In Attendance

Daniel Sieger - Assistant Secretary for Environment EEA

Katie Theoharides - Assistant Secretary for Climate EEA

Patrick Woodcock - Assistant Secretary for Energy EEA

Linda Benevides - EEA

Stephanie Cooper – MA Department of Environmental Protection

Christine Kirby -- MA Department of Environmental Protection

Commissioner Judith Judson – MA Department of Energy Resources

Will Lauwers – MA Department of Energy Resources

Stephan Russell -- MA Department of Energy Resources

Ben Miller – EEA Climate Team

Kate Fichter - MassDOT

Jules Williams - MassDOT

Andrew Novotny - Division of Standards

Gus Block - Nuvera

Jeff Hyman - EMD Serono

Charlotte Ancel (for Catherine Finneran) – Eversource Energy

Gina Coplon-Newfield – Sierra Club

Karstan Bard (for Fouad Dagher) - National Grid

Mark LeBel - Acadia Center

Kevin Miller (for Colleen Quinn) - ChargePoint

Max Forsythe - NRC

Jason Viadero – Mass Municipal

Amy Laura Cahn - CLF

Nicole Freedman – City of Newton

ZEV Commission On Phone: Jamie Hall (for Britta Gross) – General Motors; Robert Wimmer (and Ed Young) – Toyota USA; Catherine Finneran – Eversource Energy; Tracy Woodard – Nissan; Susan Bunnell-Wilbraham

Absent: Vineet Gupta, City of Boston, Scott Dube, Robert Boch,

1. Dan Sieger, Call To Order-

- Welcome and introductions
- Request approval of Notes from Previous Meeting Approved
- Agenda
 - Update on Transportation of the Future; Transportation Listening Sessions
 - Of note first Ultra-Fast Electrify America charger in the U.S. installed in Chicopee less than a mile off I-90, second under construction in Plymouth
 - o Hear from Agency on updates
 - o Discussion of MOR-EV Update and request for input for future of program

2. Katie Theoharides -

- Update on Transportation Listening Sessions
- Final report is being worked out and will be released soon
- Take home from listening sessions
 - o There was a lot of engagement from stakeholders
 - o There are a lot of stakeholders interested in various strategies for transportation
 - o Urban and rural issues differ
 - o Public Health and other benefits of electrification should be recognized
- Regional Transportation Climate Initative (Georgetown Climate Center has been coordinating
 the the effort) listening sessions on improving transportation and reducing GHG have also been
 occurring. Christine Kirby of MassDEP attended the Albany session.
 - Christine K. Great session, with similar content as the MA listening sessions.
 - Other sessions are scheduled for Connecticut next week and Delaware in June and New York City, in July, for those who would like to attend.
- Ben Miller will present details/summary of the comments received through the MA
 Transportation Listening Sessions. The state has not yet prioritized any one strategy over another.

Ben M. – Presentation on details of Transportation Listening Sessions. (PowerPoint posted). 18 specific issues identified as priority; regional differences as expected for example Amherst attendees mentioned connectivity between modes; Brockton low income issues; Boston focus on RTAs, Worcester on electric buses; electrification in top 3 for all including TOU rate and infrastructure.

Dan S. – Thank you Katie and Ben. Any questions?

1. Amy Laura C. – When will the report be out?

Katie T. – It is currently in draft form – release expected in next month.

2. Amy Laura C. – How will this report and sessions collaborate with and/or inform the newly formed Transportation for the Future commission?

Dan S. --- The Commission on Transportation for the Future is looking at long term strategies and policies out to 2040 whereas the listening sessions are more short term policy guidance. However, the listening sessions have provided solid information that is beneficial for both.

Dan S. – Moving along to Agency Updates.

- 3. MassDOT Update Kate F. and Jules W.
 - Gas Tax/EV Fee study Summary document being put together based on interviews with stakeholders including ZEV Commission to be circulated in June for review.

- Conducting multiple studies related to electric transit buses:
 - Working with consultant on converting all 40-ft diesel buses to EV transit buses.
 Consultant modeling the routes, topography, loads on vehicles, garages, and existing EV transit bus models.
 - The study hopes to answer the question of how close the existing full battery EV (BEV) transit bus technology is to working with existing infrastructure and routes that could lead to MassDOT pursuit of a BEV pilot.
 - o Study to be completed end of 2018.

Gina N. – What is the status of EV bus pilot in Cambridge? To inform the commission, Los Angeles and New York City have committed to a 100% full battery electric transit bus fleet. It would be nice if Boston/MA state would follow suit.

Kate F. --- MassDOT is following the developments and has learned that LA has had issues with their EV transit buses. Needs to make sure the state of the industry is ready for deployment without issues.

Amy Laura C. – Is there an update on the silver line EV bus?

Jules W. --- There is no time frame but MassDOT is working with the NOLO program to acquire 5 60' BEV transit buses.

Mark L. --- What is the status of the DC Fast Chargers on Mass Pike?

Jules W. --- Four of the six chargers are operational. The remaining two for Charlton, east and west, will be operational late spring. Funding in the STIP for additional chargers.

4. MassDEP Update - Christine Kirby

- VW Appendix D update
 - MassDEP designated as beneficiary for Massachusetts for \$75M can use up to 15% for ZEV infrastructure
 - Conducted ten stakeholder sessions to get input and have issued a Request for Information (RFI) with a closing date of May 18, 2018 to identify potential projects and benefits as well as cost information.
 - Next step is to submit a Beneficiary Mitigation Plan (BMP) to Trustee (Wilmington Trust)
 Hope to issue by summer/fall 2018. The BMP will indicate at a high level how MA will be using the Appendix D funding. Can withdraw funds 30 days after submittal.

Dan S. --- Thank you Christine, next ZEV meeting we will have a presentation from MassDEP about comments received from the RFI and we can have a more thorough discussion. Any questions?

Amy Laura C. --- Will the BMP be a draft and allow for comments?

Christine K. – Not expecting to issue a draft BMP as the ten stakeholder sessions and RFI will inform the BMP. BMP will be at a high level plan.

- VW Appendix C update Due to our early investments in ZEVs, MA was targeted for Cycle 1 funding.
 - In an effort to draw more Electrify America projects to the Northeast, regional states
 working with NESCAUM have released the "Northeast Corridor Regional Strategy for
 Electric Vehicle Charging Infrastructure." Available on NESCAUM Website, the report
 highlights issues to facilitate a convenient, operational network from Maine to Virginia
- MassEVIP Public Fleets and Workplace Charging Program updates currently at capacity but seeking additional funding.
 - MassEVIP Public Fleets Completed Projects -- \$2,608,265.27 spent for 262 EVs (207 BEVs, 54 PHEVs, 1 ZEM) & 87 public charging stations
 - Workplace Charging Program Completed Projects-- \$1,323,019.98 for 523 Charging Stations, 855 Ports, 213 Separate Entities, and 257 Street Addresses

Dan S. – Bond bill proposal has annual funding for MassEVIP Fleets and will be moving to the Ways and Means committee next. Support welcome.

Gina C. – If the Bond Bill does not work out for funding MassEVIP Fleets can VW funds be used for the programs?

Christine K. – VW Appendix D only allows for EV infrastructure and cannot be used for passenger vehicles.

Karstan B. – What is the goal of the NESCAUM strategy?

Christine K. – Regional travel is important and need to coordinate policy and network. --- It is an attempt to coordinate infrastructure deployment not only at policy level but on the ground as well. NREL study shows many more chargers needed.

- Update on federal proposal by EPA to weaken the greenhouse gas standards for light-duty passenger vehicles. MA with other states has adopted more stringent CA standards under section 177 of the federal Clean Air Act.
 - o CA has put out a notice for comments due by May 31st.
 - MA is also following closely the CA waiver under section 209 of the Clean Air
 Act, which allows CA to adopt and enforce its own motor vehicle standards that
 are more more stringent than federal standards and is a prerequisite for MA to
 adopt and enforce the CA standards.

5. MA DOER Update - Will Lauwers and Steve Russell

- Submitted state fleet electrification opportunity identification report. Vans and shuttles look good for pursuit of electrification and retrofits.
- Electric school bus pilot Reliability issues/ lack of competition in school buses available Mark R Are there other makes/models of school buses that are more reliable? Steve R. Only one manufacturer responded to the RFP (retrofits evaluated but cost too high). The technology is first generation and now both BYD and Bluebird have school buses in development phase.

Peter O'C – Proterra and BYD exploring, this is a strong emerging market.

- The MA state contract (VEH 102) is reopening in mid- June to accept additional vendors, EVSE technologies and retrofits.
- MOR-EV update December 2016 broke previous record by issuing more than 200 rebates in one month; September 2017 broke 300 benchmark and April 2018 broke the 400/month threshold. Tracking an exponential growth in rebates.

6. Patrick Woodcock – DPU Update, MOR-EV Update and Discussion

- DPU Proceedings Eversource \$45M over 5 years for EV infrastructure. DPU Order last Thursday regarding Grid Modernization that has implications on deploying smart meters DPU approved targeted deployment if there is a possibility that it is cost effective (for example, individuals can alter charging behavior based on smart meter installation).
- Introduce the MOR-EV discussion DOER wants a sustainable, predictable and cost-effective rebate program. Not looking for any decisions today DOER ha a plan for the rest of 2018 but base on success, we need to develop a plan to move forward, and the sooner any changes are implemented, the longer the program can stay stable.

MOR-EV PRESENTATION

CSE Shawn Jones presentation – see PowerPoint

- 45 current models
- 16 under \$30,000
- 3 under \$20,000 stats from website

April 444 approved rebates for about \$950K spending for the month.

CSE Brett Williams presentation – see PowerPoint

- a. Discussion of ways to change the program/available options each has tradeoffs
- Income based eligibility
 - Theoretically attractive to address equity given to people who survey that without the rebate they would not have purchased
 - Have to explore where to set the cap look at data to determine how many losses would be taken at various income cap levels
 - O CA State requires income basis for rebates. This complicates consumer understanding, application process, dealership willingness to use (fear liability if they submit wrong information), opportunities for fraud either intentionally or accidentally (20% of low income rebates in CA on audit were wrong), legal loop holes (\$1M in Tesla rebates to what appears on paper to be low income but only due to tax laws), increased labor costs for application process (1.75-2x more labor to process income-based paperwork). CA law now eliminates option of rebate at point of sale option.

MSRP Cap

 Trivial to implement with similar achievement of diverting funds from luxury items

Electric Range

 Low e-range may not be plugged in as frequent yielding low GHG reductions often luxury/performance tuned.

• Rebate Amount Reduction

Balance to make a difference to consumer and funding availability

Commissioner Judson – open discussion and feedback requested – we need a short term solution while working towards sustainability and additional funding. How do we get the market to respond now without stopping momentum?

Mark L.:

- >\$60k MSRP remember wanting to go to \$0 rebate but compromised to \$1000
- Consider structural changes for example change the tiers see what can be saved by making adjustments

Suggests VW settlement or bond money be put on the table

Kevin M.: RGGI has many competing uses. Not sure if state capital can be used for private projects but probably not. VW settlement money cannot be used.

Patrick: program design goal to avoid hitting the point where the incentive becomes ineffective

Gina: based on NY shows \$2000 to be that level, may not want to go below

Jason: Use eVMTs as a substitute; find out which cars used to travel furthest

Mark L: Income verification has administrative barriers. Look toward energy efficiency/solar qualifications for extra rebate to low-income

Debate regarding MSRP cap and where that cap should be to be most effective – 16 cars are > \$50K, phase out< \$35K over time.

Jeff H.: My original thinking was it was all about incentives, that they were key. Now it might be that since you can't fund all cars, infrastructure is really the key to EV use so put funding towards creating a charging network that drivers see.

Dan: Between now and next meeting, submit ideas. Take time also to think further and reopen at the next meeting. Agree that infrastructure helps reach a tipping point and that it also provides consumer awareness.

Jeff H.: What are the dealerships contributing to lower costs to consumers, every bit of funding adds up.

Dan S.: consider future agenda item related to dealers and manufacturers

Commission and gallery contributions:

- Comments against income guidelines
- In favor of MSRP cap (\$40K or \$50K suggested), while also decreasing lower end range as disincentive to buy smaller battery vehicles ("trim the edges"
- Avoid wind situation, need a long term plan and do NOT backslide or make continual adjustments
- Overall, more funding is needed.
- Make decisions based on data.

- Technology is shifting OEMs 50/50 BEVs and PHEVs. Shift focus to BEVs since battery costs going down. Keep BEV rebate at least
- Consider turning in ICE to help get to emission targets.

Will L.: we are now tracking if PEV is replacing another vehicle vs being a new purchase, we also need to think of a new car purchase, not as replacement of existing, but rather of replacing another that would have been put on the road

 Suggestion for on the hood rebate structure – works better for less money/ dealers against this with uncertain funding

June 26th next meeting/ VW mitigation fund update and hydrogen fuel cell vehicles

Meeting adjourned.

List of Documents at the ZEV Commission Meeting:

- PowerPoint on EEA/MassDOT Listening Sessions and MOR-EV
- VEIC Study on Electric School Bus
- NESCAUM Northeast Corridor
- MASS DRIVE CLEAN 2017 Snapshot
- MA Division of Standards Update (prepared for the meeting)