

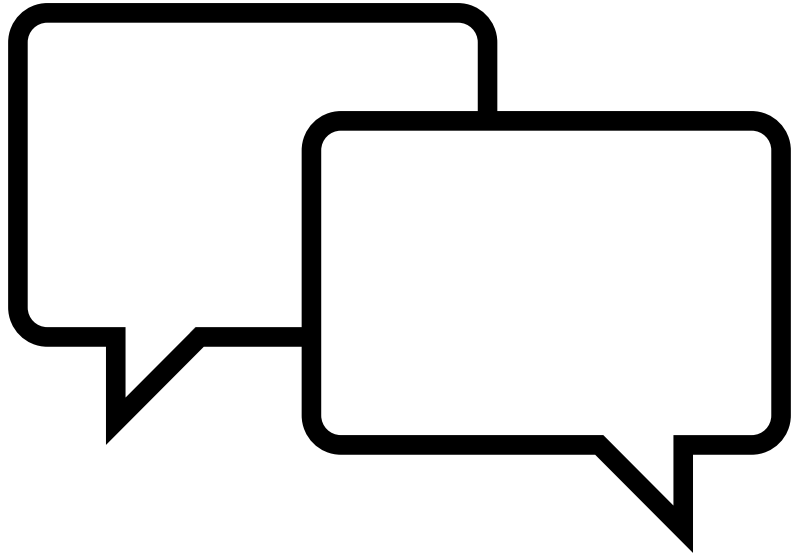
Vermont Transportation Carbon Reduction Strategy

PUBLIC MEETING

MARCH 23, 2023

Zoom Webinar Platform

- If you need help with Zoom platform:
 - Use the chat feature at bottom of screen
 - Send email to ncampbell@fhstudio.com
- To call into meeting:
 - Phone number: (305) 224-1968
 - Webinar ID: 884 1972 8441
 - Passcode: 379131
- Please close all apps/programs and limit streaming or downloads
- This meeting is being recorded



How to Participate

- All attendees are muted during the presentation and will not be on video
- Discussion & polling will follow the presentation
- Three ways to participate:
 - Raise your hand to speak
 - Type your comment or question in the Zoom Q&A button
 - Respond to the polling questions at the end of the presentation

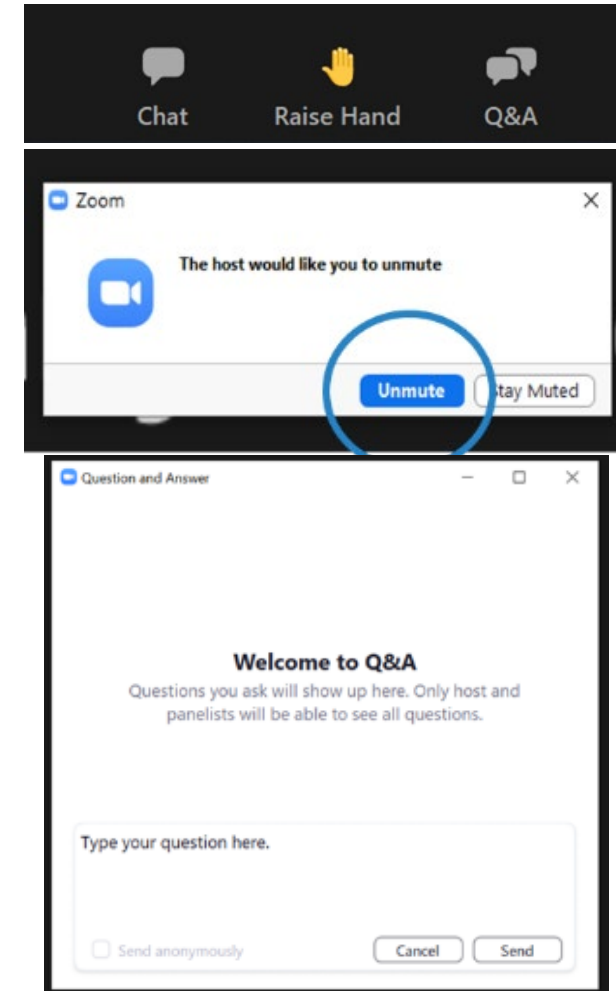
To Make Comments

Verbal Comments

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- Please limit comments to 5 minutes

Written Comments

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Agenda

- Project Team Introductions
- Project Overview
- Vermont's Transportation Greenhouse Gas (GHG) Emissions
- Evaluation of VTrans' Capital Program
- Gap Analysis
- Carbon Reduction Strategies & Scenario Analysis
- Next Steps

Project Team



Andrea Wright, Environmental Policy Manager
AOT Project Manager



Chris Porter, Cambridge Systematics
Consultant Project Manager



Ben Eskin, Cambridge Systematics
Consultant Deputy Project Manager



Laura Parete, FHI Studio
Community Engagement



Hannah Brockhaus, FHI Studio
Community Engagement

Project Objectives

Support Vermont's aggressive requirements for GHG emissions reduction

- Reduce emissions 40% below 1990 levels by 2030
- Reduce emissions 80% below 1990 levels by 2050
- Transportation sector contributes to 40% of reduction

Support U.S. DOT requirements for each State to develop a Carbon Reduction Strategy

- Describe how new Carbon Reduction Program funding will be used

U.S. DOT Carbon Reduction Program

Infrastructure Investment and Jobs Act (IIJA)

\$32 million

\$6.3 million annually over 5 years

- Public Transit
- Transportation Alternatives
- Congestion Mitigation
- Efficient Street and Traffic Lighting
- Travel Demand Management Strategies
- Deployment of Alternative Fuel Vehicles and related Infrastructure
- Carbon Reduction Strategy

Strategy Steps

Phase 1

Estimate GHG emissions and reductions associated with VTrans' Capital Program

- Baseline projection
- Construction & maintenance
- Transportation system user emissions

Phase 2

Develop Carbon Reduction Strategy

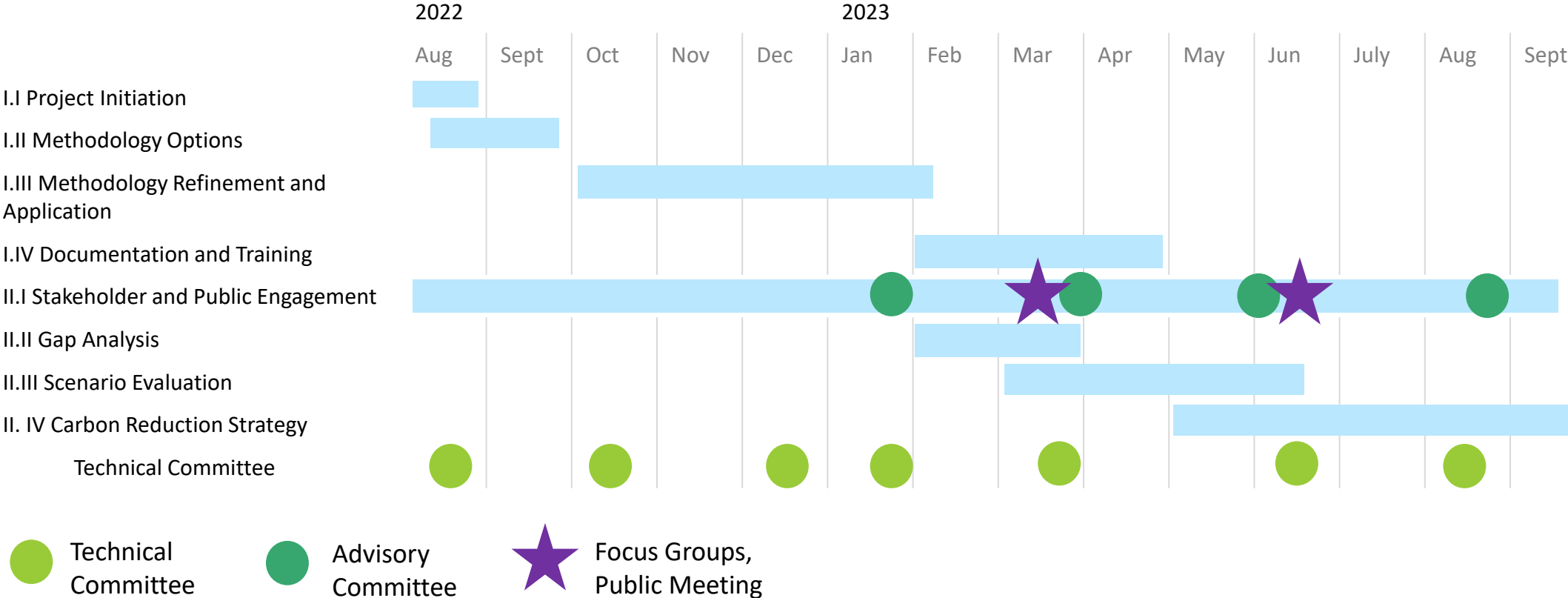
- Stakeholder and public engagement
- Gap analysis
- Strategy and scenario development and evaluation
- Carbon Reduction Strategy

Public Engagement

- Two sets of virtual public meetings
- Two rounds of focus groups
 - Community-based organizations, including equity/environmental justice groups
 - Business community
 - Transportation and freight industry
 - Environmental groups
 - Regional planning and public transportation
 - Elected officials



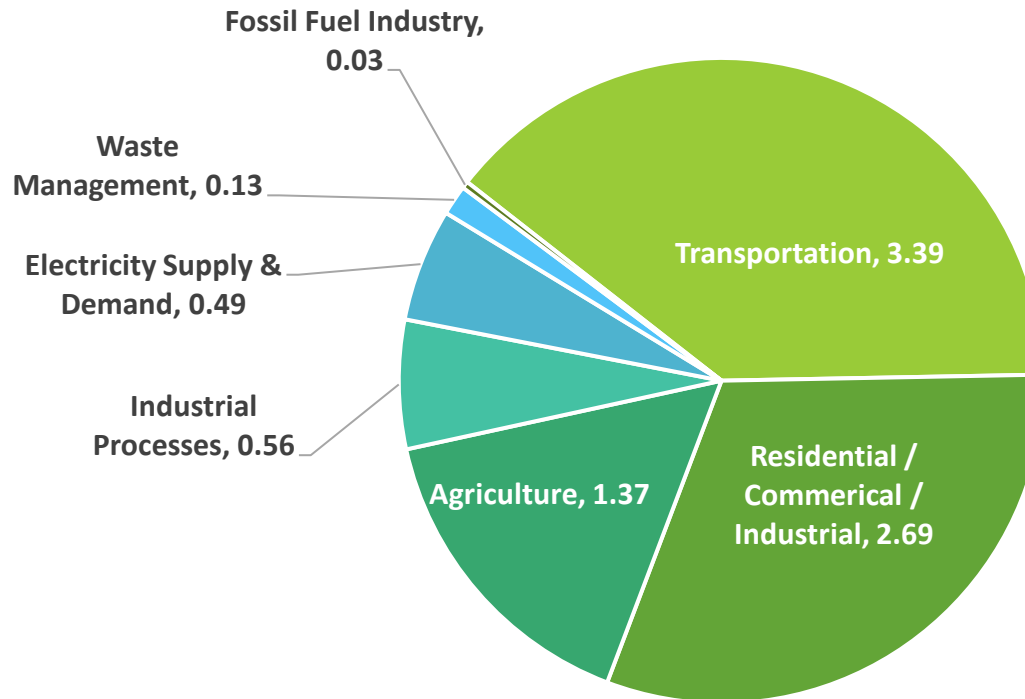
Project Timeline



Phase 1 – VTrans Capital Program Evaluation

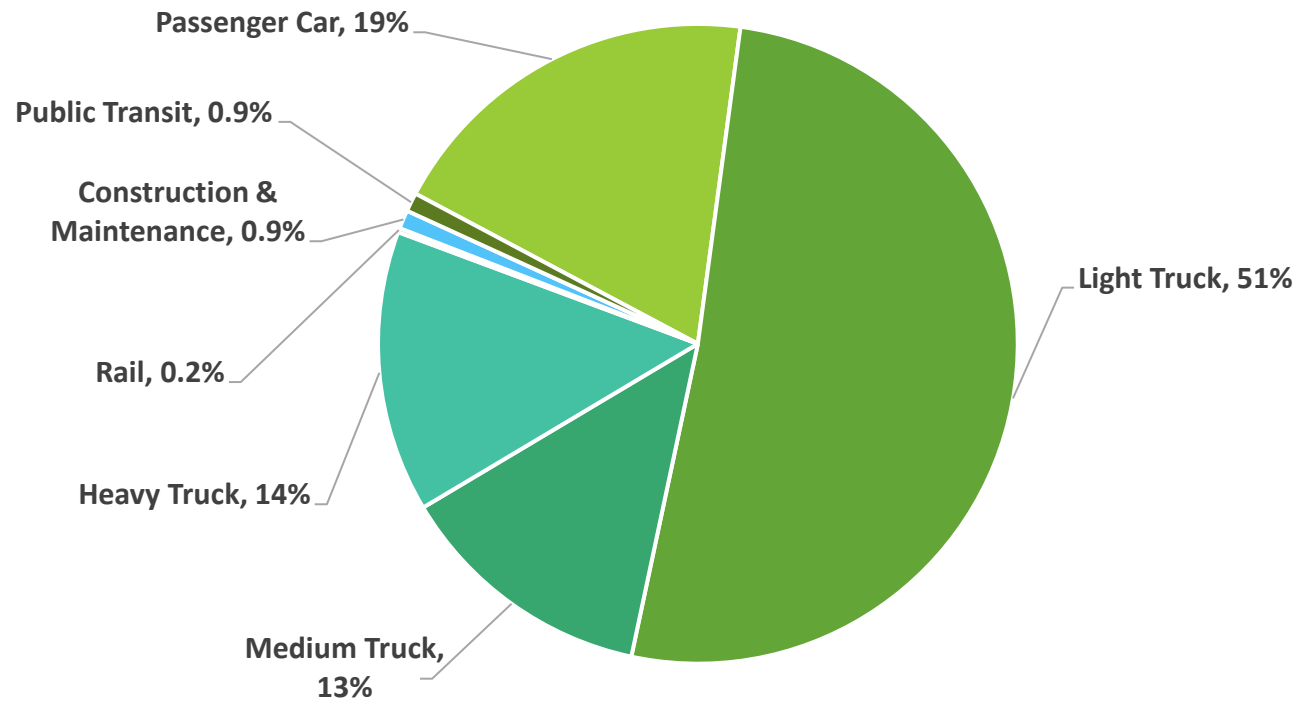
Vermont's Transportation Greenhouse Gas Emissions Intro Slide

Vermont Emissions By Sector (2017, MMT CO₂e)



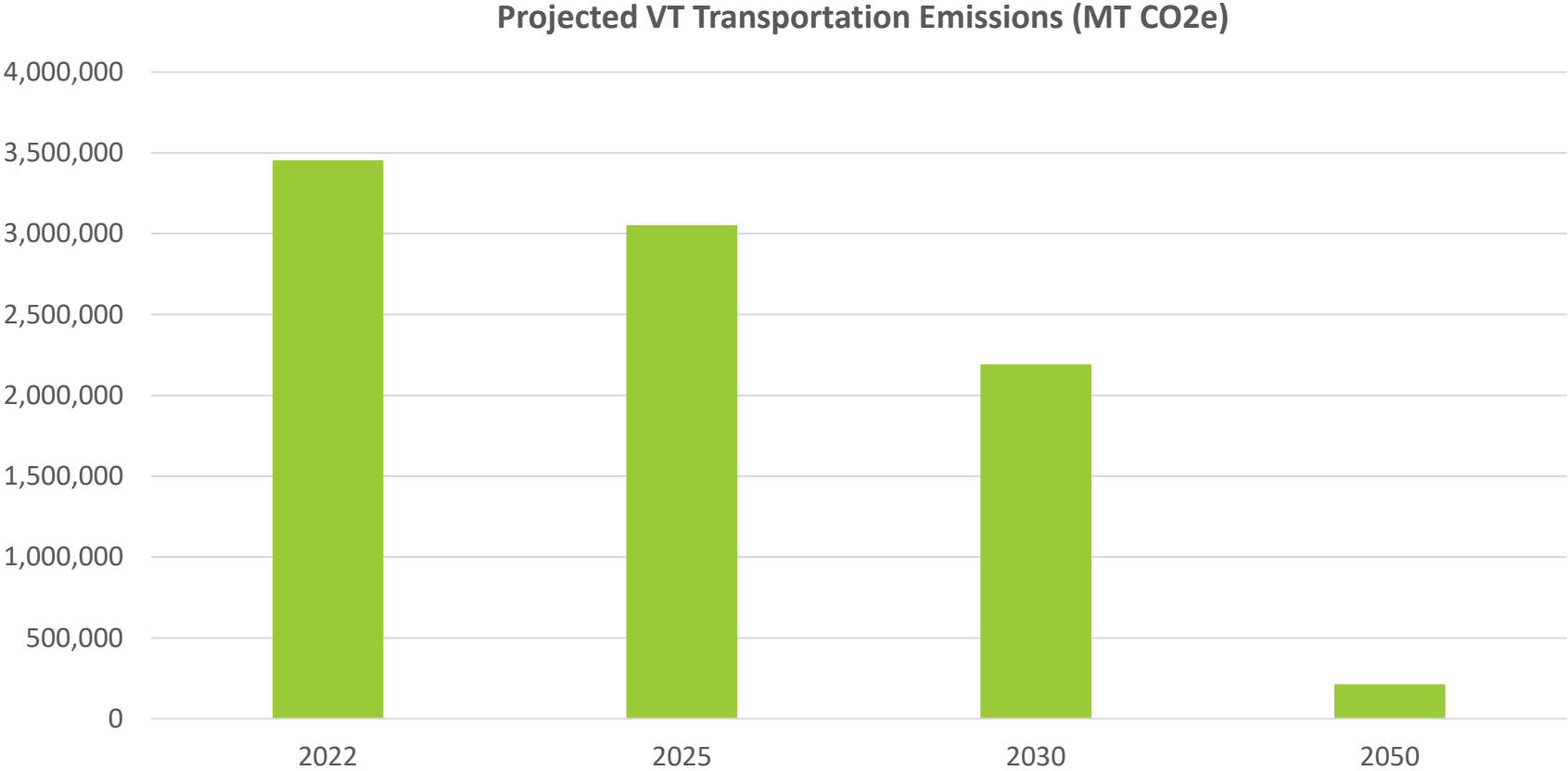
Vermont's Transportation Greenhouse Gas Emissions

2022 Transportation Emissions by Source

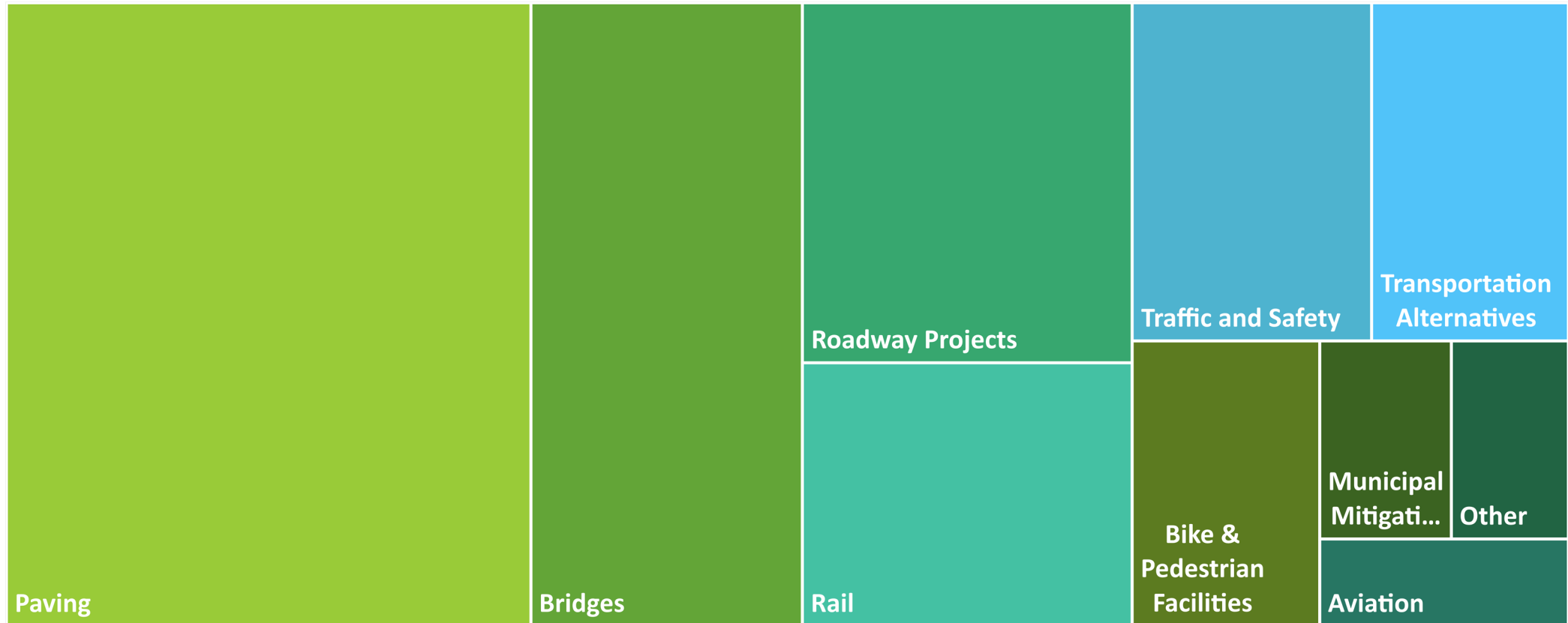


3.45 million metric tons CO₂e

Vermont's Transportation Greenhouse Gas Emissions (Projected)



VTrans' Capital Program



*Depicts the number of programmed projects, by project type, in the capital program

GHG Effects of the Capital Program



Construction and Maintenance

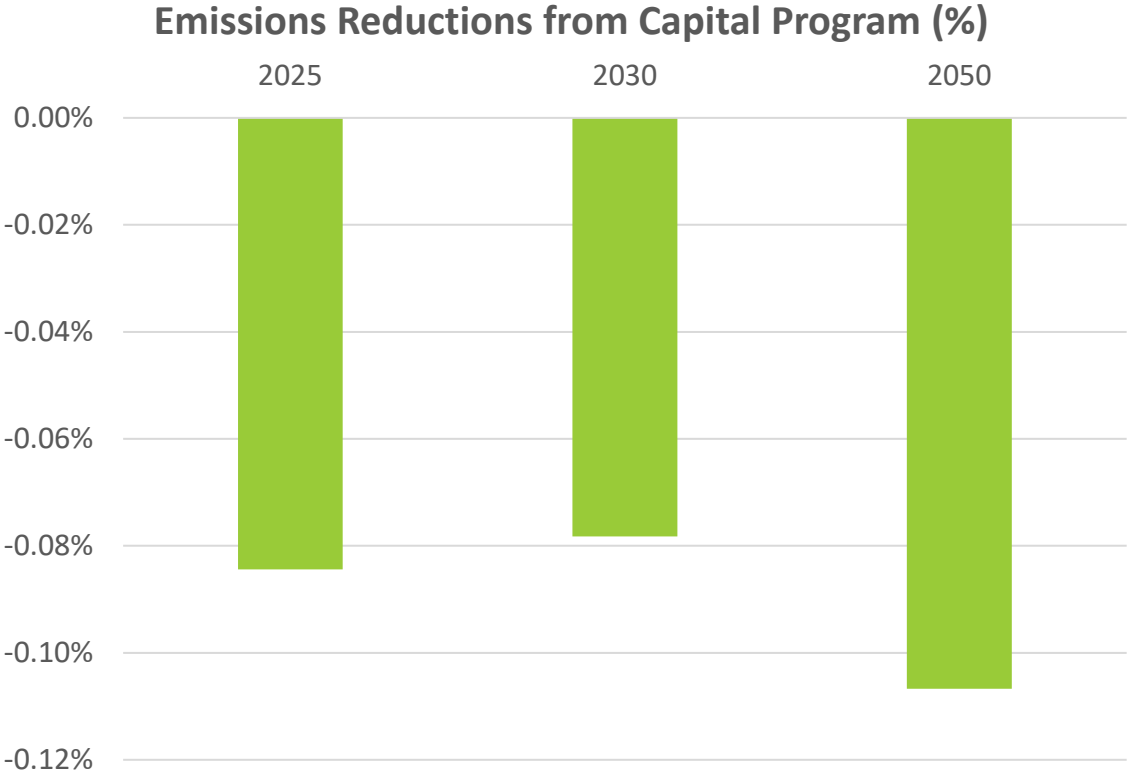
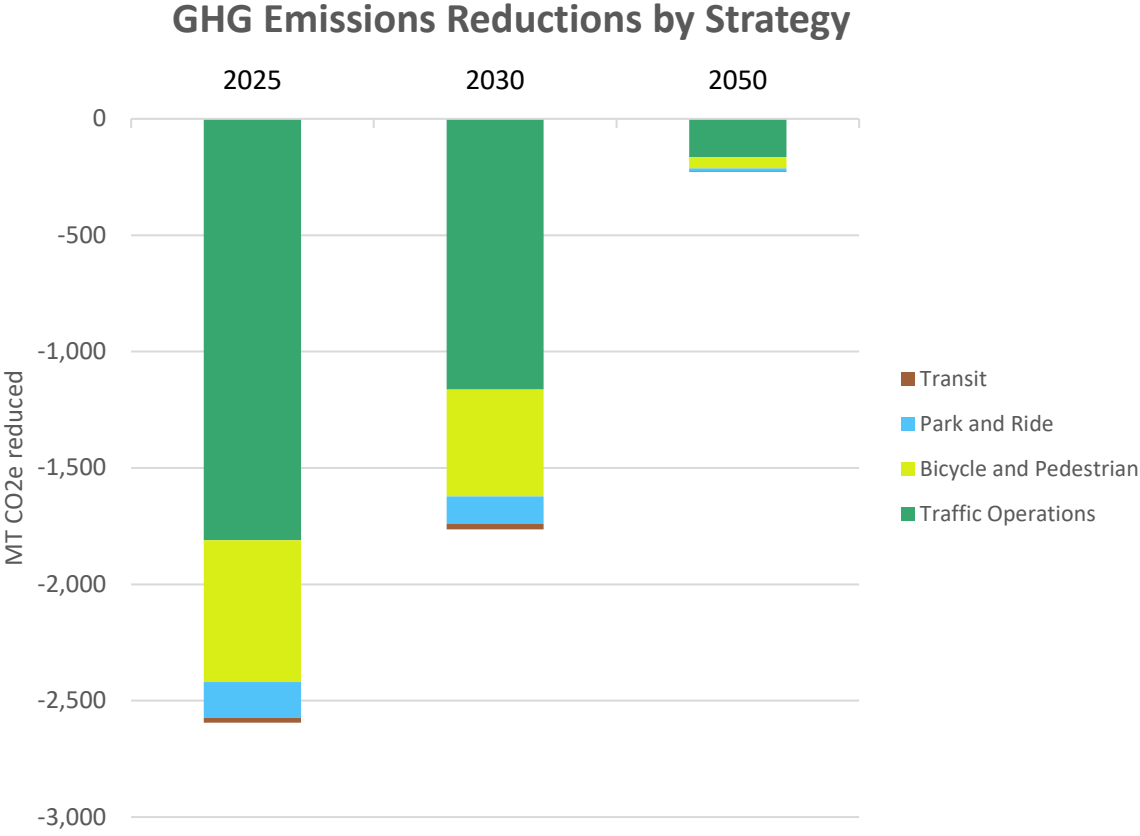


Transit and Rail Operations



**Changes in System User Emissions
(Cars and Trucks)**

Emissions Summary – Impact of Capital Program



Summary of VTrans Capital Program Findings

Construction & maintenance and transit operations each comprise ~1% of total statewide on-road emissions

Higher electrification reduces impact of VMT measures and traffic operations (as measured in tons GHG)

Current programmed projects in the capital budget will have a small GHG impact (<0.10%)

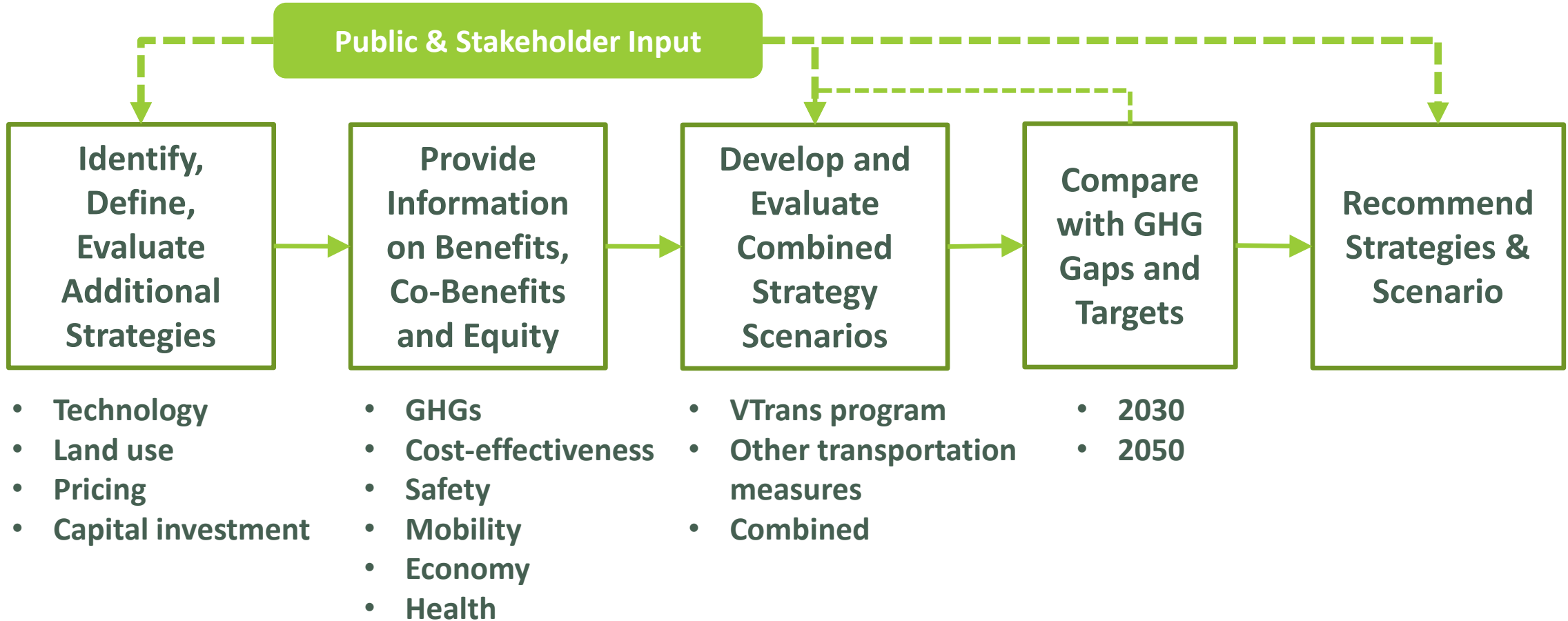
VTrans' Capital Program has limited ability to reduce emissions through VMT reduction and traffic operations

Phase 2 – Gap Analysis, Strategies, and Scenarios

Gap Analysis



Strategies and Scenario Analysis



Possible Strategies to Close Gap

Bike, Pedestrian, & Transit Strategies



Land Use & Tele-Travel Strategies



Clean Car/Truck Incentives and Requirements



Carbon Management Strategies



Traffic and Roadway Strategies



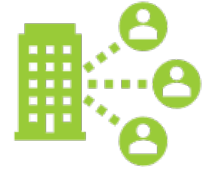
Bike, Pedestrian & Transit Strategies



- Pedestrian/bicycle infrastructure
- Transit (scheduled, on-demand/microtransit)
- Micromobility services/incentives
- Travel demand management
- Freight rail



Land Use & Tele-Travel Strategies



- Land Use/Smart Growth
- Tele-travel Substitution



Clean Car/ Truck Strategies



- Incentives
 - Electric vehicle incentives
 - EV charging infrastructure/incentives
 - Other low-carbon fuels (biofuels, hydrogen, etc.)
 - Feebates (reward high MPG)
- Requirements
 - Advanced Clean Fleets (electrify truck fleets, buses, Uber/Lyft, etc.)
 - No new vehicle light-duty (car/pickup/SUV) internal combustion engine sales



Carbon Management Strategies



- Cap-and-invest
 - Cap emissions
 - Auction allowances
 - Reinvest proceeds in clean transportation
- Carbon pricing
- Clean Transportation Standard



Image Credit: Shutterstock.com/ Elnur

Traffic and Roadway Strategies



- Traffic efficiency/smooth flow
- Advanced-technology rideshare/high-occupancy vehicles/CAVs
- Low-carbon infrastructure (construction & maintenance)



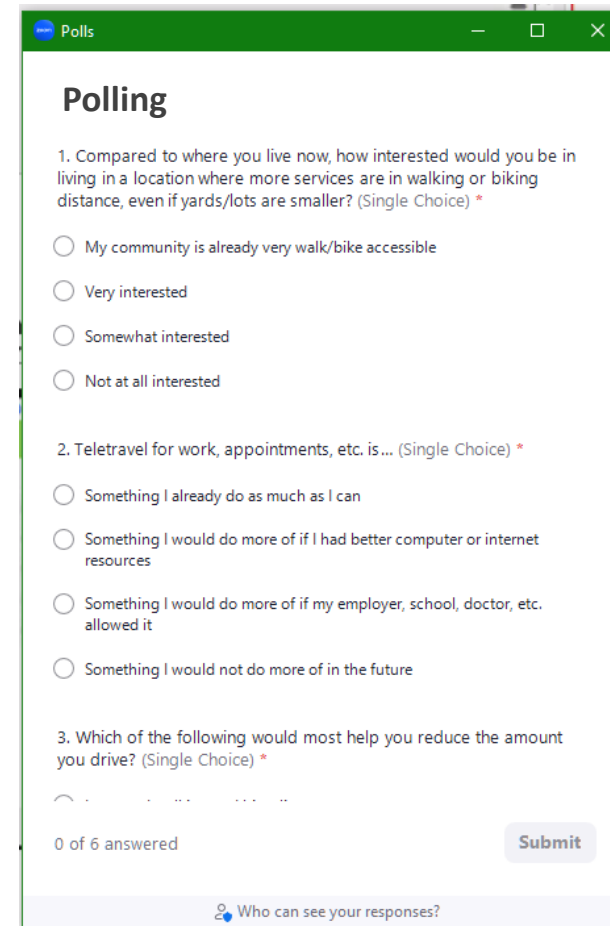


Let's hear from you!



Strategies – How to Participate in Polling

- A pop-up window with polling questions will appear
- Click on your response and click submit for each question



The screenshot shows a web browser window titled "Polls". The main content is a "Polling" form with the following questions and options:

Polling

1. Compared to where you live now, how interested would you be in living in a location where more services are in walking or biking distance, even if yards/lots are smaller? (Single Choice) *

- My community is already very walk/bike accessible
- Very interested
- Somewhat interested
- Not at all interested

2. Teletravel for work, appointments, etc. is... (Single Choice) *

- Something I already do as much as I can
- Something I would do more of if I had better computer or internet resources
- Something I would do more of if my employer, school, doctor, etc. allowed it
- Something I would not do more of in the future

3. Which of the following would most help you reduce the amount you drive? (Single Choice) *

0 of 6 answered

Submit

Who can see your responses?

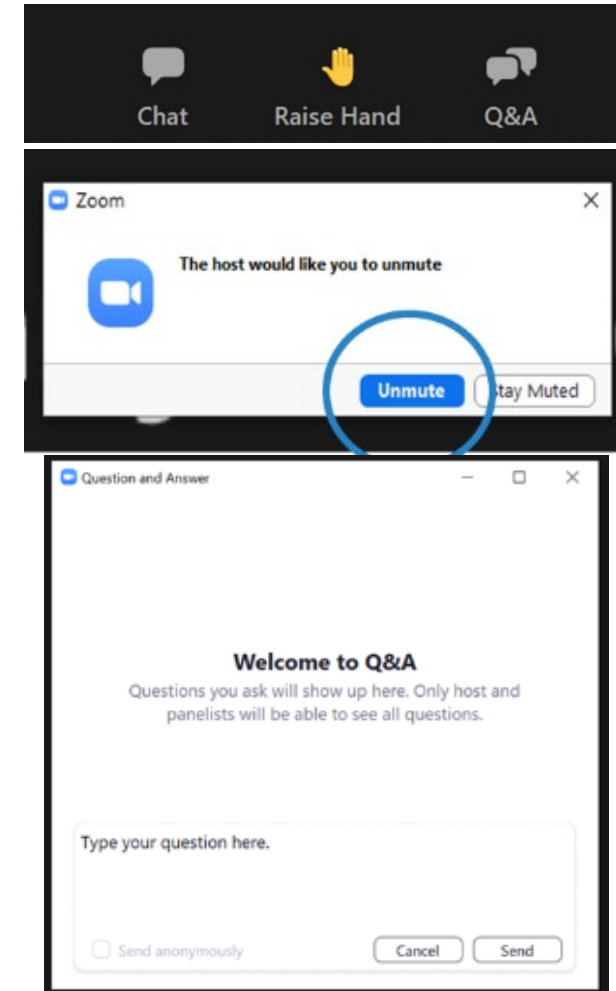
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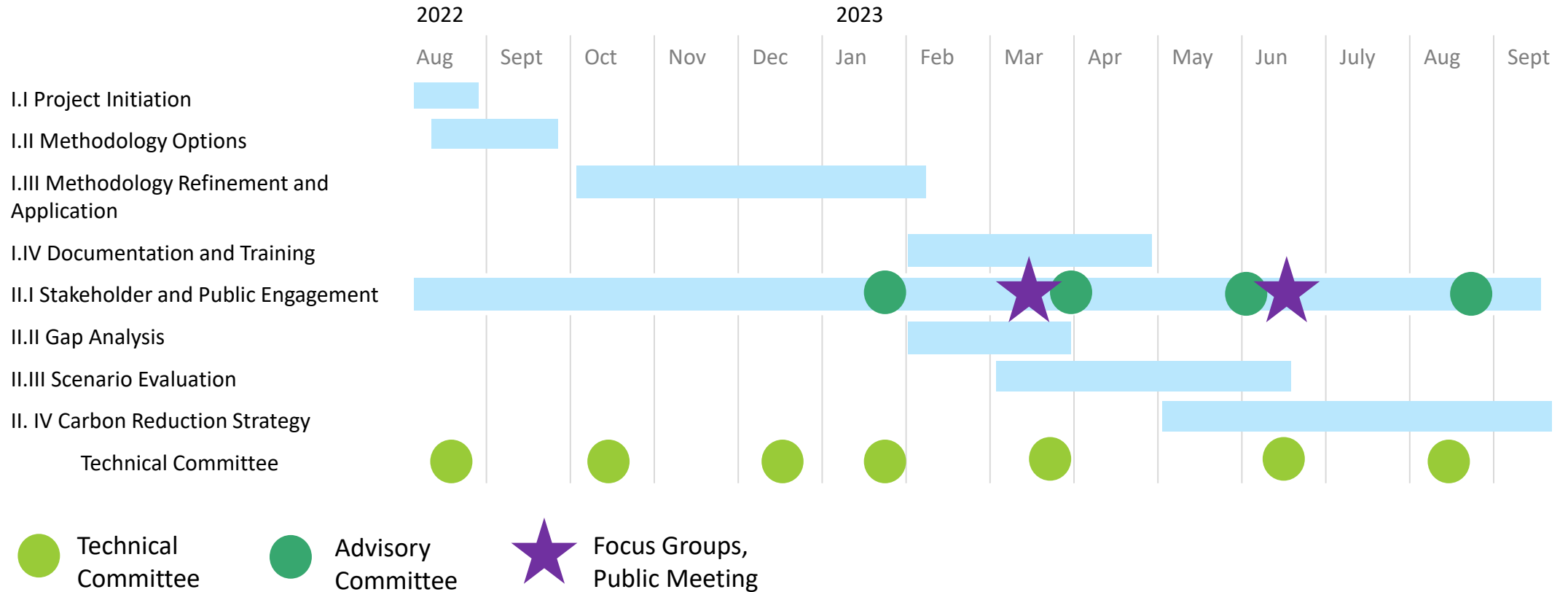


Questions & Comments



PUBLIC MEETING – SPRING 2023

Next Steps - Project Timeline



Thank You!



PROJECT WEBSITE

<https://vtrans.vermont.gov/form/carbon-reduction-strategy>

Contact:

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Vermont Agency of Transportation