

## May 9, 2018 – IAC Meeting – Input from Transportation Sub-committee

- **Reduce GHGs from medium/heavy duty vehicles**
  - **Heavy Duty Vehicle Incentives** - California's [HVIP program](#) provides up to \$120,000 for transit buses in disadvantaged communities in addition to other incentives for electric trucks. This has an enormous impact on the payback periods for heavy duty electrification. [New York](#) also has an HVIP program.
  - Almost all of Massachusetts freight transport, valued at \$350m, moves by heavy duty, on-road vehicles. New Reports ([HERE](#) and [HERE](#)) find Electric vehicles suitable for many urban delivery, transit and refuse collection vehicles. *Bottom line: myriad technologies that can cost-effectively improve the fuel efficiency of Class 8 trucks are readily available on the market today.*
  - **Rebuild existing fleets & vehicles with hybrid or EV technology.** Several American companies developing hybrids and electrification rebuild ventures (eg. [Hybrid XL](#), in Mass, and [EDI](#), based in CA)
  - **Look closely at use of Hydrogen & Fuel cell technology.** ([Nikola Motor](#), (NECEC is looking at this; will be doing more research in the coming months; see [articles](#) here.)
  - **Incentives for communities to switch to electric buses.** Electric buses are price competitive: See info here: [Proterra](#) Electric Buses Running in DC are cost competitive. Several other major US cities are moving to electric transit bus fleets.(See article [HERE](#)). None in Massachusetts yet.
  - China is rapidly adopting EV's (see - [status summary](#) ) and will be converting the entire Beijing refuse collection fleet to EV's, and includes support for fast-charging infrastructure.
- **Regional programs to reduce Transportation Emissions**
  - **Transportation Climate Initiative** is a regional collaboration of 12 Northeast and Mid-Atlantic jurisdictions that seeks to develop the clean energy economy, improve transportation, and reduce carbon emissions in the transportation sector.
  - A [2015 Report](#) from Georgetown Climate Center provides information on carbon pricing and reinvestment, along with suite of complementary policies.
  - “The report finds that existing federal and state policies are projected to cut greenhouse gas emissions 29 percent by 2030 in the region from 2011 levels. Additional strategies analyzed in the report could further those reductions, achieving total cuts of 31 to 40 percent by 2030 while also resulting in significant public health improvements.”

- o Economic analysis finds that a comprehensive implementation of state clean transportation policies could bring net cost savings of \$32.3 billion to \$72.5 billion over 15 years to the region’s businesses and consumers, while at the same time adding \$11.7 billion and 91,000 new jobs or more to the regional economy in 2030.
- o A [2017 Whitepaper](#) from Georgetown Climate Center on cap & invest explores potential mechanics of the program
  - Addresses many of the “How?” policy design questions
  - Does not include quantitative analysis
- **Regional EV Corridor**
  - o The [Northeast Electric Vehicle Network](#) would enable travelers to drive their plug-in cars and trucks from northern New England to D.C. and everywhere in between.
    - “The northeast and mid-Atlantic states are working through the Transportation and Climate Initiative to support the development of alternative fuel corridors in the region, including EV Fast Charging Corridors to enable convenient travel for electric vehicle drivers.”

## **List of Potential MA transportation policies to reduce GHG**

### **Reduce VMT and passenger miles**

- **Improve Public Transit & Land Use (MAPC)**
  - o **Do a comprehensive study** to understand how development influences transportation needs, as well as transportation’s impact on development, particularly in the context of public transportation (MAPC will be exploring this further via modeling work to be completed as part of agency’s regional plan update.)
  - o **Encourage transit oriented development (TOD), particularly the development of affordable housing near transit.** Dense, mixed-use development around transit helps reduce single occupant vehicle trips and promotes use of alternate modes of transportation. The MBTA has developed draft TOD policies and guidelines that are available [here](#).
  - o **Reevaluate parking requirements so they are more reflective of parking demand.** A [study](#) by the State Smart Transportation Initiative found that there is a relationship between building more parking and increased automobile use. Similarly, MAPC’s [Perfect Fit Parking](#) report found that parking is often overbuilt at multifamily developments in the Boston region, and the study also identified a reduced demand for parking near transit stations. Cities and towns should consider reducing parking requirements for developments located near transit, and this should be considered part of a broader TOD strategy (see above).

- **Institute transportation demand management (TDM) policies to support increased mobility needs as population grows.** TDM helps ensure that investment in transit, walking, and biking infrastructure can keep pace with increasing development. The City of Cambridge has a nationally recognized [Parking and Transportation Demand Management Ordinance](#) that is triggered when a nonresidential property owner requests to add parking above the registered number. In the case of Cambridge, TDM is linked with the City's mode shift goals.
- **Increase/incentivize active transportation options** (MAPC)
  - Improve bike safety & convenience
  - Implement/expand bike share programs
    - Hubway, and more recently, dockless bike share systems, serve as an important first mile, last mile connection to transit.
    - Increases the accessibility of cycling, promotes mode shift, and generates data points that can be used to inform future bicycle infrastructure investments
- **Invest in regional rail trail network**
  - As gaps in the existing network are filled, more people can utilize rail trails for commuting as well as recreational purposes
  - MAPC's Land Line initiative is a vision for the region's greenway system
- **Complete Streets** (See [Boston Complete Streets](#)) (MAPC, T4Mass)
  - Designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work.
  - State transportation projects generally include Complete Streets components, but there is always room for improvements, including on DCR roads.
  - State grant program to incentivize and assist cities and towns to build complete streets has been successful and should be expanded.
- **Improve the successful Massachusetts Rideshare Program (MassDEP Air)**
  - MA Companies that have 250 employees and hold air operating permits are required to reduce single occupant commuter trips by 25%.
  - 100's of thousands of single occupant commuter trips have been eliminated through matching for vanpools and carpools, bicycle incentives, offering transit pass sales at workplaces, and regional transit scheduling support.
  - 130 companies currently report annually; more could be included and more transit pass subsidies encouraged.
  - **Increase funding for TMAs** (Transportation Management Associations) that work with employers to provide incentive programs and help meet DEP goals including.
    - TMAs in Massachusetts provide services to more than 300 companies and property owners in 40 municipalities

- They work with employers to provide incentives to employees, e.g.
      - In-company or neighborhood-based rideshare matching.
      - Flexible scheduling options
      - Guaranteed ride home in emergencies
      - Bike and transit reimbursement programs
  - Explore new apps/technology designed explicitly for [car pooling](#). (2014) [Kickstart Carpooling](#) software.
  - **Additional Suggestions to Encourage Ridesharing:**
    - Reduce parking for commuters to encourage transition from driving to ridesharing and transit.
    - Create a statewide program like those in Cambridge and Boston that require employers to have aggressive programs to get their commuters out of private cars.
    - Work with Ridesharing apps (Uber, Lyft, Etc) to encourage ridesharing
- **Encourage Telecommuting (See [2017 State of Telecommuting in the U.S.](#))**
  - In more than half of the top U.S. metro areas telecommuting exceeds public transportation as the commute option of choice. It has grown far faster than any other commute mode.
- **Work with towns & cities to encourage congestion pricing (See FHA [Benefits of Congestion Pricing](#)) (T4mass)**
  - Congestion pricing benefits drivers and businesses by reducing delays and stress, by increasing the predictability of trip times, and by allowing for more deliveries per hour.
  - It benefits state and local governments by improving the quality of transportation services without tax increases or large capital expenditures, by providing additional revenues for funding transportation, by retaining businesses and expanding the tax base, and by shortening incident response times for emergency personnel and thus saving lives.
  - Avoids need/temptation to expand road network, while potentially raising money to reinvest in the transportation system.
  - It benefits mass transit by improving transit speeds and the reliability of transit service (especially buses)
  - Possibilities include time-of-day pricing for tolls, and/or “cordon” pricing (i.e. a charge to enter a downtown business district). Use of smarter tolling policies is widespread and growing across the country and globe.

### **Reduce GHG per vehicle**

- **Ensure federal fuel efficiency standards remain intact**
  - Baker administration work with allies in Congress and the administration

- o Groups advocating in DC to demonstrate business support to retain standards
- o NRDC and others suing EPA
- **Incentivize ZEV adoption and access (Mark -- Acadia)**
  - o Expand EV incentive programs, including statewide low-income rebate
  - o Adopt EV car-sharing and other options to promote access in underserved communities
  - o Add dealer incentives to rebate programs
  - o Incentivize electrification of RTAs and state and municipal fleets
- **Economy-wide carbon pricing** (with similar efforts in many northeast and mid-atlantic states)
  - o Carbon pricing bills have been introduced in Vermont, Mass., Rhode Island, Connecticut, New York, Maryland and DC, and likely soon in New Jersey; plus elsewhere in US.
  - o These bills would provide a more serious carbon price incentive than is in RGGI or is being contemplated for TCI and would yield greater GHG reductions
  - o All bills return substantial portions of the funds to households, but differ by state; all attempt to fully compensate low income people; most bills give a portion of the funds to vulnerable businesses and other employers; all devote a portion of the funds to investment
- **Pay by the mile auto insurance.** (This was part of the 2010 CECP, but removed in the 2015 version)
  - o A [2010 Study](#) found that Massachusetts' consumers would save money; Insurers would improve the accuracy of their rating plans while providing an incentive to reduce the number and cost of auto accident claims; and the environment will benefit from the reduction in driving that PAYD incentivizes – less driving means reduced fuel usage and lower greenhouse gas emissions.
  - o [HERE is a list](#) of companies that offer pay-by-the-mile insurance
- **Clean Fuels Standard** (Dan Gatti - UCS)
  - o California's [Low Carbon Fuel Standard](#) has provided a significant incentive for electrification of passenger and heavy duty vehicles, in addition to low-carbon biofuels.
  - o Bringing a LCFS (or CFS) to the Northeast would provide a significant additional incentive for alternative fuels. A CFS could reduce regional emissions by 30 million tons while creating jobs and adding to our regional GDP.

### **Cross Cutting Strategies**

- **Green Communities for Transportation** – Provide grant funding to cities and towns for projects that will reduce VMT, green their fleets, improve transit,

complete streets, etc. In return, ask for a more ambitious stretch code from our municipalities that can help increase transit-oriented development, reduce congestion and provide more density near transportation nodes, achieving similar goals to the Housing Choice Initiative.

- **Municipal Vulnerability Program for Transportation** - In addition to being a major contributor to our GHGs, our transportation systems are themselves vulnerable to the impacts of a changing climate. A municipal vulnerability program targeting transportation could expand on the existing work being done by MVP to focus on key transportation infrastructure that requires additional protection from storm surge, sea level rise and other impacts of climate change.