

U.S. DEPARTMENT OF
ENERGY

Office of
**ENERGY EFFICIENCY &
RENEWABLE ENERGY**

DOE Vehicle Technologies Office Overview

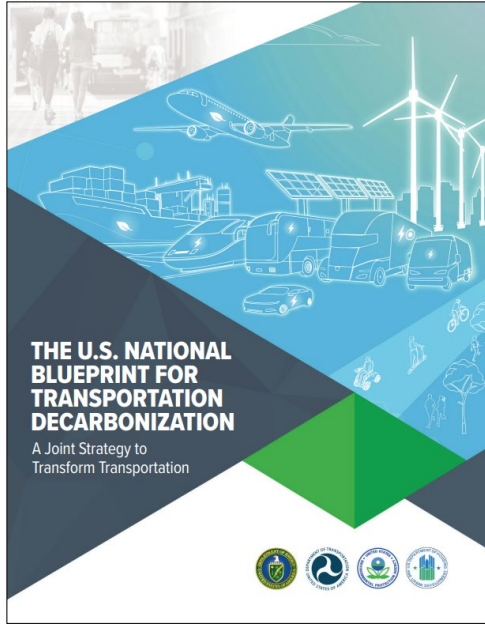
AUSTIN BROWN
Director, Vehicle Technologies Office

June 3, 2024





National Blueprint for Transportation Decarbonization



- Covers all transportation modes (light-duty vehicles, medium- and heavy-duty trucks and buses, off-road, rail, marine, aviation, and pipelines) and sets up realistic, achievable pathways based on science.
- Focuses on solutions that can be incrementally deployed, delivering results by 2030.
- Addresses full lifecycle emissions and integration with the electric grid.

Detailed Action Plans will be developed with stakeholders to achieve the following milestones:

- **Before 2030—Turning the Tide on Transportation GHGs:** Research and Investments to Support Deployment
- **2030-2040—Accelerating Change:** Scaling Up Deployment of Clean Solutions
- **2040-2050—Completing the Transition:** A Sustainable and Equitable Future

TRANSPORTATION DECARBONIZATION STRATEGIES



Released January 2023

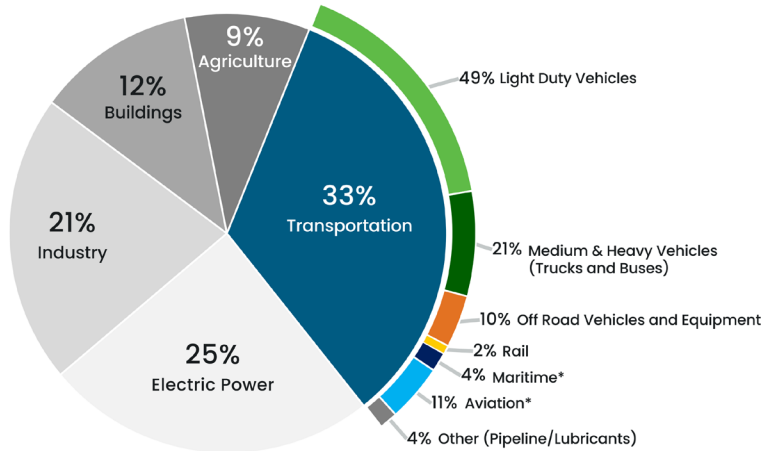
SCAN QR CODE
to access the Blueprint





Economy-wide Decarbonization by 2050

2022 U.S. GHG Emissions



*Aviation and marine include emissions from international aviation and maritime transport. Military excluded except for domestic aviation.

Based on 2023 EPA data, dated 05/21/2024

- The Biden administration has set a goal of net-zero carbon emissions economy wide by 2050
- Transportation is the largest source of GHG emissions
 - 50% of **energy expenditures and local pollution issues**
 - Significant implications for global competitiveness, trade, and domestic jobs



Vehicle Technologies Office (VTO)



Batteries



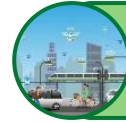
Electrification



Materials
Technology



Mobility Systems



Electrification



Hydrogen/Fuel
Cells



Advanced
Powertrains



Net-Zero Carbon
Fuels

On-Road

Off-Road, Air,
Marine, Rail

Technology Integration

Analysis

Vehicle Technologies Office

- Applied research, development, demonstration, and deployment
- 100% focused on clean transportation
- Target the “sweet spot” between science experiments (too early) and commercial technology / product development (too late)



Budget Update



Subprogram (dollars in thousands)	FY 2024 Enacted	FY 2025 Request
Battery and Electrification Technologies	\$225,500	\$255,500
Decarbonization of Off-Road, Rail, Marine, Aviation Technologies	\$35,000	\$35,000
Materials Technology	\$37,500	\$37,500
Energy Efficient Mobility Systems	\$45,000	\$45,000
Technology Integration	\$101,000	\$122,790
Data, Modeling, and Analysis	\$6,000	\$6,000
Total	\$450,000	\$501,790

Major FY2025 Priorities

- Batteries
- Vehicle / Grid Integration
- Modal Decarbonization Plans



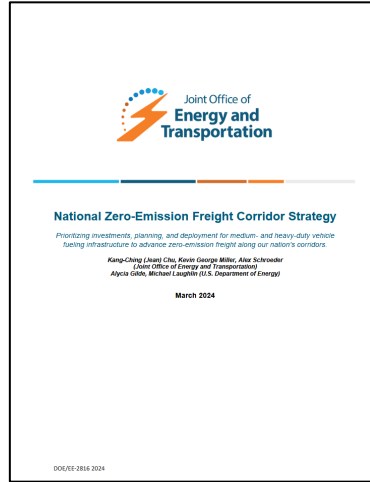


Highlights over the Last Year



White House Roundtable on Zero-Emission Freight Infrastructure

- April, 2024 event to accelerate implementation of the National Zero-Emission Freight Corridor Strategy launched by the Joint Office (JOET)
- ~100 stakeholders from federal, state, and local government, utilities, OEMs, fleets, and electric vehicle charging equipment providers





Clean Cities and Communities Rebranding

Debuted a new name and logo for Clean Cities as it moves into its fourth decade of advancing clean energy transportation nationwide.



[Rebranding announcement video](#)

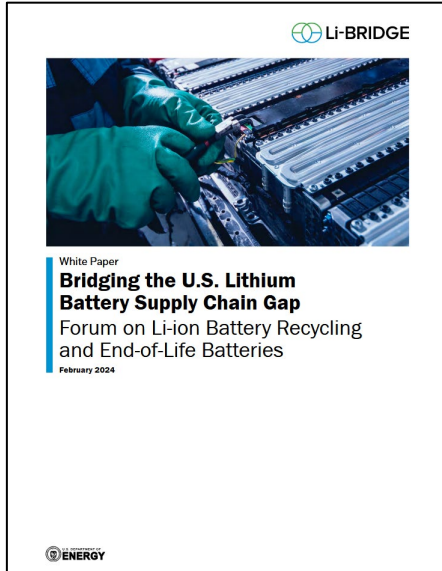


**Clean Cities and
Communities**



Key Partnerships

Li-Bridge

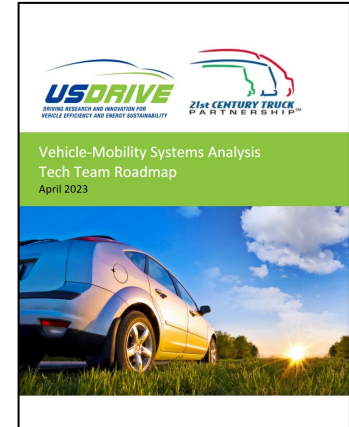


Forum for industry and government to debate and brainstorm solutions for achieving expanded domestic recycling capabilities.

Published [report](#) advising federal and state policymakers about the challenges of lithium-based recycling and ways to address the challenges.

21st Century Truck Partnership and U.S. DRIVE

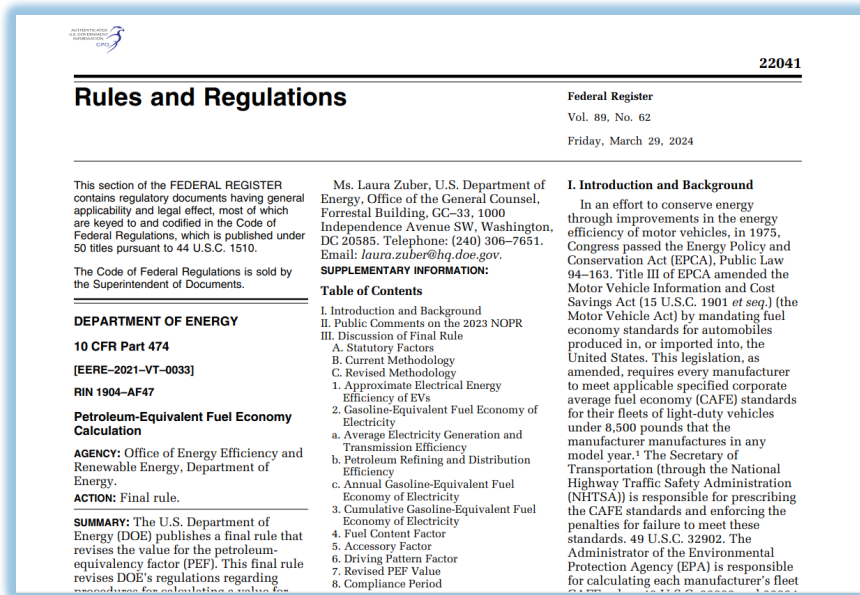
Published four technical sector team [roadmaps](#) (electrification, safety, freight operational efficiency, and ICE) and the VMSATT [roadmap](#)





Petroleum Equivalency Factor

- On March 19, 2024, VTO published the Petroleum Equivalency Factor (PEF) Final Rule (10 CFR Part 474).
- This final rule established EV efficiency as equivalent-miles-per-gallon of gasoline for purposes of EPA's calculation of manufacturers' compliance with NHTSA's CAFE regulations.



Funding Announcements



Released 6/3/2024:
**Notice of Intent for FY 2024
Batteries & Electrification Funding
Opportunity**

Released 4/24/24: Notice of Intent:
**SuperTruck Charge funding
opportunity**

Released 4/4/24:
**Fiscal Year 2024 R&D funding
opportunity—\$49.8 million –
Concept Papers due 6/24/2024**

Released 2/12/24:
**Fiscal Year 2024 Technology
Integration funding opportunity--
\$15 Million**

Visit <https://eere-exchange.energy.gov/> for more information on FOAs.



Funding Selections

Announced 1/8/2024:
**16 project for \$32.5 Million –
Fiscal Year 2023 Technology
Integration Funding Opportunity**

- Announced 1/18/2024:
- **27 projects for \$71 Million –
Fiscal Year 2023 R&D Funding
Opportunity**
 - **\$60 million for an Advanced
Battery R&D Consortium
(USCAR)**





Example Coordination with Other Offices

3/28/2024:

Coordination with MESOC: 17 projects \$62 million for Bipartisan Infrastructure Law Consumer Electronics Battery Recycling, Reprocessing, and Battery Collection Funding Opportunity

4/25/2024:

**Coordination with BETO: \$17.5 million funding opportunity
WASTE: Waste Analysis and Strategies for Transportation End-Uses funding opportunity announcement**



MESOC

OFFICE OF MANUFACTURING AND ENERGY SUPPLY CHAINS

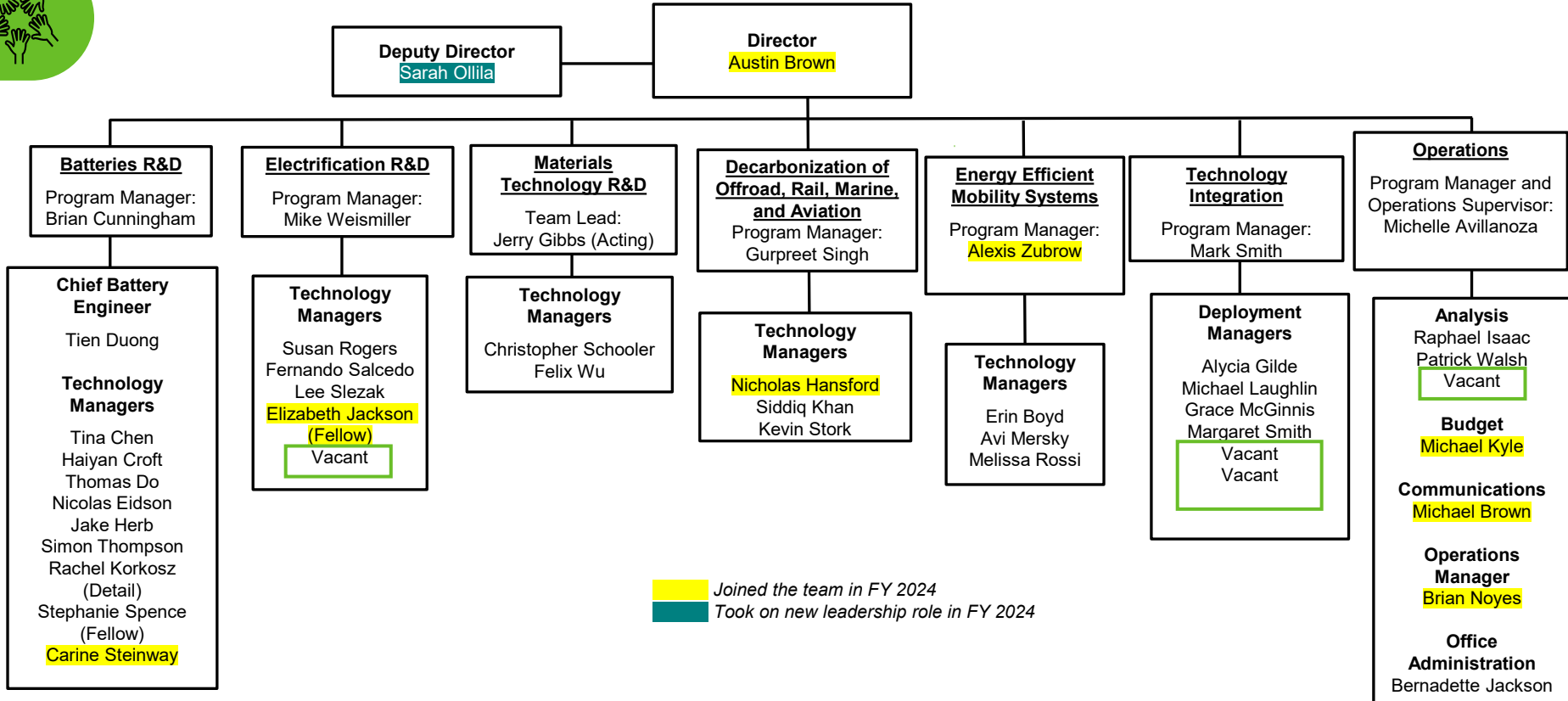
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Building the Team

June 2024



Joined the team in FY 2024
 Took on new leadership role in FY 2024

Building the Team



**Carine
Steinway**
Batteries



**Nicholas
Hansford**
DORMA



**Alexis
Zubrow**
EEMS



Michael Kyle
Budget



Doc Brown
Communications



Brian Noyes
Operations Manager



Join our team!

VTO on the Go!



On May 10, DOE named the Colorado School of Mines & Arapahoe Community College team Battery Workforce Challenge Year One champion.

On May 23, DOE named the Ohio State/Wilberforce University Team EcoCAR EV Challenge Year Two champion.



VTO on the Go!



VTO Off-Site, March 2024



**VTO Tours the
White House**



Office of
**ENERGY EFFICIENCY &
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Vehicle Technologies Office

February 22, 2024

VTO GO! Newsletter Quarter 1, 2024

Welcome to the inaugural VTO GO! newsletter from the U.S. Department of Energy's (DOE) [Vehicle Technologies Office](#) (VTO).

VTO funds research, development, demonstration, and deployment (RDD&D) of new, efficient, and clean mobility options that are affordable for all Americans. This quarterly newsletter will be revving up your inbox with recaps of VTO news, events, funding opportunities and publications, and previews of upcoming VTO activities.

A peek into this edition:

- [Get to Know... VTO Director Austin Brown](#)
- [Clean Cities Corner](#)
- [In the News](#)
- [Upcoming Events](#)
- [VTO Funding Opportunities and Selections](#)
- [Other Funding Opportunities and](#)



VTO group photo in front of the DOE Forrestal Building, October 2023.



After a short internal competition, we are happy to announce that VTO's Alycia Gilde submitted the winning title for our newsletter, "VTO GO!"

VTO launched the VTO GO! Newsletter in 2024

Quarter 2, 2024

In this Edition

- [Get to Know... Three VTO'ers](#)
- [In the News](#)
- [Activities Supporting the National Zero Emission Freight Corridor Strategy](#)
- [Events](#)
- [Funding Opportunities and Selections](#)
- [Clean Cities and Communities Corner](#)
- [Beep for Success: Four impactful projects you can't miss](#)

Get to Know...



Sarah Ollila
Deputy Director,
Vehicle Technologies Office



Brian Cunningham
Program Manager,
Batteries R&D



Ainsley Giles
U. of Maryland Intern,
Vehicle Technologies Office

How did you get into your area of work?

Sarah Ollila: I am a materials engineer by training and have always had a passion for the environment. Prior to working at DOE, I was in industry working for Whirlpool Corp. and really enjoyed working on products that people could relate to and improved their daily lives. When I came across the opportunity to apply my materials expertise to making vehicles more energy efficient, I jumped at the chance.



Subscribe to our
VTO GO! newsletter at:
<https://www.energy.gov/eere/vehicles/vehicle-technologies-office-newsletters>



VTO is hiring!

- Analysis Technology Manager
- Electrification Technology Manager
- Technology Integration Deployment Manager



Send questions to: vto@ee.doe.gov
For more information: www.vehicles.energy.gov