AOT Climate Initiatives

CURRENTLY UNDERWAY

Vehicle Miles Travelled (VMT) Study ($150K) – The purpose of this study is to demonstrate how smart growth strategies can reduce VMT to meet transportation emission reduction goals, and also to quantify the co-benefits of smart growth strategies beyond the GHG emissions reductions (including health, safety, and economic benefits). This study is slated to yield a report by the first quarter of 2023.

EVSE Deployment Plan – We are continuing the development of the electric vehicle charging infrastructure deployment plan for the National Electric Vehicle Infrastructure (NEVI) funding. This plan (although already well underway in VT prior to this program authorization) is required before we can allocate any funding from the program. The funding comes with specific requirements for capacity and distribution/location, outreach and engagement, equity, etc. The Plans are due for Joint Office of Energy and Transportation review by August 1, 2022 and will be approved by September 30, 2022. We hope to submit the VT plan by early-mid June.

EV Incentives – Contract with CSE to develop/administer all EV Incentive programs, with the exception of MileageSmart which Capstone will continue to oversee.

AOT Climate Initiatives

ANTICPATED ACTIVITIES

Incentives Optimization ($85K) – through amendment to the current contract with Center for Sustainable Energy we are looking to assess and make recommendations to adjust EV incentive program parameters to meet emission reduction and equity objectives. Planning for Contract amendment for early July and a report including optimization recommendations for Dec, 15, 2022.

Resilience Plan – The IIJA PROTECT program makes this plan an option, but provides an incentive to prepare the plan by reducing the non-federal match required for resilience projects from 20% to 10%. Guidance has not yet been provided.

Carbon Reduction Strategy – Capital Program GHG Accounting Methodology and Baseline – This will be the first phase of the Carbon Reduction Strategy. Use CRP funds to develop the methodology to quantify the effect on GHG emissions for the investments in a Capital Program at the appropriate level (program or project - TBD). Apply the analysis for the FY 24 Capital Program (maybe FY 23 as well) to establish a baseline and for reporting during the 2023 legislative session. We will want this baseline analysis to inform how best to invest the related CRP funds and to quantify the benefits towards our emissions reduction goals in the GWSA; all of which will be outlined in the required Carbon Reduction Strategy.

Carbon Reduction Strategy - Finalize – This will build off the GHG accounting baseline and will complete all of the requirements in the IIJA CRP. It is due by Nov 15, 2023.

AOT Climate Initiatives

REMAINING CONSIDERATIONS

Emissions – per the requirements of the GWSA and recommendations of the CAP, ANR is leading an effort to measure and track progress for all sectors. They have developed an RFP for the work and are beginning to brainstorm metrics for each sector. Thus far, potential transportation metrics include: Diesel sales, Gasoline sales, Electric vehicles registered, ICEV vehicles "retired", Trips on public transit, Vehicle Miles traveled (Source is traffic counts), Fleet emissions/makeup; Other Local transit agency data, Bike/pedestrian metrics. While these metrics will provide a qualitative report for reductions emissions, we need the TA to inform quantitative progress towards the goals.

Public Outreach – Public outreach is an important component of all other elements listed and several efforts are occurring and planned for. The Climate Council through ANR Climate Office is working under a defined three-pronged approach. The Transportation Task Group continues to work to provide webinars for Councilors, Subcommittee members, and the public on options in the transportation sector to reduce GHG emissions such that a recommendation for filling the TCI gap policy might be made by the Council mid to late Fall. Thus far three such outreach webinars (Level Set, Transportation Fuel Standard, and Cap and Invest) have occurred. Other Task Group outreach overlaps with that of ANR for rule making for ACCI and ACT. VTrans too is conducting stakeholder and public outreach for its EVSE Deployment Plan and will be as the CRS is developed. The critical issue for consideration is oversaturation and burnout so careful planning and coordination is needed.

AOT Climate Initiatives

REMAINING CONSIDERATIONS

Transportation Task Group Technical Analysis (TA) RFP – This RFP is meant to build off and analyze recommendations included in the Transportation Task group memo to fill the TCI gap (WCI/Cap and invest and clean transportation standard) as well as other policies, actions, etc. The Task Group is looking for this analysis to inform a policy recommendation to fill the TCI gap by mid Fall. This analysis will build off existing data and analyses (Pathways, EAN, etc.), and some that are currently under development (VMT and Incentive Optimization) and would be used to define the emissions reductions Vermont is currently on track to achieve from the transportation sector, and what reductions are possible via the implementation of additional actions and policies. VTrans had committed $50,000 towards this analysis through Planning dollars. ANR was seeking a grant from the Climate Alliance to contribute $50-$70k more. The Climate Alliance can only commit $21,000 and suggested use of the IIJA CRP funds to conduct the analysis. VTrans is currently in the process of determining the eligibility of IIJA CRP to support the whole of this effort. (See remaining slides with notes on IIJA CRP)

Georgetown Climate Council – has expressed an interest in performing policy and technical analyses. It is unclear to VTrans/ANR if this would include independent funding or if they would require funding to support the analyses.

H.740 - Governor vs CoC					
($millions)					
Finance & Management 5.10.22	**Governor**	**House**	**Senate**	**Final**	**Comments**
Climate Change Mitigation					
Weatherization - DCF-OEO	45.00	45.00	45.00	45.00	Home Weatherization Assistance Program, FY23 and FY24
Weatherization - PSD for EVT	35.00	35.00	35.00	35.00	Through 12/24
Highway Charging Stations - AOT	2.00	2.00	2.00	2.00	
ACCD - Level I and II upgrades - for VHA, VHCB, etc.	10.00	10.00	10.00	10.00	Shifted to 1X GF
Level II charging - FPR and F&W	3.00	3.00	-		Not funded
Clean Vehicle Options - AOT	14.00	14.00	14.00	14.00	Incentives for new PEVs
AOT - MileageSmart	3.00	3.00	3.00	3.00	Grant to Community Action Agencies
AOT - VT Replace Your Ride	3.00	3.00	3.00	3.00	
AOT - E-bikes, E-snowmobiles, E-ATVs	2.00	2.00	-	0.05	E-bike incentives only, T-Fund
AOT for Public Transit fare subsidies			1.20	1.20	1X GF to operate routes on a zero fare basis
AOT for MTI grant program			1.00	1.50	1M GF plus $500k in T-Fund
PSD - Advanced Metering Infrastructure		5.00	8.00	8.00	1X GF
PSD - Home Electrical Systems Upgrade	20.00	25.00	25.00	25.00	Includes $5M for "switch and save" program
PSD - Load Management and Storage	2.00	2.00	2.00	2.00	
DPS - Hazard Mitigation Buy-Out	14.75	14.75	14.75	14.75	
ANR-DEC - Hazard Mitigation Buy-Out	0.25	0.25	0.25	0.25	
AAFM - Agronomic Practices	5.00	4.76	4.76	4.76	To educate about sustainable soil-based practices
ANR-FPR - Urban and Community Forestry	1.00	1.00	1.00	1.00	
ANR GWSA support	0.08	0.08	0.08	0.08	Contractual support for GWSA implementation
DPS-VEM hazard mitigation	10.00	10.00	8.00	8.00	FEMA match, studies/analysis
ANR-DEC climate package part #3	0.65	0.65	0.65	0.65	Climate office, CAP monitoring and database
PUC/PSD - Clean Heat Standard	-	1.20	1.20	1.20	H.715, vetoed
BGS - Municipal Energy Resilience Grant Program		35.00	35.00	45.00	ARPA H.518
Subtotal	**170.73**	**216.69**	**214.89**	**225.44**	

AOT Climate Initiatives

FHWA Carbon Reduction Program – VTrans considerations

Phase I - Impact of the AOT Capital Program on GHG Emissions

- Develop the GHG emission assessment methodology,
  - Document what other state DOTs, MPOs and other transportation agencies are doing, is there an existing approach that will work for VT
  - Test it on one or more previous Capital Programs (probably need to evaluate a few years of CPs).
  - Need to determine which programs will be evaluated and at what level (types of projects and services to be evaluated, and at what level - specific projects or services, by program, or something in between.
  - Need to quantify GHG emissions related to Agency construction and operation activities – materials, fleets, buildings, etc.
  - The methodology should be a tool that AOT staff can apply to assess future CPs for reporting to the legislature, provide training and documentation.
- Apply the GHG methodology to the SFY 24 Capital Program for reporting to the legislature and Climate Council

AOT Climate Initiatives

FHWA Carbon Reduction Program – VTrans considerations

Phase II – Develop a Carbon Reduction Strategy

- Based on Phase 1 – Quantify the gap that needs to be closed in GHG reduction accounting for current level of investments in EVs and overall EV adoption, current programs like bike, ped, transit, TDM and the impact of the other regulatory options being considered (WCIT, Energy Standard). Also need to consider impact of Agency construction and operation related GHG emissions.
- Identify the strategies necessary to help achieve transportation GHG reduction targets
  - Can start with the list in the guidance that you listed in the document
  - Quantify costs and GHG reduction potential of different strategies
  - Determine an optimization methodology considering GHG reduction, cost, equity and maybe other factors
  - Develop an optimized group of strategies. Possibly identify budget targets by program type.

AOT Climate Initiatives

FHWA Carbon Reduction Program – VTrans considerations

<u>VTrans Programs (Existing and Potential)</u>

- Vehicle Incentives
- EV Charging Infrastructure
- Transportation Demand Management
  - Bike/Ped – TA Grants, Complete Streets
  - Go!Vermont - carpooling, ridesharing, public transit, and alternative modes of transportation
  - Park n Rides – carpool, public transit
  - Public Transit [provides financial and technical assistance to various transit authorities]
    - Mobility and Transportation (MTI) Grants
    - E-busses
    - ?
  - Rail – freight and passenger
  - HSD – complete streets, idling reduction/ relieve of traffic congestion,???)
- Fleet – light duty, medium/heavy duty,
- Facilites – lighting, heating, EV Charging, solar
- DMV – policies to aid the reduction of GHG reductions??
- Construction – diesel filters, idling, products/materials life cycle
- ROW – broadband for greater potential for telework, solar, carbon sequestration
- CR/VTTC – Labor and Workforce

AOT Climate Initiatives

FHWA Carbon Reduction Program – VTrans considerations

Related Documents:

Existing:

- CAP
- CEP
- Transportation Energy Profile
- VTrans Zero-Emissions Transition Plan

Future:

- Sustainable Transportation Plan (CAP)
- Carbon Reduction Strategy (IIJA CRP)
- Resiliency Plan (IIJA PROTECT)
- EVSE Deployment Plan (IIJA NEVI)

FHWA Carbon Reduction Program Guideline Notes

Guidance released by USDOT on April 21, 2022. CRP is a new core highway program authorized in the IIJA. Vermont's FFY22 CRP funding: $6,308,809. Funding will be made available annually through the 5-year period covered by the IIJA ($32,831,293 over five years).

Program Description

- Program purpose: to fund projects and strategies designed to reduce transportation emissions, defined as carbon dioxide (CO2) emissions from on-road highway sources.
- Eligible projects: funds may be obligated for projects that support the reduction of transportation emissions, including, but not limited to:
  - a project to establish or operate a traffic monitoring, management, and control facility or program, including advanced truck stop electrification systems.
  - a public transportation project eligible under 23 U.S.C. 142
  - a transportation alternative (as defined under the Moving Ahead for Progress under the 21st Century Act [23 U.S.C. 101(a)(29), as in effect on July 5, 2012]), including, but not limited to, the construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation.
  - a project for advanced transportation and congestion management technologies.
  - deployment of infrastructure-based intelligent transportation systems capital improvements and the installation of vehicle-to-infrastructure communications equipment.
  - a project to replace street lighting and traffic control devices with energy-efficient alternatives.
  - development of a carbon reduction strategy developed by a State per requirements in 23 U.S.C. 175(d).

FHWA Carbon Reduction Program Guideline Notes

- a project or strategy designed to support congestion pricing, shifting transportation demand to nonpeak hours or other transportation modes, increasing vehicle occupancy rates, or otherwise reducing demand for roads, including electronic toll collection, and travel demand management strategies and programs.
- efforts to reduce the environmental and community impacts of freight movement.
- a project that supports deployment of alternative fuel vehicles, including–
  - acquisition, installation, or operation of publicly accessible electric vehicle charging infrastructure or hydrogen, natural gas, or propane vehicle fueling infrastructure; and
  - purchase or lease of zero-emission construction equipment and vehicles, including the acquisition, construction, or leasing of required supporting facilities.
- diesel engine retrofits.
- certain types of projects to improve traffic flow that are eligible under the CMAQ program, and that do not involve construction of new capacity.
- any other STBG-eligible project, if the Secretary certifies that the State has demonstrated a reduction in transportation emissions, as estimated on a per capita and per unit of economic output basis.
- Other projects that are not listed above may be eligible for CRP funds if they can demonstrate reductions in transportation emissions over the project's lifecycle.

FHWA Carbon Reduction Program Guideline Notes

- Projects that may be eligible, subject to approval by FHWA:
  - Sustainable pavements technologies that reduce embodied carbon during the manufacture and/or construction of highway projects could be eligible for CRP if a lifecycle assessment (LCA) demonstrates substantial reductions in CO2 compared to the implementing Agency's typical pavement-related practices.
  - Projects including alternative uses of highway right-of-way (ROW) that reduce transportation emissions are also eligible. For example, renewable energy generation facilities, such as solar arrays and wind turbines, can reduce transportation emissions. Biologic carbon sequestration practices along highway ROW to capture and store CO2 may demonstrate potential for substantial long-term transportation emissions reductions.
  - Micromobility and electric bike projects, including charging infrastructure.
- Matching funds: 20%
- States may transfer up to 50% of CRP funds to other apportionments.
- Suballocation required as follows:
  - 65% to be suballocated based on the following population thresholds – 1) Urbanized areas with an urbanized area population greater than 200,000, 2) Urban areas with population at least 5,000 and no more than 49,999, and 3) Areas with population of less than 5,000.
  - 35% can be obligated in any area of the state.
- Projects must be identified in the STIP and be consistent with the LRTP.

FHWA Carbon Reduction Program Guideline Notes

Coordination, Consultation & Policy Requirements

- Before obligating CRP funds for an eligible project in an urbanized area that is not a transportation management area, a State shall coordinate with any MPO that represents the urbanized area prior to determining which activities should be carried out under the project.
- Before obligating CRP funds for an eligible project in a rural area, a State shall consult with any regional transportation planning organization or MPO that represents the rural area prior to determining which activities should be carried out under the project.
- Carbon Reduction Strategy (due November 15, 2023)
  - Requires each State, in consultation with any MPO designated within the State, to:
    - develop a carbon reduction strategy not later than 2 years after enactment.
    - update that strategy at least every four years.
  - Content requirements:
    A. Support efforts to reduce transportation emissions.
    B. Identify projects and strategies to reduce transportation emissions, which may include projects and strategies for safe, reliable, and cost-effective options—
       i. to reduce traffic congestion by facilitating the use of alternatives to single-occupant vehicle trips, including public transportation facilities, pedestrian facilities, bicycle facilities, and shared or pooled vehicle trips within the State or an area served by the applicable MPO, if any.
       ii. to facilitate the use of vehicles or modes of travel that result in lower transportation emissions per person-mile traveled as compared to existing vehicles and modes; and
       iii. to facilitate approaches to the construction of transportation assets that result in lower transportation emissions as compared to existing approaches.

FHWA Carbon Reduction Program Guideline Notes

C. Support the reduction of transportation emissions of the State.
D. at the discretion of the State, quantify the total carbon emissions from the production, transport, and use of materials used in the construction of transportation facilities within the State.
E. be appropriate to the population density and context of the State, including any metropolitan planning organization designated within the State.

- Encouraged overlap with USDOT Policy Priorities (not required but encouraged). Encourages States and other funding recipients to prioritize the following areas in all federal highway investments and in all appropriate projects, using relevant federal-aid funding, including funds from CRP:
  - *Safety for all users, including Safe Streets* – in pursuit of the goal of achieving zero highway deaths.
  - *Transit Flex* – flexing funds into eligible public transit projects.
  - American with Disabilities Act – Improve accessibility and to implement transition plans.
  - *Equity* – for projects and project elements that proactively address racial equity, workforce development, economic development, and remove barriers to opportunity. FHWA expects recipients of CRP funds to engage with all impacted communities.
  - *Climate Change and Sustainability* – whole-of-government approach to reducing economy-wide net greenhouse gas pollution by 2030.
  - *Labor and Workforce* – Opportunities to support the creation of good-paying jobs, including jobs with the free and fair choice to join a union, and the incorporation of strong labor standards, such as the use of project labor agreements; the use of an appropriately trained workforce (in particular registered apprenticeships and other joint labor-management training programs)
  - *Truck Parking* – to address truck parking shortages and conform with the requirements of Jason's Law.