

Transportation Advisory Panel Meeting

Electrification and Fuels Roundtable

December 10, 2020 | 3:00-4:30pm

Attendees

- **Chair**, Marie Therese Dominguez, Commissioner, New York State Department of Transportation
- **Moderator**, Julie Tighe, President, New York League of Conservation Voters
- See Presentation slides for full list of roundtable participant names and organizations

Meeting Notes

Introduction

- Marie Therese Dominguez welcomed everyone and introduced agenda.
 - Reviewed meeting procedures and roll call
- Julie Tighe provided an introduction

Panel Discussion – *facilitated by Julie Tighe*

Julie T. – What top 1-2 policies or actions should the Transportation Advisory Panel consider to advance the adoption of zero emission vehicles in New York State and why? Both for 2030 and 2050. We've seen California and Europe taking various actions – are those approaches NY should be considering? Please consider both light-, medium- and heavy-duty vehicles.

- Britta G. – We need to start with target for 2030 that is consistent with what's needed to keep global warming to 1.5 degrees – at least 20% of cars electrified by then, if not more – that's 2 million electric vehicles (EVs) in New York (NY). Need to look at direct current fast chargers (DCFCs) – 11,000 ports by then, right now there are only 600 ports. That means 1,000 ports a year for next 10 years. If NY needs to get to net-zero by 2050, when can you possibly afford to still be selling gasoline vehicles? 2040/2035? The average car on the road today stays on the road for 12 years. 25% of the cars on the road have a 16-year life. This is aligned with the European Union and California (CA).
- Dale H. – Agrees with everything Britta says. Specific ideas from research – looking at Europe and other cities. NY already has some good incentives, but could do more – extending EV rebates to used EVs (Oregon and Europe are doing this), which helps with disadvantaged communities. Statewide EV ready building codes – some cities have that, like New York City (NYC), but they are modest in scope. CA has this, the United Kingdom (UK) has this, some cities are requiring up to 100% EV ready building codes. Also need to think about retrofitting buildings. Work with Department of Public Services (DPS) to create EV-friendly rates for DCFC – Southern California Edison has good examples, very important for commercial operators for corridors and depots.
- Ben M. – Set targets through regulation that sunset internal combustion engine (ICE) sales – follow CA rules. Put right operating conditions in place – good on capital cost so far – EV rebates, EVSE rebates, but also need rate design shifts and low carbon fuel standard (LCFS) or the transportation climate initiative (TCI) to make sure that operating clean vehicles makes more business sense from a total cost of ownership (TCO) perspective.

Julie T. – “What are critical barriers to progress in scaling up the purchase of electric vehicles? To increasing charging infrastructure. What are barriers to the availability of EVs in the automobile market in NYS?”

- Julia R. – Talking about both plug-in hybrids (PHEVs), battery electric vehicles (BEVs), and fuel cell electric vehicles (FCEVs) – 75,000 EVs sold in NY so far, but a long way to go to 850,000. Barriers include customers, infrastructure, and cost. Customers – OEMs have key role in availability and choice, which is happening now and expanding breadth, with new options coming. OEM investment is reaching an all-time high. Over the next 5 years, investments will be \$100B+. We expect over 130 models by 2025. The transition will require public and private fleets to buy EVs. There needs to be an expansion of outreach and awareness. Cost – need to bring down cost for vehicles and fuel. Infrastructure – costs need to come down there as well. Purchase incentives have always played a role, and having sustained sources of funding is important – when incentives go away, sales drop. Funding for research and development (R&D) is important too – batteries, hydrogen (H2). Investment in grants for updating and retooling manufacturing facilities. Infrastructure – multi-unit dwellings (MUDs) is really difficult. Need more workplace and public chargers too. Building codes are good, mandatory retrofits is one way to go. Want to see more publicly funded electric vehicle supply equipment (EVSE), esp. DCFC. Need a large investment in hydrogen to be able to sell here. Very supportive of LCFS – helps achieve a number of these goals, good source of revenue for reinvesting in growing the market
- Ryan W. – National Grid is very committed to clean transportation and will convert its own fleet by 2030. Customer awareness – need to understand concerns about EVs available, battery life, and range. A lot of customers are just learning about EVs, help them learn about options, including rate options. Charging access is a big barrier – working on MUD and public charging. Like the idea about used EV incentives. Affordability – residential charging program that allows residents to have a clear idea of how much they’ll pay for EV charging. Behavior – need to get people to use infrastructure in place at the right times of day.
- Matt T. – Looking at medium- and heavy-duty (MHD), which is mostly using diesel fuel. Need to keep in mind 3 key elements 1) scale of challenge - ~1.3B gallons of diesel used in New York State (NYS) now, 2) cost of changes – often a big incremental cost of vehicles, plus operational costs, 3) time element – don’t have time to wait – things like biofuels that can make an immediate impact.
- Katherine G. – Big issue is that there aren’t as many models for people at all income levels – build out secondary market and incentives for used EVs (CA has done this in certain areas of the state). Charging – don’t underestimate level one (L1) and level two (L2) charging, invest in chargers at train stations, workplaces, and on-street parking.

Julie T. – non road and heavy-duty vehicles are hard. What barriers exist here:

- Floyd V. – Agrees with what Matt just said. Electrification makes sense for light duty vehicles (LDVs), but for MHD and non-road there are other challenges – alternative fuels can be very effective. Need to get the right market signal for diversifying fuel pool. Once you get that right, it tends to take care of a lot of these secondary barriers. LCFS reduced carbon dioxide (CO2) emissions by 63 million tons in CA. Biodiesel is responsible for over 40% of that, displaced over 3 billion gallons of diesel, about 25% of current diesel use is biodiesel. We need to recognize that time is of the essence and it’s particularly important for disadvantaged communities. Biofuels are the fastest way to get to this goal. Biofuels offer 50% reduction in particulate matter (PM), 40% in Colorado, up to 100% in other toxics – which are particularly important for

disadvantaged communities. There are no infrastructure changes required. These comments apply to most alternative fuels, which mostly have existing distribution networks.

- Matt T. – Cost is arguable the biggest barrier. Not only the capital cost for new vehicles and/or fueling. Cost is a barrier, but not the only one. There is a premium for renewable biofuels. A market signal is needed to bring them down to parity or even a discount. Need to overcome inertia, and when it comes to fleets, even if it's cheaper and easier it isn't guaranteed to convince everyone. Having a LCFS is important, but that alone may not be enough. There's a ton of money that needs to be deployed.
- Floyd V. – In terms of cost, they have looked at the prices that consumers pay at the pump while the low carbon fuel standard was in effect in CA. The prices for gas and diesel are at the same level or lower than they were in 2011. Biodiesel is a drop-in fuel, fleets can do it now through 80% renewable diesel, 20% biodiesel, with no infrastructure or performance changes. Electrification is going to take a while – this is something that we can do in the meantime. To the extent that the state subsidizes turnover of diesel fleets – require the new vehicles to use clean fuels, make them use biodiesel (BD) or renewable diesel (RD).
- Ben M. – Agree that there's a big opportunity for drop-in fuels in the near term if the price signals are adjusted – LCFS and TCI work well together. Also helps put us in position to invest in electrification – we will need a lot of revenue to go beyond Volkswagen (VW) settlement funds, and should leverage private investment. CALSTART will have a paper soon on how public sector can get private sector to invest.
- Ryan W. – Agree on inertia. Fleets have lots of experience with current tech, need to help them along with making the decision to switch to electric fleets.
- Basav S. – A few caveats about biofuels – can't rely on low-carbon, need to get to zero-carbon. Don't want to invest in what's essentially a stranded asset. There is a question about how much emissions are attributable to the biofuels – lifecycle emissions, land use impacts need to be accounted for. When you look at all of these, emissions may be much higher.
- Floyd V. – Doesn't disagree that long-term we need to get to zero, but question is what is long-term, don't want to dawdle. Agree on lifecycle – California Air Resources Board (CARB) has put a rigorous analysis process in place.
- Britta G. – Medium and Heavy-duty vehicles all operate differently. We need to look at these things on a fleet by fleet option, not a sector by sector basis. Much more complicated.

Julie T. – Are there specific fuels that are promising and why. Which ones reduce co-pollutant in addition to reduced fossil fuels?

- Mike S. – No one has been talking about in-state production – the possibility to bring production closer to NYS. If you have diesel trucks that are going to be around for a while, you should look at biofuels. Renewable natural gas (RNG) is another opportunity where there's been a lot of effort so far, esp. on transit, refuse trucks – RNG offers some big reduction opportunities, especially if RNG is coming from landfill, wastewater, or dairy farms. It lets you leverage previous investments. There will be a lot of pressure on state and local gov'ts budget-wise, so these can help bridge the gap. A little on hydrogen – it is possible to use it as a range extender, we're starting to see it in transit buses. On EVs – as a strategy for limiting demand charges, energy storage in EVSE could help.
- Katherine G. – CA's Advanced Clean Trucks (ACT) rule will help EV trucks come to CA first – NY also adopting ACT would help them come here too. It makes a big difference for disadvantaged communities. There is billions in health savings potential. Regulatory efforts can help create these markets. LCFS can make it much more economically viable. Some trucks are harder to

electrify – important to do research first – drayage, school buses, transit buses, etc. all can make a lot of sense.

- Basav S. – Electric transit buses are well established already, MTA has a plan to buy electric buses. Hydrogen can be good or bad, depending on where it's coming from. If from electrolysis, that's good, but from steam-reformed methane it's not really helping.

Julie T. – Other supporting activities are needed to enable transportation electrification and a shift to alternative fuels. What strategies should NYS consider to reduce pollution in communities near heavy duty/medium duty and off-road facilities where a zero emission fuel can help?

- Scott W. – From the freight rail perspective, it's harder to electrify. Rail is 4x more fuel efficient than trucking for moving freight. It also helps reduce congestion. How to promote? Develop intermodal sites and site logistics facilities near warehouses.
- Ben M. – Non-financial inducements help, like giving EV drayage trucks advantages for waiting in line/preferential parking – use ports as points of leverage. In cities, you can look at zero-emission zones/green zones, or differential prices for congestion pricing.
- Basav S. – Regarding land use and zoning, there is an underlying issue that some communities are burdened with being near freight facilities, based on historical decisions. We need to look at historical emissions as part of the permitting process.

Julie T. – What strategies for addressing equity concerns about access to zero emission vehicles have you seen succeed elsewhere? Financial assistance and infrastructure have already been mentioned.

- Katherine G. – A few examples – BlueLA EV carsharing – 35 locations in central Los Angeles (LA), community rates for low-income customers. Other program – if you have a car that doesn't meet the emissions inspection, you can get a check to go toward buying a cleaner car.
- Dale H. – The key is getting infrastructure in place. It needs to be built in disadvantaged communities, without that people won't be able to use EVs. Targeting scrappage schemes for MHD specifically for DACs, could be part of economic stimulus.
- Britta G. – We need to look at the way we fund local projects using local funding – we need to provide more access to places people want to go. Sometimes it's as simple as building sidewalks. Need to look at where the money goes.
- Ben M. – Clean Mobility Options Voucher Pilot Program in CA. It is based on communities identifying their own mobility needs – could be carsharing, bikesharing, etc. Giving communities opportunity to identify their own needs is important, and giving block grants is a good model.

Julie T. – Are there barriers to educating people using these different types of fleets?

- Britta G. – It will be hard to work on these cars, as they are more complex. Could look to battery reuse for a new industry.