

## Joint Environmental Comments on Proposed Changes to Waste Incineration Regulations in the Renewable Energy Portfolio Standard (225 C.M.R. 14.00 and 225 C.M.R. 15.00)

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Thank you for the opportunity to provide comments regarding the proposed changes to Massachusetts' Renewable Portfolio Standard ("RPS") Class I and RPS Class II Regulations. These comments were prepared by the Conservation Law Foundation ("CLF")<sup>1</sup> and are being submitted on behalf of the groups and individuals listed above (collectively "Commenters").

In the RPS Class II "waste-to-energy" section of the proposed changes, DOER proposes increasing the amount of energy our utilities must purchase from qualifying facilities from 3.5% to 3.7% for 2019 through 2025. DOER also proposes increasing the RPS Class II waste-to-energy rate to align with the RPS Class II Renewable Energy alternative compliance rate, effective this year.

The Commenters oppose both the proposed increase in energy to be purchased from incinerators, and proposed increase in rate because:

- 1) Incinerators do not produce renewable energy, and should not benefit from programs meant to support renewable energy;**
- 2) Incinerators' toxic emissions and ash are bad for the environment, public health, and the economy;**

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<sup>1</sup> Portions of these comments were previously published on CLF's website in a blog post authored by Ahmina Maxey, the U.S. and Canada Regional Coordinator with Global Alliance for Incinerator Alternatives. See Ahmina Maxey, What's Wrong with Burning Our Trash, Anyway? So very, very much, <https://www.clf.org/blog/whats-wrong-with-burning-our-trash-anyway/>.

- 3) Incinerators in Massachusetts are disproportionately located in already overburdened Environmental Justice Communities;**
- 4) The RPS should not be adjusted to prop up and extend the life of outdated, aging incinerators;**
- 5) Incinerators are more expensive and provide fewer jobs than the alternatives;**
- 6) Any changes to the RPS should be made after the 2020-2030 Solid Waste Master Plan is adopted.**

RPS and programs like it are meant to support and stimulate the sustainable energy field and to protect the environment, yet as analyzed in a recent Boston College Law Review article, incineration is neither economically sound nor environmentally sustainable:<sup>2</sup>

Because [Waste-To-Energy] superficially appears to be renewable, it was able to become a thriving industry by taking government subsidies that should have been reserved for wind, solar, and geothermal energy. Thus this “dirty” industry has continued to benefit under federal and state programs, while they simultaneously expel persistent, bioaccumulative toxics into the environment.<sup>3</sup>

**1. Incinerators do not produce renewable energy, and should not benefit from programs meant to support renewable energy.**

Incineration, often referred to as “waste-to-energy” by the industry, is a high-heat waste treatment technology that involves burning municipal solid waste (“MSW”), a.k.a. the combination of commercial, residential, and industrial wastes. Massachusetts’ MSW comprises primarily food, yard waste, cardboard, paper, textiles, metals, glass, construction and demolition materials, plastics, household hazardous waste, and electronics.<sup>4</sup> High-heat incineration converts these materials into bottom ash, fly ash, combustion gases, air pollutants, wastewater, wastewater treatment sludge, and heat.

Municipal Solid Waste comprises many materials that are not “renewable.” Incineration of MSW that contains fossil fuels, such as plastics and rubber, releases the bound carbon stored in those

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<sup>2</sup> Hale McAnulty, *A Dirty Waste – How Renewable Energy Policies Have Financed the Unsustainable Waste-To-Energy Industry*, 60 B.C.L. Rev. 385 (2019), <https://lawdigitalcommons.bc.edu/bclr/vol60/iss1/9>.

<sup>3</sup> *Id.* at 412.

<sup>4</sup> See Massachusetts DEP, Overall Waste Composition By Primary Material Category—Winter and Fall 2016 Sampling, <https://www.mass.gov/doc/summary-of-waste-combustor-class-ii-recycling-program-waste-characterization-studies-includes/download>.

fossil fuels.<sup>5</sup> According to the U.S. Environmental Protection Agency (“EPA”), in 2016, MSW incineration released 11.0 million metric tons of carbon dioxide equivalent (“CO<sub>2</sub>e”) greenhouse gases.<sup>6</sup> Per unit of electricity generated, waste incineration emits more carbon dioxide (2,988 lbs/MWh) than coal-fired power plants (2,249 lbs/MWh).<sup>7</sup>

Moreover, according to EPA, zero waste practices such as source reduction, recycling, and composting provide a significant net life-cycle reduction in greenhouse gas emissions compared to incineration.<sup>8</sup> And in fact, these zero waste practices conserve significantly more energy than can be generated via incineration.<sup>9</sup> Source reduction, recycling, and composting can conserve three to five times more energy, per ton of waste, than can be generated by incinerating that same ton of waste.<sup>10</sup> Tellus Institute, in its “Assessment of Materials Management Options for the Massachusetts Solid Waste Master Plan Review” submitted to the Massachusetts Department of Environmental Protection (“DEP”), estimated that waste diversion through recycling saves 1,665 kWh over incineration per ton of solid waste.<sup>11</sup> According to another estimate, the amount of energy wasted by not recycling aluminum and steel cans, paper, printed materials, glass, and plastic equals the annual output of 15 medium-sized power plants.<sup>12</sup>

In 2016, more than 70% of the MSW incinerated in Massachusetts was paper, plastic, metal, glass, or organic material,<sup>13</sup> most of which could have been recycled or composted. In terms of

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<sup>5</sup> Tellus Institute, Assessment of Materials Management Options for the Massachusetts Solid Waste Master Plan Review 9, 11 (2008), [https://www.tellus.org/pub/Final\\_Report-Materials\\_Management\\_Options\\_for\\_MA\\_SW\\_Master\\_Plan\\_Review\\_-\\_With\\_Appendices\\_-\\_12-08.pdf](https://www.tellus.org/pub/Final_Report-Materials_Management_Options_for_MA_SW_Master_Plan_Review_-_With_Appendices_-_12-08.pdf). See also U.S. EPA, Solid Waste Management and Greenhouse Gases, a Life-Cycle Assessment of Emissions and Sinks 76 (3d ed. 2006) (“Combustion of plastics results in substantial net [greenhouse gas] emissions. . . . This result is primarily because of the high content of nonbiomass carbon in plastics.”).

<sup>6</sup> EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2016, 3-51–3-53 (2018).

<sup>7</sup> Morris, Jeffrey, Bury or Burn North America MSW? LCAs Provide Answers for Climate Impacts & Carbon Neutral Power Potential, Environmental Science & Technology, Volume 44, NO. 20, September, 2010. See also Energy Justice Network, Trash Incineration More Polluting Than Coal, <http://www.energyjustice.net/incineration/worsethancoal> (when “biogenic” emissions are included in the calculus, incineration releases carbon dioxide “at a rate 2.5 times that of coal power plants”).

<sup>8</sup> U.S. EPA, *supra* note 5, at 116–19.

<sup>9</sup> Marie Donahue, Institute for Local Self-Reliance, Waste Incineration: A Dirty Secret in How States Define Renewable Energy 11 (2018), <https://ilsr.org/wp-content/uploads/2018/12/ILSRIncinerationFinalDraft-6.pdf>.

<sup>10</sup> *Id.*

<sup>11</sup> Tellus Institute, *supra* note 5, at 3, 51–52.

<sup>12</sup> Recycling Investment Saves Energy, S. 3654, 109th Cong. § 2 (2006).

<sup>13</sup> See Massachusetts DEP, *supra* note 4.

greenhouse gas generation and energy production, even rudimentary zero waste alternatives are far more advantageous than using these materials to generate non-renewable energy.<sup>14</sup>

## **2. Incinerators' toxic emissions and ash are bad for the environment, public health, and the economy.**

Waste incineration not only emits greenhouse gases at a much higher rate than other non-renewable energy sources, but it also releases significant levels of toxic pollutants to nearby communities. On average, to produce the same amount of energy as a coal power plant, waste incinerators release:

- 28 times as much dioxin;
- twice as much carbon monoxide;
- three times as many nitrogen oxides;
- 6–14 times as much mercury;
- nearly six times as much lead; and
- 70% more sulfur dioxides.<sup>15</sup>

Incinerators are also significant sources of particulate matter emissions.<sup>16</sup> Inhalation of particulate matter, from a variety of sources, has been linked to respiratory and cardiovascular problems and may cause approximately 2 million excess deaths worldwide each year.<sup>17</sup> And a 2011 study published in the *American Economic Review* found that among U.S. industries, waste incineration has the highest ratio of negative economic impacts from air pollution compared to the financial value added by the industry.<sup>18</sup>

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<sup>14</sup> See Tellus Institute, *supra* note 5, at 1 (“From a lifecycle environmental emissions and energy perspective, source reduction, recycling, and composting are the most advantageous management options for all (recyclable/compostable) materials in the waste stream.”).

<sup>15</sup> Energy Justice Network, *supra* note 7; see also Environmental Integrity Project, *Dirtying Maryland’s Air by Seeking a Quick Fix on Renewable Energy?* 3–8 (2011), <http://www.environmentalintegrity.org/wp-content/uploads/2016/11/FINALWTEINCINERATORREPORT-101111.pdf> (Maryland’s two major incinerators release mercury, lead, nitrogen oxides, and carbon monoxide at significantly higher rates than Maryland’s four coal-fired power plants).

<sup>16</sup> The New School, U.S. Municipal Solid Waste Incinerators: An Industry in Decline 34 (2019), [https://tishmancenter.org/wp-content/uploads/2019/05/CR\\_GaiaReportFinal\\_05.21.pdf](https://tishmancenter.org/wp-content/uploads/2019/05/CR_GaiaReportFinal_05.21.pdf).

<sup>17</sup> Howard, C. Vyvyan, Statement of Evidence, Particulate Emissions and Health, Proposed Ringaskiddy Waste-to-Energy Facility 4–5 (2009).

<sup>18</sup> Muller, Nicholas Z., Robert Mendelsohn, and William Nordhaus, 101 Environmental Accounting for Pollution in the United States Economy, *American Economic Review* 5, 1649, 1664–69 (2011).

Some newer incinerators are equipped with air pollution control devices such as air filters, but these filters do not efficiently prevent the escape of ultrafine particular matter.<sup>19</sup> And in any event, filters do not eliminate pollutants; they merely capture those pollutants and transfer them to incinerator by-products such as ash and wastewater treatment sludge.<sup>20</sup>

Incineration is often touted as a landfill alternative, but after incineration, roughly 25% of the weight of incoming waste remains in the form of residual ash.<sup>21</sup> This ash, which contains high levels of dioxin, mercury, lead, polychlorinated biphenyls (“PCBs”), and polychlorinated naphthalenes (“PCNs”),<sup>22</sup> is disposed of in landfills. Dioxins have been described as the most toxic chemicals known to mankind and are recognized human carcinogens; mercury and lead impair cognitive and behavioral development in children and impact the central nervous system, kidneys, and developing fetuses. When incinerator ash is deposited in landfills, these pollutants eventually leach out and pose an immediate threat to groundwater, drinking water, and surface water bodies.<sup>23</sup> In 2004, Massachusetts’ waste incinerators produced approximately 790,000 tons of combustion ash, 700,000 tons of which was deposited in landfills.<sup>24</sup>

### **3. Incinerators in Massachusetts are disproportionately located in already overburdened Environmental Justice Communities.**

The impacts of incinerators’ emissions and toxic ash are disproportionately borne by already overburdened environmental justice (“EJ”) communities. Most waste incinerators in the U.S. are located in EJ communities,<sup>25</sup> and incinerators in Massachusetts are no exception.

In 2002, Massachusetts established an Environmental Justice Policy (“EJ Policy”), revised most recently in 2017, to help address the disproportionate share of environmental burdens

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<sup>19</sup> Vyvyan, *supra* note 17, at 21–22.

<sup>20</sup> Global Alliance for Incinerator Alternatives, Incinerators: Myths vs. Facts 1 (2010), [https://www.weal.org/ARCHIVE%20Waste/Incinerator\\_Myths\\_vs\\_Facts.pdf](https://www.weal.org/ARCHIVE%20Waste/Incinerator_Myths_vs_Facts.pdf).

<sup>21</sup> U.S. EPA, Municipal Solid Waste in the United States: 2011 Facts and Figures 143–44 (2013), [https://archive.epa.gov/epawaste/nonhaz/municipal/web/pdf/mswcharacterization\\_fnl\\_060713\\_2\\_rpt.pdf](https://archive.epa.gov/epawaste/nonhaz/municipal/web/pdf/mswcharacterization_fnl_060713_2_rpt.pdf).

<sup>22</sup> Global Alliance for Incinerator Alternatives, *supra* note 20, at 1; Jindrich Petrlik and Ralph Anthony Ryder, After Incineration: The Toxic Ash Problem 4–6 (2005), [https://ipen.org/sites/default/files/documents/ipen\\_incineration\\_ash-en.pdf](https://ipen.org/sites/default/files/documents/ipen_incineration_ash-en.pdf); Michelle Allsopp, Pat Costner, and Paul Johnston, Incineration and Human Health 11–12 (2001).

<sup>23</sup> Allsopp, *supra* note 22 at 54–56.

<sup>24</sup> Massachusetts DEP, Solid Waste Master Plan: 2006 Revision 43 (2006), <https://www.mass.gov/files/documents/2016/08/vo/swmprev.pdf>.

<sup>25</sup> The New School, *supra* note 16, at 4 (“58 incinerators, or 79 percent of all MSW incinerators in the U.S. are located in environmental justice communities.”).

experienced by lower-income families and communities of color.<sup>26</sup> The EJ Policy is designed to help protect these communities from environmental pollution and promote community involvement in planning and environmental decision-making to maintain and/or enhance the environmental quality of their neighborhoods.<sup>27</sup>

The EJ Policy defines an EJ community as a neighborhood (or “block group”) in which either 25 percent of the households have an annual median household income less than or equal to 65 percent of the statewide median, 25 percent of the population is minority, or 25 percent of the population identifies as a household that has English isolation.<sup>28</sup> The following table identifies Massachusetts municipalities in which there are active incinerators,<sup>29</sup> and lists whether the municipality comprises an EJ population, and, if applicable, the specific EJ criteria met and the percentage of the municipality population that meets the EJ criteria.<sup>30</sup> Six of the seven incinerators in Massachusetts are located in EJ communities:

Active Incinerators	Maximum Permitted Tonnage per Year	EJ Populations Present	EJ Criteria Met	Percent of Population in EJ Block Groups
Agawam <sup>31</sup>	148,920	Yes	Income	4.3%
Haverhill	602,250	Yes	Minority, Income	35%
Millbury	547,500	Yes	Income	7.2%
North Andover <sup>32</sup>	547,500	Yes	Minority, Income	14.6%
Pittsfield	87,600	Yes	Minority, Income	36.8%
Rochester	1,095,000	No	--	--
Saugus	547,500	Yes	Income	7.0%

<sup>26</sup> Environmental Justice Policy of the Executive Office of Energy and Environmental Affairs 2 (2017), [https://www.mass.gov/files/documents/2017/11/29/2017-environmental-justice-policy\\_0.pdf](https://www.mass.gov/files/documents/2017/11/29/2017-environmental-justice-policy_0.pdf).

<sup>27</sup> *Id.*

<sup>28</sup> *Id.* at 3.

<sup>29</sup> See Municipal Waste Combustors, <https://www.mass.gov/guides/municipal-waste-combustors>.

<sup>30</sup> Massachusetts DEP, 2010 Environmental Justice Populations, <http://www.mass.gov/anf/docs/itd/services/massgis/ej-2010-communitystatistics.pdf>.

<sup>31</sup> The Agawam incinerator is located near the border with Springfield, which meets Minority, Income, and English Isolation EJ criteria, and in which 89.6% of the population is in an EJ block group.

<sup>32</sup> The North Andover incinerator is located within one mile of Lawrence, which meets Minority, Income, and English Isolation EJ criteria, and in which 100% of the population is in an EJ block group.



For those forced to live near these facilities, the effects are dire. Throughout the U.S., many of the incinerators with the highest total emissions of lead, mercury, nitrogen oxides, sulfur dioxides, and particulate matter are located in EJ communities.<sup>33</sup> Exposure to these pollutants can cause a wide range of cardiovascular, respiratory, and neurological damage, and can lead to decreased life expectancy.<sup>34</sup> EJ communities face a multitude of social vulnerabilities and are often confronted with many sources of dangerous pollution.<sup>35</sup> Throughout Massachusetts and the U.S., these communities should not be forced to endure the negative impacts of other communities' waste.

#### **4. The RPS should not be adjusted to prop up and extend the life of outdated, aging incinerators.**

The proposed changes to the RPS would provide unwarranted life support to the outdated, unsafe, and unreliable incinerator facilities that disproportionately impact the Commonwealth's most vulnerable communities. Each of the incinerators in Massachusetts is at least 30 years old: the oldest, Saugus, began operating in 1975,<sup>36</sup> and the youngest, Haverhill, began operating in 1989.<sup>37</sup>

Incinerators typically have a lifespan of 20–30 years,<sup>38</sup> and require increasing capital investments as they age.<sup>39</sup> Many aging incinerators in the U.S. have been unable to keep up with maintenance requirements and/or emissions limits and have been forced to shut down as a result. For example, a Detroit incinerator, operating since 1986 and increasingly unable to comply with emissions limits,<sup>40</sup> recently announced that it would shut down in the face of a Clean Air Act lawsuit that would have forced the incinerator to spend tens of millions of dollars to upgrade its pollution control equipment.<sup>41</sup> A 33-year-old Wheelabrator incinerator in Baltimore, which has received an estimated \$10 million in renewable energy subsidies, emits nitrogen oxides at twice the rate of newer Maryland facilities, and would need to invest millions of dollars to comply with

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<sup>33</sup> The New School, *supra* note 16, at 39–41.

<sup>34</sup> *Id.*

<sup>35</sup> *Id.* at 14.

<sup>36</sup> See <https://www.wtienergy.com/plant-locations/energy-from-waste/wheelabrator-saugus>.

<sup>37</sup> See <https://www.covanta.com/Our-Facilities/Covanta-Haverhill>.

<sup>38</sup> The New School, *supra* note 16, at 22; National Research Council, *Waste Incineration and Public Health* 29–30 (The National Academies Press 2000).

<sup>39</sup> The New School, *supra* note 16, at 22–23.

<sup>40</sup> See Rebecca Stoner, *Why Communities Across America Are Pushing to Close Waste Incinerators*, *Pacific Standard*, Dec. 12, 2018, <https://psmag.com/environment/why-communities-across-america-are-pushing-to-close-waste-incinerators>.

<sup>41</sup> See The New School, *supra* note 16, at 15.

new, stricter, emissions limits.<sup>42</sup> An aging incinerator in Hartford, Connecticut, has been unable to afford necessary equipment upgrades and shut down for more than two months between November 2018 and January 2019 because of a mechanical failure.<sup>43</sup>

Massachusetts' incinerators are, again, no exception. The Wheelabrator Saugus incinerator, operating since 1975, has suffered from regular shutdowns and outages in recent years.<sup>44</sup> During 2018, according to emissions data reported to DEP by Wheelabrator, either or both of the waste furnaces at the Saugus incinerator were shut down for all or part of 89 separate days.<sup>45</sup> These shutdowns are particularly problematic because the furnaces often emit much higher concentrations of pollutants such as carbon monoxide, sulfur dioxide, and nitrogen oxides during shutdown and startup than during normal operation. For example, during shutdown operations on December 2, 2018, the Saugus incinerator emitted average concentrations of 1,127.4 parts per million ("ppm") of carbon dioxide and 113.5 ppm of sulfur dioxide over two separate one-hour periods.<sup>46</sup> These average emissions significantly exceed the incinerator's Air Quality Operating Permit emissions limits of 100 ppm for carbon dioxide and 29 ppm for sulfur dioxide.<sup>47</sup>

Shutdowns and maintenance can also blanket nearby communities with disruptive and dangerous noise pollution. During a three-week period in June and July, 2019, Wheelabrator Saugus shut down one of its steam turbines to perform necessary maintenance, resulting in loud steam venting that forced neighbors indoors and kept them awake at night.<sup>48</sup>

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<sup>42</sup> See Rebecca Stoner, *supra* note 40.

<sup>43</sup> See The New School, *supra* note 16, at 24; Cole Rosengren and Rina Li, Connecticut WTE facility partially back online after double turbine failure, Waste Dive (Jan. 31, 2019), <https://www.wastedive.com/news/Materials-Innovation-Recycling-Authority-wte-double-turbine-failure/545359/>.

<sup>44</sup> See, e.g., Mike Gaffney, Fire Ignites in Wheelabrator Saugus boiler, Wicked Local Saugus (Sept. 30, 2015), <https://saugus.wickedlocal.com/article/20150930/news/150939906>; Mike Gaffney, Firefighters douse trash fires at Wheelabrator Saugus, Wicked Local Saugus (Aug. 2, 2017), <https://saugus.wickedlocal.com/news/20170802/firefighters-douse-trash-fires-at-wheelabrator-saugus>.

<sup>45</sup> Emissions data can be retrieved at <http://eeaonline.eea.state.ma.us/DEP/MWC/facilityReport.aspx>.

<sup>46</sup> See *id.*

<sup>47</sup> See Final Air Quality Operating Permit MBR-95-OPP-011A5 at 5, <https://www.mass.gov/files/documents/2019/06/27/op-wheels.pdf>.

<sup>48</sup> See Kristina Rex, 'No One Sleeps': Revere, Saugus Residents Frustrated By Noise From Waste Plant, CBS Boston (July 2, 2019), <https://boston.cbslocal.com/2019/07/02/revere-saugus-wheelabrator-residents-frustrated-loud-noise-waste-plant/>; Mike Gaffney, Wheelabrator Saugus temporarily stops processing waste to address noise complaints, Saugus Wicked Local (June 26,



Moreover, Wheelabrator has stated that its aging Saugus incinerator cannot comply with revised nitrogen oxides emissions limits without major modifications.<sup>49</sup> RPS subsidies, intended to support and spur innovation in renewable energy, should not prop up these aging, polluting incinerators.

## **5. Incinerators are more expensive and provide fewer jobs than the alternatives.**

In part owing to the capital costs of aging facilities, waste incineration is a losing financial proposition for state and local governments. As both a means of energy generation and waste disposal, incineration is more expensive than available alternatives. According to 2010 estimates by the U.S. Energy Information Administration, both capital costs and operations and maintenance costs are higher for MSW incineration than for all other forms of electricity generation, including coal, natural gas, nuclear, biomass, solar, geothermal, and hydroelectric.<sup>50</sup> In light of this imbalance, incineration facilities typically derive a much larger portion of their revenue from tipping fees<sup>51</sup> than from electricity sales.<sup>52</sup>

These tipping fees are significantly more expensive than alternatives such as recycling or composting. Baltimore, for example, pays approximately \$18 per ton for recycling, but \$50 per ton in incineration tipping fees.<sup>53</sup> Hennepin county, Minnesota, pays more than \$80 per ton in incineration tipping fees, but charges only \$25 per ton for organics composting.<sup>54</sup> And because incineration facilities rely on tipping fees to stay financially viable, municipalities are often

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2019), <https://saugus.wickedlocal.com/news/20190626/wheelabrator-saugus-temporarily-stops-processing-waste-to-address-noise-complaints>.

<sup>49</sup> Mike Gaffney, Proposed Wheelabrator Saugus emission control plan modification riles officials, Wicked Local Saugus (Dec. 13, 2018), <https://saugus.wickedlocal.com/news/20181212/proposed-wheelabrator-saugus-emission-control-plan-modification-riles-officials>.

<sup>50</sup> U.S. Energy Information Administration, Updated Capital Cost Estimates for Electricity Generation Plants 7 (2010), <http://large.stanford.edu/courses/2018/ph241/wang-k2/docs/eia-nov10.pdf>.

<sup>51</sup> “Tipping fees . . . are charged by a waste disposal site, such as an incinerator or landfill, to a municipality or private waste hauler for each tonnage of waste deposited at the site.” The New School, *supra* note 16, at 25.

<sup>52</sup> *Id.* (“Municipal solid waste incinerators rely primarily on tipping fees and secondarily on electricity sales for revenues. As an example, Covanta (which owns 22 facilities and operates 39 facilities in the U.S.), on average, derives its revenues: 71 percent from tipping fees, 18 percent from electricity sales, 5 percent from metal recycling and 6 percent from ‘other’ (i.e. revenues derived from construction revenues, resale of purchased energy, fees from operating transfer facilities, etc.).”).

<sup>53</sup> Donahue, *supra* note 9, at 14.

<sup>54</sup> *Id.*

forced to enter into “put or pay” contracts with incinerators—these clauses require the municipalities to supply a minimum amount of waste or pay a penalty.<sup>55</sup>

And despite the higher costs of incineration, incinerators generate fewer jobs than alternatives such as recycling and composting facilities. In a 2011 report, Tellus Institute estimated that composting generates five times as many jobs as incineration—and recycling twenty times as many jobs—per ton of waste disposed.<sup>56</sup> The Institute for Local Self Reliance has similarly estimated that composting facilities can create more than three times as many jobs as incinerators per ton of waste.<sup>57</sup> Tellus also estimated in its 2011 report that the implementation of “an aggressive recycling and composting program” resulting in the diversion of 75% of overall MSW by 2030, could result in the creation of 739,000 additional jobs in the U.S. compared to the status quo.<sup>58</sup>

RPS subsidies should not support an expensive system that generates fewer jobs than zero waste alternatives.

**6. Any changes to the RPS should be made after the 2020–2030 Solid Waste Master Plan is adopted.**

DEP has begun holding Solid Waste Action Committee meetings of stakeholders to develop the new Solid Waste Master Plan. DEP expects to release a draft plan in the fall of 2019, and to publish a final plan by the end of 2020.<sup>59</sup> Goals under consideration include a 33% reduction in waste disposal by 2030 compared to 2017 waste totals.<sup>60</sup> In light of potentially drastic changes to the waste stream in Massachusetts, DOER should not alter RPS subsidies to waste incinerators until after the final 2020–2030 Solid Waste Master Plan is adopted.

**Conclusion**

Increasing the amount of energy to be purchased from aging, polluting, and expensive incineration facilities or increasing the waste-to-energy Class II rate would only serve to direct more money to existing generators without any benefit to the people of Massachusetts. Indeed, as discussed above, incinerators significantly disadvantage the Commonwealth’s people, in particular those that live in EJ communities. The RPS should not be adjusted to prop up and

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<sup>55</sup> The New School, *supra* note 16, at 25.

<sup>56</sup> Tellus Institute, *More Jobs, Less Pollution: Growing the Recycling Economy in the U.S.* 34–35 (2011), [https://www.nrdc.org/sites/default/files/glo\\_11111401a\\_0.pdf](https://www.nrdc.org/sites/default/files/glo_11111401a_0.pdf).

<sup>57</sup> Donahue, *supra* note 9, at 15.

<sup>58</sup> Tellus Institute, *supra* note 56, at 36.

<sup>59</sup> John Fischer, MassDEP, *MassDEP Updates 5* (2019), <https://recyclingworksma.com/wp-content/uploads/2019/05/MassDEP-2019-Spring-WasteWise-Forum.pdf>.

<sup>60</sup> John Fischer, MassDEP, *2030 Solid Waste Master Plan Discussion of Goal and Capacity Data 4* (2019), <https://www.mass.gov/files/documents/2019/06/19/swmp519.pdf>.



extend the operation of aging incineration facilities, nor should it be used to facilitate the development of new trash-burning plants, at the expense of the health and lives of residents of the Commonwealth.

Thank you again for the opportunity to comment on the proposed changes to Massachusetts' Renewable Portfolio Standard ("RPS") Class I and RPS Class II Regulations.

Very truly yours,

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Environmental League of Massachusetts

Institute for Local Self Reliance

Massachusetts Sierra Club

MASSPIRG

No Fracked Gas in Mass

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