Meeting Procedures

Before beginning, a few reminders to ensure a smooth discussion:

• Panel members should be on mute when not speaking.

• Video is encouraged for Panel members, in particular when speaking.

• We will not be muting individuals for this discussion; the chair will call on members individually, at which time please unmute.

• If technical problems arise, please contact Gina McIntyre at gina.mcintyre@dot.ny.gov
Agenda

• Welcome/Introductions
• Clean Transportation Roadmap Presentation
• Developing Recommendations/Assignments
• Liaisons/Cross Sector Collaboration
• Expert/Stakeholder Input
• Next Steps

• www.Climate.ny.gov
Panel Member
Introductions

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Transportation Advisory Panel Members

Marie Therese Dominguez, Chair
NYSDOT

Jared Snyder
NYSDEC

Paul Allen, M. J.
Bradley &
Associates

Dimitris Assanis,
Stony Brook
University

Steve Finch, AAA
Western & Central
New York

Albert Gore III, Tesla

Kendra Hems,
Trucking Association
of New York

Elgie Holstein,
Environmental
Defense Fund

Renae Reynolds,
New York City
Environmental
Justice Alliance

Porie Saikia-Eapen,
Metropolitan Transit
Authority

John Samuelsen,
Transport Workers
Union of America
AFL-CIO

Nick Sifuentes,
TriState
Transportation
Campaign

Kerene Tayloe, WE
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League of
Conservation Voters

Craig Turner, Buffalo
Niagara
International Trade
Gateway
Organization

Nancy Young,
Airlines for America

Bob Zerrillo, New
York Public Transit
Association
Clean Transportation Roadmap

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Clean Transportation Roadmap

> Key Goals

• Chart possible courses to 2030/2050 GHG emissions targets for transportation sector

• **Inform CAC Transportation Advisory Panel** by answering key questions:
  - How much GHG reduction will current transportation policies achieve? How much more is needed to meet 2030/2050 goals?
  - What are current and future trends? What should initial priorities be?
  - What policy options can best accelerate adoption? How much would they cost? How could NYS fund these?
  - How much GHG reductions can come from ZEVs? How much GHG reduction can come from other strategies like clean fuels, increased transit, TDM? What policies help realize these savings?

• Help align and inform policies of NYS agencies working on clean transportation initiatives

> Team of consultants led by Cadmus Group

> Will be complemented by additional analysis of electric grid impacts, EV infrastructure needs
# How the Roadmap Fits In

<table>
<thead>
<tr>
<th>CAC Transportation Advisory Panel</th>
<th>Clean Transportation Roadmap</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Activity</strong></td>
<td>• Develop GHG emission reduction policy recommendations for the transportation sector for NYS</td>
</tr>
</tbody>
</table>
| **Expected Results** | • Recommendations of clean transportation policies for the CAC to put forward | • Report outlining potential clean transportation policy mixes to get to 2030/2050 GHG emission reduction goals  
• Accompanying analysis of underlying market factors and expected policy impacts of various actions that could be taken |
| **Project Structure** | • Appointed outside expert panel led by NYSDOT | • NYSERDA and State agency steering committee directing consultant, informed by outside experts |
| **Timeline** | • Draft recommendations by Dec 2020  
• Final recommendations by Spring 2021 | • EV policy analysis by Nov 2020  
• Other policy analysis by Mar 2020  
• Final report May 2020 |
Roadmap Task Overview

Task 0. Stakeholder Engagement

Task 1. GHG Reduction Assessment

Task 2. Market Assessment of EVs, Alt. Fuels, & VMT/System Efficiencies

Task 3. Policy Development for EVs, Alt. Fuels, & VMT/System Efficiencies

Task 4. Final Clean Transport Roadmap
# Roadmap Timeline

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Expected Completion Date</th>
<th>Briefings for Advisory Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV Policy Analysis</td>
<td>November 2020</td>
<td>12/18: EV policy analysis</td>
</tr>
<tr>
<td>Mobility Market Assessment</td>
<td>February 2021</td>
<td>2/18: Mobility mkt assessment</td>
</tr>
<tr>
<td>Alt Fuel Market Assessment</td>
<td>February 2021</td>
<td>2/18: Alt fuel mkt assessment</td>
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<tr>
<td>Mobility Policy Analysis</td>
<td>March 2021</td>
<td>3/18: Mobility policy analysis</td>
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<tr>
<td>Alt Fuel Policy Analysis</td>
<td>March 2021</td>
<td>3/18: Alt fuel policy analysis</td>
</tr>
<tr>
<td>Economic Impacts Analysis</td>
<td>April 2021</td>
<td>TBD: Econ impact analysis</td>
</tr>
<tr>
<td>Final Report</td>
<td>May 2021</td>
<td>TBD: Final report</td>
</tr>
</tbody>
</table>
Roadmap Roles and Responsibilities

- **Expert Advisory Council**
  - Technical input
  - NY-specific context

- **Listening Sessions**
  - Frontline communities
  - Just transition & workforce

- **Steering Committee**
  - Direction, guidance
  - Coordination on data & deliverables

- **NYSERDA**
  - Direction, guidance
  - Project management

- **Climate Action Council**
  - Transportation Advisory Panel
## Modeling Overview

<table>
<thead>
<tr>
<th>Model</th>
<th>Purpose</th>
<th>Type</th>
<th>Modes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diffusion Model</td>
<td>Estimates ICEV, BEV, PHEV, HEV, FCEV annual sales between today and 2050 at the county-level under various policies.</td>
<td>Consumer choice diffusion model based on stated preference model</td>
<td>Light-duty vehicles</td>
</tr>
<tr>
<td>VE-State</td>
<td>Used to estimate VMT, mode shift, and costs of various policies.</td>
<td>Multi-stage hybrid model</td>
<td>All on-road vehicles</td>
</tr>
<tr>
<td>NY-VISION</td>
<td>Integrate all sub-sectors and all modeling together</td>
<td>Spreadsheet / PowerBI accounting tool</td>
<td>All modes (on-road, rail, marine, air)</td>
</tr>
<tr>
<td>IMPLAN</td>
<td>Estimate economic impacts of various policies and programs.</td>
<td>Economic input-output model</td>
<td>Linked to NAACS code sectors of economy</td>
</tr>
<tr>
<td>EVSE Acct. Tool</td>
<td>Estimate number, typology, and electricity load of EV chargers</td>
<td>Hybrid model</td>
<td>All ELECTRIC on-road vehicles</td>
</tr>
<tr>
<td>Side Analyses</td>
<td>TCO of vehicles, TCO of refueling infrastructure</td>
<td>Various</td>
<td>Various</td>
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</table>
Complementary Research

> Distribution System Analysis
  • Led by Nexant
  • Analyzing the impacts from additional electrification of the transportation sector on the electric grid at the distribution level
  • Results expected in January 2021, to inform broader Roadmap analysis

> Integration with Pathways
  • Led by E3
  • Integrating modeling results from Roadmap and distribution system analysis back into the Pathways model
  • Analyzing the impacts from additional electrification of the transportation sector on the electric grid at the transmission level
  • Results expected in April 2021
Developing Recommendations

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Developing Recommendations

Structure - Develop recommendations in subject areas:

- Electrification and fuels
- Market-based programs, funding and financing
- Public transportation
- Smart Growth/System Optimization

Designate work groups for each
Electrification and Fuels

• **Pathways goals for 2030**
  
  o **Electrification**: 60-70% passenger vehicle sales; 35-50% of medium/heavy duty truck sales
  o **Fuels**: 40% of diesel is renewable

• **Initiatives underway include**:
  
  o **Passenger cars**: DEC’s ZEV mandate, subsidies
  o **Trucks**: Medium/Heavy Duty MOU, VW, transit bus electrification initiative
  o **Charging infrastructure**: Make Ready, NYPA programs, NYSERDA incentives, Climate Smart Communities funding
Electrification and Fuels

- **Policies/programs to drive the transition to electrified cars and trucks**
  - Potential regulatory policies could include next generation ZEV rules adopted by California to implement the 2035 100% sales target; Advanced Clean Truck rule adopted by California.
  - Potential complementary policies could include incentives, pricing, charging infrastructure/technology, and policies to ensure benefits to disadvantaged communities
  - Analyses needed:
    - Identify infrastructure requirements to support the transition and mechanisms to deploy that infrastructure
    - Identify challenges/opportunities and lifecycle cost/benefit

- **Policies/programs to reduce the carbon intensity of transportation fuels**
  - Potential regulatory policy could be a Low Carbon Fuel Standard: eligible low-carbon fuels could include electricity, green hydrogen and advanced renewable biofuels
  - Consider life-cycle emissions
  - Evaluation of challenges/opportunities, including reduction of co-pollutants and cost impacts, considering experience in other states.

- **Discussion**
Market-Based Policies, Financing and Funding

• Programs underway, in development or under consideration
  o Transportation and Climate Initiative: potential multistate cap-and-invest program that would cap and reduce emissions and provide a funding source for investments with emphasis on investing for the benefit of disadvantaged communities
  o New York Green Bank
  o Identify challenges/opportunities and contribution to CAC goals; evaluate adequacy of funding for clean transportation investments needed

• Potential policies and programs
  o Market-based: could include participation in TCI or other approaches
  o Financing: strategies to animate private capital; based on the Green Bank or other approaches?
  o Other ways of funding transportation investments

• Discussion
Public Transportation

• *Identify policies and programs that would double the availability/accessibility of public transportation services statewide - other than the Metropolitan Transportation Authority (MTA) - by 2035*

  o Identify resources to support network expansion projects identified by MTA in their twenty-year needs study
  o Identify strategies to provide operating/capital support
  o Identify strategies to address transit deserts
  o Assess options for vehicle types/connectivity with micro transit
  o Invest in pedestrian infrastructure to enhance safety/access to bus stops
  o Identify strategies for using tax increment financing for modernization/enhancement of bus/rail facilities/equipment

• *Discussion*
Smart Growth/System Optimization

- **Adopt policies that incentivize construction of all new roadway, residential, and commercial development along certain census tracts to be adjacent to public transportation routes by 2035**
  - Identify supportive land use/infrastructure polices that provide access to transportation for users of all abilities
  - Identify barriers such as home rule and provide incentives to address
  - Develop policies on last-mile freight delivery/warehousing
  - Incorporate strategic design features including sidewalks, pedestrian and facilities, crosswalks and pedestrian, other into reconstruction activities
  - Identify modal bottlenecks that result in excess idling and carbon emissions for candidate projects

- **Discussion**
Liaisons/Cross Sector Collaboration

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Areas of cross sector-collaboration

- Land Use & Local Government Panel – *This Panel will also be reviewing the topic of Adaptation and Resilience*: Anticipate meeting in late Oct 2020 and mid-November

- Agriculture and Forestry: Anticipate meeting in mid-November

- Power Generation: Anticipate meeting in mid-November

- Just Transition Working Group: Anticipate meeting in late Oct 2020 and Feb 2021

- Climate Justice / Environmental Justice Working Group: Anticipate meeting in late Oct 2020 and Feb 2021
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Expert/Stakeholder Input

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Expert/Stakeholder input

• Stakeholder/expert groups for informal outreach

• Schedule for public input
Next Steps/Open Discussion

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