

U.S. EPA Headquarters
1201 Constitution Ave. NW
Washington, DC 20460

Re: EPA-HQ-OAR-2013-0602; Renewable Northwest's Comments on EPA's Proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources

Submitted via email to A-and-R-Docket@epa.gov

Renewable Northwest applauds the Environmental Protection Agency (EPA) for acting to regulate carbon pollution from existing power plants under Section 111(d) of the Clean Air Act, through its proposed Clean Power Plan. We strongly support EPA adopting new regulations in a strengthened final form by June 1, 2015.

Power plants are the nation's largest source of carbon pollution. Significant policy changes from federal and state regulators must be adopted to keep electric sector carbon emissions from continuing to be a major contributor to catastrophic climate change. EPA's Clean Power Plan is an important step in the right direction, ending the era in which the federal government has failed to place any limits on carbon pollution from the nation's electric sector.

Renewable Northwest is a non-profit advocacy organization that brings together its business and non-profit members to promote the expansion of environmentally responsible renewable energy resources in the Northwest states (Oregon, Washington, Idaho, and Montana). For 20 years, Renewable Northwest has been advocating for the Pacific Northwest region to build on its clean energy legacy by deploying new renewable energy technologies like wind, solar, and geothermal energy to reduce emissions, support local economies, and improve energy security and resilience. Renewable energy, along with energy efficiency, has already led to significant carbon emission reductions from fossil fuel generators. Our experience demonstrates that renewable energy, along with energy efficiency, can be the foundation for the clean, reliable, and affordable electricity system of the future.

In approaching carbon regulation for the electric sector, EPA correctly looked at the entire electric system to determine the best system of emissions reductions (BSER) and resulting emissions reduction targets for existing power plants. The Clean Air Act virtually compels a system-based approach, because it requires that any achievable and adequately demonstrated system of emission reduction that is available for compliance with a performance standard must also drive the standard's stringency. In its proposal, EPA recognized the real-world potential to reduce carbon pollution from power plants operating in an interconnected electric grid by deploying non-polluting renewable energy

- 3Degrees
- American Wind Energy Association
- Atkins
- Blattner Energy
- Bonneville Environmental Foundation
- Center for Energy Efficiency & Renewable Technologies
- Christenson Electric
- Citizens' Utility Board of Oregon
- Climate Solutions
- Columbia Gorge Community College
- Community Renewable Energy Association
- DNV GL
- Ecofys
- EDF Renewable Energy
- EDP Renewables
- Environment Oregon
- Environment Washington
- Eurus Energy America
- FirstWind
- GE Energy
- Geothermal Resources Council
- Green Mountain Energy
- HDR Engineering, Inc.
- Iberdrola Renewables
- Idaho Conservation League
- K&L Gates
- Kapla Law PLLC
- MAP
- Montana Environmental Information Center
- MontPIRG
- Natural Capital Partners
- Natural Resources Defense Council
- NextEra Energy Resources
- Northwest Environmental Business Council
- Northwest SEED
- NW Energy Coalition
- OneEnergy Renewables
- Oregon Solar Energy Industries Association
- Orion Renewable Energy Group LLC
- OSPIRG
- Oregon Tech
- Portland Energy Conservation, Inc.
- REC Silicon
- RES America Developments
- Solar Oregon
- SolarCity
- Stoel Rives, LLP
- SunPower Corporation
- SWCA Environmental Consultants
- Tonkon Torp LLP
- Vestas Americas
- Warm Springs Power & Water Enterprises
- Washington Environmental Council
- WashPIRG
- Western Resource Advocates

and energy efficiency, improving the efficiency of power plants, and relying more on less-polluting resources.

Our comments focus primarily on renewable energy, and recommend that EPA make its final rule stronger. EPA can do more to set, and enable states to work efficiently to meet, strong carbon goals using renewable energy. We support the comments of many national, regional, and state allies working to promote clean energy. In our own comments, we make six main recommendations to EPA:

(1) Adopt, but with significant improvements to renewable energy costs and performance, the Alternative Building Block 3 approach as refined in the Notice of Data Availability (NODA).

(2) Maintain strong 2020 interim targets, but allow new renewable energy and energy efficiency actions taken after January 1, 2017, to be banked for 2020 compliance.

(3) Define a specific crediting approach for out-of-state renewable energy to avoid double-counting and damaging existing markets and contracts.

(4) Encourage states to consider diverse types of multi-state compliance structures, so long as equivalent emissions reductions are achieved.

(5) Factor likely shifts from existing higher-emitting generators to new gas generation into targets and compliance.

(6) Make clear that the 111(d) targets will be reviewed and strengthened regularly—no less frequently than every eight years.

Adopting these recommendations, discussed in more detail below, will help to produce a final rule that accurately reflects the full potential of the electric system to achieve significant emissions reductions at the lowest system cost.

(1) EPA should adopt the Alternative Building Block 3 / Renewable Energy (BB3) target-setting approach using the regional calculation detailed in the NODA, but only after making certain critical technical revisions to the analysis of technical and economic potential and the calculation of BB3.

(a) Reasons for preferring Alternative/NODA BB3 approach

The technical and economic potential approach, as outlined in the Alternative BB3 technical support documents and supplemented by the NODA, offers important advantages

over the renewable portfolio standard (RPS) method for calculating BB3 *if* EPA makes certain critical technical revisions to the analysis.

In many regions, RPS policies have successfully driven renewable energy expansion. However, the level of renewable energy called for in RPS policies does not necessarily reflect the technical or economic potential of renewable energy in the Clean Power Plan timeframe. Most RPS policies come from negotiated legislative agreements influenced by politics and based on historic price, performance, and grid operation assumptions. In some cases, we have seen actual renewable energy performance in non-RPS states outpace that in RPS states, and we have seen idiosyncrasies of individual RPS policies greatly influence RPS procurement. Analyzing actual technical and economic potential to determine the reasonable contribution from renewable energy is a better foundation for the BSER.

By using the regional frame outlined in the NODA, the technical and economic potential analysis will reflect the reality of interstate power transactions. Both single-state utilities and those serving customers in multiple states have frequently crossed state boundaries to find the most cost-competitive supply of renewable energy and renewable energy credits (RECs). The rule should assume that states will continue to benefit from looking to their neighbors to find the greatest carbon emission reductions at the lowest cost. Interstate renewable energy markets are presently the best system of emissions reductions, and the final rule should take the NODA's regional approach in order to reflect this.

Using the Alternative/NODA regional approach ameliorates a challenge that the original proposal presented for some states that export renewable energy. The original proposal assumed that states could grow by six percent a year from an in-state generation baseline level, up to the RPS-based target. However, the original proposal also anticipates that the state that imported renewable energy would likely receive credit for its emissions reductions (an approach we support), meaning that some renewable energy in the exporting state's "baseline" would not in fact be available for compliance. The Alternative/NODA approach would better align Building Block 3 with the proposal to allow use of out-of-state renewables for compliance. Establishing state Building Block 3 targets by apportioning regional renewable energy potential based on state power consumption would result in states with larger loads being responsible for capturing a larger proportional share of the regional renewable energy potential. While this does not entirely eliminate the imbalance between a generation-based baseline and consumption-based compliance crediting, it reduces its impact and is likely the best, most feasible approach for EPA to address this challenge in the absence of nation-wide all-source consumption tracking systems.

(b) Needed technical changes to Alternative/NODA BB3 approach

For the technical and economic potential analysis to reflect what levels of renewable energy will actually be achievable and cost-effective during the compliance period, certain technical revisions are needed.

First, EPA should allow its economic potential analysis alone to determine what levels of renewable energy growth are economically reasonable. EPA's current Alternative Building Block 3 proposal sets a redundant and arbitrary growth cap based on a percentage of technical potential per year. No cap is necessary, because the economic potential analysis serves to limit growth expectations to economically reasonable and practicable levels that factor in infrastructure constraints. Furthermore, because the proposed cap is historically-based, it will likely not capture technology improvements and therefore will fail to reflect the increasing economic potential of renewable energy. For example, technology for efficiently capturing power from the available renewable resource has already improved and will continue to improve; the proposed cap assumes a permanent freeze in technology development. Also, as costs decline and economies of scale increase, a state may go from near zero growth in a resource to significant growth very quickly. The economic potential analysis is a much better way to understand what levels of renewable energy will actually be achievable and cost-effective during the compliance period.

Second, EPA should make significant improvements in its assumptions regarding the present and future cost of renewable energy. At minimum, EPA's renewable energy price assumptions should reflect current, real-world cost assumptions. We recommend that EPA align its assumptions with the costs reflected in the most current reports by the U.S. Department of Energy (U.S. DOE) for solar and the Lawrence Berkeley National Laboratory (LBNL) for wind energy. So far, EPA has used much higher costs for renewable energy. For wind energy, EPA's assumption of \$2,258/kW (2011\$) exceeds LBNL's representative national indication of wind's current installed costs by more than \$500/kW.¹ EPA's assumed solar costs of about \$2,800/kW-DC (2011\$),² exceed recent costs reported by U.S. DOE's 2014 report on solar PV system pricing trends (2014 installations at \$1,800/kW for utility-scale, \$2,540/kW for commercial, and \$3,290/kW for residential).³ Each of these reports offers regional breakdowns that EPA could use to differentiate pricing and performance assumptions for different regions under the regional NODA approach.

A study by the Natural Resources Defense Council found that simply by updating the cost and performance parameters for renewable generation and energy efficiency to be consistent with today's technologies, compliance could be achieved at net savings of \$1.8 billion in 2020 and \$6.6 billion in 2030. In the final rule, EPA should update its cost numbers and strengthen the state targets to reflect the emission reductions available based on current data on availability and cost.

¹ Wisner and Bolinger, Lawrence Berkeley National Laboratory, *2013 Wind Technologies Market Report* (August 2014), at page ix (citing capacity-weighted national average installed cost of \$1,750/kW).

² EPA's IPM used an installed cost of \$3,364/kW-AC for utility scale solar. Assuming an inverter loading ratio of 1.2 (equivalent to a de-rating of about 0.8) to convert from AC to DC, this equates to about \$2800 kW-DC.

³ Feldman, et al., U.S. Dep't of Energy, *Photovoltaic System Pricing Trends: Historical, Recent, and Near-Term Projections, 2014 Edition* (September 22, 2014), at page 4.

Accurately reflecting today's costs is a necessary improvement, but EPA should go a step further to gain an accurate picture of what levels of renewable energy will actually be achievable and cost-effective during the compliance period. The U.S. DOE and LBNL reports referenced above contain predictions of future cost declines and performance improvements. EPA should apply the US DOE and LBNL future supply curve predictions to prevent its out-year assumptions from being overly conservative.

Third, to the extent feasible in the technical and economic potential modeling, EPA should expect that grid changes will enable even more cost-competitive renewable energy by 2030. By then, generator retirements and new transmission builds will have opened transmission capacity for more cost-effective renewable energy, and improved coordination and market functions will have improved transmission operations. We support the American Wind Energy Association's recommendations for how these improvements should be modeled in setting Building Block 3.

(c) Recognize in target that renewables displace emitting resources.

In the NODA, EPA noted that its original proposal treated renewable energy resources (BB3) differently from redispatch to natural gas generators (BB2) when building the target. As the NODA suggests, renewable energy actually operates to reduce dispatch from other generators, just as shifting to gas generators would. Therefore, the two building blocks should be calculated in the same way—by reducing tons of carbon dioxide from the numerator, not only adding megawatt-hours to the denominator.

(2) EPA should maintain strong 2020 interim targets, but allow new renewable energy and energy efficiency actions taken after January 1, 2017, to be banked for 2020 compliance.

Strong interim targets are necessary to begin to transition the electric sector towards less-polluting infrastructure and investments in renewable energy and energy efficiency that will create jobs and stimulate the economy. However, restricting credit for energy efficiency and renewable energy actions until 2020 may distort the market by encouraging delay in new actions until such time as they are eligible for credit. To alleviate this circumstance and to offer more tools to states concerned about meeting the 2020 interim targets, we support a limited pre-2020 banking option.

We recommend that EPA allow credit for new carbon reduction actions—including increasing existing policies and adopting new policies—taken after January 1, 2017, and before the plan performance period begins (Jan. 1, 2020) to count toward achievement of the state's 2030 carbon emission goal. This would help ensure that the states have an incentive to reduce carbon emissions by using new renewable energy and energy efficiency measures, as well as other compliance tools, prior to 2020. By limiting banking to “new” emission reduction measures (which could include expanding existing programs, measures, or actions—or establishing new ones), actions taken before 2020 would place states in a better position to comply in meeting the ultimate required emission performance standards.

Also, to ensure that states are making meaningful progress throughout the compliance timeframe, we recommend that EPA divide the ten year period into two five-year compliance periods so that emission reduction actions between 2020 and 2030 are not likely to be delayed until the end of the compliance period.

(3) EPA's final rule must define a specific crediting approach for out-of-state renewable energy. This is necessary to avoid double-counting emissions reductions and severely damaging existing renewable energy markets.

(a) Prevent double counting and protect existing markets and contracts

Renewable energy resources are often sited to take the most advantage of the clean, renewable resource that they are using to generate power. This means that while one state may incentivize the development of a renewable resource, pay for it and ultimately consume the electricity, that renewable resource may be sited out-of-state to take advantage of the best resource areas or transmission infrastructure.

To avoid disrupting existing interstate markets for renewable energy and associated environmental attributes or renewable energy credits (RECs), the EPA must establish more clear and certain guidance for the treatment of out-of-state renewable energy. Failure to specify acceptable and unacceptable attribution approaches for out-of-state renewable energy introduces significant uncertainty, risk of double-counting emissions reductions and RECs, and potential for serious damage to existing renewable energy markets.

EPA should be clear that the compliance credit for renewable resources accrues to the state that is consuming the renewable energy. In the absence of such a statement in the final rule, there is the risk that the state hosting the renewable energy production could also try to claim compliance credit towards 111(d). This could lead to double counting of emissions reductions, and therefore a failure to meet the emissions reductions targeted by Clean Power Plan.

At minimum, EPA's final rule must require that a state wishing to use renewable energy MWh for compliance demonstrate that in-state entities hold and have submitted the environmental attributes associated with the compliance MWhs. The simplest and most straightforward mechanism for a state to accomplish this demonstration will be to require RECs to be retired in a tracking system. Tracking systems follow RECs from point of issuance to retirement, and are the surest way to ensure no double counting has occurred. EPA should require, or strongly encourage, states that already participate in REC tracking systems to use them to record renewable energy used for compliance.⁴

⁴ It is the REC or environmental attribute that is needed to determine that the renewable energy has created emissions reductions and that those reductions have been allocated without double counting. It is not necessary for EPA to also require that the REC be bundled with the electricity. State policy can continue to determine the need for such bundling.

In addition, EPA should very clearly prohibit state plans from disrupting existing contracts that assign RECs. Contractual agreements for renewable energy specify the ownership of RECs and give the REC owner the exclusive claim to emission reductions caused by the MWh of renewable energy generation. Allowing states or compliance entities to claim renewable energy emission reductions from renewable energy generation from which another entity explicitly holds the RECs would undermine existing contracts and introduce significant market uncertainty. EPA should decline to recognize any language in state laws or plans that attempts to divide the emissions value of the REC (or simply to take it from its owner).

EPA should also decline to allow state plans to count the RECs from voluntary green power purchasing mechanisms. The issue here is not that double-counting would occur, but rather that counting voluntary purchases would upset the premise on which voluntary renewable energy purchases are made. Companies and individuals taking voluntary action do so with the expectation that they are buying and using renewable energy for voluntary purposes that go over and above legal requirements. Upsetting contractual or tariff-based expectations of such “regulatory surplus” would be problematic. Also, green pricing programs may not be enforceable for purposes of 111(d), because states cannot compel or guarantee participation; at minimum, a state would need a backstop for shortfall in RECs expected from voluntary purchases. For these reasons, EPA should require that states using rate-based plans not include voluntary renewable energy MWhs in calculating their rates. States using mass-based emissions structures must adjust their emission limits using a voluntary renewable energy set-aside, as RGGI and California have done.

(b) Define bounds of interaction with state RPS laws

State RPS laws clearly can be enforceable policies for compliance with 111(d). RECs retired for a state’s RPS can be claimed for that state’s 111(d) compliance, if the RPS is part of the state’s plan. EPA should be clear, however, that where a utility’s REC retirement would comply with a state RPS but not with 111(d), the state will not be able to count that renewable energy. The state must either discount the RPS for 111(d) compliance, modify the RPS, or require separate REC retirements in connection with 111(d) compliance. For example, Oregon’s RPS allows unlimited banking of RECs, meaning that in theory RECs from the inception of the law in 2007 could be retired for a utility’s RPS compliance in 2020. Such RECs could not be credited for 111(d) compliance, so the state would not be able to use that portion of the RPS for its 111(d) compliance. Furthermore, many states have “cost-caps” and alternative compliance payments or mechanisms; those off-ramps from state RPS likewise cannot be credited for 111(d).

Another RPS interaction is important for multi-state utilities. A utility with compliance obligations arising from both 111(d) and RPS laws in multiple states cannot retire a REC for RPS compliance in one state (where the RPS is part of the state’s plan) and submit the same REC or MWh for another state’s 111(d) compliance, absent a multi-state agreement that ensures the total level of emissions reductions remains the same. However, if states have combined their

compliance obligations in a manner that ensures equivalent total emissions reductions, this approach may be the lowest cost, most efficient course of action.

(4) EPA should use the final rule to encourage states toward diverse types of multi-state compliance structures, so long as equivalent emissions reductions are achieved.

Renewable Northwest filed separate comments jointly with other Western non-governmental organizations to encourage EPA to make space in its final rule for a variety of flexible multi-state compliance structures, including structures such as bilateral agreements that are not as comprehensive as the example set by the Regional Greenhouse Gas Initiative.

Comprehensive credit accounting systems across states may well be efficient and appropriate. As long as the total carbon emission reductions claimed are at least equal to the total of each state's in-state emission reductions, states participating in multi-state plans should be able to distribute carbon emission reductions among states in the multi-state area.

But the EPA should also be open to less comprehensive arrangements. In regions where a comprehensive multi-state structure does not emerge, it may still be useful and consistent with achievement of equivalent emissions reductions to allow states to cooperate on a narrower basis. Arrangements between two states, even with respect to a single facility or utility, may help to harmonize the implementation of the rule in a way that is both fair and cost-efficient.

Finally, we recommend that EPA allow states to have the flexibility to be able to consider multistate opportunities that may emerge even after they have filed individual state-level plans. However, we do not recommend that EPA delay its timeline for individual plans; it may well encourage movement toward multistate systems to have states develop their own plans first. We do recommend that states that are in compliance with individual plans be permitted to shift to a multistate arrangement at a later time.

(5) EPA's final rule should factor shifts from existing generators to new gas generation into targets and compliance. Otherwise, the rule will treat new gas-fired generation as though it has zero carbon emissions and create severely distorted incentives that could lead away from the long-term carbon emission reductions that the rule seeks.

EPA must ensure symmetry between the resources available for compliance purposes and the resources used to determine the targets. Unless a potential compliance option is too costly or not adequately demonstrated, it must be included in setting the target if EPA will allow its use for compliance purposes. In its original proposed rule, EPA considered the potential to shift power generation from existing coal-fired power plants to underutilized natural gas combined cycle (NGCC) plants. EPA did not include new NGCC plants in setting state targets, but did suggest that it was considering whether states should be allowed to use new NGCC plants for compliance purposes.

If gas generators are used for compliance purposes, they should be factored into the establishment of the targets to ensure symmetry between the resources considered in setting the target and resources allowed for compliance. A failure to account for gas emissions would treat new gas generation as a non-emitting source for purposes of 111(d) compliance. In reality, new gas generation would continue emitting, undermining 111(d)'s goal of reducing electric sector greenhouse gas emissions.

Eventually treating "new" gas generators as "existing" gas generators does not entirely fix the problem. As discussed below, we do recommend updating the fleet of facilities subject to the regulation in order to ensure that the 111(d) regulations continue to achieve significant, cost-effective emission reductions from fossil-fuel power plants, consistent with the no backsliding policy. However, this should not be considered a substitute for the needed symmetry between the resources available for compliance purposes and the resources used to determine the targets.

(6) EPA should make clear that the 111(d) targets will be reviewed and strengthened regularly. As it faces resource decisions whose consequences stretch three to five decades into the future, the electric sector needs a strong signal that carbon regulation is here to stay.

EPA should commit to regularly review the BSER to ensure that it continues to reflect the system that can maximize reductions in carbon pollution considering cost, energy requirements, and impacts on other health and environmental outcomes, as required by the Clean Air Act.

Section 111(b)(1)(B) calls for EPA, at least every eight years, to review and, if appropriate, revise federal standards of performance for new sources. This requirement provides for regular updating of performance standards for new sources as technologies become cleaner or less costly. While Section 111(d) does not contain the same explicit requirement, nothing prevents EPA from committing to regular review of the standards and it would be inconsistent with the statutory scheme to fail to strengthen a performance standard that proves too easy to meet in practice. Regular updating would be consistent with the "no backsliding" policy that is appropriately emphasized in the Clean Power Plan.

We recommend that EPA treat the 2030 final goals as a default and further commit to reviewing, and if appropriate revising, the 2030 final goals by no later than 2024. Providing a clear timeline for when new gas plants will become part of the existing fleet for purposes of 111(d) compliance (assuming not accounted for in the target and compliance initially) is critical to utility resource decisions in the near term. Utilities and stakeholders need to have as much clarity as possible about the potential carbon regulatory implications of adding new gas generation. Certainty that new gas will become subject to carbon constraints in the future will help utilities and stakeholders work together to use diverse supply and demand-side resources to produce a clean and reliable electric system.

CONCLUSION

We appreciate EPA's attention to these comments and look forward to partnering with our states to implement the final rule. We strongly support EPA adopting new regulations, with the improvements discussed here, in a strengthened final form by June 1, 2015.

Sincerely,

A handwritten signature in black ink that reads "Rachel Shimshak". The signature is written in a cursive, flowing style.

Rachel Shimshak
Executive Director
Renewable Northwest