



February 24, 2017

Jordan Garfinkle, MassDEP
One Winter Street, 7th floor
Boston, MA 02108

Re: 310 CMR 7.00 & 310 CMR 60.00: Proposed Greenhouse Gas Emission Regulations and Amendments

Dear Mr. Garfinke,

Please accept these comments from the Jones River Watershed Association and its Cape Cod Bay Watch program regarding the above-mentioned amendments/regulations.

**I. Reducing Methane Emissions from Natural Gas Distribution Mains and Services:
310 CMR 7.73**

We commend Massachusetts Department of Environmental Protection (MassDEP) for proposing this new regulation to reduce methane (CH₄) emissions from natural gas distribution lines, and to establish annually declining aggregate limits on CH₄ emissions. CH₄ is a potent greenhouse gas which, as your agency states in the background document,¹ has a global warming potential of roughly 25x that of carbon dioxide in the short term.

Currently under Massachusetts law, gas companies must address CH₄ leaks via Gas System Enhancement Plans (GSEPs). Most gas operators are to replace or improve aging or leaking natural gas infrastructure by 2034. Additionally, a new law passed in 2016 requires the Massachusetts Department of Public Utilities (DPU), in consultation with MassDEP, to identify and develop plans to repair Grade 3 gas leaks. DPU is also required to set rules about acceptable methods for repairing these leaks. Where leaks are ongoing and, before now, considered “acceptable,” such as along newer gas supply lines, the industry should design a method for capture and collection, which MassDEP should review for efficiency.

¹ MassDEP background document on proposed new and amended regulation.

While we do not have specific comments about the assumptions and methodology of how CH₄ emission limits were calculated, we do have comments regarding the CH₄ emission limits themselves.

JRWA expects that MassDEP (and DPU where applicable) will enforce the limits and impose penalties for companies that exceed limits. Strong enforcement and penalties will be the only way limits will have a meaningful impact on emission reductions.

We also have a general concern about the Commonwealth becoming too reliant on natural gas. Massachusetts is already heavily dependent on this source -- more than 50 percent of our in-state electricity generation currently comes from natural gas. Becoming this reliant on natural gas slows the development of renewables, places the economy and consumers at risk from fluctuating gas prices, weakens efforts to cut emissions, and more.

The U.S. Department of Energy has projected that the cost of natural gas will rise as demand increases. This means consumers will eventually have to pay more once costs go up. Reliance on natural gas also undermines long-term carbon emission reductions. While natural gas electrical generation produces much less carbon emissions than coal or oil, it still produces emissions, and CH₄ leaks appear to be extraordinarily consequential. It is important to consider the life cycle of an energy source to appreciate the true impacts (i.e., drilling, storage, extraction, and pipeline activities). Gas development can also contaminate water sources with hazardous chemicals that are used during the fracking process.

While we understand MassDEP's consideration of natural gas to meet short-term goals for reducing emissions, additional gas and pipeline construction should not be permitted when considering the more long-term goal of encouraging truly clean energy sources in Massachusetts. Not only should there be limits on CH₄ emissions, but also on the construction and expansion of gas infrastructure. Construction of renewables takes less time, potentially employs more of the workforce, and serves for long periods without adverse consequences. Renewables provide much greater social and economic benefit when constructed with proper siting and development that preserves, rather than depletes carbon attenuating and other important natural resources.

II. Clean Energy Standard: 310 CMR 7.75

Clean Energy Eligibility

The Clean Energy Standard (CES) is like the Renewable Portfolio Standard (RPS), in that it allows use of clean energy generated outside of MA. However, CES relies on emissions-based performance standards to identify eligible technologies, therefore allowing additional

technologies that are not eligible for RPS. When defining technologies to be labeled as clean energy, it is critical that MassDEP not only consider emissions, but the total impact caused by the technology, and most especially the environmental impacts.

As the proposed regulation is now written, Pilgrim Nuclear Power Station, our state's only commercial nuclear plant, would not be eligible under the CES because it began operating prior to December 2010. By setting this cut-off date, MassDEP correctly recognized that awarding credits to older facilities would not support construction of new clean energy supplies; but would rather "result in significant resource shuffling and windfall profits, as those [CES] certificates could be moved among accounts ... without any corresponding change in generation or emissions." As discussed in the 2013 Synapse report,² including nuclear under the CES would result in windfall profits (i.e., existing facilities profit from CES at ratepayer expense, without any changes in generation), which would only prevent renewables from growing. **The 2010 cut-off date in the proposed regulation should not be lowered or in any manner be extended to outdated, dangerous, and counterproductive technologies.**

Nuclear plants of today and throughout the region should be retired as soon as possible because they are dangerous and damaging to the environment. Any subsidies and incentives associated with them should not continue. In fact, MassDEP's CES should be designed to retire destructive producers (and technologies) quickly and ahead of schedule, to reduce risk and cleanup costs that accompany poor performing energy producers.

Furthermore, we also believe that new generation nuclear plants should not be eligible under the CES until the long list of complex problems (discussed below) associated with this power source are resolved, most notably the disposition of the highly toxic nuclear waste that is now vulnerable on our Cape Cod Bay shoreline.

Nuclear power, including and especially Pilgrim, is fraught with problems related to pollution, water usage, destruction of aquatic life,³ and the dangerous by-product of excessively highly toxic nuclear waste that currently has no repository. Pilgrim is sited on the shoreline where it is highly vulnerable to storms, flooding, sea level rise and other climate induced coastal changes. These irreconcilable problems clearly disqualify it from being labeled as a "clean" energy source. Furthermore, in the case of Pilgrim, its Clean Water Act NPDES permit has long been expired, and conditions are not being followed. Although EPA published a new draft NPDES

² Synapse Energy Economics. Oct. 25, 2013. A Clean Energy Standard for Massachusetts. 98 pp. <<http://www.mass.gov/eea/docs/dep/air/climate/ces-report.pdf>>

³ In the 1970s, the Commonwealth wanted Boston Edison (BE), Pilgrim's first owner, to install a closed cycle cooling system to minimize environmental damage. BE filed a legal challenge to avoid the cost of a closed system, eventually prevailing. Pilgrim is built with a once-through cooling system, which is well-known to cause destruction of marine life and thermal pollution.

permit in 2016, the final permit is still pending and Pilgrim is currently operating under one of the longest expired permits in the country (In April the expiration will turn 21 years old). Furthermore, the final NPDES permit, should it ever be issued, does nothing to counter the adverse environmental impacts.

The costs associated with cleanup and decommissioning of Pilgrim should also be recognized and considered. An energy facility that cannot achieve “greenfield” status at the end of operations due to unresolvable pollution or radioactive contamination should never be classified as a “clean energy source.” Generations to come will bear the costs associated with the pollution left behind.

Perhaps most importantly, although Pilgrim is expected to shut down by 2019, it will leave behind a legacy of nuclear waste on the shoreline of Cape Cod Bay. This waste that will remain on Pilgrim’s site for an indefinite length of time and will remain dangerous for hundreds of thousands of years, according to the Nuclear Regulatory Commission.⁴

Our economy – one of the best in the nation⁵ – relies heavily on fishing and tourism, and is largely dependent on a healthy Cape Cod Bay. One bad day at Pilgrim, or with its waste stockpile too close to the shoreline, could devastate our health, environment, and economy for decades or longer.

Nuclear power, whether new generation or older plants, should not be considered a “clean” source of energy. It has tremendous uncalculated costs and poses enormous health consequences to the environment and nearby populations. It is obvious that nuclear should not be on table with regard to the CES. Making existing or new nuclear reactors eligible under the CES would divert credits and incentive away from truly clean and new energy advancement and technologies, and shackle our region to serious and unresolved dangers.

Solar Siting

The proposed CES is designed to cover low- and zero-emissions generation technologies that are not included in Massachusetts Department of Energy Resources’ (DOER) Renewable Portfolio Standard program; the CES is designed to complement DOER’s program. It’s important

⁴ U.S. NRC. 2012. High-level waste.

⁵ Massachusetts’ overall economy is the best in the U.S., according to an analysis of federal economic statistics by Governing magazine.

<<http://www.governing.com/topics/politics/gov-state-economic-rankings-governor-ratings.html>>

to note that DOER issued a model zoning bylaw⁶ to help towns develop standards for large-scale ground mounted solar projects, and addresses siting preferences by stating:

“Where a solar facility is sited, as well as placement on the site once selected, is an important consideration, particularly in regard to large-scale ground mounted facilities. DOER strongly discourages locations that result in significant loss of land and natural resources, including farm and forest land, and encourages rooftop siting, as well as locations in industrial and commercial districts, or on vacant, disturbed land. Significant tree cutting is problematic because of the important water management, cooling, and climate benefits trees provide.”

State financial incentives, whether provided through programs administered by MassDEP, DOER, or any other state agency, should not be used for the installation of large, ground mounted solar installations that significantly affect environmental resources, or when they conflict with other established state goals and programs for protecting natural resources. If large solar farms are built, they should be sited in already disturbed areas (rooftops, parking lots, transmission line and highway right of ways, etc.).⁷

At a time when climate change is causing irreversible harm to the planet, resource-altering large-scale ground mounted solar installations are causing further irreparable harm to our environment, including to unique ecosystems throughout the state.⁸ Clearing forestland and other important ecosystems in the name of “green solar energy” makes no sense.

If DOER has addressed siting issues, MassDEP should as well. Chapter 3 of the Clean Energy and Climate Plans for 2020 does outline land use and its relation to GHGs for future policy and plans. Based on this chapter, forests, wetlands and other ecosystems play an important role in storing carbon. Here, the state is on the right track – a better appreciation of land use and GHG emissions is needed, and could lead to additional mitigation opportunities. However, protection and maintenance of carbon trapping natural resources needs to be secured more quickly, as large tracts of forestland are being clearcut across the state to make way for industrial solar facilities.

The state’s solar energy incentives should be changed so that ratepayer and taxpayer subsidies do not go into large-scale ground mounted solar energy systems that destroy ecologically,

⁶ MA EOEEA. Dec. 2014. Model Zoning for the Regulation of Solar Energy Systems.

<<http://www.mass.gov/eea/docs/doer/green-communities/grant-program/model-solar-zoning.pdf>>

⁷ Mass Audubon. Oct. 28, 2016. Letter to DOER re: Next Generation Solar Incentive Straw Proposal.

http://envirowatchma.org/wp-content/uploads/2016-10-28_MassAud_LtrNxtGenSolarIncentive.pdf

⁸ EnviroWatchMA. Feb. 2017. Loss of Open Space, Cultural Resources & Community Character Caused by Industrial Ground-Mounted Solar Energy Systems in Massachusetts: Case Studies and a Call for Changing Solar Industry Subsidies. <http://envirowatchma.org/wp-content/uploads/2017.02.08_SolarReport_final_updated.pdf>

socially, and culturally valuable lands. State and local laws should be enforced, and if need be, clarified, to ensure that these projects do not result in the loss of habitat, open space, and historic and cultural resources.

Geographic Eligibility

Regarding whether eligibility should be strictly limited to New England and adjacent control areas – we believe it depends on the impacts of the methods employed. Right now, New England has the character, intellect, and capacity to develop energy from our vast sun, wind and tidal resources. If MassDEP can come up with options to transport energy sources without the use of pipelines, destructive dams, or cables through sensitive ocean habitats, then perhaps out of state sources could be eligible. Right now, we have dirty pipelines delivering oil and gas to our state that are damaging to the environment and public health across multiple regions. Again, MassDEP should consider the holistic impacts of an energy source, and not just emissions, when determining eligibility.

III. Global Warming Solutions Act Requirements for Transportation 310 CMR 60.05 (Amended)

MassDEP is proposing amendments to add declining annual aggregate CO₂ targets for the transportation sector and for MassDOT (including equipment owned by MBTA). The MBTA's Old Colony Line (Plymouth/Kingston) was permitted for service c1989, and it required that an electrical component to be developed for the train line as soon as possible.⁹ This has not yet occurred, and the train often idles over the Jones River to change direction, with diesel smoke blowing over the river. While there has been some improvement on this issue, there does not seem to be progress on changing the train to electric, nor any of the commuter trains. Moving from diesel use in the state's trains – as well as in DOT's trucks – would greatly help reduce emissions and help the state reach its longer-term goals.

IV. Carbon Dioxide Emission Limits for State Fleet Passenger Vehicles 310 CMR 60.06

MassDEP requested comment on whether and how to address increased vehicle need, including whether it is reasonable to expect Executive Offices to acquire all non-emitting (i.e., electric) vehicles in order to stay within their CO₂ limits. We fully support any state efforts to move to an all-electric vehicle fleet, and believe it will boost the use of this means of transport in the private sector.

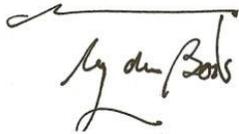
⁹ MEPA Certificate

Summary

What is deemed eligible as clean energy and receives subsidies should be based on a clean “do no harm” standard, not just an emission standard. If taxpayer money is spent on clean and renewable energy, then the sources should truly be clean and healthy. For instance, only solar farms that do not clear forestland or destroy important wildlife habitat should be considered; only wind farms that do not end up in the migratory path of endangered species should be considered; and only energy sources that minimize environmental harms and do not produce large stockpiles of waste hazardous for generations to come should be considered.

It’s time that Massachusetts takes its leadership role in the clean energy sector to the next level, and become a global leader in smart, meaningful expansion of clean energy. Until gas and nuclear can stop contamination and avoid waste byproducts, the Commonwealth’s first choice should always be responsibly sited sun, wind, and tidal sources.

Sincerely,



Pine duBois, Executive Director
Jones River Watershed Association



Karen Vale-Vasilev, Program Manager
JRWA’s Cape Cod Bay Watch Program