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Transportation and Climate Initiative
NEPGA Comments on the Framework for a Draft Regional Policy Proposal
November 5, 2019

The New England Power Generators Association (NEPGA)[1] appreciates efforts by the Transportation and Climate Initiative (TCI) jurisdictions to develop a market-based, regional policy to reduce carbon dioxide (CO_2) emissions from the transportation sector. As the trade organization that represents competitive power generators in New England, NEPGA is proud of the leadership of its members in reducing more CO_2 emissions across the region than any other sector of the economy.

The TCI Framework for a Draft Regional Policy Proposal (Draft Framework) rightfully highlights that any effort to meaningfully reduce CO_2 emissions and achieve the TCI jurisdictions' individual policy goals will require major contributions from the transportation sector, the largest source of CO_2 emissions in New England and a significant share of economy-wide emissions elsewhere in the TCI region. The Draft Framework represents an important and positive initial step. For that reason, NEPGA supports the proposal. NEPGA also offers the following comments and recommendations for consideration to maximize the benefits of this initiative as a part of what must be a multi-sector CO_2 emissions reduction effort in order to achieve a decarbonized economy.

Declining Electricity Sector Emissions

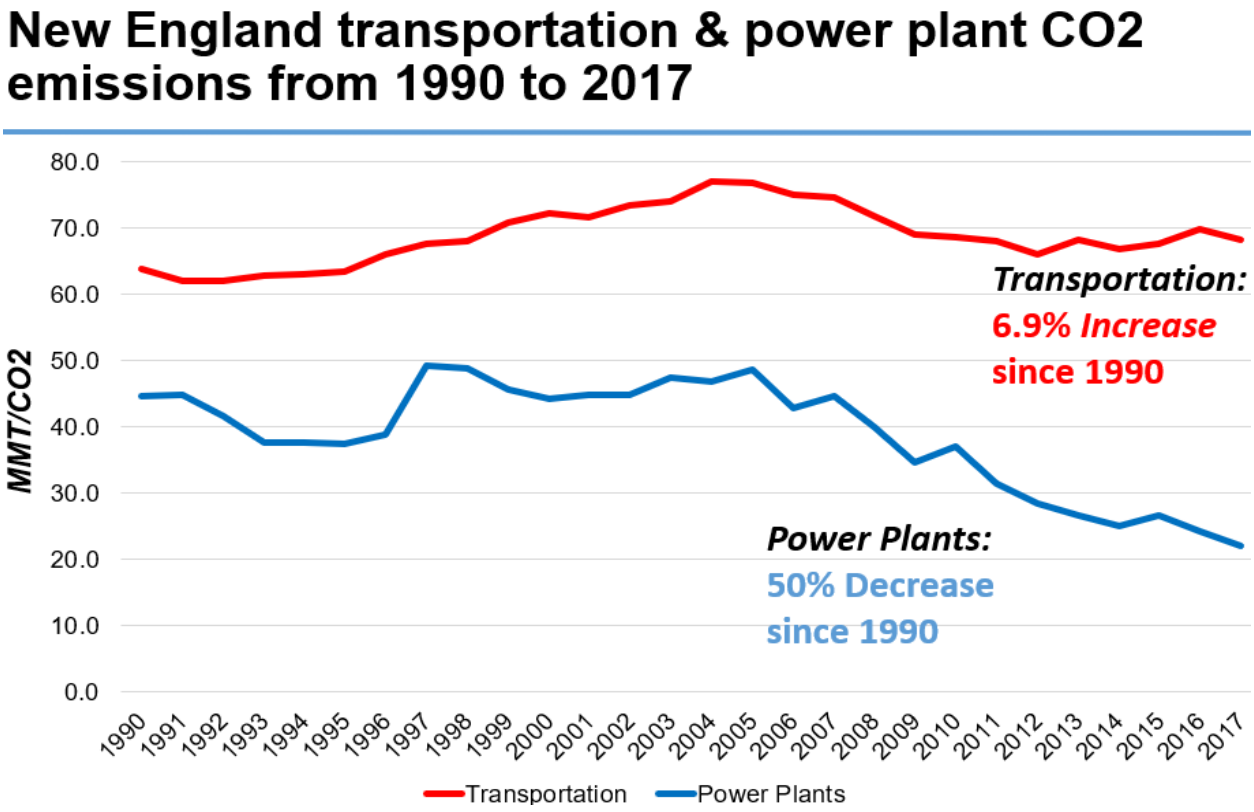
The TCI Draft Framework is being proposed in the context of unprecedented wholesale electricity market efficiencies and declining CO_2 emissions in the electricity sector.

Wholesale electricity markets are designed to procure electricity supplies at the lowest possible cost. In these markets, merchant generators often set the wholesale electric prices. Because fuels costs are the bulk of a generator's production cost, it is natural that investors will develop the most innovative and efficient means to convert fuel to electricity in order to seek a competitive advantage. Since restructuring of the electricity industry in the late 1990s, private capital participating in New England's competitive wholesale electricity markets have invested billions of dollars in facilities to ensure a reliable supply of electricity, all without exposing consumers to the risks of cost overruns or guaranteed rates of return. This dynamic has resulted in significant reductions in wholesale electricity prices and provided a reliable power supply in New England. Since 2008, wholesale energy prices have declined by 56% – a remarkable result made possible by investments in an open, competitive marketplace. In fact, 2016 and 2017

[1] The comments expressed herein represent those of NEPGA as an organization, but not necessarily those of any particular member. NEPGA is the trade association that represents competitive electric generating companies in New England. NEPGA's member companies represent approximately 90% of all generating capacity throughout New England.

featured the lowest annual average wholesale electricity prices since the beginning of the region's competitive markets.[2][3]

These competitive market forces coupled with low-cost fuel and certain public policies have resulted in a cleaner, more efficient fleet of power plants in the region. Since 1990, power plants have decreased CO_2 emissions by 50% - the most of any sector of the economy over the same period - according to recent data released by the U.S. Energy Information Agency (EIA).[4]



Much of these reductions can be attributed to the innovations and efficiencies driven by private investment in New England's power plants following the restructuring of the region's electricity industry. Since 1999, the efficiency for power plants in New England improved by 22%. This equates to closing one of every five plants while providing the same amount of electricity. In addition, the rapid decline of natural gas prices over the last 15 years has spurred major investments in new generating facilities and improvements at existing plants that have driven a dramatic shift from primarily burning coal and oil to using natural gas for electric generation. In 2000, 40% of the electricity produced in New England was generated from coal and oil resources. Today, coal and oil plants account for just 2% of the region's resource mix.[5]

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[2] https://www.iso-ne.com/static-assets/documents/2018/03/20180306_pr_2017prices.pdf
[3] By comparison, New England transmission rates have increased by over 650% since 2004. https://www.iso-ne.com/markets-operations/settlements/tariff-rates
[4] https://www.eia.gov/environment/emissions/state/, October 23, 2019
[5] https://www.iso-ne.com/static-assets/documents/2019/01/new_england_power_grid_regional_profile_2018-2019.pdf

Over the last decade, an electricity sector-specific, multi-state carbon reduction program, the Regional Greenhouse Gas Initiative (RGGI), was put in place to price the societal costs of CO_2 emissions into electricity. Implemented in 2009, RGGI is a market-based program currently covering the member states Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont.[6] Through RGGI, the participating states cap CO_2 emissions from power plants through the issuance of a limited, and declining, number of allowances that may be traded among the regulated entities. Each allowance represents one short ton of CO_2 that a regulated generator may emit during the compliance year. Because RGGI is a regional program, the participation of multiple states minimizes the risk that CO_2 reductions in any one state will be offset by increases in an adjoining member state. While RGGI is not the only factor driving the successes outlined above, it does demonstrate that a market-based approach can be incorporated into the competitive wholesale electricity market and help states meet their environmental policy objectives. Now is the time to expand these efforts to include the transportation sector under a similar, market-based approach, while incorporating the lessons learned under RGGI.

Addressing Transportation Emissions

While remarkable emissions reductions have been made in the electricity sector, in the absence of a cap on CO_2 emissions, the transportation sector is lagging far behind. A database recently created by Boston University and mapped by the New York Times shows that CO_2 emissions from passenger vehicle driving have increased in most urban areas of the U.S. from 1990 to 2017.[7] [8] Vehicle emissions in cities like Boston, New York, and Baltimore grew faster than their populations, especially since the recession of the late 2000s, illustrating the growth of CO_2 emissions per person in those areas. This is incompatible with the emissions reductions that are needed to address climate change and air quality inequities. With the advent of zero emissions vehicles and increased interest in clean public transit systems, the time is ripe to consider a broader, market-based mechanism that would cost effectively and efficiently reduce CO_2 emissions from the transportation sector. New England's power sector is one of the cleanest in the nation and stands ready to support the kind of electrification that is needed to support low and zero carbon transportation technologies.

According to data from the Union of Concerned Scientists, an electric vehicle driven in New England would be more than 25% more efficient than if deployed in other jurisdictions because of the New England generators' leadership in reducing costs and CO_2 emissions through investment.[9]

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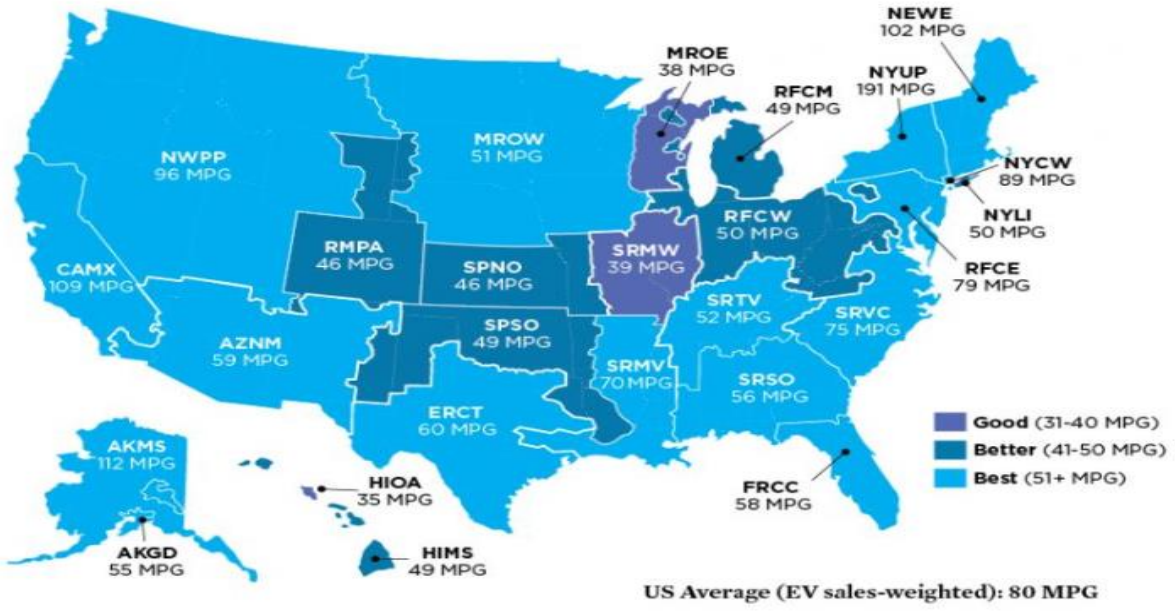
[6] New Jersey will re-join RGGI on January 1, 2020, Virginia will become a RGGI member by 2021, and Pennsylvania's governor recently signed an Executive Order directing the state's Department of Environmental Protection to also join RGGI.

[7] https://daac.ornl.gov/cgi-bin/dsviewer.pl?ds_id=1735

[8] https://www.nytimes.com/interactive/2019/10/10/climate/driving-emissions-map.html?action=click&module=Top%20Stories&pgtype=Homepage

[9] https://blog.ucsusa.org/dave-reichmuth/new-data-show-electric-vehicles-continue-to-get-cleaner



Note: The MPG (miles per gallon) value listed for each region is the combined city/highway fuel economy rating of a gasoline vehicle that would have global warming emissions equivalent to driving an EV. Regional global warming emissions ratings are based on 2016 power plant data in the EPA's eGRID 2016 database (the most recent version). Comparisons include gasoline and electricity fuel production emissions estimates using Argonne National Laboratory's GREET 2017 model. The 80 MPG US average is a sales-weighted average based on where EVs were sold in 2011-2017.

Incorporating market incentives under TCI has the ability to drive economic electrification in the transportation sector. While this would mean an increase in electricity demand, the electric markets are designed to respond in such a situation. The wholesale electricity markets in New England – and across much of the United States – were developed in part on a premise of a steady increase in demand; this was the general rule for the first century of electrification. Over the last decade, that notion has been flipped with consistent annual decreases in demand due to the effects of the Great Recession and huge investments in energy efficiency in New England. Nevertheless, the current manufacturers' offerings for all forms of electric generation are capable of increasing the efficiency of an already highly efficient generation fleet if investors are presented with adequate investment opportunities.

In this way, programs like the TCI Draft Framework, RGGI and other regional CO_2 valuation and incentive programs can create a cycle of market signals, investment decisions and behavioral change that will lead to economically efficient decreases in emissions. However, two components are critical to achieve the results required to meet the emissions mandates that exist in most New England states.

The Draft Framework

NEPGA supports the principles outlined in the Draft Framework, particularly a cap on CO_2 emissions from the combustion of transportation fuels destined for final sale or consumption in a TCI jurisdiction, and the allocation of allowances that can be banked or traded to facilitate program flexibility and compliance. This market-based structure would provide an effective means of reducing transportation-related CO_2 emissions

while supporting policies that promote clean transportation technologies and improve public health. NEPGA makes the following recommendations to ensure that the final policy achieves the objectives of the TCI jurisdictions.

First, the emissions cap should be set at a level that appropriately reflects the transportation sector's share of CO_2 emissions in the TCI region but also accounts for projected transportation emissions by conducting analysis of future scenarios. A sufficiently stringent allowance price will send appropriate signals to consumers to seek low- and zero-carbon alternatives, while providing investors, entrepreneurs, and manufacturers with the financial incentive to develop increasingly affordable clean transportation options to meet consumer demand. The emissions cap should be informed by individual TCI jurisdictions' environmental policy goals, particularly those existing state laws that set aggressive decarbonization targets by a certain date.

NEPGA offers this perspective from lessons learned with the RGGI experience. RGGI has been remarkably successful in creating a revenue stream to allow individual jurisdictions to invest in other emissions reducing areas. In particular, a number of New England states have used RGGI to support the nation-leading investments in energy efficiency. But because the RGGI allowance cap has been set at a relatively high level, allowance prices have been low enough that it has not driven major behavioral change in the dispatch of power plants, nor has it spurred large-scale, market-based investments in other low, or zero-carbon generation. Rather, the majority of RGGI's direct impact has occurred by the investment of allowance proceeds in state programs, most notably, energy efficiency. That fault in RGGI has spurred a number of RGGI jurisdictions to take out-of-market approaches by favoring certain classes of resources to meet CO_2 emissions mandates. Most economists agree this is a less efficient outcome than pricing carbon appropriately in the competitive markets. It also saddles consumers with long-term liabilities in the form of power purchase agreements with terms of up to 20 years. NEPGA strongly encourages the TCI jurisdictions to be mindful of these shortcomings from RGGI when considering the best way to drive emissions reductions in the transportation fleet.

To be most efficient, carbon abatement signals should be coordinated across the electricity, transportation, and other emitting sectors. In competitive wholesale electricity markets, participants rely on transparent price signals to guide investment decisions to reliably supply electricity when and where it is needed and at what emissions cost. Similarly, setting the right allowance price for transportation emissions would encourage consumers and policymakers to make more efficient transportation choices and give investors and developers the confidence to invest in the changes that are needed to reduce CO_2 from transportation sources. That is why as the transportation and electricity markets become more intertwined, it is important to ensure that the market signals are compatible.

Ultimately, TCI and RGGI could be integrated to ensure that decarbonizing efforts are harmonized across the transportation and power sectors for the most efficient

outcomes.[10] A good first step down this path is for TCI and RGGI to coordinate a progress review every five years to maintain a holistic approach that will more effectively reduce emissions in both sectors. These periodic assessments ensure that the two programs are aligned, and that the programs are positioned to complement the efforts of the other. Ideally, this process should lead to a single allowance price in the TCI and RGGI programs that properly reflects the value of each ton of CO_2 and provides market participants with consistency and certainty.

Second, proceeds from the program should be used to support the most efficient means to reduce CO_2 emissions in transportation and support consumer choices. However, widespread electrification of the transportation sector is poised to transition it from one that is primarily reliant on inefficient internal combustion engines to low and zero-emissions technologies. Each TCI jurisdiction will ultimately determine its own policy needs; however, NEPGA recommends that the program focus on high-impact projects that reduce emissions and other quality of life impacts, and alleviate increasingly burdensome and inequitable commutes, including incentives that support the purchase of electric vehicles (EVs), development and installation of EV infrastructure, and investment in clean, accessible public transit systems. Allowing TCI jurisdictions to allocate program funds for EV adoption is particularly important given the fact that some state and federal incentives have ended, will expire soon, or have been reduced for budgetary or policy reasons.[11]

NEPGA also recommends that model language be adopted that discourages jurisdictions from diverting program proceeds to their general funds. Experience with RGGI has shown that some states have used RGGI proceeds for general budget purposes, effectively depleting resources that were meant to support other energy or decarbonization programs. Allowing for similar usage of TCI funds would hamper the program's broader CO_2 reduction efforts and undermine stakeholders' and public confidence in the program.

[10] As an additional benefit, integrating transportation and power sector decarbonization efforts could lead to the exchange of new technologies between the sectors.

[11] For example, the Massachusetts Offers Rebates for Electric Vehicles (MOR-EV) program expired on September 30, 2019, due to a lack of permanent state funding, ending a successful EV program that is on track to rebate over $31 million to Massachusetts EV consumers since 2014. In Connecticut, starting October 15, 2019, limited public funding will reduce or eliminate rebates for certain hybrid vehicles and EVs now offered under the Connecticut Hydrogen and Electric Automobile Purchase Rebate (CHEAPR) program. Since 2015, CHEAPR has returned over $5 million in rebates to battery EV purchasers. Federal tax credits, which provide for up to $7,500 credit for each eligible EV sold, will continue to decline and eventually phase out as individual manufacturers reach a 200,000 vehicles sales quota, pursuant to an Internal Revenue Service rule. In March, General Motors announced it reached 200,000 sales, which triggered a steady decline in the tax credit since. Today, buyers of a Chevrolet Bolt EV are eligible for the much smaller federal tax credit of $1,875 which will decline further until the credit ends altogether by April 2020. In the absence of stable, long-term state and federal EV policies, it is critical that the final program give TCI jurisdictions the means to continue otherwise successful EV incentives. Funding EV programs and policies will help put the TCI region on a sustainable path and ensure that the CO2 emissions reductions will occur over the program's proposed 10-year period and beyond.

Beyond these two overarching components, NEPGA recommends that the TCI jurisdictions expand the proposed affected fuels, which currently include finished motor gasoline and on-road diesel fuel, to include any fossil-based fuels combusted for transportation uses. Otherwise, owners of fleet vehicles could simply shift to other fossil fuels that are not covered under the proposed policy, including natural gas and propane, which would frustrate TCI's decarbonization goals.

Underlying any final policy should be a recognition of the impacts of this clean energy transition for traditionally underserved and vulnerable populations. In the electricity sector this has taken many forms, such as the Low Income Heating Energy Assistance Program (LIHEAP). Similar recognition must also be incorporated in the transportation space to ensure access and affordability for those populations that will be most challenged by the transition to address climate change. Doing so will best support consumers across the region while also ensuring a sustainable and durable program, which will be important to maintain long-term, dependable price signals and investment resources.

Conclusion

NEPGA strongly supports the TCI jurisdictions' recognition of the need to reduce CO_2 emissions from the transportation sector through a regional, market-based system to effectively combat climate change and support a clean transportation future. The Draft Framework is an important first step toward addressing the critical role of the transportation sector in overall CO_2 emissions across the TCI region. As has been acknowledged by TCI participants, much more work remains to put a successful program in place. The preceding comments are offered in that spirit.

Thanks to the enormous environmental improvements that have already and continue to occur in the power generation fleet, the electricity sector is primed to serve as the foundation for needed dramatic decarbonization in other parts of the economy. Enabling a transition to an electrified transportation industry should be a primary short-term goal for both TCI jurisdictions and the electricity industry. Power generators stand ready to do our part to support this effort.