The Industrial Customers of Northwest Utilities

Comments On:

Proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units

Docket ID: EPA-HQ-OAR-2013-0602

Submitted Electronically to:

U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

December 1, 2014
I. INTRODUCTION

The Industrial Customers of Northwest Utilities (“ICNU”) appreciates the opportunity to provide comments on the Environmental Protection Agency’s (“EPA”) proposed rules under § 111(d) of the Clean Air Act (the “Clean Power Plan”).

A. About ICNU

ICNU is a non-profit organization that represents large energy users in the states of Washington and Oregon. ICNU’s members are national and international companies that have facilities around the world and compete in a globalized marketplace. In the Pacific Northwest, ICNU’s members form one of the engines of the region’s economy, employing over 170,000 people in more than 160 facilities. They also constitute a major portion of the Northwest’s energy load, consuming approximately 17 million megawatt hours (MWh) of electricity each year. Given this level of electricity consumption, ICNU’s members are particularly knowledgeable about energy issues and sensitive to the costs of energy policy decisions, which can have a material impact on their businesses. To that end, ICNU is intimately involved in shaping energy policy in the Northwest, both through legislative action and administrative proceedings at the Washington Utilities and Transportation Commission, Oregon Public Utility Commission, and the Bonneville Power Administration. ICNU offers a unique perspective to EPA on the potential impacts of the Clean Power Plan on the cost of energy in the Northwest. A list of ICNU’s members is attached to these comments.

B. The Clean Power Plan

EPA’s Clean Power Plan establishes state-specific interim and final emission reduction targets with the goal of reducing the United States’ carbon dioxide emissions from existing fossil-fueled electric generating units (“EGUs”) to 30 percent below 2005 levels by
To achieve these emission reductions, the Clean Power Plan takes each state’s 2012 emission rate and sets target emission reductions from that rate based on the “best system of emission reduction” adequately demonstrated (“BSER”).\(^2\) For carbon dioxide emissions from existing EGUs, EPA has determined that the BSER is a combination of four “building blocks:” (1) heat rate improvements at existing coal-fired EGUs; (2) redispacth from coal-fired units to natural gas-fired units; (3) increasing renewable generation; and (4) increasing energy efficiency.\(^3\) The Clean Power Plan gives states discretion regarding how to implement these four building blocks, but each state is required to meet its final emission reduction targets by 2030.\(^4\) For Oregon, the final emission target is 372 lb/MWh; for Washington State, it is 215 lb/MWh.\(^5\)

The Clean Power Plan also contains an interim emission reduction target, which must be achieved based on average emissions between 2020 and 2029.\(^6\) The interim carbon emission goal for Oregon is 407 lb/MWh and is 264 lb/MWh for Washington.\(^7\) These states’ baseline 2012 emissions, as calculated by EPA, are 717 lb/MWh for Oregon and 756 lb/MWh for Washington.\(^8\) Consequently, the interim goals represent the vast majority of the final goal emission reductions.

\(^{2/}\) Id. at 34863.
\(^{3/}\) Id. at 34836.
\(^{4/}\) Id. at 34837.
\(^{6/}\) Clean Power Plan at 34837.
\(^{7/}\) Supra, n. 5.
C. Energy Consumption in the Northwest

The Northwest is a unique energy region in the United States. Oregon and Washington load is served primarily by low-cost, zero-carbon, federal hydropower in the Columbia River Basin. According to the Northwest Power and Conservation Council, the Federal Columbia River Power System provides “two-thirds of the [Northwest’s] generating capacity and about three-quarters of electric energy on average.”\(^9\) The phrase “on average,” however, is critical. The Northwest hydro system’s average output of 16,000 average megawatts (“aMW”) is not constant and depends on annual precipitation and water levels.\(^10\) The actual annual output can range widely, anywhere from 19,000 aMWs in high water years, to 11,800 aMWs in low water years.\(^11\) This compares to the total regional demand of approximately 22,000 aMWs.\(^12\) Accordingly, hydropower can meet anywhere from 54% to 86% of total regional demand, and thus, the output from these hydro resources directly correlates with the output from fossil-fired generation – fossil generation increases in low hydro years and decreases in high hydro years. This means that emission rates in both Oregon and Washington are extremely variable. Nevertheless, they are, in any year, among the lowest in the country.\(^13\)

In fact, Washington and Oregon were the second and third highest producers of zero-carbon energy in the nation, respectively, in 2012.\(^14\) Additionally, both Oregon and Washington have been leaders in the development of other sources of renewable energy, particularly wind power. These states have aggressive renewable portfolio standards, with

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\(^10\) Id.

\(^11\) Id.

\(^12\) Id.

\(^13\) Id.


\(^14\) GHG Abatement Measures Technical Support Document, Docket ID No. EPA-HQ-OAR-2013-0602 at 4-38, Table 4-1.2, available at: [http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule-ghg-abatement-measures](http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule-ghg-abatement-measures) (Idaho, another recipient of Northwest hydropower, was number one).
Washington requiring 15 percent of generation coming from renewable sources in 2020 and Oregon requiring 25 percent by 2025 (neither state counts legacy hydropower in these requirements). Each state has only one coal-fired power plant – the Centralia Generating Facility in Washington and the Boardman Generating Facility in Oregon. Both plants are scheduled to cease burning coal by 2025 at the latest.\footnote{Boardman is scheduled to cease burning coal in 2020 and will either transition to burning biomass or will be decommissioned; Centralia will cease burning coal from one of its units in 2020 and the other in 2025.} Accordingly, Washington and Oregon are already two of the least carbon-intensive states in the country and have demonstrated a strong desire to significantly reduce their remaining carbon output independently of the Clean Power Plan.

**II. THE EPA SHOULD REVISE THE CLEAN POWER PLAN TO LIMIT ITS COST IMPACTS TO ELECTRICITY CUSTOMERS**

The Clean Power Plan vastly expands the EPA’s authority to regulate energy and the economy. In particular, ICNU questions the EPA’s statutory authority to regulate in areas other than the source itself. Section 111(d) of the Clean Air Act authorizes EPA to prescribe regulations requiring states to submit plans that “establish[] standards of performance for any existing source ….”\footnote{42 U.S.C. § 7411(d)(1).} Accordingly, it is unclear that EPA has the authority to require states to reduce their emissions through environmental redispatch, additional construction of renewable generation, and additional acquisition of energy efficiency, when these requirements do not relate directly to the performance of an “existing source.” As the Supreme Court has recently stated:

> When an agency claims to discover in a long-extant statute an unheralded power to regulate a significant portion of the American economy, we typically greet its announcement with a measure of skepticism. We expect Congress to speak clearly if it wishes to assign to an agency decisions of vast economic and political significance.\footnote{Util. Air Regulatory Group v. EPA, 134 S. Ct. 2427, 2444, 189 L. Ed. 372 (2014) (citations and internal quotations omitted).}
EPA has traditionally been vested with the authority to regulate emissions from source
categories. By wading into areas like generation dispatch and energy policy, in which the
agency has questionable legal authority and that are outside of its areas of expertise, the Clean
Power Plan is likely to have unintended consequences that will unnecessarily raise costs for
electricity customers. For large energy users like ICNU’s members, this can mean millions of
dollars in lost revenue. Therefore, without acknowledging the legality of the Clean Power Plan,
ICNU limits the remainder of these comments to concerns it has about certain assumptions EPA
has made in developing the proposed rule that are likely to increase power costs for Northwest
electricity customers without substantial justification.

The Clean Power Plan, as currently proposed, penalizes states like Washington
and Oregon that have taken aggressive early action to limit their already low carbon output. This
exacerbates cost increases for customers beyond what is reasonable under the BSER. Some of
the Clean Power Plan’s goals are simply not attainable in Oregon and Washington and must be
revised. The final rule must also contain additional flexibility to ensure reliability of the system
and to enable states to achieve the final emission reductions in the most cost-effective way
possible. ICNU’s comments below address these issues and provide associated
recommendations. Specifically:

- EPA should abandon its use of 2012 as the baseline year for the Clean Power
  Plan’s emission reduction goals in favor of a five-year average (2008-2012) to
  better reflect average baseline emissions; EPA should also adopt a rolling multi-
  year average for compliance with the final emissions targets.

- EPA should not penalize states that have been early promoters of renewable
  energy and energy efficiency by failing to give appropriate credit for action taken
  prior to 2012.

- EPA should build more flexibility into the Clean Power Plan by: (1) removing the
  interim goals; (2) allowing states to update their state implementation plans
  during the interim compliance period; and (3) establishing necessary reliability
  backstops.
A. The Clean Power Plan establishes an artificially low baseline for carbon emissions in Washington and Oregon.

By establishing 2012 as the baseline year from which carbon reductions must be achieved, the EPA has assumed artificially low emissions rates for both Washington and Oregon. Northwest hydro output was at 128% of normal in 2012.¹⁸ The result was carbon emissions in Oregon and Washington that were 1.6 million and 5.5 million metric tons lower than the average of the last ten years, respectively.¹⁹ This means that both coal- and gas-fired plants ran at capacity factors significantly below the historical average. The number of combined MWhs produced by coal and natural gas in Oregon in 2012 was 14.3 million.²⁰ This compares to 19.8 million MWhs in 2010 and 19.3 million MWhs in 2009.²¹ In Washington, 2012 combined coal and natural gas output was 9.2 million MWhs, while it was 18.9 million MWhs in 2010 and 19.4 million MWhs in 2009 (more than double the 2012 output).²²

Despite these massive discrepancies in fossil output (and the corresponding emissions), EPA is requiring Washington to reduce its carbon emissions by 72 percent from below average 2012 levels, and Oregon by 48 percent. When one compares the emission rate reduction goals to prior years with lower hydro output and higher emission rates, it is clear that these percentage reductions are significantly greater when based on these higher carbon years. The consequence is that EPA’s goals will likely be unattainable in years with low hydro output when fossil generators will need to run at higher capacity factors, and therefore, do not represent

²⁰ U.S. Energy Information Administration, Form EIA-923, “Power Plant Operations Report” and predecessor forms, available at: http://www.eia.gov/state/?sid=OR. The year 2011 was also a high hydro year with fossil output similar to 2012. Id.
²¹ Id.
the true BSER for these states. The EPA should not penalize Oregon and Washington simply because these states rely heavily on a clean, but variable, energy source.

To address these problems, ICNU recommends that the EPA adopt a baseline level of emissions based on a multi-year average (ICNU suggests the 2008-2012 five-year average), as well as a rolling multi-year average for compliance with the 2030 target emission reduction level. This will smooth some of the variability in hydro generation and will establish a more normalized emission rate from which to base reduction targets. It will also help ensure that these states are not automatically driven out of compliance with the final emission goals in low water years – a circumstance over which they have no control. Continuing to target reductions from a 2012 baseline will compromise Oregon’s and Washington’s ability to meet the requirements of the Clean Power Plan.

B. The Clean Power Plan penalizes states that have been more aggressive in reducing carbon emissions.

1. The proposed rule does not appropriately credit renewable energy installed prior to 2012.

Prior to 2012, Oregon had nearly 2,000 MWs of installed operational wind capacity; Washington had over 2,300 MWs. 23/ Both states had renewable portfolio standards in place by 2008 that established aggressive requirements for renewable energy acquisition. Washington requires utilities to meet at least 15 percent of their load with renewable energy by 2020; 24/ Oregon establishes a 25 percent requirement by 2025. 25/

The Clean Power Plan’s emission reduction goals are based in part on state renewable energy generation targets that are cumulative to pre-2012 installed renewable capacity. The targets were developed by taking the amount of operational renewable generation

25/ ORS § 469A.052.
in 2012 and applying a growth factor until the state reaches a regional renewable energy percent
generation target determined by the EPA.26 This means that states like Washington and Oregon,
which have been at the forefront of renewable energy development, are required to achieve and
maintain higher levels of renewable energy than states that have done little or nothing to promote
renewable resources. Kentucky’s final renewable energy goal in 2030 under the proposed rule,
for instance, is one-sixth (2%) of the amount of renewable generation Oregon had operational in
2012 (12%).27

This framework penalizes states that have worked on their own to attain the type
of emission reductions the Clean Power Plan is designed to achieve. The vast majority of wind
potential in both Washington and Oregon is in the Columbia River Basin. As the cheapest and
most productive sites in this area are acquired for renewable development it becomes more
expensive to construct incremental capacity. While states with little renewable generation in
2012 can cheaply develop the so-called “low hanging fruit” to meet the Clean Power Plan’s
goals, states like Washington and Oregon that have already developed these sites will need to
build more costly renewable resources to comply with their larger requirements under the
proposed rule.28 Accordingly, the Clean Power Plan establishes a more costly path to
compliance for Washington and Oregon than other states simply because these states have done
voluntarily what the Clean Power Plan seeks to require.

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26/ Oregon and Washington are in the “West Region,” which extends from Washington in the Northwest to
New Mexico in the Southwest (and all states in between), and thus, includes a wide range of renewable
energy opportunities. The collective renewable generation target for this extremely diverse region is 21
percent. GHG Abatement Measures Technical Support Document at 4-17.

27/ GHG Abatement Measures Technical Support Document, at 4-27, Table 4.8.

28/ This is on top of the fact that, if one includes hydro generation, Washington and Oregon already meet 84%
and 77%, respectively, of their generation needs with renewable energy. Id at 4-41.
2. The proposed rule does not appropriately credit energy efficiency acquired prior to 2012.

The same is true for the Clean Power Plan’s energy efficiency goals. The proposed rule assumes states can achieve incremental energy savings from energy efficiency of 1.5% and calculates cumulative energy savings from energy efficiency as a percentage of retail sales with this incremental savings input.\(^{29}\) Again, the inputs build off of incremental savings from energy efficiency measures already in place as of 2012. For Oregon, this is 1.04% and for Washington, it is 0.88\%.\(^{30}\) Thus, these states achieve the 1.50% incremental savings goal faster, and must maintain it for longer, than states that have pursued little or no energy efficiency.\(^{31}\)

As with renewable energy, incremental energy efficiency is more expensive to acquire. The Energy Trust of Oregon has already expressed concerns that much of the cheapest conservation in the state has been acquired.\(^{32}\) This means that achieving the Clean Power Plan’s cumulative savings targets of 11.76% for Oregon and 11.64% for Washington will cost these states more than it will other states that still have the ability to acquire cheap and plentiful energy efficiency.\(^{33}\)

Much of these costs will be passed on to customers who already pay for the energy efficiency Oregon and Washington have acquired. Sensitive to the costs of energy, industrial customers, in particular, spend large amounts of their own money – often into the millions of dollars – pursuing energy efficiency projects. It is generally recognized that

\(^{29}\) Clean Power Plan at 34872.


\(^{31}\) For instance, Oregon hits the 1.50% target in 2020, while Louisiana does not reach it until 2025 under the proposed rule. Id.


industrial projects produce the most cost-effective energy efficiency.\textsuperscript{34} And the reduced energy usage from these projects benefits all electricity customers by reducing system costs as well as overall emissions. Industrial energy efficiency also provides ancillary economic benefits: it enables these businesses to hire and retain more workers; makes them more competitive in a globalized economy; and enhances product quality while simultaneously lowering end product cost.\textsuperscript{35} Requiring these customers to bear additional costs for incremental energy efficiency will materially reduce these benefits, which depend upon the cost-effectiveness of conservation measures to these customers.

States like Washington and Oregon have taken early action to address climate change. The EPA should be supporting these actions, not penalizing them. In a number of cases, these states’ policies have already increased the cost of energy for customers. The Clean Power Plan will further exacerbate these increases and for the wrong reasons. ICNU urges the EPA to give appropriate credit to states that have pursued carbon reduction policies on their own.

C. The EPA should build more flexibility into the Clean Power Plan.

1. The EPA should remove the interim goals.

Long before the EPA developed the Clean Power Plan, Washington State made a commitment to close its only coal-fired power plant, the Centralia generating station, by 2025.\textsuperscript{36} The Clean Power Plan, however, requires states to meet interim goals starting in 2020.\textsuperscript{37} EPA attributes a coal-fired emissions rate to Washington of 2,432 lb/MWh in 2012.\textsuperscript{38} The plan’s

\textsuperscript{36} See RCW §§ 80.80.040(3)(c), 80.82.010.
\textsuperscript{37} Clean Power Plan at 34837.
2020 target emissions rate, however, is 334 lb/MWh, reducing to 215 lb/MWh in 2029 to establish the average interim goal for Washington of 264 lb/MWh.\textsuperscript{39} It appears from a comparison of the baseline emission rate assumptions and the interim emission rate assumptions that the interim goals may not be achievable in Washington unless the state accelerates closure of Centralia to 2020, thereby vastly increasing the plant’s decommissioning costs. Given that the plant will be closed in time for the state to meet the Clean Power Plan’s final goals, there is no justifiable reason to accelerate decommissioning just to meet interim reduction targets.

ICNU proposes that the EPA eliminate the Clean Power Plan’s interim goals entirely. So long as a state can show sufficient progress toward meeting its final emission reduction target (whatever that ends up being), there is no reason to require adherence to inflexible interim targets that may unnecessarily increase the costs of compliance.

2. The EPA should allow more flexibility for development of state plans.

The Clean Power Plan can also benefit from additional flexibility with regard to state implementation plans (“SIPs”). While the EPA has given states discretionary authority to determine how to meet the final emission reduction goals, the proposed rule requires states to submit their full plans by June 30, 2018, at the latest.\textsuperscript{40} Given that there is a minimum of 12 years between the date SIPs are submitted to EPA and the date final emission reduction goals must be achieved, EPA should allow states to modify their SIPs at any point during this interim period to incorporate changing technologies and to implement best practices as the states become more familiar with which emission reduction policies are most efficient and cost-effective. Not only will this ensure that states can meet the Clean Power Plan’s targets in the least-cost manner,

\textsuperscript{39} Id.
\textsuperscript{40} Clean Power Plan at 34838.
it also reflects the discretionary authority § 111(d) gives to the states to develop standards of performance for existing sources.\footnote{41/ 42 U.S.C. § 7411(d)(1).}

In a similar vein, ICNU sees potential value in the option under the Clean Power Plan to develop a multi-state approach to compliance. Such an option could be more cost-effective than each state pursuing individual goals. Given the legal and policy hurdles that must be overcome before such a multi-state approach can be finalized, however, ICNU is pessimistic that this alternative is truly viable given the June 30, 2018 deadline for submitting multi-state plans.\footnote{42/ Clean Power Plan at 34838. ICNU proposes that states should be able to replace their individual plans with a multi-state plan at any time before 2030. This would give states additional time to meet all necessary requirements for implementing a multi-state plan. 3. EPA’s rules must not harm the reliability of the electric grid. Finally, it is critical that EPA establish a reliability backstop in the Clean Power Plan. Industrial processes depend on firm energy service. Unexpected power losses to industrial facilities can result in millions of dollars’ worth of damage to equipment and materials, and can put worker safety at risk. Currently, the Clean Power Plan assumes all combined cycle natural gas plants can run at 70% capacity, thereby displacing coal-fired output.\footnote{43/ Clean Power Plan at 34863. This assumption has the potential to create significant reliability problems during peak times. For instance, a NGCC unit that runs at an average 90 percent capacity factor four months out of the year, and an average 30 percent capacity factor the other eight months will have an average annual capacity factor of 50 percent. While it may be possible to increase the output from these facilities in the low-load months, thereby nominally achieving the 70 percent target, in peak months these units will not be able to make up for the lost generation from coal facilities their increased output is

\begin{itemize}
\item \footnote{41/ 42 U.S.C. § 7411(d)(1).}
\item \footnote{42/ Clean Power Plan at 34838.}
\item \footnote{43/ Clean Power Plan at 34863.}
\end{itemize}
designed to replace when they are already operating at near capacity. Should coal plants retire as a result of the Clean Power Plan, EPA must ensure that its emission targets allow for sufficient capacity to meet peak load needs.

In the Northwest, the impact of lost generation from coal resources during peak periods may be exacerbated by climate change’s effects on hydro output. The U.S. Department of Energy has predicted that, while changes in weather patterns due to climate change are not likely to have a significant impact on the overall precipitation levels in the region, these changes are likely to affect how this precipitation impacts hydro generation. While these are only projections, if they bear out then less snow and more rainfall means more hydro output in lower demand spring months and less hydro output in higher demand summer months. Specifically, DOE predicts a 20 percent decrease in summer runoff.\footnote{United States Dept. of Energy, “Effects of Climate Change on Federal Hydropower,” Report to Congress at 8-9 (Aug. 2013), available at: \url{http://www1.eere.energy.gov/water/pdfs/hydro_climate_change_report.pdf}.} With less hydro capacity available to meet peak demand needs, relying solely on natural gas units that are already running at near full capacity may create significant reliability problems. The EPA must ensure that the Clean Power Plan does not establish emission reduction targets that effectively require states to hold insufficient capacity to meet peak-load needs.

### III. CONCLUSION

ICNU appreciates the opportunity to comment on the Clean Power Plan. As currently framed, the proposed rules are likely to significantly increase the cost of energy, which has the potential to threaten the vitality of the Northwest’s industrial base. ICNU strongly urges the EPA not to penalize states like Oregon and Washington that have already taken aggressive action to limit their carbon footprint, and to mitigate the cost impacts that the rule, as currently proposed, is likely to have on electricity customers.
Dated in Portland, Oregon, this 1st day of December, 2014.

Respectfully submitted,

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