

Federal Advisory Committee Act

Clean Air Act Advisory Committee

Hybrid (In-Person & Virtual) Meeting
September 13-14, 2022

Welcome & Opening Remarks, Day 1

This Clean Air Act (CAA) Advisory Committee (CAAAC) meeting followed a hybrid format that accommodated both in-person and virtual attendees through Microsoft Teams. Ms. Lorraine Reddick, the Designated Federal Official, opened first day of the meeting and reviewed the agenda, which is displayed below. A list of attendees is provided in Attachment 1. Previous meeting minutes as well as materials associated with this meeting will be available online at EPA's CAAAC website (<https://www.epa.gov/caaac>).

Day 1 Meeting Agenda

Time	Item	Presenters/Facilitators
1:00 - 1:05pm	Opening Remarks	John Shoaff and Lorraine Reddick <i>EPA Office of Air Policy and Program Support (OAPPS)</i>
1:05 - 1:20pm	IAQ Research Priorities WG Update	William P. Bahnfleth, PhD, PE, FASHRAE, FASME, FISIAQ, <i>Professor of Architectural Engineering, The Pennsylvania State University</i>
1:20 - 1:35pm	NEJAC & AQCM WG Update	Trish Koman, <i>OAPPS</i> Mary Peveto, <i>Executive Director, Neighbors for Clean Air</i>
1:35 - 2:15pm	EtO Regulatory Actions & Risk Communication	Madeline Beal, <i>Senior Risk Communication Advisor, Office of Public Affairs, Office of the Administrator</i>
2:15 - 2:30pm	Break	
2:30 - 3:05pm	American Rescue Plan: Air Monitoring Implementation Experience	Kristen Benedict, <i>EPA Office of Air Quality Planning and Standards (OAQPS)</i>
3:05 - 3:40pm	BIL Clean School Bus Program	Michael Moltzen, <i>Deputy Director, Transportation and Climate Division, EPA Office of Transportation and Air Quality</i>
3:40 - 4:00 pm	Public Comment and Closing Remarks	John Shoaff and Lorraine Reddick

Update from Indoor Air Chemistry (IAC) Workgroup

Dr. Bill Bahnfleth, the chair of the IAC Workgroup, provided background about the workgroup. He noted that the National Academies of Science, Engineering, and Medicine (NASEM) recently released a report titled *Why Indoor Chemistry Matters*, and the purpose of this report was to summarize the state of the science regarding chemicals in indoor environments. The CAAAC, through a workgroup, was charged by the EPA to provide recommendations on prioritizing the research needs identified by NASEM in their consensus report. So far, the workgroup has had three meetings and has completed a draft report outline. Members are currently reviewing all report recommendations and research priority statements, of which there are more than 40. Going forward, the workgroup will identify recommendations that are relevant to the EPA charge; combine, interpret, supplement them as necessary into a compact, prioritized set; and develop a draft report for full CAAAC review prior to the next CAAAC meeting.

Mr. Dan Greenbaum added that there were many recommendations in the report that are more relevant to chemists than to EPA staff. Mr. Greenbaum and Mr. Gary Jones noted that they will also consult the CAA 50th Anniversary Report that was recently put out by the CAAAC to help identify pertinent recommendations.

Update from the National Environmental Justice Advisory Committee (NEJAC) Air Quality and Community Monitoring Workgroup

Mr. Shoaff introduced Dr. Trish Koman and Ms. Mary Peveto to update the CAAAC on the work of the NEJAC Air Quality & Community Monitoring Workgroup.

Dr. Koman began by explaining that under the American Rescue Plan (ARP), Congress gave EPA a one-time supplement to address disparities from air pollution and COVID-19, and a significant amount of these resources were put towards community air quality monitoring. A grant competition closed in March to award grants to monitor air pollutants of greatest concern, and funding will be awarded by the EPA soon to promote partnerships, leverage existing expertise, expand air quality monitoring advisory groups, and build foundations of trust. In light of these efforts, the EPA requested advice from the NEJAC's Air Quality and Community Monitoring work group to anticipate community needs around data management, interpretation, and access, and new sensor technologies. Ms. Peveto was also invited to join the workgroup to provide air quality and programmatic expertise and to liaison with the CAAAC.

Ms. Peveto presented that the workgroup is considering the following eight questions as they proceed with this task:

1. What are the key ways in which the public and EJ communities will want to engage with the air quality data from new technologies that may be funded under ARP or other types of funding? What questions or uses are anticipated?
2. What are the issues related to understanding the quality of the data obtained?
 - a. How will communities and regulators evaluate the quality?

- b. From the community perspective, what are the strengths and limitations of various types of monitoring approaches?
3. How might we improve public understanding about issues such as what geographic scope or timing of monitoring? Or how to relate measures to human exposures or health-relevant benchmarks?
4. From the community perspective, how should EPA evaluate and interpret the data communities are collecting?
5. From the community perspective, how should EPA engage with state and local agencies responsible for air quality related to ARP data?
6. How might we improve practices and future decision-making regarding permitting, siting, compliance reviews, enforcement actions, and ways we convey the purpose of the data collection to enhance its use, application and impact, and avoid misuse or lack of consideration of community-generated data?
7. What are examples of previous successful programs or pilots with lessons learned about using new monitoring data to meet community needs?
8. What strategies and approaches should EPA consider to reduce harm to fence-line communities from cumulative impacts from multiple sources of air pollution?

The workgroup is strongly emphasizing enabling and elevating community involvement and making sure they have the resources to become more environmentally literate. They are also working to make sure that their recommendations are actionable by EPA.

Dr. Koman and Ms. Peveto explained that the workgroup is currently reviewing the members' comments on the current set of recommendations and preparing a revised draft. The goal is to develop draft advice for the NEJAC's consideration and finalization at their next meeting to then forward to the EPA Administrator.

Discussion

Mr. Bob Myers asked if the draft letter would be made available before the public meeting in October. Dr. Koman said it would probably be circulated about a week beforehand.

Mr. Dan Greenbaum noted that inevitably the public wants to know what a given air pollution measurement means and asked if part of the program would be helping communities interpret the data. Ms. Peveto responded it is still early in the draft recommendation development process, but there was a lot of conversation about this during the workshop they held in September as well as interest in determining how the EPA can work with other agencies like the Centers for Disease Control and Prevention (CDC) on this topic. Ms. Peveto observed that more data is not necessarily needed, but they do need better understanding of risk and ways to communicate that with communities. Ms. Koman added that part of the reason the EPA wanted advice from NEJAC was to be better prepared as data are collected.

Mr. Beto Lugo-Martinez asked whether the report would be recommending that there should be more regulatory-grade air monitors in communities where there are hotspots. Ms. Peveto stated

that she would be happy to share more specifics as well as hear more in-depth feedback offline. Dr. Koman added that question #7 being considered by the workgroup relates to examples of previous successful programs and lessons learned and requested that if anyone has relevant information, they share it with the workgroup. Another member of the NEJAC workgroup, Ms. Leticia Colon de Mejias, was also present on the call, and she clarified that Mr. Lugo-Martinez was requesting monitors in locations identified by communities, which she said had come up at their meetings before.

Ethylene Oxide (EtO) Regulatory Actions and Risk Communication

Mr. Shoaff introduced Ms. Madeline Beal to discuss recent EPA efforts related to EtO. Ms. Beal began by explaining why the EPA is concerned about EtO, noting that it causes cancer in humans. Scientific evidence in humans indicates that exposure to EtO for many years increases the risk of cancers of the white blood cells, including non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia. EtO also damages DNA, and children are particularly susceptible to this type of carcinogen. In 2016, the EPA revised the toxicity value for EtO based on research that showed it to be 40-60 times more toxic than previously thought. In July of 2022, the EPA completed an analysis of emissions and resulting risks from about 100 commercial sterilizers in the U.S., which showed where risk is highest for nearby residents. In a national context, the majority of EtO is used by the chemical sector, and only a fraction is used by commercial sterilizers, but sterilizers disproportionately drive risk, often due to their proximity to homes and residential areas. Of the approximately 100 commercial sterilizers in the U.S., 23 facilities showed risk at or above 100-in-1 million. The analysis also showed that much of the risk is due to fugitive emissions, which are harder to identify and control. To address EtO elevated risks, the EPA plans to revise current Clean Air Act (CAA) regulations for industries that emit EtO into the air, reevaluate the terms of EtO's use as a sterilant under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), expand the reporting requirements under the Toxics Release Inventory (TRI) for sterilization facilities, work with state and local air agencies and facilities to reduce EtO emissions as quickly as possible in advance of a revised CAA rule, and use enforcement options as appropriate.

The EPA is planning to perform risk communication outreach regarding EtO. The objectives of this are to inform residents about risks from EtO and what EPA, state, and facilities are doing about those risks; increase community involvement in the rule-making process; increase cases of partnership between communities, states, and facilities to lower risk; and increase trust that the EPA is taking this issue seriously and is dedicated to making change. As part of this outreach, the EPA released the risk results in early August and held a national webinar on August 10th. The EPA will also hold community meetings in each of the 23 communities where modeled risk levels are at or above the 100-in-1 million level. After those meetings, specific further actions are dependent on state/local activity, community needs, and collaboration with other federal and state agencies.

Discussion

Mr. Dan Nickey asked whether the high-risk facilities are major sources. Ms. Beal explained that there is a mix of both. Mr. Nickey suggested that the EPA reach out to the state Small Business Assistance Program (SBAP) as a way to get in touch with affected small businesses, and Ms. Beal stated that they already have.

Mr. Lugo-Martinez asked about the vintage of the EtO data. Ms. Beal responded that it mostly came from two rounds of information collection requests in 2021 and 2022 that started with the nine biggest companies and then expanded to cover all facilities.

Mr. Lugo-Martinez commented that there is a facility in Kansas City where an incident several years ago resulted in a mitigation plan but there was no follow-through, and he asked if there is going to be communication or active enforcement from the EPA for this facility. Ms. Beal stated that enforcement has a role to play, but one of the challenges is that many facilities are in compliance, but the regulation itself is not stringent enough to address the risk from those facilities.

Mr. Tim Wallington asked what the concentrations of EtO is in the air around these facilities. Ms. Beal was not sure of the concentration values and stated that she could find out and follow up with him about that.

Mr. Miles Keogh commended EPA for making a good-faith effort to engage with agencies, facilities, and communities and acknowledged that it will be impossible to satisfy everyone. Ms. Beal responded that the EPA is just getting started with the public outreach effort, and they will see how things go.

Ms. Peveto brought up the risk for individuals younger than 16 and asked what is driving that risk. Ms. Beal replied that it is not unusual for a mutagen to be more dangerous to the younger age group. The CAA considers birth to age 70 when looking at risk and assumes that people are in an area 24 hours a day, 7 days a week for residential exposures. The other part of the regulation considers worker risk and “non-residential bystander” risk, which covers people who work and go to school near a source but do not live nearby. Those calculations are conducted differently, but they both consider childhood exposures. Ms. Peveto asked whether the issue is just the general vulnerability of that age group, or whether EtO has a unique pathway of exposure. Ms. Beal stated that she believes it is a general vulnerability, but she could check about that with the EPA Office of Research and Development team.

Mr. Jason Howanitz expressed concern about the communication around enforcement and permitting. He explained that in his experience, that messaging has felt like an afterthought that gets left to the states to figure out despite being a key component. Ms. Beal noted that this falls at the intersection of legal and bureaucratic offices as well as technical and engineering staff, and it is a difficult concept to communicate. However, she noted that they are working on this

communication, and she agrees that there should be a partnership between the federal and state and local agencies.

Ms. de Mejias said that if EPA is certain that EtO is a mutagen that affects children more strongly, the EPA should be working to stop its production and use. She asked how the EPA will address this in a way that communicates the danger to children and their families while planning ahead for a phaseout. Ms. Beal acknowledged that communicating directly to families is a big part of the challenge. She explained that this is a complicated issue to solve, and they are trying to partner with the Food and Drug Administration (FDA), who is working on alternatives to EtO, although this will not completely solve the problem. From the CAA side, there are some options for containment, but they are costly. Ms. de Mejias responded that it is also costly to health to not attempt to control emissions.

Mr. William Spratlin observed that the EPA's proposed timeline of putting out a proposal by the end of the year is "forever" for people living right next to these facilities. He urged the EPA to take advantage of other parts of the agency that have tackled similarly urgent problems, specifically the Superfund program. Ms. Beal agreed that the first thing they want to tell the public is how to protect themselves, although there is not a lot they can do. She added that they are working with Superfund and getting support from the Community Involvement Toolkit.

Mr. Lugo-Martinez advocated for the EPA to properly explain the risk to people before telling them what to do about it, since in the past, the government has not shared that information because they did not want to upset people. He added that information should be accessible, including being translated into Spanish and other languages. He also commended the EPA's efforts to protect people's health, especially in EJ communities. Ms. Beal agreed that they are trying to do better with communication, and noted that they have translated everything so far, including offering interpretation for community meetings after doing an assessment to identify language needs.

A CAAAC member also noted the importance of educating facilities and polluters in addition to communities.

Update on the American Rescue Plan (ARP)

Mr. Shoaff introduced Ms. Kristen Benedict to update the CAAAC on EPA's work under the ARP.

Ms. Benedict discussed the background of the ARP, including that the ARP was signed in March 2021 and included a supplemental FY 2021 appropriation of \$100 million for the EPA to address health outcome disparities from pollution and the COVID-19 pandemic. The EPA's appropriation was split into two \$50 million line items – one dedicated to support EJ priorities, and the other dedicated to enhancing air quality monitoring. For this, the EPA launched a \$20 million grant competition that called for proposals from nonprofit community-based organizations, state, Tribal and local air agencies, to conduct monitoring of pollutants of greatest

concern in communities with health outcome disparities. The EPA is also in the process of awarding \$22.5 million to state, Tribal or local air agencies for enhanced monitoring of PM_{2.5} and five other air pollutants regulated by the National Ambient Air Quality Standards (NAAQS). In addition, EPA is investing in Regional mobile monitoring platforms and sensor loan programs to support short-term community monitoring needs (\$5 million) and administrative support (\$2.5 million).

In a Government Accountability Office (GAO) Report, titled *Air Pollution: Opportunities to Better Sustain and Modernize the National Air Quality Monitoring System* (GAO-21-38), it is recognized that the ambient air quality monitoring system is a national asset that provides standardized information for implementing the CAA and protecting public health. Two key recommendations in this report focused on asset management and modernization, and the EPA has committed to address each recommendation in the coming years and keep them in mind when implementing ARP funding. The first recommendation is that the EPA should develop and implement an asset management framework for sustaining the national ambient air quality monitoring system, which should identify the resources needed, use data to manage infrastructure risks, and target resources toward assets that provide the greatest value. The second recommendation is that the EPA should develop an air quality monitoring modernization plan to better meet the additional information needs of air quality managers, researchers, and the public. The EPA is addressing asset management first, with modernization to follow.

Discussion

Mr. Keogh explained that state and local air quality agencies actually need about twice as much money to do all of the work they need to do, and while the ARP is great, it is not nearly enough, which is a Congressional appropriations problem. He then asked how much of the \$22.5 million for equipment has been allocated. Ms. Benedict stated that the state, local, and tribal agencies are working on work plans with their regional offices, and they hope to communicate the broader status of things on the website as that information becomes available.

Mr. Greenbaum noted that the Inflation Reduction Act (IRA) includes \$236 million for air quality monitoring in disadvantaged communities and asked if the EPA has started to think about how to learn from its experience with the ARP for that work. Ms. Benedict stated that Mr. Goffman would be able to discuss that in more depth, but they are thinking and talking about those lessons and are happy to hear feedback about early stakeholder engagement as well.

Mr. Howanitz described his frustration at the state/local level at the lack of guidance on how to define EJ areas. He stated that different terms are used interchangeably, even in guidance documents, so it's a "you'll know it when you see it" situation. He explained that without any metrics or solid methodologies, it is difficult for state and local agencies to defend their decisions. He also noted that EJSCREEN is helpful for identifying outreach areas, but it is not designed to be used for policy or regulatory decision-making, and he encouraged the EPA to think about creating a regulatory framework before allocating funds. He also noted that although money is being allocated for monitoring now, the awardees will need to figure out ways to operate and maintain those monitors without continued funding. He stated that having more

monitoring data will not solve air quality problems in EJ areas, which are usually already being monitored, and expressed curiosity about how the data will be used. Ms. Benedict acknowledged these concerns and stated that the EPA is aware that these are one-time funds, so they are trying to be mindful of that by using the resources where “one-time” funds were needed.

Mr. Hodanbosi agreed with previous comments about the need for continued funding, especially because some equipment is very expensive and there is a need for operating funds as well. He requested elaboration about the system for asset management and how it will work. Ms. Benedict explained that they are working to determine what a long-term asset management framework will look like and will be increasing engagement and communication soon on this topic.

Mr. Lugo-Martinez asked how the EPA is ensuring that the ARP funding is actually being used to work with community groups. He also pointed out that EJ communities, not EPA, define themselves based on demographics and environmental hazards. He observed that as this administration prioritizes EJ, the EPA needs to be intentional about looking at applications and making sure those communities are actually overburdened or disadvantaged. He added that although there are grant opportunities and discussions about air monitoring, more enforcement is what is needed, and he questioned whether the data is being gathered for the sake of gathering data, or if it will be actionable. Ms. Benedict pointed to information in the request for applications for clear evaluation criteria related to EJ as well as partnerships and the approach to air monitoring.

Ms. Natalene Cummings commented that Tribes frequently employ one staff person who works on everything related to air quality, and they are restricted to a fixed amount of funding per year, which limits their ability to purchase equipment. She noted that the ARP has been helpful for Tribes in enabling them to get PM or ozone samplers.

Ms. Peveto noted that applying for federal grants remains a challenge despite the efforts by the EPA to offer workshops and information for applicants. She asked if there is a way that money can be made available through more cooperation with local agencies and states, since many communities will be unable to participate even with the EPA’s assistance. Ms. Benedict stated that she will bring this comment back to EPA’s grant office.

Update on the Clean School Bus Program (CSBP)

Mr. Shoaff introduced Mr. Mike Moltzen to update the CAAAC on the EPA’s work on the CSBP under the Bipartisan Infrastructure Law (BIL).

Mr. Moltzen provided an overview of the work the EPA is doing on the CSBP. He noted that under Title XI: Clean School Buses and Ferries, the BIL provides \$5 billion over five years for the replacement of existing school buses with clean school buses and zero-emission school buses. Half of that funding is dedicated to zero-emission school buses, and the other half is dedicated to zero-emission *and* “clean” school buses, which can include buses that use propane

or compressed natural gas (CNG). The first funding opportunity under this program is through the 2022 Clean School Bus Rebates, which made \$500 million available. School districts applying directly for funds may only submit one application to replace up to 25 buses. As permitted by the BIL, the EPA will prioritize applicants during the selection process for school districts that serve low-income students, are in rural areas, or are Tribal school districts. Buses eligible for replacement must be model year 2010 or older, diesel-powered school buses that will be scrapped if selected for funding. The buses to be replaced must also have a Gross Vehicle Weight Rating (GVWR) of 10,001 pounds or more, be operational at the time of application submission, and have provided bus service to a public school district for at least 3 days/week on average during the 2021/2022 school year. New replacement buses must meet several requirements, including having a battery electric, CNG, or propane drivetrain; be an EPA certified vehicle model year 2021 or newer; have a GVWR of 10,001 pounds or more; not be ordered prior to receiving official notification of selection for EPA funding; be purchased, not leased or leased-to-own; and serve the school district listed on the application for at least 5 years from the date of delivery. The maximum rebate amount per bus is dependent on the bus fuel type, size, and whether the school district served by the bus meets one or more of the prioritization criteria. The range of rebates is \$15,000 to \$375,000 per bus. There is also infrastructure funding available for zero emission school buses of up to \$20,000 per bus for priority districts and up to \$13,000 per bus for other eligible school districts. However, this funding is limited to the fleet's side of the meter.

The application deadline for the rebate program was August 19, 2022. Applications received by the deadline were placed in a single ordered list using a random number generator lottery process, and the EPA is selecting applicants for funding through this process, until the funds are all allocated. Prioritized applicants will be selected first. To ensure a broad geographic distribution of funds, the EPA will select at least one application per state or territory provided there is at least one eligible application. The EPA is notifying applicants of their selection status within 60 days of the application deadline.

Discussion

Mr. Clay Pope asked how states can take credit for the emission reductions in their State Implementation Plans (SIPs) through the MOVES model that result from their participation in the CSBP. Mr. Moltzen encouraged states to connect with staff at the state/regional offices. Mr. Pope asked whether someone on the policy side at the EPA might also address these types of issues. Mr. Moltzen offered to confer with other EPA staff about this.

In response to a question about whether the use of federal funds for non-eligible expenses would render a group ineligible for CSBP funding, Mr. Moltzen explained that other federal funds cannot be mixed with CSBP funds for eligible expenses, but if other funding pots are used to cover needed infrastructure upgrades, they are still eligible for CSBP funding.

Ms. Peveto asked if there is a ballpark estimate for the percent of DERA funding that had been going to school buses and how much of that amount is being replaced by the CSBP which could

then be used for other areas. Mr. Moltzen stated that they have gotten a lot of experience from DERA's school bus rebate program and recognize that there are other projects that will benefit from the additional funding that will be freed up. He did not know the specific numbers to respond to Ms. Peveto's questions but will follow up to provide that information.

Mr. Greenbaum pointed out that \$5 billion is a lot of funding and asked if there is an estimate for the proportion of the school bus fleet nationwide could be reached with this amount of money. Mr. Moltzen did not provide an estimate but assured the committee that they should expect clear public health benefits associated with this and following programs.

Mr. Meyers asked about how the 2022 rebate criteria compares to the statutory language, Mr. Moltzen explained that it seemed important to ensure options for applicants who for various reasons prefer non-ZEV options. They considered other options, like cleaner diesel fuel, but based on input from a number of stakeholders, they settled on non-ZEV technologies like propane and natural gas. He added that this is in the guidance.

Ms. de Mejias noted that based on public listening sessions, many Title I school districts have difficulty meeting the matching requirements and are therefore unable to upgrade buses. She asked how the EPA is addressing that. Mr. Moltzen asked her to elaborate on Title I, and she explained that these are districts that serve students that are at or near the poverty line. Mr. Moltzen stated that these districts most likely overlap with the prioritization criteria and are eligible for the highest ZEV rebates, which come close to the current prices of the buses and charging technologies, so they are trying to address the challenges Ms. de Mejias described. He added that they are still in the early days of this program, and this is the first of several funding opportunities, including grants, so there will be chances to incorporate more nuance in the future.

Ms. de Mejias asked how the EPA is being intentional in reaching out to those communities to inform them of this program. Mr. Moltzen stated that they are trying to be thorough, and they held several webinar listening sessions in English and Spanish in addition to making materials public on the website. They also worked closely with partners at the EPA's Office of Environmental Justice to talk about this program plus DERA and the Ports Initiative at OEJ's national listening sessions.

Public Comment and Closing Remarks

There were no members of the public who wished to speak.

Ms. Reddick explained to the committee that the Federal Advisory Committee Act now requires the designation of an alternate DFO and introduced Ms. Ruth Morgan, who will serve this role for the CAAAC. She also thanked the members who assisted with reviewing applications for the Clean Air Excellence Awards and explained that the ceremony had to be postponed, but more information will be provided when it is rescheduled. She then adjourned Day 1 of the meeting.

Welcome & Opening Remarks, Day 2

Ms. Reddick opened the second day of the meeting by reviewing the logistics again, then Mr. Shoaff invited the members of the CAAAC to introduce themselves before introducing Mr. Joe Goffman to speak.

Day 2 Meeting Agenda

Time	Item	Presenters/Facilitators
9:00 - 9:05am	Introductions and Welcome	John Shoaff and Lorraine Reddick
9:05 - 10:00am	OAR Highlights & Inflation Reduction Act Overview	Joe Goffman, <i>Principal Deputy Assistant Administrator, EPA Office of Air and Radiation (OAR)</i>
10:00 - 10:15am	Break	
10:15 - 10:45am	Overview of EPA's Air Toxics Screening Assessment (AirToxScreen)	Rod Truesdell and Doug Soloman, <i>OAQPS</i>
10:45 - 11:30am	NEXUS Multipollutant Screening Tool Demo	Beth Landis, <i>OAQPS</i>
11:30am - 12:00pm	Public Comment and Closing Remarks	John Shoaff and Lorraine Reddick

Updates from OAR Leadership

Mr. Goffman discussed the ongoing work at OAR. One of the rulemakings on the regulatory agenda is for the oil and gas sector, and he noted that a supplemental proposal for methane standards for the oil and gas industry will be issued in a few weeks. He mentioned that the initial proposal was put out for public comment in November 2021, which did not include proposed regulatory text and that the supplemental proposal will include full proposed regulatory text. For the power sector, the EPA will be taking a strategic approach for the sector and related rulemakings, with the goal of bringing together a set of proposals or final actions that the utility sector can assess as a package. He noted that the EPA is aiming to reduce emissions while ensuring there is reliable and affordable electricity. They are working on finalizing the Good Neighbor plan that was proposed in March to address summer NOx emissions that affect downwind nonattainment areas, and they are also working on finalizing one action to regulate mercury air toxics and another proposal to address additional mercury and air toxics emissions. The EPA is also working on CO₂ emission standards for new and existing sources under CAA sections 111(b) and 111(d) with the goal of putting forth a proposal in the first quarter of 2023.

Regarding vehicle emissions, Mr. Goffman remarked that President Biden signed an Executive Order in August 2021 that directed the EPA to develop greenhouse gas (GHG) and conventional pollutant standards for light-duty and heavy-duty tailpipe emissions. In March, the EPA

proposed standards for NOx from heavy duty vehicles (HDVs), and they are aiming to finalize those standards by the end of 2022 as well as address GHGs from HDVs in a consistent manner. Last year, the EPA finalized GHG standards for light-duty vehicles (LDVs) through model year (MY) 2026, and following the August 2021 EO directive, they are working on GHG and conventional pollutant standards for LDVs from MY 2027 and onward. They are making good progress and have a realistic deadline of the first quarter of 2023 to issue the LDV proposal.

The EPA is also working on a number of other actions. For hydrofluorocarbons (HFCs), the EPA is working on phasing out HFCs through the American Innovation in Manufacturing (AIM) Act. They are working on a proposal for the second step of that process, which is expected to begin in 2024 and reduce HFCs by 40%. The EPA will be putting out another request for application for the Clean School Bus Program in the spring, and this round the funding will be in the form of grants, rather than rebates. The EPA has also sent the new PM NAAQS rule out for interagency review, they have a draft policy assessment out for the ozone NAAQS, which are still being developed, and they have started an effort to notify communities at risk from EtO.

Mr. Goffman remarked that the Inflation Reduction Act (IRA) was signed in August, and although it is not an exclusively environmental bill, it makes historic investments in climate action, air quality, and EJ. The IRA is expected to reduce U.S. GHG emissions by about 40% by 2030 while supporting disadvantaged communities and clean energy. Investments will drive the most significant emissions reductions in electricity generation and transportation while establishing the groundwork for long-term decarbonization in industry, buildings, and agriculture. The EPA is the recipient of \$41.5 billion in appropriated funds to support 24 new and existing programs. Of this \$41.5 billion, \$27 billion will be used to capitalize existing and new green banks and fund state and local government investment in distributed energy and other clean technologies. About \$20 billion of this \$27 billion will go to entities that will function to finance decarbonization projects at the community level; this is named the “GHG Reduction Fund.” Of the \$41.5 billion, \$5 billion is for climate pollution reduction grants at the state, local, and Tribal level to develop and implement plans to reduce greenhouse gas emissions; \$3 billion will be put toward environmental and climate justice block grants to fund community-based nonprofit organizations; \$3 billion will be used for grants to reduce air pollution at ports to purchase and install zero-emission technology and develop climate action plans; \$1.55 billion is for the Methane Emissions Reduction Program to fund grants and technical assistance to accelerate emissions reduction from petroleum and natural gas systems; and \$1 billion will be spent for clean heavy-duty vehicles to provide grants, rebates, and contract support to replace heavy duty vehicles with zero-emission alternatives.

The EPA’s OAR is in charge of making a plan for how to dispense this funding, and they are working with other offices and agencies to ensure it is used wisely. They are working to identify existing program structures and interconnections to move quickly where possible, and they are prioritizing early and significant pollution reductions. Public engagement and outreach will be starting soon as a first step. The EPA is also expanding its political leadership team and senior

management team to ensure the money is spent strategically. The EPA's goal is always to maximize benefits to climate and public health; the agency will also prioritize EJ in accordance with the act and the goals of the administration. Other priorities include harmonizing management structures, regulations, funding, and grants; engaging inclusively with stakeholders; supporting and building on EPA regions' strengths; and safeguarding financial integrity.

Discussion

Rev. Mitch Hescoc asked about the EPA's capacity to handle an agenda of this scale, Mr. Goffman pointed out that Congress accounted for the fact that the EPA will need to bring on additional staff, and the Administrator's office is putting together a program to manage hiring for OAR and the four program offices that will be implementing IRA spending.

Mr. Goffman stated that he had anticipated a question about methane from the CAAAC, then went on to explain that there is a provision in the IRA that gives the EPA a significant toolbox to address methane emissions. They are required to set up a methane emissions fee program to create an incentive for states and sources to put together approvable methane emissions reductions plans, consistent with the reductions the EPA is planning on finalizing next year with a supplemental proposal. That program is coupled with an emission reduction spending program aimed at facilitating state compliance and supporting monitoring of methane emissions. He stated that this addition to the EPA's regulatory toolbox gives the agency a chance to take a comprehensive approach to methane reductions, which is a good example of synergy between funding and existing programs.

Mr. Meyers asked how the EPA is going to navigate the process of interpreting the IRA and identifying statutory intent, since there is not much text in the IRA. Mr. Goffman explained that several provisions in the Act have significant antecedents. A nontrivial amount of funding is for existing programs, such as the ports initiative, so he believes that it is reasonable to think that staying on the EPA's current trajectory in implementing these programs is appropriate. He added that the GHG reduction fund has been pushed for by stakeholders and states for years, and the methane provisions were worked on for months, going back to when the EPA was asked for technical assistance for the Build Back Better (BBB) plan. He identified these as informal sources that provide a starting point for interpretation. He observed that Congress wants the EPA to dispense this money quickly, and Congress gave this funding to the executive branch on a ten-year time horizon, so the EPA needs to make decisions in the short term that give the agency the best chance of finding effective long-term strategies. This is a driving force behind their emphasis on outreach, since ultimately the recipients of the funding will be the ones who determine how successful the program is.

Before Mr. Goffman had to leave for another obligation, he acknowledged a request by Mr. Pope for expedited national guidance on how to take credit in MOVES for SIPs.

Ms. Shannon Broome observed that the sections in the IRA related to methane brought back memories of the Tailoring Rule and a memo on monitoring that was issued by Administrator

Jackson. She asked if the EPA has discussed if that policy will be continued and if the trigger dates will be changed. Ms. Cynthia Giles, who stepped in to answer questions after Mr. Goffman left, responded that the rule has not been proposed yet, but the public will have an answer to that soon.

Ms. Vicky Sullivan observed that the IRA includes a provision for the EPA to revise subpart W about empirical monitoring of methane emissions and asked if EPA has plans or a timeline for doing that. Ms. Giles stated that the IRA was signed very recently, so they are still sorting through all of the requirements and provisions, but this is an important question, and they anticipate conducting significant public outreach to get feedback.

Ms. Adrienne Hollis asked how the EPA is tackling the challenge of getting communities to participate in the public outreach efforts. Ms. Giles stated that they are acutely aware of issues with engagement fatigue and the difficulty of reaching the communities they want to reach. She did not have a specific answer yet but added that this question is front and center on their minds and they welcome suggestions.

Ms. Sarah Hayes noted that many committee members and their organizations have existing networks for communication and collaboration that would include some of the people who would receive IRA funding. She offered that these contacts could be helpful to the EPA and asked how best to provide that information. Ms. Giles agreed that it would be helpful to get advice and feedback on how to conduct outreach.

Air Toxics Screening Assessment (AirToxScreen)

Following a short break, Mr. Shoaff introduced Mr. Rod Truesdell and Mr. Doug Soloman to discuss AirToxScreen (<https://www.epa.gov/AirToxScreen>).

Mr. Truesdell began by providing background information about AirToxScreen. The AirToxScreen is a screening-level characterization of air toxics across the nation that is at the census tract resolution and is based on air quality modeling of emissions. It provides cancer and noncancer risk estimates for more than 100 air toxics. The AirToxScreen is used to provide communities with information about health risks from air toxics and is used as a planning tool for the EPA and state/local/Tribal organizations to identify locations of interest for further study. It is the successor to the National Air Toxics Assessment (NATA).

There are several analytical steps used to develop the risk information in AirToxScreen. The first is to compile the National Emissions Inventory (NEI), which is based on data provided by state, local, and Tribal agencies. The next is to estimate ambient concentrations of air toxics across the U.S. using air quality and emissions dispersion models. Then population exposures and cancer and chronic non-cancer hazards are estimated based on the modeled pollutant concentrations in the census tract area. The sources of emissions considered by AirToxScreen include point and non-point stationary sources, onroad and non-road mobile sources, fires, biogenic sources, and secondarily formed emissions. The risk results for cancer are the combined cancer risk based on

exposure to all air toxics from all outdoor sources and are presented as risk “in-1 million,” which means the number expected cancer cases for every 1 million people over their lifetimes. The national average for 2018 is 20-in-1 million. For non-cancer risks, the results are presented as a hazard index (HI) that is target organ-specific.

The AirToxScreen includes a mapping tool that was developed to provide easy access to summary-level information to understand risk in a given area. It was designed to answer the following questions: What is the risk from air toxics in my area? What pollutants drive those risks? and Where do those emissions come from? The mapping tool is currently able to provide information at the tract-level, showing total cancer and noncancer risk and associated source contributions, emissions, and monitoring data. Mr. Soloman continued by giving a live demo of the AirToxScreen mapping tool to the CAAAC.

Discussion

Mr. Greenbaum pointed to the term “total risk” and asked how this is calculated. He also asked if the public understands terminology such as “1-in -0,000” and if the agency has tried to evaluate comprehension through outside evaluators or focus groups. Mr. Truesdell explained that the calculations are explained in the technical support document for AirToxScreen, and they follow the guidance for risk with a mixture of air toxics. He added that for EtO communication and general topics related to risk communication, Ms. Beal (who spoke on the first day of the meeting) would be a better person to ask.

Mr. Hodanbosi asked about mobile source impacts and emissions. Mr. Truesdell replied that they do include mobile source emissions, both onroad (estimated from actual transportation data) and nonroad (including things like parking garages and stops and starts). He added that they have partners in the EPA’s Office of Transportation and Air Quality (OTAQ) working with them on this. AirToxScreen users can see the contribution from mobile sources in the breakdown for each census tract.

Ms. Cummings asked how AirToxScreen identified facilities that have an impact on downwind areas. Mr. Truesdell stated that their model uses a national grid that includes all sources, and the risk calculations for a given tract are based on how the model accounts for downwind dispersion, which would include upwind sources from which pollutants are transported. Ms. Cummings asked if the tool allows users to identify those upwind sources for a given tract, and Mr. Truesdell clarified that AirToxScreen does not show the contributions at any tract from a particular source.

NEXUS

Mr. Shoaff introduced Ms. Beth Landis to demonstrate NEXUS, a new internal, EPA-only tool for reviewing air pollution information.

Ms. Landis prefaced her discussion of NEXUS with information about multi-pollutant (MP) approaches to improving air quality. The EPA seeks to support a comprehensive, MP treatment of air quality problems to effectively improve air quality and make the most efficient use of available resources. The primary goal is to identify and evaluate local control strategies targeting emissions of ozone and PM_{2.5} and their precursors, while at the same time reducing air toxics of concern for communities to maximize both health benefits and air quality improvements.

NEXUS is an advanced screening tool for MP risks and EJ/demographic analysis developed by the EPA's Office of Air Quality Planning and Standards MP team. It integrates a suite of MP data, including emissions, monitoring, modeling, fused air quality data, and health risk data for PM_{2.5}, ozone, and air toxics, as well as EJ/demographic data, into one single platform to allow national mapping and analysis of MP ambient pollutant concentration and risk data. The EPA expects to use NEXUS primarily to identify areas that would potentially benefit most from MP approaches to reduce emissions (including current nonattainment areas).

Inputs to NEXUS include data on ozone and PM_{2.5} ambient/design values at the county-level; ozone, PM_{2.5}, and air toxics risk data and concentration (fused air quality) data at the census tract-level; ozone, PM_{2.5}, and air toxics monitoring data; NEI county and facility emissions; EJ and demographic data from EJSCREEN; advance areas; Class I areas; and Tribal areas. The major functions of NEXUS are to show MP ambient and/or risk maps, show monitoring sites and trend data, show major point emissions sites and data, provide source category emissions summaries, and provide sector emissions summaries. NEXUS is currently only available for internal EPA use, and additional updates/improvements are necessary before the NEXUS tool is ready to be released to the public.

Ms. Landis then provided a live demo of NEXUS for the CAAAC.

Discussion

Mr. Nickey asked about the difference between NEXUS and AirToxScreen, and Ms. Landis stated that the information and data should be consistent between both tools for air toxics, but NEXUS also includes information on ozone and PM_{2.5}. Mr. Nicky also asked whether users can self-define EJ parameters. Ms. Landis explained that they have the ability to change EJ parameters, but they currently only include the same ones that are in EJSCREEN.

Rev. Hescox member asked how often the EPA will be updating the underlying data in NEXUS. He also encouraged the EPA to do demonstrations and trainings with the regions as well as the public once NEXUS becomes available. Ms. Landis agreed that training would be useful. She also explained that there is the MP platform, which will be updated annually by EPA eventually; their goal is to switch to 2018 data this fall, and ultimately to 2019 later in the fiscal year, from which point it will be updated yearly. She added that some of the monitoring data can be updated more quickly.

Mr. Greenbaum noted that there are some apples-to-oranges comparisons that are being made here, since the cancer risks from air toxics differs from the public health outcomes related to PM. It is difficult to show which reductions would most advance public health. For example, if you eliminated all PM in one area, you would get a much bigger public health impact than if you brought down the cancer risk in the same area. Ms. Landis responded that they are working on how best to communicate the risks, but the ability to see the underlying data and related risks should be helpful for understanding and communicating this information. She added that they are working with the BenMAP team to get tract-level information about which they feel confident, and once that happens, they will work to ensure the trainings, materials, and users' guide explain this adequately so that it is clear where the numbers come from and what they mean.

Mr. Keogh predicted that some of the earliest and heaviest users of NEXUS will be state and local officials and asked if the EPA has done outreach to those agencies to validate use cases and maximize its usefulness to those groups. Ms. Landis explained that the original intent of the tool was to be an internal screening tool for EPA to identify areas that would benefit from a MP approach. However, as they developed it and added more functionality, they began to see the benefit of providing it to others outside the agency. She noted that they have not done any outreach yet since they are still working on NEXUS internally, especially the BenMAP data.

Public Comment

There were no members of the public who wished to speak; however, Mr. Nickey asked how the CAA 50th Anniversary Report has been utilized by EPA since being approved by the CAAAC. Mr. Shoaff stated that they have periodically talked about how various programs are taking on some of the recommendations, but they will provide a more thorough update on report implementation and the potential overlap with the IRA at the next meeting.

Final Remarks and Closing

Mr. Shoaff noted that if any CAAAC members have suggestions or requests for future meetings, they can reach out to him or Ms. Reddick.

Ms. Reddick explained that in January, the process of seeking new CAAAC members will begin, and they would appreciate assistance from current members in identifying potential candidates, especially academics. The current cycle will end on August 8, 2023, and some members will be rotating off the committee after serving their maximum of six years, although they will be eligible to reapply after one year. She also requested that members keep EPA staff updated about pending or upcoming changes in status, such as retirements.

With regard to the next CAAAC meeting, Mr. Shoaff stated that they are still discussing the timing and do not have a projected date yet. They are also still considering when to reschedule

the Clean Air Excellence Awards and will hopefully hold those events at the same time. He added that they welcome feedback regarding the timing and meeting format.

With no further comments or questions, Ms. Reddick adjourned the meeting.

Attachment 1

CAAAC Virtual Meeting Attendance List¹		
CAAAC Members	EPA Staff	Other Attendees
William Bahnfleth	Madeline Beal	Leticia Colon de Mejias
Shannon Broome	Kristen Benedict	Margaret Overton
Natalene Cummings	Tomás Carbonell	Lesley Stobert
Veronica Figueroa	Cynthia Giles	
Gail Good	Joe Goffman	
Dan Greenbaum	Trish Koman	
Sara Hayes	Beth Landis	
Mitch Hescoc	Michael Moltzen	
Robert Hodanbosi	Ruth Morgan	
Adrienne Hollis	Lorraine Reddick	
Jason Howanitz	John Shoaff	
Tim Hunt	Doug Soloman	
Gary Jones	Rod Truesdell	
Miles Keogh	Larry Weinstock	
Beto Lugo-Martinez		
Eric Massey		
Bob Meyers		
Daniel Nickey		
Mary Peveto		
Clay Pope		
Frank Prager		
Kim Scarborough		
Max Sherman		
Art Spratlin		
Vicki Sullivan		
Tim Wallington		
Bob Wyman		

¹ This list of meeting attendees is not comprehensive due to a number of unidentified call-in participants.