2050
New Visions for a Quality Region
ZEV by 2035: Planning Tools for Vehicle Electrification

September 20, 2022
CDTC Webinar Guidelines

- Your mic is muted 🎤
- You can see us, we cannot see you
- Open webinar chat 🤝 to send chat messages to the host, panelists, and attendees
- If you have a question, please type it into the chat 🤝 OR
- If you have a question, request to be unmuted by raising your hand 🙋 or typing your request into the chat 🤝
- If you prefer a reply via text, open the Q&A window 🤝
Professional Development

AICP members can earn Certification Maintenance (CM) credits for this activity. When CM credits are available, they are noted at the end of an activity description. More information about AICP’s CM program can be found at [www.planning.org/cm](http://www.planning.org/cm).

AICP members must be in attendance for the duration of the event in order to receive CM Credit.

**CM# 9256172**

**New!**

**Special topic credit: “Sustainability & Resilience”**

NYS Department of State Training Requirements for Planning & Zoning Boards

Local planning boards, zoning boards, and county planning boards are required to receive a minimum of 4 hours of training. A well-trained board makes better, more defensible decisions more efficiently. Local governing boards determine how their local officials may obtain the training.

Local governments can approve a New Visions webinar to meet NYS training requirements by contacting the NYS Department of State. For more information visit their website or contact them.

**Contact NYSDOS by phone:** (518) 473-3355

**Contact NYSDOS by email:** localgov@dos.ny.gov
Upcoming Webinars

New Visions Virtual Learning Series
Each month will feature a different topic in New Visions and provide local planners, engineers, and officials with tools and resources for integrating the New Visions 2050 Principles and best practices into their local plans and projects.

October 18 at 3:30 – 5:00 pm: Pedestrian Safety Planning

Find more information & register at: www.cdtcmpo.org/news/nv-webinars
Webinars & Other Resources

www.cdtcmpo.org/news/nv-webinars
Agenda

1. Introduction & Overview - Jen Ceponis, CDTC
2. Capital District ZEV Plan & Implementation Progress – Jacob Beeman, CDTC
3. Lessons learned from local EVSE projects & available resources – Tara Donadio, CDRPC
4. Step-by-step EVSE installation for municipalities – Brandon Mortka, PISO
5. Electrifying municipal fleets – Lucas Rogers, Albany County
6. Questions & Discussion – All Panelists
Capital District EV Drivers Club EV show
**Saturday, October 1 9:00 am – 1:00 pm**
Delmar Farmers Market, Delmar, NY

Capital District Drive Electric & Sustainability Fair
**Sunday, September 25 10:00 am – 2:00 pm**
Schenectady City Hall, Schenectady, NY
New Visions 2050 is...

- Metropolitan Transportation Plan
- A blueprint for regional transportation that reflects a shared vision for the future
- A 30-year plan to guide prioritization and funding of investment decisions
- Developed collaborately
  - Transportation providers
  - Local governments
  - State agencies
  - Private sector
  - The public
Previous Long-Range Plan Accomplishments

- Bus Rapid Transit
- Albany County Rail-Trail
- I-787 / Hudson River River Corridor Study
- Couse Corners Roundabout
- I-87 Exit 3 Airport Connector
- Zim Smith Trail
- Rexford Bridge
- Madison Ave Road Diet
- I-87 paving
- Erie Boulevard Reconstruction
- Patroon Island Bridge Repairs
- NY 2 Reconstruction
Capital Region Snapshot

Slow Growth Region

- 2000: 794,293
- 2010: 837,967
- 2020: 864,426
- 2030: 888,073
- 2040: 896,457
- 2050: 895,012
Capital Region Snapshot

Multi-unit housing development is outpacing construction of new single family houses.

greenhouse gas emissions
7% per capita
Capital Regional Snapshot

Capital Region Infrastructure Snapshot

14,289 Lane-Miles
Over 1,000 Bridges
1,200 Sidewalk Miles
150 Miles of Trails
33 Miles of Bike Lanes
17 miles of BRT planned
40 miles of BRT planned
Capital Region Snapshot

- Capital District EV Charging Plan (2016)
- ZEV Plan (2020)
- CDTC Freight & Goods Movement Study (2016)
- Regional Trail Perspectives (2017)
- Capital District Trails Plan (2019)
- Local Road Safety Plan
How We Move

(pre-COVID)

Daily Regional VMT
22.7 million

270,000 vehicles cross the Hudson River daily

230,000 vehicles cross the Mohawk River daily

80% Drive Alone to Work

10% Walk or Bike to Work

Over 15,687,239 rides in 2018
More Options Than Ever Before

90,000 Capital Region residents don’t own a car

49% of trips are < 3 miles
28% of trips are < 1 mile

More commuters are choosing transit and working from home

Uber and Lyft began operating in Upstate NY in 2017

17 miles of BRT currently

40 miles of BRT planned

DRIVE Carshare by CDTA

Members have taken 76,531 CDPHP Cycle! trips since 2017
Long Range Planning Challenges

- Autonomous vehicles
- Equity
- Electrification
- Climate change
- New mobility disruption
- Funding uncertainty
- Emerging technologies
- Increasing costs
New Visions Implementation

• Major CDTC Products:
  – Unified Planning Work Program (UPWP)
  – Transportation Improvement Program (TIP)

• New Visions Virtual Learning Series

• Request Virtual Training for your Planning Board, Zoning Board, Town Board, or City Council

www.cdtcmpo.org/nv2050

• Email jceponis@cdtcmpo.org
Electric Vehicles in NYS

- 3 Million Zero Emission Light Duty Vehicles on the road by 2030
- 10 Million Zero Emission Light Duty Vehicles on the road by 2050
- By 2030 nearly 100% of LDV sales and 40% or more of MHD vehicle sales must be ZEVs to help meet these goals
Zero Emission Vehicle Planning

- Capital District Clean Communities Coalition
- Regional Electric Vehicle Planning
- Fleet Technical Assistance
- Alternative Fuel Outreach and Education Events
What is Clean Cities?

**Clean Cities** advances the energy, economic, and environmental security of the United States by supporting local actions to cut petroleum use in transportation.

- **Reduced petroleum consumption**
- **Reduced greenhouse gas (GHG) emissions**
- **Reduced dependence on imported petroleum**
Locally Based Public - Private Partnerships

• **Clean Cities Coalitions:**
  • Are comprised of public and private stakeholders who share a common commitment to using affordable alternative fuels and saving energy
  • Facilitate the adoption of new transportation technologies and infrastructure development
  • Leverage public and private resources
  • Engage in education and information sharing activities
ZEV Plan Highlights - Commute

- Capital Region commute distances well aligned with existing electric vehicle range
- Average distance traveled in a daily commute to work is approximately 11 miles one way
- 53 models with an all-electric range of 22 miles or greater

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>BEV Models</th>
<th>PHEV Models</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tesla</td>
<td>17</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Kia</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>BMW</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Ford</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Hyundai</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Nissan</td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Chevrolet</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Honda</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Jaguar</td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>smart</td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Toyota</td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Audi</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>BYD Motors</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Chrysler</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Fiat</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Mitsubishi</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Volkswagen</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Volvo</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39</strong></td>
<td><strong>14</strong></td>
<td><strong>53</strong></td>
</tr>
</tbody>
</table>

*This analysis represents data available as of January 2020*
ZEV Plan Highlights – Incentives

• Federal Electric Vehicle Tax Credit

• Charge NY Drive Clean Rebate

• NYS Truck Voucher Incentive Program

• Municipal ZEV Rebate

• National Grid Make Ready

• Charge Ready NY charging station rebate
### ZEV Plan Highlights – EV Growth

**Capital Region - Electric Vehicles on the Road**

<table>
<thead>
<tr>
<th>Year</th>
<th>PHEV/EREV</th>
<th>BEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>2013</td>
<td>194</td>
<td>20</td>
</tr>
<tr>
<td>2014</td>
<td>376</td>
<td>76</td>
</tr>
<tr>
<td>2015</td>
<td>539</td>
<td>161</td>
</tr>
<tr>
<td>2016</td>
<td>599</td>
<td>229</td>
</tr>
<tr>
<td>2017</td>
<td>1,070</td>
<td>507</td>
</tr>
<tr>
<td>2018</td>
<td>1,717</td>
<td>730</td>
</tr>
<tr>
<td>2019</td>
<td>2,012</td>
<td>1,074</td>
</tr>
<tr>
<td>2020</td>
<td>2,537</td>
<td>1,354</td>
</tr>
<tr>
<td>2021</td>
<td>3,325</td>
<td>2,261</td>
</tr>
<tr>
<td>2022*</td>
<td>3,729</td>
<td>2,882</td>
</tr>
</tbody>
</table>

* As of 9/16/2022
ZEV Plan Highlights – EV Growth

Capital Region - Electric Vehicle Charging Stations

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Outlets</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>2</td>
</tr>
<tr>
<td>2012</td>
<td>7</td>
</tr>
<tr>
<td>2013</td>
<td>11</td>
</tr>
<tr>
<td>2014</td>
<td>31</td>
</tr>
<tr>
<td>2015</td>
<td>32</td>
</tr>
<tr>
<td>2016</td>
<td>45</td>
</tr>
<tr>
<td>2017</td>
<td>49</td>
</tr>
<tr>
<td>2018</td>
<td>63</td>
</tr>
<tr>
<td>2019</td>
<td>249</td>
</tr>
<tr>
<td>2020</td>
<td>549</td>
</tr>
<tr>
<td>2021</td>
<td>1,128</td>
</tr>
<tr>
<td>2022*</td>
<td>1,191</td>
</tr>
</tbody>
</table>

* As of 4/15/2022
EV Barriers & Opportunities

**Barriers**
- Electricity Demand Charges
- Access to at home charging
- Electric Vehicle Pricing

**Opportunities**
- Municipal EV Readiness Policy
- Elected Officials Outreach and Education
- General Public Outreach and Education
Federal Electric Vehicle Programs

• The Bipartisan Infrastructure Deal will invest $7.5 billion to build out the first-ever national network of EV chargers in the United States.

  ➢ Sec. 11401 - Grants for Charging and Fueling Infrastructure for Corridors and Communities
    ➢ $2.5B for Alternative Fuels (EV, CNG, LNG, LPG, H2)
      ▪ $300,000,000 for FY2022; $400,000,000 for FY2023; $500,000,000 for FY2024; $600,000,000 for FY2025; and $700,000,000 for FY2026

  ➢ National Electric Vehicle Formula Program
    ➢ $5.0B for EV Corridors
      ▪ $1B/year for FY2022-2026

  ➢ Joint DOT/DOE Deployment Support Program to provide tools & technical assistance to funding recipients
State & Federal Resources

New York State NEVI Plan

Federal Electric Vehicle Charging Infrastructure Guidebook

DOT FUNDING AND FINANCING PROGRAMS WITH EV ELIGIBILITIES*

<table>
<thead>
<tr>
<th>FORMULA PROGRAMS</th>
<th>FY 2022 Amount</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Highway Performance Program (NHPF)</td>
<td>$28.4 B4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface Transportation Block Grant Program (STBGP)</td>
<td>$12.5 B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Congestion Mitigation &amp; Air Quality Improvement Program (CMAQ)</td>
<td>$2.5 B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Highway Freight Program (NHFP)</td>
<td>$1.4 B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Planning and Research (SPR)</td>
<td>$988.3 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metropolitan Planning (PL)</td>
<td>$438.1 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon Reduction Program</td>
<td>$1.2 B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Electric Vehicle (NEVI) Formula Program</td>
<td>$685 M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How Can We Help?

• Fleet Technical Assistance
  • Fleet inventory and Total Cost of Ownership analysis
  • Connections to industry experts and example fleets

• EV Zoning & Policy Guidance
  • Comprehensive Plan and Zoning Audits
  • Recommendations on incorporating EV friendly policies into zoning and development ordinances

• Alternative Fuel Outreach and Education Events
  • General education on alternative fuels for municipal staff & boards and general public
Questions?

• Open webinar chat to send chat messages to the host, panelists, and attendees
• If you have a question, please type it into the chat
• If you have a question, request to be unmuted by raising your hand or typing your request into the chat
• If you prefer a reply via text, open the Q&A window
Questions?

Email: cdtc@cdtcmpo.org

Call us at (518) 495-8178

Or by mail to 1 Park Pl, Albany, NY 12205

To request paper copies of the New Visions 2050 Plan and related documents, call (518) 458-2161.

Learn more at www.cdtcmpo.org