 358:1	Jersey's 276:19	216:18 240:4, 9, 15
111:13 114:9 122:15	372:9	Jesus 191:2 274:8	262:19 263:4 276:20
125:15 209:8, 20 255:10,	inviting 109:11	Jewish 285:18, 19	279:18 284:8 285:19
17 280:6 316:7 326:8,	involved 169:17 243:13	JFK 40:15	286:1, 3, 19 304:19
12, 13	357:6	JIM 8:12 258:13, 16	305:15 322:13 323:10
International 9:18	involvement 169:22	JOANNE 7:16 227:9	337:4 364:18 366:1, 13
170:17 241:16 314:19	involves 45:15	Joaquin 221:3, 9, 12	367:7 371:13 378:6, 15
internationally 169:22	Iowa 312:10	job 234:5 261:20	382:18, 19 383:5, 7
170:9 171:2 183:11	IPCC 45:13, 17 117:7	266:18	< K >
internship 159:13	171:18 188:7	jobs 82:14 217:9	Kansas 376:7 377:6, 15
interpretation 12:10	IPL's 162:2	257:17, 18, 21 258:1	KAREN 9:17 312:2, 5
135:21 251:9 343:3	IRA 182:10 245:19	292:17 313:17 324:20	karmically 291:13
interpreter 342:14, 15	317:2	363:15 364:5 381:13	KATE 3:5, 7 28:12, 15
interpreters 39:4 53:20	Ironbound 384:21	363:15 364:5 381:13	35:13, 16
69:6 79:9 94:9 110:3	irreparable 347:5	job-sustaining 190:11	K-A-T-E 28:16
137:15 166:20 179:10	Irrespective 127:14	JOEL 10:17 352:9, 10,	KATHERINE 3:15 5:16
197:20 211:3 223:22	irritant 58:10	14	54:9, 12 132:1, 4
237:17 265:21 278:13	irritation 58:22 130:16	John 233:10, 15 250:12	K-A-T-H-E-R-I-N-E
293:12 306:4 321:8	272:20	274:8	132:5
344:19 358:6 372:14	island 46:2 307:6	join 45:8	KATHY 10:20 361:12,
interruption 342:13	ISO 287:13	joined 69:19 70:5 77:2,	15
intersection 75:11 117:5	issue 24:20 84:22 99:3	10, 15 78:15 169:4	KAUFFMAN 6:12
intersections 101:22	152:3 202:16 260:12, 17	175:8 192:9 194:16, 21	167:8, 11, 12
intersects 299:12	281:6 302:18 337:4	207:1 211:14 220:5	KAYLA 2:13 12:6 22:5,
interstate 27:1, 3 40:9	347:3	227:2 229:14, 22 233:12	6 135:8, 12 250:22
58:16 82:1 92:19 128:1,	issues 66:21 67:9	243:20 244:3 249:20	
	215:20 221:8 240:2	250:3, 7, 12 294:2	

342:7	313:3 322:22 329:2	latest 87:6 320:6	LEE 6:20 175:6 191:21
KCK 378:4	330:19 333:8 334:6	Latina 310:15	192:2, 3
keep 20:18, 19 90:4	347:12 348:22 353:4, 5,	Latin-American 272:9	left 120:22 284:19
158:15 160:20 163:5	7, 8, 10 354:2, 8 361:22	Latino 56:4 140:12	left-hand 226:18
192:18 334:4, 11 348:2	367:3 370:17 382:15, 22	195:11, 22 196:5 212:3	legacy 38:3 72:9 286:8
363:12	383:1 385:2	225:2, 11, 13 226:2	378:7
keeping 84:18 325:3	know-how 178:12	337:6 349:14 377:16	legal 307:12
keeps 185:11 243:7	knowing 356:21	Latinos 224:20 351:14	legally 81:7 115:18
KELLY 5:10 7:17 8:5	knowledge 60:22 282:12	Latinx 10:14 183:19	283:4
121:22 122:3, 4 229:12,	357:12	345:3	legislation 231:12 232:1
13 244:11	knowledgeable 247:18	laudable 234:6	333:11
kept 20:3 248:13	249:6	launch 257:3	legislative 88:11 333:14
307:14	known 100:4 101:12, 13	LAURA 3:5 28:12, 15	Lego 248:21 249:1
KEVIN 5:5 8:4 47:22	146:16 163:19 188:13	L-A-U-R-A 28:16	LEIGH 6:12 167:8, 12
110:14, 17 229:20, 21	192:4, 21 195:21 347:2	LAUREL 10:4 324:12,	lens 322:18
241:10, 13	360:8	15	Leo 198:20 199:5
key 14:4 46:8 62:3	< L >	LAURIE 4:22 103:7, 11	200:13
133:7 154:20 155:6	L.A 173:19 312:21	Law 15:11 52:3 115:10	lessen 212:19
163:15 197:5 208:10	LA 313:6	190:4 216:12 276:20	lesson 248:12
283:14 316:21 383:5	labor 303:12	318:13 331:22 351:2	less-polluting 264:22
Keys 355:4 386:22	lack 61:19 98:13 219:2	356:20 366:22 369:5	lethal 365:4
kicked 342:14	280:3	382:18 383:6, 10	letting 85:14 262:5
kid 236:7 261:19	lacking 354:19	lawnmower 332:20	309:7 369:20
354:14 368:11	land 92:22 97:4 127:14	laws 101:15 115:10	leukemia 102:13
kids 29:14 90:3 96:20	234:8 301:18 306:19	362:19	level 61:14 75:14 120:1
101:10 102:21 140:3	378:9	lay 133:7	121:14 185:4 187:4
197:1 202:5, 9 214:3	landfills 302:9	layer 213:17 248:8	208:18 212:16 225:5
235:3, 8 236:1, 9 237:2	lands 92:19 101:17	layering 313:1	269:9 330:14 350:13
262:10 336:13 337:9, 17	landscape 190:3 208:12	lead 17:3 27:10 89:10	levels 27:19 55:20 59:5
338:22 339:9 340:10	235:6	133:16 152:9 183:6	62:15 65:12 89:11
354:17 368:4	landscapes 222:8	194:9 206:14 210:7	99:18 108:10 114:1, 20
KIEFER 8:17 270:20,	language 12:10, 13, 16	219:3 242:18 246:16	127:7 131:4 148:15
22 271:1	17:12 34:18 135:20	295:18 304:8 327:10	160:7 161:16 163:18
kill 224:19 280:8	136:1, 5 251:8, 11, 15	372:3 374:21 375:5	184:15 185:1, 5 202:3
killer 120:4	343:3, 5, 9 365:19	leader 191:7 245:6	276:17, 18 277:2 309:5,
killing 235:5	large 20:15 21:6 161:8	283:7 352:17	20 318:22 326:19 333:1
KILLMER 9:14 303:21	176:9 177:5 191:15	leaders 171:3 189:11	336:9 347:9 350:6
304:2, 3	222:5 273:3 374:19	298:19	361:5 380:11
kills 119:20	377:12, 17 378:4	Leadership 14:10 86:10	leverage 118:19
KIMMEL 7:5 201:5, 8	largely 277:3 367:5	133:3 134:19 170:21	LEWIE 4:14 85:17, 19
kind 41:11 204:12	largest 24:13 33:3	171:5 236:21 351:7	LGBTQ 183:20
205:1 206:4 248:17	52:10 59:11 64:2 67:10	leading 31:15 48:3	liaison 322:9
270:2 287:19 347:1	72:3 88:19 95:17 98:14,	105:20 110:19 147:12	liberty 279:8
kindergarten 97:1	17, 18 104:12, 14 107:11	177:9 180:20 193:1	libraries 193:4
kinds 120:16	113:9 127:1 143:12	206:16 224:22 241:14	lies 221:1
Kings 221:20	146:17 150:13, 15	272:15 290:19 295:13	life 38:7 55:1 84:16
knew 313:2	170:19 183:8 196:14	304:10	91:20 98:2 118:14
know 31:9 56:3 64:1	200:7 212:9 215:1	leads 67:8 150:19	122:11, 19 123:1 139:19
65:1 75:16 76:1 96:2	217:7, 9 221:16, 22	326:22	145:11 183:16 202:15
97:5, 10 101:14 104:12	222:18 227:18 273:7, 10	lead-up 87:8	209:13 222:4 235:7
105:14 118:15 133:18	296:7 330:20 349:17	learned 248:12 281:11	243:9 261:17 274:9, 11
134:11 160:1 162:12	362:1, 8 377:6, 8 383:8	368:7	283:17 291:16 303:6
172:15 181:15 182:16	384:15	learning 202:19 380:20	310:12 327:3 333:15
184:7 185:9 202:2	LARRY 8:14 263:7, 10	leave 92:14 102:15	360:5 368:5 377:18
221:9 233:5, 6 235:3	Las 138:8, 18 139:2	123:22 151:20 269:2	life-cycle 302:6
236:10 237:2 248:22	Lastly 206:5 284:15	304:8 354:16	lifelong 57:12 121:12
249:7 261:22 262:4	last-mile 154:22	leaves 270:2 365:19	337:15 340:18
264:13, 15, 21 267:1, 13,	late 112:16 346:17	leaving 268:2, 21 286:7	lifesaver 25:11
14, 17, 18, 19, 21 268:1, 5	376:9	319:20 378:8	lifesaving 157:14 163:13
275:4 286:1 288:12		led 74:14 282:15	213:14 367:1
289:11 307:11 311:1			life-threatening 145:11

lifetime 133:21 271:14 320:7	listen 68:4 80:15 85:12 284:10 365:1 367:22	106:22 107:6 120:7 121:15 142:5 144:15 145:10 157:10 159:22 191:15 212:4 222:11 225:20 238:19 248:22 258:2 273:5 304:4 310:15 366:6 371:15	long-haul 62:5 81:12 82:6 83:3 84:4 292:6 315:19 326:4 362:18
lifetimes 104:1 152:4	listened 231:2	LIVINGSTON 3:8 39:15, 18, 19 235:18 236:14 335:16 340:1	long-term 36:4 62:10 128:5 161:4 218:5 226:4 296:12
Light 6:10 11:4 131:15 162:2, 6 284:17 313:1 316:12 331:17 370:1	listening 12:14 13:15 84:15 136:2 204:18 251:12 307:9 343:6, 7 385:11, 12	LIZ 7:9 211:20 212:1	long-time 74:20
light-duty 49:3 64:5 98:19 170:14 184:21 239:6	literally 72:21 224:19	load 316:11	look 17:16, 21 63:3 89:20 115:21 134:20 178:19 188:6 205:6 206:15 231:21 243:15 247:4 312:21 383:12
LIGHTS 245:1	lithium 327:5	loaded 292:4	looked 366:22
Light's 370:2	little 89:18 92:10 228:17 230:21 248:20 291:15 370:14 383:3	loads 85:1	looking 81:8 134:1 156:16 232:6 353:9 354:12 383:6
likelihood 288:6	livable 45:19 141:13 223:8	lobbied 307:19	looks 38:10 141:10 248:21 269:19 317:9 346:2
Likewise 280:4	live 24:10, 16 26:20 40:17 45:5, 21 55:1 56:2 58:2, 21 59:4 63:13 67:22 71:3 72:19 73:1 75:7 89:4 90:10 91:19 93:2, 3, 12 95:7 98:1 99:4, 18 101:1, 22 102:18 104:2 105:3 108:17 116:20 120:11 121:15 130:12 138:9 142:8 144:17 147:20 150:3 160:1 163:17 165:5, 6, 12 167:21 173:1, 7 181:10 182:15 184:2, 14, 16, 17 190:20 192:16, 20 195:19, 20, 22 198:19 199:7, 9 201:9 202:17 213:6 216:6 221:5 225:3, 15 234:8 239:15 240:1 248:17 264:2 267:17 274:6 306:18 307:4, 6 310:18 312:9 328:7, 17 329:9 332:7 335:16 336:17, 19 337:10 338:11 339:22 346:19 349:15 350:5, 11 358:21 360:15 361:5 362:14 376:15	Local 8:11, 14, 15 17:16 51:9 71:2 81:14 82:4 83:2 193:3 235:22 236:17 245:15 256:5, 11 257:10 263:11 266:13 270:3, 6 299:21 324:20	loops 231:7
limit 20:14, 16 23:6 39:2 53:18 69:4 79:7 94:7 110:1 137:5 140:5 166:18 179:8 197:18 211:1 223:20 237:15 245:12 252:15 259:19 265:19 274:13 278:11 280:5 293:10 300:15 306:2 308:19 321:6 344:9 349:22 358:4 372:12	localized 208:5	local 8:11, 14, 15 17:16 51:9 71:2 81:14 82:4 83:2 193:3 235:22 236:17 245:15 256:5, 11 257:10 263:11 266:13 270:3, 6 299:21 324:20	Los 40:7, 11 173:12 312:10
limited 206:5, 8 232:7 284:15 303:1 374:1 377:22	locally 231:9 281:21	located 92:8 95:7 96:12, 21 120:14 173:12 181:17 192:6 196:7 216:4 221:6 239:20 304:15 325:2 362:21	loss 202:20 303:11
limiting 45:13 268:20	located 92:8 95:7 96:12, 21 120:14 173:12 181:17 192:6 196:7 216:4 221:6 239:20 304:15 325:2 362:21	location 360:9	lost 80:17 193:22 213:3 307:18
limits 20:12 30:15 33:19 156:15 163:21 164:20 167:16 172:14 192:12 193:21 194:7 263:22 266:16 271:7 303:16 329:10 379:19 384:9	locations 107:7	lock 366:9	lot 182:16 203:10 228:12, 13 264:10 266:21 267:3 268:13 345:11, 21 347:1, 18 357:7 359:12, 16 384:18 385:17
LINDSAY 8:18 273:22 274:3	locks 318:16	lock 366:9	lots 141:16 381:1
LINDSEY 6:16 179:20, 21 180:3, 10	locomotive 26:2 32:15 33:1 34:9, 17 35:7 239:18 256:13, 14 264:1 265:4 266:17, 22 268:5 367:1, 3, 6	locomotives 17:7 26:1, 3 33:10, 12, 15, 17 34:5, 20 53:5 116:3 206:4 239:22 256:8, 12, 15, 17, 18, 22 257:4, 13, 15 265:1 270:14 283:15 285:2 366:21 377:12	Louisiana 263:16
line 33:10 103:1 158:6 239:21 241:20 244:17 254:20 300:22 354:13 384:6	lived 55:2 84:16 91:19 92:13 98:1 117:16 120:7 199:1 220:22 221:5 226:3 248:3, 6 310:12	logistical 353:15	love 93:14 192:8 199:10 338:15
lined 193:3	livelihoods 80:18 185:10 258:6	logistics 22:7, 10 136:11 219:12 251:21 301:18 343:15 366:10	loved 312:11, 21
lines 72:11 82:20 192:17 331:10	lives 31:22 34:12 47:4 52:22 54:19 68:2 101:19 118:14 119:21 121:12 128:20 142:4 148:14 163:16 165:16 168:3, 13 174:21 184:5 193:22 216:16 228:8 235:7 236:14 262:10 276:20 310:13, 16 311:18 329:11 353:8, 21	long 28:6 36:14 42:2 71:18 73:11 75:11 90:13 101:13 104:7 159:14 173:20 185:18 200:11 208:3 217:12 219:3 261:3 291:16, 20, 21 302:22 307:22 333:10 359:17 374:20 375:5	low 27:18 72:10 73:1 104:21 131:1 139:6 142:6 148:1 291:17 369:7
lineup 20:18	living 26:4 37:10 58:10 88:2 102:8 105:18	longer 17:9 33:12 38:6 55:17 111:11 148:19 160:7, 11 203:6 219:13 295:5, 7	Low-carbon 36:9 298:6
linked 89:16 139:13 148:15 272:19 331:1			lower 15:14 24:18 37:9 42:11 131:1 133:21 210:8 226:17 263:3 269:12 309:20 315:16 316:1 369:3 371:16
liquid 36:9, 13, 20 242:11 324:19			lower-cost 315:21
Lisle 241:18			lower-income 92:16 150:4 157:12
list 20:22 69:18 70:5 169:3 175:7 179:21 195:4 206:22 211:13 220:4 227:1 229:13, 22 233:11 294:1 321:19 327:19 329:20 335:2 341:13 352:3 355:5 379:3			lowering 177:18 191:15
listed 77:1			lowest 36:1, 9

<p>lucky 59:7 313:13 328:16</p> <p>Lucy 310:1, 6, 13, 15 311:18</p> <p>lunch 21:4</p> <p>Lung 3:3, 4, 5, 6 5:13, 22 23:20, 21 24:21 25:14, 21 26:19 27:4, 20 28:18 29:11, 16, 20 32:8 35:4 55:4 58:5, 10 59:9 64:20 67:9 70:18, 20 71:7 72:14 73:3 74:22 76:12 89:12, 16 99:19 102:6 108:21 126:8, 9 128:2, 10 130:15, 16 131:13 138:20 139:15 142:9 143:6, 21 146:5 147:15 149:4 150:21 151:5 152:5 160:6, 20, 21 184:13 224:22 225:16 272:18, 20 274:22 275:6 294:18 295:18 307:20 331:14 333:16 347:22 348:1 350:3 371:14 376:17, 19 382:22</p> <p>lungs 55:11 89:18 90:10 96:19 97:6, 8 181:14 215:22 228:15 339:8, 15 368:15 385:20</p> <p>Lyme 95:22 96:3 182:15, 16</p> <p>Lynden 9:13 301:16, 17, 20 302:17 303:14</p> <p>LYONS 7:16 227:9, 11, 12</p> <p>< M ></p> <p>M.D 3:21</p> <p>M.P.H 3:21</p> <p>MACIVERS 6:10 161:19, 22</p> <p>Mack 244:20</p> <p>mad 338:20</p> <p>Magdalena 67:14</p> <p>MAGGAY 8:4 229:21 241:10, 13</p> <p>magnitude 124:6 290:16</p> <p>main 92:3 248:4 254:16 268:19 323:21 370:13</p> <p>Maine 159:9 186:4 304:4</p> <p>maintain 80:11</p> <p>maintained 87:4 375:13</p> <p>maintains 14:20</p> <p>maintenance 177:18 215:13 271:17 299:21</p> <p>major 25:8 26:3 27:1 30:8 34:10, 16 35:9, 10 37:5, 7 62:12 72:6 73:2</p>	<p>91:21 92:6, 17 93:2 98:12 99:14 108:4 128:18 131:1 134:4 138:12 145:2 148:11 157:2 158:10 161:15 163:4, 9 173:7 174:8 190:21 199:2 200:6 212:11 215:17 225:20 255:6 272:12 273:6 281:15 285:16 286:7 295:11 304:12, 15 308:6 314:13 323:6 336:20, 22 350:19 360:12, 15 362:20 371:7</p> <p>majority 130:1 150:6 161:7, 9 185:13 193:8 209:12 232:2</p> <p>makers 319:2</p> <p>making 21:2 24:12 31:19 64:3 88:21 91:14 98:15 107:13 113:14 145:6 155:2, 21 176:19 184:19 196:15 200:8 236:4 239:16 253:21 255:13 262:11 273:8 280:19 348:16 366:10 367:21 376:10 384:10</p> <p>Malcolm 385:3, 20, 21, 22 386:2</p> <p>MALFUNCTION 24:7 102:6 120:17 131:10 189:22 190:5 334:19 352:13</p> <p>M-A-N 335:14 339:21</p> <p>manageable 309:21</p> <p>Management 287:14</p> <p>manager 71:16 88:12 91:6 106:16, 17 137:20 143:6 198:13 212:2 220:15 290:1 301:16 335:17 349:13 361:16 364:15</p> <p>mandate 181:21 242:10 365:12 368:18, 20 369:12, 13 378:12</p> <p>mandates 369:1</p> <p>mandating 43:18 353:13</p> <p>MANDEL 3:9 41:17, 20</p> <p>manhours 281:8</p> <p>manner 114:18</p> <p>manufacture 41:22 43:18 124:2 162:17 259:4 384:6</p> <p>manufactured 105:22 255:5 302:10 355:22</p> <p>manufacturer 80:9 176:5 241:15</p> <p>Manufacturers 3:9 5:11 16:17 41:21 44:2, 14 62:17 73:21 80:13 83:11 87:2 122:6 131:2</p>	<p>157:16 158:3 161:15 164:1 165:20 168:7 185:12 189:21 205:4 247:8 255:6, 12 258:21 290:10 291:8 308:2 319:17 320:15 356:8, 14 357:10, 16 363:9 371:4 384:11</p> <p>manufacturing 87:9 122:13 125:19 241:21 258:10 269:11 299:11 324:18</p> <p>Maple 92:18</p> <p>Maplewood 127:12</p> <p>Mapping 173:1</p> <p>March 306:20</p> <p>MARGARITA 10:22 367:16 368:1</p> <p>margin 76:14 131:9</p> <p>marginalized 163:7 236:12</p> <p>MARGUERITE 6:9 159:4, 8</p> <p>MARIBETH 3:19 66:4, 7</p> <p>MARK 7:12 220:10, 11, 14 382:19</p> <p>market 15:9 42:6, 9 43:22 61:19 62:1, 8, 16 124:12 133:20 154:18, 20 155:7, 13, 15 165:21 168:6, 10 176:2, 4, 21 177:8 178:5, 12, 17, 20 210:3 244:21 245:6 281:13 291:11, 18 299:7, 10 315:12 320:17 326:15, 17 369:3, 12 371:2 375:9</p> <p>markets 36:8 48:8 61:1</p> <p>Marpillero 224:9</p> <p>MARPILLERO- COLOMINA 7:13 224:12, 13</p> <p>marriage 290:9</p> <p>Marshall 105:4</p> <p>marshes 58:1</p> <p>Maryland 6:16 91:19 180:11, 21 181:11, 16, 20 182:4</p> <p>Maryland's 181:2</p> <p>Massachusetts 280:18 306:18, 19, 20</p> <p>Massachusetts-Amherst 257:11</p> <p>massive 157:13 163:12 177:9 192:22</p> <p>master's 309:14</p> <p>match 25:16 31:14 157:21 165:19 168:10 187:4 299:6, 9</p>	<p>matches 245:17 253:16</p> <p>Matching 61:13 161:12</p> <p>materials 19:2 49:17 50:1 260:2, 13, 15 356:12, 15, 18 357:8</p> <p>matter 41:8 68:3 72:8 102:20 127:2 133:6 138:17 144:8 163:11 173:3 174:11, 12 196:20 224:21 239:11, 22 269:15 272:2, 21 277:8 286:18, 19 290:19 296:6 323:9, 10 332:16 348:1 362:9 371:13 377:13 380:19 381:2</p> <p>matters 68:3, 4 215:16 234:18</p> <p>Matthew 191:2</p> <p>MAX 8:17 270:20, 22</p> <p>maximize 129:17 131:5 149:10</p> <p>maximum 305:8</p> <p>MCCLAIN 9:21 322:5, 7, 8</p> <p>mean 203:2 325:8 354:2 367:14</p> <p>meaning 203:6</p> <p>meaningful 15:12 154:13 177:15 178:4, 7 204:12 257:22 284:20</p> <p>meaningfuly 281:20</p> <p>means 37:8 68:2 81:6 90:7 154:4 173:5 262:4, 14 288:22 319:11 336:12, 13 337:13 340:9, 10, 17</p> <p>meant 33:1 327:2</p> <p>MEASE 116:7, 9</p> <p>measure 85:10 123:16 171:9</p> <p>measured 117:19 262:16</p> <p>measures 57:4 81:10</p> <p>MECA 3:12 5:5 47:18 48:2 49:14 50:8 110:18 111:1, 6, 12, 16 112:3, 9, 13</p> <p>mechanism 319:12</p> <p>mechanisms 243:5</p> <p>mediate 386:6</p> <p>medical 29:8 30:6 159:9, 13 294:14 295:15 348:20</p> <p>medication 147:17 295:15 312:17 313:8</p> <p>medications 160:17 312:19</p> <p>medicine 160:16, 20</p> <p>Medicines 328:21</p> <p>medium 61:3, 8 67:19 113:12 115:2 129:21 131:15 138:6, 13 139:7</p>
--	--	---	---

143:14 150:14 154:21 161:6 163:14 180:22 181:21 207:21 277:6 296:8 304:12 331:17 350:22 371:3 medium-duty 241:22 mediums 232:19 meet 31:8 36:3 43:11 48:10 105:17 111:6 112:9, 18 114:3 124:4 141:15 157:16 158:11 170:8, 16 171:1, 12, 20, 22 178:9 208:8 218:9 222:20 257:4 269:11 275:13 316:19 326:3, 19 334:13 362:19 363:6 364:3 370:18 376:16 meeting 141:19 217:17 257:1 290:11 387:20 meetings 346:8 megawatt 315:5, 18 MELODY 4:16 88:6, 9, 11 MEMA 5:12 125:1, 2 member 36:8 51:11 70:15 75:21 80:4 82:21 102:8 106:22 234:3, 7 261:16 276:8 282:11 306:17 312:6 326:11 355:16 364:17 378:10 379:14 380:11 member-based 60:16 members 18:20 21:22 28:5 35:19 41:22 42:2, 9, 21 44:7 48:4, 8 49:14 50:4, 10 58:20 60:17 68:5 102:1 113:5 125:2 134:3 138:5 156:13 183:10, 12 185:8 192:6, 15 193:6 195:12 217:9 218:20 219:21 220:17 256:11 258:18 259:4, 6, 11, 14 261:5 277:21 282:16 283:16 317:21 335:18 345:21 367:13 376:11 379:22 382:11 membership 298:11 memorandum 350:21 memorial 328:14 men 41:3 88:2 217:8 MENA 11:6 375:17 376:2, 4, 6 MENDELSON 6:16 179:20 180:6, 9, 10 MENDOZA 5:19 137:16, 18, 20 mental 117:6, 8 118:4, 5, 22 262:8 mention 40:21 149:1 203:8 381:16	mentioned 231:2 318:11 mentor 67:14 mere 156:20 merely 284:9 met 42:12 86:10 114:11 115:14 171:4 meters 73:2 93:4 336:20, 22 methane 302:8 method 291:17 Methodist 192:5 methods 20:7 185:13 231:19 metric 15:21 Metro 89:4, 13 101:20 128:3 309:17 Metro/North 104:2 metropolitan 345:12 Mexican-American 376:7 Mexico 195:10, 19 196:10 263:16 MFN 282:10, 15 283:2 364:16 367:9 378:10 MICHAEL 3:8, 12 9:21 39:15, 18 47:14 322:4, 7, 8 MICHELLE 7:20 206:21 233:22 234:2 Michigan 10:10 304:5 335:17, 18, 19 338:11 339:9 340:1, 2 microphone 226:17 middle 230:16 263:19 Middlebury 149:17 151:4 Midway 264:3 MIGHELL 9:3 279:1, 4, 5 M-I-G-H-E-L-L 279:5 Mike 47:17 mild 49:11 59:7 210:1 309:21 mile 92:3 138:9 196:3 315:17 mileage 87:14 miles 55:9 58:13 127:16 138:12 144:4 149:3 182:8 196:4, 9 218:11 222:1 230:14 232:13 374:17 military 230:17 million 24:16 56:2, 19 72:22 75:7 91:7 93:1, 3 95:5 99:17 100:21 106:18 113:5 130:12 141:2 144:17 146:18 147:13 156:13 157:9 163:16 193:8 198:14 216:5 217:8 220:17 230:14 239:15 273:5 275:10 298:20, 21	317:21 335:19 350:5, 7 360:14 361:5 362:13 370:9 371:14 376:15 Millions 24:3 120:2 144:14 162:8 164:2 191:13 218:10 315:11 350:11 365:3 Milwaukee 264:21 mind 163:5 mine 47:8 168:22 173:6 197:6 minerals 124:2 135:2 260:14 Mines 309:16 minimal 376:16 minimize 315:15 minimum 61:14 238:16 mining 327:5 minister 39:20 304:4 ministry 286:3 MINJARES 9:18 314:16, 18 Minnesota 263:13 minority 37:10 minus-50 303:3 minutes 20:15, 19 23:7 39:3 53:19 69:5 79:8 83:20 94:8 110:2 137:6 166:19 179:9 197:19 211:2 223:21 236:15 237:16 252:16 265:20 278:12 293:11 306:3 321:7 344:10 348:22 358:5 372:13 misconceptions 287:20 misconstruing 280:17 misnomer 326:22 missed 145:21 202:22 261:17 285:4 295:14 missile 280:8 mission 162:2 175:20 234:6 259:10 286:3 322:21 370:2 missions 378:21 Mississippi 151:8 384:16, 17 mistake 201:21 280:10 288:4 mitigate 99:7 182:21 225:18 226:3 332:9 mitigation 178:8, 22 mix 302:15 mixture 130:14 Mobile 2:10 13:9 51:6 52:8, 14 113:13 126:21, 22 221:20 Mobility 47:18 48:4 50:11 110:18, 20 112:18 153:17 315:10 mobilization 192:3	mobilize 162:3 370:2 mode 270:15 Model 13:22 14:15 51:18, 20 56:12 61:21 62:6 80:11 87:4 107:4 205:6 208:20 209:21 210:8 295:22 315:20 models 16:21 62:4 73:22 76:10 125:7 177:17 182:6 242:12 363:11 modernize 33:1 modes 205:22 modifications 123:6 modify 363:19 mold 152:2 MOLLY 10:21 364:11, 14 mom 59:20 103:20 227:22 228:17 347:14 mom-and-pop 217:10 moment 41:6 66:20 105:17 178:9 309:1 318:4 342:19 momentum 56:11 61:17 157:21 165:19 168:10 299:9 318:16 Moms 3:11, 16, 18, 19 4:16, 17, 18, 19, 21, 22 5:4, 7, 8, 21 7:3, 4, 5, 9, 10, 16, 20 10:9, 13, 15, 16, 19 45:3, 5, 8 47:10, 57:10 63:10, 12, 16 65:22 66:8 88:9, 12 91:4, 6, 16 95:4, 5, 14 97:20, 22 98:2 100:19, 20 101:3 103:2, 12, 13 106:2, 16, 17, 19, 22 116:19 120:10 141:1, 3, 4 195:10 198:13 200:22 201:10 212:2 214:11, 17 227:13, 14 229:7 234:3, 7 237:3 335:17 340:2 345:2 346:18 349:14 358:20 mom's 361:2 Mona 76:22 78:14 monetary 119:16 money 83:16 215:12 308:2 329:1 354:9 Mongolia 5:9 119:13, 15, 17 monitor 333:13 monoxide 272:13 Montana 7:20 138:11 234:9, 20, 22 235:8, 13 236:9, 16 Montana's 235:4 MONTE 4:10 79:21 80:2
--	--	---	--

<p>month 55:9 64:21 83:22 89:13 165:11 184:13 199:12</p> <p>months 56:17 199:17 313:8</p> <p>MOODY 7:18 230:7, 9, 10</p> <p>MOORHEAD 10:4 324:12, 15, 16</p> <p>moral 189:9 372:2</p> <p>MORALES 10:13 69:17 77:14 329:19 335:2 341:17 344:20 345:2</p> <p>morally 354:19</p> <p>morbidity 127:8</p> <p>morning 12:2 13:3 18:9 23:18 26:18 28:10, 15 32:6 35:16 39:18 41:20 47:17 51:1 54:12 63:9 89:21 106:14, 20 110:17 175:17</p> <p>MORRIS 6:14 172:3, 6, 7</p> <p>mortalities 127:8</p> <p>mortality 328:21</p> <p>mosquito 325:16</p> <p>most-polluted 128:4 138:18</p> <p>MOTAVVEF 7:21 220:3 238:5, 8</p> <p>mother 57:19 63:14 101:10 106:21 118:5 127:13 202:11 212:4 234:7 328:14 336:14 360:6 368:4</p> <p>Motive 153:16</p> <p>motor 86:5 87:19 206:2 217:10 230:12 231:8, 16 232:18, 21 233:2 259:3 290:16</p> <p>Motorcoach 7:18 206:9</p> <p>motorcoaches 239:7</p> <p>Mount 3:21 70:16</p> <p>Mountain 98:1 199:6, 7</p> <p>mouse 280:8</p> <p>move 27:3 30:11 35:4 64:8 73:21 78:20 84:1 85:6 86:9 123:8 130:18 149:9 162:9 164:4 173:22 186:21 187:14 195:4 212:21 217:17 226:21 231:3, 9 242:11 275:7 296:14 299:2, 19 300:7 301:9 313:14, 17 370:10 371:21 384:1</p> <p>moved 119:18 120:9 248:8 312:10 313:6 328:11</p> <p>movement 176:11 359:16</p>	<p>movements 176:21</p> <p>moves 217:18</p> <p>Moving 9:4 10:21 80:14 115:5, 20 168:6 217:21 230:17 261:1 275:4 282:10 299:20 312:14 313:8 351:6 359:19 361:6 363:13 364:15 383:18</p> <p>MPRM 245:8</p> <p>much-needed 30:9 168:4 174:18 192:13 274:15 324:7</p> <p>MUDD 8:6 226:10 240:18 247:11, 14, 16</p> <p>MULLEN 8:12 258:13, 16</p> <p>multi 319:7</p> <p>multi-faith 172:8</p> <p>multi-generational 359:10</p> <p>multiple 126:16 146:5 186:8 188:5 347:17</p> <p>multiplier 111:22 112:4</p> <p>multipliers 111:17, 20</p> <p>multiply 96:1</p> <p>multi-pollutant 365:18</p> <p>multitude 115:11 282:21 347:16 383:14</p> <p>multiyear 44:14</p> <p>mute 78:5 91:2 169:14 226:13 241:1</p> <p>muted 22:12 26:17 78:10 136:11 226:16 251:21 343:15</p> <p>< N ></p> <p>NACAA 3:14 51:6, 15 52:18</p> <p>NACAA's 52:5</p> <p>NAGRANI 6:7 153:9, 12</p> <p>name 12:6 23:17 26:14 28:13, 15 32:4, 6 35:14, 16 39:12, 16, 18 41:18 44:22 45:4 47:15 50:21 51:1 54:6, 10, 12 57:7, 9 60:4, 8 63:7, 11 66:5, 7 69:14, 20 70:6, 13, 14 71:13, 15 74:5, 8 77:2, 10, 14 78:1 79:18, 22 80:2 82:17, 19 85:18 88:7, 11 90:21 94:17, 21 95:2 97:17, 19 100:16 103:8, 11 106:12, 14 110:11, 15 113:1, 2 116:18 119:9, 12 122:1 124:19 126:5 129:2, 5 132:2, 4, 5 137:17, 19 140:19 143:3, 5 146:10 149:14, 16 153:6, 10, 12 156:9, 11 159:5, 7</p>	<p>161:20, 22 164:11, 13 167:5, 9 169:5, 11, 16 172:4, 7 175:9, 16, 18 179:17 180:4, 10 183:3, 5 186:1 188:21 189:1 191:22 192:2 194:20 195:7, 9 198:4, 8, 11 201:6, 8 204:3, 5 207:2, 9, 16 211:9, 15, 22 212:1 214:10, 11, 15 216:22 220:5, 11, 14 224:6, 11, 12 226:11 227:3, 10, 12 229:15 230:1, 8, 10 233:12 234:1, 2 238:2, 6 240:19 241:11, 13 244:11 247:16 250:2, 6, 11 253:5 256:2, 4 258:14, 16 261:12, 14 263:8, 10 266:6, 10, 12 268:10, 13 270:21, 22 274:1, 3 276:4, 6 278:20 279:2, 4 282:6, 8 284:19 285:9, 11, 13, 14 287:3, 5 289:20 293:19 294:3, 10, 11 297:11, 16 301:12, 15 303:22 304:2 306:11, 15, 17 309:10, 13 312:3, 5 314:17, 18 316:13 317:16 321:15, 21 322:6 324:13, 15 327:21 328:6, 7 329:22 330:7, 8 332:4 335:2, 11, 12 338:9, 10 339:19 341:13 344:21 345:1 346:11, 18 349:10, 13 352:4, 11, 14 355:6, 14, 15 358:13, 17, 19 361:13, 15 364:12, 14 367:17 368:1 369:19, 21 372:21 373:3 375:18 376:5 379:4, 10, 12 382:6, 9</p> <p>names 77:8 194:15 243:19 249:18 296:20 341:8 386:12</p> <p>name's 140:22 164:16 339:22</p> <p>narrow 248:20</p> <p>nation 27:6 35:8 41:4 52:11 97:3 105:11 114:15 143:14 148:13 154:15 162:8 163:16 176:9 190:13 206:18 221:2 259:8 364:3 378:5 380:5</p> <p>National 3:13 7:12 9:5, 21 23:19 28:17 29:12 30:6 31:6 32:7 39:21 40:1 51:4, 7 60:10 65:16 71:18 74:11 87:12 91:6 95:3 106:16, 17 108:14 125:3 126:7</p>	<p>129:9 132:13, 22 133:6, 19 134:7, 18 137:21 142:12 166:4 168:16 175:1 189:8 198:12 212:2 217:7 220:15 221:9, 20 222:8 235:19 258:22 259:1, 3 272:22 277:22 282:10 285:12, 15, 20 289:17 298:17 311:12, 13 322:9, 10, 11, 14, 21 364:16 369:22 370:10</p> <p>nationality 66:22</p> <p>nationally 106:19 145:8 231:10 335:19</p> <p>nationally-determined 170:3</p> <p>Nations 170:1 186:5 187:11 305:3</p> <p>nation's 32:12 43:2 86:7 138:2 140:10 145:3 183:8 217:9, 19 218:1 222:21 230:17 253:15 259:13 260:6 288:8 362:1</p> <p>nationwide 16:11 28:22 30:3 131:14 141:3 157:6 175:22 176:15 183:17 190:20 198:16 208:16 224:20 225:3 287:6 331:5, 16 363:11 379:22</p> <p>Native 306:19</p> <p>Natural 5:6 82:10 113:4 187:16 262:14 302:7 365:20 373:11</p> <p>naturally-occurring 280:12</p> <p>nature 14:22 58:3 189:21 199:10</p> <p>nauseous 310:7</p> <p>Navajo 101:14</p> <p>Navistar 8:4 241:14, 20 242:4, 16</p> <p>naysayers 153:20</p> <p>nd 200:10 294:18 384:9</p> <p>N-D-L-E-R 141:1</p> <p>near 24:16 26:5 30:13 36:4 37:10 72:19 75:7, 9 81:1, 19 90:10 96:21 97:3 101:22 102:18 105:3 107:6 130:13 147:20 173:7, 12 181:18 190:7, 20 191:15 193:5 213:6, 10 216:4, 6 239:21 255:14 264:18 266:22 267:5 288:14 289:9 304:15 307:3 329:9 337:10 338:20 340:13 367:14 380:10</p>
---	--	---	---

<p>nearby 31:21 221:9 257:9 310:8 350:12 363:1</p> <p>nearer 150:4</p> <p>nearest 34:14 199:6</p> <p>nearly 33:17 37:20 48:2 52:8 59:8 63:15 80:21 88:20 99:17 128:16 147:13 175:21 178:2 195:12 225:2, 9 249:6 273:13 333:6 337:11 350:4 353:13 362:13</p> <p>near-term 62:9 260:17</p> <p>nebulizers 159:16</p> <p>necessarily 177:13 362:4</p> <p>necessary 32:17 43:7 44:14 121:3 125:12, 18 130:9 153:21 181:4 225:18 260:2, 10 296:11 301:4 316:19 317:1, 10 319:7</p> <p>necessity 56:22</p> <p>Neck 306:22 307:3</p> <p>need 20:16 24:14 28:19 29:18 31:14 33:18 35:10 43:10 56:10 59:13 63:22 75:19 77:20 83:22 84:11 85:11 104:16 105:15 106:4 118:16 121:19 130:5 133:4 157:20 158:1, 13 162:20 165:17, 18, 22 166:1 167:20, 21 168:9 170:21 178:10 185:15 186:17 187:4 189:4 216:18 230:21 231:21, 22 234:15 236:17, 21 239:1 243:12 262:18 263:2 270:4 275:15 285:5 286:17 289:4 292:10 299:4, 8 300:2, 7 301:1, 13 308:15, 16 309:1 311:1 339:7 353:8 359:3 362:19 363:4 364:21 368:18, 21 369:15 370:15, 20 378:20, 21 383:12 384:4</p> <p>needed 29:5 42:16, 19 43:1, 14 56:13 112:1 114:3 118:8 123:8 158:16 170:22 171:6, 17 172:19 185:6 187:1 208:1 233:5 269:1, 10, 20 272:7 317:1 350:10 374:18</p> <p>needs 52:11 56:22 59:13 71:8 84:8 111:6 115:13 122:10 124:4 130:21 159:22 208:8</p>	<p>214:1 243:10 257:15 269:8 299:2, 19 326:3</p> <p>negating 319:13</p> <p>negative 59:19 98:11 119:15 144:6 163:4 277:3 282:14 286:9 302:8 334:5, 6 350:18 353:16</p> <p>negatively 246:15 264:5</p> <p>neglected 319:15</p> <p>neighbor 370:6</p> <p>neighborhood 31:20 174:3 193:3, 15 195:20 198:21 306:22 330:16 352:21 354:14 359:20 377:15, 20</p> <p>neighborhoods 46:3 102:17 156:22 307:22 323:22 364:8 368:19</p> <p>neighborhood's 120:20</p> <p>neighbors 192:8 198:20 199:4</p> <p>Neither 210:2</p> <p>NELSON 2:6 250:20</p> <p>Nestle 134:5</p> <p>nestled 58:11</p> <p>net 15:6, 18 123:15 187:1 194:9 301:2 305:6</p> <p>Network 8:19 9:4 10:21 70:15 87:12 115:20 183:9 186:5 274:5 282:10 285:18 298:12 364:16 370:10</p> <p>networks 259:16 260:8</p> <p>net-zero 103:2</p> <p>neurodegenerative 376:20</p> <p>neurological 300:12</p> <p>neutral 302:1</p> <p>Nevada 138:8 220:15</p> <p>never 81:13 160:15 242:14, 17 248:8 312:18 313:7 365:14</p> <p>New 10:5, 18 11:8 13:21 14:11 39:20 40:12, 14, 18, 19 42:6, 11 43:19 52:13 53:5 65:19 73:7 75:2 80:12 83:21 84:3 87:1 114:15 125:11 151:2, 3 154:18, 21 155:1, 3, 19 159:13, 20 162:13 181:7 184:6, 12 188:1 189:19 191:8 192:16 195:10, 19 196:10 198:19 205:1, 20 206:10 218:7, 9 232:21 254:8 260:21 263:15 264:16 267:8 270:7 276:7, 19 277:9 311:9 312:9 313:6 316:6</p>	<p>317:8 319:10 328:8 334:12 354:21 355:17 365:20 375:3 379:15 382:10, 19 383:13 384:7, 15 385:7</p> <p>Newark 384:22</p> <p>newer 87:8 264:22</p> <p>newly-developed 205:2</p> <p>news 90:6 194:1</p> <p>Newsom 254:1</p> <p>NGO 368:2</p> <p>NICHOLS 3:4 26:13, 18</p> <p>niece 337:11 340:15 360:2, 4 361:3</p> <p>Nike 134:3</p> <p>nine 61:18</p> <p>nitrogen 29:21 65:5 72:8 99:22 127:3 130:14 144:8 147:7 150:16 176:18 196:18 268:21 269:14 272:2, 14 277:7 362:9 377:12 381:2</p> <p>NJ 277:5</p> <p>noise 349:21</p> <p>noisy 181:12</p> <p>non 221:13 307:20 337:8</p> <p>Non-Attainment 104:3, 4, 10 181:6 309:18</p> <p>non-carbon 309:4</p> <p>non-combustion 25:3, 7 128:15</p> <p>noncompliance 247:8</p> <p>nonpartisan 51:7</p> <p>non-polluting 309:4</p> <p>non-powertrain 320:3</p> <p>nonprofit 51:7 60:10 110:18 119:14 162:1, 2 317:19 369:22</p> <p>non-profit 60:11 132:11</p> <p>Nonroad 2:7</p> <p>non-stop 337:11</p> <p>non-technology 327:1</p> <p>noon 47:21</p> <p>normal 139:12</p> <p>North 7:17 8:5 121:13 199:2 227:13 228:13 229:5 230:11 241:19 244:12 245:5 287:13</p> <p>Northeast 96:1, 8 101:20</p> <p>Northern 192:20 234:11 235:19 276:7 324:18</p> <p>northernmost 138:11</p> <p>notably 196:1</p> <p>note 20:22 25:20 44:6 55:16 226:15</p> <p>noted 31:5 60:22 76:14 380:9</p> <p>notes 130:22 359:18</p>	<p>not-for-profit 137:22 279:7</p> <p>Nothing's 348:15, 16</p> <p>NOTICE 1:9 19:12 20:8 60:7</p> <p>noticeably 332:17</p> <p>notification 22:14 38:17 53:11 68:19 78:9, 22 93:22 109:16 136:13 152:18 166:13 179:3 197:12 210:17 223:14 237:10 252:1 265:14 278:6 293:5 305:19 321:1 343:17 357:21 372:7</p> <p>notion 288:1</p> <p>November 86:10</p> <p>NOx 30:2 86:21 87:21 104:4 127:3 143:17 181:1, 4 221:14 239:10 255:14 272:14, 16 273:11 280:2 296:6 310:16 311:3 319:9 326:7 369:7</p> <p>NPCA 220:16 222:21 223:9</p> <p>NRDC 6:12 8:20 113:4 115:19 167:13 276:8</p> <p>NRDC's 113:5</p> <p>nuclear 309:3</p> <p>Number 20:1, 15 21:6 23:10 39:7, 13 54:1, 7 69:9, 15 79:13, 19 89:15 94:12, 18 110:6, 12 114:17 115:4 117:21 119:22 120:4 137:9 138:21 144:4 153:7 167:6 169:18 179:18 186:10 198:5 200:6 211:10 213:2 224:7 232:7 236:9 238:3 239:14 252:19 263:1 266:7 268:14 272:17 278:21 291:22 293:20 306:12 317:6 321:16 325:16 326:2 344:13 353:21, 22 358:14 372:22 374:3</p> <p>numbers 91:21 236:11 354:2</p> <p>numerous 28:5 61:11 118:1 127:11 223:3 330:21</p> <p>NUNEZ 2:9 13:3, 8</p> <p>nurse 74:9 75:16, 21 76:3 129:8 330:10 331:10 376:8</p> <p>Nurses 4:5 5:14 10:6 74:10, 12, 14 129:5, 8 330:11</p>
---	--	---	--

nursing 74:11 129:9
NYC 3:8
Nyma 367:19

< O >

oaks 58:1
Obama 356:17
objective 44:18 122:21
objectives 125:2
obligation 284:9
obligations 74:15
obliged 127:22
obstructive 150:7 151:1
obvious 200:3
Obviously 349:3 370:15
 382:14 383:15, 17 384:7,
 18 386:5
occupations 318:10
occur 114:22 271:19
 319:3
occurrences 360:20
occurs 290:20
odds 82:12
OEM 36:15
OEMs 155:9, 22 242:16,
 20 245:13
offer 114:8 127:10
 132:15 351:11
offering 292:12 326:6
 327:7
offers 31:15 52:16
 161:2 323:15
off-grid 303:8
Office 2:4, 7, 10 13:4, 10,
 12 83:6 92:2, 5
officer 13:13 18:7
 20:11 253:8
official 18:19 20:2
 21:15, 19 307:16
off-ramp 82:2
off-road 48:7 326:5
offset 348:12
offsets 276:12
offsetting 348:13
off-the-shelf 319:18
oftentimes 231:12
Oh 386:1
Ohio 11:5 63:10, 13
 64:15, 22 232:2 263:16
 264:19 373:5, 7, 15
 374:10
Ohioans 65:18
Ohio's 65:7
oil 16:10 104:6 123:15
 132:14, 20 133:14 134:6
 174:3 194:9 215:12
 356:1
okay 164:14 214:15
 233:21 297:10 300:19
 338:8 346:15, 16 376:4

old 33:12 119:22 139:9
 165:8 200:19 202:8
 217:6 256:15, 22 267:10
 287:19 334:5 338:11
 376:22
older 38:3 86:22
 108:19 109:8 260:20
 359:4
oldest 146:17 151:7
 287:18 361:3 365:16
OLIVER 4:21 100:15,
 18, 19
O'MALLEY 11:8 382:5,
 8, 9 386:1, 5
once 87:7 100:9 119:2
 156:4 168:11 197:7
 203:17 210:11 214:4
 337:21 339:11 341:1
 361:8
one-fifth 176:16
ones 87:1 309:3 328:18
one-third 88:20 167:19
 222:16 225:2 370:17
one-truck 217:10
ongoing 17:1 83:12
online 241:10
Onroad 2:6
on-road 48:9 83:11
 130:1 143:16 161:7, 9
 176:18 181:2 221:20
 277:8 333:22
on-roads 14:7
onset 151:2
onsite 374:22
on-the-road 83:14
OOIDA 86:3 87:20
open 18:1 20:3 204:10
 248:13, 18 269:2 270:2
 345:15
opened 248:8
opening 230:22
operate 33:12 44:4
 83:1 157:19 231:6
 259:5 260:20 273:15
 302:13 373:14
operates 302:17 373:8
operating 15:14 33:15
 60:10 205:19 359:22
operation 245:3
operational 33:2 34:5
 205:11, 13 218:9 242:12
 253:20 291:19 292:9
operationally 291:14
operations 33:8, 22
 217:11 219:1, 12 246:15
Operator 4:10, 12, 14
 86:2
operators 15:14 86:7
 233:2 259:2
opinion 81:13 329:16
opportunities 20:4

opportunity 18:16 19:9,
 18 20:20 26:20 28:10
 31:16 35:9, 19 40:2
 45:4 50:18 51:21 52:16
 53:2 54:15 57:4 60:1, 6
 62:20 63:11 67:3 71:22
 74:2, 7 76:18 80:5
 88:10 95:1 97:21
 103:10 106:9 116:17
 118:21 119:6, 11 122:4
 129:7 132:8 135:3
 137:19 140:21 146:13
 154:12 164:8, 15 166:7
 167:11 168:19 172:6
 174:13 175:4 176:1
 180:9 183:7 188:22
 194:12 195:8 198:11
 201:11 204:9 207:14
 208:7 210:12 214:7
 217:3 220:13 224:15
 227:12 234:4 238:10
 253:9 263:5 268:12
 271:1 273:20 274:7
 275:21 278:3 284:21
 285:4 287:7 289:16
 290:2 297:20 301:6
 303:18 305:12 312:7
 316:21 317:22 323:15
 324:2, 21 327:15 332:11
 335:15 339:14, 21 341:5
 349:12 350:17 364:8, 20
 365:19 372:2 376:9
 382:3
optimally 51:22
optimistic 52:18 86:13
optimize 38:11
optimizes 292:9
option 36:10 292:21
 303:4
options 30:21 48:16
 131:1 187:5 188:8
 290:10 291:8 299:7
 303:17 319:18 331:22
 351:13 374:4
oral 18:16, 17 19:18
 312:17
order 3:2 4:2, 9 5:2, 18
 6:2 7:2 8:2, 8 9:1, 12
 10:2, 12 11:2 12:8 14:9
 21:1 23:5 77:21 83:22
 99:2 104:17 132:12
 135:18 137:4 163:22
 164:5 251:6 252:14
 274:14 275:12 313:18
 314:10 318:6 326:15
 342:22 344:8
organic 150:16 163:20
 377:13
Organization 40:13
 60:10, 16 73:7 91:7
 95:4 119:14 129:9, 12

130:18 131:6 132:11
 134:20 146:18 162:5
 172:8 185:8 192:6
 198:13 231:8 234:10
 276:19 277:5 279:8
 294:14 298:11 330:15
 370:8 371:12 380:1
organizations 17:15
 29:12 30:7 60:12 71:19
 74:12 137:22 262:17
 268:15 282:11 364:17
Organization's 165:10
organize 380:4
organizer 97:22 103:12
 141:1 162:1 195:10
 227:13 358:20
organizing 40:13 369:22
origin 350:16
originated 126:19
originating 145:12
OSCAR 10:9 338:8, 9,
 10
outbreaks 105:8
outcomes 71:5 102:14
 147:2 148:6 228:5
 299:17 330:21 350:18
outdoor 96:20
outdoors 313:9
outline 62:13
outlined 146:5 246:2
outlining 64:9
out-of-state 362:18, 22
 363:5
output 34:7
outraged 117:14
outreach 322:10
outside 63:13 67:18
 181:12 312:12 330:10
outsiders 83:16
outsized 89:1 113:13
 286:12 304:11
outweigh 76:14 334:2
outweighing 131:9
outweighs 131:8
overall 50:11 92:11
 143:14 277:19 292:21
 356:11
over-ambitious 83:8
overburden 134:13
overburdened 72:12
 73:22 183:18 196:6
 208:4 276:21 366:5
overburdening 378:5
overestimates 353:15
overlooking 327:6
overly 261:1
overly-conservative
 115:14
overnight 232:15
oversight 327:8

oversized 222:9
 overstated 365:1
 over-the-road 81:4
 205:18 206:9 231:7
 overtones 310:4
 overturn 87:21
 overturned 327:11
 overwhelming 87:18
 282:19
 ow 348:15
 Owner 4:10, 12, 14 80:3
 86:1 288:16
 Owner-Operator 80:4
 82:21 85:20
 owner-operators 83:2
 owners 112:12
 ownership 133:21
 oxide 150:16 176:18
 277:7 377:12
 oxides 29:21 65:5 72:8
 99:22 127:3 130:15
 144:8 147:7 196:18
 268:21 269:14 272:1, 13
 362:9 381:2
 oxygen 378:19
 ozone 24:11 27:7, 11
 33:5 55:6, 20 58:6, 8
 65:6, 9 75:3, 4 89:11, 15,
 16 100:1 102:3, 5 104:3,
 7, 10 120:20 127:4, 7
 130:15 138:19 143:17
 144:9, 12, 18 147:15
 148:16 150:17, 21 151:6,
 8, 15 160:11 181:6
 193:9 196:19 221:14
 272:16 275:3 276:17
 296:5 309:18, 20 310:17
 311:4, 5, 17 347:4, 9
 350:6 383:2

< P >
 p.m 19:10 21:4, 9
 81:19 135:9, 14 250:20
 251:2 342:4, 9 387:20
 PA 8:6
 pace 62:14 158:16
 174:18 243:7 324:6
 334:10
 packages 210:5
 packed 264:11
 PAINE 5:12 124:18
 pains 368:11
 Pakistan 120:3
 Palestine 264:19
 pandemic 66:19 202:20
 panel 18:21 280:22
 305:1
 panelist 22:15 38:18
 53:12 68:20 70:10
 77:18, 21 79:1 94:1
 109:17 136:14 152:19
 166:14 179:4 180:1
 197:14 210:19 223:16
 237:11 252:2 265:15
 278:7 293:6 297:8
 305:20 321:2 335:8
 343:18 357:22 372:8
 panels 356:21 357:7
 paper 52:5 289:10
 par 255:5
 paralyzed 202:7
 pardon 125:15
 parent 46:13 75:13, 21
 93:9 101:21 203:10, 11
 236:8 248:1 354:6
 parentheses 202:5
 parents 89:20 91:7, 15
 98:22 100:21 101:3
 103:1 107:9 118:12
 198:14 229:5 236:4
 359:7
 Paris 114:4 169:22
 244:17 364:5
 parity 177:17 218:6
 315:20, 22 375:12
 park 81:21 120:13
 213:18 221:9 222:2, 3
 232:5 235:20
 parked 81:20 300:3
 parking 81:15 232:2
 359:11
 Parkinson's 376:20
 Parks 7:12 220:15
 221:19, 20 222:8 223:9
 PARRA 10:22 367:16,
 19 368:1
 part 17:5, 7 19:5 40:10
 41:5 60:20 83:13 86:13
 98:13 129:8, 20 169:22
 172:11 176:9 190:9
 205:7 216:8 235:6
 236:8 245:13 255:18
 265:7 287:16 305:14
 309:17 319:21 325:10
 349:20 370:9 386:5
 participant 301:19
 PARTICIPANTS 2:1
 3:1 4:1 5:1 6:1 7:1
 8:1 9:11 10:1 11:1
 12:15 136:4 172:16
 251:14 286:6 287:10, 22
 343:8
 participate 13:8 53:2
 participated 186:5
 participating 17:20
 participation 109:13
 204:13 387:16
 particle 24:11 27:6, 11,
 17, 18 28:2 76:9, 13
 100:3 120:20 131:12
 138:22 142:2, 3 147:7,
 14 148:16 160:8
 particular 48:8 72:5
 111:12 163:18 256:9
 particularly 27:12 36:4
 46:11 47:2 76:19
 133:10 134:13 150:20
 170:18 176:14 205:22
 225:12 272:14 300:5
 319:3 370:22 380:15
 particulate 72:8 102:20
 127:2 138:16, 17 143:18
 144:7 173:3 176:17
 221:14 224:21 239:11,
 22 268:22 269:15 272:2,
 21 277:8 284:5 290:19
 296:5 332:16 347:7
 348:1 350:7 362:9
 377:13 380:19 381:2
 383:4
 particulate-forming
 143:17
 Particulates 311:4
 parties 18:11, 15 19:18
 partly 311:15
 partner 116:20
 partnered 330:15
 partners 189:8 238:18
 245:2
 Partnership 9:6, 22
 37:12 285:13, 15 322:11
 Partnerships 40:1
 parts 80:14 222:1 356:9
 Pasadena 82:20
 pass 138:14 156:5
 221:7 249:14 311:20
 368:9
 passage 311:9
 passed 133:7 232:1
 249:6 283:14 303:12
 325:7 361:21 382:18
 passenger 33:10 49:10
 107:20 206:1 271:22
 passengers 233:4
 passes 327:11
 Pastor 9:14 322:8
 pastored 40:11
 patches 199:8
 path 40:8 62:13 90:17
 93:18 114:15 115:22
 132:17 166:4 168:17
 175:2 203:15 208:2
 262:19 278:1 364:3
 pathway 30:12 140:7
 180:14 238:16 378:11
 pathways 155:19
 patient 146:17 147:3
 298:9
 patients 70:19 75:18
 150:3, 6, 21 151:6, 14, 19,
 22 152:14 159:15 160:5,
 9, 13, 16 161:1, 2, 17
 298:21 299:13 352:15
 353:2
 P-A-T-R-I 95:2
 PATRICE 4:18 94:20
 95:2
 PATRICK 5:10 121:22
 122:4
 patterns 148:22 378:1
 PAUL 3:3 23:16, 18
 P-A-U-L 23:19
 pause 70:11 77:19
 180:2 297:9 335:9
 342:21
 pay 84:1, 10, 19 121:11
 264:16, 22 289:1 308:7
 payback 316:10
 paying 84:5
 payload 219:13 303:11
 315:16
 payments 83:21
 PCUSA 9:14
 peanut 356:1
 pediatric 348:4
 peer 280:21
 peers 362:4
 Pena 349:13
 PENA-ALARCON 10:16
 349:9, 12
 penalty 127:6
 penetrate 96:18 291:18
 penetration 43:15 61:7,
 13, 16 210:9 244:22
 246:1, 7 255:4 375:9
 PENNOYER 6:9 159:4,
 7, 8
 Pennsylvania 3:11 45:3,
 6 47:6 95:8 144:2, 22
 145:13, 16 165:7, 13
 256:5 257:20
 Pennsylvanians 144:13
 people 17:19 24:3, 6, 9,
 10, 16, 18 26:4 27:3, 22
 29:7, 14, 15, 16 31:17
 40:3 46:10, 11 56:2
 59:7, 8 64:1 65:11 71:3
 73:1, 5 75:7 84:15 92:9
 93:1, 3, 4 96:2 99:18
 101:14, 16 102:15, 18
 108:18 109:8 113:7
 117:13, 15, 21 119:17
 120:2 121:16 130:12
 140:13 144:15 145:10,
 19 147:22 150:5 154:1
 157:10, 12 162:3, 8, 12
 164:2 181:16 182:16
 184:15, 16 190:12 191:1,
 18 193:8, 9 195:22
 216:5 226:6 231:5, 15,
 17, 18 239:16, 22 247:17
 264:10, 11, 18, 19 265:8
 267:17 273:5 274:9

276:15 285:22 288:19
304:6 307:10, 12, 13
313:14, 15, 16 327:1
328:18 329:15 334:4
337:2 347:10 348:2, 6, 8,
10, 20 350:5, 8 353:6
354:3, 12 359:4 360:15
361:3, 5 362:10 365:3
370:2, 4, 9 371:14, 17
380:14 381:21 385:10
peoples 189:15
people's 173:19 187:17
353:7
percent 33:6, 15 34:14
36:22 56:7, 8 64:3
67:12 73:3, 6 80:21
86:5 88:22 89:8 95:19
98:16, 18 99:17 107:13
108:7 113:11, 13, 15
115:1 119:21 123:20
129:22 140:7 141:9
142:2 143:15, 16, 18
151:16 158:13 166:5
168:17 170:3 173:20
174:5, 16 176:19 180:14
181:1 187:3 194:3, 4
196:16 200:8 207:22
209:10 210:6, 10 217:19
222:15 225:8, 9 239:9,
10, 11, 13 244:14, 15
245:9 254:8 256:14
257:1, 4 259:5 260:6
262:13 273:9 274:18
275:16 277:7, 8 278:1
283:2 286:11, 13, 21
288:8, 13, 14 292:3
298:13 302:4, 5, 10, 11,
12 303:1, 5 304:21, 22
308:13 310:21, 22
313:19, 21, 22 315:8
323:3, 5 324:5 333:20,
22 350:4 361:4 362:3
363:22 364:1 365:6, 12
370:21 371:6 378:12, 13
percentage 181:22
213:10 292:7 329:7
percentages 61:12
percentile 138:16 173:2
perfected 80:16
perform 49:6 325:21
performance 36:17 87:3
111:2 125:13 139:16
218:6 374:15
performance-based
189:21
performed 59:3
performers 287:12
performing 66:12 312:13
period 18:1 19:10 53:7
204:11 284:17 316:10
periods 86:21

permitting 109:12
246:19
perpetual 127:16
persistence 314:6
persistent 58:21 295:9,
19
person 20:14 23:6 39:2
46:13 53:18 69:4 79:7
94:7 110:1 137:5 142:5
166:18 172:9, 15 179:8
197:18 211:1 223:20
237:15 252:15 265:19
278:11 293:10 306:2
321:6 322:17 344:9
358:4 372:12
personal 47:2 83:17
84:12 118:6 276:14
279:8 385:22 386:2
personally 55:1 222:11
persons 144:14
perspective 60:19 253:10
perspectives 259:8
pervasive 92:14
pet 310:3
Peter 335:14 339:20
Peterson 156:11
PETERSON-TRUJILLO
6:8 156:8, 11
Petrie 45:2, 4
Petrochemical 5:10
122:6, 7 356:4
petroleum 123:16 310:2
petroleum-based 37:15
PETRY 3:11 44:21
45:2
Ph.D 8:9 66:9 67:4
214:19
PHASE 1:8 12:5 14:2,
11, 16, 20, 21 18:13
30:17 44:7, 17 48:1
50:8 51:16, 19, 20 52:16,
20 60:7 61:5 62:21
70:18 74:18 80:7 87:6,
10 111:8 113:18, 22
126:18 132:10 133:12
135:16 146:20 149:20
158:14 159:10 176:1
177:4 178:19 189:19
204:21 207:15 208:13,
17 209:7 210:4 218:13
219:18 240:7 251:4
254:14, 18, 22 255:2, 8,
13, 21 268:20 269:21
271:4 272:5 273:17
283:21 294:21 296:16
299:1 316:8 319:16
320:2, 4 342:11 346:21
349:1 361:19 363:18, 20
364:22 366:14 373:17,
21 376:13

phase-in 33:21
PHEV 111:17
Philadelphia 45:21 46:1
144:16 248:3, 16
Phoenix 142:11 345:11
347:8
phone 39:13 54:7 69:15
79:19 94:18 110:12
153:7 167:6 179:18
198:5 199:15 211:10
224:7 229:18 233:19
238:3 244:8 247:12
250:4, 9, 15 266:7
278:21 293:20 294:6
306:12 321:16 322:2
335:1, 5, 6 341:15
355:10 358:14 372:22
386:20 387:4, 8
phones 22:20 39:1
53:17 69:3 79:6 94:6
109:22 136:19 153:2
166:22 179:12 197:22
211:5 224:2 237:19
252:7 266:1 278:15
293:14 306:6 321:10
344:1 358:8 372:16
physical 118:22 262:7
physically 117:22
physicians 149:18 159:8
physicians 294:15
pick 124:12 173:13
Pickerington 63:13
PICKETT 3:16 57:6, 9
picking 165:19
piece 14:4
pilot 133:19 134:4
Pilsen 330:16
Pima 348:4
pioneer 301:20
pipe 55:19
Pitt 11:5 373:5, 7, 15
Pittsburgh 145:7
pivotal 318:4
place 29:5 31:1 42:19
43:3, 7 44:4 57:14 58:2
81:12, 21 123:13 187:20,
22 199:11 235:21
259:22 281:4 305:12
366:7
placed 52:13 125:13
139:3 173:4 323:17
Placer 51:2
places 25:12 99:18
184:2, 14 361:5 368:6
placing 125:17
plagued 46:1 114:17
plain 366:7
Plan 14:5, 8 16:17 21:3,
8 33:4, 7 64:7 82:13
178:18 202:13 205:22

216:8 281:15
planes 206:4
planet 25:13 52:4
67:17 113:8 169:19
171:6 185:14 188:6
193:1 226:6 309:6
329:15 339:4, 8 370:6
planet-warming 362:1
planned 205:14
planning 72:10 153:16
170:7 184:11 202:8
219:20
plans 44:15 115:16
plant 151:11 222:4
257:18 310:3
plants 82:9 199:20, 21
Plastic 187:15, 19
plastics 357:2
platform 283:12
platforms 320:6
play 36:7 43:12 90:3
143:10 221:11 236:4, 8
277:1 296:8 338:15
350:11
played 50:12
playground 120:14
playing 107:6 248:19
plays 222:10
plead 142:17
please 12:12 20:22
21:19 22:2, 21 23:2, 14,
16 26:14 28:13 32:4
35:14 39:3, 9, 12, 16
41:18 44:22 47:15
50:21 53:19 54:3, 6, 10
57:7 60:4 63:7 66:5
68:13 69:5, 11, 14, 20, 22
70:6, 13 71:13 74:5
77:3, 5, 10, 13, 15 78:1, 5,
15, 17 79:8, 15, 18, 22
81:22 82:17 85:18 88:7
90:21 94:8, 14, 17, 21
97:17 100:11, 16 103:8
106:7, 12 110:2, 8, 11, 15
113:1 116:9, 11 119:9
122:1 124:19 126:4
129:2 132:2 135:22
136:20 137:1, 13, 17
140:19 143:3 146:10
149:14 153:3, 6, 10
156:9 159:5 161:20
164:11 166:19 167:2, 5,
9 169:5, 7, 11 171:21
172:4 175:9, 11, 15
179:9, 14, 17 180:4
182:19 183:3 186:1
188:21 191:22 194:16,
18, 21 195:6 197:19
198:1, 4, 8 201:6 203:20
204:3 207:2, 4, 8 211:2,
6, 9, 15, 17, 21 214:10

216:22 220:6, 8, 11
223:21 224:3, 6, 10
226:11 227:3, 5, 9
229:15, 17 230:1, 3, 7
233:13, 16, 18 234:1
237:16, 21 238:2, 6
240:19 241:11 243:21
244:1, 3 249:14, 20, 22
250:3, 7, 12 251:10
252:8, 11 253:1, 5 256:2
258:14 261:12 263:8
265:3, 20 266:3, 6, 10
268:10 270:21 274:1
276:4 278:12, 17, 20
279:2 282:6 285:9
287:3 289:20 293:11, 16,
19 294:3, 5, 9 296:21
297:1, 5, 11 300:15
301:11 303:22 306:3, 8,
11, 15 308:19 309:10
311:19 312:3 314:17
317:16 321:7, 12, 15, 21
322:1, 5 324:13 327:21
328:1, 5 329:22 330:2, 6
332:4 334:20, 21 335:3
339:15 341:10, 12, 14, 18,
20 342:16 343:5 344:2,
5, 17, 21 346:11 349:10
352:10 355:7, 9, 13
358:5, 10, 13, 17 361:13
364:12 367:17 369:19
372:13, 18, 21 373:3
375:18 379:5, 7, 10
382:6 386:14, 16 387:1,
7
pleased 253:16
plenty 357:4
plow 325:15
plug-in 49:11
PM 127:2, 7 128:5
130:15 165:3, 9 224:21
269:16 319:9
Pneumonia 120:4
pockets 347:13
Poder 10:14 345:3
point 118:8 141:7
171:8, 12 196:10 234:17
264:21 279:22 357:4
370:14 371:10 377:3
pointed 199:17
points 28:19 111:22
186:11 188:6 200:15
370:13
poisoned 365:4
poisons 339:2
policies 33:11 46:4
61:3 101:15 122:8
132:17 133:7 134:8, 16
188:17 208:12 213:8
243:6 260:18 298:5
337:1 353:11 362:7

Policy 9:3 23:20 32:21
60:9 71:16 88:12
116:19 119:16 122:5
126:8 132:7 133:13
146:15 169:16, 18 189:2
238:10 243:13 279:7
284:18, 20, 21 285:5
297:18 316:22 317:1, 20
331:3 366:9
policymakers 318:5
policymaking 175:21
280:10
political 67:14 186:7
politics 66:13
pollen 59:4 160:7, 10, 12
295:7 333:3
pollens 160:9
polling 117:11
pollutant 89:16 112:16
127:4 225:4, 14 255:16
280:14 319:8
pollutants 27:16 37:4
58:9 72:7 76:9 90:8
127:2, 10 128:21 130:10,
14 134:10, 12 143:20
144:7, 12 147:6 152:10
165:1, 5 185:2 215:11
216:2 262:6, 8 264:8
269:19 272:15 290:12
296:5 331:13
pollute 108:16
polluted 90:3 102:17
221:2 228:18 313:2
354:14 381:17
polluters 329:6
polluting 33:11 138:13
143:10 154:9, 10 156:21
184:19 185:12 265:10
268:1 308:6 365:16
381:19
pollution 14:6 16:12
23:22 24:7, 11, 14, 15
25:12 26:2, 3 27:6, 11,
17, 18 28:2 29:13 30:10
31:7, 20 32:10 40:17
46:5, 6, 19 47:1, 2 51:3,
8 54:18 55:10, 15, 18, 19
56:3 58:8, 20 59:5, 12,
17 64:13, 19 65:1, 9, 12,
15, 22 67:7 70:21 71:2,
4 72:13 73:8, 12, 13, 19
75:16 76:5, 10, 13 89:2,
11 91:9, 12, 15 92:7, 10,
13, 15, 20 93:6, 7 95:6, 9,
13, 20 96:9, 15, 18 97:6
98:13, 15 99:3, 12, 14, 19
100:2, 3 102:3, 5, 20, 21
104:9, 13, 16 105:21
107:8, 12, 15 108:10, 13,
16, 20 109:9 115:22
116:3, 22 117:3 119:14,

18, 20 120:1, 6, 21
121:14 127:6 128:10
129:14 130:11 131:7, 12
138:3, 6, 19, 22 139:1, 13,
20 140:5 142:2, 3, 8
143:8, 18 144:21 145:3,
8, 12 146:1 147:7, 12, 14,
15 148:2, 16 150:9
151:6, 8, 9 152:6 156:15
157:4, 5, 8, 11 158:10, 13
159:1 160:4, 8, 10 163:2,
6, 18 164:19, 21 165:3, 4,
9, 15 167:16 168:2, 5, 7,
9 172:14, 20 173:7, 8, 18
174:1, 9, 14 176:13
177:10 180:20 181:1, 9,
13, 17 184:4, 15 185:7
187:15, 19 190:21
192:12, 15, 17, 22 193:14,
21 194:8 196:1, 6, 16, 22
197:1, 3, 5 200:17
203:14 208:5 212:11
213:5, 12 215:14, 18, 22
220:19 221:5, 8, 17
222:2, 5, 10, 17 225:6, 14
226:2 228:9, 16 229:1, 4
232:21 234:15, 18
235:13, 16, 17, 22 236:18,
22 238:13, 15 239:4, 17
240:12 247:20 248:22
262:1, 2, 15 267:2, 8, 15
268:22 270:4, 6 271:7,
13 272:1 273:3, 19
274:16 275:3, 11, 15, 22
276:22 277:14 282:21
284:3, 5 286:8, 12, 15
290:19, 20 295:11, 12, 17,
20 299:22 300:6, 9
304:11, 13, 16 305:10
307:13 308:10, 14
310:22 312:22 313:19
314:1, 6, 11 319:10
323:7, 12, 15, 20, 21
324:2 325:1 328:9, 10,
19, 22 329:8, 10 331:2, 7
332:9 333:10, 13, 21
336:5, 10, 12, 15 337:13,
16, 21 338:13, 18 340:10,
17, 20 341:1 345:9, 10,
11, 18, 22 347:21 349:22
350:16 351:22 360:12
361:6 364:7, 19 366:5
367:11 368:7, 13 370:18,
20 371:16 376:18, 22
379:20 383:2, 4, 6, 8, 12
384:18, 19
pollution-based 33:20
pollution-driven 59:19
pollution-free 239:2
pollution-reduction 57:1

pollutions 167:15, 20
331:4 349:21 350:7
353:3
pollution-triggered 225:1
pond 247:22
ponds 58:1
pool 154:6
pools 154:2 173:11, 15
poor 27:10 108:19
148:6 183:13 189:11
275:5 280:2 299:15
306:22 307:12, 22
328:13 330:21 338:15
353:6 354:14 360:9
378:3
populated 65:8
population 37:7 73:6
74:20 119:21 147:3
194:4 213:10 262:12
populations 27:19 29:13
37:9, 11 46:9 76:19
89:19 108:3 148:5
183:20 190:22 330:19
port 31:21 40:13 75:9
92:1, 4, 20, 21 173:12, 14,
19 362:21 384:15
portfolio 48:16 156:3
244:14
portion 23:8 39:5
53:21 69:7 79:11 94:10
110:4 137:7 163:1
221:22 252:17 344:11
373:10
Portland 159:9
ports 72:20 91:21
147:20 176:10 213:6
362:12, 20 363:1 384:15
pose 272:10
poses 24:5 127:5
183:22 212:13
position 123:18
positive 26:7 36:17
43:4 128:19
possibility 269:3 270:2
305:8
possible 26:9 30:2 31:1,
2 46:6 47:11 54:18
55:15 57:1 66:1 84:11
85:13 91:18 93:15
95:15 97:12 100:8, 10,
12 103:4 105:16 106:2,
8 109:4 116:21 118:20
119:3 125:20 130:19
131:20 138:6 140:4
142:16 149:9 152:13
156:14 161:12 162:10
163:3 164:4, 20 167:16
168:12 172:14 174:15,
20 182:19 186:15
187:19 188:18 192:11
193:21 194:7 197:2

198:17 201:1, 12 203:18
212:8 214:5 216:14, 15
223:10 225:22 226:4
229:8 234:12 235:10
237:5 238:14 240:14
249:15 272:21 273:18
275:18 276:9 286:20
288:2 289:14 301:3
305:7, 10 311:21 314:9,
13 324:3 325:9 334:12,
15 348:17 351:18
358:22 361:9 365:9
368:18 369:13 370:11
371:22 376:13 382:2
384:2 385:19
possibly 281:18
post 209:16
posted 12:21 136:8
251:18 343:12
post-fossil-fuel 141:17
potential 52:1 112:5
158:7 177:20 178:1
192:13 202:1 205:18
213:20 226:5 317:3, 11
potentially 115:5 292:9
374:7
potentiate 160:8
Potomac 98:9
pound 216:1
pounds 81:7
poured 361:1
poverty 144:15 145:11
Power 6:10 11:4 49:20
68:11 71:21 82:9
122:14 140:15 145:18
151:11 153:16 162:2, 6
200:4, 21 219:2 260:1,
10, 14 267:21 281:14
288:17 292:2 298:4
302:15 356:6 357:3
370:1
powered 25:2 31:18
49:15 128:14 264:1
287:15 291:3 374:13
PowerFlex 153:18
powerful 58:9 105:11
145:9
powertrain 111:7 123:3
powertrains 42:1, 10, 15
111:5, 13, 21
practical 86:15 325:7
327:11
practically 80:9 283:4
practice 68:12 151:17
236:3 298:11, 15
practices 173:5 298:14
378:8
practicing 149:18
pragmatic 34:21
pre-2010 288:9 302:13

precedent 44:10 353:9,
14, 19
precious 76:2 139:8
precursor 127:3 144:8
272:15
predicted 302:15 307:19
predictors 283:17
predominant 143:8
predominantly 139:6
377:15
preemption 17:7, 8, 11
25:22 32:15 34:18 53:4
prefer 320:7
preferred 12:10, 16
135:20 251:8 343:2
pregnant 46:10 108:18
premature 16:6 25:4
37:21 72:15 73:9 102:9,
14 117:19 131:17
145:20 148:17 157:6
203:8 213:3 228:4
275:9 295:17 300:11
314:8
prepare 298:2
prepared 23:8 39:6
53:22 69:8 79:11 94:11
110:5 137:7 252:17
344:11
preparing 359:18
Presbyterian 304:3
presence 58:3 69:20
70:1, 7 77:3, 11, 15
78:15 150:17 156:19
169:5 175:9 194:17
207:2 211:15 220:6
227:3 229:15 230:1
233:13, 16 243:21 244:4
249:20 250:3, 8, 13
294:3 296:22 297:5
321:21 327:21 329:22
334:21 335:4 341:10, 19
352:5 355:7 379:5
386:14 387:2, 8
present 77:9 138:4
152:10 184:10 194:15
233:16 243:19 249:18
296:20 341:8 386:12
presentation 18:16 19:18
presents 43:7
preserve 124:10 169:19
preserving 191:16 279:9
President 14:9 23:20
28:17 36:3 39:21 41:21
82:20 85:20 124:22
132:6 217:4 256:5
263:11 307:17 322:15
379:15
presidential 322:16
President's 216:11
presiding 13:13 18:7

20:11
press 21:22 341:14
pressing 69:21 70:7
77:3, 11, 16 78:15 169:6
175:10 194:17 207:3
211:16 220:6 227:4
229:16 230:2 233:13
243:21 244:4 249:21
250:8 294:4 296:22
297:5 321:22 327:22
330:1 334:22 335:4
341:10, 19 352:5 355:7
379:5 386:14, 19 387:2,
8, 9
pressure 185:11 360:8
Pretending 325:22
pretty 85:22 235:3
247:21
prevalence 59:18
prevalent 280:12
prevent 12:15 34:21
136:3 251:13 312:17
314:8 343:8 354:1
356:20 363:7
preventable 67:8
prevented 131:18 366:22
prevention 37:21 294:16
prevents 246:11 380:20
previous 42:13 44:9
242:7 246:3
previously 145:4 184:6
347:8
prices 277:15 369:3
primarily 92:5
primary 83:10 176:13
239:11
Prince 181:10
principles 191:5
printed 289:10
prior 22:15 38:18
53:12 68:20 79:2 85:7
94:1 109:17 136:14
152:13, 19 166:14 179:4
197:14 210:19 223:16
237:11 252:2 265:15
278:7 285:1, 3 293:6
305:20 321:2 343:18
357:22 366:21 372:8
prioritization 378:14
prioritize 57:20 365:13
prioritized 365:15
prioritizing 140:11
366:13
priority 52:13
privacy 385:22 386:2
Private 6:9, 11 8:16, 17
62:13 164:16 206:9
271:2 276:7 279:9
privilege 120:22 262:4
310:15

probably 202:14 303:9
310:14
problem 43:11 99:15
334:1 360:13 361:7
problematic 319:4
problems 43:9 83:15
84:19 89:17 181:15
247:20 248:2 262:8, 9
267:4 268:19 300:7
333:17 337:15 340:19
360:3
proceedings 23:15 39:4
53:20 69:6 79:10 94:9
110:3 137:15 166:21
179:11 197:20 211:3
223:22 237:18 253:3
265:22 278:14 293:13
306:5 321:9 344:19
358:7 372:15
process 19:5 29:3, 9
35:1 155:5 181:20
219:22 242:3 256:16
284:16 325:11 349:6
processes 62:19 366:9
produce 150:15, 17
158:4 161:7 185:1
381:1
produced 151:9
producer 194:4
producing 363:10
product 241:20 242:21
244:13, 16
Production 2:13 62:4,
18 80:16 123:4, 19, 20
124:14 277:15 291:17
292:20 302:7 323:13
369:2, 11 381:10
productive 83:22 218:1
329:4
products 123:16 155:4
271:17 369:3
professional 74:14, 16
86:4 87:14 118:8
191:13 294:14 354:6
professionals 29:8 30:5
51:10 352:18 385:13
profits 41:3 258:5
264:17
profound 212:15 377:2
Program 13:17 14:12,
16, 20, 21 25:17 31:5
43:17 51:22 117:11
161:13 195:11 212:3
214:12 220:15 221:18
222:7 224:14 262:22
272:22 275:19 287:10
292:19 297:19 299:6
314:20 361:16 369:6
programs 50:16 52:13
60:10 111:19 128:8

133:19 254:11 349:14
369:4, 6, 7
progress 43:13 52:8
progressed 80:12
progressively 158:20
prohibit 35:2
Project 245:1 282:9
355:17
projected 34:11 49:19
87:7 114:1, 10, 20
180:16 182:1 186:19
190:14 209:9 221:21
257:3 273:14 319:3
320:18
projections 61:16 115:7
176:5, 21 178:20
projects 134:4 183:6
374:19
proliferation 145:1
prolonging 320:19
promise 140:10 274:12
promised 86:12 319:2
promises 378:20
promising 160:17
promote 74:12 77:18
180:1 191:10 254:19
255:10 297:8 335:7
346:21
promoted 22:15 38:17
53:11 68:19 78:4 79:1
93:22 109:16 136:14
152:18 166:13 179:3
197:13 210:18 223:15
237:10 252:2 265:14
278:6 293:5 305:19
321:1 343:18 357:21
372:7
promotes 228:13 298:7
368:2
promoting 40:5 70:10
promulgated 191:4
pronounced 152:5
proof 171:2 230:21
propane 139:21
proper 123:1
properly 87:9 122:20
property 279:9
proportion 144:3
proposal 15:19 16:4, 6
17:13, 18 18:2 19:13
20:8 21:16, 21 25:21
26:7 27:13 32:15 42:2,
5 48:1 50:9 51:21 53:3
61:19 71:9 76:7 87:6
111:1 112:15 113:21
114:2, 6, 8, 17, 22 115:8
128:19 158:17 166:3
171:7 178:8, 16 190:13
205:14 206:5 207:19
208:7 209:14 210:2
254:15, 17 268:20 269:6,

21 271:22 272:5 279:12
290:3 296:11 315:1, 3
316:5, 21 317:5 318:16,
18 319:16 320:10, 12
354:21 364:9 383:19
proposals 30:20 86:18
168:16 331:21
PROPOSED 1:9 12:5
13:15, 20, 22 14:19 15:1,
5, 16, 20 16:14 18:12
19:1, 5, 19 21:15 32:19
43:15 45:7 52:16 60:8,
18 61:6 62:14 63:17
64:7 65:19 66:14 72:1
80:6 82:11 86:20 88:13
91:9 95:11 98:3, 20
101:5 103:14 112:19
124:8 125:10 126:10
127:9 130:22 132:9, 16
133:15 135:16 141:5
146:3 158:2, 6, 14
161:14 162:19, 21
170:15 176:3 189:19, 20
190:10 191:9 195:13
197:7 200:10 207:15
212:6 214:16 215:5, 16
216:7 218:12 223:1
227:15 242:9 246:2
251:4 255:4 256:7, 10
258:7 271:2 272:3
273:17 274:13 277:18
280:9 281:3, 16, 19
291:7 294:20 295:21
301:22 303:15 314:4
319:7, 12 333:4 342:12
346:22 352:20 355:2
361:19 363:20 371:1, 12
384:5
proposes 44:6
proposing 14:11 17:6
30:14 107:2 146:19
218:19 253:13 283:6
prosperity 52:22 134:18
369:11
protect 26:2 27:15
29:19 32:17 52:4, 21
60:20 63:1 73:15 76:18
95:5, 13 97:13 100:11
104:17 105:18 106:7
109:7 119:1 121:16
130:6 171:6 172:17
182:20 191:1, 10 194:8
203:12, 20 212:20, 22
215:13 222:7 224:18
234:6 235:9 236:18, 21
237:3 262:12 277:20
285:21 298:9 301:3
314:7, 10 324:9 329:13
331:4 339:7, 15 352:14
359:4 366:7 367:2

protecting 41:7, 9 45:11
63:20 65:21 66:17
88:16 91:11 98:6, 22
101:8 103:17 107:5
154:14 195:17 201:15
213:22 262:3 286:18
304:7 305:4
PROTECTION 1:4 2:2
12:3 13:4 51:12 107:1
207:14 273:1 322:20
324:1 351:18 385:19
protections 57:17 75:20
117:1 119:5 336:3
338:2 339:13 340:7
341:4
protective 30:21 31:8
131:4 161:16 283:22
285:5 331:22 362:19
364:22
protects 298:6 351:20
proud 66:8
prove 303:8 327:8
proven 48:4 84:3
205:10 206:7 373:20
provide 15:6 18:5
19:17 20:4 21:15 23:7
30:9 37:17 39:5 47:19,
22 48:8 53:6, 21 60:7
62:15 69:7 71:22 74:8
77:22 78:5, 13 79:11
94:10 110:4 114:10, 19
121:3 124:15 129:7
132:8 137:6 140:2
158:21 165:21 168:4, 10
170:21 171:2, 5, 10
172:18 178:18 185:5
192:13 217:14 219:8, 17
225:19 252:17 259:7
260:9 261:7 274:14
283:12 290:10 296:13
299:9 303:7, 18 325:19
344:10 359:8 369:13
provided 52:2 115:11
288:18
Provider 7:19 373:8
providers 245:14
provides 18:15 253:18
254:18 301:17 302:8
351:3
providing 12:12 15:13
19:4 95:21 134:21
135:22 189:13 190:17
251:10 343:4
proving 218:9
provision 26:6
provisions 53:3 126:12
143:22 292:16 311:20
proximity 74:21 221:6
340:13
Prudhoe 302:21

psych 76:3
psychologically 117:21
PTSD 361:3
Public 6:8 9:3 12:4, 18,
20 13:6, 19 14:18 15:7,
12, 17 17:15, 22 18:4
22:7, 10 23:4, 12, 13, 20
25:1, 13 26:2 31:16, 22
32:17 34:10, 13, 16 47:7
51:13 54:22 55:8 56:21
60:14 63:15 73:15
99:14 109:11, 13 113:17
114:21 126:15 127:19
128:13 129:17 130:6
131:5 132:8 134:7, 18
135:15 136:5, 8 137:3,
11, 12, 13 147:13 148:12
152:2 156:12 175:20
182:21 187:7 204:14
212:22 213:22 223:5
224:18 248:5 251:3, 15,
18 252:13, 21, 22 269:2
271:11 272:7, 11 273:3,
4 275:9 277:4 279:7
284:12, 15, 17 285:19
289:1 290:16 296:12, 13
307:15, 16 314:7 315:12
317:20 318:3, 7 325:11,
12, 17 326:4 330:10, 17
331:4 332:20 336:20
342:10 343:9, 12 344:7,
15, 16, 17 351:8, 20
353:11 360:12 376:10
378:16 385:13
**public_hearing@abtassoc.
com** 22:22 23:3 39:10,
13 54:4, 7 69:12, 15
79:16, 19 94:15, 18
110:9, 12 136:21 137:2
153:4, 7 167:3, 6 179:15,
18 198:2, 5 211:7, 10
224:4, 7 237:22 238:3
252:9, 12 266:4, 7
278:18, 21 293:17, 20
306:9, 12 321:13, 16
344:3, 6 358:11, 14
372:19, 22
publications 118:1
public-charging 315:4
publicly 12:20 115:15
131:2 136:7 251:17
255:7 343:11
publicly-accessible 316:3
published 18:14 21:16
314:21
PUCs 62:17
Puerto 350:21
puffing 159:16
PUGH 4:14 85:17, 19
pull 164:14

Pulmonary 6:6 149:18 150:7 151:1 238:22 294:15 pulse 325:3 pump 300:5 pumping 257:6 pun 288:11 punitive 81:10 purchase 42:20 43:5 44:3 80:10 87:11 157:19 246:12 purchases 246:21 254:8 257:12 purchasing 80:22 219:4 242:16 purifiers 192:19 Purina 310:3 purpose 18:10 231:21 Pursuant 290:14 pursue 38:8 pursuing 253:22 push 92:9 208:17 209:7 210:5 218:13 255:3 pushed 101:21 102:18 pushes 85:8 pushing 87:16 318:15 put 27:19 61:17 71:19 90:17 93:18 112:14 114:14 131:2 132:21 140:6 142:9 165:15 166:3 168:3, 16 175:1 180:14 184:5 187:20 203:15 208:1 213:13 231:13 305:12 306:21 312:16 351:4 364:2 366:7 371:13 374:9 puts 24:17 115:22 281:3 303:16 putting 75:8 85:13 139:17 193:10 277:22 318:1 Puyallup 92:19 < Q > Quaker 162:12 qualities 66:11 68:2 Quality 2:5, 8 13:13 24:12 27:10 50:16 51:10 58:4 64:16 66:20 67:20, 21 68:1, 3, 6, 13 75:4 89:21 95:10 99:15 100:6 108:19 118:11, 13, 14 120:20 125:3 139:2 150:12 159:21 163:15 176:9 177:9, 11, 12 178:7 183:13 184:17 190:19 203:5 221:10 225:6 235:21 239:8 269:5 275:5 276:17 277:2 299:15 313:4 319:13 324:19 328:13	333:5 336:7 338:15 360:9 361:16 362:10 363:6 376:17 378:3 quantified 37:13 76:11 131:12 quantities 374:1, 19 377:12 quarter 33:17 67:13 174:7 Queen 40:12 Queens 40:11 192:16 193:8 248:11 question 89:5 354:4 questions 18:21 19:1 22:1 112:20 124:16 281:15 quick 29:3 quicker 188:13 353:17 quickly 30:11 85:6 130:19 131:20 149:9 162:9 164:4 168:6 188:10 212:8 216:15 220:18 223:10 286:19 299:2, 7 305:7, 10 331:9 370:10 371:21 376:12 384:1 Quincy 306:18, 20 307:2, 5 quite 186:10 quo 185:13 318:16 365:11 quote 367:13 < R > race 92:9 283:16 racial 108:8 racism 157:9 173:3 225:19 226:4 240:6 323:17 378:7 racist 46:4 Radiation 2:10 13:5, 10 rail 33:8, 22 93:4 239:18, 20 257:8 263:12, 18 266:14, 19 270:16, 17 366:21 367:3, 6 377:7, 8, 9 rail-impacted 34:3 35:8 railroad 196:8 railroads 26:5 34:15 256:21 258:5 263:17 264:16 265:5, 6, 7, 9 rails 33:18 257:1 railyard 34:15 145:2 258:8 266:19 352:22 railyards 26:5 239:19 256:19 257:7 258:2 263:18 264:5, 10, 14 267:8, 11, 14 268:1 377:17 rain 193:18 339:6 rains 346:1	raise 69:21 70:7 77:3, 5, 11, 13, 16 78:16, 17 169:6, 8 175:10, 12 194:17, 19, 22 199:10 207:3, 5 211:16, 17 220:6, 8 227:4, 6 229:16 230:2, 4 233:13, 17 243:21 244:1, 4 249:21 250:1, 8, 14 294:4 296:22 297:2, 6 321:22 327:22 328:2 330:1, 3 334:22 335:4 341:10, 12, 15, 19, 21 352:6 355:7, 9 379:5, 7 386:14, 16, 18, 19 387:2 raised 70:9 77:17 195:4 233:15 244:5 297:7 335:7 376:8 387:9 raising 119:15 250:4, 13 Raja 126:4, 6, 7 RAJAN 5:13 R-A-J-A-N 126:7 ramp 369:2 ramping 208:5 ran 307:17 356:2 Randleman 230:11 range 15:19 50:10 87:15 102:2 104:2 111:7 130:2 182:9 209:5 217:9 219:14 253:18 303:5, 11 315:16 316:14 318:10, 11 ranges 205:19 374:18 rank 64:4, 18 ranked 27:6 75:2 119:22 138:18 275:2 ranks 102:4 145:8 rapid 45:15 47:8 91:16 99:1 103:2 106:3 107:10 121:18 186:22 229:6 233:3 235:14 349:22 359:7 363:16 rapidly 46:7 49:19 133:1 176:22 186:10 197:3 223:7 234:15 295:2 299:8 337:18 339:1 rapidly-approaching 167:22 Rapids 304:5 rare 287:12 rarely 59:2 ratchet 186:10 rate 56:6, 8 64:17 243:6, 7 282:18 329:11 rated 120:19 rates 43:15 61:14 72:16 142:11 147:18 148:6 157:3 193:2 224:22 238:22 246:1 307:20	328:20 336:17 337:5 rating 347:21, 22 raw 260:2, 13 RAY 9:18 314:16 318:11 Raymond 314:18 reach 84:6 121:5 162:7 202:4 226:20 283:22 301:1 303:17 reached 62:2 280:16 300:15 308:19 reaching 84:3 85:11 react 65:5 99:22 196:18 reaction 150:18 346:17 reactions 347:19 read 201:20 readily 81:11 96:18 246:14 283:20 365:6 readily-available 319:18 readiness 62:3, 8 219:5 reading 201:21 279:16 ready 13:1 70:12 77:22 81:2 124:6 133:18, 20 162:13 180:3 240:11 242:20 297:10 301:14 335:10 380:8 387:13, 15 real 31:16 62:9 145:18, 19 209:4 294:22 313:9 373:19 384:22 385:10 realign 316:21 realistic 62:13 realistically 85:9 realities 67:7 205:13 375:1 reality 58:18 72:17 165:17 167:21 185:15 190:2 200:20 242:8 355:17 365:2 366:12 realization 93:11 realize 16:5 62:9 67:5 269:13 325:11 realized 269:13 302:14 real-life 259:7 really 29:10 34:20 35:4 81:17 96:17 165:22 166:7 234:18 243:2 264:10 267:15 268:18 269:6 311:13 314:8 332:21 346:21 348:22 349:2 354:2 368:11 369:1, 7 382:20 real-world 217:14 218:11 reams 319:22 reap 164:5 reason 74:17 107:22 276:14 383:13 reasonable 20:12 293:1 reasonably 292:8 reasons 185:16 235:9
--	---	---	--

272:5 281:17 282:22	224:11 226:11 227:10	reduces 36:21 221:22	regardless 66:21 122:18
reassign 342:16	230:8 234:1 238:7	256:14 288:6	123:2 185:3 326:14
rebuttal 20:5	240:20 241:12 253:2, 6	reducing 36:22 46:15	327:12
receded 307:6	256:3 258:15 261:13	64:8 76:9 96:7 127:10	Region 89:14 144:16
receive 17:22 18:11	263:9 266:11 268:11	128:20 130:10 131:7, 12	181:5 182:14 263:14
22:14 38:16 53:10	270:21 274:2 276:5	143:18 147:5, 8 152:8	360:11 375:1
68:18 78:22 93:21	279:3 282:7 285:10	170:11 191:10 208:4	regional 83:3 89:5
102:19 109:15 136:13	287:4 289:21 294:10	212:18 222:5 229:3	221:18 222:7 292:18
152:17 166:12 179:2	297:12 301:12 304:1	292:13 296:2 323:14	306:21
197:12 210:17 223:14	306:16 309:11 312:4	332:13 360:17 383:12	regionally 231:10
237:9 252:1 265:13	314:17 317:17 322:6	Reduction 15:12 34:14	regions 128:4 221:12
278:5 293:4 305:18	324:14 328:6 330:7	38:1 45:16 52:3 115:9	Register 18:14 19:12
320:22 343:17 357:20	332:5 335:11 344:19, 22	134:9 141:19 208:15	20:8 21:17 29:6
372:6	346:12 349:11 352:11	216:11 223:6 253:19	registered 21:1 23:1
received 56:18 58:5	355:14 358:18 361:14	277:17 283:10 288:14	39:11 54:5 69:13 74:9
65:8 89:14 116:10	364:13 367:18 369:19	292:18 301:21 302:14	79:17 94:16 110:10
151:4	373:4 375:19 379:11	318:12 363:15 364:4	129:8 136:22 153:5
recently-passed 325:5	382:7	369:5	167:4 179:16 198:3
recently-released 45:13	record-breaking 378:2	reductions 17:2 49:12	211:8 224:5 238:1
128:2	recorded 12:18 116:13	114:3 122:22 143:19	252:10 254:12 266:5
recess 135:6 250:18	136:6 251:16 343:10	152:9 157:14 158:16	278:19 293:18 306:10
342:2	recording 12:19 136:6	163:12 170:7, 13, 16, 22	321:14 344:4 358:12
recessed 387:21	251:16 266:13 343:11	171:6, 17 177:9 190:18	372:20
recharge 42:17	recovering 235:1	240:8 246:6, 8 253:11	regular 302:20
recharging 42:18 123:4	recreation 368:6	269:15, 18 270:1 284:7	regularly 150:6 313:9
recipe 44:5	recurring 354:4	288:10 301:1 314:22	378:1
recognize 31:5 133:2, 5	recyclable 356:19	316:1, 18 317:2, 7	regulate 265:4 319:9
232:18 233:2 270:8	recycling 107:18 123:6	319:20 374:8	366:20 367:5
350:20 370:4	Red 104:18	re-evaluate 320:12	regulated 177:16 280:14
recognized 205:21	Redacted 385:22 386:2	Reever 4:11 80:3	regulation 17:7 53:4
285:21	redefined 67:1	refer 21:19	63:4 195:14 218:2, 13,
recognizes 291:7	redlined 102:16	referenced 287:22	18 219:7 242:4, 7, 8, 10
recognizing 366:21	redlining 46:4 314:1	384:20	243:3 246:2, 6, 10 254:7
recommend 61:21	378:8	references 125:21	273:17 281:2, 14 285:1
recommendations 114:12	redress 290:15	referred 26:21 238:20	319:21 324:22 325:6, 8,
reconfiguring 219:12	reduce 14:5, 13 15:3, 20	refineries 174:3 360:10	9 327:12 367:9 373:21
reconsider 284:22	16:8 27:13, 16 28:8, 20	refinery 310:2, 10	381:6
reconvene 135:7 250:19,	29:21 34:4, 19 36:2	refining 122:7	regulations 17:6, 9, 11
20 342:2 387:21	37:2, 3, 5 46:19 48:17	reflect 14:22 62:8	25:22 26:1 42:5 53:4
record 18:19 20:2	52:14, 22 59:16 64:12	112:5, 10 190:2 191:12	65:19 82:11 86:16
23:15, 17 26:15 28:14	68:14 73:12, 18 96:9	208:20 314:13 315:11	91:10 98:20 142:19
32:5 35:15 39:17 41:19	99:11 104:9, 16 111:1, 9	366:2	146:3 154:7 155:18
45:1 47:16 48:5 50:22	126:10, 20 127:9 132:13	reflection 68:10	165:17 167:18, 21
54:11 57:8 60:5 63:8	141:9 149:2 161:9	reflects 17:13 51:22	177:12, 15 178:4 187:8,
66:6 70:13 71:14 74:6	170:2 187:3 189:15	158:17 314:22 317:11	21 188:17 193:19 197:8
78:2 80:1 82:18 85:18	197:4 203:13 209:4	383:19	212:6 217:13 219:16
88:8 89:7 90:22 94:22	215:12 220:19 224:17	Reform 128:11	243:5 245:17 246:3, 9
97:18 100:17 103:9	234:17 235:16 256:20	refrain 282:2	261:2 279:11 281:1
105:9 106:13 110:16	260:19, 21 270:5 271:12	refrigerated 300:3	283:15 293:2 311:8
113:1 119:10 122:2	288:1, 11, 13 296:3, 4	refuel 42:17	325:6 329:12 332:21
124:20 126:5 129:3	298:1, 7, 16 299:18, 21	refueled 292:1	334:8 348:9 362:17
132:3 137:15, 17 140:20	300:10 302:3 303:4, 17	refueling 42:18 123:4	363:4, 21 365:15 367:1
143:4 146:11 149:15	314:10 317:12 320:2	124:5 260:1 291:22	373:17, 18
151:17 153:11 156:10	323:15 329:11 331:3	363:12	Regulations.gov 19:22
159:6 161:21 164:12	332:8 337:20 340:22	refugees 119:18	23:10 39:8 54:2 69:10
167:10 169:12 172:5	350:1, 17 363:4 371:20	refuse 14:17	79:14 94:13 110:7
175:16 180:5 183:4	374:5	refused 80:15	137:9 252:20 344:13
186:2 188:21 192:1	reduced 37:19 48:22	regard 41:8 42:10	regulatory 35:17 43:8,
195:7 198:9 201:7	49:4 213:2 246:4	92:10 170:7 276:21	17 44:13 50:16 52:7
204:4 207:9 211:22	272:18 291:2 303:11	regarding 141:7 151:6	88:12 124:22 155:5
214:10 217:1 220:12	316:11 364:7 371:19	271:2 280:20 355:19	204:7 209:11 217:14

219:17 271:12 296:1 308:3 318:18, 20 319:8 325:4 reinforcing 366:20 REIS 4:16 88:6, 9, 11 reiterate 149:8 rejoining 135:14 251:2 342:10 relate 345:16 related 147:19 336:15 relating 130:3, 4 relation 66:12 relations 68:11 244:12 relationships 261:21 relative 104:21 291:20 relatives 120:8 release 165:3 released 24:22 27:4 55:5 64:21 89:13 128:12 154:3 184:12 201:18 208:11 274:22 345:7 383:1 releases 249:2 releasing 50:8 relevant 121:1, 4, 17 reliability 85:2 87:3 112:11 205:19 218:5, 8 219:6 261:3 302:18 reliable 80:19 84:6, 13 135:1 243:10 259:12 260:22 261:6 reliance 16:9 123:12 125:18 176:10 relief 30:9 157:14 158:21 163:13 168:4 172:19 185:6 192:14 213:14 225:19 274:15 relies 115:14 Religious 9:5, 21 40:1 285:12, 15 286:1 322:11 rely 36:13 125:9 231:9 311:1 remain 185:15 219:21 221:13 319:11 remaining 158:6 232:7 remains 87:12 112:17 367:9 377:9 remember 28:5 40:8 121:13 156:16 159:14 236:6 368:3 381:18 remind 19:7 284:22 reminder 22:12 38:16 53:10 68:18 77:20 78:21 93:21 109:15 136:11 152:17 166:12 179:2 197:11 210:16 223:13 237:9 251:21 265:13 278:5 293:4 301:13 305:18 320:22 343:15 357:20 372:6	reminding 68:7 remiss 76:3 remote 109:12 303:8 Removal 101:13 111:17 remove 96:6 206:1 232:1, 14 256:19 removed 232:4 removing 231:17 renewable 25:3 35:20 36:1, 20 37:3 38:12 128:15 302:2, 3, 7, 16 366:4 374:5 reopen 44:6 reopening 44:8 205:5 219:18 repaired 356:10 repairs 308:7 repeat 368:14 repeatedly 96:5 142:13 353:12, 21 replace 356:22 357:1, 7 replaced 154:4 replacement 292:6 replacements 123:5 report 24:8, 22 25:5 27:5 32:13 45:13, 17 55:5 58:6 64:20 65:7 75:2 89:13 99:20 102:7 117:8, 13 118:1 120:19 128:3, 11 131:13 138:20 144:19 145:15 151:5 184:12 193:7 201:18, 20, 22 208:11 275:1 331:15 350:4, 9 383:2 reported 277:4, 5 307:21 333:2 reporter 12:19 23:15 39:4 53:20 69:6 79:9 94:9 110:3 116:13 136:6 137:14 166:20 179:10 197:20 211:3 223:22 237:17 251:16 253:2 265:21 278:13 293:12 306:4 321:8 343:10 344:18 358:6 372:14 reports 146:6 305:2 334:1 represent 33:14 86:3 138:4 143:15 230:10 263:14 266:14 310:21 324:16 382:10 representative 180:11 186:4 representatives 21:12 87:22 represented 367:8 representing 29:12 48:3 110:19 141:2 195:12 217:7 241:14 263:12 298:19	represents 33:3 122:6 147:3 185:9 re-propose 124:9 request 19:2 requests 116:10 require 34:22 43:17 81:4 114:9 158:3 163:21 209:22 223:1 232:15 262:13 279:20 283:2 303:9 357:6, 15 374:21 384:9 required 43:16 124:2 260:13, 14, 15 277:11 325:21 327:5 356:9, 16 requirement 43:13 245:17 304:19 requirements 38:7 112:10 123:12 254:5 316:16 319:17 320:4 347:1 362:5 363:7 requires 177:5 280:4 354:22 requiring 61:11 158:19 254:8 357:9 research 36:16 37:16 65:10 66:11 67:4 70:21 117:7, 20 260:3 314:21 315:2, 19 316:9, 13 380:9 reservation 102:16 reservations 80:22 reside 28:1 149:17 151:7 163:8 resident 138:8 184:6 220:21 309:13 residential 181:19 380:17 residents 34:3 58:16 73:4 144:17 150:5 163:17 180:21 183:17 336:19 366:6 377:14 resides 74:21 resiliency 184:11 resilient 243:10 resistance 316:12 resolution 187:13 resolutions 187:20 resolve 260:14 Resource 325:4 Resources 5:6 8:9 32:22 113:4 121:9 177:3 236:20 245:19 253:8 281:6 303:1 369:8, 9 377:22 respect 145:14 respectively 292:20 respects 208:10 respiratory 16:7 65:2 67:9 89:17 102:13 139:14 144:13 203:7 215:19 248:2 272:17	294:17 295:12 333:17 337:15 340:19 345:20 respond 19:3 255:12 305:3 response 14:8 19:4 26:16 48:18 70:2 77:6 78:3, 7, 11, 19 91:1 169:9, 13 175:13 189:9 195:2 207:6 211:19 220:9 226:12, 14, 19 227:7 229:19 230:5 233:20 240:21 241:2, 6 250:5, 10, 16 294:7 322:3 326:13 328:3 330:4 341:16, 22 352:8 355:11 375:20 379:8 386:21 387:5, 11 responsibility 186:14 262:5 284:9 308:10 326:16 367:5 373:12 responsible 88:20 89:1 113:11 174:6 176:16 193:13 207:21 225:8 277:3, 7 286:12 304:21 305:11 313:22 323:4 responsibly 376:12 rest 173:14 262:9 336:18 385:5 restaurants 193:4 Reston 201:9 restricted 295:14 restrictions 348:10, 11 result 16:10 25:8 34:11 86:15 111:20 131:17 150:8 161:3 173:17 181:22 213:7 227:20 269:4 270:10 271:20 272:17 331:19 resulting 15:14 245:3 310:16 results 104:7 123:9 177:13 180:16 185:3 resume 21:9 136:10 251:20 343:14 387:17 retain 82:14 retire 260:20 Retired 3:8 9:14 39:19 271:10 304:3 322:8 returns 81:14 re-value 178:15 revenue 178:1 reverberate 282:1 REVEREND 9:14, 21 304:2, 3 322:7 review 32:16 34:17 242:3 280:21 reviewing 254:14 reviews 219:7 revise 17:6 25:21 53:3 279:12
---	---	---	---

<p> revisions 17:10 revisit 182:2 rhetoric 366:17 RICH 9:14 303:21 Richard 304:3 richer 307:5 richest 171:13 Richmond 156:20 Rico 350:21 rid 309:2 ride 140:2 rider 351:9 rides 213:19 riding 139:10, 12 RIEMENSCHNEIDER 6:4 146:9, 12, 14 rig 81:5 right 64:5 92:18 101:1 106:6 108:6 120:1, 8, 14, 21 135:9 154:11 155:20 160:18 180:19 181:5 214:13 218:2, 15 222:20 235:4 258:7, 9 262:21 269:22 270:6 310:16 314:5 347:17 351:6, 21 364:3 367:2, 4 378:18 385:4 rights 113:7 254:10 279:9 327:4 366:20 rigorous 175:20 364:2 rigs 107:17 337:10 RIOS 7:3 195:6, 8, 9 R-I-O-S 195:9 rise 160:21 182:16 rising 212:16 234:22 risk 24:17 27:20 29:13 34:14 38:2 58:4, 19 75:8 102:9, 12 132:22 134:8 139:18 142:9 150:8 165:16 168:3 181:16 182:17 184:5 193:10 212:13 225:5, 16 238:22 247:7 279:21 284:18, 20 337:15 340:18 345:18, 19 348:6 365:22 377:1 risks 53:1 72:16 123:13 130:3 157:3 320:18 328:19 365:10 Ritz 66:10 River 57:22 98:9 rivers 234:22 Riverside 3:8 39:20 road 32:15 47:5 88:22 96:15 100:6 106:1 113:15 129:22 141:22 163:1 174:6 185:18 193:3, 5 200:15 206:1 213:13 222:15 225:8 228:18, 22 231:12, 18 239:6, 10 273:9 286:11, </p>	<p> 21 302:22 304:21 323:4 351:5 359:15 368:9 369:15 374:2 roads 86:7 120:11, 15 147:20 176:20 213:10 286:7 313:22 352:22 roadway 93:2 96:17, 21 273:6 336:22 360:16 roadways 59:18 72:20 97:3 127:16 190:21 191:15 225:21 ROB 6:18 185:22 186:3 Robert 169:16 robust 52:17 135:1 190:1 260:11 327:11 363:4 375:10 role 22:15 36:8 38:18 43:12 50:13 53:12 68:20 70:10 77:18 79:1 94:1 109:17 136:14 143:10 152:19 160:21 166:14 179:4 180:1 197:13 210:18 221:11 222:10 223:15 237:11 252:2 265:15 277:2 278:7 293:6 296:9 305:20 321:2 343:18 357:22 372:8 rolling 44:8 154:5 307:14 316:11 rollout 186:22 rooftops 307:1 room 147:18 148:9 159:16 295:16 300:20 328:22 root 361:7 ROSE 7:12 220:10, 13, 14 roughly 33:5 222:16 round 30:2 111:10 347:9 Roundtable 285:20 route 40:14 74:22 96:13 150:2 156:21 181:10 248:18 302:20 routes 24:17 25:8 56:3 73:2 75:8 90:11 92:8, 17 127:18 128:19 130:13 145:5 157:10 216:6 239:15, 20 291:21 292:6 350:12 371:15 routine 96:5 routinely 59:1 353:15 row 196:21 rows 159:14 ruin 280:1 Rule 12:6 13:15, 21 14:1 17:21 24:1, 4 26:9 29:2 30:14, 18 31:1 33:3 40:6 41:14 43:12 44:6, 17 47:5 52:16 </p>	<p> 60:18 61:6, 15, 18 62:5, 22 63:1 64:7 73:12 80:7 84:3 86:21 87:10, 21 90:17 93:18 100:5 105:22 111:16 112:19 113:19, 22 114:6 115:4, 18, 22 119:4 125:10, 22 126:10, 12, 13 127:9 129:16 130:21 131:20 132:9, 16 133:15 135:17 141:21 142:17 143:22 144:1 146:7, 21 154:17 156:6 158:19 170:10 177:2, 4 178:20 180:13 181:3 182:1, 2, 6, 20 197:9 198:17 200:10 201:2 203:19 204:17 208:9, 19, 22 209:1, 13 214:6 215:5, 16 220:19 222:20, 22 223:10 228:21, 22 229:10 232:20 233:1 234:14 240:8, 13 243:16 247:5 249:5, 12 251:5 255:5, 9, 21 256:10 258:3, 7 262:13, 21 271:3 272:3 274:13 275:17, 20 279:13 280:9 281:3, 16, 20 282:3 283:3 284:3, 16, 17 290:9 291:7 295:21 301:3, 22 309:19 311:10, 14, 20 316:1, 17 317:11 318:3, 8 319:4, 13 320:16 325:14 332:12 336:6, 11 339:8 340:7, 8 342:12 351:20 359:2 361:19, 21 363:18 365:1, 9, 13, 18 366:2, 16, 17 368:22 371:1, 13, 17 376:14 383:15, 16, 18, 22 384:8 385:11, 14 RULEMAKING 1:9 15:6 18:12 19:1, 6, 20 20:1 21:15 29:22 33:1 60:8 62:21 76:17 112:15 152:12 170:6 205:7 216:7, 8 226:7 239:19 254:18 255:1, 18 256:7 325:10 327:9, 10 rulemakings 29:17 71:21 242:8 rules 20:10 29:20 30:2 31:11 33:8 34:11 42:4, 13 93:16 97:12 100:10 105:16 155:3, 12, 15 159:12 163:6 203:18 212:8 216:14 231:21, 22 233:1, 8 234:12 237:6 268:17 289:12 314:12 333:5 334:12, 16 338:1 339:12 341:3 347:6 </p>	<p> 353:22 355:19 361:10 367:10 378:17 382:19 ruling 80:8 run 27:22 31:4 256:21 261:3 300:3 314:3 355:22 runner 288:16 running 13:19 84:14 192:19 234:9 303:2 runs 373:10 rural 145:4 183:19 199:9 235:18 312:9 313:6 352:15 353:2 rush 127:17 rushed 80:16 RUSSO 10:18 355:13, 15 RUTH 9:16 309:9, 13 < S > SABETTA 3:18 63:6, 9, 12 Sacramento 32:11 220:21 sacred 162:16 sacrifice 213:22 sacrifices 269:22 sad 267:20 saddened 156:19 safe 101:2 120:17 121:14 134:20 191:17 200:13 214:1 236:3 274:11 276:18 safeguard 113:6 118:21 safeguards 88:15 216:16 safer 313:14 safest 86:6 safety 74:16 84:10 87:15 140:11 205:18 212:14 264:8 267:1 302:18 366:8 sake 335:20 356:20 sale 42:21 177:5 208:20 280:7 sales 61:11 115:3 174:17 180:14 181:21 223:2 244:16, 22 254:5 277:16 317:4 320:17 324:5 334:14 351:1 363:22 371:6 378:12 SAM 6:15 132:6 175:14, 15, 18 SAMI 7:10 214:9, 11, 15 San 120:9 156:17 195:20 221:2, 8, 12 SANCHEZ 10:13 69:17 77:14 329:19 335:3 341:18 344:20 345:1, 2 346:15 Sandra 326:11 sandwiched 352:21 </p>
--	---	---	---

SARAH 4:5 74:4, 8	scot-free 268:1	133:11, 15, 17 134:2, 6	semis 38:3
Sarfaty 76:22 78:14	SCOTT 8:11 256:1, 4	143:13 145:7 146:3	semi-trailer 107:17
save 31:21 52:21 54:19	SCR 49:4	155:1 165:1 170:16	semi-trucks 14:19 64:11
177:21 215:12 216:16	scrap 262:22	174:7 181:3 196:7, 14	221:7
308:16 329:2, 10 353:22	screen 12:11 22:14	212:9, 21 215:1 222:18	Senate's 87:20
saved 34:12	23:6 38:17 53:11 68:19	239:12 242:10 274:17,	Senator 257:20
saving 128:20 163:15	69:22 70:8 77:4, 12, 17	19 296:6 298:4 304:22	send 19:9 22:22 23:2
190:13 354:9	78:6, 16, 22 93:22	310:19 313:20 317:12	39:10, 12 54:4, 6 61:19
savings 15:15 37:14	109:16 135:21 136:13	318:7 323:5, 15 329:6	69:12, 14 73:20 79:16,
49:12 121:12 145:18	137:5 152:18 166:13	330:19 349:17 361:22	18 94:15, 17 110:9, 11
177:16 194:9 253:19	169:7 175:11 179:3	364:6	136:21 137:1 153:4, 6
371:18, 20 373:20	194:18 195:1 197:13	sectors 37:8 71:21 86:8	167:3, 5 179:15, 17
savvy 327:1	207:4 210:18 211:16	184:22 319:8	198:2, 4 211:7, 9 224:4,
saw 160:4	220:7 223:15 227:5	sector's 310:22	6 237:22 238:2 252:9,
saying 153:21 249:13	229:17 230:3 233:14, 18	secure 45:19 200:12	11 266:4, 6 278:18, 20
SBIR 155:22	237:10 243:22 244:5	security 122:10 123:14,	293:17, 19 306:9, 11
scale 62:13 67:2 133:2	249:22 250:15 251:9	22 132:13, 22 134:7, 18	321:13, 15 326:15, 16
245:16	252:1, 15 265:14 278:6	see 43:3 47:8 56:5	344:3, 5 358:11, 13
scandal 155:11, 12	293:5 294:5 297:1, 6	69:18 70:4, 9 77:1, 17	372:19, 21
S-C-A-R 338:10	300:18 305:19 308:22	81:20 82:10 85:9 89:21	sending 78:8 90:2
scared 227:22 228:5	321:1 322:1 328:1	91:15 99:1, 9 103:2	sends 180:20
scary 236:8	330:2 334:20 335:6	106:3 111:14 121:18	senior 23:19 32:7 39:19
scenario 44:1 154:8, 9	341:11, 20 343:4, 17	138:5 139:1 150:6	88:11 113:3 116:19
269:5 315:7	344:9 352:6 355:8	156:19 169:3 170:13	122:4 146:14 175:18
SCHANUTZ 4:12	357:21 372:7 379:6	173:16 175:7 179:21, 22	183:6
schedule 84:21 204:19	386:15 387:3, 10	182:13 195:3 203:7	seniors 27:20 380:18
233:3	screens 345:14	204:20 206:22 211:13	sense 67:1 213:20
scheduled 135:6 250:18	scripture 192:7	220:4 221:7 224:16	248:16, 22 345:22
schedules 29:9	sea 212:16 301:18	227:1, 22 229:6, 13, 21	sent 85:4
Schnautz 82:16, 19	SEARS 9:13 301:11, 15	233:11, 14 241:9 244:5	separate 83:15
School 5:20 14:19 40:8	season 152:1 160:7	246:20 249:1 253:16	Sequoia 221:19
64:10 66:10 72:19 76:1	311:17 338:16	254:17 267:19 271:4, 6	series 296:1
96:12 97:1 107:16	seasonal 59:2	275:7 294:1 297:7	serious 16:6 218:21
137:21 138:2, 7, 15	seasons 148:20 160:12	311:2 318:17 321:19	221:13 227:21 262:11
139:17, 19 140:11	203:6 295:6, 7 333:4	322:22 327:19 329:20	336:16 383:11
147:19 154:22 159:15	seated 159:15	335:7 339:5 346:15, 16	seriously 41:7 105:2
173:10 202:22 206:2	Seattle 91:20 92:1, 2, 4,	352:3 353:2 354:3	serve 36:9 51:5 177:7
230:16 231:6 236:7	8, 16, 21 362:20	355:5 359:7, 12 366:7	192:3 322:10 366:8
241:17, 22 295:14	second 64:4 98:17	367:7, 20 370:13, 21	serves 178:14
309:15 330:9, 10 331:10,	104:14 105:9 107:20	371:18 379:3 385:2	service 62:16 259:4
14 337:14 340:13, 18	116:7, 9 148:11 164:14	seeing 86:18 87:7	315:12 328:15 374:9
350:11 351:3 368:12	170:19 255:8 260:17	105:11 148:21 156:17	services 92:7 325:19
369:6	316:5 371:10 377:7	187:22 213:15 274:19	serving 20:11 92:6
schoolers 139:9	387:17	283:14 331:10	298:21
Schools 92:18 97:3	second-largest 107:19	seeking 260:7 280:21	session 21:7 387:13, 14
193:5 336:21	214:21	seeks 81:9 280:7	set 13:21 14:8 30:2
science 67:20 70:15	secondly 147:8	seemingly 58:10	44:10 56:22 62:14
114:12 123:2 172:10	seconds 241:5 300:16	seen 96:2 101:16	75:19 102:3 111:10
175:20 214:19 279:15	308:20	123:17 142:6 153:20	116:21 168:12 174:20
280:2, 21 309:15 310:19	Secretary 86:12 266:13	155:10 160:20 295:7	187:8 206:17 208:8, 22
311:1 317:21	Section 19:16 159:18	sees 359:16 360:19	233:1 235:10 245:11
Science-Based 244:18	239:18 280:19 307:5	segment 291:11	256:7 257:3 263:22
314:9	sector 14:7 16:2 31:7	segments 50:4 291:20	266:16 267:21 269:8
scientific 280:4, 9	35:22 36:5, 12 38:13	segregated 102:16	270:15 273:17 276:18
Scientists 6:15 9:20	46:16 47:3 52:10, 15	segregation 181:19	291:5 293:1 314:8
70:16 72:21 175:19	59:11 61:4 64:5 72:5	select 12:10 135:20	324:4 326:18 345:13
249:13 313:10 317:19	73:20 88:19 95:20	251:8 343:2	351:18 358:22 362:4
333:9	98:14, 17 104:13 105:20	selected 67:4	sets 174:16
scorched 199:21	107:11, 20 113:9, 12	sell 44:2 259:4	setting 30:17 46:6
scored 55:6	114:3 122:15 125:6	selling 242:19	68:13 74:18 111:2
	126:21 132:15, 21		126:16 129:15 130:8

149:20 159:10 161:3 197:2 209:3 298:22 316:2 320:4 settings 185:4 seven 362:17 seventh 32:12 severe 104:4 105:12 148:22 171:20 196:11 228:11, 12 295:5 309:18 360:2 severity 99:9 shadow 266:18 SHAINA 4:21 100:15, 19 shape 61:2 shapes 63:4 share 25:18 60:18 89:1 154:20 155:10, 16 194:6 205:3 218:2 261:15 288:1 296:9 317:4, 7 370:5, 7 371:5 shared 44:18 67:1 shares 208:20 sharing 189:10, 12 219:22 sheer 193:18 SHENK 3:7 35:13, 16 Shepherdstown 98:1 shift 30:7 188:11 266:20, 21 270:15 291:2 Ship 360:10 ships 206:4 384:18 shocked 199:16 shocking 184:18 shop 85:5 shore 311:8 short 61:20 113:22 133:4 142:3 180:16 294:18 307:2 366:14 378:15 shortages 83:13 shortcomings 114:18 325:5 shortened 284:15 shorter 95:21 96:8 246:17 377:19 shortly 22:15 38:18 53:12 68:20 79:2 94:1 109:17 136:14 152:19 166:14 179:4 197:14 210:19 223:16 237:11 252:2 265:15 278:7 293:6 305:20 321:2 343:18 357:22 372:8 385:6 shortness 360:7 shots 199:7 should've 261:19 281:11 show 93:14 128:12 330:21 383:2 show-and-tell 380:5	showed 199:7 383:4 showing 24:8 319:22 shown 41:12 96:14 133:19 139:15 157:17 178:4 300:17 308:21 351:7 353:12, 14 380:19 381:5 showroom 308:4 shows 24:16, 22 45:18 65:11 92:10 128:3 184:13 314:21 318:22 SHRUTI 7:7 207:7, 16 shuttle 14:19 SHYAMALA 5:13 S-H-Y-A-M-A-L-A 126:7 Shyamalan 126:4, 6 siblings 353:1 sick 31:19 37:20 185:14 224:19 261:19 sicker 160:10 side 153:15, 17, 18 155:14 226:18 277:10 359:12, 14, 15 384:16 sides 359:17 Sierra 3:15 6:16 8:6 9:15, 16, 17 10:5, 8, 18 54:13, 16 180:12 220:14 306:18 307:11 309:16 312:6 332:8 355:16 sight 300:2 sign 29:7 350:21 signal 61:19 62:16 73:20 165:21 168:11 299:10 326:15, 17 369:14 signals 133:13 signed 30:5 187:12 significant 15:6, 15, 16 33:9 49:12 59:14 65:4 99:22 107:14 117:4, 9 122:12 124:13 159:20 190:19 196:18 219:4 222:6 223:5 232:14 253:19 269:18 272:10 277:2 290:17 302:14 305:7, 14 326:6 350:17 374:21 375:6 377:10 381:6 significantly 27:9 103:22 114:5, 7 166:2 168:15 176:4 226:5 242:9 255:3 256:20 277:15 289:2 292:13 304:8 320:13 333:17 336:18 337:5 signup 29:3, 4 siloed 378:4 similar 112:10 118:13 182:3 204:20 223:4 245:22 275:18 291:15	351:13 simple 237:2 simply 31:7 118:21 151:10 153:22 199:4 232:10 318:16 325:20 371:13 SIMPSON 7:4 198:7, 10, 12 S-I-M-P-S-O-N 198:12 simultaneous 49:8 simultaneously 116:14 296:4 320:1 326:5 singing 248:19 single 33:3 75:5 129:18 228:9 274:19 296:7 sink 281:8 SIP 33:6 SIPP 10:15 346:10, 13, 18 sister 134:20 sit 232:5 354:13 site 219:5 sites 37:16 sits 58:13 199:2 236:15 359:11 sitting 264:6 situation 188:5 236:16 356:5 380:22 six 101:11 264:4 sixth 334:18 341:7 Sixty-nine 336:19 skeptical 80:21 87:14 ski 339:4 skies 312:21 skiing 199:5 skin 325:18 skyrockets 82:6 slash 212:20 slashing 54:17 slated 56:12 SLAWSON 8:11 256:1, 4 sleep 294:15, 17 360:4 slides 145:6 slight 21:2 279:21 slightly 292:2 slow 116:12 257:5 261:3 336:6 slower 370:14 slowly 23:14 39:3 53:19 69:5 79:8 94:8 110:2 137:14 166:19 179:9 197:19 211:2 223:21 237:16 253:1 265:20 268:2 278:12 293:11 306:3 321:7 344:18 358:5 372:13 small 75:13 80:3 86:3, 4, 19 153:13 162:22 217:10 231:6, 11 235:18	247:21 248:16 275:5 359:15 smaller 122:15 281:8 315:15 317:6 337:17 374:3 smart 61:2 287:10 301:19 smell 89:22 181:11 359:13 368:7, 10, 13 smelled 310:4 smells 200:16 346:1 smog 55:19 58:8 59:6 89:11 139:1 156:17 215:18 smog-forming 72:8 273:11 284:5 smoggiest 32:12 smoke 89:22 127:18 149:3 249:1 295:6 smokers 307:21 smoky 235:2 snow 198:22 199:2, 6, 8 325:15 339:5 snowed 199:3, 7 sobering 105:5 Soccer 213:18 236:1 338:16, 17 340:13 social 91:5 92:7 189:5 191:5 285:19 337:3 373:12 societal 325:17 Society 9:8 16:4 85:8 294:13, 20 381:7 solar 287:15 357:3 sold 48:19 180:17 209:13 245:9 sole 247:7 solely 129:10 soliciting 318:2 solidarity 191:6, 12 solution 57:3 232:17 287:16 361:6, 7 solutions 50:11 60:19 153:22 155:8, 10 156:1 162:14 263:2 270:5 283:20 301:18 319:11, 22 327:7 365:20 372:3 solvable 62:11 solve 43:10 solves 300:6 solving 334:1 somebody 155:14 someplace 311:12 son 97:9 102:10 198:20 199:5, 10, 13 200:15 227:21 228:1, 10 236:1 336:14 338:6 340:11, 12 385:2 soon 55:15 64:15 81:18 89:2 100:7, 12 106:2, 8
--	---	---	--

118:20 152:12 336:15 340:12 356:1, 3 369:15 sooner 158:8 269:13 315:22 346:7 soot 72:7 73:8 100:4 139:4 145:8 215:18 248:9 310:16 311:2 313:1 sore 58:22 sorry 62:7 169:15 342:13 345:13 sorts 288:10 sound 122:8 123:2 260:18 281:1 sound-blocking 58:17 source 24:13 26:3 52:14 59:11 64:2 65:4 67:10 72:6 75:6 88:19 92:7 95:17 98:14 99:22 100:3 104:12 105:21 107:12, 14 113:9, 14 124:13 129:18 147:12 150:13 161:6 176:13 180:20 196:14, 18 200:7 212:9 214:21 215:1 260:12 273:7 288:17 290:18 296:7 304:10, 13 330:20 349:17 365:20 sourced 356:12 Sources 2:10 13:9 32:9 51:6 52:9 65:13, 15 92:15 104:9 108:11, 13 126:22 127:1 151:12 165:15 168:2 177:14 184:5 221:17, 20 262:15 271:13 282:21 302:16 323:21 377:10 sourcing 260:15 South 40:10 144:22 221:12 248:16 Southeast 358:21 359:10 360:8 Southern 172:11 245:1 312:11 Southwest 234:9 Southwestern 95:8 space 67:1 68:9 154:19 191:8 232:14 374:16 spaces 232:6 Spanish 12:8, 15 116:14 135:18 136:3 251:6, 13 343:1, 7 376:10 speak 20:21 21:1 23:1, 14 26:20 28:10 29:7 32:10 39:3, 11 53:19 54:5 62:20 67:5 68:6 69:5, 13 70:17 79:8, 17 94:8, 16 110:2, 10 136:22 137:13 153:5 162:5 166:19 167:4 179:9, 16 197:19 198:3,	16 204:9 210:12 211:2, 8 217:3 223:21 224:5 237:16 238:1 247:17 249:7 252:10 253:1 256:9 263:5 265:20 266:5 274:7 278:12, 19 293:11, 18 306:3, 10 309:7 312:7 321:7, 14 325:5 344:4, 17 352:14, 16 358:5, 12 369:21 372:4, 13, 20 375:14 376:9 382:3 speaker 23:11, 16 26:13 28:12 32:3 35:13 39:15 41:17 44:21 47:14 50:20 54:9 57:6 60:3 63:6 66:4 69:17 70:3 71:12 74:4 76:22 77:7 78:12, 14, 21 79:21 82:16 85:17 88:6 90:20 94:20 97:16 100:15 103:7 106:11 110:14 112:22 116:6 119:8 121:22 124:18 126:3 129:1 132:1 137:10, 16 140:18 143:2 146:9 149:13 153:9 156:8 159:4 161:19 164:10 167:8 169:2, 10 172:3 175:6, 14 179:20 183:2 185:22 188:20 191:21 194:14 195:5 198:7 201:5 204:2 206:21 207:7 211:12, 20 214:9 216:21 220:3, 10 224:9 226:10, 22 227:8 229:12, 20 230:6 233:10, 21 238:5 240:18 241:10 243:18 244:2 247:11 249:17 250:11 252:20 253:4 256:1 258:13 261:11 263:7 266:9 268:9 270:20 273:22 276:3 279:1 282:5 285:8 287:2 289:19 293:22 294:8 296:19 297:3 301:9, 10 303:21 306:14 309:9 312:2 314:16 317:15 321:18 322:4 324:12 327:18 328:4 329:19 330:5 332:3 334:18 341:7, 17 344:14, 20 346:10 349:9 352:2, 9 355:4, 12 358:16 361:12 364:11 367:16 369:18 373:2 375:17 379:2, 9 382:5 386:11, 17, 22 387:6 speakers 20:16, 18 22:19 29:6 38:22 53:16 69:2 79:5 94:5 109:21	136:18 153:1 166:21 179:11 197:21 211:4 224:1 234:16 237:18 252:6 265:22 278:14 293:13 306:5 321:9 343:22 358:7 372:15 speaking 12:13, 15 21:12 22:13, 16 23:5 38:16, 18 53:10, 12 57:15 67:6 68:18, 20 78:21 79:2 93:21 94:1 109:15, 17 116:12 136:1, 3, 12, 15 137:4 152:17, 19 164:22 166:12, 14 167:17 176:7 179:2, 4 197:12, 14 210:17, 19 223:14, 16 237:9, 11 251:11, 13, 22 252:3, 14 265:13, 15 278:5, 7 293:4, 6 305:18, 20 320:22 321:2 343:5, 7, 16, 19 344:8 357:20, 22 372:6, 8 376:11 special 183:6 233:1 248:20 Specialist 2:14 specialize 160:3 specializing 66:10 159:8 specific 107:22 124:12 205:16 288:5 specifically 205:9 Specifically 14:11 65:14 108:12 154:16 346:3 speech 116:12 speed 46:20 99:13 215:5 229:2 277:11 336:11 340:8 spelled 285:13 335:13 339:20 spells 295:5 spend 121:9 266:21 281:5 304:5 spending 259:14 371:19 spent 70:19 86:1 153:14 271:13 312:12 spew 157:1 174:1 225:5 239:22 311:1, 3 338:12 spews 139:4 spikes 138:22 spiritual 370:5 spirituality 68:12 spoke 248:12 spoken 247:18 249:7 sports 96:20 232:15 338:15 spots 81:15 232:2 sprawl 380:13, 16 sprawling 58:1 spreads 149:3 spring 24:21 333:1	339:5 spurring 60:22 squelching 127:18 stability 44:13 stabilize 170:22 stable 104:17 214:1 359:8 staff 70:16 109:11 112:14 155:3 177:21 255:19 294:12 318:1 324:21 367:21 staff's 253:17 stage 112:2 375:8 stages 86:11 STAINKEN 5:16 132:1, 4, 5 stake 133:3 134:19 stakeholder 190:1 stakeholders 17:13 44:17 52:19 121:8 244:21 247:4 261:8 373:16 Stan 384:20 stand 327:12 standard 56:1, 12 96:5 100:12 140:9 166:2 168:14 176:2 178:1, 14 181:6 219:18 257:2, 5 269:9 275:19 286:20 287:14 345:7, 13 346:6 365:10, 18 372:1 384:2 STANDARDS 1:7 2:4 12:5 13:11, 21 14:1, 3, 12, 13 15:3, 5, 16, 20 16:10, 14 17:3 18:13 25:15 28:8 30:3, 18, 22 31:6, 8, 12 33:2, 5 34:9 35:1, 2, 6 44:7, 9, 11 45:7, 9, 10 46:6, 19 47:11 48:11, 18 50:9 51:16, 19 52:21 54:17 56:11 57:16 59:21 61:5, 22 62:15 63:17, 18, 19 64:10, 12 66:1, 14, 15, 16 68:14 72:1 73:18 74:18 75:20 76:8 80:12 81:11 83:8 87:9 88:14, 15 90:16 91:18 93:17 95:11, 16 96:9 98:4, 5, 6, 13 99:11 101:5, 6, 7 102:3 103:4, 15, 16, 17 106:8 107:3 108:21 109:5, 7 111:2, 10 112:16 116:22 118:17, 20 119:3 121:3 124:7, 9, 10 126:17 129:15 130:8, 20 132:10 133:12 135:16 138:6 140:5 141:5, 6, 18 146:20 147:1, 4, 9 149:10, 21, 22 157:13, 17, 20 158:1, 6,
--	--	---	--

14 159:11 161:3, 12, 13 162:10, 19, 20 163:4, 10, 11, 21 164:5 165:18, 22 168:4, 10, 12, 13 170:14 171:21 172:18 174:15, 16, 20 178:16 180:15, 182:3, 4 183:16 185:5, 17 189:19, 20 190:10, 16 191:9, 12 192:13 195:15, 16 197:3 201:1, 12, 14, 15 203:15, 21 205:1, 3, 6 206:15, 17, 18 207:16 208:1, 3, 8, 13, 14, 17 209:3, 7, 21 210:4, 5 213:1, 13 214:5, 17, 20 216:13 221:15 223:4 225:12, 17 226:1, 5 227:15, 16 229:9 232:22 235:11, 14 237:1, 5 238:15 249:15 251:4 253:14 255:3 256:8 257:2 267:21 269:16 270:13, 14, 15 271:3, 5 273:18 276:9 277:14, 18 283:11 288:9 289:17 290:4, 11, 15 291:5 294:21 296:16 298:10 299:1, 3, 9 303:16 305:12 307:14 312:8 314:4, 9 316:2, 8, 20 324:4 326:18 331:3 336:2, 4 337:22 339:11 340:5 341:2 342:11 351:19 359:1, 3 361:9 363:4, 20 364:2 370:11 375:3 376:13, 16 379:14 381:9 382:2 384:4, 8 standpoint 334:10 stands 113:22 STANISLAV 11:7 379:9, 12 Star 121:13 star-6 244:8 247:13 star-9 70:1, 9 77:5, 13 78:17 169:7 175:11 194:19 207:4 211:17 220:8 227:5 229:17 230:3 233:18 244:1 249:22 250:4, 9, 15 294:5 297:2, 7 322:1 328:1 330:2 334:20 335:1, 6 341:12, 15, 21 352:7 355:9 379:7 386:16, 20 387:3, 8 stark 58:18 72:17 333:19 start 29:1 71:4 76:7 114:18 135:8 214:13 262:11 266:21 268:18 324:20 384:21	started 13:2 120:10 160:15 310:6 338:16 starters 294:19 starting 14:15 21:10 138:2 246:20 254:9 316:4 start-up 153:13 Startups 154:19 155:7, 21 state 10:20 17:7, 16 23:17 24:7 25:22 26:1, 14 27:5 28:13 31:6 32:4, 13, 21 33:4, 9 34:4 35:14 39:16 41:18 44:22 45:5 47:15 50:21 53:4 54:10 55:5 56:15 57:7, 10, 13 58:6 60:4 62:12 63:7, 12 64:15, 16, 20 65:7 66:5 67:17 70:13 71:13 74:5, 21 75:1 78:1 79:22 82:17 85:18 88:7 89:12 90:21 92:5 94:21 96:13 97:17 98:2 99:8, 20 100:16 102:4, 6 103:8 106:12 110:15 113:1 115:3 119:9 120:19 122:1 124:19 126:5 128:2, 9 129:2 132:2 137:17 138:13, 20 140:19 143:3 144:2, 18 145:14 146:10 149:14 150:2 151:5, 11, 13 153:10 156:9 157:21 159:5 161:20 164:11 167:9 169:11 172:4 175:15 176:5 177:1, 6 178:9 180:4 183:3 184:6, 7, 12 186:1, 9 188:21 191:22 192:6, 21 193:7 195:6, 13 198:8 201:6 204:3 206:8 207:8 208:13 211:21 214:10 216:22 218:16 220:11 221:11 224:10 226:11 227:10 230:7 234:1 238:6 240:19 241:11 245:15, 18 253:5 254:13 256:2 258:14 261:12 263:8 266:10 267:21 268:10 270:21 274:1, 21 275:1 276:4 279:2 282:6 283:11 285:9 287:3 289:20 294:9 297:11 301:11 303:22 306:15 309:10 312:3 314:17 317:16 318:4 322:5 324:13 328:5 330:6 332:4 335:11 336:18 344:21 346:11 349:10 350:4, 20 352:10 355:13 358:17,	20 361:13, 17 362:22 364:12 367:17 369:19 370:8 373:3 375:18 379:10 382:6, 12 383:1, 3 state-advanced 162:17 stated 234:16 279:18 state-level 64:19 statement 12:16 23:8 39:6 53:22 69:8 79:11 94:11 110:5, 22 136:4 137:7 251:14 252:17 259:10 343:8 344:11 statements 18:18 20:13 230:22 231:3 STATES 1:4 12:3 16:17 30:5 31:2, 15 51:8 52:19 56:20 61:11, 18 64:3, 18 67:11 80:10 87:22 95:18 98:15 99:7, 16 107:12 113:10 115:5 116:2 128:8 138:19 145:13 148:4 150:14 162:6 169:21 170:19 171:1, 9, 13 173:21 178:4 182:5 183:10 185:4 187:4 190:5 196:15 200:8 208:21 215:2 223:3 245:21 254:10 256:7 259:6 263:22 265:3 266:16 273:8 281:7, 18 283:5 298:20 308:11 315:21 318:8 339:9 349:18 351:13 362:17 364:4 366:20, 22 368:22 373:8 381:14 383:14 384:7 state's 222:7 276:21 stating 255:7 325:13 station 245:14 stations 82:2 260:2, 8, 11 271:18 277:12 377:21 statistics 247:19 385:10 status 185:12 318:16 365:11 statutorily 279:14 stave 200:5 stay 171:18 381:12 steam 165:19 steel 356:22 step 16:21 26:7 52:17 65:20 91:11 95:12 98:21 107:4 128:19 129:13 158:15 162:15 170:10 207:20 237:2 240:5 311:14 314:5 STEPHANIE 9:13 301:10, 11, 14, 15	steps 134:22 146:1 191:1 196:8 222:22 349:1 Steve 253:7 STEVEN 8:9 253:4 Stevens 264:21 stewards 192:7 305:11 stifling 61:20 stimulate 141:20 317:3 363:16 stolen 306:19 stop 81:18 185:12 259:2 stopping 200:12 stops 291:22 303:2 storage 232:14 stores 193:3 stories 189:12 storm 306:21 storms 46:1 117:18 148:22 152:2 193:14 story 50:13 97:2 strain 348:7 stranglehold 132:20 strategic 133:6 strategies 38:10 178:11 strategy 52:12 60:20 247:2 319:19 320:3 stream 350:13 streamline 62:18 street 193:6 248:10, 18, 20 258:5 streets 40:15 120:13 strengthen 30:15 55:22 71:8 76:8 109:6 114:6 158:19 223:9 254:17 270:12 284:21 290:3 320:16 329:12 334:15 361:18 367:10 383:21 Strengthening 14:10 70:18 189:18 237:1 290:9 332:11 366:16 stressors 118:9 stretch 245:11 stretched 307:3 strict 103:4 266:16 293:2 stricter 253:13 256:7 263:22 266:16 269:16 270:14 strictest 276:9 strides 145:6 stringency 61:14 62:8, 14 154:12 155:18 156:5 158:5 stringent 14:13 25:14 28:8 30:19 35:6 48:10 63:1 126:12, 17 143:22 146:2 158:15 161:11, 14 162:18 166:3 168:15 187:5 188:16 216:13 222:22 225:12 261:2
---	---	---	---

269:5 290:11 331:20 361:20 363:20 364:22 378:16 strive 285:22 striving 187:10 stroke 102:9 203:3 strokes 228:3 328:20 strong 31:6, 9 45:9 52:12 54:16 57:15 59:21 62:15 63:18 66:15 73:18 75:19 88:14, 15 90:16 93:17 96:8 98:4 99:11 101:3, 5 103:15, 16 104:21 108:21 113:18 117:18 121:2 134:8 140:8 141:6, 18 142:18 157:13, 17 180:13 187:20 195:15 203:14 213:12 214:19 216:16 224:16 225:17 227:16 228:22 235:14 271:11 275:17 283:12 290:15 294:20 296:16 298:10 299:1, 10 305:12 309:19 311:14, 20 314:13 336:2, 11 338:21 340:7, 8 349:22 351:7 359:3 368:21 371:17 379:13, 19 381:5, 9 384:5 stronger 30:18 45:10 61:6 63:19 64:9 66:16 98:5 101:7 107:2 115:18 118:17 129:17 146:22 147:1 149:22 159:12 160:7 166:2 168:15 178:16 195:16 201:14 208:9 213:1 271:7 283:21 320:13 334:8 336:4 340:5 351:18 385:14 strongest 26:8 30:1 46:6 47:11 57:1 66:1 68:14 91:17 93:15 95:15 97:11 100:10 103:4 105:16 109:4 114:7 116:21 118:20 119:2 130:6, 19, 21 131:20 132:16 134:16 138:5 140:4 142:16 149:9 156:14 158:1, 21 162:10, 21 163:3, 10 164:4, 20 167:15 168:12 172:13 174:15, 20 182:19 187:18 192:11 193:20 194:7 197:2 198:17 201:1, 12 203:17 214:5 225:22 226:4 229:8 234:12 235:10 237:5 238:14 240:13 249:14 273:18 285:5	286:20 299:4 301:3 314:9 324:3 334:14 337:22 339:11 341:1 352:20 355:1, 19 358:22 361:9 365:9 368:18 369:11, 13 370:11 371:22 376:13 382:1 384:1 385:19 strongly 23:21 30:16, 17 109:3 126:9 143:7 222:21 294:20 362:19 384:4 structure 14:21 348:8 370:22 structured 114:18 319:4 struggle 64:22 159:17 183:13 347:10 struggled 118:6 struggling 142:13 345:14 348:2, 21 stuck 84:12 student 40:8 66:9 67:5 189:1 351:4 students 139:16 193:5 230:16 331:11 336:21 353:9 Studies 96:13 330:21 study 53:3 257:11, 14 260:4 267:18 277:13 374:4 subcategory 209:11 subject 42:1 submission 19:20 submissions 19:19 submit 19:11 20:4, 5 300:17 308:21 327:15 submitted 170:4 210:13 319:22 325:12 submitting 110:21 303:19 subsequently 280:18 substances 163:20 substantial 152:10 281:5, 22 291:21 373:18 substantially 209:19 substations 242:19 suburban 57:22 suburbs 127:13, 19 success 50:13 243:1, 14 successful 43:19 85:10 259:21 353:10 375:5 successfully 42:3, 22 298:7 sudden 249:12 suffer 59:9 150:6 171:20 213:11 353:2 385:8, 9 suffered 28:6 75:11 193:12 261:17 312:18 328:9	suffering 34:4 120:8 151:19 176:12 193:19 202:19 307:13 351:21 354:17 suffers 84:9 337:12 340:16 sufficient 114:19 208:15 219:2 259:22 378:16 sufficiently 111:18 158:15 suggest 202:4 suggests 117:20 118:3 suit 88:1 suited 112:8 summarized 110:22 summary 182:19 363:19 summer 46:2 55:15 104:7 235:3 328:13 summers 55:16 173:10 203:4 339:6 summit 186:8 super 306:21 supercharger 49:7 superstorm 307:8 supplementary 20:5 supplied 82:8 supplier 112:17 suppliers 47:20 48:3 49:19 110:19 125:1 319:22 supplies 299:13 supply 81:7 83:17 84:22 85:2 123:19 125:21 135:1 218:1 246:19 281:9 378:19 supplying 49:14 support 16:14 25:21 28:21 30:17 31:3 41:14 42:7 44:17 45:7 56:13 57:15 59:21 60:13 63:17 66:14 88:13 98:3 101:4 103:14 111:1 112:6 113:6 116:10 121:4 125:2, 4 129:14 132:9, 15, 16 134:15 141:5 149:20 159:10 161:12 162:18 165:21 168:11 176:1 187:18 195:13 197:7 198:17 201:11 212:5 214:16, 19 218:4, 18 227:15 231:20 243:9 246:5 247:5 256:6 263:21 266:15 268:4 270:13 274:13 284:10 298:14 299:10 305:8 315:5 318:14 336:2 337:22 339:11 340:5 341:1 345:6, 12 346:5 355:19 356:12 357:9 363:16 366:19	368:17 374:18, 20 375:11 379:13 supported 50:15 51:15 87:20 189:7 373:19 supporter 39:22 supporters 156:14 175:22 220:17 supporting 19:2 61:1 73:13 74:17 75:22 120:10 134:3 205:12 317:9 supports 23:22 25:14 50:9 111:16 112:9 126:9 131:6 143:7 189:18 191:8 242:5 244:19 260:18 290:3 294:20 298:22 supposes 319:6 Supreme 279:18 280:1, 16 281:11 sure 12:12 59:3 88:18 121:5 135:9, 10, 22 155:2 182:3 203:10 251:10 263:2 275:17 342:20 343:5 345:15 369:20 surely 268:3 327:10 surpass 117:22 surpassing 283:5 surprise 138:15 333:3 surprised 64:1 surrounded 58:1 196:1 199:11 264:4, 9 359:17 surrounding 362:11 survival 68:8 survivor 97:10 survivors 101:12 SUSAN 9:15 306:14, 17 susceptible 239:17 348:6 sustainability 298:14 351:12 sustainable 45:19 52:12 155:7, 10 169:19 186:6 224:13 Sustainably 6:18 swift 164:19 178:10 186:21 278:1 swiftly 73:17 167:14 172:12 296:15 379:18 switch 349:22 Switcher 239:21 switching 37:17 215:11 symptoms 58:22 59:1, 7 150:11 331:12 synthesis 45:13, 17 system 33:20 85:7 97:10 114:14 190:10 238:12 282:15 287:14 299:15 367:12 systemic 121:7 173:3 323:17 378:7
--	---	--	--

systems 80:14, 16 83:12
144:13 153:16 298:16,
18 324:19 366:7 375:11

< T >

table 34:16 284:19
319:21
tackle 238:13 281:7
tackling 330:12
Tacoma 91:20 92:16, 21
362:21
tail 55:19
tailpipe 46:19 48:15
64:12 65:1, 4 71:4, 9
82:7 96:9, 17 99:12, 21
122:17 123:9 142:16
157:5 196:16, 17 197:5
213:12 225:17 228:9
229:4 255:14 269:16
270:5 273:19 279:12
280:5 281:3 291:12
300:5, 10 326:7, 12
327:2 336:12, 15 337:13
338:18 340:9, 16 349:22
tailpipes 90:9 134:11
T-A-I-N-K-E-N 132:6
take 21:4 38:8 41:6
52:17 59:22 80:5 105:2
111:11 122:9 127:15
155:15 162:3 173:9
182:12 189:12 199:5
208:7 209:18 216:9
219:8 222:22 235:8
240:5 245:22 266:19
332:10 364:21 370:3
372:2 377:4 378:18
taken 141:15 145:22
170:13 283:9 320:5
349:2 374:13, 14
takes 173:22 284:21
320:13 332:21 354:17
TAKI 11:5 373:2, 5
talk 118:12 317:22
331:9 345:5 348:9
370:7
talking 336:1 382:17, 20
talks 202:9
Tampa 57:11
tangible 190:17 247:20
Tank 258:22
tanks 50:6
tapped 345:14
target 163:6 244:18
254:2 262:14 283:3
320:16
targets 57:1 114:11
141:19 187:2 255:1, 6
272:4 284:6 320:1
364:4
task 171:3 290:1

tasked 217:21
tax 292:20
taxi 263:17
TAYLOR 7:14 10:20
226:22 250:6, 7 361:12,
15, 16
TCO 315:19, 22
teachers 89:20
teaching 189:5, 10
team 169:16 236:1
254:14 338:19
teams 230:18
tearing 40:15
technical 22:21 39:9
54:3 69:11 79:15 94:14
110:8 121:4 136:20
153:3 167:2 179:14
189:14 198:1 211:6
218:21 224:3 237:21
252:8 254:14 266:3
278:17 293:16 306:8
321:12 344:2 358:10
372:18
technically-credible 36:16
techniques 189:14
technological 17:1 52:1,
7 125:8 292:15
technologically 85:12
115:18
technologies 15:8 16:18,
19 33:18, 21, 22 43:19
47:20 48:4, 9, 12, 13, 20
49:14 50:1, 5 59:16
84:2 85:3 110:20 111:8,
15, 18 112:11, 18 123:11
124:4 125:15 178:12
190:6 205:10, 17, 20
206:7 209:19 210:3
216:10 218:9 255:10
260:21 269:3 288:5
291:7 302:2 314:14
316:6, 10, 14, 19 317:8
319:16 325:22 326:3
334:9 337:20 365:21
368:3 373:20 374:7
technology 36:12 42:11
43:6 48:6, 16 49:22
50:15 56:9 61:1 62:2
83:12 85:5 90:6 112:3,
6, 8 125:11, 18 133:18
140:13 153:15 155:3
156:2 157:16 182:9
194:1 205:10, 15 209:9
218:7, 15, 20, 22 219:10
240:2 242:21 264:13
290:1 291:10 302:1
309:5 320:8, 14 326:1,
10 351:15 353:12 354:8
363:17 365:6 374:4, 11,
17 375:8, 13 376:4
380:7 381:22

technology-forcing 42:3,
13 124:6
technology-neutral 50:9
124:11
telephone 22:19 38:22
53:16 69:2 79:6 94:5
109:21 136:18 153:1
166:22 179:12 197:21
211:4 224:1 237:19
252:6 266:1 278:15
293:14 306:6 321:10
343:22 358:8 372:16
tell 63:22 154:1 202:12
356:7
telling 313:11
tells 310:19
temper 202:12
temperature 152:6
temperatures 55:18
89:10 104:22 222:13
295:4 303:4
tenets 322:18
tens 34:12 142:3 157:5
tentative 21:1
Terawatt 315:10
term 30:13 147:5
288:14 289:9 326:22
380:10
terminal 81:14
terms 133:3 188:3, 17
288:5 291:15 334:15
terrain 374:14
terrible 200:17
territories 51:10
test 87:2 171:20 218:11
testified 81:3
TESTIFIERS 3:2 4:2, 9
5:2, 18 6:2 7:2 8:2, 8
9:1, 12 10:2, 12 11:2
20:15 21:7
testify 13:7 22:17, 20
35:19 38:20 39:1 45:4
53:14, 17 54:15 57:4, 12
60:1 63:11 68:22 69:3
74:2 77:9 79:4, 7 88:10,
13 94:3, 6 95:2 97:21
103:11 106:9 109:19, 22
116:18 119:6, 12 122:4
136:16, 19 137:19
140:22 146:13 152:21
153:2 164:8, 15 166:7,
16 167:1, 12 168:19
172:7, 22 175:4 179:6,
13 180:10 183:8 189:1
192:9 194:12, 16 195:9,
13 197:16, 22 200:20
201:11 207:14 210:21
211:5 214:7 223:18
224:2, 15 227:12 230:9
234:4 237:13, 20 238:10
243:20 249:19 252:4, 7

265:17 266:2 268:4, 13
271:1 273:20 278:3, 9,
16 290:2 293:8, 15
296:21 297:20 301:6
305:22 306:7 309:12
321:4, 11 335:15 339:14,
22 341:5, 9 343:20
344:1 349:13 358:2, 9
364:9, 20 372:10, 17
373:6 386:13
testifying 45:6 51:4
63:16 66:13 98:3 101:4
103:14 141:4 227:15
234:11 235:12 263:21
265:2 346:20 361:18
371:12 379:14
testimonies 335:22
testimony 12:8, 12
13:15 18:6 20:5, 6, 14,
19 23:4, 7, 12 34:2 39:2
51:13 53:18 55:1 69:4
77:22 78:5, 13 79:8
91:5 94:7 109:12 110:1
134:22 135:18, 22 137:3,
6, 11 166:19 179:9
197:18 198:11 211:1
214:13 223:20 237:16
241:8 251:6, 10 252:13,
16, 21 265:20 278:12
293:11 300:16, 17
303:19 306:3 308:20, 21
321:7 338:3 340:3
343:1, 4 344:7, 10, 15
358:5 365:2 372:13
testing 218:11 256:16
259:16
tests 59:2
Texas 9:3 82:21 184:7
263:16 279:7 315:21
358:20
than-average 65:15
Thank 18:4, 5, 8, 9 22:4,
7, 9 24:2 26:9, 10, 12, 19
28:9, 11 32:1, 2 35:10,
12, 19 38:14, 15 41:15,
16 44:19, 20 45:2, 3
47:12, 13 50:17, 19 51:1
53:7, 9 54:14 57:4, 5
59:22 60:2, 6 62:20
63:4, 5, 10 66:2, 3 68:15,
17 71:10, 11, 22 74:1, 3,
7 76:20, 21 80:6 82:14,
15, 22 85:15, 16 88:3, 5,
10 90:18, 19 91:3, 4
93:19, 20 95:1 97:13, 15,
20 100:12, 14, 18 103:5,
6, 10 106:8, 10 109:10,
14 112:19, 21 113:2
116:1, 3, 5, 14, 15, 17
119:6, 7, 11 121:21
122:3 124:17 126:1, 2

128:21, 22 129:6 131:21, 22 132:7 135:3, 5
137:18 140:15, 17, 21
142:22 143:1 146:7, 8,
13 149:11, 12 152:15, 16
156:4, 7 159:1, 3 161:17,
18 164:7, 9, 15, 18
166:10, 11 167:11, 13
168:19 169:1, 15 171:22
172:2, 6, 12 175:3, 5, 22
178:22 179:1 180:6, 9
182:22 183:1, 7 185:19,
21 186:3 188:18, 19, 22
191:19, 20 192:10
194:11, 13 195:8 197:9,
10 198:10 201:2, 4, 10
203:22 204:1, 8, 15, 18
206:18, 20 207:13
210:11, 14, 15 214:7, 8
216:20 217:2 220:1, 2,
13, 17 223:10, 12 224:14
226:8, 9 227:11 229:10,
11 230:9 233:8, 9 234:3
237:6, 8 238:9 240:16,
17 243:15, 17 247:9, 10,
16 249:15, 16 253:9
255:19, 22 258:11, 12, 16
261:9, 10 263:4, 6
265:10, 12 268:7, 8, 12
270:18, 19 273:19, 21
274:6 275:20 276:2
278:2, 4 282:3, 4 285:5,
7 286:22 287:1, 7
289:17, 18 290:2 293:2,
3 294:11 296:17, 18
297:16, 19 300:14 301:5,
8 303:18, 19, 20 305:15,
17 308:18, 22 309:6, 8,
12 311:22 312:1, 6
314:14, 15 317:12, 14
320:21 324:8, 10, 11, 21
327:14, 16, 17 329:15, 18
331:22 332:2 334:16, 17
335:14, 21 338:2, 4
339:14, 17, 21 340:2, 3
341:4, 6 342:5, 17, 18, 22
345:4 346:7, 9 349:7, 8,
12 351:22 352:1 355:2,
3, 18 357:18, 19 361:10,
11 364:8, 10 367:14, 15,
19, 21 369:15, 17, 20
372:5 373:6 375:14, 16
376:4, 8 378:21 379:1,
17 382:2, 4, 8 385:16, 18
386:8, 10 387:18
thankful 121:15
Thankfully 199:14
thanking 29:2
Thanks 40:2 58:3
129:12 146:19 320:20

352:12 372:3 387:16
theirs 267:18
thick 127:18
thing 155:20 231:15
258:7, 9 275:5 334:5
things 29:10 41:1 84:10
153:21 166:1 168:14
230:20 242:18 262:22
think 81:17 142:14
204:19 228:5 233:7
242:14, 18 288:4 315:1
333:7 334:11 337:9
340:12, 14 347:18 348:3,
16
thinking 155:17 236:6
third 193:13 194:14
248:9
third-floor 248:4
Thirty-five 363:9
THOMAS 7:14 226:22
250:6 289:19, 22
THOMPSON 2:13 12:2,
6 22:5, 9 26:12, 17
28:11 32:2 35:12 38:15
41:16 44:20 47:13
50:19 53:9 57:5 60:2
63:5 66:3 68:17 70:3,
12 71:11 74:3 76:21
77:7, 20 78:4, 8, 12, 20
82:15 85:16 88:5 90:19
91:2 93:20 97:15
100:14 103:6 106:10
109:14 112:21 116:5, 8,
15 119:7 121:21 124:17
126:2 128:22 131:22
135:5, 12, 13 140:17
143:1 146:8 149:12
152:16 156:7 159:3
161:18 164:9 166:11
169:1, 10, 14 172:2
175:5, 14 179:1 180:3, 8
183:1 185:21 188:19
191:20 194:13 195:3
197:10 201:4 204:1
206:20 207:7, 12 210:15
211:20 214:8, 14 216:20
220:2, 10 223:12 226:9,
13, 15, 20 227:8 229:11,
20 230:6 233:9, 21
237:8 240:17, 22 241:3,
7 243:17 244:10 247:10,
15 249:16 250:6, 11, 17,
22 251:1 255:22 258:12
261:10 263:6 265:12
268:8 270:19 273:21
276:2 278:4 282:4
285:7 287:1 289:18
293:3 294:8 296:18
297:10, 15 300:14 301:8
303:20 305:17 308:18
309:8 312:1 314:15

317:14 320:21 322:4
324:11 327:17 328:4
329:18 330:5 332:2
334:17 335:10 338:4, 7
339:17 341:6, 17 342:1,
7, 8, 17, 19, 22 346:9, 14
349:8 352:1, 9 355:3, 12
357:19 361:11 364:10
367:15 369:17 372:5
375:16, 21 376:3 379:1,
9 382:4 386:10, 22
387:6, 12
Thoracic 9:8 294:13, 19
thoroughly 199:14
thoughts 345:6
thousand 336:19
thousands 138:13 142:4
149:3 156:21 157:5
193:5 221:7 231:9
256:22 263:15 379:22
threat 148:12 158:10
272:10 294:22 295:8
threaten 215:4 295:3
threatening 147:12
threatens 91:13 93:11
threats 132:13 183:22
273:4
three 24:10 120:12
129:15 173:7 184:17
192:17 195:19 234:7
236:1 248:15 276:15
303:2 307:4
thrive 95:22
thriving 191:18
throats 58:22
thrown 356:10
Thunberg 249:8
Tick 96:4 199:15, 17
tick-borne 182:15
ticking 141:11
ticks 199:12, 14, 19
tics 95:22
Tier 33:14, 16 35:6
256:13, 15 257:2, 5, 13
TIFFANY 3:4 26:13, 17,
18
tighter 163:21 384:9
TIM 8:16 268:9, 13
time 13:7 17:3 19:11
20:16 21:6 22:16 27:16
28:21 38:19 53:13 57:3
68:16, 21 76:16 79:2
83:5 86:12 87:2, 8, 15
88:3 94:2 100:13
109:18 112:19 127:14
133:14 135:6, 14 136:15
140:2, 16 142:22 143:20
152:20 154:14 156:4
157:19 166:15 179:5
185:20 188:15 197:14
199:5 200:19 201:3

202:10 206:19 210:19
216:18 220:1 223:16
226:8 228:20 232:11
234:9 236:7, 21 237:7,
12 246:16 250:17 251:2
252:3 265:16 266:22
275:20 278:8 283:19
285:6 286:22 292:1
293:7 303:5 304:5
305:2, 21 307:7 312:12
315:15 321:3 324:8
333:10 339:15 342:1, 4,
9 343:19 347:19 349:7
351:17 358:1 366:11
367:21 368:9 369:16
372:9 381:7 385:6
386:19
timeline 87:4 218:18
245:17
timelines 43:16 87:17
292:10
times 24:9 80:15 93:12
99:5 139:11 142:12
148:8, 9 184:15 186:9
192:20 202:18, 22 203:1
206:11 219:3 231:5
242:18 248:7 310:14
337:8 374:12, 21 375:5
timing 62:12
tipping 141:7 186:11
188:6 234:17
tire 316:11
titled 14:1 18:12
TK 368:12
today 12:12 13:8, 10, 14
16:21 17:16, 19 18:6, 11
20:15, 21 21:1, 4, 12, 19
22:13 26:20 28:21 29:8
30:10 32:11, 14 33:18
36:2 37:8 38:13, 16
45:7 47:21 50:18 53:2,
8, 10 54:15 55:2 57:12,
15 62:21 63:11 68:18
74:10, 17 78:22 83:19
88:10 91:5 93:21 95:2
97:21 100:13 104:2
107:22 109:15 110:22
113:5 118:19 129:7
132:8, 15 135:22 136:12
138:3 143:9 146:14
152:17 155:22 156:12
162:4 164:16, 22 166:8,
12 167:12, 17 169:20
172:9, 22 176:1, 7
178:12 179:2 183:8
192:9 195:9 197:12
198:11, 16 201:11 202:8,
15 204:9 207:16 210:4,
12, 17 212:5 217:16, 22
218:4, 21 219:10 220:1
223:14 230:10, 13, 22

234:4, 11, 18 237:9 238:14 240:2 245:5 247:17 249:7 251:10, 22 254:12, 16 260:7 261:15, 20 262:1 263:5, 21 265:13 266:15 268:4, 13, 15 270:10 271:2 274:7 276:9, 13 278:3, 5 287:8 290:2 293:4 297:21 305:18 316:16 317:22 320:22 334:12 335:22 338:3 339:14 340:4 341:5 343:4, 16 346:21 352:14 353:21 357:20 361:18 364:20 365:1, 5 369:21 370:7 372:4, 6 373:7 374:2 375:14 381:19, 22 382:3 387:17 today's 13:5, 14, 19 18:7 19:8, 14 20:9, 11 21:7, 9 22:1, 7, 10 29:2 42:2, 5 93:12 99:4 111:3 202:17 217:3 287:20 toddlers 139:9 told 80:20 86:20 249:8 260:8 tolerate 159:19 toll 25:12 Tom 335:14 339:21 TOMCIK 4:18 94:20 95:1, 2 T-O-M-C-I-K 95:3 tomorrow 18:6 21:2, 10 385:18 387:18 ton 122:17 tonight 385:17 tonnage 217:20 tons 15:22 123:8 190:14 217:21 tool 66:12 113:18 173:1 224:17 292:13 tools 118:15, 18 130:6 189:14 top 52:12 84:5 89:8 102:2 128:4 145:8 381:3 topic 66:13 top-tier 287:11 tornadoes 360:22 torrential 193:18 total 33:6 73:6 133:20 174:7 209:10 274:18 286:13 304:22 323:5 333:21 362:3 totally 288:1 touched 285:2 touches 67:21 tough 159:19 tournaments 230:19 Tours 7:18 230:11	touting 320:5 tow 85:4 town 95:7 198:22 199:2 213:19 235:18 276:17 380:12 Township 380:12 toxic 55:12 73:19 130:10 200:16 235:16 239:4 264:7 350:13 365:4 toxicology 271:10 272:22 toxins 139:10 378:20 Toyota 326:9 track 17:11 32:19 48:4 89:8 334:11 trackers 242:2 tracks 196:8 349:19 tractor 107:17 273:10 315:6, 7 316:2 tractors 182:8 209:16 315:14, 19 316:17 364:1 373:9 374:16 TRACY 3:18 63:6, 9, 11 trade 48:2 60:16 110:18 123:21 217:7 258:19 tradeoffs 122:21 traditional 241:20 302:4 374:12 Traditionally 380:15 traditions 370:5 traffic 40:20 58:14, 16 70:22 73:4, 5 74:22 75:12 93:5 96:13, 14 102:20 104:5 127:17 181:14 248:5 259:3 329:10 350:14, 19 384:17 traffic-related 76:5 128:9 tragic 66:19 145:9 300:11 trailers 107:17 273:10 315:6, 7 316:2 trailing 283:8 trails 176:4 train 34:6 313:9 training 177:21 312:13 trains 264:18 267:5 292:2 trajectory 208:22 transcript 12:20 23:12 136:7 137:11 251:17 252:21 343:12 344:15 Transfer 10:4 324:16, 17 transform 351:3 transformation 125:5 369:10 transformed 302:16 transit 14:18 47:7 55:22 64:11 107:16	114:13 154:22 206:2 231:6 transition 25:2, 6 28:22 30:3, 12 31:13, 15 42:6 46:21 47:8 48:15 52:5 59:13 60:13 64:14 91:16 96:10 99:1, 13 103:2 106:3 107:10 108:22 115:11, 16 121:18 128:17 131:14, 16 133:8, 14 134:17 141:20, 22 145:17 149:7 158:4 164:1, 7 177:6 188:1 197:3 215:5 218:18 223:7 229:2, 6 234:15 235:15 239:1 242:5 243:1 253:15 254:19 259:11, 18, 21 260:4 261:5 269:1, 6 270:7 272:6 283:7 298:6 301:5 305:13 318:5 320:19 329:14 331:16, 18 336:11 340:8 350:16 351:15 354:22 359:8 384:12 Transitioning 43:16, 20 46:7 128:14 131:3 353:16 371:2 transitions 259:8 translated 116:13 translators 116:11 transmission 210:1 Transport 4:11 68:1 80:3 170:16 173:14 233:4 316:22 Transportation 2:4, 7 7:19 9:7, 19 13:12 16:2 24:13 45:10 46:16 47:3 52:12 54:14, 18, 22 55:8 56:10, 19 57:3, 16 59:11 60:14, 19 63:19 64:2 66:16 67:7, 10 71:16, 21 72:3, 9 75:5 88:18 93:3 95:17 98:5, 14, 16 101:7 103:16 104:12 105:20 107:11, 20 113:9 124:4 125:6 127:19 128:18 129:18 132:14, 18, 21 133:1, 5, 9, 15 134:17 143:13 144:20 146:3 148:2 150:13 153:14 158:12 161:5 162:13 165:1 167:20 174:7, 10 180:11 181:3 185:9, 13, 18 190:9, 12 193:13 195:16 196:7, 14 200:7 201:15 205:22 207:17, 22 208:5 212:9, 21 214:22 222:16, 18 227:18 228:13 231:19 232:19 238:12 239:12	247:1 254:21 259:13 260:3 273:6, 7 274:17 275:15 282:14 286:5, 14 287:6 290:1 292:22 296:6 298:8 299:12 300:22 304:9, 16, 18, 22 305:13 310:19 313:20 314:2 323:5, 8, 14 329:5, 6 330:19 332:21 347:10 349:17 351:11 360:16 361:22 362:7, 15 364:6 367:12 368:1 370:18, 19 373:7 377:7, 8, 21 381:14 transportation-related 225:9 298:16 Transportation's 314:20 transporting 230:18 231:16 265:8 traps 215:2 travel 27:2 47:7 96:17 182:8 232:12, 13 299:13 traveled 230:14 traveling 28:3 91:22 151:10 travels 27:8 40:20 traverse 156:22 traversing 302:21 treacherous 302:22 treasured 222:8 treated 96:3 148:8 treating 70:19 159:14 treatment 80:14 161:2 treatments 160:18 treaty 187:18 tremendous 56:10 91:21 145:6 187:15 trend 62:1 Trenton 40:18 trepidation 313:2 TREVINO 10:19 358:16, 19, 20 trials 83:14 triathlons 312:13 tribal 17:16 92:19 Tricia 60:8 trigger 148:21 338:18 triggered 337:13 340:16 triggers 147:16 295:12 311:5 trillion 131:18 331:19 348:14 trillions 348:12 Trinity 37:12 trips 230:15, 17 TRISHA 3:17 60:3 trivial 160:22 trouble 84:17 244:7 Truck 3:9 24:16 25:8, 12, 17 40:20 41:21 45:9 47:11 58:14 61:13
--	---	---	---

63:17 66:1, 15 70:22
73:5, 18 75:7, 12 80:9,
10, 13 81:1, 4, 14, 18
82:4, 5, 7 83:21 84:13
88:14 90:11 91:18 92:7,
8, 17 93:4, 6, 16 95:16
96:9 98:5 99:11 101:6
102:19 103:16 109:5
112:12, 15 128:19
130:13, 20 131:2 140:6,
9 141:6, 18 142:17, 18
147:22 149:10 154:22
161:15 162:10 164:19
165:20 166:4 167:14
168:7, 17 174:15, 17
175:1 177:16 180:14
191:13 195:15 201:1
203:14 208:14, 22 214:5,
17 216:6, 14 217:16
221:4 222:10 223:2
225:15 227:16 229:8
235:11 237:1, 5 241:17
242:14, 16, 19 244:22
245:6 246:16, 21 248:20
249:1 254:12, 13 255:6
258:20, 21, 22 259:2
270:16 271:5 277:14, 22
284:3 286:20 292:8
302:5 303:2 308:1
311:9 314:4 318:22
319:1 320:17 323:2
324:4, 5 328:19 329:10,
12 334:13 338:1 365:15
368:10 370:11 379:18
383:15, 16 384:2, 8
truckers 80:17 81:10
86:4 87:5 281:4 326:4
Trucking 7:11 16:16
17:14 30:10 31:7, 10
37:6 43:3 56:3 73:2
81:3, 17 82:12, 13 83:4,
7 84:8 85:22 86:4, 13,
14 92:17 121:2, 4
157:10 163:9 186:19
190:2 194:9 217:5, 12,
18 239:15 242:9, 13
243:8, 10 258:19 271:17
279:17, 19 281:4, 9, 22
287:7, 13 291:11, 19
304:10 371:15
trucking-related 217:8
Truckload 259:1
Trucks 14:5, 8, 11, 17, 18
24:15, 19 25:7, 10 28:3
29:1, 17, 19 30:4, 8, 12
31:1, 4, 18 34:8 38:3
40:15 46:7, 8 48:17, 19
55:11 56:14, 21 57:16
59:15, 17, 21 61:12 62:5
64:7, 11 65:1, 13, 18
71:10 72:13 73:10, 11,

13 76:2 80:18 81:2, 20,
22 83:2, 9, 22 84:5, 6, 9
85:1, 4 86:11, 22 87:13
88:3 89:2 90:14, 17
91:22 93:7, 18 95:19
96:16 97:12 99:14
100:2, 4, 11 104:14
105:17, 22 106:1, 4
107:16, 17, 18, 19 108:11,
15 111:2, 20 112:4, 7
115:4 116:22 119:4
120:15 125:4, 13 127:17
129:20 138:7, 14 139:4
141:21 142:1, 9 143:10
144:3, 21 145:12, 17
147:6, 15 149:8 156:21
157:18, 19 158:3, 10, 20
161:8, 13 162:14, 18, 22
163:15, 22 165:2, 21
167:19 168:7, 8 172:13
173:13, 22 174:5, 11
176:3, 13 177:2, 5, 6, 8
178:6, 13, 17 180:17, 19,
22 181:12 182:1, 5
184:19 186:22 190:8
192:11, 17, 21 193:12, 20
197:3, 4, 9 198:17
200:10, 14 201:2, 13
203:19 207:21 208:6
212:22 213:1, 13 214:6
215:7, 17 216:8, 18
217:16, 17, 20 219:5
220:20 221:10, 11, 16, 21
222:6, 15 225:7 228:14,
18 229:9 231:4, 13
234:13 235:14 237:6
239:7 241:16 242:1
243:2, 4, 15 245:4, 6, 9
246:13 248:6 249:5
254:3, 4 259:5, 12, 16
260:5, 17, 20, 21 261:6
263:1 268:17 270:11
273:3, 9, 12, 14 275:7, 18
283:15 284:7 285:1
286:10, 15, 17, 22 287:18,
20 288:9, 20 289:6, 8
290:18 291:2 292:4
295:22 296:3, 8, 16
299:6, 8 300:1 302:12
303:15, 16 304:9, 12, 18,
20 305:6 308:13 309:19
310:17, 21 311:1, 9, 10,
14, 20 313:20 315:9
318:8, 9, 14, 21 319:6
323:3, 9 329:7, 14 336:2,
12 337:19, 22 338:12
339:3, 8, 12 340:6, 9
341:2, 3 350:12, 17, 19
351:17, 20 357:11 359:2,
8, 16, 19, 22 360:12, 13
361:10, 21 362:8, 16, 18

363:1, 3, 5, 8, 13, 21
365:5, 7, 13, 14 368:19
369:14 370:17 373:10
374:2, 3 375:12 378:13,
14 379:18 380:22
383:21 384:19, 21
truck's 245:8
true 142:20 155:1
284:10 348:16
Trujillo 156:12
truly 30:3 320:9
trust 219:19
trusted 357:17
truth 58:4
try 202:11 269:22
288:4 312:17
trying 170:5 311:8
325:18 326:11 338:21
347:16
TSOGTSAIKHAN 5:8
119:8, 11, 12
Tucson 214:12 346:19
348:5
Tuesday 1:19
tuned 178:5
turbo 49:7
turbocharger 49:7
turbochargers 48:21
49:6
turn 13:1 18:6 22:5, 18
23:11 38:21 53:15 69:1
79:4 94:4 109:20
136:17 137:10 152:22
166:17 179:7 197:17
210:22 223:19 237:14
249:8 252:5, 21 261:4
265:18 278:10 293:9
306:1 321:5 343:21
344:14 358:3 372:11
turned 248:14
turnover 254:7
Turnpike 40:20
twice 199:3 337:6
twins 116:21
Twitter 201:22
two 57:19 58:11 81:4
84:9 95:8 115:10 120:4,
12 127:14 147:4 150:10
166:1 168:14 176:22
184:22 192:20 196:4
199:12, 17 221:19
232:12 254:16 259:19
283:14 315:1 347:14
352:22 370:13
type 228:15 256:17
types 48:14 231:1
289:11 318:10

< U >
U.N 186:6

U.S 12:7 13:3 16:2, 17
50:14 51:13 52:10
55:16 58:9 59:12 73:6
75:6 86:6 87:20 88:20
93:2 107:11 115:2
117:13, 15 119:19
120:10 122:7 123:15, 17,
20 129:19 133:9 134:22
138:12 158:11 171:22
186:13, 20 187:18 189:6,
8 190:5 191:4 192:7
194:3, 5 202:2 212:10
222:19 253:13, 16
254:12, 17, 19, 22 255:2,
8, 15, 20 260:5, 12 273:5
274:18 275:13 282:13
285:17 296:8 297:19
298:1, 12, 13 316:21
330:20 333:21 353:11
360:15
U.S.C 280:19
UBERUAGA 7:20
206:21 233:22 234:2
UE 8:11, 14, 15 256:5,
11 263:11 266:13
UE's 263:14
ultimately 73:22 111:20
288:2
ultra 281:2
ultra-low 36:19
unable 23:9 39:6 53:22
69:8 78:13 79:12 94:11
110:5 137:8 151:20
193:16 241:4, 8 252:18
325:14 344:12 375:21
unacceptable 240:1
unaddressed 375:7
unavoidable 67:17 68:8
unborn 119:20
unburdened 68:1
uncle 173:11
unconstitutional 279:15
281:15
undercut 115:15
undergraduate 271:8
underlying 280:3 317:10
undermining 44:13, 14
underregulated 323:1
underrepresented 183:18
underscore 76:4
underscored 38:5
underscores 45:17 117:8
underserved 159:20
understand 121:7 155:4,
5 231:15 234:19 243:12
277:10 301:22
understanding 350:22
understands 231:14
understood 242:6
underway 320:20

undoubtedly 86:6
undue 323:11
unexpected 199:18
Unflappy 6:7 153:13
unforeseen 184:10
unfortunate 380:22
unfortunately 32:11
 69:18 86:17 97:2
 113:21 154:2 169:2
 175:6 178:8 206:21
 211:13 218:14 220:3
 226:22 228:16 229:12,
 21 241:3 246:20 256:21
 269:21 311:10 320:10
 321:19 327:19 329:20
 352:2 355:4 375:21
 379:2
unhealthy 55:20 90:13
 99:18 104:8 138:22
 160:1, 2 163:18 176:12
 181:17 184:14 313:13
 333:15 336:9 350:8
 361:5
unilaterally 281:19
unintended 32:21 34:18
Union 6:15 9:20 70:15
 175:19 257:10 317:19
unique 43:8 97:2
 177:13 259:7
unit 374:13
UNITED 1:4 6:20 12:3
 64:3 67:11 80:9 87:22
 95:5, 18 98:15 99:15
 100:22 107:12 113:10
 137:22 138:19 148:4
 150:14 169:21 170:1, 19
 171:1, 9, 12 173:21
 183:10 186:5 187:4, 11
 192:4, 5 196:15 200:8
 215:2 259:6 273:8
 281:7, 18 308:10 339:9
 349:18 364:4 381:14
University 189:2 257:11
unjust 213:8 270:9
 283:18 323:12 337:1
unjustly 353:6
unlock 15:12
unmute 22:17, 20 26:14
 28:13 32:4 35:13 38:20
 39:1, 16 41:18 44:21
 47:15 50:21 53:14, 17
 54:10 57:7 60:4 63:7
 66:5 68:22 69:3 70:12
 71:13 74:5 78:1, 6, 9
 79:3, 6, 22 82:17 85:17
 88:7 90:21 94:3, 6, 21
 97:17 100:16 103:8
 106:12 109:19, 22
 110:15 112:22 119:9
 122:1 124:19 126:4
 129:1 132:2 136:16, 19

140:19 143:2 146:10
 149:13 152:21 153:1, 10
 156:9 159:5 161:20
 164:10 166:16, 22 167:9
 169:11 172:4 175:15
 179:6, 12 180:4 183:3
 186:1 188:20 191:22
 195:6 197:15, 22 198:8
 201:5 204:3 207:8
 210:20 211:5, 21 214:9
 216:22 220:11 223:17
 224:2, 10 226:10, 16
 227:9 230:7 233:22
 237:13, 19 238:6 240:19
 241:11 244:6 247:12, 13
 252:4, 7 253:5 256:2
 258:14 261:12 263:8
 265:17 266:1, 10 268:10
 270:20 273:22 276:4
 278:9, 15 279:2 282:6
 285:9 287:2 289:20
 293:8, 14 294:9 297:11
 301:11 303:21 305:22
 306:6, 15 309:10 312:3
 314:16 317:15 321:4, 10
 322:5 324:13 328:5
 330:6 332:4 335:10
 343:20 344:1, 21 346:10
 349:10 352:10 355:13
 358:2, 8, 17 361:12
 364:12 367:17 369:18
 372:10, 16 373:3 375:18
 379:10 382:6
unmuted 376:1
unmuting 244:7
unnecessarily 281:5
unnecessary 123:13
unprecedented 52:2
 61:10
unrealistic 303:9
unrecognized 92:21
unregulated 367:5
unreliable 83:9
unsurprising 89:11
update 208:19
updated 208:1
updates 277:12
upfront 82:4 122:16
upgrade 267:12
upgrades 177:20
upright 159:15
upset 84:14
upstream 209:2
uptake 125:11
uptick 202:20
upwind 151:12
urban 46:2 236:12
 290:20 382:20
urban/rural 185:4
urge 24:1 26:5, 8 30:16,
 18, 20 55:22 61:4 76:16

87:22 88:1 90:15 93:16
 109:3 125:13 126:11
 134:15 143:21 146:6, 21
 149:21 152:12 156:4, 14
 159:11 161:11 164:3, 20
 167:15 168:12 171:21
 172:13 174:19 178:15
 180:12 192:11 194:6
 208:19 212:7 214:4
 216:12 226:7 235:10
 238:14 240:13 258:10
 261:1 273:16 296:14
 329:11 331:21 334:14
 346:6 352:19 353:20
 354:21 355:1 361:8
 369:12 372:1 379:18
 382:1
urgency 45:17 140:8
 234:19 364:21
urgent 24:15, 19 29:18
 45:12 63:21 66:18 71:8
 98:7 101:9 103:18
 151:15 195:18 201:16
 225:13
urgently 54:18 88:17
 121:19
urges 35:4 222:21 283:2
urging 57:17 97:11
 100:9 203:17
URVASHI 6:7 153:9, 12
USA 322:10, 22
usage 38:4 326:1
USCIS 177:14
use 16:18, 21 28:21
 37:1 38:4 86:22 111:19
 113:17 118:16 124:14
 147:17 219:22 276:12
 288:22 289:8 292:7
 295:16 300:4 302:7
 310:11 315:14 319:15,
 18 332:20 353:13
 356:15, 21
useful 38:7
user 244:5
users 36:15 111:6
uses 111:11
usual 154:4
usually 199:8
Utah 311:6
utilities 56:18 62:17
 242:17 245:14
utility 14:18 260:8
 325:12, 17 326:4
utilization 36:19
utilize 122:14

< V >
vacated 280:2
VAIDYANATHAN 7:7
 207:8, 10, 13, 17

VALENTINE 4:19
 97:16, 19, 20
validates 36:16
Valley 139:2 221:3, 9, 12
valuable 155:13 259:7
value 92:11 326:21
values 303:14
variable 128:7 154:3
variety 33:2 48:7 65:13
 108:10 271:15
various 121:8
Vasquez 169:2
vast 51:11 245:18
vastly 202:14 231:7
Vazquez 194:20
vector-borne 130:5
Vegas 138:8, 18 139:2
Vehicle 11:7 14:3 15:8,
 14, 20 16:12, 16 25:15
 27:8 43:21 44:19 48:20
 54:17 61:4, 5 62:16
 75:3 81:2 82:7 95:9
 98:13 104:5 111:11
 114:1, 11, 20 115:2
 122:5 123:4, 11 124:9
 125:1 128:7 129:13
 132:18 140:5 145:13
 153:15 154:4, 19 156:15
 157:16 163:3 164:5, 6,
 21 166:5 167:16 168:18
 170:14 172:14 173:7
 182:11 190:6, 21 192:12
 193:21 194:8 196:2
 213:5 216:10 224:17, 19
 225:12 226:1 232:22
 235:17 238:15 240:7
 241:15 243:7 246:8
 247:6, 8 254:9 255:5
 271:7, 21, 22 272:10
 273:13 276:10 277:16
 290:17 291:6 296:9
 298:10 299:10, 20 300:9
 302:6 308:4, 13 314:12
 316:9 318:10 319:10
 323:20 327:6 332:12
 334:15 351:1 354:8
 355:22 356:1, 8, 14
 357:5, 10, 15 363:22
 371:3, 6, 22 379:15, 16,
 21 380:3
VEHICLES 1:8 12:5
 13:17, 22 14:2, 14, 17
 15:10 18:13 24:1 25:2,
 18 27:2, 14 28:3, 9, 20
 29:14, 21 30:16 31:13
 37:1 42:1, 7, 10, 15, 20
 44:2 46:21 47:4, 9 48:7,
 10, 14 49:3, 11, 13, 15, 17,
 21 50:3, 12, 14 51:17
 54:21 56:1 59:14 61:9
 62:2 64:4, 5, 10, 14

65:20 67:12 68:15 72:2
74:19 81:11 87:8, 11, 19
88:22 89:1 90:7 91:10,
16 95:12 96:11, 16
98:17, 19, 21 99:2, 14, 21
100:7 104:17 107:3, 10,
15, 21 108:22 109:5, 7
110:21 112:2, 9 113:12,
15, 16, 19 114:9, 16
115:12, 13 116:1 117:3
118:18 119:3 120:15
121:19 122:11, 14 123:8,
13 126:11, 19 127:1
128:14, 21 129:16, 21, 22
130:11, 13 131:4, 8, 15
132:10 133:12 134:11
135:16 139:5, 8 141:21
142:3 143:8, 15, 19
144:6 146:21 147:9, 11
149:21 150:15 151:9
152:9 154:21 155:2
157:1 158:5, 18 159:11
161:7 163:1, 21 164:1, 7
165:2 166:6 174:6
175:3, 18 176:15, 18, 19,
22 180:13 182:7, 20
184:21, 22 187:2, 21, 22
188:2, 3 189:20 190:8
191:9 194:2, 3 195:14
196:17 197:8 203:16
205:17 206:1 208:18
209:4, 9, 11, 13, 14, 16, 20
210:8 212:7 214:20, 21
215:6, 8, 11 218:10
219:15 222:15 223:7
225:5, 8, 17 228:21
229:2, 3, 7 231:1, 12, 18
232:11, 22 234:16
235:15, 22 239:5, 6, 7, 9,
12 240:9, 10 246:4, 13
249:4 251:4 253:13
255:17 270:7 271:4, 13
272:3 273:9, 11 274:14
275:11 276:11 277:1, 6,
9 278:2 279:13 280:6
283:13 286:11, 21
288:11 290:5, 6, 7, 8, 13
291:21 292:14 294:21
299:2, 19 300:1, 4, 6
301:5 304:21 305:14
308:15 309:3 310:21
312:8 313:21 314:2, 20
315:13 316:7 317:4
323:4, 21 330:18 331:13,
17 332:22 333:20, 22
334:7 340:21 342:11
350:1 351:11, 16, 18
353:4 354:15 356:6, 9,
11, 14 357:13 359:1
364:1 365:16 371:3, 8

374:10 379:19 380:2, 7
381:10, 11 384:9, 10, 12
vehicle's 122:18
verbal 20:14 23:6 39:2
53:18 69:4 79:8 94:7
110:1 137:5 166:18
179:8 197:18 211:1
223:20 237:15 252:16
265:19 278:11 293:10
306:2 321:6 344:9
358:4 372:12
Vermont 116:20
version 21:16, 20
viable 303:17 327:6
365:8
vice 23:19 28:17 85:20
124:22 132:6 217:4
vice-president 263:14
view 123:10 322:17
viewpoint 126:1 380:7
381:12
views 18:16 60:18
Village 186:4
violated 280:19
vires 281:2
Virginia 4:20 97:22
99:1, 6 201:9 203:4
212:4, 5, 14 281:12, 17
349:16
Virtual 2:13 12:4 13:6,
19 22:7 387:14
virtually 319:17
visibility 221:17 222:1
visible 93:6
vision 218:3
visit 81:18 82:1 127:13
156:18 328:12
visitors 127:21 222:3
visits 65:4 147:18
295:16 300:20 328:22
337:14 340:17
visibly 159:14
vocational 14:17 125:12
180:17 190:8 209:16
364:1
vocations 112:7
VOCs 311:3
voice 212:5
voices 29:22 183:11
284:19 367:22
volatile 150:16 377:13
volt 49:11
Volta 153:19
volume 331:1
volumes 36:19
volunteer 66:8 164:17
167:13 309:16 332:7
340:1
Volvo 7:17 8:5 244:12,
13, 18, 20 245:1, 5, 8, 10

371:4
vu 87:6
vulnerabilities 67:16
68:11
vulnerable 28:2 46:11
76:19 89:19 108:3
109:8 118:3 144:14
147:21 184:8 191:3, 19
200:19 212:20 215:21
236:20, 21 262:12, 19
277:21 330:18 331:5
359:5 360:11
VW 155:11

< W >
wages 257:19
wait 105:15 240:12
381:7
waiting 140:14 266:22
316:12
waiver 31:4 35:1
walk 47:3 101:14
120:13 139:5 332:17, 20
Walker 289:19, 22
walking 54:21 55:7, 9, 21
walks 213:18
Wall 258:5
walls 58:17
wand 349:4
want 28:7 47:8 57:13
91:15 99:1 103:1 106:3
121:18 135:9 138:5
149:8 164:18, 19 204:15
220:17 229:6 234:18
237:2 248:11 256:6, 9
264:16 314:8 318:1
340:5 345:12 357:9, 11
359:7 368:3 371:10
375:22 378:10 383:22
385:21
wanted 186:9 199:10
368:8 381:16 384:13
385:7, 18
wanting 345:8
wants 202:9 370:14
385:20
Ward 56:6, 7
warehouse 37:6 145:1
362:12
warehouses 363:1
warm 104:22 248:13
warmer 89:9 95:21
96:8 144:9
warming 45:14 171:19
193:1 202:2, 3, 4 215:3
245:12 275:12
warning 78:9 104:18
warnings 104:19 105:2
warranty 112:10
washes 359:21

Washington 3:19 10:20
66:9 91:20 106:22
108:17 159:19 204:8
232:1 249:3 350:21
361:17 362:2, 15, 20
363:10
Washingtonians 362:13
waste 76:16 187:15
339:15
watch 142:12 355:17
watched 159:17 354:7
water 113:7 156:18
165:15 168:2 173:17
184:4 307:1, 6 325:15
355:17 361:1 378:9
Waterbury 6:6 149:19
150:1 151:4
waters 258:5
WattEV 315:10
wave 359:20
waves 378:2
waving 349:4
way 51:22 67:19 80:20
90:15 134:9 138:11
154:12, 17 200:11
203:16 208:3 235:7
270:15 287:10 301:19
311:11 319:4 340:22
345:21 366:21 381:6
ways 66:19 91:13 102:2
126:16 200:3 207:20
231:13 263:3 281:22
288:3 295:3 299:13
336:7
weak 193:19
wealth 72:11 101:17
weaned 313:8
weather 89:6 104:1, 20
105:19 108:6 117:17
130:4 148:21 165:13, 14
168:1 184:3, 9 196:12
202:21 203:9 227:20
295:5 312:11 360:6, 20
374:15 378:1
webinar 382:17
website 19:13, 21, 22
weddings 230:19
Wednesday 387:18, 21
week 32:22 34:2 55:4
118:2 173:15, 18 201:18
208:11 254:6
weeks 12:21 136:9
177:1 251:19 274:22
308:5 309:22 343:13
382:22
Weiderhold 79:21
weigh 166:9
weights 81:5
weight 87:15 205:16
206:12 216:1
WEIR 10:5 328:5, 7

welcome 12:2 13:5
51:20 289:16
welcomed 198:21
welfare 15:17 40:4, 5
92:3, 5 329:13
well 15:10 16:8 19:13
26:6 29:6 40:22 48:12
49:2, 4, 22 59:5 61:11
68:5 75:9 83:2 84:9
86:16 105:14 121:10
133:4, 9 138:14 139:19
155:5, 18 162:5 182:9
184:7 195:21 205:6
206:13 222:3 230:19
245:14 269:14, 18, 19
272:2 274:12 289:9
292:17 299:21 319:19
324:9 353:18 370:6, 8
373:10 379:15 383:1
well-being 119:1 154:15
184:1 185:10 187:17
212:14 222:2 226:6
262:20
well-to-wheel 255:16
went 160:3
We're 30:22 74:14, 17
80:20 82:10 84:5 85:1
86:17 122:7 125:17
139:3 148:19, 21 170:5
182:12 187:22 188:5, 14
202:21 212:14 224:15
231:16, 17 234:22 235:1,
18 241:7 242:1, 3 264:4
267:6 287:6, 16 288:6,
17 289:3 294:18 347:16
362:17 369:4 373:11
383:16 384:10 387:15,
17
West 4:19 92:1 97:22
99:1, 6 281:12, 17
384:16
Westchester 198:19
328:8
western 127:12 263:14
wettest 99:7
we've 41:11 59:6
101:16 155:10 169:17
170:8 188:13 287:10
295:7 346:22 347:2
wheel 88:3
WHEELER 6:18
185:22 186:3
WHELCHER 8:15
266:9, 12, 13
where-have 380:13
where-haves 380:14, 16
WHITAKER 6:17
183:2, 5
WHITE 3:13 24:10
50:20 51:1, 2 102:15

148:10 184:16 306:22
310:14 337:8
Whitman 279:19 280:1
wholehearted 242:4
wholeheartedly 59:20
242:5
whole-of 187:9
whole-of-administration
187:9
whole-of-government
43:10
wholesale 204:13
wide 48:6 50:10 111:7
130:2 178:7 253:18
271:15 318:11
widely 363:8
widespread 58:9 210:2
290:5
WIEDERHOLD 4:10
80:2
wife 198:20 340:2
wildfire 105:4 311:17
wildfires 90:1 105:7
149:2 196:13 203:9
222:13 311:5 336:8
wildland 234:21 295:6
wildlife 58:2 222:4
WILLIAM 2:3 3:6, 21
6:14 32:3 70:3, 4, 14
172:3, 7
willing 155:15
willingness 86:14
Wilmington 75:10
WILSON 6:15 175:15,
17, 18
wind 310:3
window 67:16 226:18
windows 192:19 248:8,
19 357:3
windowsills 312:22
winds 104:21
wine 310:5
winner 301:19
winnings 124:12 288:5
winter 105:9 198:22
199:3
winters 95:21 96:8
Wisconsin 10:17 263:13
264:21 266:15 352:15,
17, 19
Wise 6:18
wisely 319:7
wish 351:12
witness 20:13
Witnesses 18:17
Wollaston 307:2
woman 106:21
woman's 192:5
womb 71:5

Women 6:20 41:4 88:2
108:18 192:4, 5 193:16
217:8
words 61:15 67:13
287:16
work 13:16 29:2, 9
31:14 35:5 43:2 72:19
81:13 85:13 97:21
112:13 115:19 117:5
119:15 145:21 154:22
159:2 161:17 169:18
178:21 189:16 213:4
221:19 222:9 234:5, 9,
19 236:18 238:11, 18
240:1 241:9 242:17
255:20 263:17, 20 264:2
267:2, 6, 11 268:14
273:20 275:19, 20
295:14 305:15 324:8, 21,
22 330:9 332:8, 17
350:9 352:13 354:2
362:14 366:12 368:17
375:3 385:13, 16, 19
workable 204:20 269:6
worked 63:14 92:2
220:22 221:8 257:10
359:18 373:15
worker 91:5 271:14
workers 257:8 258:6, 9
272:11
Workforce 82:13
working 36:14 38:10
44:16 52:18 60:12 63:3
71:19 74:12 107:6
116:2 125:13 132:12
133:22 153:14 178:19
217:8, 13 243:16 244:21
247:4 258:2 271:14
289:12 312:11 322:12
333:9 367:10 377:16
workplaces 271:19
Works 10:22 29:11
121:16 239:3 297:22
368:2 383:16
World 24:3 48:8 67:18
141:17 142:20 146:12
165:10 170:20 171:3, 11,
14 186:8, 14 188:11
209:5 276:18 280:13
295:10 298:1 305:3
308:12 313:10 354:16
373:20 381:8 382:14
world's 194:4
worldwide 281:18
worried 85:1 97:7
181:13 213:20
worries 118:13
worry 55:11, 13 118:9
164:22 165:4, 11 203:2
311:16 340:14
worrying 213:17

worse 24:12 75:5 90:1
107:15 182:17 184:20
280:8 310:13 336:8
383:4
worsen 144:5 222:14
worsened 118:10
worsening 71:6 160:21
worsens 203:5
worst 102:4 139:7
145:3 151:8 176:8
200:5 275:2 300:21
310:12 333:4 363:7
worst-case 178:15
worth 16:15 353:9
worthless 289:11
wreak 144:12
writes 202:5
writing 18:18 125:20
178:18
written 17:22 19:4, 9, 11,
19, 20 21:20 53:6
110:21 124:15 134:21
210:13 254:15 296:14
303:19 325:12 327:16
386:8
wrong 81:8
wrote 52:6 201:22
308:1

< Y >
YACA 274:10
Yale 117:11
Yard 7:14 266:21
yards 263:19
Yarmouth 304:4
Yeah 338:6
Year 13:22 14:15 16:2
24:1 26:6 28:6 29:22
35:5 37:19, 20 41:15
45:9 47:12 51:18, 20
56:12 57:18 59:22
61:22 62:6 63:18 66:2,
15 73:9, 17 76:17 80:11
86:20 88:15 90:17
91:18 93:18 95:16
97:11 98:5 101:6 102:5,
11 103:4, 16 105:9
107:4 109:5 112:16
113:20 117:2 119:6, 21
126:13 128:12 130:20
140:8 141:6 142:4
144:1 146:7 148:19
149:11 151:16 152:13
156:6 157:6 180:21
187:12 195:16 198:18
199:6, 19 201:2, 14
203:21 205:6 208:20
209:21 210:6, 8 226:8
229:10 232:12 235:1
237:5 275:19 277:6
295:22 299:3 312:14, 20

314:21 315:20 336:3
338:2 339:14 340:7
341:4 347:9, 21 361:9
370:12 372:1 374:11
384:3 385:15
years 25:4 29:16 33:12
38:13 40:18 48:2, 20
52:8 63:1 64:17 70:19
74:9 83:4, 5, 6, 10 86:17
89:6, 7, 15 93:9 96:3
97:1 108:18 111:14
118:7 119:22 121:11
123:15 139:1 149:19
160:16 169:18 188:1, 14
196:21 199:1 202:8
221:1 230:13, 15 248:4,
7, 15 249:8, 9 263:20
273:16 285:1 287:11, 19
313:11 324:18 338:11
339:10 347:2 361:3
363:17 377:18
year's 350:9
Yellowstone 235:19
Yellowstone's 234:10
Yep 135:10
yesterday 347:22
yield 48:22 49:12
York 10:5 39:20 40:12,
14 73:7 159:13, 20
184:6 192:16 198:19
328:8
young 46:9 96:19 139:9
168:21 235:3 261:22
274:5 360:5 368:5, 7
376:21
younger 97:9
youngest 102:10 360:2
youth 262:3
YUHNKE 6:13 169:11,
15, 16

< Z >
zero 25:18 30:7 33:16
42:7, 14 46:7 48:15
59:13 61:7 90:6, 7, 8
114:15 115:12, 16, 22
121:5, 13 126:18 131:14
149:7 153:21 158:17
168:6, 9 176:21 177:17
180:17 185:17 186:21
187:1, 10 188:12 197:4
212:21 216:9 229:6
234:15 238:16 242:5
243:14 244:15 245:5
246:12 255:14 256:15,
16 259:11 262:16 269:1,
11 272:6 283:7, 20
288:3 289:5, 14 290:5
299:7 301:2 305:6
319:5 326:6, 11 327:2
336:11 350:16 366:3

367:14 368:18 371:2
375:11 378:12, 21
zero-carbon 188:12
zero-emission 15:9
16:18 25:2, 6 29:1
30:12 31:13 33:21 35:6
42:10, 20, 22 44:2, 18
46:21 54:20 56:9, 14, 21
59:15 61:12 62:2 73:21
91:16 96:11 99:2, 13
108:22 114:1, 11, 20
128:14 131:3, 16 141:20
145:17 157:18 158:5
164:1, 7 168:18 174:11,
17 175:2 180:15 181:21,
22 182:6 194:2 206:10
208:6 215:6, 8, 11 218:3,
22 223:2, 7 229:3
235:15 240:2, 10 241:21
243:1, 4 253:12 254:2, 4,
9 257:13 259:9, 16
261:6 262:14 273:13
275:7 278:1 283:3, 13
286:17, 21 291:6 299:19
300:6 301:5 304:18
305:14 314:14 318:6, 9,
21 320:9, 16 323:9
324:5 326:22 331:16
337:19 340:9, 21 359:8
363:8, 22 365:7, 13, 21
368:3 369:14 371:5
378:13
zero-emissions 43:21
47:8 64:14 140:7 166:5
177:6, 8 178:5, 13, 17
185:9 203:15 269:7
320:20 331:18 350:1
351:1, 9 378:14
zero-emitting 106:4
107:10 121:18 360:13
Zeroing 24:22 128:10
331:15
zero-pollution 384:12
ZEV 43:5, 15 62:12
245:19 246:1, 6, 21
255:4, 9 259:9, 18, 21
260:16 317:3
ZEVs 43:1, 17 49:19
209:3, 9 253:15, 17
254:7, 19 255:1, 3, 12
317:6
zip 67:22 138:15 283:16
zone 199:3
zones 72:22 142:8, 14
157:2 225:15 238:20
338:19 366:6
zoning 72:10 378:8
Zoom 226:18 385:3