

Transportation Working Group Recommendations

1. INTRODUCTION

In 2019, Governor Janet Mills established the Maine Climate Council (MCC). The MCC was charged with developing a four-year Climate Action Plan to put Maine on a trajectory to decrease greenhouse gas emissions by 45% by 2030 and 80% by 2050 and achieve carbon neutrality by 2045. The MCC and six working groups, including the Transportation Working Group (TWG), and an equity subcommittee developed *Maine Won't Wait (MWW)*, a four-year action plan that determines the steps Maine must take to combat climate change.

The Transportation Working Group was tasked with updating Maine's existing climate action plan, MWW, by June 2024. The TWG held several meetings between November 2023 and May 2024 to update the recommendations and actions for the updated MWW.

- **Meeting 1 - November 09, 2023:** The TWG began the process of updating the strategies specific to transportation emissions, deciding to build on the existing recommendations while working to integrate equity. The TWG identified four focus areas: EV adoption, medium- and heavy-duty electrification, continued support for reducing VMT, and investigating marine and aviation alternative fuels.
- **Meeting 2 – December 12, 2023:** The meeting focused on reviewing the existing data and resources and understanding where gaps exist.
- **Meeting 3 – January 10, 2024:** TWG members confirmed the priorities: (1) supporting EV and EV charging expansion, (2) transitioning from single occupancy vehicles in rural and urban areas, and (3) Medium- and Heavy-Duty Roadmap. Additionally, UMaine's Mitchell Center gave a presentation on their engagement work with priority populations in the MCC process.
- **Meeting 4 – February 26, 2024:** The meeting focused on reviewing the data behind MWW EV and EV charging infrastructure recommendations and the TWG began coalescing around updated recommendations based on small group and large group discussions.
- **Meeting 5 – March 13, 2024:** The TWG discussed strategies for transitioning away from single occupancy vehicles in rural and urban areas and began coalescing around updated recommendations for reducing vehicle miles traveled based on small group and large group discussions.
- **Meeting 6 – April 10, 2024:** The TWG discussed recommendations related to Medium- and Heavy-Duty Vehicles based on the work to date on the Medium- and Heavy-Duty Roadmap.
- **Meeting 7 – May 8, 2024:** The TWG reviewed and provided feedback on the draft recommendations and strategies developed by the TWG.
- **Meeting 8 – May 22, 2024:** The TWG received a presentation from the Mitchell Center on their first round of engagement work with priority populations and considered the results of the engagement work in the finalization of the recommendations. The TWG also finalized the recommendations and actions.

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In addition to meeting monthly, the TWG formed volunteer groups in the three priority areas to assist in the planning of specific working group meetings and writing the initial draft recommendations. The TWG also met with other working groups on cross-cutting issues. The TWG, Energy Working Group, and the Buildings, Infrastructure, and Housing Working Group hosted joint meetings on demand energy management.

The TWG achieved unanimous consensus on the proposed recommendation and action table developed for the updated MWW. There is recognition that meeting the light-duty electric vehicle target of putting 219,000 EVs on the road by 2030 will be challenging. When modeling is complete, the TWG recommends that the MCC consider scaling the transportation recommendations, as necessary and appropriate, to meet statewide GHG targets.

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Transportation Working Group Recommendations

Accelerate Maine’s Transition to Light-Duty Electric Vehicles, including Plug-in Hybrid Vehicles

2. SUMMARY OF RECOMMENDATIONS AND ACTIONS

STRATEGY	ACTIONS
Accelerate Maine’s Transition to Light-Duty Electric Vehicles, including Plug-in Hybrid Vehicles	<ul style="list-style-type: none"> • Over the next four years, significantly extend Maine’s electric vehicle charging network by investing more than \$52M in new DC Fast Chargers and Level 2 chargers, including in more than 50 underserved and disadvantaged areas. • Decrease the purchase cost of EVs by increasing the EV rebate program by at least X% [to be filled in when modeling is complete], expanding EV rebates for used vehicles, providing a tiered rebate system based on income, expanding the dealer network offering rebates, and enhancing financing options for Low-to-Moderate Income drivers. • By 2026, launch new education and awareness campaign(s) for all Maine communities, the dealer network, and employers to significantly accelerate the adoption of electric and plug-in hybrid vehicles statewide. • Advance policy options that support light-duty EV targets to achieve state GHG emissions goals. • Set targets for light-duty EV sales that are consistent with Maine’s statutory emissions reductions, including targets for purchases by Low-and-Moderate Income Households.

3. ANALYSIS AND SUPPORTING INFORMATION

Strategy: Accelerate Maine’s Transition to Light-Duty Electric Vehicles

1. **Impacts** - Describe the recommendation and its actions and how they address Maine’s four climate goals – *reducing greenhouse gas emissions, increasing resilience, creating economic opportunity, and achieving equity through Maine’s climate response*. **Use the questions in Annex 1 of this document** to guide the analysis of impacts.

Reducing Greenhouse Gas Emissions

The transportation sector accounts for 49% of GHG emissions in Maine, with passenger cars and light-duty trucks comprising 60% of the transportation emissions. The electrification of passenger cars and light-duty trucks is the most impactful strategy to reduce GHG emissions in the transportation sector. Due to the lower carbon intensity of electricity generation in Maine, a light-duty EV in Maine produces 92% fewer overall emissions than a gasoline

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vehicle (on a well to wheel basis).¹ Accelerating Maine’s transition to light-duty electric vehicles, including plug-in hybrid vehicles, is essential for the state to meet its GHG reduction goals. This can be achieved by expanding EV infrastructure, decreasing the purchase cost of EVs, increasing education and outreach, setting EV targets, and advancing policies that support light-duty EV targets. Expanding EV infrastructure, setting targets, and advancing policies options will be reviewed in this section.

Expanding EV Infrastructure

It is essential to have an electric vehicle charging network that supports the increased penetration of EVs in Maine and reduces range anxiety. The action to significantly extend Maine’s electric vehicle charging network over the next four years by investing more than \$52M in new DC Fast Chargers and Level 2 chargers, including in more than 50 underserved and disadvantaged areas, is critical to achieving a reliable EV charging network to support increased EV penetration.

The extension of Maine’s electric vehicle charging network will be funded through the following sources:

- **National Electric Vehicle Infrastructure (NEVI) Formula Funding:** \$19.3M (total funding with 20% match: \$24.1M). NEVI funding is used for charging along Federal Highway Administration Designated Alternative Fuel Corridors.
- **Charging and Fueling Infrastructure (CFI) discretionary grants:** \$15M (total funding with 20% match: \$18.75M). CFI grants are used for charging near large workplaces, community locations, low-to-moderate (LMI) income households, renters, and multifamily renters, and LMI households in rural areas. USDOT will apply for the next round of funding when the Request for Proposals is published.
- **Maine Jobs & Recovery Plan (MJRP):** \$8M (total funding with 20% match: \$9.6M). MJRP funding will be used for statewide Level 2 and DC Fast Chargers.
- **New England Clean Energy Connect (NECED):** \$10M over 5 years.

To further build out the EV charging network and support increased EV penetration, employers will be encouraged to install workplace charging to support employees, reduce a company’s environmental footprint and utilize daytime off-peak charging.

To assist municipalities and employers with EV charging installation, example state and local codes and ordinances (including building codes, National Fire Protection Association (NFPA), zoning, the Americans with Disabilities Act (ADA), etc.) that remove barriers to EVs and EV charging while maintaining safety, reliability, and access will be identified and shared.

Targets

¹ Maine Governor’s Energy Office & Maine Governor’s Office of Policy Innovation and the Future (2021). “Maine Clean Transportation Roadmap,” pp. 15-16:
<https://www.maine.gov/future/initiatives/climate/cleantransportation>

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For the state to meet its GHG emission targets, it is important to set light-duty EV sales targets that are based on modeling and considered with targets from other GHG emitting sectors. Light-duty electric vehicle sale targets should be consistent with Maine’s statutory emissions reductions, including targets for purchases by low-and-moderate income households.

Policy

Advancing policy options that support-light duty EV targets is important to achieve state GHG emissions goals. A range of policy options, such as utility rate design and make-ready programs, should be considered.

Quality of Life

Transitioning to light-duty electric vehicles will reduce GHG emissions as well as nitrogen oxides, sulfur dioxide, hazardous air pollutants (HAPS)/volatile organic compounds (VOCs), and particulate matter emissions, leading to improved air quality and health outcomes. Additionally, after the upfront capital cost of purchasing an EV, swapping out a gasoline powered vehicle for an EV could reduce a household’s spending on transportation, including lowered operating costs and reduced maintenance needs. This is particularly relevant given recent high fuel prices. Vehicles in rural areas tend to be older, less efficient, less reliable, and more expensive to operate than vehicles in urban areas;² people in rural areas also tend to drive more. Therefore, replacing gasoline fueled vehicles with EVs in rural areas could be especially impactful on health outcomes and reduced transportation costs.

Increasing Resiliency

The recommendations will build the community capacity needed to support the transition to light-duty EVs and plug-in hybrid vehicles and build more resilient communities. Specifically, community capacity will be increased by launching new EV education and awareness campaign(s) for all Maine communities, the dealer network, and employers and securing funding for community-level charging infrastructure.

Education & Awareness for Maine Communities

The education and awareness campaign for Maine communities will build off current Efficiency Maine Trust (EMT) education and outreach efforts with assistance from regional and local organizations and trusted community institutions. The campaigns will review EV and plug-in hybrid technology, including the economic and environmental benefits of these vehicles, clear up common misconceptions about the technology, and review incentives for purchasing EVs. Surveys, focus groups, and research will be used to understand consumer attitudes, beliefs, and behaviors and to identify knowledge gaps. This effort will build off

² Maine Climate Council (2023). “Final Recommendations of the Equity Subcommittee,” p. 20: <https://www.maine.gov/future/initiatives/climate/climate-council/equity-subcommittee> [Original source: https://digitalcommons.library.umaine.edu/mcspc_transport/3/]

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national studies on consumer attitudes but will be Maine-specific. The study will include disadvantaged populations, including low-income drivers.

Based on the study results, tailored campaigns will be developed for different types of consumers in different regions of the state and to relevant stakeholders. Specific groups such as superusers, which are drivers often residing in more rural areas who typically average more than 40,242 miles per year³, will be targeted.

The Mitchell Center's recent outreach to priority populations has shown that EV adoption and infrastructure are not top priorities in rural communities and the reliability and safety of the vehicles is a concern.⁴ To help ease these concerns, a pilot could be developed as part of education and outreach that would provide rural drivers an EV for a set period of time (e.g., a week) to help rural drivers gain familiarity with the vehicle and charging infrastructure.

Metrics will evaluate the effectiveness of education and outreach and inform future efforts. As part of the evaluation process, further research might be conducted on how plug-in hybrid vehicles are being operated (i.e., whether they are being operated using both electricity and petroleum fuel or solely petroleum fuel).

Education and Training for Dealers

Education and training for interested dealers, including used vehicle dealers, will improve dealer knowledge of the vehicles and train technicians. Training will cover service and installation, as well as an overview of how rebates work, including for used vehicles. Having educated and trained dealers is a critical component of community capacity needed to increase EV penetration.

Employer Education and Outreach

Furthermore, partnerships will be developed with employees statewide to educate employees on electric and plug-in hybrid vehicles and incentivize employee adoption of these vehicles. This partnership effort might be part of GO MAINE or implemented through a separate effort. Incorporating the effort into GO MAINE would expand the scope of the program.

Community Funding

The Charging and Fueling Infrastructure (CFI) discretionary grants will be applied at the community level, further supporting community capacity. To date, \$15M of CFI funding has

³ Coltura (2024). "Cracking the Gasoline Code," <https://coltura.org/wp-content/uploads/2024/01/Gasoline-Superusers-3.0-Full-Report-Coltura-2024.pdf>

⁴ The Mitchell Center.

"Transportation Working Group Presentation for Maine Climate Council Equity Engagement." May 22, 2024.

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been secured by the state. This funding is used for charging stations located in cities and towns with the following:

- The highest number of multi-unit dwellings (MUDs)
- Those in or near USDOT-designated disadvantaged communities
- Those with median income levels below the state average
- Those serving as Regional Service Centers

Chargers will be located where people congregate, such as MUDs, supermarkets, publicly accessible parking facilities, libraries, and other locations.

Other

One additional component of resiliency is the potentially significant energy stored in electric vehicles that could be used in the event of a power outage. In the future, EV batteries could increasingly be used to support household and grid resiliency.

Creating Economic Opportunity

Researchers nationwide are working to understand the potential workforce implications of a transition to EVs.⁵ In Maine, the Governor’s Energy Office and Department of Labor have a joint project looking into potential workforce implications resulting from a transition to EVs. The Clean Energy Partnership, an effort to advance Maine’s energy, climate, economic development, and work force goals, is also reviewing this issue.

While workforce implications will become clearer, research to date indicates that the accelerated adoption of EVs can have a handful of positive macroeconomic impacts, including protecting the U.S. economy from recessions⁶ and adding a significant number of jobs to the automobile and parts manufacturing industry.⁷ Additionally, the manufacturing and supply chains for EVs, their components, and charging equipment could be an opportunity to expand investment in the American workforce and local communities.⁸

At the state level, spending less money on petroleum fueled vehicles will result in increased discretionary spending, which can be used on local goods and services, potentially creating more local jobs. A recent study showing the economic and air quality benefits of EV adoption in Nevada estimated that an additional dollar of household spending will create 16 times more jobs than if that dollar were spent on fossil fuels.

⁵ U.S. Department of Transportation: <https://www.transportation.gov/rural/ev/toolkit/ev-benefits-and-challenges/community-benefits>

⁶ Kenan Institute of Private Enterprise. “The EV Transition Makes the U.S. Economy More Resilient,” <https://kenaninstitute.unc.edu/commentary/the-ev-transition-makes-the-u-s-economy-more-resilient/>

⁷ Economic Policy Institute. “The stakes for working in how policymakers manage the coming shift to all-electric vehicles,” <https://www.epi.org/publication/ev-policy-workers/>

⁸ U.S. Department of Transportation: <https://www.transportation.gov/rural/ev/toolkit/ev-benefits-and-challenges/community-benefits>

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Increasing the penetration of light-duty EVs in Maine will foster innovation in our transportation system and contribute to Maine’s growing clean energy workforce. Having an electric vehicle network in Maine will make our state a more attractive place to live and work, potentially attracting new families, workers, and businesses to Maine. Building out the EV network might also employ unemployed or underemployed people who already live here.

Achieving Equity through Maine’s Climate Response

Today, most new EVs are unaffordable for lower and moderate-income households. That will change as vehicle manufacturers begin offering more models within all price ranges and more used EVs become available. In the meantime, decreasing the purchase cost of EVs will increase vehicle affordability for low-income residents. The purchase cost of EVs can be reduced through EV rebate programs and financing options, as captured by the TWG recommendation:

“Decrease the purchase cost of EVs by increasing the EV rebate program by at least X% [amount to be determined after modeling is complete], expanding EV rebates for used vehicles, providing a tiered rebate system based on income, expanding the dealer network offering rebates, and enhancing financing options for Low-to-Moderate Income drivers.”

In addition to providing a tiered rebate system based on income, EMT will identify and explore niche rebate opportunities with commercial, government, law enforcement, or non-profit users such as contractors’ pickup trucks, municipal fleets, shuttle vans, etc.

The following financing options will be evaluated for Low-to-Moderate (LMI) Income drivers⁹:

- **Loan-loss reserve programs** for qualified, low-income customers buying EVs, hybrids, or plug-in hybrids. These programs create a reserve fund to cover financial institutions from large losses resulting from defaults.¹⁰
- **Tax incentives** for new and used electric and plug-in vehicles for qualified low-income vehicle customers.
- **Federal funding opportunities** to capitalize loan or other financing opportunities for LMI drivers.

⁹ Maine Climate Council (2023). “Final Recommendations of the Equity Subcommittee,” p. 21: <https://www.maine.gov/future/initiatives/climate/climate-council/equity-subcommittee>

¹⁰ Rubin, Jonathan. “Credit Enhancement Strategies for Higher Efficiency Vehicles in Maine,” University of Maine. https://digitalcommons.library.umaine.edu/mcspc_transport/8/

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- **Cash for Clunkers program** in which a voucher is received for trading in an older, less-efficient vehicle and purchasing a new, more fuel-efficient vehicle,¹¹ such as an EV or plug-in hybrid.

While cost is the main barrier to EV access for priority populations, other barriers include access to infrastructure and general education on the technology. The following table includes barriers to EV access for priority populations and the recommendations and actions that will address these barriers.

Barriers	Recommended Action(s) to Address Barrier
Cost of purchasing a light-duty EV	<ul style="list-style-type: none"> • Increasing funding for the EV rebate programs. • Expanding EV rebates for used vehicles. • Providing a tiered rebate system based on income. • Expanding the dealer network offering rebates, especially in rural areas and for used vehicles. • Enhancing financing options for low-to-moderate income drivers; initially evaluate loan-loss reserve programs, tax incentives, federal funding opportunities, and “Cash for Clunkers.” • Identifying incentives for participants in volunteer driver programs to purchase EVs.
Access to charging infrastructure	<ul style="list-style-type: none"> • Investing more than \$52 million over the next four years in new public highspeed and Level 2 chargers, including in more than 50 underserved and disadvantaged areas. • Applying \$15M in Charging and Fueling Infrastructure (CFI) discretionary grants for charging near large workplaces, community locations, low-to moderate (LMI) income households, renters, and multifamily renters, and LMI households in rural areas. • Identifying barriers to installing charging in LMI homes and identifying ways to address these barriers.
Education on light-duty EVs and plug-in hybrids	<ul style="list-style-type: none"> • By 2026, launch new education and awareness campaign(s) for all Maine communities.

2. **Cross-over** - Does the recommendation involve other working groups/sectors? *Select all which apply.*

- Transportation
- Buildings, Infrastructure, and Housing

¹¹ Parker, T. & Gayer, E. Cash for Clunkers: An Evaluation of the Car Allowance Rebate System. Tech. Rep. (2013). <https://www.brookings.edu/research/cash-for-clunkers-an-evaluation-of-the-car-allowance-rebate-system/>

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- Energy
- Community Resilience
- Coastal and Marine
- Natural and Working Lands
- Other (please describe)

How did the Working Group coordinate with others around these overlaps?

The Transportation Working Group had joint meetings on electricity demand management with the Buildings, Infrastructure, and Housing, and Energy Working Groups. On January 19, 2024, the three working groups jointly hosted a workshop to build understanding of, and identify opportunities and barriers around, electricity demand management. The workshop consisted of six national experts that discussed current initiatives across the country, and then proceeded with members from all three working groups identifying topic areas for potential policy recommendations in the updated climate action plan. The three groups met twice after that, once on March 29, 2024, and again on Thursday, May 16, 2024. Both meetings reviewed and discussed the proposed draft recommendations. Additionally, Michael Stoddard is a TWG member and a co-chair of the Building, Infrastructure, and Housing Working Group.

The TWG co-chairs met with the Coastal and Marine Working Group to discuss transitioning to low carbon in the fishing industry. The two working groups further developed recommendations and implementation details that will be incorporated into the updated climate action plan.

3. **Priority Populations** - Consider the priority populations impacted or affected by this recommendation. A list of priority populations is contained in **Annex 2** of this document.

a. *POPULATIONS: Identify any priority populations impacted or affected by this recommended strategy.*

- Low-income individuals and low-income communities
- Cost-burdened renter or owner households
- Older adults (65+)
- People with health vulnerabilities (i.e. asthma)
- Rural communities
- Small towns with limited municipal capacity
- Clean energy industries

b. *IMPACTS: Using the Equity Sub-Committee analysis (see Annex 3) from March 2023 as a starting place, consider both potential positive outcomes and any unintended consequences/byproducts. Describe these potential impacts/benefits.*

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Potential positive outcome include:

- Increased funding for EV rebate program
- Increased used EV rebates
- Expanding dealer network offering rebates, including used EVs
- Enhanced funding opportunities for charging near rental housing, especially multi-unit and affordable housing
- Enhanced funding opportunities for rural EV charging
- Increased education and awareness

SOURCES OF INFORMATION: Describe how you know what groups are impacted/affected. Cite relevant data sources¹² and/or formal conversations (MCC-organized panels, focus groups, etc.) with priority populations.

The recommendations and actions identified by the TWG were informed by the Final Recommendations of the Equity Subcommittee, the 2021 Maine Clean Transportation Roadmap, and the Mitchell Center’s engagement work with priority populations. These sources identified impacted groups. The recommendations and actions were also informed by MaineDOT’s NEVI Plan and Carbon Reduction Strategy.

c. *RESULT OF ENGAGEMENT: Describe any consultation or engagement with these priority population (either by the Working Group or through GOPIF’s community engagement contractor). Describe how the Working Group’s recommendations have changed as a result of these conversations.*

- **Final Recommendations of the Equity Subcommittee:** The Maine Climate Council Equity Subcommittee was comprised of individuals representing priority populations. Additionally, the Equity Subcommittee worked with MCC working groups, state agencies, experts, and members of the public to develop equity recommendations.¹³ The TWG reviewed and considered all of the equity recommendations in the development of the updated TWG recommendations.

¹² Some available data sources include:

U.S. Council on Environmental Quality [Climate and Economic Justice Screening Tool](#) (CEJST) (select by census tract)

U.S. Census Bureau [Rural America](#) tool

The Nature Conservancy [Coastal Risk Explorer](#) (w/ particular focus on Social Vulnerability Ranking)

Climate Mapping for Resilience and Adaptation [Assessment Tool](#) (select by census tract, county, or Tribal land)

[Maine Social Vulnerability Tool](#)

U.S. Department of Energy [Low-Income Energy Affordability Tool](#) (LEAD)

¹³ Maine Climate Council (2023). “Final Recommendations of the Equity Subcommittee,” p. 8:

<https://www.maine.gov/future/initiatives/climate/climate-council/equity-subcommittee>

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- **2021 Maine Clean Transportation Roadmap:** As part of the development of the 2021 Maine Clean Transportation Roadmap, 19 listening sessions were conducted in fall 2021, including interviews with individuals representing groups within Maine who face economic, social, or operational challenges in shifting to clean transportation vehicles.¹⁴
 - **Mitchell Center’s Engagement Work with Priority Populations:** To date, the Mitchell Center has collaboratively completed 29 engagements, reaching over 1,000 members of priority populations. The results of this effort has been considered by the TWG.¹⁵
- d. *IMPLEMENTATION: How might the recommended strategy be implemented in consultation with priority populations? Do priority populations have the resources and capacity necessary to implement or access this recommended strategy? How might you make recommendations to improve equitable access to resources and capacity-building? You might consider planning capacity, financial capacity, programmatic capacity, human capital, and other.*

The following actions will be implemented to ensure that priority populations have resources and capacity necessary to access the recommended strategy:

- Increasing funding for the EV rebate programs.
- Expanding EV rebates for used vehicles.
- Providing a tiered rebate system based on income.
- Expanding the dealer network offering rebates, especially in rural areas and for used vehicles.
- Enhancing financing options for low-to-moderate income drivers; initially evaluate loan-loss reserve programs, tax incentives, federal funding opportunities, and “Cash for Clunkers.”
- Identifying incentives for participants in volunteer driver programs to purchase EVs.
- Investing more than \$52 million over the next four years in new public highspeed and Level 2 chargers, including in more than 50 underserved and disadvantaged areas.
- Applying \$15M in Charging and Fueling Infrastructure (CFI) discretionary grants for charging near large workplaces, community locations, low-to moderate (LMI) income households, renters, and multifamily renters, and LMI households in rural areas.
- Identifying barriers to installing charging in LMI homes and identifying ways to address these barriers.

¹⁴ Maine Governor’s Energy Office & Maine Governor’s Office of Policy Innovation and the Future (2021).

“Maine Clean Transportation Roadmap,” pp. 15:

<https://www.maine.gov/future/initiatives/climate/cleantransportation>

¹⁵ The Mitchell Center.

“Transportation Working Group Presentation for Maine Climate Council Equity Engagement.” May 22, 2024.

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- By 2026, launch new education and awareness campaign(s) for all Maine communities.

4. **Timeframe** - What is the timeframe for this recommendation and its actions?

	Short-term (2025)	Mid-term (2030)	Long-term (2050+)
To implement	X	X	
To realize outcomes	X	X	X

5. **Implementation Next Steps** - What types of next steps would be required to implement the recommendation?

- Legislation, rules/regulation, internal program guidance changes
- Establishment of a new program or a fund,
- Conduct additional research
- Provide education or training
- Coordinate with other parties/agencies/states
- Other (please describe)

Please provide some detail around these steps. If possible, identify **specific actors** who would lead in the implementation of the recommendation and actions.

Action	Implementation	Specific Actor
<ul style="list-style-type: none"> • Over the next four years, significantly extend Maine’s electric vehicle charging network by investing more than \$52M in new DC Fast Chargers and Level 2 chargers, including in more than 50 underserved and disadvantaged areas. 	<ul style="list-style-type: none"> • Coordinate with other parties/agencies/states • Federal, state, and local funding 	<ul style="list-style-type: none"> • MaineDOT • Efficiency Maine Trust (EMT) • Governor’s Energy Office (GEO) • MaineHousing • Municipalities • Utilities
<ul style="list-style-type: none"> • By 2026, launch new education and awareness campaign(s) for all Maine communities, the dealer network, and employers to significantly accelerate the adoption of electric and plug-in hybrid vehicles statewide. 	<ul style="list-style-type: none"> • Establishment of a new program or fund • Conduct additional research • Provide education or training • Coordinate with other parties/agencies/states • 	<ul style="list-style-type: none"> • MaineDOT • Maine Department of Labor • Municipalities • Regional Planning Organizations and Metropolitan Planning Organizations • The dealer network • GO MAINE • Employers

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		<ul style="list-style-type: none"> •
<ul style="list-style-type: none"> • Decrease the purchase cost of EVs by increasing the EV rebate program by at least X%, expanding EV rebates for used vehicles, providing a tiered rebate system based on income, expanding the dealer network offering rebates, and enhancing financing options for Low-to-Moderate Income drivers. 	<ul style="list-style-type: none"> • Coordinate with other parties/agencies/states • Establishment of a new program or a fund • Legislation, rules/regulation, internal program guidance changes 	<ul style="list-style-type: none"> • EMT • MaineDOT • Department of Tax • Governor’s Office of Policy Innovation and the Future (GOPIF) • GOE • Bureau of Motor Vehicles • Dealer Network • Financing institutions
<ul style="list-style-type: none"> • Advance policy options that support light-duty EV targets to achieve state GHG emissions goals. 	<ul style="list-style-type: none"> • Legislation, rules/regulation, internal program guidance changes 	<ul style="list-style-type: none"> • Maine Department of Environmental Protection (DEP) • GOPIF • GEO • Utilities • Maine State Legislature
<ul style="list-style-type: none"> • Set targets for light-duty EV sales that are consistent with Maine’s statutory emissions reductions, including targets for purchases by Low-and-Moderate Income Households. 	<ul style="list-style-type: none"> • Coordinate with other parties/agencies/states 	<ul style="list-style-type: none"> • GOPIF • GEO • DEP • MaineDOT

6. **Measuring Outcomes** - How will you know if the recommendation is effective? *Are outcomes measurable using current monitoring/data collection? Are there benchmarks or short-term indicators of success?*

The following metrics could be used to evaluate the effectiveness of the recommendation.

- EV and plug-in hybrid sales
- Number of publicly accessible Level 2 and DC Fast Charger plugs
- Total number of EV rebates provided
- Number of EV rebates provided for used vehicles
- Geographic distribution of EV rebates and ownership, by priority communities
- Number of dealers participating in EV rebate program
- Geographic distribution of dealers participating in the rebate program

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- Geographic distribution of MUD, non-residential and public charging stations, and funding (including proximity to affordable housing)
- Number of individuals reached by education and awareness campaigns, including geographic distribution of individuals
- Number of dealerships receiving education and training
- Employers partnering on education and awareness efforts

7. **Other** - Additional Rationale/Background Information

**Please footnote substantive disagreements among the Working Group members

Transportation Working Group Recommendations

Reduce Vehicle Miles Traveled (VMT)

2. SUMMARY OF RECOMMENDATIONS AND ACTIONS

This is a high-level summary of the proposed recommendations and actions.

STRATEGY	ACTIONS
Reduce Vehicle Miles Traveled	<ul style="list-style-type: none"> • Increase transit ridership by improving connections and coordination among transit agencies, investing in new and updated infrastructure, making transit easier to use, and supporting transit-oriented development. • For transportation projects adding new capacity, mitigate modeled GHG increases by investing in modes, projects, and/or programs that offset those modeled emissions. • By 2026, expand education and awareness efforts to help all Mainers understand and use transit and active transportation options within and between their communities. • Launch innovative transit pilot projects in urban and rural areas to improve and expand transit, including new intercity bus routes and regional pilots to improve coordination between state agency transportation services. • By 2030, expand safe active transportation options by improving active transportation in at least 10 villages and downtowns, paving at least 75 miles of shoulder along highways, principally in rural areas, and developing a pipeline for high priority active transportation trail development that builds at least 10 miles of high priority off-road trails, if supported through special federal funding. • Launch active transportation partnerships and pilot programs, including a demonstration pilot program to improve safety prior to permanent modifications and e-bike pilot programs for underserved and disadvantaged individuals. • Increase shared commuting by expanding participation in the GO MAINE program. • Over the next four years, conduct research that addresses data gaps in understanding the VMT and GHG impacts of strategies of interest. • Develop targets related to increased use of transit, active transportation, and shared commuting that are consistent with Maine’s statutory emissions reduction goals.

3. ANALYSIS AND SUPPORTING INFORMATION

Key Questions (provide analysis for each strategy and its respective set of actions.)

1. **Impacts** - Describe the recommendation and its actions and how they address Maine’s four climate goals – *reducing greenhouse gas emissions, increasing resilience, creating economic opportunity, and achieving equity through Maine’s climate response*. **Use the questions in Annex 1 of this document** to guide the analysis of impacts.

Reducing Greenhouse Gas Emissions

While the most significant reductions of greenhouse gas emissions in Maine’s transportation sector will come through the long-term and large-scale electrification of our transportation systems, our state can only meet its GHG emissions targets by pairing electrification with reducing the number of miles driven in gasoline and diesel-fueled vehicles by Mainers and visitors to our state. VMT can be reduced through strategies, such as replacing single occupancy vehicle trips with public transportation, active transportation, and shared commuting options like carpooling and vanpools.

Public transportation

An efficient and effective public transportation system provides an alternative to personal vehicles and can reduce overall VMT and GHG emissions, especially in urban areas which have a critical mass of travelers and numerous shared destinations.¹⁶ The following actions seek to increase transit ridership in our state to reduce VMT and GHG emissions:

- Improving connections and coordination among transit agencies, investing in new and updated infrastructure, making transit easier to use, and supporting transit-oriented development.
- Launching innovative transit pilot projects in urban and rural areas to improve and expand transit, including new intercity bus routes and regional pilots to improve coordination between state agency transportation services.

The first action will be implemented as follows:

- **Improve connections and coordination among transit agencies:** better coordinate transit services, especially in the Portland area, and improve connections. In December 2022, the Portland Area Comprehensive Transportation System (PACTS) completed a study recommending changes to the Greater Portland region’s bus network. Implement this action in conjunction with the implementation of the study.
- **Invest in new and updated infrastructure:** build shelters, install bicycle racks, improve lighting, provide displays, improve sidewalks to increase accessibility, and

¹⁶ MaineDOT (2023). “Maine State Transit Plan,” P. 39:
<https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

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- improve first and last mile connections to increase accessibility and help users reach their destinations.
- **Make transit easier to use:** Implement automated fare payment system(s) and implement General Transit Feed Specification (GTFS) systems for real-time vehicle tracking information for riders. Expand operation hours and frequency, as warranted.
 - **Support transit-oriented development:** Public transportation is most efficient and effective when it is considered in conjunction with decisions around development patterns, including housing and economic development. Supporting transit-oriented development (TOD) will increase ridership. Implement TOD in coordination with the Land Use Committee.

The following projects will be considered for the second action to address challenges and gaps in our transit system:

- Explore implementation of a regional pilot project between MaineDOT and DHHS to improve connection between MaineDOT and DHHS transportation services.
- Implement the \$4M Lewiston/Auburn-Portland Commuter Bus Pilot and explore other potential connections.
- Complete further planning and design efforts related to the Gorham-Westbrook-Portland Rapid Transit Study.
- Identify potential micro-transit pilots in areas not served by buses or with limited bus service.
- Assess and implement pilot projects recommended through national research and analysis and/or awarded through grant programs; explore scaling up and/or permanently establishing successful pilots.
- Pursue funding to continue supporting the delivery and assessment of Workforce Transportation Pilot-funding projects, which provide funding for innovative solutions to address transportation challenges for current and potential workers, with an emphasis on environmentally friendly approaches.

Pilot projects should continue to be assessed and recommended through national research, University of Maine research on rural transit, the analysis and framework in the Maine State Transit Plan, and recommendations of the PTAC. Successful pilots should be scaled up and/or permanently established.

Active Transportation

Active transportation provides the opportunity for human-powered transportation as an alternative to driving a motor vehicle for a commuter trip or to run an errand.¹⁷ Expanding safe active transportation infrastructure that connects homes to jobs and people to services will expand carbon-free transportation options such as walking, biking, or the use of

¹⁷ MaineDOT (2023). "Maine State Active Transportation Plan," P. 13:
<https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

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appropriate electric bicycles or other appropriate micromobility devices.¹⁸ The following new actions seek to increase active transportation in our state to reduce VMT and GHG emissions:

- By 2030, expand safe active transportation options by improving active transportation in at least 10 villages and downtowns, paving at least 75 miles of shoulder along highways, principally in rural areas, and developing a pipeline for high priority active transportation trail development that builds at least 10 miles of high priority off-road trails, if supported through special federal funding.
- Launch active transportation partnerships and pilot programs, including a demonstration pilot program to improve safety prior to permanent modifications and e-bike pilot programs for underserved and disadvantaged individuals.

The first action will be implemented as follows:

- **Improve active transportation in at least 10 villages and downtown:** MaineDOT's Village Partnership Initiative (VPI) will support active transportation improvements in villages and downtowns, with \$12M state and local funds per year included in MaineDOT's Work Plan for 2025 and 2026. Federal discretionary grant funding, including, but limited to, the USDOT Reconnecting Communities discretionary grant program and Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program, as well as Congressionally Directed Spending opportunities, will be pursued to secure the funding needed to implement these transformative investments. Investments will be supported by MaineDOT's Complete Streets Policy, which will be updated by the end of 2024, as well as the "Speed Limit and Roadway Context Report" which is being used by MaineDOT to set and recommend speed limits for roads based on their context to make vulnerable users safer.
- **Paving at least 75 miles of shoulder along highways:** MaineDOT will implement shoulder paving on principally rural roads with a target of 15-20 miles per year and assess roads for bicycle infrastructure and traffic calming during striping work. This work will incorporate the High Priority Active Transportation (HPAT) corridors under development and provide enhanced shoulders along identified HPAT segments.
- **Building at least 10 miles of high-priority off-road trails:** MaineDOT will develop a list of high priority AT trails, reviewing work that has already been completed through the Maine State Active Transportation plan and explore opportunities to leverage federal Carbon Reduction Program and Congestion Mitigation and Air Quality funding, as well as pursue discretionary federal spending opportunities.

The following active transportation partnerships and pilot programs will be explored and evaluated under the second action:

- New partnership initiative to improve safety for bicycles and pedestrians.

¹⁸ Ibid

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- E-bike program partnership between MaineDOT and Maine Department of Labor for underserved individuals seeking transportation for employment and healthcare purposes.
- Continued support for e-bike programs to give people opportunities to try a bike through community or work events and through library share programs.
- Expand e-bike rebate program to include an individual rebate for low- and moderate-income residents.

Active Transportation partnerships and pilot programs identified in the Maine State Active Transportation Plan will be rolled out in the 2025-2027 Three-Year Work Plan.

Shared Commuter Programs

Shared commuting options, like carpooling and vanpooling, reduce single occupancy trips thereby reducing greenhouse gas emissions. The GO MAINE Program, which matches carpoolers and helps form vanpools, is the leading statewide commuter program in Maine. It rewards members for doing any sort of green commute, including carpooling, vanpooling, walking, biking, taking the bus, or teleworking. From its relaunch in April 2022 to the end of April 2024, GO MAINE achieved reductions of 4.4M vehicle miles traveled and 2,883 tons of CO₂.

The updated action to “increase shared commuting by expanding participation in the GO MAINE program” will continue to support and expand participation in GO MAINE, including expanding partnerships with businesses and other stakeholders. Additionally, GTFS, a tool that tracks real-time location of transit vehicles, will be incorporated into the GO MAINE trip planner.

The TWG also recommends further integration of transit routes with Park and Ride lots and expanding transit amenities in these lots, including shelters, bike racks, and transit schedule boards. Currently there are more than 10 park and rides lots in Maine that also include a bus stop.

Other

Research will be conducted to understand the VMT and GHG impacts of strategies to ensure that our state continues to invest in the most effective strategies to reduce GHG emissions. Additionally, for MaineDOT and Maine Turnpike Authority transportation projects adding new capacity, modeled GHG increases will be mitigated by investing in modes, projects, and/or programs that offset those modeled emissions.

Improvements to Quality of Life

Having the option to take transit, use active transportation, or participate in a rideshare program improves quality of life for Maine people. Increased use of these modes will reduce GHG emissions as well as nitrogen oxides, sulfur dioxide, and particulate matter emissions, leading to improved air quality and health outcomes. Additionally, active

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transportation infrastructure offers opportunities to counteract the impacts of inactivity, and to support the ability of people of all ages to stay physically active in their own communities.¹⁹ The CDC recently reported Maine’s inactivity rate at 24.8 percent.²⁰ A 2014 American Trails study indicated people living within a mile of a new trail engaged in an average of 45 minutes more exercise a week after the trails were built than before they had that available infrastructure.²¹

Increasing Resiliency

The recommendation and associated actions increase resiliency by expanding access to essential services, especially in underserved or priority communities, and building community capacity to take transit, active transportation, and shared commuting options.

Expanding Access to Essential Services

The recommendation and actions would expand access to essential services (e.g., places of employment, medical facilities, educational opportunities, shopping centers etc.) through improved and expanded public transportation and active transportation options. These modes are especially important in underserved areas and for priority populations that lack access to other transportation options or would benefit from alternatives to driving, like older Mainers.²²

Community Capacity

Community capacity will be developed by expanding education and awareness efforts to help all Mainers understand and use transit, active transportation, and shared commuting options within and between their communities. Education and outreach will be conducted in all communities throughout the state and will expand upon existing efforts, including for priority populations. As part of the effort, research will be conducted on which populations might be most likely to shift modes to inform education and outreach efforts and maximize results.

The transit-specific education and awareness effort will assist transit providers and GO MAINE in the development and dissemination of customer-focused materials that provide basic information such as types of public transportation services and vehicles used to assist with service recognition (e.g., buses, vans, etc.); service areas; schedules; eligibility; fares; and trip planning, booking, and payment options. Direct outreach will be provided to

¹⁹ MaineDOT (2023). “Maine State Active Transportation Plan,” P. 13:
<https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

²⁰ Ibid. [Original Source: U.S. Centers for Disease Control and Prevention, “Adult Physical Inactivity Prevalence Maps by Race/Ethnicity,” January 2022, <https://www.cdc.gov/physicalactivity/data/inactivity-prevalence-maps/index.html#overall>]

²¹ Ibid. [Original Source: Anna Goodman, Shannon Sahlqvist, David Ogilvie, and on behalf of the iConnect Consortium, 2014: “New Walking and Cycling Routes and Increased Physical Activity: One- and 2-Year Findings From the UK iConnect Study,” *American Journal of Public Health* 104, e38_e46, <https://doi.org/10.2105/AJPH.2014.302059>]

²² Maine Climate Council (2023). “Final Recommendations of the Equity Subcommittee,” p. 19:
<https://www.maine.gov/future/initiatives/climate/climate-council/equity-subcommittee> [Original Source:
<https://www.maine.gov/dhhs/sites/maine.gov.dhhs/files/inline-files/FINAL-Age-Friendly-Update.pdf>]

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businesses, group living facilities, human service agencies, job training centers, community groups, educational institutions, and other major trip generators. Furthermore, work will be done with school districts statewide to develop and deliver education and outreach materials focused on the environmental benefits of transit, including school bus ridership.

The active transportation specific education and awareness will build upon current efforts and work with AT advocacy organizations and other stakeholders to offer safety education for children and youth programs, drivers, bicyclists, pedestrians, and other modal users, with a focus on vulnerable users. The campaigns will include opportunities to learn about modeshift.

Both campaigns will include information on the economic implications of transit and active transportation, including cost savings to families (especially if these modes are used for commuting), economic benefits for companies, and overall economic growth opportunities at the community, regional, and state level.

The Mitchell Center's preliminary equity engagement work indicates that there is interest in the GO MAINE program from priority populations, but more education and awareness on the program and how to use it is needed. As a result, education and awareness campaigns should include an overview of the GO MAINE program and explain how to use it.

Creating Economic Opportunity

Public transportation and active transportation both play a critical role in growing Maine's economy. Investing in transit and active transportation will make Maine a more desirable place to live and work, attracting new workers, families, and businesses to Maine.

Public transportation

Public transportation connects people to job opportunities, recreational and entertainment opportunities, and retail centers, supporting businesses. A nationwide study showed that investment in transit offers a 5 to 1 economic return and generates jobs.²³ Public transportation is most efficient and effective when it is considered in conjunction with decisions around development patterns, including housing and economic development.

The recommended actions to improve and expand transit, including supporting transit-oriented development, will therefore directly grow the economy in Maine. Additionally, launching innovative transit pilot projects in urban and rural areas to improve and expand transit will foster innovation in Maine consistent with the state's climate goals.

²³ MaineDOT (2023). "Maine State Transit Plan," P. 8 [Original Source: American Public Transportation Association. Economic Impact of Public Transportation Investment: 2020 Update. <https://www.apta.com/wp-content/uploads/APTA-Economic-Impact-Public-Transit-2020.pdf>]

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The TWG would like to recognize and support transit employees as part of the ever-growing clean energy workforce in the state of Maine.

Active Transportation

Improving active transportation in at least 10 villages and downtowns will help communities reinvest and revitalize their downtowns and village centers to be places for recreating, shopping, socializing, learning, working, or investing. Improving active transportation in these communities will ensure that they are places where people want to stay instead of pass through, buoying local economies across Maine.²⁴

Developing a pipeline for high priority active transportation trail development that builds at least 10 miles of high priority off-road trails, if supported through special federal funding, will also support economic development and opportunity. Trails throughout Maine have drawn visitors from neighboring states and throughout the U.S. to contribute to Maine's local economy.²⁵ Communities next to trails have also reported new openings of tourism-related businesses, such as restaurants and lodging facilities, and increased business sales volumes following the trail's opening.²⁶

Achieving Equity through Maine's Climate Response

Transit

Improving and expanding transit service in Maine will provide an affordable travel option to Maine's underserved and priority populations, including low-income households, aging individuals, working populations, new Mainers, people with disabilities, and rural communities. Increased service for the aging population is especially critical in Maine. The fastest-growing demographic in Maine is the age 65+ population, many of whom live in rural areas with auto-centric land use and community design. As people age, many will struggle to transport themselves and, if unable to find alternative transportation, will experience a higher risk of social isolation and health problems.²⁷

Additionally, Maine's largest urban centers are home to significant foreign-born and Limited English proficiency populations and zero-car households, all of whom are more likely to rely on public transportation.²⁸

²⁴ MaineDOT (2023). "Long-Range Transportation Plan,"
<https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

²⁵ MaineDOT (2023). "Maine State Active Transportation Plan," P. 12:
<https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

²⁶ Ibid [Original Source: *The Economic Impact of Greenways and Multi-use Trails*, John McDonald and Laura Brown, 2015, p.13 <https://cdn2.assets-servd.host/material-civet/production/images/documents/The-Economic-Impact-of-Greenways-and-Multi-Use-Trails.pdf>]

²⁷ MaineDOT (2023). "Maine State Transit Plan," P. 33:
<https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

²⁸ MaineDOT (2023), "Maine State Transit Plan," P. 11:
<https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

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For these priority populations, common barriers to transit use include lack of access, insufficient service frequency and hours of service, insufficient coordination between adjacent transit services, insufficient geographic coverage of transit services, and lack of understanding of travel options and access service.²⁹

Actions that address these barriers include:

- Improving connections and coordination among transit agencies, investing in new and updated infrastructure, making transit easier to use, and supporting transit-oriented development.
- Expanding education and awareness efforts to help all Mainers understand use transit and active transportation options within and between their communities.
- Launching innovative transit pilot projects in urban and rural areas to improve and expand transit, including new intercity bus routes and regional pilots to improve coordination between state agency transportation services.

Active Transportation

Improving and expanding active transportation in Maine will provide an affordable travel option to Maine’s underserved and priority populations, including low-income households. The most common barrier to active transportation is lack of access to safe active transportation infrastructure. Residents of underserved communities are less likely to live near or travel along roads with safe, accessible, and high-quality pedestrian and bicycle facilities.³⁰ Additionally, low-income residents that rely on active transportation are more likely to walk, wheel, or bike, even when conditions are not safe and are, therefore, exposed to more risk of injury.³¹

Accessibility barriers will be addressed by improving active transportation in at least 10 villages and downtowns, paving at least 75 miles of shoulder along highways, principally in rural areas, and building at least 10 miles of high-priority off-road trails, among other projects, if supported through special federal funding. Additionally, new active transportation partnerships and pilot programs will be launched, including e-bike pilot programs for underserved and disadvantaged individuals and expanding the e-bike rebate program to include an individual rebate for low- and moderate-income residents.

2. **Cross-over** - Does the recommendation involve other working groups/sectors? *Select all which apply.*

Transportation

Buildings, Infrastructure, and Housing

²⁹ MaineDOT (2023), “Maine State Transit Plan,” PP. 33-35:

<https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

³⁰ MaineDOT (2023), “Maine State Active Transportation Plan, P. 32:

<https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

³¹ Ibid.

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- Energy
- Community Resilience
- Coastal and Marine
- Natural and Working Lands
- Other (please describe)

How did the Working Group coordinate with others around these overlaps?

The Transportation Working Group had joint meetings on electricity demand management with the Buildings, Infrastructure, and Housing, and Energy Working Groups. On January 19, 2024, the three WG jointly hosted a workshop to build understanding of, and identify opportunities and barriers around, electricity demand management. The workshop consisted of six national experts that discussed current initiatives across the country, and then proceeded with members from all three WG identifying topic areas for potential policy recommendations in the updated climate action plan. The three groups met twice after that, once on March 29, 2024, and again on Thursday, May 16, 2024. Both meetings reviewed and discussed the proposed draft recommendations. Additionally, Michael Stoddard is a TWG member and also a co-chair of the Building, Infrastructure, and Housing WG.

3. **Priority Populations** - Consider the priority populations impacted or affected by this recommendation. A list of priority populations is contained in **Annex 2** of this document.

a. *POPULATIONS: Identify any priority populations impacted or affected by this recommended strategy.*

- Low-income individuals and communities
- Older adults (65+), especially in rural areas
- People with physical mobility challenges
- People with limited access to transportation
- Members of tribal nations and tribal and indigenous communities
- Non-White Mainers
- Non-native English speakers or people with limited English proficiency
- New Mainers (immigrant and refugee populations)
- Migrant workers
- Small towns with limited municipal capacity
- Disadvantaged communities

b. *IMPACTS: Using the Equity Sub-Committee analysis (see Annex 3) from March 2023 as a starting place, consider both potential positive outcomes and any unintended consequences/byproducts. Describe these potential impacts/benefits.*

Potential positive outcomes include:

- Increasing transit access to priority populations.

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- Increasing awareness of transit, active transportation, and shared commuting options for priority populations.
 - Improving and expanding transit through innovative pilot projects in urban and rural areas.
 - Expanding safe active transportation options for priority populations.
 - Launching active transportation partnerships and pilot programs, including e-bike pilot programs for underserved and disadvantaged individuals and expanding the e-bike rebate program to include an individual rebate for low- and moderate-income residents.
 - Encouraging land use and development patterns that support transit and active transportation.
- c. *SOURCES OF INFORMATION: Describe how you know what groups are impacted/affected. Cite relevant data sources³² and/or formal conversations (MCC-organized panels, focus groups, etc.) with priority populations.*

The recommendations and actions identified by the TWG were informed by several reports, all of which identified groups that would be impacted by VMT reduction strategies, including the *Final Recommendations of the Equity Subcommittee*, the *2021 Maine Clean Transportation Roadmap*, the *Maine State Transit Plan*, the *Maine State Active Transportation Plan*, and the Mitchell Center’s engagement work with priority populations. The recommendations and actions were also informed by MaineDOT’s *Long-Range Transportation Plan* and *Carbon Reduction Plan*, as well as the University of Maine report *Rural Public Transportation and Maine: Review of State Best Practices*.

- d. *RESULT OF ENGAGEMENT: Describe any consultation or engagement with these priority populations (either by the Working Group or through GOPIF’s community engagement contractor). Describe how the Working Group’s recommendations have changed as a result of these conversations.*
- **Final Recommendations of the Equity Subcommittee:** The Maine Climate Council Equity Subcommittee was comprised of individuals representing priority populations. Additionally, the Equity Subcommittee worked with MCC working

³² Some available data sources include:

U.S. Council on Environmental Quality [Climate and Economic Justice Screening Tool](#) (CEJST) (select by census tract)

U.S. Census Bureau [Rural America](#) tool

The Nature Conservancy [Coastal Risk Explorer](#) (w/ particular focus on Social Vulnerability Ranking)

Climate Mapping for Resilience and Adaptation [Assessment Tool](#) (select by census tract, county, or Tribal land)

[Maine Social Vulnerability Tool](#)

U.S. Department of Energy [Low-Income Energy Affordability Tool](#) (LEAD)

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groups, state agencies, experts, and members of the public to develop equity recommendations.¹⁴ The TWG reviewed and considered all the equity recommendations in the development of the updated TWG recommendations.

- **2021 Maine Clean Transportation Roadmap:** As part of the development of the 2021 Maine Clean Transportation Roadmap, 19 listening sessions were conducted in fall 2021, including interviews with individuals representing groups within Maine who face economic, social, or operational challenges in shifting modes.¹⁵
- **Maine State Transit Plan:** Robust public and stakeholder outreach and stakeholder meetings allowed for consultation and engagement with priority populations.³³
- **Maine State Active Transportation Plan:** Robust public and stakeholder outreach and stakeholder meetings allowed for consultation and engagement with priority populations, including age-friendly and disability-rights advocates, organizations supporting people experiencing homelessness, social justice advocate, and Tribes and Nations.³⁴
- **Mitchell Center’s Engagement Work with Priority Populations:** to date, the Mitchell Center has collaboratively completed 29 engagements, reaching over 1,000 members of priority populations. The results of this effort have been considered by the TWG.¹⁶

e. *IMPLEMENTATION: How might the recommended strategy be implemented in consultation with priority populations? Do priority populations have the resources and capacity necessary to implement or access this recommended strategy? How might you make recommendations to improve equitable access to resources and capacity-building? You might consider planning capacity, financial capacity, programmatic capacity, human capital, and other.*

To build capacity among these populations, education and outreach on transit and active transportation options will be conducted in all areas of the state, including in underserved areas and for disadvantaged populations.

4. **Timeframe** - What is the timeframe for this recommendation and its actions?

	Short-term (2025)	Mid-term (2030)	Long-term (2050+)
To implement	x	x	
To realize outcomes	x	x	x

³³ MaineDOT (2023). “Maine State Transit Plan,” <https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

³⁴ MaineDOT (2023). “Maine State Active Transportation Plan,” PP. 15-16: <https://storymaps.arcgis.com/stories/27763afe326645c285cb1d726ee68cae>

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5. **Implementation Next Steps** - What types of next steps would be required to implement the recommendation?

- Legislation, rules/regulation, internal program guidance changes
- Establishment of a new program or a fund,
- Conduct additional research
- Provide education or training
- Coordinate with other parties/agencies/states
- Other (please describe)

Please provide some detail around these steps. If possible, identify **specific actors** who would lead in the implementation of the recommendation and actions.

Action	Implementation	Specific Actor
Increase transit ridership by improving connections and coordination among transit agencies, investing in new and updated infrastructure, making transit easier to use, and supporting transit-oriented development.	<ul style="list-style-type: none"> • Coordination with other parties/agencies/states 	<ul style="list-style-type: none"> • <i>State Agencies:</i> MaineDOT, DHHS, DECD, MaineHousing • <i>MPOs:</i> PACTS, KACTS, BACTS • <i>Urban Transit Agencies:</i> BSOOB, CityLink, COAST, Community Connector, Greater Portland Transit District, South Portland City Bus Service • <i>Regional Transportation Program Systems:</i> Aroostook Regional Transportation System, Downeast Community Partners, Penquis Community Action Program, Kennebec Valley Community Action Program, Waldo Community Action Partners: Mid Coast Public Transportation, Regional Transportation Program, Western Maine Transportation Services, York County Community Action Corporation
For transportation projects adding new capacity, mitigate modeled GHG increases by	<ul style="list-style-type: none"> • Internal program guidance changes 	<ul style="list-style-type: none"> • MaineDOT • Maine Turnpike Authority

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investing in modes, projects and/or programs that offset those modeled emissions.		
By 2026, expand education and awareness efforts to help all Mainers understand and use transit and active transportation options within and between their communities.	<ul style="list-style-type: none"> • Provide education and training 	<ul style="list-style-type: none"> • MaineDOT • RPOs and MPOs • Transit providers statewide/Maine Transit Association • GO MAINE • Active transportation advocacy organizations • Other active transportation stakeholders
Launch innovative transit pilot projects in urban and rural areas to improve and expand transit, including new intercity bus routes and regional pilots to improve coordination between state agency transportation services.	<ul style="list-style-type: none"> • Establishment of new program or fund 	<ul style="list-style-type: none"> • MaineDOT • RPOs and MPOs • Transit providers statewide • PTAC
By 2030, expand safe active transportation (AT) options by improving AT in at least 10 villages and downtowns, paving at least 75 miles of shoulder along highways, principally in rural areas, and developing a pipeline for high priority AT trail development that builds at least 10 miles of high priority off-road trails, if supported through special federal funding.	<ul style="list-style-type: none"> • Establishment of new program • Continuation of established program • Coordination with other parties/agencies/states • Other – special federal funding 	<ul style="list-style-type: none"> • MaineDOT • Municipalities • MPOs & RPOs • Active Transportation Advisory Council
Launch AT partnerships and pilot programs, including a demonstration pilot program to improve safety prior to permanent modifications and e-bike pilot programs for underserved and disadvantaged individuals.	<ul style="list-style-type: none"> • Establishment of new program • Coordination with other parties/agencies/states 	<ul style="list-style-type: none"> • MaineDOT • DHHS • Municipalities • MPOs & RPOs • Stakeholder groups
Increase shared commuting by expanding participation in the GO MAINE program.	<ul style="list-style-type: none"> • Continuation of established program 	<ul style="list-style-type: none"> • MaineDOT • Maine Turnpike Authority
Over the next four years, conduct research that addresses data gaps in	<ul style="list-style-type: none"> • Conduct additional research 	<ul style="list-style-type: none"> • MaineDOT

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understanding the VMT and GHG impacts of strategies of interest.		
Develop targets related to increased use of transit, active transportation, and shared commuting that are consistent with Maine’s statutory emissions reduction goals.	N/A	N/A

6. **Measuring Outcomes** - How will you know the recommendation is effective? *Are outcomes measurable using current monitoring/data collection? Are there benchmarks or short-term indicators of success?*

Benchmarks to consider include:

- Total unlinked passenger trips
- Percent of agencies that use scheduling software
- Percent of agencies that use automated fare payment system
- Percent of agencies that use GTFS/GTFS-Flex
- Percent of agencies that use CAD/AVL systems
- Percent of agencies incorporated into GO MAINE Trip Planner
- GO MAINE metrics
 - Total members
 - Reporting members
 - VMT reduction
 - Trip reduction
 - CO2 reduction
 - Participating organizations
- Number of villages/downtowns with improved active transportation infrastructure
- Additional miles of paved shoulders
- Additional miles of high priority off-road trails
- Use of shared, transit or active transportation, by location and rider characteristics
- Distribution of clean transit projects and spending by priority population and geography

7. **Other** - Additional Rationale/Background Information

The MaineDOT Long Range Transportation Plan, Maine State Transit Plan, Maine State Active Transportation, Maine State Rail Plan, and MaineDOT’s Carbon Reduction Strategy were completed in 2023 and are currently in the implementation stages. The recommendations and actions identified by the TWG include and build upon recommendations in these plans. The Maine Public Transit Advisory Council (PTAC) and Active Transportation Advisory Council (ATAC) will also provide recommendations throughout the period covered by the MWW update. The

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implementation of the recommendation and actions provided by the TWG will continue to weave into the implementation of the MaineDOT Long Range Transportation Plan, Maine State Transit Plan, Maine State Active Transportation, Maine State Rail Plan, and MaineDOT's Carbon Reduction Strategy.

Transportation Working Group Recommendations

Accelerate Maine’s Adoption of Zero-Emission Medium- and Heavy-Duty Vehicles

2. SUMMARY OF RECOMMENDATIONS AND ACTIONS

This is a high-level summary of the proposed recommendations and actions.

STRATEGY	ACTIONS
Accelerate Maine’s Adoption of Zero-Emission Medium- and Heavy-Duty Vehicles	<ul style="list-style-type: none"> • Invest in and demonstrate the viability of electric bus fleets in Maine with support from federal discretionary grants; explore plug-in electric-hybrid ferry options for future ferry replacements in the Maine State Ferry Service fleet as well as other regional and local ferry fleets. • Over the next four years, support demonstration and pilot applications of MHD ZEV technology to showcase performance, reliability, and cost effectiveness and increase awareness and adoption of clean trucks and buses. • Over the next four years, launch fleet advisory services and technical assistance to help medium- and heavy-duty vehicle fleets prepare for electrification. • Advance policy options, including consideration of utility and vehicle regulatory approaches, and develop a new MHD ZEV incentive program, to help accelerate the adoption of zero-emission medium- and heavy-duty vehicles. • Build upon recommendations from the Clean Medium- and Heavy-Duty Vehicle Roadmap (2024).

3. ANALYSIS AND SUPPORTING INFORMATION

For each recommendation and its respective set of actions, provide concise analysis using the questions below. Analysis should focus mostly on new or significantly recommendations.

Key Questions (provide analysis for each strategy and its respective set of actions.)

1. **Impacts** - Describe the recommendation and its actions and how they address Maine’s four climate goals – *reducing greenhouse gas emissions, increasing resilience, creating economic opportunity, and achieving equity through Maine’s climate response*. **Use the questions in Annex 1 of this document** to guide the analysis of impacts.

Reducing Greenhouse Gas Emissions

The transportation sector accounts for 49% of GHG emissions in Maine, with medium- and heavy- duty vehicles comprising 28% of the transportation emissions. Accelerating Maine’s

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Adoption of zero emission medium- and heavy-duty vehicles is essential for the state to meet its 2030 and 2050 GHG goals. This can be achieved by investing in electric bus fleets, exploring plug-in electric-hybrid ferry options, electrifying propulsion in commercial marine and small harbor craft, and advancing policies that support zero- emission medium- and heavy-duty vehicles.

Bus fleets

It is important to invest in and demonstrate the viability of electric bus fleets in Maine, including public transportation buses and school buses. This can be done by:

- Implementing fleet transition analyses and plans, completed by MaineDOT in partnership with HATCH consultants, for transitioning eight transit agency fleets to electric or hybrid vehicles.
- Finalizing transition plans for another four transit agencies.
- Apply annually, as appropriate, for FTA Low or No Emissions vehicle discretionary grant funding for hybrid and electric vehicles and associated chargers and infrastructure.
- Pending the potential award of federal discretionary grant funding, implement the Acadia Clean Bus Initiative, which will provide funding for the purchase of 23 electric buses and associated chargers and infrastructure.

Ferries

For the state to meet its GHG emission targets, it is important to continue to explore plug-in electric-hybrid ferry options for future ferry replacements in the Maine State Ferry Service fleet, as well as other regional and local ferry fleets. Implementation includes replacing the Margaret Chase Smith ferry with a plug-in electric-hybrid ferry by 2027.

Commercial marine and small harbor craft

Demonstrating viability and planning for the broad-scale adoption of electrified propulsion in Maine's commercial marine and small harbor craft will help reduce GHG emissions in Maine.³⁵

The following action can be implemented as follows:

- Implement a vessel energy use baseline assessment and publish a vessel electrification guide for interested Maine businesses and vessel owners.
- Commission a marine energy efficiency audit program for existing vessel owners to assess emissions/efficiency and evaluate hybrid retrofit options.
- Align Maine's existing Clean Diesel program and related disbursement of federal funding with the opportunity to electrify Maine's commercial and small harbor craft fleets.

³⁵ Disclaimer: Recommendation and implementation details were provided by the Coastal and Marine working group but weren't discussed with the full Transportation Working Group.

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- Provide support for Maine’s Regional Councils to provide technical assistance for businesses and municipalities in developing electrified propulsion and shoreside charging infrastructure proposals.

Policy

Advancing policy options that accelerate the adoption of zero emission medium- and heavy-duty vehicles is important to achieving state GHG emissions goals. Policy options, such as utility and vehicle regulatory approaches, and developing a new MHD ZEV incentive program, should be considered. The clean medium- and heavy-duty vehicle roadmap will explore and identify vehicle and infrastructure incentives, utility rate design, and make ready programs.

Quality of Life

Transitioning to zero emission medium- and heavy-duty vehicles will reduce GHG emissions as well as nitrogen oxides, sulfur dioxide, hazardous air pollutants (HAPS)/volatile organic compounds (VOCs), and particulate matter emissions leading to improved air quality and health outcomes. The health benefits are especially important for mechanics who work on, workers who load/unload, and people who drive, MHDVs. Additionally, if a business were to swap out fossil fuel powered medium- and heavy-duty vehicles for MHD ZEVs, they would see a reduction in fuel costs, operating costs, and maintenance needs. MHD ZEVs could make employers more attractive.

Increasing Resilience

The recommendations will build the community capacity needed to support the transition to zero emission medium- and heavy-duty vehicles. Community capacity will be increased by supporting demonstrations and pilot applications, as well as launching fleet advisory services and technical assistance for trucks, buses, and medium- and heavy-duty vehicles.

Pilot applications

Supporting demonstrations and pilot applications of MHD ZEV technology will increase awareness and adoption of clean trucks and buses by showcasing performance, reliability, and cost effectiveness. Implementing rebates established through LD122 will help attract businesses to either adopt or learn more about MHD ZEVs, therefore increasing community capacity.

Fleet advisory services

Community capacity will be built through launching fleet advisory services and technical assistance to help medium- and heavy-duty vehicle fleets prepare for electrification. Fleet advisory services might include but are not limited to:

- Providing fleets with a detailed and personalized plan for electrification.
- Pairing businesses and nonprofits with a technical consultant who will analyze fleets and prepare a tailored electrification plan.
- Education and assistance on MDHD charging.

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Creating Economic Opportunity

Researchers nationwide are working to understand the potential workforce implications of a transition to EVs, including MDHD ZEVs.³⁶ In Maine, the Governor's Energy Office and Department of Labor have a joint project looking into potential workforce implications resulting from a transition to EVs. The Clean Energy Partnership, an effort to advance Maine's energy, climate, economic development, and work force goals, is also reviewing this issue.

At the individual business level, while the upfront purchase costs remain higher for MHD ZEVs than diesel alternatives, businesses will achieve savings on fuel and maintenance in the long-term. Fleets are expected to see cost parity or savings immediately.

Increasing the penetration of MDHD ZEVs in Maine will foster innovation in our transportation system and contribute to Maine's growing clean energy workforce.

Achieving Equity through Maine's Climate Response

The upfront purchase cost remains high for MHD ZEVs compared to diesel alternatives. Decreasing the purchase cost of MHD ZEVs will increase the affordability for small businesses that may not be able to afford the upfront cost. The purchase cost of MHD ZEVs can be reduced through MHDV rebates and federal funding opportunities. Implementing the rebates established through LD122 will help make MHDVs more affordable for small businesses to invest in. Federal funding opportunities such as FTA Low or No Emissions Vehicle Discretionary Grant, EPA Clean School Bus, EPA Clean Heavy Duty will further decrease the cost of these vehicles.

In addition, emissions and particulate matter most impact individuals with existing health disparities, including respiratory (ie Asthma) and heart conditions; when individuals with existing conditions live near warehouses, ports, and other places with high truck or bus traffic, they suffer disproportionately from exposure to truck emissions. Electrifying trucks will have a disproportionate benefit on these individuals, as well as on drivers and mechanics who experience increased exposure to dirty trucks.

2. **Cross-over** - Does the recommendation involve other working groups/sectors? *Select all which apply.*

- Transportation
- Buildings, Infrastructure, and Housing
- Energy
- Community Resilience
- Coastal and Marine

³⁶ U.S. Department of Transportation: <https://www.transportation.gov/rural/ev/toolkit/ev-benefits-and-challenges/community-benefits>

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- Natural and Working Lands
- Other (please describe)

How did the Working Group coordinate with others around these overlaps?

The Transportation Working Group had joint meetings on electricity demand management with the Buildings, Infrastructure, and Housing, and Energy Working Groups. On January 19, 2024, the three working groups jointly hosted a workshop to build understanding of, and identify opportunities and barriers around, electricity demand management. The workshop consisted of six national experts that discussed current initiatives across the country, and then proceeded with members from all three WG identifying topic areas for potential policy recommendations in the updated climate action plan. The three groups met twice after that, once on March 29, 2024, and again on Thursday, May 16, 2024. Both meetings reviewed and discussed the proposed draft recommendations. Additionally, Michael Stoddard is a TWG member and a co-chair of the Building, Infrastructure, and Housing WG.

The TWG co-chairs met with the Coastal and Marine Working Group to discuss transitioning to low carbon in the fishing industry. The two working groups further developed recommendations and implementation details that will be incorporated into the updated climate action plan.

3. **Priority Populations** - Consider the priority populations impacted or affected by this recommendation. A list of priority populations is contained in **Annex 2** of this document.

a. *POPULATIONS: Identify any priority populations impacted or affected by this recommended strategy.*

- Rural communities
- Small towns with limited municipal capacity
- Small businesses
- Individuals who work with, or live near, areas with high concentrations of fossil-fuel powered trucks and buses (including truck traffic)
- Individuals with existing health conditions which may be worsened by exposure to transportation emissions

b. *IMPACTS: Using the Equity Sub-Committee analysis (see Annex 3) from March 2023 as a starting place, consider both potential positive outcomes and any unintended consequences/byproducts. Describe these potential impacts/benefits.*

Potential positive outcomes for priority populations listed above include:

- Increased funding for electric bus fleets and medium heavy duty vehicle fleets
- Enhanced tax credit opportunities
- Increased education and awareness

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- c. *SOURCES OF INFORMATION: Describe how you know what groups are impacted/affected. Cite relevant data sources³⁷ and/or formal conversations (MCC-organized panels, focus groups, etc.) with priority populations.*

To be determined by the Clean Medium- and Heavy-Duty Vehicle Roadmap (2024).

- d. *RESULT OF ENGAGEMENT: Describe any consultation or engagement with these priority population (either by the Working Group or through GOPIF's community engagement contractor). Describe how the Working Group's recommendations have changed as a result of these conversations.*

- **Final Recommendations of the Equity Subcommittee:** The Maine Climate Council Equity Subcommittee was comprised of individuals representing priority populations. Additionally, the Equity Subcommittee worked with MCC working groups, state agencies, experts, and members of the public to develop equity recommendations.³⁸ The TWG reviewed and considered all of the equity recommendations in the development of the updated TWG recommendations.
- **Mitchell Center's Engagement Work with Priority Populations:** to date, the Mitchell Center has collaboratively completed 29 engagements, reaching over 1,000 members of priority populations. The results of this effort has been considered by the TWG.³⁹

- e. *IMPLEMENTATION: How might the recommended strategy be implemented in consultation with priority populations? Do priority populations have the resources and capacity necessary to implement or access this recommended strategy? How might you make recommendations to improve equitable access to resources and capacity-building? You might consider planning capacity, financial capacity, programmatic capacity, human capital, and other.*

³⁷ Some available data sources include:

U.S. Council on Environmental Quality [Climate and Economic Justice Screening Tool](#) (CEJST) (select by census tract)

U.S. Census Bureau [Rural America](#) tool

The Nature Conservancy [Coastal Risk Explorer](#) (w/ particular focus on Social Vulnerability Ranking)

Climate Mapping for Resilience and Adaptation [Assessment Tool](#) (select by census tract, county, or Tribal land)

[Maine Social Vulnerability Tool](#)

U.S. Department of Energy [Low-Income Energy Affordability Tool](#) (LEAD)

³⁸ Maine Climate Council (2023). "Final Recommendations of the Equity Subcommittee," p. 8:

<https://www.maine.gov/future/initiatives/climate/climate-council/equity-subcommittee>

³⁹ The Mitchell Center. "Transportation Working Group Presentation for Maine Climate Council Equity Engagement." May 22, 2024.

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The implementation of the recommendations and actions will be overseen by the Maine Climate Council, Governor’s Office of Policy Innovation and the Future, Governors Energy Office, all of which have representation from priority populations. To build capacity among these populations, education and awareness on clean trucks and buses will be conducted in all areas of the state, including in rural areas and with small businesses.

4. Timeframe - What is the timeframe for this recommendation and its actions?

	Short-term (2025)	Mid-term (2030)	Long-term (2050+)
To implement	X	X	X
To realize outcomes		X	X

5. Implementation Next Steps - What types of next steps would be required to implement the recommendation?

- Legislation, rules/regulation, internal program guidance changes
- Establishment of a new program or a fund,
- Conduct additional research
- Provide education or training
- Coordinate with other parties/agencies/states
- Other (please describe)

Please provide some detail around these steps. If possible, identify **specific actors** who would lead in the implementation of the recommendation and actions.

Action	Implementation	Specific Actor
<ul style="list-style-type: none"> • Invest in and demonstrate the viability of electric bus fleets in Maine with support from federal discretionary grants; explore plug-in electric-hybrid ferry options for future ferry replacements in the Maine State Ferry Service fleet as well as other regional and local ferry fleets. 	<ul style="list-style-type: none"> • Coordinate with other parties/agencies/states • Provide education and training • Federal, state, and local funding 	<ul style="list-style-type: none"> • Transit providers statewide • MaineDOT • Utilities • Ferry operators
<ul style="list-style-type: none"> • Over the next four years, support demonstration and pilot applications of MHD ZEV technology to showcase performance, reliability, and 	<ul style="list-style-type: none"> • Coordinate with other parties/agencies/states • Provide education and training 	<ul style="list-style-type: none"> • To be determined as roadmap is developed

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cost effectiveness and increase awareness and adoption of clean trucks and buses.		
<ul style="list-style-type: none"> Over the next four years, launch fleet advisory services and technical assistance to help medium- and heavy-duty vehicle fleets prepare for electrification. 	<ul style="list-style-type: none"> Coordinate with other parties/agencies/states Provide education and training 	<ul style="list-style-type: none"> To be determined as roadmap is developed
<ul style="list-style-type: none"> Advance policy options, including consideration of utility and vehicle regulatory approaches, and develop a new MHD ZEV incentive program, to help accelerate the adoption of zero-emission medium- and heavy-duty vehicles. 	<ul style="list-style-type: none"> Legislation, rules/regulation, internal program guidance changes 	<ul style="list-style-type: none"> Maine Department of Environmental Protection Governor’s Energy Office Governor’s Office of Policy Innovation and the Future Efficiency Maine Trust Utilities Maine State Legislature
<ul style="list-style-type: none"> Build upon recommendations from the Medium- and Heavy-Duty Roadmap. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> To be determined as roadmap is developed

6. Measuring Outcomes - How will you know the recommendation is effective? *Are outcomes measurable using current monitoring/data collection? Are there benchmarks or short-term indicators of success?*

Benchmarks to consider include:

- Percent or number of electric or hybrid vehicles in Maine’s transit fleet
- Percent or number of plug-in electric hybrid ferries in Maine
- Total number of rebates provided for medium-and heavy-duty vehicles
- Geographic distribution of electric truck and bus dealers
- Geographic distribution of electric fleet operators
- Number of fleet operators, truck and bus dealers receiving education and training
- Employers partnering on education and assistance on MDHD charging

7. Other - Additional Rationale/Background Information

**Please footnote substantive disagreements among the Working Group members

Proposed Recommendations and Actions

Proposed recommendations resulting from TWG WG discussions to date:

RECOMMENDATION	ACTIONS	IMPLEMENTATION DETAILS
Accelerate Maine’s Transition to Light-Duty Electric Vehicles including Plug-in Hybrid Vehicles	Over the next four years, significantly extend Maine’s electric vehicle charging network by investing more than \$52M in new DC Fast Chargers and Level 2 chargers, including in more than 50 underserved and disadvantaged areas.	<ul style="list-style-type: none"> ● Implement using the following funding sources: <ul style="list-style-type: none"> ○ National Electric Vehicle Infrastructure (NEVI) Formula Funding: \$19.3M (total funding with 20% match: \$24.1M) <ul style="list-style-type: none"> ▪ For charging along Designated Alternative Fuel Corridors ○ Charging and Fueling Infrastructure (CFI) discretionary grants: \$15M (total funding with 20% match: \$18.75M) <ul style="list-style-type: none"> ▪ Utilize CFI grants for charging near large workplaces, community locations, low-to-moderate (LMI) income households, renters, and multifamily renters, and LMI households in rural areas. ▪ Apply for next round of CFI grant funding when the NOFO is published. ○ Maine Jobs & Recovery Plan (MJRP): \$8M (total funding with 20% match: \$9.6M). For statewide Level 2 and DC Fast Chargers. ○ New England Clean Energy Connect (NECEC): \$10M over 5 years.

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		<ul style="list-style-type: none"> • Identify ways to address barriers to charging in LMI homes. • Encourage employers to install workplace charging to support employees with EVs or those interested in transitioning to an EV, reduce their company’s environmental footprint, and utilize off-peak charging. • Identify and share example state and local codes and ordinances (including building codes, NFPA, zoning, ADA, etc.) that remove barriers to EVs and EV charging while maintaining safety, reliability and access; provide model codes as a resource.
	<ul style="list-style-type: none"> • By 2026, launch new education and awareness campaign(s) for all Maine communities, the dealer network, and employers to significantly accelerate the adoption of electric and plug-in hybrid vehicles statewide. 	<p><u>Education and Awareness Campaigns</u></p> <ul style="list-style-type: none"> • <i>Maine communities</i>: build off current EMT education and outreach efforts with assistance from regional and local organizations and trusted community institutions. <ul style="list-style-type: none"> ○ Study consumer attitudes, beliefs, and behaviors through surveys, focus groups, and research to understand attitudes, behaviors, and identify knowledge gaps. Build off national studies on consumer attitudes but ensure outreach work is Maine-specific. Ensure study includes disadvantaged populations, including low-income drivers. ○ Based on study results, develop tailored campaigns to different types

		<p>of consumers in different regions of the states and to relevant stakeholders.</p> <ul style="list-style-type: none">○ Target superusers, which are drivers that typically average more than 40,242 miles per year, to help accelerate emissions reductions.○ Explore a pilot for rural drivers to test drive an EV to gain familiarity with the vehicle and charging infrastructure.○ Support further research on the use of plug-in hybrids.○ Implement campaigns and develop metrics to evaluate the effectiveness of the campaigns and inform future efforts. <ul style="list-style-type: none">● <i>Dealer network:</i> provide education and training for interested dealers (including used vehicle dealers) to improve dealer knowledge of vehicles and train technicians.<ul style="list-style-type: none">○ Include training on service and installation.○ Provide an overview of how rebates work, including for used vehicles.● <i>Employers:</i> Partner with employers to educate employees on electric and plug-in hybrid vehicles and incentivize employee adoption of these vehicles. Evaluate whether to use GO MAINE as the vehicle for this effort (education on EVs would expand the scope of
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		GO MAINE) or implement through a separate effort.
	<ul style="list-style-type: none"> Decrease the purchase cost of EVs by increasing the EV rebate program by at least X% [to be filled in when modeling is complete], expanding EV rebates for used vehicles, providing a tiered rebate system based on income, expanding the dealer network offering rebates, and enhancing financing options for Low-to-Moderate Income drivers. 	<p><u>EV Rebate Program:</u></p> <ul style="list-style-type: none"> In addition to the tiered rebate system, identify and explore ‘niche’ opportunities with commercial, government, law enforcement, or non-profit uses such as contractors’ pickup trucks, municipal fleets, shuttle vans, etc. Identify incentives for participants in volunteer driver programs to purchase EVs. Expand dealer network offering rebates, especially in rural areas and for used vehicles, through education and outreach action. Reward dealers that successfully promote EVs. <p><u>Financing Options</u></p> <ul style="list-style-type: none"> Evaluate new financing programs such as loan-loss reserve programs, tax incentives, federal funding opportunities, and “Cash for Clunkers.”
	<ul style="list-style-type: none"> Advance policy options that support light-duty EV targets to achieve state GHG emissions goals. 	<ul style="list-style-type: none"> Consider a range of policy options, including utility rate design and make-ready programs.
	<ul style="list-style-type: none"> Set targets for light duty EV sales that are consistent with Maine’s statutory emissions reductions, including targets for purchases by Low- and Moderate-Income Households. 	<p><u>Target details:</u></p> <ul style="list-style-type: none"> The Maine Climate Council should set targets once emissions modeling is complete. Ground targets in modeling and continue to evaluate the predicted impacts of all vehicle types (i.e., EVs, hybrids, and plug-in hybrid vehicles).

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		<ul style="list-style-type: none"> • Continue to plan for increased electricity demand to support the growth of EVs. Detail on load profiles and locations will inform the implementation of this action.
<p>Reduce Vehicle Miles Traveled</p>	<ul style="list-style-type: none"> • Increase transit ridership by improving connections and coordination among transit agencies, investing in new and updated infrastructure, making transit easier to use, and supporting transit-oriented development. 	<ul style="list-style-type: none"> • Build upon recommendations in the Maine State Transit Plan as well as future recommendations provided by the Maine Public Transit Advisory Council (PTAC). • Recognize and support transit employees as part of the clean energy workforce. • <i>Improve existing infrastructure:</i> including, but not limited to, shelters, bicycle racks and parking, lighting, displays, sidewalks, first and last mile infrastructure. • <i>Improve connections and coordination:</i> implement strategies from Maine State Transit Plan, and regional transit plans. • <i>Make transit easier to use</i> <ul style="list-style-type: none"> ○ Support Maine’s transit agencies’ transition to General Transit Feed Specification (GTFS) for Flexible Service to provide better data for trip planning applications. ○ Complete an inventory of computer aided dispatch/automatic vehicle location and automated fare payment systems currently used by Maine transit agencies and identify challenges and opportunities to advance use of these technologies.

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		<ul style="list-style-type: none"> ○ Improve transit reliability by expanding operation hours and frequency, as warranted. ● Support transit-oriented development <ul style="list-style-type: none"> ○ Coordinate efforts with the Land Use Committee. ● Pair transit improvements with robust education and outreach.
	<ul style="list-style-type: none"> ● For transportation projects adding new capacity, mitigate modeled GHG increases by investing in modes, projects and/or programs that offset those modeled emissions. 	<ul style="list-style-type: none"> ● Offsets would apply to MaineDOT and the Maine Turnpike Authority. ● Modes that can reduce GHG emissions include but are not limited to transit, active transportation, and shared commuting, as well as electrification.
	<ul style="list-style-type: none"> ● By 2026, expand education and awareness efforts to help all Mainers understand and use transit and active transportation options within and between their communities. 	<ul style="list-style-type: none"> ● Conduct research on which populations might be most likely to shift modes to inform education and outreach efforts and maximize results. ● Ensure education and outreach efforts are conducted in all areas of the state, including in underserved areas and for disadvantaged populations. ● Expand on existing education and awareness efforts for priority populations. ● <i>Transit:</i> <ul style="list-style-type: none"> ○ Assist transit providers and GO MAINE in the development and dissemination of customer focused information that provides basic information such as types of public transportation services and the types of vehicles used for

		<p>transport (e.g., buses, vans, etc.); service areas; schedules; eligibility; fares; and trip planning, booking, and payment options. Include direct outreach to and engagement with businesses, group living facilities, human service agencies, job training centers, community groups, educational institutions, and other similar groups.</p> <ul style="list-style-type: none">○ Work with school districts statewide to develop and deliver education and outreach materials focused on the environmental benefits of transit, including school bus ridership.● <i>Active Transportation</i>: build upon current education and outreach efforts and work with active transportation advocacy organizations and other stakeholders to offer safety education for children and youth programs, drivers, bicyclists, pedestrians, and other modal users, with a focus on vulnerable users. Include opportunities to learn about mode shift.● For both campaigns, use past surveys and assessments (or build upon them, as necessary) to develop tailored campaigns to transportation system users in different regions of the states and to relevant stakeholders.
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		<ul style="list-style-type: none"> • Ensure campaigns include information on the economic implications of transit and active transportation, including cost savings to families (especially if these modes are used for commuting), economic benefits for companies, and overall economic growth opportunities at the community, regional, and state level.
	<ul style="list-style-type: none"> • Launch innovative transit pilot projects in urban and rural areas to improve and expand transit, including new intercity bus routes and regional pilots to improve coordination between state agency transportation services. 	<ul style="list-style-type: none"> • <i>Workforce Transportation Pilot</i>: pursue funding to continue supporting the delivery and assessment of Workforce Transportation Pilot-funding projects, which provide funding for innovative solutions to address transportation challenges for current and potential workers, with an emphasis on environmentally friendly approaches. To date, MaineDOT has awarded 14 grantees throughout the state, with grants ranging from \$41,600 to \$750,000. • <i>Improve Coordination between State Agencies</i>: MaineDOT and DHHS will explore implementation of a regional pilot project to improve coordination between MaineDOT and DHHS transportation services. • <i>Intercity Routes</i>: implement the \$4M Lewiston/Auburn-Portland Commuter Bus Pilot and explore other potential connections. • <i>Rapid Transit</i>: continue working with PACTS and municipalities to complete further planning and design efforts related to the

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		<p>Gorham-Westbrook-Portland Rapid Transit Study.</p> <ul style="list-style-type: none"> • Identify potential micro-transit pilots in areas not served by buses or with limited bus service. • Assess and implement pilot projects recommended through national research and analysis and/or awarded through grant programs; explore scaling up and/or permanently establishing successful pilots. • Use the Maine State Transit Plan, Maine State Rail Plan, University of Maine report “Rural Public Transportation and Maine: Review of Best Practices,” and the Workforce Transportation Pilot Program as a starting point for pilot identification.
	<ul style="list-style-type: none"> • By 2030, expand safe active transportation options by improving active transportation in at least 10 villages and downtowns, paving at least 75 miles of shoulder along highways, principally in rural areas, and developing a pipeline for high priority active transportation trail development that builds at least 10 miles of high priority off-road trails, if supported through special federal funding. 	<p><u>Downtown and Villages</u></p> <ul style="list-style-type: none"> • MaineDOT Village Partnership Initiative (VPI) will support active transportation improvements in villages and downtowns, with \$12M state and local funds per year included in MaineDOT’s Work Plan for 2025 and 2026. • Proactively apply for federal discretionary funding, which may include, but is not limited to, discretionary grant programs (such as RAISE and Reconnecting Communities) and Congressionally Directed Spending opportunities, to secure the funding needed to implement these transformative investments.

		<ul style="list-style-type: none">• Investments will be supported by MaineDOT’s Complete Streets Policy, which will be updated by the end of 2024.• Implement and assess the impact of the “Speed Limit and Roadway Context Report.” The goal of this effort is to encourage voluntary speed compliance to make vulnerable users safer. This report will be utilized by MaineDOT moving forward to set and recommend speed limits for roads based on their context. <p><u>Paving Shoulders</u></p> <ul style="list-style-type: none">• MaineDOT will implement shoulder paving on principally rural roads with a target of 15-20 miles per year. This work will incorporate the High Priority Active Transportation (HPAT) corridors under development and provide enhanced shoulders along identified HPAT segments.• Assess roads for bike infrastructure and traffic calming during striping work. <p><u>Active Transportation Trails</u></p> <ul style="list-style-type: none">• Develop a list of High Priority Active Transportation trails, reviewing work that has already been done through the Maine State Active Transportation Plan.• Explore opportunities to leverage federal Carbon Reduction Program (CRP) and Congestion Mitigation and Air Quality (CMAQ) funding, as well as pursue discretionary federal spending opportunities.
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		<p><u>Other</u></p> <ul style="list-style-type: none"> Continue working with the recently revitalized Active Transportation Advisory Council (ATAC) to discuss relevant bicycle/pedestrian efforts and priorities; use the ATAC to follow the implementation of the Maine State Active Transportation Plan.
	<ul style="list-style-type: none"> Launch active transportation partnerships and pilot programs, including a demonstration pilot program to improve safety prior to permanent modifications and e-bike pilot programs for underserved and disadvantaged individuals. 	<ul style="list-style-type: none"> Active transportation partnerships and pilot programs were identified in the Maine State Active Transportation Plan to be rolled out in the 2025-2027 Three-Year Work Plan. Explore new partnership initiative to improve safety for bicyclists and pedestrians. Implement and evaluate an e-bike program partnership between MaineDOT and Maine DOL for underserved individuals seeking transportation for employment and healthcare purposes. Continue to support E-bike programs to give people opportunities to try a bike through community or work events and through library share programs. Expand e-bike rebate program to include an individual rebate for low- and moderate-income residents.
	<ul style="list-style-type: none"> Increase shared commuting by expanding participation in the GO MAINE program. 	<ul style="list-style-type: none"> Continue to support and expand participation in GO MAINE, including expanding partnerships with businesses and other stakeholders. From the relaunch in April 2022 to the end of April 2024, GO MAINE achieved reductions of 4.4M vehicle miles traveled;

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		<p>2,883 tons of CO₂; 210,519 trips; and 172,699 gallons of gas.</p> <ul style="list-style-type: none"> • Incorporate GTSF Flex into GO MAINE trip planner. • Expand education and awareness, especially for priority populations. • Integrate transit routes and amenities (e.g. shelters, bike racks) with Park and Rides.
	<ul style="list-style-type: none"> • Over the next four years, conduct research that addresses data gaps in understanding the VMT and GHG impacts of strategies of interest. 	<ul style="list-style-type: none"> • A cross-cutting group will follow this research as well as the implementation of the MaineDOT Family of Plans to ensure the two efforts are woven together and inform future MWW actions.
	<ul style="list-style-type: none"> • Develop targets related to increased use of transit, active transportation, and shared commuting that are consistent with Maine’s statutory emissions reduction goals. 	<ul style="list-style-type: none"> • The Maine Climate Council should set these targets once emissions modeling is complete.
Accelerate Maine’s Adoption of Zero-Emission Medium- and Heavy-Duty Vehicles	<ul style="list-style-type: none"> • Invest in and demonstrate the viability of electric bus fleets in Maine with support from federal discretionary grants; explore plug-in electric-hybrid ferry options for future ferry replacements in the Maine State Ferry Service fleet as well as other regional and local ferry fleets. 	<ul style="list-style-type: none"> • Bus fleets include public transportation buses and school buses. • Implement fleet transition analyses and plans for transitioning eight transit agency fleets to electric or hybrid vehicles. • Finalize transition plans for another four transit agencies. • Apply annually, as appropriate, for FTA Low or No Emissions vehicle discretionary grant funding for hybrid and electric vehicles and associated chargers and infrastructure. In April 2024, MaineDOT applied on behalf of four transit agencies for a total of 14 hybrid

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		<p>electric vehicles and associated chargers and infrastructure.</p> <ul style="list-style-type: none"> • Pending potential award of federal discretionary grant funding, implement the Acadia Clean Bus Initiative, which will provide funding for the purchase of 23 electric buses and associated chargers and infrastructure. • By 2027, replace the Margaret Chase Smith ferry with a plug-in electric-hybrid ferry.
	<ul style="list-style-type: none"> • Over the next four years, support demonstration and pilot applications of MHD ZEV technology to showcase performance, reliability, and cost effectiveness and increase awareness and adoption of clean trucks and buses. 	<ul style="list-style-type: none"> • Initially prioritize demonstrations best suited for the technology. • Implement the rebates established through LD122 for Medium-and Heavy-Duty Vehicles.
	<ul style="list-style-type: none"> • Over the next four years, launch fleet advisory services and technical assistance to help medium- and heavy-duty vehicle fleets prepare for electrification. 	<ul style="list-style-type: none"> • Fleet Advisory Services might include: <ul style="list-style-type: none"> ○ Providing fleets with a detailed and personalized plan for electrification. ○ Pairing businesses and nonprofits with a technical consultant who will analyze fleets and prepare a tailored electrification plan. ○ Education and assistance on MDHD charging. • Ensure services are flexible to keep pace with this evolving field. • Assess opportunities to work with community development financial institutions familiar with small businesses.
	<ul style="list-style-type: none"> • Advance policy options, including consideration of utility and vehicle regulatory approaches, and develop a new MHD ZEV incentive program, to 	<ul style="list-style-type: none"> • Explore and identify vehicle and infrastructure incentives as recommendations

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	<p>help accelerate the adoption of zero-emission medium- and heavy-duty vehicles.</p>	<p>from the Medium- and Heavy-Duty Roadmap become clearer.</p> <ul style="list-style-type: none"> • To support this action, explore utility rate design and make-ready programs as recommendations from the MDHD Roadmap become clearer. Proactively work with utilities. • Evaluate demand management for MDHD vehicles through the MDHD Roadmap and the Northeast Freight Chargers Corridor Plan.
	<ul style="list-style-type: none"> • Build upon recommendations from the Medium- and Heavy-Duty Roadmap. 	<ul style="list-style-type: none"> • Build upon recommendations from the Medium- and Heavy-Duty Roadmap as they become clearer. The MDHD Roadmap will be completed at the end of 2024.