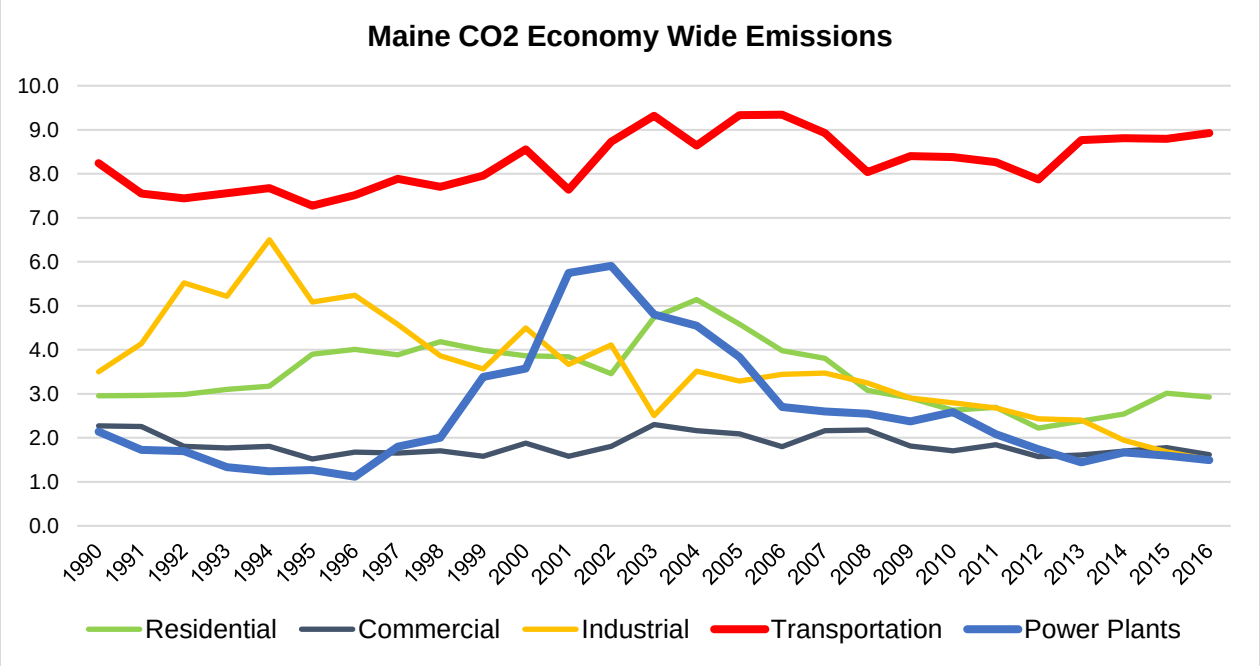
NEPGA
NEW ENGLAND POWER GENERATORS ASSOCIATION, INC.
33 Broad St, 7th Floor, Boston, MA 02109
(t) 617-902-2354 (f) 617-902-2349
www.nepga.org

Maine Joint Standing Committee on Environment and Natural Resources
NEPGA Testimony on LD 1679

The New England Power Generators Association (NEPGA)[1] applauds Governor Janet Mills' commitment to reduce greenhouse gas (GHG) emissions across all sectors of the economy to mitigate the effects of climate change. There is no question that addressing climate change and instituting programs to meet this challenge is of the highest priority. NEPGA is committed to doing its part in that fight.

NEPGA is proud of the leadership of the electric generation industry in reducing carbon dioxide (CO_2) emissions more than any other sector of the economy across New England. We also recognize that to meet the economy-wide mandates, more can and should be done. It is for that reason that NEPGA supports putting a meaningful price on CO_2 emissions in the wholesale electricity market to support the development of low and zero emissions technologies while also incenting continued investments in existing facilities critical to meeting our environmental mandates and reliability commitments. There are a number of aspects that make Maine unique when looking at emissions and those are critical when considering this proposal to make real emissions improvements.

First, a few facts. Transportation today represents 54% of all CO_2 emissions in Maine. While emissions coming from the power sector represent less than 10% of emissions in Maine. This is tied for the lowest amount among any sector of the Maine economy.

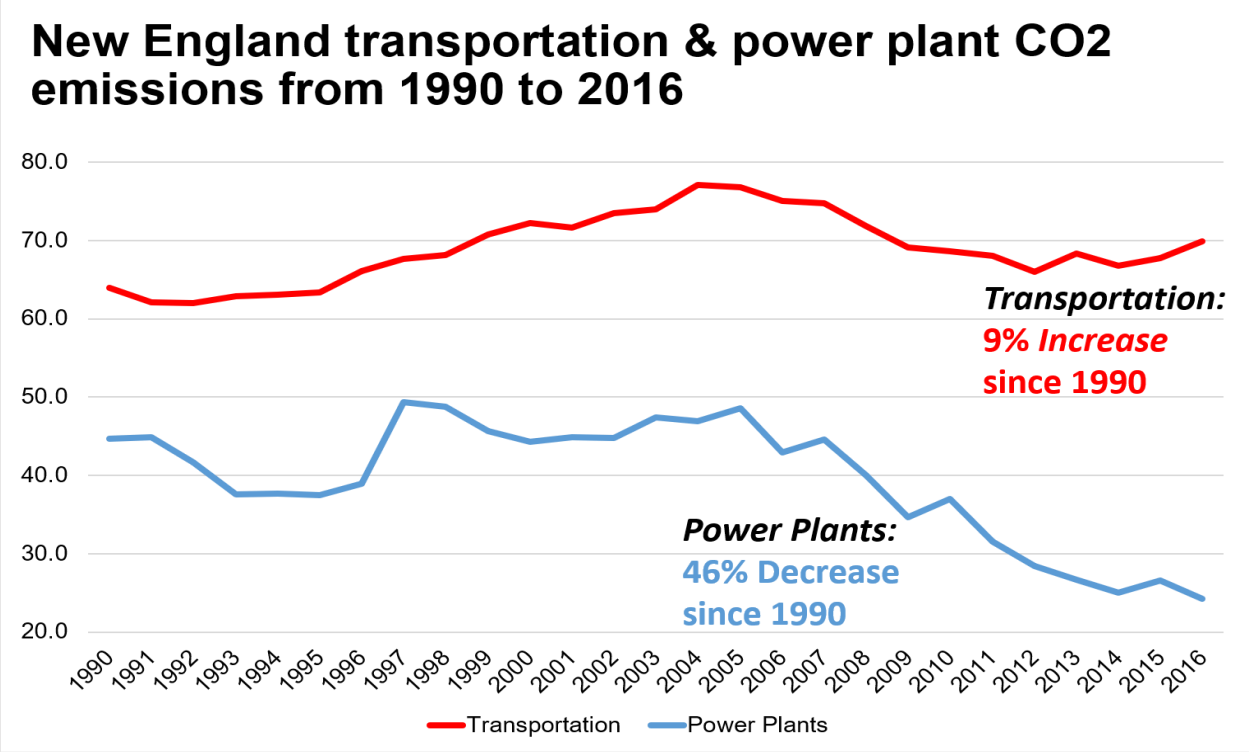


[1] The comments expressed herein represent those of NEPGA as an organization, but not necessarily those of any particular member. NEPGA is the trade association that represents competitive electric generating companies in New England. NEPGA's member companies represent approximately 90% of all generating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

Since 1990, economy-wide emissions in Maine have fallen 13.6% while emissions from the state's power sector fell by 28.5%.[2] It is particularly notable that electricity generation in Maine began as the lowest emitting sector of the economy and has still made substantial improvements, remaining the lowest emitting. That is a very unusual situation both across New England and nationally. It is for that reason that proposals made in areas with much higher emitting generators will not have the same impact here. Maine already has one of the cleanest power generation fleets in the nation. Simply put, Maine cannot make some of the deep cuts in electricity sector CO_2 emissions compared with many other states and must address other sectors of the economy for further meaningful improvements.

A Path Forward on Pricing CO_2 Emissions

This bill presents Maine with an opportunity to join other New England states and lead a broader effort to adopt and implement a regional, economy-wide price on carbon to more effectively and equitably reduce GHG emissions.



Power plants across the region have reduced their CO_2 emissions 46% since 1990 according to recent data released by the U.S. Energy Information Agency (EIA).[3] Much of these reductions have been driven by greater efficiencies following the restructuring of the state's electricity industry. Since 1999, the efficiency (measured in heat rate) for power plants in New England improved by 22%. This means that the electricity output that used to take four plants to produce, today takes only three.

[2] https://www.eia.gov/environment/emissions/state/excel/maine.xlsx, October 31, 2018
[3] https://www.eia.gov/environment/emissions/state/, October 31, 2018

And yet, transportation remains the most significant portion of CO_2 emissions here in Maine and across New England.

Nonetheless, NEPGA recognizes that more will be expected from the electricity sector to continue its remarkable track record. That is why NEPGA supports placing a meaningful price on CO_2 emissions into the competitive wholesale electricity market as part of an economy-wide strategy to meet regional environmental mandates. Similar proposals to address emissions have been introduced in other states.[4] But, because of the interstate nature of the electric grid, a patchwork of policies across the states should be avoided to the maximum extent possible.

NEPGA therefore suggests a trigger mechanism to ensure that as much of the regional market move forward on a comparable policy as possible. This could be done by writing into legislation a condition that the CO_2 price would only be implemented if other New England states representing a certain percentage of the region's load (e.g., 80%) adopted a similar, but no less stringent, pricing mechanism. Such a trigger is being proposed in other states in New England as well.[5]

A state-specific price on carbon would mean that Maine-based power plants would run less (because their production will be more expensive than other regional generators), yet electricity demand in the state must still be met. This means that plants outside of Maine, which wouldn't run as much if not for the Maine-specific CO_2 price, would have to increase production to make up for the shortfall, ultimately frustrating Maine's emissions reduction objectives. A multi-state approach would avoid this outcome and produce a transparent and efficient means for reducing CO_2 across the economy.

Addressing Transportation Emissions

While remarkable improvements have been made in the electricity sector, it is clear that other sectors of the economy are lagging far behind. With the advent of electric vehicle technologies and home heating alternatives, the time is ripe to consider a broader, market-based mechanism that would efficiently and effectively reduce CO_2 emissions. Many of the reductions that would be expected from these other sectors would come from electrification and NEPGA members stand ready to do their part.

For example, according to data from the Union of Concerned Scientists, an electric vehicle driven in New England would be the equivalent of a 102 miles per gallon combustion engine vehicle – more than 25% better than the national average.[6] This comes because New England already has one of the cleanest electric grids in the country; a situation that would only improve with a price on CO_2 in the wholesale electricity market.

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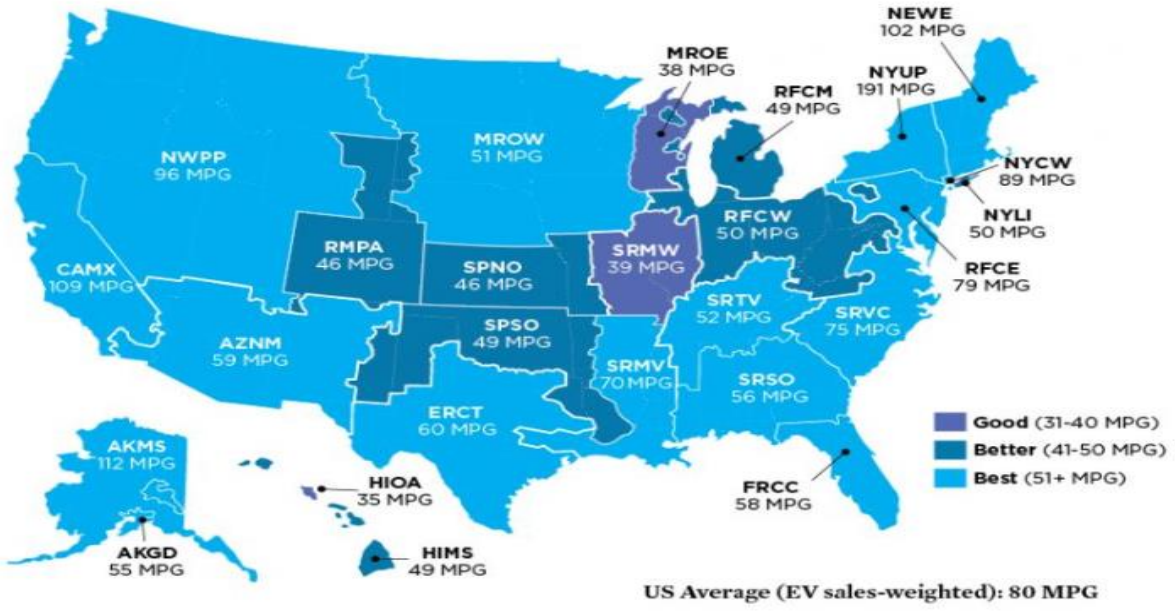
[4] H 5869, *An Act Relating to Health and Safety – Economic and Climate Resilience Act of 2019* (RI) S 662, *An Act Relating to Health and Safety – Economic and Climate Resilience Act of 2019* (RI); HB 5363, *An Act Establishing a Carbon Price for Fossil Fuels Sold in Connecticut* (CT); S.1821, *An Act Combatting Climate Change* (MA); and H.1726, *An Act to Promote Green Infrastructure, Reduce Greenhouse Gas Emissions, and Create Jobs* (MA).

[5] H 5869, *An Act Relating to Health and Safety – Economic and Climate Resilience Act of 2019* (RI) and S 662, *An Act Relating to Health and Safety – Economic and Climate Resilience Act of 2019* (RI).

[6] 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.

Certainly, a move to widescale electrification in different sectors of the economy would mean an increase in electricity demand. That is something that the competitive electricity markets are actually designed for. 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 has been 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, recent history shows the ability of the competitive wholesale electricity market to respond to increased demand with investments in upgrading existing facilities and the construction of new, efficient electricity supplies.

Since electric restructuring in the late 1990s, generators participating in New England's competitive wholesale electricity markets have invested billions of dollars in facilities to produce a reliable, cost-effective and efficient supply of electricity without guaranteed cost recovery or a guaranteed rate of return. This has resulted in the construction and development of roughly 14,000 MW of new power plants – equivalent to nearly 50% of the all-time peak demand in New England. More than 4,000 MW have been brought to market or have begun construction in just the last three years. All without state subsidies or market carve-outs. These facilities are some of the most efficient, clean and cost-effective in the country and helped drive the remarkable emissions reductions seen over the last 20 years. In fact, 2016 and 2017 featured the lowest annual average wholesale electricity prices since the beginning of the competitive markets.

Open, competitive markets were key to this result and should continue to be what drives future investments.

It is that power of a competitive marketplace that Maine and New England can help unleash by addressing climate change through a price on CO_2 emissions. A strong price signal can prime investments in clean energy technologies by having some of their key attributes appropriately valued. It levels the playing-field across technology and fuel sources and sets off a competitive environment that spurs innovation.

An RPS Increase is Unnecessary

As currently drafted, LD 1679 would require 80% of the electricity consumed in Maine to come from defined renewable resources by 2030. By 2040, 100% of Maine's electricity needs would have to be met from a specific subset of resources. However, Maine already derives roughly 75% of its electricity from renewables, particularly hydroelectric, biomass and wind facilities.[7] Given the current penetration of renewables in Maine, mandating additional amounts of renewable energy outside the region's competitive markets, as proposed in this bill, does not appear to be necessary for Maine to reach its environmental goals and would result in additional costs for the state's ratepayers. For that reason, a strong CO_2 price should be used as the primary driver for clean energy development and GHG emissions reductions in Maine. NEPGA remains concerned about policies that would choose individual technologies and resource types, insulating them from full competition, as is seen in proposals to increase to the state's Renewable Portfolio Standard (RPS).[8]

By constricting the focus on electricity to specific resource types rather than overall emissions, Maine is cutting out existing technologies that can help meet the environmental goals as well as explicitly writing out potentially new technologies not contemplated today. RPS programs were intended to help support what, at that time, were emerging technologies that required subsidies to be financially viable. Wind and solar have now evolved to the point where they are increasingly competitive on their own merits. With the underlying imperative of reducing GHG emissions, renewable energy is simply one of many strategies to achieve that goal.

NEPGA suggests that the same GHG emissions mandates laid out in LD 1679 can and should be met by working with other New England states to set a meaningful price on CO_2 emissions. That will help support existing clean resources while also incenting innovation for the next generation of technologies, across the broader economy.

NEPGA opposes policies that carve up the market for chosen technologies or subsidize individual resource types, even though those policies may be well-intentioned. Such an approach puts the risk of betting on the "right" solution on the backs of consumers. There are countless examples of similar policies prejudging the answers to government-identified issues creating unintended consequences by being rigid and prescriptive in their solutions and burdening consumers with higher costs and risks than necessary.

Instead, NEPGA believes that a policy should be clearly articulated by a state – such as for lower GHG emissions – and then implemented in a way that is flexible enough to adapt to the innovative solutions that may not be apparent today. In much the same way

[7] https://www.eia.gov/state/print.php?sid=ME
[8] LD 1494, *An Act to Reform Maine's Renewable Portfolio Standard*

that most did not foresee the dramatic cost reductions in solar technologies, increased potential for onshore and offshore wind or the recently available abundance of domestic natural gas supplies, we do not know today what the best, most cost-effective electricity supply resources will be to meet a carbon-constrained economy in 2030, 2040 or 2050. It is for that reason that as the legislature considers the goals laid out by the Governor in LD 1679, it should ensure that implementation of those mandates be made in the most market-based and flexible way possible – through the integration of a resource-neutral price on CO_2 emissions.

Conclusion

Combatting climate change will require a comprehensive effort with contributions from all sectors of the economy. With the attention brought by Gov. Mills with LD 1679, Maine has a unique opportunity to join other states in implementing a meaningful, economy-wide price on CO_2 to meet ambitious GHG emissions targets. Maine, however, must take this opportunity to address the sectors of the economy actually driving emissions – particularly transportation. If not, Maine runs the risk of relying exclusively on the electricity sector to achieve its ambitious environmental goals. Given that the electricity sector is at an already extraordinarily low emissions level of 1.5 million metric tons,[9] zeroing these out will not bring Maine anywhere close to the economy-wide targets the legislation identifies.

Now is the time to take a bold approach to the generational challenge posed by climate change. By working cooperatively with other New England states and instituting an economy-wide, resource-neutral CO_2 pricing mechanism, NEPGA and its members are committed to help Maine meet its share of this Global issue.

NEPGA looks forward to the opportunity to work with Committee Members and the Governor on the best path toward attaining Maine's energy and environmental goals.

Respectfully submitted,

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Dan Dolan,
President

May 17, 2019

[9] https://www.eia.gov/environment/emissions/state/excel/maine.xlsx, October 31, 2018