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Comments on Stakeholder Drafts of Greenhouse Gas Emissions Reductions from Electricity Generating Facilities and Clean Energy Standard

The New England Power Generators Association (NEPGA)[1] appreciates the opportunity to provide these initial comments to the Massachusetts Department of Environmental Protection (DEP) on the stakeholder discussion drafts posted on November 7 for "Reducing Greenhouse Gas (GHG) Emissions from Electricity Generating Facilities Program" and a "Clean Energy Standard" (CES). NEPGA recognizes that pursuant to the Governor's direction,[2] DEP is setting a process with multiple opportunities to provide input and feedback to institute sector-specific regulations to reduce GHG emissions pursuant to direction under the Global Warming Solutions Act (GWSA). NEPGA is committed to working with DEP to meet the emissions reduction mandates while maintaining competitive electricity costs and ensuring continued reliability. Within that framework, NEPGA believes that the best way to meet state policies for the benefit of consumers is to provide a truly competitive market that does not discriminate between resource types or resource vintage.

NEPGA is the trade association representing competitive power generators in New England. NEPGA's member companies represent approximately 26,000 megawatts, or roughly 80% of the installed capacity in New England and approximately 83% of the covered emissions in the proposed DEP regulations. NEPGA's mission is to support competitive wholesale electricity markets in New England. NEPGA believes that

[1] The comments expressed herein represent those of NEPGA as an organization, but not necessarily those of any particular member.
[2] Executive Order 569, "Establishing an Integrated Climate Change Strategy for the Commonwealth"

open markets guided by stable public policies are the best means to provide reliable and competitively-priced electricity for consumers. A sensible, market-based approach furthers economic development, jobs and balanced environmental policy for the region.

Understanding that both the proposed GHG power sector emission cap and Clean Energy Standard are early in their development, we respectfully offer the following key points for the DEP to consider as the agency proceeds with the rulemaking process:

1. Massachusetts has achieved economy-wide GHG emissions reductions of 24% below 1990 levels, before a single regulation has been put into place. That is only 1% away from the 25% reductions called for by 2020. In light of these numbers, DEP should take a more deliberate approach in power generator regulations and substantially increase any emissions cap from what was proposed.
2. The Massachusetts power sector has already reduced GHG emissions 60% below 1990 levels, well beyond levels asked for and achieved by other emitting sectors and DEP should include these equity considerations in its approach to implementing the GWSA provisions. DEP's focus should be on increasing reductions from these other sectors, such as transportation, given the leadership that has already been shown by the power sector.
3. Imposing a *state-specific* emissions cap on generators operating within a competitive *regional* power market is bad environmental and energy policy that will likely result in the unintended consequences of shifting generation out of state without reducing regional GHG emissions, jeopardizing the ISO-NE electricity system reliability, and increasing costs to Massachusetts consumers.

4. Any new policy capping GHG emissions from the state power sector should include compliance flexibility mechanisms that allow generators to effectively manage the competing interests of delivering energy and reducing GHG emissions. This might include an appropriately designed reliability exemption, emergency fund, banking and borrowing protocol, or some other approach. No environmental mandate should be imposed that could have a direct threat to regional power system reliability.
5. Existing and new sources must be treated equitably under new carbon policy.
6. If the DEP proceeds with CES development it should create an emission standard-based policy and then allow any generation source, new or existing, that meets that standard to qualify for participation.

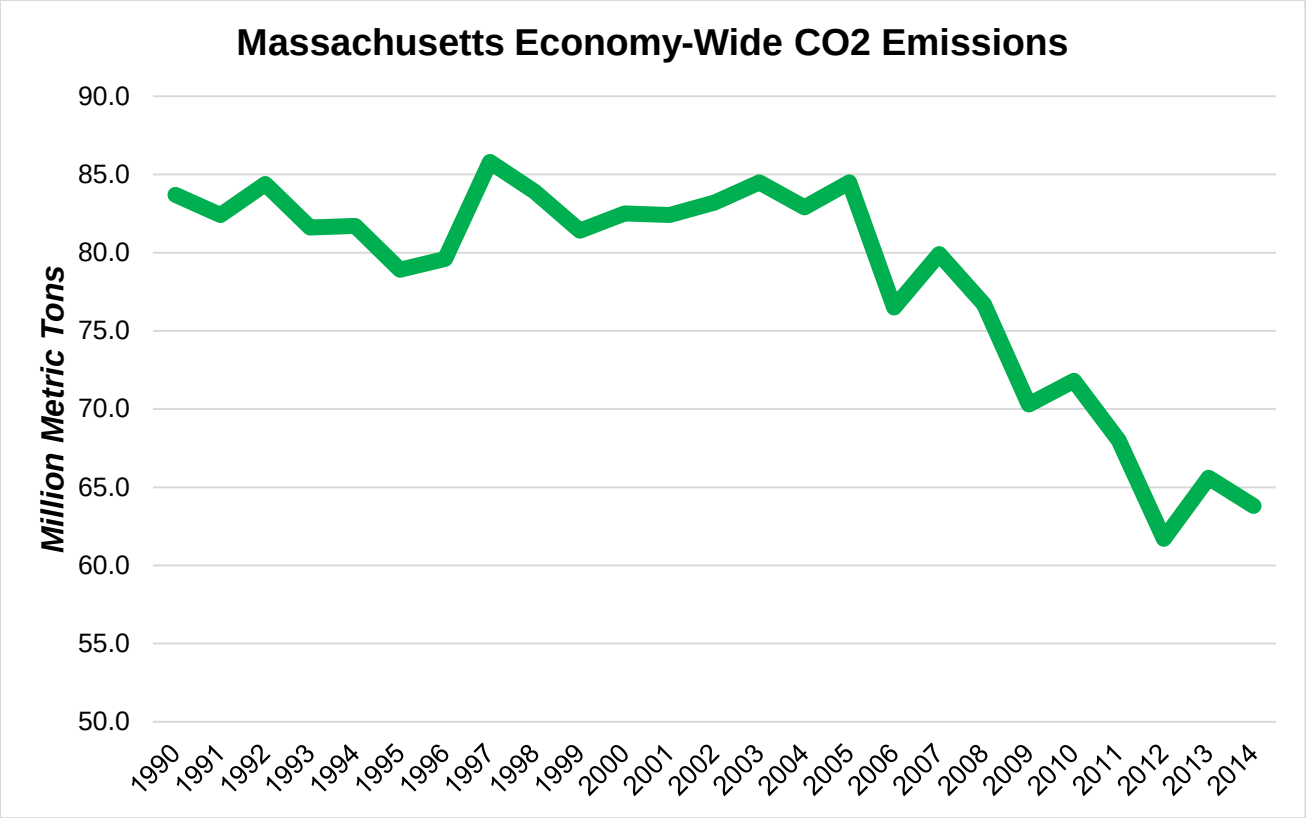
We elaborate on these points in the text that follows.

Emissions Reductions from Electricity Generating Facilities

Historical and Actual Generation Emissions

Just four days before DEP's stakeholder meeting on Emitting Electricity Generators, the U.S. Energy Information Administration (EIA) released updated 2014 CO2 emissions data showing that Massachusetts is on the cusp of its 2020 mandate. Massachusetts has achieved economy-wide carbon dioxide (CO2) emissions reductions of 24% since 1990,[3] now only 1% off the 2020 mandate of 25% below 1990 emissions.

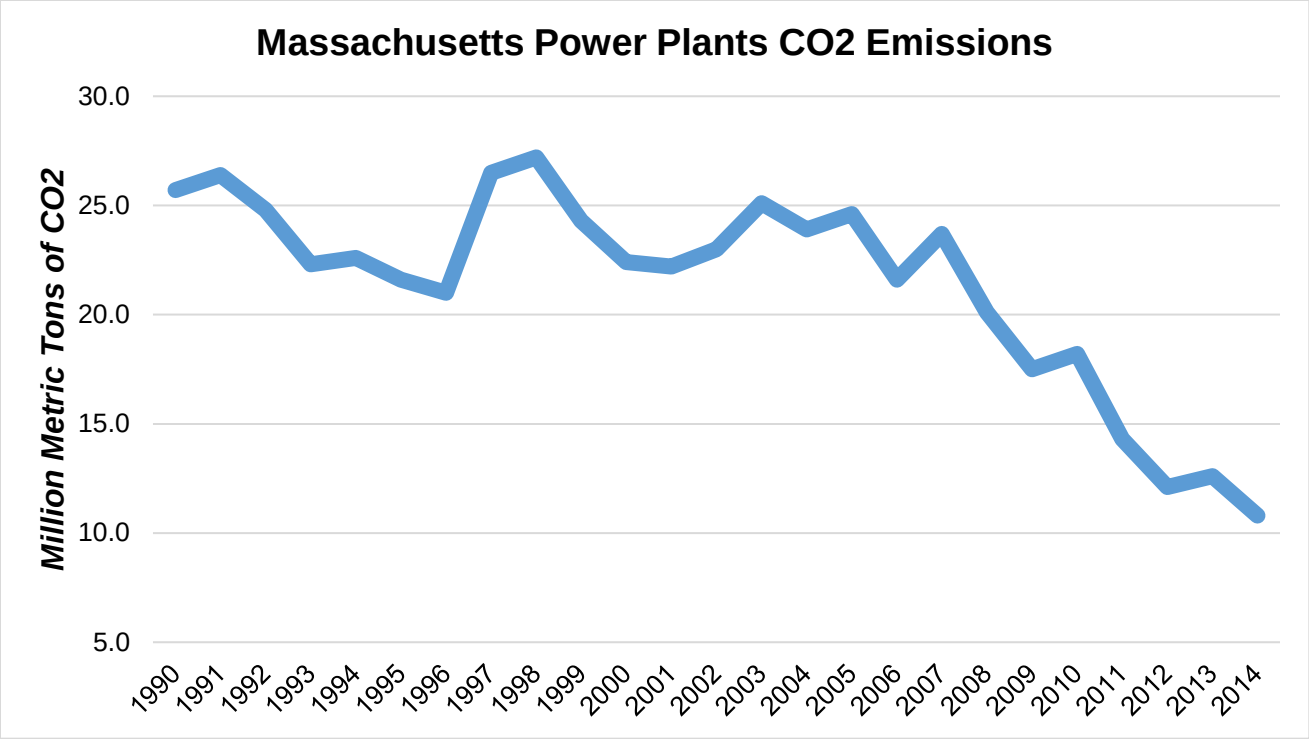
[3] EIA, State Carbon Dioxide Emissions, Released November 3, 2016. Grand total carbon dioxide emissions in Massachusetts 1990 were 83.7 million metric tons and 63.8 million metric tons in 2014. http://www.eia.gov/environment/emissions/state/



Massachusetts should celebrate this achievement and now take the appropriate time it affords to fully consider what long-term policies may be necessary to meet the subsequent mandate of 2050 emissions 80% below 1990 levels. The new information should also cause DEP to substantially revise the proposed regulations. In fact, NEPGA asserts that given the dramatic reductions realized, no material additional cuts in CO2 emissions from the power generation sector are necessary by 2020. The incremental 1% reduction, or approximately 0.84 million metric tons (MMT), should be achievable with modest emphasis on transportation or others lagging in their emission reductions.

The Massachusetts success story, after all, has been driven primarily by the competitive generation sector, which has cut CO2 emissions 60% below 1990 levels.[4]

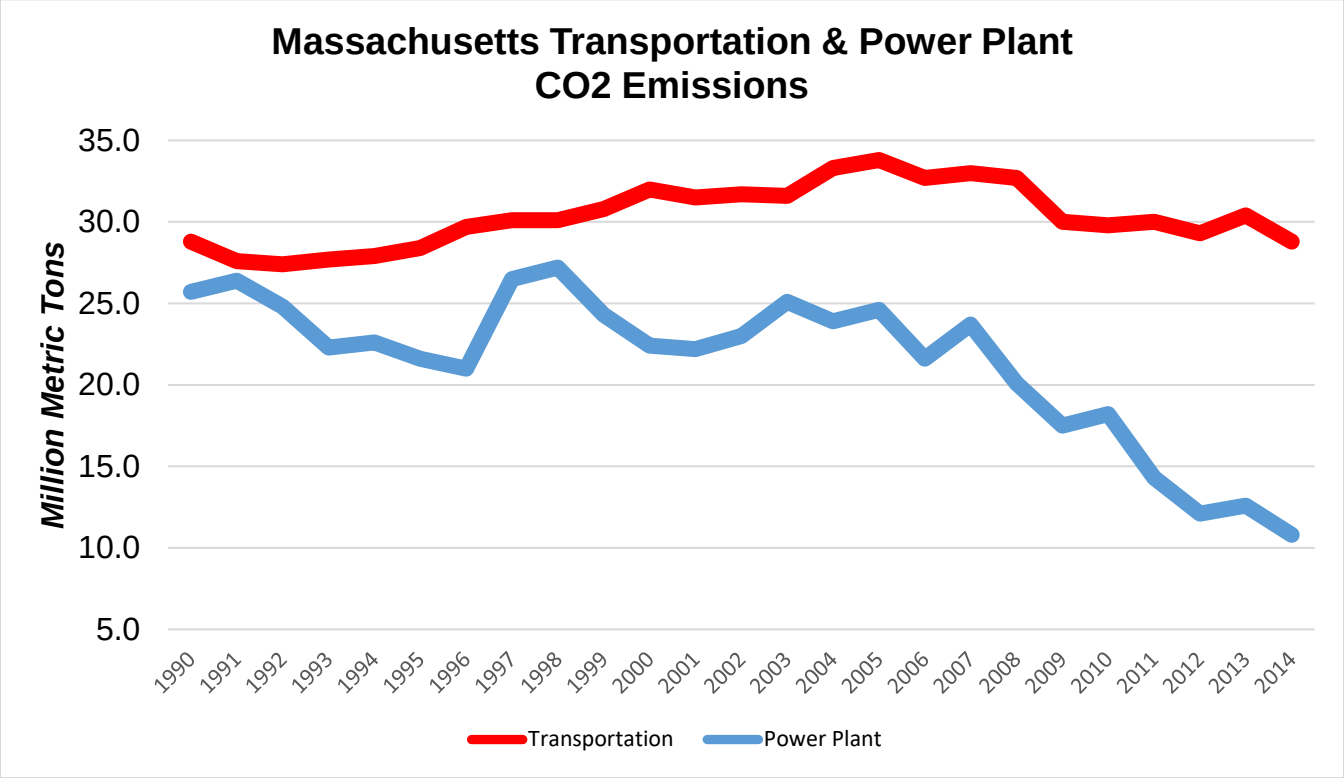
[4] U.S. EIA, State Carbon Dioxide Emissions. CO2 emissions from the electric power sector in 1990 were 25.7 million metric tons and reduced to 10.8 million metric tons in 2014.



Much of this decline was driven by the increased use of natural gas for power generation and a move away from coal and oil. What is also notable, however, is that the largest drops came upon the advent of restructuring of the electricity industry. Following the passage of the Massachusetts Restructuring Act in 1997, emissions peaked in 1998 at 27.2 MMT. Once competition was introduced in the power generation market, power plant owners brought tremendous efficiencies to the industry. Since 1999, the efficiency (measured in heat rate) for power plants increased by 22%, meaning that the electricity output that used to take four plants to produce, today takes only three. This not only translates into dramatically lower emissions from the producing units, but also results in the need for fewer plants.

NEPGA recognizes that with the impending retirement of the Pilgrim Nuclear Power Station, some rise in emissions should be expected in New England and, to a lesser extent, in the Commonwealth. However, it must also be noted that many of those

emissions will be offset, in part, by the retirement of other facilities, such as the Brayton Point Power Station in May 2017. The electricity sector has dramatically out-performed every other sector in cutting CO2 emissions and now represents only a third of the emissions from the transportation sector.[5]



DEP should now shift its focus to sectors, like transportation, that have not shown a similar emissions trajectory as electricity. NEPGA is compelled to highlight that the emissions regulations being proposed for emitting generators would have a larger impact on commercial operations of those affected resources, than any of the proposed regulations in other sectors. Put another way, despite having already cut CO2 emissions by 60%, a deeper impact will be felt in the electricity sector from the

[5] EIA, State Carbon Dioxide Emissions. Transportation sector CO2 emissions in Massachusetts in 2014 were 28.8 million metric tons versus 10.8 million metric tons in electricity generation.

proposed regulations than the regulations applicable to other covered sectors. That simply doesn't make sense.

Maintaining the current path laid out in the stakeholder draft will have severe impacts for the Commonwealth's power plant owners and consumers, without the actual need and will also lead to the perverse outcome of not cutting regional emissions. That is because the proposed regulations will constrain output from Massachusetts-based power plants, inevitably leading to increased production – and therefore, emissions – from out-of-state resources. The Commonwealth is part of a New England-wide electricity market that is dispatched as a region and not on a state-specific basis. Therefore, any reduced generation in Massachusetts will simply shift power production requirements to resources located in other states in the region and will generally not lead to any actual net emissions reductions. Instead, it will cause increased costs for Massachusetts consumers as otherwise economic power generation resources located in the Commonwealth will no longer be able to be dispatched as frequently because of onerous emissions caps; instead more expensive generation out-of-state will be used, and paid for, by consumers. These out-of-state generators would presumably also have a higher heat-rate, therefore lower efficiency and higher emissions, or they would have been dispatched before their Massachusetts-based competitors. This is bad energy policy and bad environmental policy.

Reliability and Market Impacts

The unit-specific emissions caps proposed in 310 CMR 7.77(4)(b) Table A will have an immediate negative impact on the continued economic operation of those facilities with significant potential impacts on reliability. Power generation resources in

Massachusetts are likely to be in the untenable position of violating emissions regulations set by DEP or putting the electricity grid in peril by not being able to perform should ISO New England need them. This situation is wholly avoidable.

Under the structure proposed by DEP, specific resources will have a set emissions cap with the potential for units that over-comply (i.e. generate CO2 emissions below their prescribed limits) in any given year to then sell or transfer an over-compliance credit (OCC) to resources that exceed their caps. This is a simple cap-and-trade model with which the electricity industry is generally familiar and comfortable. However, there are serious practical challenges to the regime proposed here.

In particular, because this mechanism is only for Massachusetts power plants there will be a small, illiquid pool from which OCCs may be bought and sold. As listed by DEP, there are only 22 existing facilities that will be participating. Under the proposed regulations, each facility is limited to a hard cap that, at first blush, appears to be quite low. Based on the small pool, it is therefore unlikely that credits will be traded at a volume commensurate with other, regional cap-and-trade programs that have been successful. This general concern is further compounded by timing issues that will make the trading of credits even more difficult, if not impossible.

The electricity market is distinguished by being unpredictable and subject to an almost infinite amount of variables based on electricity demand, weather and the occurrence of contingencies affecting both power generation and fuel supplies. Because of the unpredictable nature of electricity and the illiquid market for OCCs, individual resources will need to stockpile their emissions allowances to ensure that they have adequate allowances through year-end. This will dramatically restrict the trading of

OCCs by reducing the period in which companies will be willing to trade. In addition, it creates a situation in which resources must both restrict their run-times to the most critical periods while also avoiding non-performance penalties under the ISO New England Pay for Performance market structure during electricity shortage events.

Taken together, this establishes an overall situation where Massachusetts-based power plants will have the incentive to offer higher prices into the energy market as a means of not being dispatched in ‘normal’ periods, in order to preserve their run-times for operation during the times of greatest system stress. This will substantially constrain the ability of ISO New England as the market operator to efficiently dispatch the regional power generation fleet, leading to potential reliability impacts to deal with unexpected occurrences that happen regularly in a diverse and complicated electric grid. By necessity, this also translates into increased costs for consumers.

The bottom line is that regulated entities will require flexibility in order to effectively manage the competing demands of the energy market and environmental obligations. Fortunately, there is now a wealth of experience designing efficient emissions trading systems and we urge the DEP to tap into that experience when developing the compliance system necessary to meet any sector emissions reduction limits dictated by the GWSA. The DEP need go no further than the Regional Greenhouse Gas Initiative (RGGI) for examples of flexibility provisions that allow the sector to accommodate the dynamic nature of the energy market. In particular, a system that limits sector rather than unit emissions, that distributes emission allowances via quarterly allowance auctions, that sets multi-year compliance periods and that allows for banking of compliance instruments provides generators their needed flexibility.

New Versus Existing

DEP proposes bifurcating the regulation of new and existing power generation facilities by allocating 1 MMT of emissions to be split by any new resources in 2018 and have that aggregate cap decline 2.5% annually thereafter. There are three new resources that have cleared in recent ISO New England Forward Capacity Auctions and have Capacity Supply Obligations that begin for one generator on June 1, 2017 and for the two others on June 1, 2019. These resources constitute an aggregate capacity of 1,197 MW. Yet at first examination of Table A in the stakeholder draft, the 1 MMT emissions cap would not fit for an aggregate capacity of that amount.

This puts new resources at a substantial disadvantage to existing ones, even though both are obligated to perform to the exact same reliability and performance requirements for ISO New England. That type of discrimination between new and existing facilities is patently unfair. One potential solution to address this inequity is to create a single emissions cap and reduction schedule for the sector that covers both new and existing facilities and conduct periodic allowance auctions to create a true market for allowances and to provide all generators an equal chance to obtain the allowances necessary for compliance and continued operation. Such an aggregate cap, however, must be well above the 9,119,126 tons proposed in the stakeholder draft.

While DEP is constrained by the GWSA and the recent Massachusetts Supreme Judicial Court decision[6] to set declining emissions regulations on various sectors within the Commonwealth, the GWSA and *Kain* both provide substantial latitude as to how those goals are achieved. NEPGA strongly questions the overall aggregate emissions

[6] *Kain v. Dep't of Environmental Protection, 474 Mass. 278 (2016)*

cap threshold proposed by DEP and opposes the unit-specific aspect, particularly in light of the new EIA data showing the 2020 emission mandate has virtually been met. NEPGA urges DEP to set an aggregate emissions cap far higher than what was initially proposed. This will help ensure continued competitive pricing and dispatchability for Massachusetts plants, while also complying with the GWSA and *Kain* decision. An aggregate emissions cap can be revised and updated with adjustments made beyond 2020, should they be necessary. A substantially elevated aggregate cap also has the benefit of not discriminating between new and existing resources, allowing for continued appropriate investment to replace retiring facilities.

Failing to increase the cap will likely serve to eliminate future investments in Massachusetts while simply shifting those same investments to bordering states. This will not impact regional GHG emissions but move them a few miles over the border with those jurisdictions then enjoying the host community benefits of increased tax revenues, employment and localized electric reliability. That does not have to be the case.

Clean Energy Standard

NEPGA had filed comments[7] on the previous iteration of a Massachusetts Clean Energy Standard (CES) proposed in 2014. If a CES is to be implemented, NEPGA raises two key issues that should be considered, as originally articulated relating to the CES proposed in 2014.

Eligibility of New and Existing Generators

Reducing CO2 emissions requires a two-pronged approach – maintaining existing low-carbon resources and providing for new low carbon resources. Thus, a

[7] Comments filed November 3, 2014 http://nepga.org/2014/11/nepga-comments-on-massachusetts-clean-energy-standard/

successful CES must include all resources that have the requisite low-carbon characteristics, in a non-discriminatory manner, including both existing and new generation. If an unanticipated consequence of implementing a CES is to undermine existing low or zero carbon resources, this could cause the retirement of existing generation resources that would otherwise contribute to cost-effectively attaining the emission reduction targets. This would be counter-productive to the intent of the CES. Including both existing and new resources is the best option for meeting the CES's CO2 emissions goals.

Eligibility of All Resources Meeting the Threshold

In addition to allowing both existing and new generation to qualify for a CES, all resources – regardless of technology type – meeting the specified emission rate should qualify. NEPGA has consistently advocated that the optimal approach for reaching emissions goals is to develop a standard rate and then allow any resource able to meet the standard to compete. This avoids putting policymakers in the position of picking winners and losers and allows the market to deliver the best mix of resources to cost-effectively meet the CO2 goals. In addition, resources from both Massachusetts and throughout the region should qualify for the CES as they currently do for the RPS.

Conclusion

NEPGA appreciates the opportunity to provide these initial comments in response to the stakeholder presentations and discussion drafts posted for review. NEPGA and its members are committed to working with DEP on meeting emissions mandates as specified by the GWSA and the recent *Kain* decision. NEPGA looks forward to continuing the constructive dialogue in this and other proceedings.