Transportation Advisory Panel Meeting
September 17, 2020

Attendees

- **Chair**, Marie Therese Dominguez, Commissioner, New York State Department of Transportation
- Jared Snyder, Deputy Commissioner, New York State Department of Environmental Conservation
- Paul Allen, Senior Vice President, M. J. Bradley & Associates
- Steve Finch, Senior Vice President, Automotive Services, AAA Western & Central New York
- Albert Gore, III, Policy and Business Development, Tesla
- Craig Turner, Executive Director, Buffalo Niagara International Trade Gateway Organization
- Nancy Young, Vice President, Environmental Affairs, Airlines for America
- Bob Zerrillo, Policy Director, New York Public Transit Association
- Nick Sifuentes, Executive Director, Tri-State Transportation Campaign
- Renae Reynolds, Transportation Planner, New York City Environmental Justice Alliance
- Elgie Holstein, Senior Director for Strategic Planning, Environmental Defense Fund
- Julie Tighe, President, New York League of Conservation Voters
- Porie Saikia-Eapen, Director, Environmental Sustainability and Compliance, Metropolitan Transportation Authority
- Kendra Hems, President, Trucking Association of New York
- Dimitris Assanis, Assistant Professor, Stony Brook University
- Kerene Tayloe, Director of Federal Legislative Affairs, WE ACT for Environmental Justice

Not in Attendance

- John Samuelsen, International President, Transport Workers Union

Introductions – 15 Minutes

- Marie Therese Dominguez – intro
  - Importance of this issue
- Andrea Linton (host)
  - Rules of participation, technical introduction for participating
- Marie Therese Dominguez
  - Developing recommendations for CAC by Feb 2021
  - Have made unprecedented progress under Gov. Cuomo's leadership
  - Enhancements to mobility and resiliency
  - CLCPA targets are aggressive, transportation at the forefront of a sustainable future
  - Opportunity to leap forward together
  - Walk through agenda
    - Baseline transportation sector contributions to reducing GHG emissions
    - How to get public input
    - Come up with basis for workplan
  - Know there's not a lot of time, but NYS has other resources we are bringing to the project - introduce Jared Snyder
  - Panel introductions – name, title, background

- Jared Snyder – oversees climate and air programs at DEC, includes ZEV program, VW settlement funds, work with other agencies, have made a lot of progress, eager to work with AP on additional strategies
- Paul Allen – MJ Bradley in DC office, consults across multiple sectors, experience with utilities, clean transportation electrification, cost benefit analysis for EVs, see a tremendous convergence between transportation, utilities, other sectors
- Elgie Holstein – EDF in Washington DC office, policy and lobbying activities for transport and clean energy, former chief of staff at DOE, White House staffer, worked with National Conference of State Legislators, not much time to change course, already seeing severe impacts of climate change, hope to explore how a leading state like NY can show the rest of the country what can be achieved, develop ideas for how states can work with federal government
- Kerene Tayloe – WE ACT leg affairs, looking at equitable transportation, health benefits and economic investments, how TCI will impact communities, understand that it's the largest source of GHG emissions, and it contributes to other emissions. 6 of 7 MTA bus depots still in EJ areas with high asthma rates in upper Manhattan – want this to change. Help advocate for change at the local level, push for electric buses, focused on transparency
- Dimitris Assanis – professor at Stony Brook, most experience in academia, training in thermodynamics and combustion, focused on low carbon fuels, biofuels and internal combustion engines that can use them, also working in CAVs and energy demand associated with them, huge changes underway, with a lot of significant energy implications
- Renae Reynolds – NYC-EJA is a network of grassroots orgs, focus on advocacy on LMI and EJ topics, background in urban theory, focused on transportation advocacy and reducing emissions from vehicles (esp trucks and buses) in EJ areas, COVID has amplified the urgency
- Julie Tighe – NYLCV, statewide advocacy group focused on transportation policy, renewable energy, water quality, voting. Formerly at DEC. Focused heavily on transportation at LCV – especially transit, alternative fuels, equity issues. Transportation is difficult because dealing with people/individuals, not companies used to being regulated
- Steve Finch – SVP at AAA Central/Western NY, previously 40 years as plant manager at GM managing engine facility near Western NY, looking at this opportunity from auto industry perspective and also representing millions of members like fleets and commuters in NY – how does this affect the average person driving a vehicle today?
- Porie Saikia-Eapen – MTA director of environment & sustainability, been with MTA 6 years, moving forward with electric bus program, signed onto Paris Accord, work regularly with NYPA and NYSERDA on energy efficiency
- Craig Turner – logistics organization in WNY across border, worked with Buffalo-Niagara Partnership, companies are being forced to get smarter about supply chain and logistics, which can reduce environmental impacts
- Albert Gore – Tesla biz dev/gov affairs, leads east coast policy, transportation is a big piece of the pie, good news is that for the biggest piece of emissions, we have a good understanding of what to do – LDVs, MD/HDVs too are coming, mostly focused on LDVs, challenge is expanding access to EVs in NY and making it easier for all New Yorkers to take part in electrification – how do we ensure EVs are competitive with ICE, how do we adopt best practices for EVSE deployment
- Nancy Young – Airlines for America, largest trade assn for US airlines (both cargo and passenger), based in DC, lead environment and sustainability programs for these airlines, on

board of air transport action group (international industry group on supply chain), involved with Commercial Airlines Alternative Fuels Initiative – have achieved a lot of goals, working toward commercial scale up. Committed to addressing climate change, weather affects airline industry, eager to learn a lot from other groups/industries

- Kendra Hems – Trucking Assn of NY for more than 20 yrs now – family owned a trucking company, understand that trucking is a major contributor to GHG, eager to move toward clean transportation and work with others, challenge is working on state plans for an industry that is broader than just one state with interstate operations
- Nick Sifuentes – TSTC, data and analysis/advocacy around transit and climate, focused on fixing commutes, making transit fair and equitable, ending transportation deaths, reducing GHG emissions. Background with EJ, have served on two COVID related reopening committees, know that transit will come back eventually – focused on long term crisis. Two focuses – equity, expansion of transit to people who don't have it, transportation electrification. Eager to look at policies to accelerate and augment transition – TCI, LCFS, others
- Bob Zerrillo – NYPTA – transit operators and industry members, formerly at DOT, worked with DEC, trying to represent public transit industry – a healthy public transit industry is critical to meeting goals, reducing emissions by providing reliable service and transitioning to cleaner vehicles
- Marie Therese Dominguez – trained as a lawyer, working for 20+ years in transportation, water, infrastructure. Looking at both reducing emissions and resiliency

Advisory Panel Objectives – 15 Minutes

- Marie Therese Dominguez - CLCPA targets and how this panel works with other panels
  - Baseline transportation GHG contributions
  - How to best solicit public input and conduct outreach to stakeholders
  - Create a basis for a workplan
- Jared Snyder - Provide recommendations to CAC, which Comm. Dominguez serves on, to help them develop a scoping plan to help us meet aggressive targets
- CAC has until end of 2021 to develop draft plan; this group needs to feed into it well before then
- CLCPA Targets codified into law
  - GHG targets – 40% reduction by 2030, 85% by 2050, zero-carbon economy by 2050
  - Zero-emission electricity – 70% by 2030, 100% by 2040
  - EJ – floor of 35% of benefits of investments to go to disadvantaged communities
- Advisory Panel objectives
  - Identify a range of emission reductions
  - Present a list of sector-based recommendations for policies, programs, actions for Scoping Plan
  - Evaluate the costs and benefits of recommended strategies, informed by Value of Carbon
  - Identify measures to reduce GHG in disadvantaged communities
  - Include climate adaptation and resilience
  - Consider approaches by other states and nations
  - Identify potential sources of funding necessary for implementation

- Process
    - Meet at least once per month and provide regular updates to CAC
    - Consult with climate justice and just transition working groups
    - Identify additional presentations needed by SMEs
    - Seek public input
    - Have a blank slate to work from

Inventory/Pathways– 45 minutes

- Marie Therese Dominguez – introduce Tory Clark from E3
- Tory Clark – see NYS Decarbonization Pathways presentation
- Analysis
    - Previous analysis was initiated prior to CLCPA so it's a starting point
- Key Takeaways
    - 30-year transition demands action now
- Scenario Development
    - Reference case and range of Pathways
    - High Technology Availability and Limited Non-Energy Pathway
- Characterization of Transportation Sector
- Transportation Approach and Key Data Sources
    - Largest sources from passenger vehicles, LD trucks
    - Accounting direct emissions from on and off-road transport, not counting electricity
- Key Drivers
    - Vehicle ownership and driving patterns, fuel efficiency improvements, transit, urbanization, mode shifting, economic growth
- Transport Emissions Over Time
    - Baseline is BAU with no policies included
    - Reference case includes states policies as of May 2019
    - Both cases include CAFÉ extension through 2026
    - Reference case includes LD ZEV MOU
- Pillars of Deep Decarbonization
    - Energy efficiency and conservation – device efficiency and reducing VMT
    - Low carbon fuels
    - Decarbonized electricity supply
- Pillars of Carbon Neutrality
- Opportunities for Decarbonization in Transportation
    - Direct emission reductions
    - Interactions with rest of sector
- 2020-2050
    - Significant drop in total energy consumed while VMT increases
    - Electricity will be around half of energy consumed by 2050
- Timing of EVs
    - Ramping up the adoption curve is a key challenge
- VMT Reductions through Smart Growth and Transit
    - Smart growth includes density, diversity, design, accessibility
    - Mode Shifting includes mass transit, walking and biking

- Emissions Reductions by Measure
  - Transportation measures include CAFÉ standards, ZEV MOU, bioenergy and CCS
- Annual Electricity Demand
  - Transportation sector will drive increases by 20-100% by 2050
- Vehicle Charging Flexibility
  - Half of LDVs could charge flexibly by 2050, based on electric system conditions and EVSE availability
- Low-Carbon Fuels
  - Key for sectors where electrification is difficult such as freight, aviation and marine
- Next steps
  - Adding CLCPA GHG accounting viewpoint to this analysis e.g. upstream emissions from imported fuels and 20-year global warming potential
  - Review of performance and cost assumptions
- Questions from Panel:
  - Elgie Holstein – assumptions about hydrogen – what is current info on status of marketable, economical, sustainable hydrogen?
    - Tory Clark – most today is through **steam methane reforming**, moving forward would be through electrolysis, which is reflected on electric load graph. Can look at assumptions around cost down the road
  - Nancy Young – when you've determined/assessed GHG attributions to the state, how does that work? By where the fuel is purchased? Specifically, how does that work for aviation?
    - Tory Clark – big issue for aviation, long-haul trucking, NYC area where there's a lot of travel across state lines. Mostly do through fuel sales. For aviation, NYS takes credit for a little less than 100% of jet fuel sold in NYS. Something to discuss more.
    - Nancy Young – just be clear that others may take credit for some of those emissions as well, so we want to make sure we're not double-counting
  - Albert Gore – can you clarify scenario development – reference case assumes pre-CLCPA goals will be achieved. That would mean that even achieving reference case leaves a lot of work to do still.
    - Tory Clark – assume existing ZEV MOU is achieved in reference. Additional sales beyond that out to 2030 and beyond. Yes, there's lots of work. They used 900,000 EVs by 2030 for reference case.
  - Paul Allen – was this analysis done pre-CLCPA and pre-COVID? Are there any COVID sensitivity cases w/r/t new vehicle purchases?
    - Tory Clark – haven't done that in NY yet, but have done it in some other places. More about reductions in VMT – 10-20% earlier in pandemic, now leveling off at lower levels. Haven't seen data on vehicle purchases, but likely that they are down. Definitely worth investigating further whether there will be lasting changes.
    - Paul Allen – BNEF has done some work in this area, challenge of vehicle stock not turning over quickly means that you push out uptake of new vehicles further out, so there's a need to do even more earlier on to ensure these are EV sales.
  - Julie Tighe – would be helpful to get the info with actual numbers attached to it, rather than just in PPT form

        - Tory Clark – some of that's in the full report and technical appendix (which are on the CAC website)
    - Renae Reynolds – question comes out of desire to resist half-measures – analysis shows biodiesel used in certain sectors. How would that influence emissions reductions? How does RNG compare to full electric, and what are its emissions profiles?
        - Tory Clark – with current accounting they're using, biofuels and RNG are considered carbon-neutral. Air quality is a separate issue, especially localized air quality
    - Porie Saikia-Eapen – re: EV infrastructure, MTA has had a lot of issues, which have large requirements for infrastructure. Have they looked at EV charging infrastructure from NYC perspective?
        - Tory Clark – have not done analysis of that as part of this work, but NYSERDA may be doing some of this
    - Dimitris Assanis – fuel source used in ICE data? How is the power being generated for EVs?
        - Tory Clark – for ICEs, fuel consumed depends on vehicle class – for LDVs, conventional motor gasoline (E10), for MHDVs, mostly diesel. For electrification, a lot of PHEVs at first. For MHDVs, look at diesel hybrids (not plug ins). Have a separate model for electricity sector that feeds into this. Assume we meet the CLCPA targets.
        - Dimitris Assanis – if just talking about new vehicle sales, it could be 20 years before fleet turns over – what do we do in the meantime?
        - Tory Clark – Dimitris Assanis is right, talking about ICEs in 2020, but some ICEs could be zero-emission through biofuels later on
    - Elgie Holstein – how to think about V2G, V2B?
        - Tory Clark – this doesn't look at V2G, but it is important to look at
        - Elgie Holstein – is that an appropriate part of our thinking for our recommendations?
        - Tory Clark – some element of interfacing with the power sector is important
    - Nancy Young – You said you'd look at upstream emissions imported into the state – is that also part of this work? If so, when will you do that?
        - Tory Clark – CLCPA mandate to include those emissions, working on it now
    - Kendra Hems – where will EVSE for MHDVs live? Shortage of options, especially in NYC area. Did you look at that?
        - Tory Clark – beyond the scope of this analysis

Panelist Discussion to Inform Work Plan – 75 minutes

- Marie Therese Dominguez – how do we go about this going forward?
- Jared Snyder
    - goal to present workplan at the next CAC meeting in early October
    - conversation today will inform the development of the workplan
    - three most important elements:
        - What should emission reduction goals be? 31-33% reduction from this sector would achieve transportation's share that helps meet the overall goal

        - Scope of work for the advisory panel
            - What topics/issues to tackle?
            - What cross-sectoral issues to work with other groups on (power generation, land use)?
            - Plan for public engagement – create an opportunity for others to be heard
        - Timeline for work
    - Timing
        - CAC needs a Draft Scoping Plan by end of 2021
        - Final Recommendations needed to full CAC by March 2021
        - Work Plan should be done by October
        - Want to know how often TAP should meet
        - When to meet with Climate Justice, Just Transition working groups
        - When to do public meetings
    - Presented sample timeline (see slides)
        - Want a briefing on draft policies by December 2020, final recommendations by March 2021
- Marie Therese Dominguez
    - introduce discussion of panel priorities, want to give members opportunity to give thoughts on priorities, subjects to explore, whom to engage with, what to do for workplan, how to make sure we engage the public
- Julie Tighe – CA and OR have successful clean fuel standards. LCFS is something that should be considered strongly, helps shift away from fossil fuels, also doesn't require state funding. Want to continue looking at TCI and how it works with LCFS, how it includes EJ components. Need to do as much as possible on mass transit. Need to advance congestion pricing. Need to look at how to meet ZEV MOU and how to make EVs more competitive – either through bigger incentives, EVSE deployment, etc. Look at fossil fuel taxes through an equity lens - want to do it so we don't adversely impact low-income people. Try to give incentives for more open streets, encourage more mode shifting, e-bikes, pedestrians, etc. Electrification of transit.
- Nancy Young – LCFS or other policies to increase uptake of renewable fuels. Interconnectivity/intermodality – how do you facilitate transfers between modes like planes to trains, how do you solve last mile issues. Big data – how do we use the tools we have to enhance efficiency of intermodal handoff, etc. Interface with federal air traffic management system – big issues for efficiency in the NYC area. Slow uptake of ATC system. Need to talk about market-based measures – aviation is subject to that internationally now, should consider how that could be done
- Renae Reynolds – areas of agreement with the first two – electrification of transit buses, municipal fleets, school buses. Support for MTA to adhere to its commitment to 100% electric buses by 2040. Implementation is key. Congestion pricing is big, especially for generating revenue for transit investments. Prioritizing clean MHDVs in EJ areas, especially around Hunts Point. Expanding EVSE in urban areas, pairing it with renewables, onsite storage such as solar canopies in public lots. How to work with NYCHA on EVSE, solar, storage. TCI is an area of concern – don't support TCI right now because the regional approach may take away from what we're doing in NY. From NYCEJA's standpoint, CA cap and trade hasn't been effective at reducing emissions in local EJ areas. Doesn't feel like TCI has been as collaborative as CLCPA.

- Craig Turner – First mile/last mile/freight movement – goal is to link logistics with economic development and transportation and climate – want NYS to focus on freight as economic development. In Kansas City, they've done a lot on creating an inland logistics center – have a lot of info on how they've reduced GHGs as part of that. Think it helps on both economic development and GHG sides. Policies that encourage smarter logistics – example – warehousing capacity is a big issue right now. Issue is that warehouses don't create a lot of jobs, but it supports a lot of manufacturing. Without warehouses, there are more trucks on the road. Include freight and logistics companies in planning conversations – important stakeholders. Sometimes urban redevelopment can get in the way of logistics. Buffalo Skyway project will mean trucks have to drive farther. Invest in logistics – work with other ports on inland ports but haven't been able to get economic development in the state to get behind the projects.
- Nick Sifuentes – four main categories: 1) equity – EVs should be affordable – secondary market for EVs/new platform for incentives for EVs. expansion of charging in cities, especially MUDs. Concerned about grid management and EVs. How to leverage size of market to get manufacturing in state? 2) Transit – smart growth, TOD, microtransit for FM/LM especially in suburban communities that are close to rail. Need to address electrification especially with utilities and power needed at depots. Expansion of transit – not just rail, also buses, paratransit, since aging in place is a concern in rural and suburban areas. Resiliency – make sure EVs and EVSE can handle the climate 3) funding – support TCI (as long as investments are equitable), congestion pricing, revisit gas tax policy, VMT fee 4) MHDV ZEV MOU – freight has to come in on trucks so need to address. Expand rail. Expand complete/green streets. Better curb management policies, especially in NYC – green loading zones, etc.
- Kendra Hems – economic development must be linked with planning and other policies. For instance, plans for large distribution centers that don't have space for truck parking. Need more areas for EVs and EVSE. NYC is a big challenge with freight – have worked closely with NYCDOT on freight plan – if that were to move forward, it could create a lot of efficiencies that could be realized. If you can create efficiencies, will reduce emissions. Working on FM/LM issues – cargo bikes, freight consolidation. Congestion management is key –need to look at choke points along road network, not just congestion pricing. Need to look at it regionally too – how do we treat trucks coming into or leaving NY? See decisions being made that are often in conflict with other environmental issues – example of I-81, Buffalo Skyway – does create additional VMT for trucks. Conversion to electronic tolling on NYS Thruway – one thing that was neglected was the impact on tandem operations – may mean the removal of tandem lots, which could increase the number of trucks on the road. Need to make sure we're looking at the big picture.
- Paul Allen – where can we get early action for electrification? Fleets that are under direct control of the state or can be influenced by the state. Focus on ports such as PANYNJ as an important center of transportation emissions that presents an opportunity. Rail – to the extent that long haul (short haul?) rail and switch yards are using diesel locomotives, they present an opportunity for major emission reductions especially next to EJ areas. Need to understand rate design issues – TOU rates are important and confusing to a lot of consumers, people may not be able to manage it properly. Managed charging is also really important for getting the benefits of electrification – very important at DCFC stations, demand charges can make it very uneconomical. PSC has made some strides on the LD side but need to do more on MHDVs. CA examples – Advanced Clean Truck rule – important element is the upfront data inquiry on truck locations and home bases – want to talk about how to converge market pull with regulatory

push. LCFS and TCI – need to recognize that many of these changes are expensive, will require revenue that can be deployed in innovative ways so disadvantaged communities see the benefits.

- Kerene Tayloe – transportation and EJ – health concerns at 5 bus depots in Harlem. Want to make sure we don't forget about public health aspects. EV affordability is important – costs are a lot higher. Even "cash for clunkers" is potentially an issue, unless the vehicles are destroyed. Keep transportation equitable and accessible. Other things have already been raised. Very cautious and tepid about TCI
- Albert Gore – agrees with a number of others – anything we can do to bring cost of fossil fuels closer to actual cost is a good policy, the social cost of fuels. Agree with Paul Allen on electric rate policies, supports MHDV ZEV MOU. Lifecycle costs – a lot of the cost is electricity costs – mostly from demand charges – it's an issue for both MHDVs and LDVs. Current electric rates can be a big impediment to vehicle electrification, in part because NY has a reluctance to have technology-specific rates, need to do a lot more like other states. Current rates are a disincentive to build infrastructure. Example – corridor routes are important to people's decision to buy an EV but are really hard to make economic sense; EV corridors don't have high utilization right away but will be useful in the future and help range anxiety.
- Bob Zerrillo – agree with Nick's transit items, both upstate and downstate, healthy public transit industry is critical to meet goals, needs to be adequately funded in order to achieve EV and capital goals. Have a realistic estimate of costs to public entities, where revenues can be found. Want to make sure to include stakeholders at the right time – utilities, PSC are important. Flexibility is important – lots of unknowns that will disrupt the world, like COVID. Intersection of transit and land use.
- Steve Finch – public discourse is really important – see projections for EV adoption, but the reality is that there are headwinds preventing that from happening. Education is really important; people don't want to give up what they've known just because. People don't know what the changes are, what the differences are. Purchasing decisions are important because it's not just individuals, it's also fleets – if we don't get ahead of big decisions, we won't be able to meet targets. Infrastructure/EVSE is really important too – installed some a few years ago because there was incentive money, but when the money went away, they stopped installing more.
- Porie Saikia-Eapen – support for MTA, want to include railroads in the conversation too. Most things have already been discussed, but some broader topics – smart growth is really important, should be encouraged/enforced, has a huge impact on transportation, should be paired with EVSE. Parking structures and requirements - should encourage EVSE as part of the building development process with DOB to create transportation options for residents, and don't allow waivers. Identify and mandate energy efficiency in transportation infrastructure design and construction. Congestion management and pricing. FM/LM connectivity – need incentives for communities that would deal with partnerships with public transit – this could be effective. For instance, LIRR, MNR could incentivize transporting people to stations, maybe give an incentive for using EVs to get people to stations. Also want to encourage micromobility for FM/LM. Renewables could be an opportunity and NYCHA and bus depots, looking at ways to attract solar developers to use their roofs. Procurements – ask vendors to disclose emissions and survey the supply chain as part of the procurement process.

- Elgie Holstein – port electrification and emission reductions. Many of those trucks are going short distances to warehouses, should be able to electrify them. Endorse electrification of school buses and transit buses. Should be core element of EJ approach because of what and where they are. Air on a diesel bus can be up to 5x worse than ambient air. For fleets, good opportunities for both government and non-government fleets, with the right financing. Financing – we should think about what on financing we should look at – things that have worked elsewhere or here. CA has a voucher program for MHDVs – provides opportunities for revolving loan programs, possibly securitization of financing. Possible to do that with EVSE as well. V2G is a good opportunity to bring in new benefits, helps grid modernization and stabilization, opens door to new revenue streams to allow for electric school buses, other EVs.

- **Next Steps – 15 minutes**
  - Marie Therese Dominguez
    - Lots of info shared, lots of people to follow up with
    - Hope to meet before the end of the month (September) – in the next two weeks
    - Take this discussion and turn it into concrete, actionable items that we can put into a draft workplan
    - Will be reaching out across the board to transportation partners – will be bringing in other agencies, like Thruway, PANYNJ
    - Next meeting will be providing info on Roadmap, and help develop strategies and recommendations