

# Harmonizing the Proposed Clean Power Plan with Oregon's Existing Law and Policy

**A Policy Paper for the State of Oregon**

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The  
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## Executive Summary

The Clean Power Plan is a call to action. It is a mandate requiring states to significantly reduce their greenhouse gas (GHG) emissions from existing fossil fuel-fired electric generating units (EGUs). However, existing fossil fuel-fired EGUs are only a small percentage of the major GHG emitters. Therefore, although the call to action is significant, the Clean Power Plan is confined to the boundaries of the Clean Air Act (CAA) §111(d) and therefore inherently limited.

In light of the Clean Power Plan's aggressive but refined requirements and Oregon's more comprehensive and progressive GHG emission goals, Oregon must draft a state plan that harmonizes the Clean Power Plan's requirement with the state's existing emission reduction efforts and goals. The state's plan must grant ease and flexibility in pursuing the state's larger GHG emission reduction goals through contributory and additional efforts. Ultimately, the plan must be one that guarantees the future success of attaining Oregon's more comprehensive climate and energy policies.

The Climate Trust believes that a state plan comprised of the following components, among others, establishes a strong plan of action to achieve compliance with the Clean Power Plan and goes beyond to support a stronger future for Oregon:

- *Biogas Facilities:* Biogas facilities must be utilized as a viable, efficient component that is available for immediate application. Biogas facilities not only prevent the release of methane, a potent GHG at the source, but also create renewable energy (R/E) credits through the biodigester process. These R/E credits contribute toward Clean Power Plan compliance and beyond, including Oregon's Renewable Portfolio Standard (RPS) and the state's greater 2050 GHG emission reductions goals.
- *Mass-Based Emissions Performance Goal:* Electing a mass-based emission reductions goal, provides significant flexibility at three levels: for the individual EGU's subject to the Clean Power Plan; the state in the instance that Oregon chooses to pursue a multi-state approach and/or elects to link to an external emission trading program; and lastly grants ease in achieving Oregon's overall GHG emission reduction goals beyond the electric sector.
- *Portfolio Approach:* Implementing a portfolio approach now, which allows for shared responsibility, establishes precedent and ease in transition for future shared responsibility in the pursuit of Oregon's more inclusive GHG emission reductions pursuit.

## Introduction

### *1. Oregon's History of Climate Emission Reduction Efforts*

Oregon has served as a national leader in addressing climate change and has been actively pursuing the reduction of GHG. In 1997 the Oregon State Legislature enacted a standard for emissions of carbon dioxide (CO<sub>2</sub>) from base load electric generating plants fueled by natural gas (hereafter referred to as the Oregon CO<sub>2</sub> Standard).<sup>1</sup> This standard, mitigating carbon emissions and resulting in carbon offsets, was the first of its kind in the United States.

More definitively, in 2007, the Oregon State Legislature, under House Bill 3542, established GHG reduction goals for the year 2020 and 2050. These goals are to reduce GHG emissions by 10 percent and at least 75 percent below 1990 levels respectively.<sup>2</sup> Although these emission reduction goals do not hold any legislative mandate today, recently proposed legislation, if passed, would hold Oregon accountable to achieving them. This would be accomplished through House Bill 3470, also referred to as the Climate Stability and Justice Act of 2015, which requires the Environmental Quality Commission to adopt these limits by rule.<sup>3</sup>

Building on the existing overall energy and climate change goals, in 2012 Governor Kitzhaber released his 10-Year Energy Action Plan.<sup>4</sup> In this Action Plan, Kitzhaber recognized the challenges faced in reducing GHG emissions, particularly energy-related carbon dioxide, and ensured the continued investment in demand management tools, smart grid infrastructure, energy efficiency, conservation, R/E, and clean technology. Accordingly, his plan called for the creation of an energy infrastructure that would enable Oregon to thrive in a carbon-constrained future.<sup>5</sup>

### *2. The Proposed Clean Power Plan, A Call to Action*

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<sup>1</sup> Oregon Department of Energy, *Oregon's Carbon Dioxide Emission Standards for New Energy Facilities* (July 2010).

<sup>2</sup> House Bill 3543 §2 (b) & (c)

<sup>3</sup> House Bill 3470 §6 (1) The Environmental Quality Commission shall adopt by rule:

(a) A statewide greenhouse gas emissions limit for the year 2020 that is based on the best available science and that limits emissions to levels that are at least 10 percent below 1990 levels; and

(b) A statewide greenhouse gas emissions limit for the year 2050 that is based on the best available science and that limits emissions to levels that are at least 75 percent below 1990 levels

<sup>4</sup> Kitzhaber, *Ten-Year Energy Action Plan* (December 14, 2012), *available at* [http://www.oregon.gov/energy/Ten\\_Year/Ten\\_Year\\_Energy\\_Action\\_Plan\\_Final.pdf](http://www.oregon.gov/energy/Ten_Year/Ten_Year_Energy_Action_Plan_Final.pdf)

<sup>5</sup> *Id.* at pg. 6.

On June 2, 2014, the U.S. Environmental Protection Agency (EPA), under President Obama’s Climate Action Plan, proposed a plan to cut carbon pollution from power plants, titled “Carbon Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units” and more commonly referred to as the Clean Power Plan. In this action, the EPA proposed emission guidelines for states to follow in developing plans to address GHG emissions from existing fossil fuel-fired EGUs. As proposed, the EPA intends for this rule to continue progress already underway in reducing carbon dioxide emissions from existing fossil fuel-fired power plants in the United States.<sup>6</sup>

### *3. The Climate Trust*

The Climate Trust is a non-profit organization founded in 1997, with a mission of providing expertise, financing, and inspiration to accelerate innovative and effective climate solutions that endure. The Climate Trust has a historical relationship with the state of Oregon in the pursuit of carbon emission reductions; originating in 1997 with the creation of the Oregon CO<sub>2</sub> Standard. The Climate Trust serves as a qualified organization, as required under the Oregon CO<sub>2</sub> Standard, to implement offset projects; to date, The Climate Trust is the only qualified organization.<sup>7</sup> Accordingly, The Climate Trust is dedicated to participating in the development of the most effective carbon emission reductions plan from existing fossil fuel-fired EGUs, and beyond, by contributing to the overall achievement of Oregon’s 2050 GHG emission reduction goals.

The Climate Trust recognizes that there are several opportunities for the state of Oregon to pursue in submitting a state plan pursuant to the Clean Power Plan, and appreciates the opportunity to be involved in this lengthy and complex process.

## **The Clean Power Plan**

### *1. Overview*

As previously noted, pursuant to the CAA §111(d), the Clean Power Plan proposes emission guidelines for each state to use in developing plans to address GHG emissions from

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<sup>6</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 1.

<sup>7</sup> Oregon Department of Energy, *Oregon’s Carbon Dioxide Emission Standards for New Energy Facilities* (July 2010), pg. 8, available at <http://www.oregon.gov/energy/Siting/docs/Reports/CO2Standard.pdf>.

existing fossil fuel-fired EGUs. The emission guidelines are based on the EPA’s determination of the “best system of emission reduction... adequately demonstrated” and include: state-specific goals, general approvability criteria for state plans, requirements for state plan components, and requirements for the process and timing for state plan submittal and compliance.<sup>8</sup>

## *2. State Requirements: What is Required of Oregon*

Under the Clean Power Plan, states must develop, adopt and submit a state plan. State plans must: (1) include an emission performance level that is equivalent to the state-specific CO<sub>2</sub> goal in the emission guidelines and (2) establish a standard of performance or set of standards of performance (known as emission standards under the existing CAA section 111(d) framework regulations), along with implementing and enforcing measures, that will achieve a level of emission performance that equals or exceeds the level specified in the state plan.<sup>9</sup> These standards of performance must reflect the degree of emission limitation achievable through the application of the best system of emission reduction (BSER) that, taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements, the Administrator determines has been adequately demonstrated.<sup>10</sup>

In meeting this requirement states are granted considerable discretion in how each chooses to meet their carbon emission reduction requirements. This reflects the understanding that states are ultimately the most knowledgeable about their specific circumstance and are best positioned to evaluate and leverage programs to reduce CO<sub>2</sub> emissions.<sup>11</sup> States may exercise this flexibility when selecting which measures are to be employed in achieving emission performance levels,<sup>12</sup> when determining whether to keep the prescribed rate-based goal or translate this number to a mass-based goal, whether the state chooses to utilize the EPA’s defined BSER or go beyond these measures,<sup>13</sup> as well as with the ability to opt into a multi-state plan. These flexibilities are just a few of many.

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<sup>8</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 111.

<sup>9</sup> *Id.* at pg. 112.

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

<sup>11</sup> *Id.* at pg. 39.

<sup>12</sup> *Id.* at pg. 43.

“The state may choose the measures it will include in its plan to achieve its goal. The state may use the same set of measures as in the EPA’s approach to setting the goals, or the state may use other or additional measures to achieve the required CO<sub>2</sub> reductions.”

<sup>13</sup> *Id.* at pg. 39.

Although Oregon is granted great flexibility in achieving emission reductions, under the proposed Clean Power Plan, Oregon must achieve its prescribed goal of an emission reductions of 372 average pounds of CO<sub>2</sub> per net MWh from all affected fossil fuel-fired EGUs by 2030.<sup>14</sup>

## State Plan Considerations: Utilizing Existing Biogas Facilities

Among the varying flexibilities granted by the EPA in achieving compliance with the Clean Power Plan, one of the most noteworthy flexibilities, is the state's ability to elect which measures its state plan consists of.

The emission guidelines provided by the EPA do not specify the emission reduction measures that a state must use in its plan, only the level of emission performance that must be achieved through the plan, such that there is no specified "policy" or set of emission reduction measures that must be applied.<sup>15</sup> This broad discretion granted to states in developing their state plan is done so that the best suite of state specific circumstances and policy objectives can be achieved.<sup>16</sup>

In light of this flexibility, an immediate component to be utilized by Oregon in its state plan is biogas facilities.

### *1. Biogas Overview*

When organic material decomposes without oxygen, it produces methane, a potent GHG approximately 25 times more powerful at trapping heat in the atmosphere than carbon dioxide.<sup>17</sup> However, this natural process can be controlled at a biogas plant through an anaerobic digester. This is illustrated below.

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"States may also identify technologies or strategies that are not explicitly mentioned in any of the four building blocks and may use those technologies or strategies as part of their overall plans (e.g., market-based trading programs or construction of new natural combined cycle units or nuclear plants)."

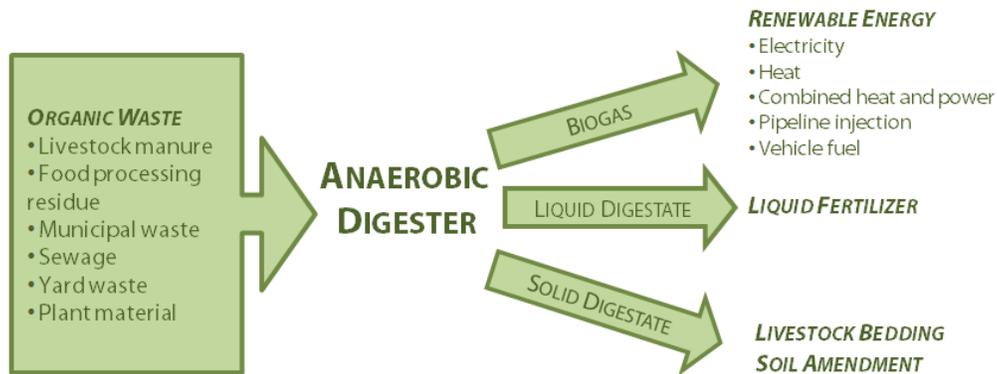
<sup>14</sup> *Id.* at pg. 348.

<sup>15</sup> U.S. Environmental Protection Agency Office of Air and Radiation, *Projecting EGU CO<sub>2</sub> Emission Performance in State Plans* (June 2014), pg. 14.

<sup>16</sup> U.S. Environmental Protection Agency Office of Air and Radiation, *State Plan Considerations* (June 2014), pg. 1.

<sup>17</sup> Krifka, Kasey, *Anaerobic Digester Generates California Carbon Offsets*, (February 19, 2015), available at <http://www.climatetrust.org/anaerobic-digester-generates-california-carbon-offsets/>.

## The Anaerobic Digester Process Illustrated



Weisberg and Roth, *Growing Oregon's Biogas Industry: A Review of Oregon's Biogas Potential and Benefits*, (February 2011).

Digesters foster methane production and then capture the resulting gas, called biogas. By combusting the methane created by decomposition, methane emissions are avoided and R/E is generated. As such, biogas is a renewable substitute.<sup>18</sup>

The reduction of GHG emissions through anaerobic digesters is significant. For example, a 1-megawatt (MW) biogas plant on a 1,000-cow dairy farm will annually avoid 5,000 tons of carbon dioxide-equivalent methane emissions. These emission reductions are in addition to the R/E replacing fossil fuel energy, such as that used by electric generating units, and the subsequent GHG emissions emitted by that power plant. Note that this 1 MW biogas plant annually generates enough R/E to reduce power plant emissions by 3,000 metric tons of carbon dioxide. Therefore, biogas facilities provide dual benefits: (i) they eliminate GHG, methane specifically, at the source and (ii) in producing R/E, they reduce the demand on power plants and subsequently the release of additional CO<sub>2</sub> emissions. In this example, this dual benefit results in a total of 8,000 metric tons of carbon dioxide-equivalent GHG emissions.<sup>19</sup>

### *2. Utilizing Biogas Facilities Pursuant to the Clean Power Plan*

As the June 2<sup>nd</sup>, 2014 proposed Clean Power Plan now stands, biogas facilities producing biogas fall within EPA's established BSER that can be utilized to achieve emission reduction

<sup>18</sup> Weisberg and Roth, *Growing Oregon's Biogas Industry: A Review of Oregon's Biogas Potential and Benefits* (February 2011), pg. 3, available at <http://climatetrust.org/wp-content/uploads/2014/07/Growing-Oregons-Biogas-Industry-White-Paper.pdf>.

<sup>19</sup> *Id.* at pg. 10.

performance goals. According to the Clean Power Plan, the BSER measures encompass two basic approaches: 1) reducing the carbon intensity of certain affected EGUs by improving the efficiency of their operations, and 2) addressing affected EGUs' mass emissions by varying their utilization levels.<sup>20</sup> These two measures are grouped into four main categories or "building blocks." Of the four building blocks, building block 3 is defined by measures that "reduce emissions from affected EGUs in the amount that results from substituting generation at the EGU with expanded low- or zero-carbon generation."<sup>21</sup> These measures include renewable generating and nuclear capacity.<sup>22</sup>

In further illustrating building block 3, the EPA recognizes that:

"More than half the states have established RPSs that require minimum proportions of electricity sales to be supplied with generation from renewable generating resources. Production of this renewable generation replaces predominantly fossil fuel-fired generation and thereby avoids the CO<sub>2</sub> emissions from that replaced generation. *EPA believes that renewable electricity generation is a proven way to assure reductions of CO<sub>2</sub> emissions at affected EGUs at a reasonable cost.*"<sup>23</sup>

According to Oregon's RPS, which was enacted in 2007, all utilities serving Oregon must meet a percentage of their retail electricity needs with qualified renewable resources.<sup>24</sup> Eligible renewable energy resources include biomass, geothermal, hydropower, ocean thermal, solar, tidal, wave, wind, and hydrogen. Generating facilities utilizing these resources to generate renewable power can create Renewable Energy Certificates.<sup>25</sup> Biodigesters generate electricity at biogas facilities by decomposing organic matter or biomass. Under Oregon's RPS, biomass that can be used to comply with the RPS include:

- (a) Organic human or animal waste;
- (b) Spent pulping liquor;
- (c) Forest or rangeland woody debris from harvesting or thinning conducted to improve forest or rangeland ecological health and to reduce uncharacteristic stand replacing wildfire risk;
- (d) Wood material from hardwood timber grown on land described in ORS 321.267(3);

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<sup>20</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 33.

<sup>21</sup> *Id.* at pg. 153.

<sup>22</sup> *Id.* at pg. 195.

<sup>23</sup> *Id.* Emphasis added.

<sup>24</sup> *Id.* at pg. 104.

<sup>25</sup> Oregon Department of Energy, *A Renewable Portfolio Standard*, available at [http://www.oregon.gov/energy/RENEW/Pages/RPS\\_home.aspx](http://www.oregon.gov/energy/RENEW/Pages/RPS_home.aspx)

- (e) Agricultural residues;
- (f) Dedicated energy crops; and
- (g) Landfill gas or biogas produced from organic matter, wastewater, anaerobic digesters or municipal solid waste.<sup>26</sup>

Biogas facilities applying the approved biomass are therefore qualified renewable resources under Oregon's RPS<sup>27</sup> and subsequently correspond with building block 3 under the Clean Power Plan as a R/E capacity that reduces the generation required at affected EGUs.

Today, the utilization of biogas facilities has resulted in 8 MWs of biogas energy. However, with proper incentives such as the implementation of biogas R/E in the state plan, and with the aid of additional financing programs Oregon could support a biogas industry generating over 100 MW of biogas energy.<sup>28</sup> Realizing Oregon's full potential would reduce annual GHG emissions by 800,000 metric tons of carbon dioxide-equivalent emissions.<sup>29</sup>

In regards to the R/E produced through anaerobic digestion at biogas facilities, it is clear that there is a well-established and effective carbon reduction mechanism that falls within the scope of approved mechanisms that can be utilized now to achieve compliance under the Clean Power Plan. The Climate Trust therefore urges Oregon to pursue biogas facilities as a readily available, effective and applicable element in Oregon's state plan.

### *3. Utilizing Biogas Facilities Beyond the Clean Power Plan*

Beyond the utilization of biogas facilities' R/E capacity to achieve Clean Power Plan compliance, including biogas facilities in a state plan also contributes to achieving Oregon's broader energy laws and policies.

The production of R/E pursuant to the Clean Power Plan, also meets the requirement to use a percentage of qualified renewable resource for those affected utilities under the Oregon RPS; the production of R/E serves a dual purpose by achieving required action under both the Clean Power Plan and Oregon's RPS. Furthermore, the dual benefit previously explained contributes to achieving Oregon's more encompassing 2050 emission reductions goal. The initial release of GHG at the source, more specifically the methane that would otherwise be

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<sup>26</sup> Oregon Renewable Portfolio Standard, ORS 469A.025§(2).

<sup>27</sup> Weisberg and Roth. *Growing Oregon's Biogas Industry: A Review of Oregon's Biogas Potential and Benefits* (February 2011), pg. 13.

<sup>28</sup> *Id* at pg. 2.

<sup>29</sup> *Id.*

released into the atmosphere, achieves significant GHG emission reductions. And furthermore, the production of R/E through the biodigester process reduces the demand of energy on additional power plants and therefore, prevents the release of additional CO<sub>2</sub> emissions. The elimination of GHGs through biogas facilities is two-pronged, both of which contribute towards achieving Oregon's more comprehensive GHG emission reduction goals.

Ultimately, the application of biogas facilities, as one component among many in Oregon's state plan, not only contributes to emission reductions under the Clean Power Plan as R/E credits, but also significantly contributes to Oregon's renewable energy requirements and Oregon's overall GHG emission reductions pursuit.

### **State Plan Considerations: Applying a Mass-Based Emission Reduction Goal**

Beyond the flexibility granted by the EPA to choose which measures it adopts in reaching the emission performance level, states are also granted discretion in how they choose to measure emission performance levels.

According to the proposed Clean Power Plan, a state can choose to accept the emission rate-based performance goal prescribed to them by the EPA or they may translate this number to a mass-based goal.<sup>30</sup> If a state were to translate their CO<sub>2</sub> emission performance goal to a mass-based emission goal, emission performance requirements are subsequently measured in absolute tons. Such that, under a mass-based approach, a state plan is deemed to achieve the required emission performance criterion if the CO<sub>2</sub> emissions outcome, in total tons of CO<sub>2</sub> emissions over each plan's performance period, is equal to or less than what would be emitted by an affected EGU through the application of the rate-based goal as prescribed in the emission guidelines.<sup>31</sup>

Under a mass-based approach, the question of CO<sub>2</sub> emissions is no longer measured by the specific measures outlined in a state plan; rather CO<sub>2</sub> emissions are measured by the overall emission guidelines. Essentially, CO<sub>2</sub> emissions are calculated for the state as a whole,

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<sup>30</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 359.

<sup>31</sup> U.S. Environmental Protection Agency Office of Air and Radiation, *Projecting EGU CO<sub>2</sub> Emission Performance in State Plans* (June 2014), pg. 14.

considering the suite of requirements, programs, and measures in its plan.<sup>32</sup> The state plan requirements, programs and measures substitute for EPA's application of best system.<sup>33</sup> A mass-based emissions goal places emphasis on the overall tonnage of CO<sub>2</sub> produced by the region; it is a finite CO<sub>2</sub> emissions budget for a group of affected EGUs,<sup>34</sup> not a scrutinized look at the CO<sub>2</sub> emissions produced at each EGU individually.

In addition to utilizing existing, efficient biogas facilities as one component in the required state plan, The Climate Trust recommends Oregon to take advantage of the additional benefits achieved under a mass-based emission performance compliance goal. A mass-based reductions goal provides significant advantages across three sectors. First, electing a mass-based reduction goal provides flexibility for individual EGU's subject to the Clean Power Plan's compliance obligations. Second, the application of a mass-based emission reductions goal provides ease in the instance Oregon chooses to pursue a multi-state approach and/or link to an external emission trading program later. Lastly, a mass-based emissions reduction goal contributes to achieving Oregon's statewide greenhouse emission reduction pursuit, a mass-based emission reduction goal greater than the emission reductions goals required under the Clean Power Plan.

### *1. Affected EGU Flexibility*

As demonstrated above, a mass-based emission reductions goal places emphasis on the overall tonnage of emissions, and as such, provides relative certainty as to the absolute emission levels that would be achieved.<sup>35</sup> For the affected EGUs, this allows for relative simplicity in accommodating and accounting for the emission impacts of a wide variety of emission reduction strategies.<sup>36</sup>

Furthermore, recognizing that the nature of each participating EGU varies and that there is an expansive list of emission reduction measures available, each with varying costs and efficiencies, employing a mass-based emission reduction goal helps a state cost-effectively achieve CO<sub>2</sub> emissions limits or achieve other policy goals. This is done all while CO<sub>2</sub> emissions

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<sup>32</sup> *Id.*

<sup>33</sup> *Id.*

<sup>34</sup> U.S. Environmental Protection Agency Office of Air and Radiation, *State Plan Considerations* (June 2014), pg. 8.

<sup>35</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 340.

<sup>36</sup> *Id.*

performance is assured through the enforceable limit on mass emissions from affected EGUs.<sup>37</sup> Each state is therefore able to maximize the advantages it considers optimal,<sup>38</sup> all while guaranteeing compliance.

Through the ease of accounting and the opportunity to pursue and optimize cost effective emission reductions great flexibility is granted to those EGUs directly affected by the Clean Power Plan.

## *2. Multi-State Approach Flexibility*

The Clean Power Plan grants states the authority to collaborate with others via a multi-state plan whether these multi-state programs already exist or if new ones must be created.<sup>39</sup> Under such a plan, utilizing a mass-based emission goal, compliance is established by demonstrating that all affected EGUs subject to the multi-state plan emit a total tonnage of CO<sub>2</sub> emissions consistent with a translated multi-state mass-based goal.<sup>40</sup>

In granting this compliance option, the EPA recognized that multi-state collaboration would likely offer lower-cost approaches to achieving CO<sub>2</sub> emission reductions.<sup>41</sup> In addition to reducing implementation costs, a multi-state plan also offers states the opportunity to achieve additional emission reductions.<sup>42</sup> These advantages are well established and acknowledged by Oregon as the state leaves open the opportunity to later pursue a multi-state approach in meeting their Clean Power Plan obligations.<sup>43</sup>

Given the clear flexibility and opportunities for cost savings<sup>44</sup> under a multi-state compliance plan, by employing a mass-based emission goal now, which as previously

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<sup>37</sup> U.S. Environmental Protection Agency Office of Air and Radiation, *State Plan Considerations* (June 2014), pg. 8.

<sup>38</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 340.

<sup>39</sup> *Id.* at pg. 32.

<sup>40</sup> U.S. Environmental Protection Agency Office of Air and Radiation, *State Plan Considerations* (June 2014), pg. 18.

<sup>41</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 378.

<sup>42</sup> *Id.* at pg. 363.

<sup>43</sup> Note, this is evident by the comments submitted by Oregon's Department of Environmental Quality requesting that the final Clean Power Plan allow for states to cooperate regionally without blending state goals into a regional goal and allow for updates to state compliance plans if later multi-state agreements emerge. *Available at* <http://www.deq.state.or.us/aq/climate/docs/epaLcomment.pdf>.

<sup>44</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 17.

demonstrated simplifies the process of accounting for the impacts of a variety of measures,<sup>45</sup> grants ease in any future transition towards such a compliance plan.<sup>46</sup>

*a. Regional Influence on a Multi-State Plan*

In light of the existing regional climate mitigation efforts, with specific consideration given to California's existing GHG trading program,<sup>47</sup> it is likely that any multi-state plan Oregon pursues could similarly employ a cap-and-trade program to align with and take advantage of existing carbon reduction efforts.

The application of a multi-state plan employing an emission trading program is supported by the successful nature of California's program. It is projected that California's emissions trading program (and related complementary measures) will reduce power sector GHG emissions to less than 80 million metric tons of CO<sub>2</sub> equivalent by 2025, a 25% reduction from 2005 power sector emission levels.<sup>48</sup> Additionally, the use of a trading program, amongst other measures, recognizes the integrated nature of the electricity system and allows for a statewide target to be developed considering the wide range of CO<sub>2</sub> mitigation options and affected EGUs' flexibility to use those options.<sup>49</sup> According to California, "the integrated nature of the power grid means that policies which displace the need for fossil generation can often cut emissions from covered sources more deeply, and more cost-effectively than can engineering changes at the plants alone, though these source- level control efforts are a vital starting point." Through this understanding and the application of various emission reduction mechanisms, including its trading program, California granted itself utmost flexibility in how the state as a whole reached its 2006 Global Warming Solutions Act goal of reducing its 2020 GHG emissions to 1990 levels.

Note, the opportunity to utilize such a mechanism is clearly granted under the proposed Clean Power Plan, "states may also identify technologies or strategies that are not explicitly

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<sup>45</sup> *Id.* at pg. 360.

<sup>46</sup> Note multi-state plans may take either the rate-based or the mass-based form. See The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 41.

<sup>47</sup> Developed pursuant to California's 2006 Global Warming Solutions Act.

<sup>48</sup> Preliminary California Air Resources Board analyses, based in part on CARB 2008 to 2012 Emissions for Mandatory GHG reporting Summary (2013), cited in Letter to the EPA Administrator, "States' Roadmap on Reducing Carbon Pollution," (December 16, 2013), *available at* [http://www.georgetownclimate.org/sites/default/files/EPA\\_Submission\\_from\\_States-FinalCompl.pdf](http://www.georgetownclimate.org/sites/default/files/EPA_Submission_from_States-FinalCompl.pdf)

<sup>49</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 267.

mentioned in any of the four building blocks and may use those technologies or strategies as part of their overall plans, e.g. market-based trading programs.”<sup>50</sup>

Nevertheless, in Oregon’s carbon emission reduction pursuit, The Climate Trust recognizes that there is still great uncertainty regarding the decision of whether Oregon should pursue a trading program of its own or implement a carbon tax, or a variant thereof.<sup>51</sup> This dilemma is centralized on the idea of either price certainty *or* carbon emission certainty. With tax proponents arguing for the guaranteed fixed emission price and cap-and-trade proponents alternatively arguing for the guaranteed total allowable emissions. This however should not be the case. The question should not be one or the other, rather how to attain *both* price and carbon emission certainty. A hybrid approach securing both is essential, and California’s trading program is an exemplary model of such an approach.

Although California’s program is a cap-and-trade program at its center, it has established a minimum and maximum price at which permits to pollute can be sold. This allows for the price of emitting to rise or fall as more or less incentive is needed to meet emissions targets, but only between a floor and ceiling. Subsequently, a window of certainty for the prices paid for emissions is established (which would be achieved under a tax), while also ensuring emission goals are met (which would occur under a cap).<sup>52</sup>

The successful nature of California’s hybrid approach is one to be exemplified. Subsequently, the pursuit of a future multi-state plan that allows for a cap-and-trade program, while maintaining price certainty, calls for a mass-based emission goal. California’s trading program, alongside other well recognized trading programs such as the Regional Greenhouse Gas Initiative (RGGI), each apply a mass based approach. Therefore, employing a mass-based emissions reductions goal in the state plan now, not only sets the stage for future multi-state efforts, but it is also complimentary for any future application of a cap-and-trade program.

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<sup>50</sup> *Id.* at pg. 39.

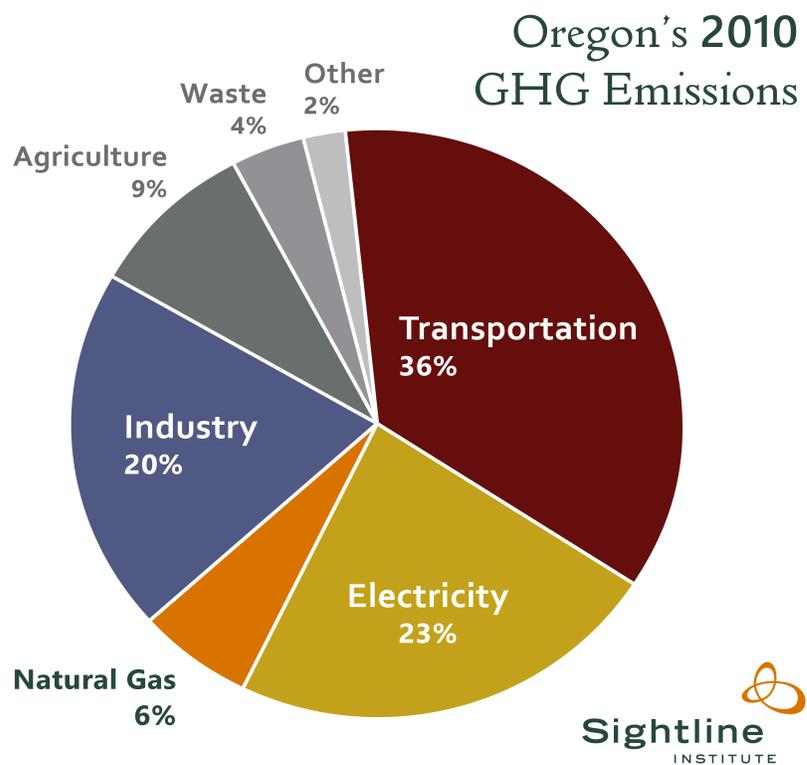
<sup>51</sup> Note recently proposed House Bill 3470, Climate Stability and Justice Act of 2015, is a greenhouse gas reduction policy that subsequently authorizes a market-based trading and auction program. Whereas, recently proposed House Bill 3250 and Senate Bill 965, Climate Protection Act, requires the Environmental Quality Commission to adopt greenhouse gas cap-and-dividend program to reduce statewide greenhouse gas emissions.

<sup>52</sup> Krifka, Kasey, *Act Now. California, A Model for Climate Policy*, (November 19, 2014).

### 3. Overall Flexibility at the Statewide GHG Reduction Level

As a state, Oregon faces the great challenge of reaching a GHG emissions reduction goal of 75 percent below 1990 levels by 2050. This is a significant challenge and one that is affected by various GHG emitters. According to Oregon’s Department of Environmental Quality, four sectors comprise 85% of Oregon’s total GHG emissions. These sectors include transportation, electricity, natural gas and industrial sources.<sup>53</sup>

## Oregon’s 2010 GHG Emissions



Eberhard, *Oregon Has a Climate Law Implementation Question. HB 3470 Has an Answer*, Sightline Daily, (April 19, 2015).

Amongst the varying GHG emitters, the electricity sector contributes less than ¼ of the total emissions produced by Oregon. As such, it is clear that although the Clean Power Plan takes a significant step in reducing carbon emissions, it is limited in scope as it applies to EGUs alone. In the context of all the GHG emitters contributing to climate change, EGUs are just one

<sup>53</sup> Eberhard, *Oregon Has a Climate Law Implementation Question. HB 3470 Has an Answer* (April 19, 2015).

of many. Subsequently, the Clean Power Plan by its vary nature is insufficiently equipped to achieve Oregon’s statewide 2050 GHG emission reduction goals, which requires GHG reductions beyond those produced by EGUs.

Nonetheless, by establishing a mass-based emission performance goal in Oregon’s state plan pursuant to the Clean Power Plan now, establishes a general baseline that is also complimentary to Oregon’s more comprehensive and larger scale 2050 carbon emission reduction goals. Through a mass-based emission performance level, those actions taken pursuant to the Clean Power Plan can also be counted towards the overall GHG emission reduction actions taken beyond the scope of the EGU emitting market. In this regard, the language of the state plan can again be created with longevity in application and structure to contribute to the achievement of Oregon’s 2050 GHG reduction goals.

*a. Carbon Offsets: In Consideration of the Statewide GHG Emission Reductions Goals*

Although it is clear that carbon offsets cannot be utilized by a state to reach its prescribed carbon emission reductions levels under the proposed Clean Power Plan,<sup>54</sup> significant opportunity remains in utilizing carbon offsets under a mass-based approach at the statewide level. In the context of Oregon’s statewide 2050 GHG emission reduction goal, carbon offsets should continue to be utilized as an effective, essential, and necessary component in the suite of mechanisms contributing to the overall reduction of GHG emissions.

The effectiveness and cost efficiency of carbon offsets are well recognized. Under the Oregon CO<sub>2</sub> Standard, regulating the carbon emissions of energy facilities, over 1.5 million tons of GHG have been reduced in 2013 alone. More than 3 million tons of reductions are expected to occur overall. Note again that this is just one GHG emitter of many. Not only are carbon offsets efficient, it is clear that they are cost effective. As a market-based mechanism, regulated entities

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<sup>54</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 429.

“[a]ll of the emission reduction measures included in the agency’s determination of the BSER reduce CO<sub>2</sub> emissions from affected EGUs. As a result, the EPA is not proposing that out-of-sector GHG offsets could be applied to demonstrate CO<sub>2</sub> emission performance by affected EGUs in a state plan.”

are incentivized to seek out and pursue the lowest cost reduction opportunities,<sup>55</sup> with offsets being one of the cheapest.<sup>56</sup>

As such, utilizing a mass-based approach would allow Oregon to capitalize on an existing carbon reduction measure, which is both effective and cost-efficient. Carbon offsets are a necessary mechanism and one that will help Oregon in its long and complex effort to reach its carbon reduction requirements.

Overall, establishing a state plan that applies a mass-based goal not only provides flexibility in reaching Clean Power Plan compliance, but also harmonizes the requirements under the Clean Power Plan with existing Oregon law and allows for longevity in the overall pursuit of GHG emission reduction.

### **State Plan Considerations: Portfolio Approach**

In addition to employing a state plan that fully utilizes the advantages present in biogas facilities and a mass-based emission performance goal, further opportunity exists with applying a portfolio approach.

In achieving prescribed performance levels, the EPA authorizes states to implement either 1) a set of measures referred to as “portfolio” measures, which include a combination of emission limitations that apply directly to the affected sources and other measures that have the effect of limiting generation by, and therefore emissions from, the affected sources; or 2) solely emission limitations that apply directly to the affected sources.<sup>57</sup>

Therefore, under a portfolio approach, both emission limits that directly apply to affected EGUs and other indirect measures that avoid EGU CO<sub>2</sub> emissions are included as authorized state plan measures. In this regard, end-use energy efficiency and R/E measures that avoid EGU CO<sub>2</sub> emissions become enforceable components of a state plan. As enforceable components, full

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<sup>55</sup> Franz T. Litz et al., *What's Ahead for Power Plants and Industry? Using the Clean Air Act to Reduce Greenhouse Gas Emissions, Building on Existing Regional Programs* (Feb. 2011) (unpublished manuscript) (on file with the World Resources Institute), pg. 3.

<sup>56</sup> Richardson, Nathan, *Playing without Aces: Offsets and the Limits of Flexibility under Clean Air Act Climate Policy. Resources for the Future* (December 2011), pg. 3.

<sup>57</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 117.

achievement of emissions reductions is assured since the emission limits applied directly to affected EGUs alone would not demonstrate full compliance.<sup>58</sup>

Pursuant to this state plan approach, the EPA authorizes states to submit state plans that do not impose legal responsibility on the affected EGUs for the entirety of the emission performance level, but instead, impose requirements on other affected entities that would reduce CO<sub>2</sub> emissions from the affected EGUs.<sup>59</sup> These additional enforceable measures can be implemented by the state or by another entity.<sup>60</sup>

By allowing for shared responsibility, the portfolio approach recognizes that some entities may be more advantageous than others to ensure emission reductions. This nature of shared responsibility is essential for Oregon to capitalize. Extrapolating this shared responsibility under the Clean Power Plans to the statewide level, allows for varying entities to again share the responsibility in the call of action to GHG emission reductions more broadly. Accordingly, the efforts required to achieve the larger 2050 emission reduction goals can be shared between varying entities. Like the benefits gained at the statewide level by utilizing a mass-based emissions performance goal, again, employing a portfolio approach now establishes precedent that will ease the later transition to pursuing Oregon's greater 2050 GHG emission reductions goal.

## Conclusion

In creating a successful, holistic approach, Oregon's state plan must begin by fully utilizing biogas facilities as well-established and effective emission reduction measures. Biogas facilities not only comply with the Clean Power Plan but also provide the additional benefits of R/E production and GHG emission reductions, which can be applied towards Oregon's RPS and the 2050 GHG emission reduction goals.

Furthermore, the state plan should be governed by a mass-based emission performance goal. Under a mass-based emission performance goal, significant advantages are provided to the individual EGUs subject to the Clean Power Plan, as well as to the state in the instance a multi-

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<sup>58</sup> U.S. Environmental Protection Agency Office of Air and Radiation, *State Plan Considerations* (June 2014), pg. 9.

<sup>59</sup> The Clean Power Plan, 79 FR 34829 (June 18, 2014), pg. 123.

<sup>60</sup> *Id.* at pg. 44.

state plan is pursued and in the overall achievement of Oregon's statewide emission reduction goals. Lastly, Oregon's state plan should apply a portfolio approach, allowing for the responsibility to be shared among various entities at both the EGU and the broader GHG emission reduction level.

A state plan comprised of these components not only suffices to meet the proposed Clean Power Plan requirements, but advances state plan components that provide a more inclusive and comprehensive approach in Oregon's overall emission reduction efforts. A state plan with these components, along with others, supports a stronger future for Oregon.

The Climate Trust greatly appreciates the state's time and consideration in advance, and we look forward to further collaborations in establishing a state plan under the finalized Clean Power Plan.