



September 22, 2016

Commissioner, Martin Suuberg
Massachusetts Department of Environmental Protection
One Winter Street
Boston, MA 02108
Submitted via DEP email to: DEP.Stationary@state.ma.us

RE: Comments on Proposed Amendments to 310 CMR 7.70 Massachusetts CO₂ Budgeting Trading Program

Dear Commissioner Suuberg:

The Alliance for Industrial Efficiency (hereinafter, “The Alliance”) appreciates the opportunity to provide comments for the Massachusetts Department of Environmental Protection’s (“MassDEP”) proposed amendments to 310 CMR 7.70 Massachusetts CO₂ Budget Trading Program. The Alliance is a diverse coalition that includes representatives from the business, environmental, labor and contractor communities. Our national membership includes 200 contractors in Massachusetts. The Alliance is committed to enhancing manufacturing competitiveness and reducing emissions through industrial energy efficiency, particularly through the use of clean and efficient power generating systems such as combined heat and power (CHP) and waste heat to power (WHP).

The Alliance supports MassDEP's proposal to allow CHP units to exclude emissions from useful thermal energy from their Regional Greenhouse Gas Initiative (“RGGI”) compliance obligation. We appreciate that the Commonwealth is moving to recognize the important benefits thermal energy can provide to the environment and the economy. CHP offers significant environmental, economic, and reliability benefits and we commend MassDEP for taking steps to remove barriers to deployment.

The Potential for CHP in Massachusetts

Across the country, CHP currently represents 83 gigawatts of clean and efficient power. In spring 2016, Department of Energy (DOE) found approximately 149 gigawatts of total on-site CHP potential across all states.¹ Full-scale deployment would create jobs in the design, construction, installation and maintenance of equipment; reduce fuel use and energy costs; and lower greenhouse emissions.

In Massachusetts, specifically, there is significant opportunity to implement CHP. Currently, the state has 209 sites, generating 1,582 megawatts of clean and efficient power.² DOE estimates that Massachusetts has 3,434 megawatts of remaining technical potential capacity, identified at 6,659 sites.³

¹ U.S. DOE, March 2016, “Combined Heat and Power (CHP) Technical Potential in the United States,” (<http://energy.gov/sites/prod/files/2016/04/f30/CHP%20Technical%20Potential%20Study%203-31-2016%20Final.pdf>).

² U.S. DOE, Combined Heat and Power Installation Database, <https://doe.icfwebservices.com/chpdb/state/MA>.

³ U.S. DOE, *supra* note 1, at 55.



The Alliance recently published a report, “State Ranking of Potential Carbon Dioxide Emission Reductions through Industrial Energy Efficiency,”⁴ which ranks states on their potential for carbon reductions and energy savings from the industrial sector. Our report finds that Massachusetts has the opportunity to see large reductions. By increasing industrial energy efficiency, including both CHP and WHP, Massachusetts can:

- Reduce CO₂ emissions by 2.9-million tons in 2030;
- Exceed the emission reductions called for under the Clean Power Plan;
- Save 16.1-million megawatt-hours of electricity in 2030; and
- Save business customers \$15.9 billion in cumulative cost savings (2016-2030) from avoided electricity purchases.

The proposed amendment helps remove a disincentive to CHP deployment in Massachusetts, making the state more likely to realize this tremendous potential.

Treatment of Thermal Output in Other Jurisdictions

There is a clear precedent for excluding emissions associated with useful thermal output from a CHP system's CO₂ compliance obligation.

On the state level, the proposed amendment is comparable with how useful thermal output is treated in both California and two RGGI member-states: Connecticut and Maine.

- Under California’s AB32 cap-and-trade program, emissions associated with thermal output from certain district heating facilities and CHP units (called cogeneration) do not face a compliance obligation.⁵
- Connecticut's Combined Heat and Power Useful Thermal Set Aside Account awards CHP units allowances to meet their compliance obligations.⁶
- Maine's Integrated Manufacturing Facility pre-retirement account awards allowances to CHP units to “offset the behind-the-meter CO₂ emissions.”⁷

On the national level, the CPP excludes most emissions produced in association with useful thermal energy from CHP facilities’ compliance obligations. Under a rate-based compliance plan,

⁴ Alliance for Industrial Efficiency, September 2016, “State Ranking of Potential Carbon Dioxide Emission Reductions through Industrial Energy Efficiency,” (http://alliance4industrialefficiency.org/wp-content/uploads/2016/09/AIE-State-Industrial-Efficiency-Ranking-Report_9_15_16.pdf).

⁵ California Air Resource Board, January 2015, “California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms to Allow for the Use of Compliance Instruments Issues by Linked Jurisdictions” at 115 (http://www.arb.ca.gov/cc/capandtrade/capandtrade/unofficial_c&t_012015.pdf).

⁶ State of Connecticut Department of Energy and Environmental Protection, December 2013, “Control of Carbon Dioxide Emissions/Carbon Dioxide Budget Trading Program” at 31-22 (<http://www.ct.gov/deep/lib/deep/air/regulations/mainregs/22a-174-31.pdf>).

⁷ Maine Department of Environmental Protection, November 2013, “CO₂ Budget Trading Program” at 21 (www.maine.gov/sos/cec/rules/06/096/096c156.doc).



the emission rates of existing CHP units are calculated by dividing CO₂ emissions by electrical output plus 100% of useful thermal output.⁸ The CPP explicitly allows a CHP host “to account for the increased efficiency by counting the useful thermal output as additional MWh of generation, thereby lowering the unit’s computed emission rate” and helping achieve a rate-based standard.⁹ It further allows states to “establish a mechanism for encouraging affected EGUs to apply CHP technology under a mass-based plan.”¹⁰ The proposed amendment accomplishes this.

The Amendment Will Promote and Enhance Existing CHP Regulations

Since its inception, RGGI has successfully raised money for energy-efficiency programs and reduced emissions; however, Massachusetts’ implementing regulations under RGGI (310 CMR 7.70) has historically adversely impacted CHP units. Under the existing regulation, all participating power plants must purchase a CO₂ allowance for each ton of CO₂ emitted, including those emissions associated with useful thermal energy. This causes an increased compliance cost for systems that produce both electricity and thermal energy, creating a disincentive for plants generating thermal output through CHP. The proposed amendment helps remove this disincentive by excluding emissions associated with the production of thermal output from RGGI compliance obligations.

Decreasing the compliance costs for CHP units removes the economic disincentive and improves the business case for CHP, encouraging its use. The Alliance believes the amendment is fair and reasonable, as CHP units will still be required to procure allowances for CO₂ emissions associated with electricity production.

In summary, CHP units provide continued benefits to Massachusetts’ power system in the form of lower emissions, lower fuel costs, and enhanced reliability. The proposed useful thermal exemption will ensure CHP is treated fairly and allow CHP to continue to be a key contributor to the Commonwealth’s clean energy goals. We appreciate that MassDEP has recognized these benefits and has taken steps to remove barriers to CHP. The Alliance strongly supports the proposed amendment to 310 CMR 7.70.

Thank you for the opportunity to comment.

Sincerely,

Jennifer Kefer, Director
Alliance for Industrial Efficiency

⁸ U.S. EPA, 80 Fed. Reg. 64662, at 64960, October 2015, “Carbon Emissions for Existing Stationary Sources: Electric Utility Generating Units; Final Rule.”

⁹ *Ibid.*, at 64756 (footnote 441).

¹⁰ *Ibid.*