Optimize Freight Supply Chain Decision Making

June 16, 2022
The presentation slides will be shared after the webinar.

Today’s webinar is being recorded.

Submit a question or comment via the Q&A pane on your Zoom control panel.

After the presentation, as time permits, our EPA hosts and presenters will answer questions submitted via the Q&A box.

Please complete the survey at the end of today’s webinar.
SmartWay

EPA SmartWay Partners go the extra mile - thank you!

In these extraordinary times, EPA SmartWay partners are working to produce and deliver essential supplies to help keep communities healthy and safe. THANK YOU!

- Learn about COVID resources for trucking companies

Learn about SmartWay

- Overview of SmartWay
- Why Freight Matters
- CSR and Freight Logistics
- SmartWay Program Successes
- Trends, Indicators & Partner Statistics (TIPs)

Participate in SmartWay

- How to Participate in SmartWay
- How the SmartWay Partnership Works
- Become a SmartWay:
  - Shippers
  - Logistics Company
  - Carrier
  - Affiliate
- Tools & Resources for Partners & Affiliates

Meet our Partners & Affiliates

Use the SmartWay Brand

Search SmartWay

What are you looking for?

Search this Site

Upcoming Webinars & Events

- 4/22/2021: Webinar - The Benefits of Freight Railroad Transportation

View Scheduled Webinars and Past Webinar Recordings

www.epa.gov/smartway
SmartWay Webinars & Events

EPA hosts free webinars to help you learn how to get the most out of the SmartWay Program.

On this page:
- Upcoming Webinars
- Past Webinar Recordings

Register for Upcoming Webinars

- Participants must pre-register.
- Registration closes at 12:00 pm on the day of the webinar.
- Click the event name for a description and registration link.

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<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Event Name</th>
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<tbody>
<tr>
<td>Thursday, April 22, 2021</td>
<td>Education</td>
<td>The Benefits of Freight Railroad Transportation Capacity, Safety &amp; Clean Air</td>
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<tr>
<td>Wednesday, May 26, 2021</td>
<td>Education</td>
<td>SmartWay Shopping: Submitting Activity Data Gets You More Out of SmartWay</td>
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Have an idea for a webinar? Email your idea to (smartway_transport@epa.gov) with the subject line "SmartWay Webinar Suggestion".

Learn more about SmartWay’s Freight Matters Webinar Series: This series features leaders in the freight sector discussing trends and issues that matter to your business.

Past Webinars

<table>
<thead>
<tr>
<th>Webinar Type</th>
<th>Event Name</th>
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<tbody>
<tr>
<td>Freight Matters</td>
<td>Alternative Fuel Adoption Accelerates Discussion with Perennial and CNA</td>
<td>All Partners, General Audience</td>
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</table>
EPA SmartWay

Patrice Thornton
Environmental Protection Specialist

EPA SmartWay Partners

Matthew Collins
Distribution Coordinator

Matthew Kavanagh
Sr. Manager, Logistics
SmartWay background
How SmartWay works
Benefits of reporting activity data
SmartWay partner perspectives
  - Cabot Creamery
  - SunPower Corp
SmartWay Background

- Public-private partnership
- Raise awareness around emission/sustainability benefits of freight efficiency
- Strengthen industry efficiency, competitiveness
- Collaboration
- Save fuel, money, and the environment
Why SmartWay Focuses on Freight

U.S. Greenhouse Gas Emissions in 2010

- Transportation: 28%
- Electricity Generation: 27%
- Industry: 22%
- Agriculture: 10%
- Commercial: 7%
- Residential: 6%

Total U.S. Greenhouse Gas Emissions by Sector: 100%

- Fluorinated Gases: 3%
- Nitrous Oxide (N₂O): 7%
- Methane (CH₄): 10%
- Carbon Dioxide (CO₂): 81%
How SmartWay Works

- Standardized approach that partners can use to assess supply chain efficiency and emissions
  - For any organization that ships, carries or receives goods
  - Adopted by private and public sector, vendors, providers, suppliers
- Designed with and for the freight sector
  - Delivers solutions to marketplace needs and challenges
  - Voluntary and no-cost
How SmartWay Works

- Companies collect and submit freight activity information using EPA assessment and tracking tools
- EPA checks data then uploads to SmartWay database
- Database combines partner data with most recent EPA emission factors to calculate annual emissions reports from transporting goods
- EPA ranks freight service providers by environmental performance
FOUR WAYS TO JOIN SmartWay

1. TAKE THE ON-RAMP TO SMARTER FREIGHT
   Learn SmartWay basics and partner with carriers to build your plan

2. START MOVING TOWARDS BETTER PERFORMANCE
   Estimate freight transportation efficiency and set improvement targets

3. MAP YOUR ROUTE WITH REAL ACTIVITY DATA
   Calculate activity-based metrics and uncover opportunities to cut waste

4. DRIVE INNOVATION WITH ADVANCED STRATEGIES
   Analyze activity data with strategic benefit calculators
There are four (4) ways shippers can participate in SmartWay. Way 1, the SmartWay Candidate level, is only for companies who want to learn more about SmartWay before joining as a SmartWay Shipper Partner. To become a SmartWay Shipper Partner, select Way 2, Way 3, or Way 4 below, complete the tool inputs, check your results and submit your tool to EPA for approval.

Select your Participation Level by checking the button [ ] next to your selected option. You can change your participation level at any time, but be careful as it may result in some loss of previous data input.

<table>
<thead>
<tr>
<th>Way 2: Basic Freight Assessment</th>
<th>Way 3: Standard Freight Assessment</th>
<th>Way 4: Advanced Freight Assessment</th>
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<tbody>
<tr>
<td><strong>Best For:</strong></td>
<td><strong>Inputs:</strong></td>
<td><strong>Inputs:</strong></td>
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<tr>
<td>Shippers with limited data that want to start freight efficiency planning.</td>
<td>Carrier names and relative data (e.g., amount spent, number of shipments, volume shipped, or another custom metric)</td>
<td>Carrier names; mileage, ton-miles and/or payload data per carrier and additional operational strategies and mode split data</td>
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<tr>
<td><strong>Input Methods:</strong></td>
<td><strong>Input Methods:</strong></td>
<td><strong>Input Methods:</strong></td>
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<tr>
<td><strong>Benefits of Way 2:</strong></td>
<td><strong>Benefits of Way 3:</strong></td>
<td><strong>Benefits of Way 4:</strong></td>
</tr>
<tr>
<td>• Define a relative freight performance metric (%) SmartWay)</td>
<td>All the benefits of Way 2 plus the ability to:</td>
<td>All the benefits of Way 3 plus the ability to:</td>
</tr>
<tr>
<td>• Be recognized as a Smartway Partner</td>
<td>• Build a freight performance assessment based on per carrier mileage and payload</td>
<td>• Subdivide freight activity based on inbound vs outbound, domestic vs international, discrete business units, and/or other criteria</td>
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<td></td>
<td>• Compete for recognition through the SmartWay Excellence Awards</td>
<td>• Compare emissions savings from various mode and operational strategy changes retrospectively and prospectively</td>
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<td>• Receive additional credit for SmartWay Excellence Award</td>
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Matthew Collins
Distribution Coordinator
-Green Team Leader

- Transportation Budgeting and Analytics
- Montpelier Green Team Leader
- Transportation liaison for sustainability and development
- Transportation Management Software Administrator
- Over 10 years of Logistics Experience
Optimize Freight Supply Chain Decision Making

Matthew Collins
Table Of Contents

- Company Overview
- Freight Sustainability
- SmartWay Participation
- SmartWay - Way 4 Scenario Planning
- Conclusion
Company Overview

Our Pledge to Sustainability
Living within our means & ensuring the means to live.

We work to accomplish this across the triple bottom line of social responsibility, environmental stewardship and economic prosperity.

Green Team:
A group of employees who voluntarily unite to drive company-aligned sustainability solutions

Green Team Network:
7 Interdependent Green Teams that collaborate to advance our organization’s sustainability
Freight Sustainability

Equipment Specs
• Aerodynamic Body Modifications
• Low Rolling Resistance Tires
• Hybrid APU’s (sleepers)
• Over 65% of our trailers are equipped with Hybrid electric Refrigeration units

Equipment Replacement Schedule/Specs
• Reduced length of power unit ownership from 7 years to 5 years
• Phasing out non-hybrid trailers

No Idle Policy
• Decreased Idle time 60% Y-O-Y
SmartWay Participation

2010 – Initiated involvement with SmartWay
2017 – Made the commitment to maintain SmartWay Certification
2018 – Grew partnership to include our internal Fleet
2019 – Committed to only onboard SmartWay Carriers
2021 – Received the EPA’s Environmental Merit Award
SmartWay - Way 4 Scenario Planning

- Decreased Mileage
  - 1.6% less empty Miles

- Strategically located Consolidation Centers
  - CT
  - CA final mile

- Agri-Mark Distribution Center
- Consolidation Center
Thank You!
Matt Kavanagh

• Matt Kavanagh is the Senior Manager of Logistics for SunPower Corporation, a leading residential solar technology and energy services provider. His current role includes operational management of five primary distribution facilities across the US, inbound & outbound transportation, reverse logistics, 3PL/carrier management, fleet sustainability and end of life management for products. He leads transportation sustainability programs at SunPower and serves as part of the Environmental Social Governance (ESG) committee. In 2021 SunPower initiated a partnership program to utilize heavy duty EV trucks to replenish smaller warehouses from its primary distribution center with plans to expand this program in 2022. Matt is passionate about the solar industry, the environment, transportation decarbonization, optimization and expansion of alternate fuel options for freight.
Agenda

1. Who is SunPower
2. ESG Released Decarbonization Goals to 2030
3. Supply Chain Decarbonization
4. Why Join SmartWay

Matt Kavanagh, Senior Manager Logistics
SunPower is a leading solar, storage and energy services provider in North America.

Our mission is to change the way our world is powered.

We do this by building a great company, putting our customers first, and making solar the most compelling energy option. If we empower our people and communities to thrive, we’ll build a sustainable future together.

A leader in U.S. solar for 35+ years

- More than 440,000 U.S. homes with SunPower rooftop solar
- Network of almost 800 dealers employing approx 17,000 workers

Superior technology and innovation

- Most efficient systems you can put on your roof (1)
- SunVault™ storage can provide whole home with backup power during electric grid failures (2)
- >400+ patents

Creating home energy ecosystem

- Expanding services to support EV charging, Virtual Power Plants and more
- Financial services platform making solar more accessible

1. Based on the top 20 panel manufacturers by market share in the US (per Wood Mackenzie US PV Leaderboard Q1 2022 report).

2. The ability to provide electricity during outages will vary based on the amount of energy stored in the battery, wattage and duration of use of devices/appliances connected to the system, the battery’s ability to recharge during daylight hours, and other factors. Additional hardware may be required for powering your HVAC system. Storage system should not be relied upon as a single source of power for critical medical devices.
Decarbonizing Our U.S. Freight and Fleet

While our products and services make a tangible difference in the fight against climate change, we recognize the carbon emissions created in our company’s regular operations. SunPower has established specific goals to reduce carbon emissions from our U.S. downstream freight and fleet vehicles to maximize the positive impact our company has on the environment. We will work to reduce carbon emissions for our U.S. downstream freight by establishing programs to achieve net zero by 2030. Additionally, we plan to convert at least 90% of our U.S. fleet vehicles to hybrid or electric vehicles by 2030.

June Press Release:
SunPower’s commitment to sustainability and reduced carbon emissions includes its logistics, freight network and vehicle fleet. The company supports the requirements of the Environmental Protection Agency’s SmartWay Shipper program and became a SmartWay Transport Partner in December of 2021. SunPower is actively seeking cost-effective and environmentally efficient freight transportation to reduce our freight carbon footprint and is also introducing green fleet technologies and EPA SmartWay carriers into our network.

SunPower’s freight and distribution strategies are managed in collaboration with logistics company Kuehne+Nagel and Dependable Highway Express (DHE), a trucking transportation company. In the fall of 2020, DHE became one of the first fleet operators in North America to deploy Volvo VNR Electric trucks. DHE now uses a fleet of electric Volvo trucks to run warehouse distribution routes for SunPower from its facility in Ontario, California. SunPower plans to use additional Volvo VNR Electric trucks to transport solar products directly to its customers’ homes throughout Southern California. Among the company’s environmental targets is conversion of at least 90% of its U.S. fleet of vehicles to electric or hybrid vehicles by 2030.

Erich Schmid
Chief Sustainability Officer

As a renewable energy company on a mission to change the way our world is powered, we can’t ignore the energy needed to deliver solar and storage to customers’ homes. By electrifying our vehicle fleet and reducing the use of fossil fuels in our supply chain, we are amplifying the benefits of residential solar power.
SunPower Joins SmartWay in 2021

Way 4 Participation opens the doors to the greatest resources

Benefits of Becoming a SmartWay Shipper

1. Provides a comprehensive and well-recognized system for tracking, documenting and sharing information about fuel use and freight emissions across supply chains

2. Helps companies identify and select more efficient freight carriers, transport modes, equipment, and operational strategies to improve supply chain sustainability and lower costs from goods movement

3. Supports global energy security and offsets environmental risk for companies and countries

4. Reduces freight transportation-related emissions by accelerating the use of advanced fuel-saving technologies

5. Supported by major transportation industry associations, environmental groups, state and local governments, international agencies, and the corporate community

6. Exhibit Leadership and Manage Risk

https://www.epa.gov/smartway/learn-about-smartway
www.epa.gov/smartway
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SmartWay Helpline
(734) 214-4767