

SB

57

<TARGET><BILL>SB 57</BILL><SUBJECT>SB
57</SUBJECT><COMM>SNRG29</COMM></TARGET>

CS FOR SENATE BILL NO. 57(NRG)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-NINTH LEGISLATURE - FIRST SESSION

BY THE SENATE SPECIAL COMMITTEE ON ENERGY

Offered:

Referred:

Sponsor(s): SENATOR GIESSEL

A BILL

FOR AN ACT ENTITLED

1 **"An Act relating to the development of state emission standards in accordance with the**
2 **federal Clean Air Act; and providing for an effective date."**

3 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

4 * **Section 1.** AS 46.14 is amended by adding a new section to article 5 to read:

5 **Sec. 46.14.570. Emission standards to comply with federal law.** (a) Before
6 beginning to develop a state plan in accordance with 42 U.S.C. 7411(d) (sec. 111(d),
7 Clean Air Act), the department shall, by any appropriate means, seek from the United
8 States Environmental Protection Agency a waiver or similar exemption from the
9 requirements of 42 U.S.C. 7411(d) (sec. 111(d), Clean Air Act). If the department
10 develops the state plan, the plan may not be submitted to the United States
11 Environmental Protection Agency until the department determines that the plan will
12 not result in

13 (1) increased retail electric service rates in a way that would have a
14 disproportionate effect on households of low or moderate income;

1 (2) less reliable electric service, resource inadequacy, or transmission
2 constraints;

3 (3) impairment of investments in existing electricity generating
4 capacity;

5 (4) impairment of the competitive position of manufacturers or other
6 public or private sectors of the state economy;

7 (5) a decrease in employment in the state; or

8 (6) a decrease in state or local revenue.

9 (b) If the department develops a plan under (a) of this section, the department
10 shall prepare a report, subject to notice and comment, that assesses the effects of the
11 plan on

12 (1) the electric power sector, including

13 (A) the availability of affordable electricity from diversified
14 sources of electric generation;

15 (B) the type and amount of electricity generating capacity in
16 the state that is likely to be eliminated or switched to another fuel;

17 (C) investment in electricity generating capacity and other
18 infrastructure;

19 (D) the amount of investment necessary to offset retirements of
20 electricity generating capacity and maintain generation reserve margins;

21 (E) potential risks to electric reliability, such as resource
22 adequacy risks and transmission constraints;

23 (F) the amount by which retail electricity prices in the state are
24 forecasted to increase as a result of the plan;

25 (2) electricity consumers in the state, including any disproportionate
26 effects of electricity and other energy price increases on households of low or
27 moderate income;

28 (3) employment in the state, including direct and indirect employment
29 effects and jobs lost within affected public and private sectors of the state's economy;

30 (4) economic development in the state, including effects on
31 manufacturing, commercial, and other sectors of the economy of the state;

- 1 (5) the competitive position of the state;
2 (6) the state government and local governments, including the effects
3 of potential changes in tax revenue;
4 (7) state law, including any new laws necessary to implement the state
5 plan.

6 (c) Not later than 15 days before the submission of a state plan to the United
7 States Environmental Protection Agency, the department shall deliver a copy of the
8 state plan and the report required under (b) of this section to the senate secretary and
9 the chief clerk of the house of representatives and notify the legislature that the report
10 is available.

11 * **Sec. 2.** This Act takes effect May 15, 2015.

SENATE COMMITTEE REPORT First Committee of Referral

DATE: 2/20/15

FURTHER: Resources

Date of 5-Day Notice: 3/12/15
(in accordance with Uniform Rule 23)

DATE TURNED
IN TO OFFICE: 3/18/15

Senate Special Committee on Energy Committee considered SENATE BILL NO. 57

SB 57-CLEAN AIR ACT PLAN

"An Act relating to the development of state emission standards in accordance with the federal Clean Air Act."

and recommends:

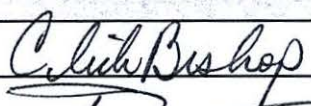


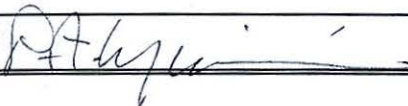
- be replaced with CS SB 57 (NRG) [] Same Title New Title
- [] adopt previous CS _____ (_____) [] Same Title [] New Title
- [] attached amendment(s)
- [] adopt _____ Letter of Intent
- [] further referral to _____ Committee

| Dept Abbr. | |
|------------|-----|
| ADM | LWF |
| CED | LAW |
| COR | LEG |
| CRT | MVA |
| EED | DNR |
| DEC | DPS |
| DFG | REV |
| GOV | DOT |
| DHS | UA |

| NEW FISCAL NOTE(S) | | | | |
|--------------------|--------|--------|------|------|
| Dept. | Fiscal | Indet. | Zero | FN # |
| DEC | ✓ | | | 1 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| PREVIOUS FISCAL NOTE(S) | | | | |
|-------------------------|--------|--------|------|------|
| Dept. | Fiscal | Indet. | Zero | FN # |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

[] APPROPRIATION - no fiscal note

| SIGNATURES AND RECOMMENDATIONS: | PRINTED LAST NAME | DO PASS | DO NOT PASS | NO REC | AMEND |
|--|-------------------|---------|-------------|--------|-------|
|  | Bishop | ✓ | | | |
|  | Egan | ✓ | | | |
|  | Hoffman | | | ✓ | |
| CHAIR:  | MICCICHE | ✓ | | | |

29-LS0523V
Nauman
3/11/15

CS FOR SENATE BILL NO. 57()

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-NINTH LEGISLATURE - FIRST SESSION

BY

Offered:
Referred:

Sponsor(s): SENATOR GIESSEL

A BILL

FOR AN ACT ENTITLED

1 "An Act relating to the development of state emission standards in accordance with the
2 federal Clean Air Act; and providing for an effective date."

3 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

4 * **Section 1.** AS 46.14 is amended by adding a new section to article 5 to read:

5 **Sec. 46.14.570. Emission standards to comply with federal law.** (a) Before
6 beginning to develop a state plan in accordance with 42 U.S.C. 7411(d) (sec. 111(d),
7 Clean Air Act), the department shall, by any appropriate means, seek from the United
8 States Environmental Protection Agency a waiver or similar exemption from the
9 requirements of 42 U.S.C. 7411(d) (sec. 111(d), Clean Air Act). If the department
10 develops the state plan, the plan may not be submitted to the United States
11 Environmental Protection Agency until the department determines that the plan will
12 not result in

13 (1) increased retail electric service rates in a way that would have a
14 disproportionate effect on households of low or moderate income;

1 (2) less reliable electric service, resource inadequacy, or transmission
2 constraints;

3 (3) impairment of investments in existing electricity generating
4 capacity;

5 (4) impairment of the competitive position of manufacturers or other
6 public or private sectors of the state economy;

7 (5) a decrease in employment in the state; or

8 (6) a decrease in state or local revenue.

9 (b) If the department develops a plan under (a) of this section, the department
10 shall prepare a report, subject to notice and comment, that assesses the effects of the
11 plan on

12 (1) the electric power sector, including

13 (A) the availability of affordable electricity from diversified
14 sources of electric generation;

15 (B) the type and amount of electricity generating capacity in
16 the state that is likely to be eliminated or switched to another fuel;

17 (C) investment in electricity generating capacity and other
18 infrastructure;

19 (D) the amount of investment necessary to offset retirements of
20 electricity generating capacity and maintain generation reserve margins;

21 (E) potential risks to electric reliability, such as resource
22 adequacy risks and transmission constraints;

23 (F) the amount by which retail electricity prices in the state are
24 forecasted to increase as a result of the plan;

25 (2) electricity consumers in the state, including any disproportionate
26 effects of electricity and other energy price increases on households of low or
27 moderate income;

28 (3) employment in the state, including direct and indirect employment
29 effects and jobs lost within affected public and private sectors of the state's economy;

30 (4) economic development in the state, including effects on
31 manufacturing, commercial, and other sectors of the economy of the state;

- 1 (5) the competitive position of the state;
- 2 (6) the state government and local governments, including the effects
- 3 of potential changes in tax revenue;
- 4 (7) state law, including any new laws necessary to implement the state
- 5 plan.
- 6 (c) Not later than 15 days before the submission of a state plan to the United
- 7 States Environmental Protection Agency, the department shall deliver a copy of the
- 8 state plan and the report required under (b) of this section to the senate secretary and
- 9 the chief clerk of the house of representatives and notify the legislature that the report
- 10 is available.
- 11 * **Sec. 2.** This Act takes effect May 15, 2015.

ALASKA STATE LEGISLATURE

716 W 4th Avenue
Anchorage AK 99501-2133
907-269-0181
Fax: 907-269-0184



State Capitol
Juneau AK 99801-1182
907-465-4843
Fax: 907-465-3871

North to the Future

Senator Cathy Giessel
Senate District N

SENATE BILL 57

SPONSOR STATEMENT

In June 2014, the Environmental Protection Agency (EPA) released a proposed rule to regulate emissions from power generators. The proposed rule has two main elements: 1) state-specific emission reduction targets and 2) guidelines for the development, submission, and implementation of state plans to achieve the target reduction. The EPA set Alaska's CO₂ emission reduction target at 26 percent by 2030.

SB 57 requires the Department of Environmental Conservation (DEC) to seek a waiver or similar exemption from the EPA's proposed rule known as "Existing Source Performance Standards under section 111(d) of the Clean Air Act. SB 57 provides guidance to DEC regarding the development of a state implementation plan should this rule go into effect.

The EPA's proposed rule will cause significant increases in Alaska's electrical rates, challenge the reliability of electric service and will effectively preempt the state's energy policy. SB 57 is written to protect the state from EPA's overreach by establishing state criteria which must be met should the state be mandated to develop a state implementation plan.

SB 57 protects consumers by requiring DEC to develop a state implementation plan that will not result in increased retail electric costs nor lessen the reliability of Alaska's energy service. Furthermore SB 57 safeguards electrical generation investments, and preserves competition in the public and private sector of Alaska's economy.

SB 57 also requires DEC to prepare a report for the legislature outlining the economics and legal effects of the Clean Power Plan. This report, plus the state plan, will be delivered to the house and senate members fifteen days before the completion of the state plan for legislative review.

Please join me in support of SB 57.

Chair Senate Resources Committee | Vice-Chair Health & Social Services | Vice-Chair Labor & Commerce

Senator.Cathy.Giessel@akleg.gov

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101


State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM

March 9, 2015

SUBJECT: Sectional Summary of SB 57 (Work Order No. 29-LS0523\E)

TO: Senator Cathy Giessel
Attn: Vivian Striver

FROM: Emily Nauman 
Legislative Counsel

You have requested a sectional summary of the above-described bill. Please note that a sectional summary of a bill should not be considered an authoritative interpretation of the bill and the bill itself is the best statement of its contents. If you would like an interpretation of the bill as it may apply to a particular set of circumstances, please advise.

Section 1 states that the Department of Environmental Conservation (department) may not submit a plan in accordance with sec. 111(d) of the Clean Air Act to the Environmental Protection Agency until the department determines that the plan meets certain requirements including requirements relating to the reliability of electrical or transmission service, the impairment of investments, employment in the state, and state revenue. The section also requires the department to prepare and deliver a report to the legislature summarizing certain effects of the plan.

If I may be of further assistance, please advise.

ELN:lem
15-157.lem

Fiscal Note

State of Alaska
2015 Legislative Session

Bill Version: SB 57
Fiscal Note Number: _____
() Publish Date: _____

Identifier: SB057-DEC-AQ-03-13-15
Title: CLEAN AIR ACT PLAN
Sponsor: GIESSEL
Requester: Senate Special Committee on Energy

Department: Department of Environmental Conservation
Appropriation: Air Quality
Allocation: Air Quality
OMB Component Number: 2061

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

| | FY2016 Appropriation Requested | Included in Governor's FY2016 Request | Out-Year Cost Estimates | | | | |
|-------------------------------|--------------------------------------|--|-------------------------|----------------|----------------|----------------|----------------|
| | | | FY 2017 | FY 2018 | FY 2019 | FY 2020 | FY 2021 |
| OPERATING EXPENDITURES | FY 2016 | FY 2016 | FY 2017 | FY 2018 | FY 2019 | FY 2020 | FY 2021 |
| Personal Services | | | | | | | |
| Travel | | | | | | | |
| Services | 75.0 | | 25.0 | | | | |
| Commodities | | | | | | | |
| Capital Outlay | | | | | | | |
| Grants & Benefits | | | | | | | |
| Miscellaneous | | | | | | | |
| Total Operating | 75.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Fund Source (Operating Only)

| | | | | | | | |
|---------------|-------------|------------|-------------|------------|------------|------------|------------|
| 1004 Gen Fund | 75.0 | | 25.0 | | | | |
| Total | 75.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Positions

| | | | | | | | |
|-----------|--|--|--|--|--|--|--|
| Full-time | | | | | | | |
| Part-time | | | | | | | |
| Temporary | | | | | | | |

| | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|
| Change in Revenues | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|

Estimated SUPPLEMENTAL (FY2015) cost: 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2016) cost: 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version:

| |
|----------------------------------|
| Not applicable, initial version. |
|----------------------------------|

| | | | |
|--------------|--|--------|---------------------|
| Prepared By: | Cindy Heil, Program Manager | Phone: | (907)269-7579 |
| Division: | Air Quality | Date: | 03/13/2015 09:00 AM |
| Approved By: | Alice Edwards, Deputy Commissioner | Date: | 03/13/15 |
| Agency: | Department of Environmental Conservation | | |

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2015 LEGISLATIVE SESSION

BILL NO. SB 57

Analysis

Analysis/Assumptions:

This bill creates additional requirements that must be met before the Department may submit a state implementation plan in response to any final EPA rule under Section 111(d) of the Clean Air Act (ie. 42 U.S.C. 7411(d)). EPA intends to finalize such a rule in mid-2015, requiring states to develop a plan to reduce greenhouse gas emissions from existing power plants within one to two years. This could include an initial plan at one year followed by a second final plan two years after the rule is final. As worded, the bill is not limited to the upcoming 111(d) power plant rules and would require the same additional analysis for any other state plan developed under this section of the Clean Air Act. This fiscal note is drafted to only cover the costs for the anticipated EPA Clean Power Plan 111(d) rules.

Under the two step planning approach proposed by EPA, the bill would result in the need for the Department to submit two reports to the legislature, one for each plan submission to EPA. The Division estimates that the majority of the required economic analysis will be completed during the first year, with additional refinements and updates based on the final plan elements during the second year. This fiscal note only considers costs required for additional analyses and reporting under this bill that are beyond any planning costs required for developing plans in response to a final EPA rule.

Personal Services: The proposed legislation would be accomplished with existing staff.

Travel: No travel costs are anticipated from this legislation.

Services: Estimated \$100K over two fiscal years for contractual assistance in analyzing and reporting the various economic-related impacts of a state plan to meet the Section 111(d) requirements.

Commodities: No commodities are anticipated from this legislation.



STATE OF ALASKA
DEPARTMENT OF
COMMERCE
COMMUNITY AND
ECONOMIC DEVELOPMENT

Bill Walker, Governor
Fred Parady, Acting Commissioner
Robert M. Pickett, Chairman

Regulatory Commission of Alaska

February 12, 2015

The Honorable Cathy Giessel
Alaska State Senate
State Capitol Room 427
Juneau, AK 99801

Dear Senator Giessel:

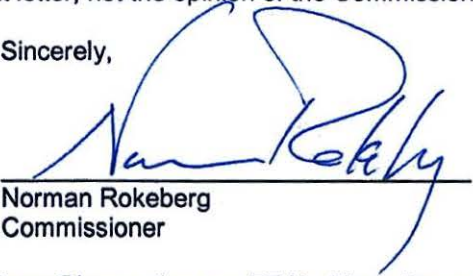
EPA's proposed Clean Power Plan (CPP), or 111(d) rule for electric utilities, will raise energy costs, challenge the reliability of electric service, and effectively federally pre-empt state energy policy. The CPP mandates state "goals" for reduced carbon intensity at a few targeted power plants. States must outline measures for meeting these goals in a state plan that will be federally enforceable by EPA and through citizen suits. EPA based the goals on measures the agency evaluated for power plants connected to the continental transmission grid and the wholesale bulk electric market. The State of Alaska requested an exemption from the CPP largely because EPA's findings do not apply where the continental grid is not available.

For example, assuming nearly unlimited transmission capacity, EPA found that natural gas generation could replace coal generation without unreasonably increasing energy costs or degrading reliability. So, EPA assigned Alaska a goal that reflects replacing coal generation at Healy Power Plant with southcentral natural gas generation by 2020. This would require capacity upgrades to the Railbelt transmission system that could cost as much as \$400 million. Abandoning Healy would also leave GVEA's member-ratepayers with \$450 million in stranded costs including debt service. All of this expense would be incurred to deliver more expensive electricity to Fairbanks that could be interrupted by an outage anywhere on the 350-mile transmission line from southcentral Alaska. The goal EPA assigns to Alaska will require the premature retirement or underutilization of the coal units at the Healy Power Plant and degrade the reliability of service in Fairbanks.

These and several other concerns were outlined in a state comment letter drafted through the collaboration of several state agencies last fall. My observations on the CPP highlight some of those concerns to help inform continued dialogue. Given the importance of affordable and reliable electric service, it is important that EPA grant Alaska an exemption.

These summary observations represent my own individual view of the proposed Clean Power Plan and matters raised in last fall's state comment letter, not the opinion of the Commission as a whole.

Sincerely,



Norman Rokeberg
Commissioner

Enclosure: Commissioner Norman Rokeberg Observations on EPA's Clean Power Plan and Alaska
By e-mail

Commissioner Norman Rokeberg
Observations on EPA's Clean Power Plan and Alaska

February 11, 2015

EPA's proposed Clean Power Plan, or 111(d) rule, establishes mandatory carbon emission "goals" for targeted power plants in each state. By the summer of 2016, each state must develop a plan to achieve an interim carbon emission goal starting in 2020 and a final goal by 2030. The state plans must include specific enforceable measures and responsible parties. Once approved by EPA, the state plans will be federally enforceable – by EPA and through citizen suits – and cannot be changed without prior approval from EPA. The State of Alaska responded to EPA's proposal with a comprehensive comment letter last year.¹ A legal memorandum attached to the comment letter also outlined how the proposed rule is unlawful and beyond the authority that Congress granted to EPA in the Clean Air Act.

My individual observations here summarize and highlight points raised in that comment letter – particularly the request for an exemption – to support continued dialogue as EPA works to finalize their proposal by this summer.

I. Introduction

The fundamental flaw in EPA's proposed Clean Power Plan is the rigid application of the same goal calculation formula to every state. Important local and regional variables – such as transmission constraints, fuel availability, or the role individual power plants play in an interdependent utility system – are not accounted for in the formula. EPA relies on "compliance flexibility" to accommodate these variables. But, in turn, state specific circumstances narrow compliance options. For some states, the advertised "flexibility" does not exist at all. Without flexibility, the proposed rule effectively preempts state energy policy while increasing energy costs, compromising the reliability, and exposing states, utilities, and consumers to citizen suits.

Alaska's situation illustrates the importance of local variables. Our compliance options are so limited that we asked to be exempted from the rule altogether. While some of our concerns may be unique to Alaska, many illustrate broader issues raised by other stakeholders and deserve closer attention nationally.

I. The Clean Power Plan in Alaska.

The Clean Power Plan (CPP) requires each state to develop a plan by 2016 for achieving an assigned carbon emission "goal" – an adjusted statewide average rate of CO₂ emissions from certain electric generating units ("affected EGUs").² "Affected EGUs," the sources EPA seeks to regulate, are steam generating units and natural gas combustion turbines that were constructed for the purpose of supplying at least one-third of their potential electric output and more than 219,000 MWh of electricity to a utility each year.³

EPA tentatively identified the following "affected EGUs" in Alaska⁴:

- Unit 1 at Healy Power Plant (Healy) owned by Golden Valley Electric Association (GVEA)⁵;
- George M. Sullivan Generation Plant #2 (Plant 2) owned by Anchorage Municipal Light and Power (ML&P)⁶;
- Beluga Power Plant (Beluga) owned by Chugach Electric Association (Chugach)⁷;
- Southcentral Power Plant (SPP) owned by Chugach and ML&P⁸; and
- Nikiski Co-Generation Plant (Nikiski) owned by Homer Electric Association (HEA).⁹

EPA reports that, in the 2012 baseline year, these “affected EGUs” collectively provided 3,162 GWh of electricity to utilities at a CO₂ emission rate of 1,368 lbs/MWh.¹⁰

Generally, EPA calculated individualized state “goals” by applying the “best system of emission reductions” (BSER) to the “affected EGUs” in each state.¹¹ EPA found that four measures constitute BSER: (1) heat rate improvements at coal-fired generating units, (2) re-dispatch from coal EGUs to natural gas combined cycle (NGCC) turbines, (3) new renewable energy generation (RE), and (4) demand side energy efficiency measures (EE).¹² EPA does not, however, require that state actually use these same measures to meet the calculated goal.¹³

EPA’s goal calculation for Alaska reflects:

- (1) Improving the heat rate of Healy Unit 1 by 6 percent¹⁴;
- (2) Replacing all generation from Healy with generation from Sullivan Plant 2, Beluga, and SPP¹⁵;
- (3) Replacing 123 GWh per year of “affected EGU” generation with new RE generation¹⁶; and
- (4) Escalating energy efficiency efforts to eventually avoid generating 744 GWh each year.¹⁷

EPA’s goal calculation for Alaska sets a target adjusted emission rate of 1,003 lbs/MWh by 2030.¹⁸

A few elements of EPA’s approach in Alaska are worth noting. First, EPA did not identify Unit 2 at Healy as an affected EGU.¹⁹ This omission, together with the re-dispatch calculation, result in a goal that does not provide any allotment for emissions, and therefore generation, from either Healy unit. Second, the rule only covers units larger than 25MW.²⁰ Some residents of Alaska expressed support for the rule because of concerns about the air quality impacts of coal generation in Fairbanks.²¹ However, the only coal-fired steam generating units likely to be “affected EGUs” are at Healy, well outside of the Fairbanks air-shed.²² Third, because oil-fired combustion turbines typically only operate in regions where pipeline natural gas is not available, EPA exempted these units from the rule.²³ Therefore the naphtha and diesel generation units in North Pole and Fairbanks are not covered.²⁴ Fourth, the EPA’s energy efficiency goal is based on statewide generation,²⁵ but many EGUs in Alaska are not connected to an affected EGU. The 744GWh that EPA expects Alaska to avoid generating at “affected EGUs” is 20% of the generation EPA forecasts for those units. A considerably higher level of compliance than the 10 percent EPA calculated using statewide generation.²⁶

Finally, the cost of compliance will unavoidably fall on residents and ratepayers in an area already experiencing some of the highest electric rates in the country.²⁷ According to the Energy Information Administration, in 2012, Alaska ranked second in residential electricity costs with an average price of \$0.18 per kWh as compared to the national average of \$0.12 per kWh.²⁸ In rural communities, power costs can be as high as \$2.16 per kWh.²⁹ Because the Healy provides the some of the least expensive generation available to GVEA,³⁰ because the emission rates for the coal steam generating units are substantially higher than the goal and the rates of other “affected EGUs,”³¹ and because EPA’s goal calculation assumes no generation from Healy,³² the brunt of this rule will likely fall on GVEA ratepayers in Fairbanks – where residential rates are already double the national average at about \$0.24 per kWh.³³

II. The “compliance flexibility” advertised by EPA does not exist in Alaska.

EPA’s “compliance flexibility” mantra is a myth. EPA claims to accommodate state-specific circumstances through “compliance flexibility,”³⁴ allowing states to choose:

- (1) the measures used to reduce carbon emissions from “affected EGUs,”³⁵
- (2) implementation timing over the phase-in period from 2020 to 2029,³⁶
- (3) a mass or rate-based goal,³⁷ and
- (4) a single or multi-state plan.³⁸

However, these compliance options have limits and are not universally available.

The mandated emission performance level, or “goal,” is the most obvious limit.³⁹ States must achieve final goals by the 2030 deadline. While there is some flexibility during the phase-in period, the interim goal must be met on average from 2020 to 2029.⁴⁰ EPA will not change these goals, either before or after finalizing the proposed rule, except in very limited circumstances.⁴¹

The focus on specific “affected EGUs” also limits compliance options. Emission reductions from “non-affected EGUs” – units smaller than 25MW, natural gas units producing less than one-third of their potential electric output, combustion turbines using fuel other than natural gas (like diesel or naphtha) – do not count.⁴² This means EE and RE projects in rural communities that are not grid connected to an “affected EGU” may not be eligible for compliance credit. It also means that reductions in emissions from Healy would count, but reductions from the smaller coal units in downtown Fairbanks, for example Aurora Energy’s 20MW coal-fired unit at the Chena Power Plant, would not.⁴³ Regardless of what other opportunities might exist to reduce carbon emissions from the utility sector, EPA is forcing states to target a few specific facilities.

Multi-state plans could open up lower cost compliance options.⁴⁴ But without interstate transmission, islanded states like Alaska and Hawaii cannot reduce emissions in a neighboring state. Just like our islanded rural communities cannot reduce generation at an affected EGU on the Railbelt, Alaska cannot reduce generation in Oregon or Idaho.

Allowing state plans to depart from the approach reflected in EPA’s goal calculation creates flexibility only if other measures are actually feasible and available. But, EPA already concluded

that the four BSER measures are the most technically feasible and cost effective.⁴⁵ Although EPA recognizes that the BSER measures are not universally available, the agency refuses to alter goals on that basis.⁴⁶ EPA also refuses to change the goals based on facility specific circumstances – such as excessive cost or infeasibility – a flexibility EPA usually allows for existing sources.⁴⁷ Permission to use different measures to reduce emissions might allow for variation from state to state – but it does not necessarily create compliance flexibility for individual states.

For example, in Alaska, most the BSER measures are unavailable and both the state and utilities already invested heavily in other non-BSER measures that have reduced carbon emissions. Since 2012, our utilities have made huge investments in new generating units.⁴⁸ These new generating units are more efficient and less carbon intensive than the 2012 baseline “affected EGUs.” There has also been substantial investment in new renewable generation and energy efficiency programs. Still, there is not sufficient room in our goal for GVEA to operate Healy as planned.

Compliance options are also limited to measures that are enforceable, measureable and verifiable (EM&V).⁴⁹ The need to quantify and verify the impact of RE and EE measures actually limits what measures can be used and the amount of compliance credit given in EPA’s calculations.⁵⁰ Also, because the measures outlined in state plans must be enforceable, state agencies are limited to measures for which they have authority under state law.⁵¹ Alaska’s state agencies lack the statutory authority to carry out many of the options outlined by EPA. We do not have siting authority; we do not have authority to regulate day-to-day dispatch practices; we do not have authority to require consumers to reduce consumption or implement EE measures. The RCA does have ratemaking authority; but, EPA doubts that the powers to deny rate recovery or change utility tariffs are adequate enforcement tools.⁵²

But, it isn’t just state regulators that will be enforcing the state plan. Once a measure is included in an approved state plan it is federally enforceable – by EPA and through citizen suits.⁵³ As a practical matter, states are limited to compliance measures that may be appropriately exposed to citizen suit enforcement. For example, Alaska may be reluctant to include major natural gas or transmission infrastructure projects in a state plan.

Compliance flexibility is limited for Alaska because the BSER measures are largely unavailable.⁵⁴ Heat rate improvements that might be achievable for the Healy units will be promptly reversed by the addition of pollution control technology required by EPA.⁵⁵ Re-dispatch cannot be executed without major infrastructure investments.⁵⁶ New renewable generation could potentially replace affected EGU generation, but only to the extent the resources are within geographic reach of the Railbelt and do not exceed the capacity of the transmission system to integrate non-firm energy.⁵⁷ Based on energy use trends in Alaska over the last few years, the most cost-effective EE measures may have already been implemented.⁵⁸ Ultimately, our initial review suggests that – even after everything we’ve already done to reduce the carbon intensity of electric generation in Alaska – the CPP may require premature retirement of Healy Unit 1, underutilization or premature retirement of Healy Unit 2, as well as significant new investment in transmission capacity, RE & EE.

Compliance options actually available to states will vary depending on factual circumstances. Because EPA has not yet examined the universe of state specific circumstances, EPA should allow modification to the state goals after the rule is finalized. The final rule should also shield affected entities from citizen suits and allow 111(d) compliance credits for reductions of carbon emissions from fossil fuel-fired EGUs that are not “affected EGUs.”

III. EPA expects states to solve an unknown universe of reliability challenges.

There is a growing consensus that EPA’s reliability and resource adequacy analysis is inadequate.⁵⁹ EPA determined that the CPP does not raise any “significant” concerns.⁶⁰ However, this conclusion rests on the analysis conducted in EPA’s Integrated Planning Model (IPM), which the agency acknowledges is “not highly granular.”⁶¹

The lack of “granularity” observed by EPA is the failure of the IPM to account for critical infrastructure within regions. First, for Alaska and Hawaii, EPA did not model the CPP’s impacts on our islanded utilities.⁶² For everyone else, the IPM fails to account for transmission constraints, assuming that “adequate transmission capacity is available to deliver any resources located in, or transferred to, the region.”⁶³ Consequently, EPA does not know the extent to which transmission constraints limit the availability of generation resources to serve load centers within a region. Nor does EPA know the scope of “local” grid reliability issues created by retirement and construction of generation resources.⁶⁴

Even where the IPM does attempt to measure impacts, EPA fails to recognize their significance. For example, the IPM anticipates that the rule will result in the retirement of 50GW of coal-fired and 16GW of oil/gas steam generating capacity by 2020 in just the continental United States.⁶⁵ Construction of replacement generating capacity will be required to maintain adequate reserve margins.⁶⁶ The IPM scenarios predict that the CPP will require construction of new natural gas pipelines – 4 to 8 percent more than what would be constructed without the CPP.⁶⁷ EPA is not fazed by these modeling forecasts.

Regardless of whether an impact is actually modeled and measured by the IPM, EPA simply disregards all of the “local” challenges, reasoning that they may be “managed through standard reliability planning processes.”⁶⁸ EPA relies on the “compliance flexibility” built into the rule to conclude that states will either have the time to construct necessary infrastructure or find alternative compliance pathways.⁶⁹ In the case of natural gas pipeline construction, EPA dismisses the cost and reliability challenges as only a minor departure from business as usual.⁷⁰ Essentially, EPA assumes, without analysis, that states and utilities will find a way to resolve an undefined universe of “local” reliability and resource adequacy issues created by the CPP.⁷¹

Contrary to EPA’s conclusion, these “local” challenges may involve “significant” reliability challenges and costs. For example, the infrastructure projects to bring natural gas to interior Alaska are well beyond the scope of “routine.”⁷² Resolving our “local” transmission constraints would also require extraordinary measures. In particular, replacing Healy coal generation with NGCC generation would require a major infrastructure project upgrading the Railbelt transmission system from southcentral Alaska. Because of imminent retirements of NGCC “affected EGUs” in the Anchorage area, there might not even be adequate NGCC generation in

southcentral Alaska. In the end, re-dispatch as imagined by EPA could require construction of new generation capacity and additional transmission upgrades.⁷³

Forcing premature retirement of generation capacity is not a small matter either; in Alaska, retiring Healy would essentially put Fairbanks on “a 350 mile extension cord”⁷⁴ – raising some obvious reliability concerns. This “extension cord” would cross through remote and difficult to access areas. In light of anticipated retirements in GVEA’s generation fleet,⁷⁵ without Healy, a single outage on the existing Railbelt transmission system would leave the Fairbanks load center without adequate generation resources.

Given the importance of reliable electric service to the U.S. economy as well as health and safety, these issues must be resolved.⁷⁶ Engaging FERC in this inquiry, as the energy committees have done,⁷⁷ is important. These efforts will ensure necessary agency expertise is applied as the CPP is finalized. However, there must be room after the rule is finalized to address reliability issues as they arise as well. The final rule should allow adjustments to state goals in appropriate circumstances.

IV. The Clean Power Plan will increase energy costs nationwide and in Alaska.

The proposed rule will increase the cost of energy.⁷⁸ EPA predicts that the rule will increase retail electricity prices 6 to 7 percent by 2020 and 3 percent by 2030 in the contiguous states.⁷⁹ EPA estimates annual compliance cost of \$8.8 billion by 2030 (2011\$).⁸⁰ However, others estimate that the annual compliance costs will be much greater – \$177 billion by 2020.⁸¹

Either way EPA does not seem to recognize an actual limit on its authority to impose costs. The agency acknowledges that the Clean Air Act requires that the cost of compliance must be “reasonable.”⁸² But the cost ceiling recognized by EPA is where costs are greater than the industry as a whole “could bear and survive.”⁸³ EPA makes a point of noting that “the D.C. Circuit has never invalidated a [§111] standard of performance on grounds that it was too costly.”⁸⁴

The Clean Air Act requires any BSER determination to account for the cost of compliance.⁸⁵ EPA even elected to prioritize cost as a consideration in this rulemaking.⁸⁶ Given potential scope of impacts of the CPP on the U.S. economy and individual consumers, it is important that EPA accurately measures and accounts for all of the costs.

A. EPA expects the Healy Power Plant to be among the coal generating units closed by the Clean Power Plan.

EPA concludes that compliance costs that force the closure of power plants are “reasonable.”⁸⁷ In fact, EPA concludes that the CPP will render 50GW of coal generation capacity uneconomic in the contiguous United States by 2020.⁸⁸ In Alaska, the 1,003 lb/MWh goal does not include any allocation for generation by either Unit 1 or Unit 2 at Healy.

Whether it is reasonable to shut down a particular power plant depends upon other specific circumstances such as regional fuel availability,⁸⁹ the amount carbon reductions at issue, “local”

reliability and resource adequacy concerns, and the degree of compliance flexibility actually available to an individual state. In Alaska, pipeline natural gas is not currently available to Fairbanks, the load center served by Healy. It is this kind of fuel unavailability that led EPA to exempt oil-fired stationary combustion turbines from regulation altogether.⁹⁰ As detailed below, the cost of abandoning Healy would increase energy costs to a far greater extent than EPA assumed – shifting the cost to benefit ratio for our state. But instead of examining state specific circumstances, EPA takes the chance that the rule will not leave consumers in the dark.

B. The cost of implementing the Clean Power Plan in Alaska outpaces EPA's estimates at nearly every step.

Although EPA did not evaluate the cost of compliance in Alaska,⁹¹ our circumstances illustrate the scale of the underestimated costs.

Just the cost of implementing the re-dispatch building block, replacing generation from the Healy Power Plant with generation from NGCC EGUs, would involve major infrastructure projects and stranded costs.⁹² For the 45,000 ratepayers in GVEA's service area we estimate that this would result in a rate increase of \$0.05 to \$0.07 per kWh, bringing residential rates to \$0.29 to \$0.31 per kWh. Fairbanks residents would be paying an additional \$450 each year for the Clean Power Plan, a 26 percent increase – significantly greater than the 3 or 6 percent increase anticipated by EPA.⁹³

EPA's analysis of the cost to achieve a 6 percent heat rate improvement (HRI) only looked at units between 200MW to 900MW.⁹⁴ EPA recognizes that smaller units, like the 27 and 52.5MW units at Healy, are likely to experience greater costs to achieve HRI because they lack economies of scale.⁹⁵ EPA also recognizes, heat rate improvements may be accomplished through the use of "best practices" or equipment upgrades only to the extent those measures have not already been implemented at a facility.⁹⁶ EPA also acknowledges that coal-fired units are designed to operate most efficiently at full capacity.⁹⁷ Therefore efficiency improvements may be effectively reversed by implementation of the other BSER measures which aim to decrease coal generation.⁹⁸

In Alaska, GVEA cannot achieve a 6 percent improvement in the heat rates of the 27 and 52.5MW Healy units.⁹⁹ GVEA reports an investment of \$2,986,000 would be required to achieve a possible 2.15% heat rate improvement for Healy Unit 2 and an investment of \$2,122,000 would be required to achieve a 2.11% improvement for Healy Unit 1.¹⁰⁰ The future installation of pollution control technologies, required by a consent decree with EPA, will reverse these gains.¹⁰¹ GVEA anticipates that the required SNCR equipment will degrade the heat rate of Healy Unit 1 by about 0.1% (2017).¹⁰² The installation of SCR equipment (in 2017 and by 2024 for Unit 1 and 2, respectively) will result in a 2.87% degradation of the heat rate at each unit.¹⁰³ So, after investing over \$5 million to achieve a 2% improvement for 80MW of coal generating capacity, GVEA ultimately could not make any progress against the 2012 baseline.

V. The Clean Power Plan expands EPA's regulatory authority

A. The proposed rule reaches into consumer households.

The “standards of performance” proposed by EPA would regulate a very broad universe of entities. EPA notes that “affected entities in an approvable state plan may include: an owner or operated of an affected EGU, other affected entities with responsibilities assigned by a state (e.g. an entity that is regulated by the state, such as an electric distribution utility, or a private or public third-party entity), and a state agency, authority or entity.”¹⁰⁴ Ultimately, because the state plans must include measures that reduce the consumption of electricity and those measures must be enforceable, the standards of performance will regulate individual consumers.

Measures aimed at reducing energy consumption would regulate the same small entities “including retail stores, offices, apartment buildings, shopping centers, schools, and churches” that the Supreme Court found to be beyond EPA’s authority in *Utility Air Regulatory Group*.¹⁰⁵ In that case, published five days after this proposed rule appeared in the federal register, the Court observed that EPA’s expansive interpretation of the Clean Air Act would place unreasonable compliance burdens on small entities, expose small entities to citizen suits, and place excessive demands on limited governmental resources.¹⁰⁶ The Clean Power Plan raises the same issues.

B. The Clean Power Plan effectively overrides Alaska’s energy policy.

EPA’s proposal would subject central components of state energy policy to EPA oversight and enforcement.¹⁰⁷ EPA reasons that the “compliance flexibility” permitted by the rule effectively leaves energy policy decisions in state hands.¹⁰⁸

However, again, the compliance flexibility envisioned by EPA does not necessarily exist in state specific circumstances. State energy policy will be constrained by the available 111(d) compliance pathways. Second, the rule requires that states prioritize reducing generation from “affected EGUs” over reducing carbon emissions from non-affected EGUs, cost, reliability, or the diversification of resources. Third, the EM&V requirements may narrow the universe of EE projects that might be considered. Most significantly, once the measures constituting state energy policy are included in an approved state plan – they become subject to EPA oversight and enforcement, subject to citizen suits, and cannot be changed without EPA’s prior permission.¹⁰⁹

Like many states, Alaska is already investing in its own energy policy – a policy tailored to our state’s specific circumstances. Our state energy policy encourages new renewable generation and energy efficiency.¹¹⁰ In 2013, 26% of our electric generation already came from renewables, primarily hydroelectric.¹¹¹ Today, within the Railbelt, the 167 GWh of renewable energy generation eligible for compliance credit already exceeds EPA’s forecast of 163 GWh (excluding pre-2012 hydroelectric capacity) for Alaska by 2030.¹¹² The state, utilities, and private investors continue to evaluate other RE opportunities.¹¹³ The high cost of electric power in Alaska already provides strong incentives to use electricity efficiently and to take advantage of state (or federal) financial support to implement those EE measures.¹¹⁴ With respect to renewable energy and energy efficiency, EPA’s rule doesn’t accomplish anything in Alaska that we aren’t doing ourselves without an EPA approved state plan that opens the door to citizen suits.

Instead, the proposed rule may inhibit RE/EE progress. For example, Alaska's EE measures often focus on thermal energy efficiency measures that would not be eligible for compliance credit under EPA's proposed rule because of its focus on electric efficiency. Given the importance of heating to health and human safety in our arctic and subarctic climate – this focus on thermal efficiency is appropriate. Also, many of Alaska's EE and RE projects focus on rural communities that rely on diesel generation and bulk fuel tanks. These EE and RE projects result in demonstrable carbon reductions. However, these communities are not connected to an "affected EGU." Disconnected from any regulated source, rural projects would not qualify as standards of performance "for" an "affected EGU" and likely would not count toward compliance.¹¹⁵ EPA's proposal would pressure the state to focus on electric energy efficiency and urban areas.

Alaska has also already made significant strides in reducing carbon emissions by installing new and more efficient generation resources since 2012 – without any EPA approved state plan.¹¹⁶ And, Alaska is already actively evaluating several natural gas projects that would bring this less carbon intensive fuel to interior Alaskan communities that rely heavily on diesel and coal.¹¹⁷ We also are already actively examining the transmission constraints that impede our ability to replace diesel and coal generation with hydroelectric and NGCC generation.¹¹⁸ While these projects would achieve the same ends as EPA's 111(d) rule, and bring a multitude of other benefits to the state, they are not suitable for inclusion in a state plan that would be subject to citizen suits.

The impact of this rule on state energy policy is also particularly dramatic in Alaska, where the transmission and consumption of electricity generated by "affected EGUs" is entirely intrastate and FERC's presence is limited (generally to hydroelectric projects and PURPA oversight).

Alaska is not insensitive to climate change. But EPA's regulations will require Alaska to expend limited government resources on developing, implementing, and enforcing a state plan that is ill-suited for our state or merely duplicates existing programs. This rule will accomplish very little in Alaska at a great cost.

VI. Alaska requested an exemption from any final 111(d) rule regulating carbon emissions from power plants.

Alaska requested an exemption from any final rule regulating carbon emissions from existing EGUs. An exemption is necessary because our electric utility sector is fundamentally different from the industry for which EPA designed the rule – in particular, our utilities lack the connectivity EPA describes as "central" to the proposed rule.¹¹⁹ Without the presumed availability of generation resources through an interconnected grid and wholesale power market, Alaska cannot reasonably execute the BSER measures that underlie the emission goals. Finally, the carbon emissions at issue in Alaska are a minuscule proportion of carbon emissions from power plants in the U.S. In 2005, fossil fuel-fired electric generation CO₂e emissions totaled 2,402.1 million metric tons, only 0.13 percent of those emissions are attributed to Alaska's entire utility sector.¹²⁰ Alaska's "affected EGUs" represent less than half of the utility sector's total generation.¹²¹ Given our transmission limits, the incredible costs associated with any attempt to

execute the BSER measures, the unexamined reliability and resource adequacy concerns, and the small amount of carbon emissions at issue – EPA should exempt Alaska from the final rule.

VII. Conclusion

Many of the concerns raised by our comments relate broadly to concerns raised by other states and stakeholders. In particular, EPA’s reasoning for this rule relies very heavily on the availability of electrical power on the interconnected North American grid. Yet, EPA did not examine interconnectivity within regions or the demands that transmission physics might make of individual generating resources – leaving those challenges, along with a fixed, mandatory emission goal, for states to figure out. Repeating the “compliance flexibility” refrain, EPA theorizes that states will be able to resolve “local” challenges within the scope of the rule. But this flexibility is largely illusory. EPA may rely exclusively on nation-wide analyses in other contexts, but more attention to regional and state circumstances must be given when regulating electric utilities providing essential services.

¹ The comment letter is available at www.regulations.gov as document number EPA-HQ-OAR-2013-0602-23855.

² *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Generating Units, Proposed Rule*, 79 Fed. Reg. 34830, 34837 (June 18, 2014) (“Proposed Rule”).

³ See Proposed Rule, 79 Fed. Reg. at 34854, 34954/1-2 (Proposed 40 C.F.R. §60.5795). There is some ambiguity in EPA’s “affected EGUs” criteria in this docket. The criteria for steam generating units (like Healy Unit 1) in the proposed regulation excludes “and supplies” term. The preamble to the proposed regulation, by contrast, suggests that EPA intended the criteria to be the same as proposed for new EGUs, which does include the “and supplies” language. Whether the “and supplies” language is included in this proposed rule may determine whether Healy Unit 1 is an affected EGU. See State of Alaska comment letter on Proposed Rule, at 40-43 (Dec. 1, 2014). The preambles to the proposed rules for new EGUs and modified and reconstructed EGUs also discuss the import of the “and supplies” term. See Proposed Rule for New EGUs, 79 Fed. Reg. at 1445/3, 1459/1-1461/2 (discussing the rationale for adding “and supplies” to the criteria); Proposed Rule for Modified and Reconstructed EGUs, 79 Fed. Reg. at 34979/1-3, 34972/1-2 (discussing the removal of the “and supplies” language from the criteria for steam generating units and IGCC facilities).

⁴ See EPA, Goal Computation TSD, Appendix 7: 2012 Plant-Level Data for Likely Covered Fossil Sources, EPA-HQ-OAR-2013-0602-0256; EPA, 2012 Unit Level Data Using the eGRID Methodology, EPA-HQ-OAR-2013-0602-0254. EPA cautions that this may not be the universe of “affected EGUs,” and does not constitute an applicability determination for any particular EGU. EPA, Goal Computation TSD, EPA-HQ-OAR-2013-0602-0460, at 5 n.3. Additionally, because of the actual sales criteria, the stationary combustion turbines covered by the rule may change each year. See Proposed Rule for Modified and Reconstructed EGUs, 79 Fed. Reg. at 34973/1.

⁵ EPA identified Unit 1 as a “likely covered fossil source.” Goal Computation TSD, Appendix 7, 2012 Plant-Level Data for Likely Covered Fossil Sources and Unit-Level Inventory, C1547. The emission data recorded by the CEMS on Healy Unit 1 reflects a considerably higher emission rate than EPA used in the baseline and goal calculation. GVEA Supplemental Response, Revised Exhibit B-1, RCA Docket I-14-007 (Oct. 31, 2014) (reporting 215,406MWh of net generation and 379,232.3 tons of CO₂ emissions for Healy Unit 1 in 2012); 2012 Unit Level Data Using the eGRID Methodology (reporting 215,407MWh of net generation and 307,155.7 tons of CO₂ emissions for Healy Unit 1 in 2012). EPA calculated emission rates by applying a generic emission factor applied to the amount of fuel consumed. Goal Calculation TSD, Appendix 6: Description of State-level Data Development. GVEA tentatively anticipates retiring Healy Unit 1 in 2024. GVEA Supplemental Response, Exhibit D, RCA Docket I-14-007 (Oct. 31, 2014). However, the utility has also noted that depending upon future energy availability

Healy Unit 1 may continue operating beyond 2030. GVEA Comment on Proposed Rule for Modified and Reconstructed EGUs, EPA Docket EPA-HQ-OAR-2013-0603 (Oct. 15, 2014).

⁶ EPA identified units 5, 6, and 7 as affected NGCC EGUs at Sullivan Plant 2. Goal Computation TSD, Appendix 7, 2012 Plant-Level Data for Likely Covered Fossil Sources; 2012 Unit Level Data Using the eGRID Methodology. Unit GT8 was excluded from Alaska's baseline as a "low generation." 2012 Unit Level Data Using the eGRID Methodology. Although the nameplate capacity of Unit GT8 is over the 25MW threshold, in 2012, the unit generated only 182,660 MWh and therefore did not meet the "affected EGU" criteria of providing at least 219,000MWh to a utility. *See id.*; Proposed Rule 79 Fed. Reg. at 34895 n. 260.

ML&P anticipates that new Plant 2a units will replace Plant 2 units to provide baseload power in the near future; the Plant 2 units will be retained for backup purposes. ML&P, TA332-121, Prefiled Direct Testimony of Eugene A. Ori, at ¶¶A11-A12 (Sept. 9, 2013) available at <http://rca.alaska.gov/RCAWeb/ViewFile.aspx?id=BE90767C-95B2-4685-B33D-0E874BBFAEEC>. Although not accounted for in the 2012 baseline, two of the new Sullivan Plant 2a units (6 and 7) may be "existing" EGUs covered by this 111(d) rule.

⁷ EPA identified Beluga Units 6, 7, and 8 as NGCC units and included the 2012 baseline data in the goal calculation. Units 1 and 2 are 16 MW units and fall under the 25MW threshold; Units 3 and 5 provided 233,233MWh and 269,540MWh respectively in 2012, and were listed as affected simple cycle combustion turbines. *See* Goal Computation TSD, Appendix 7, 2012 Plant-Level Data for Likely Covered Fossil Sources; 2012 Unit Level Data Using the eGRID Methodology.

Chugach anticipates retiring Units 3 and 8 in 2015 and Units 5, 6, and 7 by 2021. With the construction of SPP, to the extent these older (and more carbon intensive) units continue to operate, they will most likely be used for peaking power and may fall under the 219,000MWh threshold. Chugach Response, RCA Docket I-14-007, at 11 (table 3) (Oct. 31, 2014).

⁸ EPA identified four units at SPP as NGCC "affected EGUs." 2012 Unit Level Data Using the eGRID Methodology. EPA labeled these units 1-4; Chugach labels them 10-13. 2012 Unit Level Data Using the eGRID Methodology; Chugach Response, RCA Docket I-14-007, Attachment 1 (Oct. 31, 2014). SPP commenced commercial operations in 2013. Chugach Response, RCA Docket I-14-007, at 11 (table 3) (Oct. 31, 2014). Thus, while EPA nominally included SPP in the 2012 baseline, there is neither generation nor emissions attributed to the plant. *See* Goal Computation TSD, Appendix 7, 2012 Plant-Level Data for Likely Covered Fossil Sources; Goal Computation TSD, at 6 ("... EPA's BSER methodology also included under construction ... NGCC capacity that was not operating in 2012.").

⁹ *See* Goal Computation TSD, Appendix 7, 2012 Plant-Level Data for Likely Covered Fossil Sources; 2012 Unit Level Data Using the eGRID Methodology. The Nikiski unit is now an NGCC unit with greatly improved efficiency. HEA Response, RCA Docket I-14-007, at 10 and Exhibit 1 (Oct. 16, 2014).

¹⁰ Goal Computation TSD, Appendix 5 at 26; Goal Computation TSD, Appendix 7, 2012 Plant-Level Data for Likely Covered Fossil Sources.

¹¹ *See* Proposed Rule, 79 Fed. Reg. at 34834/3, 34892/3, 34836/3-34837/1.

¹² *See* Proposed Rule, 79 Fed. Reg. at 34895/1-34897/1, 34898, 34895/1.

¹³ *See infra* note 34.

¹⁴ EPA, Goal Computation TSD Appendix 1-Proposed Goals, EPA-HQ-OAR-20130-0602-0255. The application of building block 2 assumes no generation at Healy. Therefore, this step does not have a direct impact on the goal set for Alaska.

¹⁵ EPA, Goal Computation TSD Appendix 1-Proposed Goals ("re-dispatched NGCC Gen" in step 3a & 3b matches the total historical (2012) NGCC and coal generation in Step 1).

¹⁶ GHG Abatement Measures TSD at 4-18 (describing the growth factor applied in the goal calculations for Alaska and Hawaii as the “growth between each states’ individual historical 2002 and 2012 RE generation”), 4-29 (identifying proposed interim and final targets); Proposed RE Approach Data File, EPA-HQ-OAR-2013-0602-0240, “Input-EIA 2012 Generation Data” worksheet at cell C72 (showing 11.43% growth rate), “Calc Method Using MWh” worksheet at W16 (showing 163,089 MWh of additional renewables by 2029).

¹⁷ GHG Abatement Measures, Chapter 5 Supporting Data & Analysis, Scenario 1, “Sorted_by_State” worksheet, cell W1078 and W1097; Goal Computation TSD, Appendix 1 (step by step goal calculation).

¹⁸ Proposed Regulation 34957 table 1; Goal Computation TSD, Appendix 5 at 26.

¹⁹ EPA listed Healy Unit 2, or the Healy Clean Coal Project, as “indefinitely postponed” and did not include any allocation of generation or carbon emissions in the baseline or goal calculation for that unit. 2012 Unit Level Data Using the eGRID Methodology; Goal Computation TSD, Appendix 7, 2012 Plant-Level Data for Likely Covered Fossil Sources. GVEA intends to commence commercial operation of Healy Unit 2 in 2015. GVEA Supplemental Response, Exhibit D, RCA Docket I-14-007 (Oct. 31, 2014).

²⁰ Net generation of 219,000MWh is equivalent to operating a 25MW unit at capacity 24-hours a day for 365 days. *See* Proposed Rule for New EGUs, 79 Fed Reg. at 1446/1.

²¹ *See e.g.* Nancy Kuhn, Comment on Proposed Rule (July 23, 2014); Alaska Environmental Power Comments, RCA Docket I-14-007, (Oct. 24, 2014).

²² Goal Computation TSD, Appendix 7, 2012 Plant-Level Data for Likely Covered Fossil Sources; 2012 Unit Level Data Using the eGRID Methodology. For example, the coal steam generating units at Aurora Energy’s Chena Power Plant have nameplate capacities below the 25MW threshold, they cannot provide 219,000MWh of net electric output to a utility, and therefore are not “affected EGUs.”

²³ Proposed Rule for New EGUs, 79 Fed. Reg. 1430, 1446 n. 83 (Jan. 8 2014); Proposed Rule for Modified and Reconstructed EGUs, 79 Fed. Reg. 34,960, 34,973 n. 65 (June 18, 2014). Because an existing source may be regulated under 111(d) only if it would be regulated under 111(b) if it were new, these units also are not covered under 111(d).

²⁴ *See* 2012 Unit Level Data Using the eGRID Methodology (categorizing these units as OTHCC or EXCLUDE); Goal Computation TSD, Appendix 7, 2012 Plant-Level Data for Likely Covered Fossil Sources (EPA does not identify these units as affected EGUs).

²⁵ *See* EPA, kWh sales by state, EPA-HQ-OAR-2013-0602-0588; GHG Abatement Measures, Chapter 5 Supporting Data & Analysis, Scenario 1, “Sorted_by_State” worksheet, cell E1077.

²⁶ EPA’s goal calculation for Alaska reduces in business as usual generation from affected EGUs by 744 GWh due to enforceable EE programs. 744 GWh is 20.5% of the 3,637 GWh of business as usual sales that EPA forecasts for Alaska’s affected EGUs in 2030. Nationally, EPA believes 11.14% of affected EGU generation may be avoided through EE programs. *See* GHG Abatement Measures TSD, Chapter 5 Supporting Data & Analysis, Intermediate Data at line 7 and RefTables at E35; Goal Computation TSD, Appendix 7 (reporting 2012 generation from affected EGUs); GHG Abatement Measures TSD, Chapter 5 Supporting Data & Analysis, Sorted by Variable at V221 (stating EE goals as a cumulative percent of business as usual retail sales).

²⁷ The “affected EGUs” in Alaska are all owned by vertically integrated cooperative or municipal utilities, not investors. Fairbanks ratepayers may bear the greatest compliance costs in Alaska. The RCA regulates electric utilities according to traditional economic ratemaking principles – requiring that reliable service is provided at just, reasonable, non-discriminatory rates. AS 42.05.431. Utilities, under RCA oversight, must apportion charges to their respective customer classes according to the “cost causer-cost payer” principle. 3 AAC 48.510. A major compliance cost for Alaska would be replacing the coal generation supplying GVEA customers – implementing the re-dispatch building block. The cost-causer, cost-payer standard would assign these costs to GVEA customers. Assigning the

compliance costs to other entities or utilities would effectively be a cross-subsidy to supply energy to GVEA's customers.

²⁸ EIA, Electricity Data Browser, Average Retail Price of Electricity, available at <http://www.eia.gov/electricity/data/browser>.

²⁹ Alaska Energy Authority, Power Cost Equalization Program Statistical Data by Community: July 1, 2012 to June 30, 2013, at 98 (February 2014), available at <http://www.akenergyauthority.org/PDF%20files/pcereports/FY13StatisticalRptComt.pdf> (PCE Report). Power costs \$2.16 per kWh in Lime Village. PCE Report at 98. But even in hub villages and urban areas, electricity is considerably more expensive than elsewhere in the country. For example, power costs \$0.40 per kWh in Nome and \$0.58 in Fort Yukon. PCE Report at 57, 119. The weighted average cost of power in Anchorage, Fairbanks, and Juneau is approximately \$0.1482 per kWh. See Order U-14-080(1), *Order Issuing Notice of Proposed Base Amount for Power Cost Equalization Calculations, Setting Comment Deadline, Scheduling Hearing, Addressing Statutory timeline, Designating commission Panel, and Appointing Administrative Law Judge*, at Appendix A (RCA May 19, 2014).

³⁰ GVEA, Tariff Advice Letter No. 257-13 at Exhibit 2 (Nov. 25, 2014) available at <http://rca.alaska.gov/RCAWeb/ViewFile.aspx?id=E58CA758-B2E4-43E2-BCD7-55E0CF5C8B77> (TA257-13) (reporting the cost per net kWh of generation by source).

³¹ The CEMS on Unit 1 reports an emission rate of 3,521 lbs/MWh for the 27 MW EGU. GVEA anticipates an emission rate of about 2,666 lbs/MWh for the 52.5 MW Unit 2. See GVEA Supplemental Response, RCA Docket I-14-007, Exhibit B-1 (Oct. 31, 2014). EPA calculated the weighted average emission rate for all affected EGUs in 2012 at 1,368 lbs/MWh. Goal Computation TSD, Appendix 5, at 26.

³² See *supra* note 13 and accompanying text.

³³ GVEA Rates/Billing, <http://gvea.com/rates/rates> (last visited Jan. 12, 2015) (GVEA's average residential customer pays \$142.26 each month for approximately 600 kWh of electricity).

³⁴ "Compliance flexibility" has been a central theme in EPA's presentation of this proposed rule. See EPA Fact Sheet: Clean Power Plan, Flexible Approach to Cutting Carbon Pollution (available at <http://www2.epa.gov/sites/production/files/2014-05/documents/20140602fs-plan-flexibility.pdf>); Proposed Rule, 79 Fed. Reg. at 34,897/1-34,898/1.

³⁵ EPA proposes to allow states to select which measures will be used to reduce carbon emissions from "affected EGUs" in their states. States do not have to use the building blocks in the proportion reflected in the goal calculations and may use measures other than those EPA identifies as BSER. Proposed Rule, 79 Fed. Reg. at 34897/1-2. EPA also believes that by applying a "conservative" level of stringency for each building block in the goal calculation, room remains for states to pursue some building blocks more aggressively than reflected in state goals. Proposed Rule, 79 Fed. Reg. at 64896/3 64893/2.

³⁶ Proposed Rule, 79 Fed. Reg. at 34897/2. EPA believes that the "glide path" introduced in the October NODA would increase the timing flexibility.

³⁷ Proposed Rule, 79 Fed. Reg. at 34897/2. The choice of a mass or rate-based goal involves trade-offs – the mass-based goal simplifies accounting for emissions while a rate-based goal allows for growth in demand. See Proposed Rule, 79 Fed. Reg. at 34894/1.

³⁸ Proposed Rule, 79 Fed. Reg. at 34,897/1-34,898/1.

³⁹ See *e.g.* Proposed Rule, 79 Fed. Reg. at 34891/3.

⁴⁰ Proposed Rule, 79 Fed. Reg. at 34897/2, 34904/2 "EPA is also proposing to allow states flexibility to define the trajectory of emission performance between 2020 and 2029, as long as the interim emission performance

level is met on a 10-year average or cumulative basis and the 2030 emission performance level is achieved.”); Proposed Rule, 79 Fed. Reg. at 34951/3 (proposed 40 CFR 60.5740(a)(3)(i)).

⁴¹ Proposed Rule, 79 Fed. Reg. at 34835/1 (“Once the final goals have been promulgated, a state would no longer have an opportunity to request that the EPA adjust its CO₂ goal.”); *but see* Proposed Rule, 79 Fed. Reg. at 34898 n. 269 (citing CAA §307(d)(7)B)) (EPA might consider changing state goals if the state presents information not available during the comment period). During the comment period, EPA placed the burden on states to demonstrate that its assigned goals were not achievable. EPA will only consider changing proposed goals in response to comments if a state affirmatively demonstrates an inability to compensate for the impossibility to use a BSER measure with an alternative. Proposed Rule, 79 Fed. Reg. at 34835/1, 34893/1-2.

⁴² *See* Proposed Rule, 79 Fed. Reg. at 34910/1 (BSER measures “reduce CO₂ emissions from affected EGUs”); Proposed Rule, 79 Fed. Reg. at 34920/1 (noting that some CO₂ emissions avoided through RE and EE measures “may be from non-affected EGUs” and seeking comment on how to account for that fact); Proposed Rule, 79 Fed. Reg. at 34956 (emission standards include measures that avoid emissions from “affected sources”); State Plan Considerations TSD at 23 (“Some of the CO₂ emissions avoided through RE and demand-side EE measures may be from non-affected EGUs.... These dynamics may need to be addressed in a state plan when crediting or adjusting CO₂ emission rates of affected EGUs based on the effects of RE and demand-side EE measures.”); Proposed Rule, 79 Fed. Reg. at 34902/3-34903/3 (reasoning that RE and EE standards are “reasonably considered to be ‘for’ affected sources if they would have an effect on affected sources, by, for example, causing reductions in affected EGUs’ CO₂ emissions by decreasing the amount of generation needed from affected EGUs”); EPA, Legal Memorandum at 78 n. 63 (reasoning that the beyond the unit measures “ultimately reduce emissions solely from regulated EGUs.”).

⁴³ EPA discusses emissions trading as a compliance technique. Proposed Rule 79 Fed. Reg. at 34833/2, 34837/1. However, given EPA’s questions about how to account for reduced generation at non-affected EGUs, it seems that non-affected EGUs are beyond the scope of the trading program proposed by EPA. *Also see* Proposed Rule, 79 Fed. Reg. at 34848/2 (CO₂ emission allowances for an emission trading program issued only to “affected EGUs”). Alaska requested an in-state REC option if the rule is applied here to capture emission reductions in rural communities and smaller fossil-fuel fired EGUs. *See* State of Alaska comment letter on Proposed Rule, at 47-48 (Dec. 1, 2014).

⁴⁴ Proposed Rule, 79 Fed. Reg. at 34897/3 (EPA expects this flexibility to reduce the cost of achieving the state goals”); Jeffery Tomich, “MISO study suggests bigger is better when it comes to EPA carbon compliance” (Sept. 18, 2014); Proposed Rule, 79 Fed. Reg. at 34922/1 (multi-state plans may be used in “contiguous electric grid region”); Proposed Rule, 79 Fed. Reg. at 34900/3 (noting that multi-state plans are allowed “in recognition of the fact that electricity is transmitted across state lines, and that state measures may impact, and may be explicitly designed to reduce, regional EGU CO₂ emissions.”).

⁴⁵ *See e.g.* Proposed Rule, 79 Fed. Reg. at 34,836/2.

⁴⁶ Proposed Rule, 79 Fed. Reg. at 34893/1-2.

⁴⁷ Proposed Rule, 79 Fed. Reg. at 34,925/1-34926/1 (citing 40 C.F.R. §60.24(f)). This general 111(d) implementing regulation, which EPA proposes to not apply to this proposed rule, implements the CAA directive that EPA “...shall permit the State... to take into consideration, among other factors, the remaining useful life of the existing source.” Proposed Rule, 79 Fed. Reg. at 34,925/2; 42 U.S.C. 7411(d)(1).

⁴⁸ *See supra* notes 5-8; *also see* State of Alaska comment letter at 33-34.

⁴⁹ Proposed Rule, 79 Fed. Reg. at 34909.

⁵⁰ *See* Proposed Rule, 79 Fed. Reg. at 34921/1 (noting that the agency does not intend limit the types of RE and demand-side EE measures and programs that can be included in a state plan, but conditioning that intent on the availability of supporting EM&V that is rigorous and complete).

⁵¹ See State Plan Considerations TSD at 16 (noting that to be enforceable affected entities may have to voluntarily submit to state authority “pursuant to state statutory or regulatory authority specified in a state plan” and that new state legislation may be required to support state plans) Proposed 40 CFR 60.5740(a) (11)(i), Proposed Rule, 79 Fed. Reg. at 34952 (state plans must include supporting material demonstrating the state’s legal authority to carry out each component of its plan).

⁵² State Plan Considerations TSD at 15-16.

⁵³ Proposed Rule, 79 Fed. Reg. at 34901/1 (“The EPA is proposing that all measures relied on to achieve the emission performance level be included in the state plan, and that inclusion in the state plan renders those measures federally enforceable.”); also see State Plan Considerations TSD at 17 n. 17 (“We note that under the CAA, measures included in an approved 111(d) state plan would be federally enforceable by EPA, and that citizens would also have the ability to file citizen suits to compel enforcement of state plan obligations under CAA Section 304 (42 U.S. Code Section 7604).”)

⁵⁴ See State of Alaska comment letter on Proposed Rule (Dec. 1, 2014).

⁵⁵ See *infra* Part IV.B.

⁵⁶ See State of Alaska comment letter on Proposed Rule, at 12-26.

⁵⁷ See State of Alaska comment letter on Proposed Rule, at 12-26.

⁵⁸ See Chugach Response, RCA Docket I-14-007, at 6-7 (illustrating a 5 percent reduction in retail consumption from 2002 to 2013 and a 7 percent reduction for all Railbelt utilities since 2000).

⁵⁹ Peter Behr and Hannah Northey, E&E, EnergyWire, GRID: Computer models contest EPA Clean Power Plan’s reliability impacts. (Dec. 17, 2014) available at <http://www.eenews.net/stories/1060010675>; Senate and House Energy Committees letter to FERC Chair LaFleur (Nov. 24, 2014) available at http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=7cff8e3e-76fb-4a41-91c6-e7b2c692e8ed&utm_source=&utm_medium=email&utm_campaign=11755; NERC, “Potential Reliability Impacts of EPA’s Proposed Clean Power Plan: Initial Reliability Review, at 2, 27 (Nov. 2014); FERC Commissioner Moeller letter to EPA Administrator McCarthy (Dec. 1, 2014).

⁶⁰ Proposed Rule, 79 Fed. Reg. at 34900/1; 34890/2.

⁶¹ Behr, GRID: Computer model (Dec. 17, 2014).

⁶² EPA, Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and Emission Standards for Modified and Reconstructed Power Plants, at ES-15 n.7 (June 2014) (noting EPA’s lack of information regarding impacts in Alaska and Hawaii); *Id.* at 3-46 (noting that IPM does not account for costs or benefits of Proposed Rule in Alaska) (“RIA”). But the agency included a goal for Alaska in the proposed rule, so presumably our challenges are among those that the agency concluded could be resolved “through standard reliability planning processes.”

⁶³ Proposed Rule, 79 Fed. Reg. at 34899/3 and n. 271. EPA relies on the IPM analysis to support its evaluation of re-dispatch. Proposed Rule, 79 Fed. Reg. at 34864/2-2 The IPM “assumes that adequate transmission capacity is available to deliver any resources located in, or transferred to, the region.” RIA at 3-32.

⁶⁴ Resource Adequacy and Reliability TSD at 5.

⁶⁵ Resource Adequacy and Reliability Analysis TSD at 5; RIA 3-32.

⁶⁶ Resource Adequacy and Reliability Analysis TSD at 5.

⁶⁷ RIA, 3-26

-
- ⁶⁸ Proposed Rule, 79 Fed. Reg. at 34900/1; Resource Adequacy and Reliability TSD; RIA 3-33.
- ⁶⁹ RIA 3-32-33.
- ⁷⁰ Proposed Rule, 79 Fed. Reg. at 34864/1 (“planners have repeatedly demonstrated the ability to methodically relieve bottlenecks and expand capacity”). By contrast, EPA concludes that the cost of expanding natural gas infrastructure *is* cost prohibitive for integrating new NGCC capacity. Proposed Rule, 79 Fed. Reg. at 34877/1.
- ⁷¹ See Behr, GRID: Computer Models. EPA prioritized the amount of emission reductions, the cost of achieving those reductions, and the promotion of technology implementation ahead of reliability and resource adequacy. Proposed Rule, 79 Fed. Reg. at 34890/2.
- ⁷² Bill White, Guide to Alaska natural gas projects (September 10, 2014) available at <http://www.arcticgas.gov/guide-alaska-natural-gas-projects#lng> (describing natural gas projects as “epic.”)
- ⁷³ See Alaska Comments at 13-17. EPA calculated Alaska’s goal based on the assumption that all generation at the Healy Power Plant could be displaced by NGCC generation. The NGCC EGUs that EPA’s goal computation assumes can replace Healy’s 80MW of coal generation are located more than 200 miles south of Healy, beyond the other end of the Alaska Intertie. The Alaska Intertie is already generally operated at capacity to deliver hydroelectric and natural gas generation to GVEA’s customers in the Fairbanks load area.
- ⁷⁴ Alan Baily, EPA emission rule comes under scrutiny: Utilities say one size fits all approach to regulating power plant CO₂ emissions may not work in Alaska’s unique situation, 19 Petroleum News 47, at 7 (Nov. 23, 2014).
- ⁷⁵ See GVEA Supplemental Response, Exhibit D, RCA Docket I-14-007 (Oct. 31, 2014) (GVEA anticipates retiring around 200MW of generation capacity in the Fairbanks area by 2027).
- ⁷⁶ Also, the Clean Air Act requires that a BSER determination “account” for energy requirements. 42 USC §7411(a). For this rulemaking, EPA determined that “energy requirements” includes the reliability of electric service and the ability to meet demand. Proposed Rule, 79 Fed. Reg. at 34,879/3.
- ⁷⁷ Letter from Fred Upton, Ed Whitefield and Lisa Murkowski to Cheryl A. LaFleur, Chairman, Federal Energy Regulatory Commission (Nov. 24, 2014).
- ⁷⁸ Proposed Rule, 79 Fed. Reg. at 34934 (“Under Option 1, average nationwide retail electricity prices are projected to increase by roughly 6 to 7 percent in 2020 relative to the base case, and by rough 3 percent in 2030 (contiguous U.S.). Average monthly electricity bills are anticipated to increase by roughly 3 percent in 2020, but decline by approximately 9 percent by 2030. This is a result of the increasing penetration of demand-side programs that more than offset the increased prices to end users by their expected savings from reduced electricity use.”); Proposed Rule, 79 Fed. Reg. at 34934/3-34935/1 (“The EPA projects that the annual incremental compliance cost of Option 1 is estimated to be between \$5.5 and 7.5 billion in 2020 and between \$7.3 and 8.8 billion (2011\$) in 2030.”); *also see* RIA Chapter 3.
- ⁷⁹ Proposed Rule, 79 Fed. Reg. at 34935/1.
- ⁸⁰ Proposed Rule, 79 Fed. Reg. at 34934/3-34935/1.
- ⁸¹ Behr, GRID: Computer Models.
- ⁸² See EPA Legal Memorandum at 37
- ⁸³ Proposed Rule, 79 Fed. Reg. at 34879 n. 195; *also see* EPA Legal Memorandum at 39; Proposed Rule for New EGUs, 79 Fed. Reg. at 1467.
- ⁸⁴ Proposed Rule for New EGUs, 79 Fed. Reg. at 1464/2.

85 42 USC §7411(a).

86 Proposed Rule, 79 Fed. Reg. at 34879/2; 34890/2.

87 Proposed Rule for New EGUs, 79 Fed. Reg. at 1462/1.

88 Proposed Rule, 79 Fed. Reg. at 34956/1.

89 For example, EPA declines to issue standards of performance for oil-fired stationary combustion turbines, in part because they “are typically used only in areas that do not have reliable access to pipeline natural gas for example, in non-continental areas.” Proposed Rule for Modified and Reconstructed EGUs, 79 Fed. Reg. at 34973.

90 Proposed Rule for New EGUs, 79 Fed. Reg. 1430, 1446 n. 83 (Jan. 8 2014); Proposed Rule for Modified and Reconstructed EGUs, 79 Fed. Reg. 34,960, 34,973 n. 65 (June 18, 2014).

91 RIA at 3-46 (“IPM does not represent electricity markets in Alaska, Hawaii, and U.S. territories outside the contiguous U.S. and therefore the costs and benefits that may be expected from the proposed rule in this states and territories are not accounted for in the compliance cost modeling.”); RIA ES-15 n. 7 (“We do not have emission reduction information or air quality modeling available to estimate the air pollution health co-benefits in Alaska and Hawaii anticipated from implementation of the proposed guidelines.”).

92 Upgrading the transmission system to create sufficient capacity could cost in excess of \$400 million. Premature retirement of the Healy units would involve approximately \$450 million in stranded capital costs and remaining loan principal payments. Also, because coal is some of GVEA’s cheapest power, replacing generation from Healy generation would result in additional variable (e.g. fuel) costs – approximately an additional \$47 million in 2020 and \$61 million annually by 2030. H. Dale LLC, Stranded Cost Calculations for Healy Unit 1 and Unit 2 (Sept. 2014) (Attachment B). Although EPA believes that coal units retiring because of the CPP will be older (and therefore mostly or completely depreciated), Healy Unit 2 is essentially a new coal unit. It has not yet operated commercially and GVEA has not yet recovered the cost. *See* Resource Adequacy and Reliability Analysis TSD at 5.

93 In 2013, GVEA sold 286,768 MWh to 38,163 residential customers, for an average of 7,514.3 kWh per residential customer. In the same year, GVEA reported recovery of \$65,591,575 from residential customers, an average of \$1,718.72 per customer. At an estimated \$0.06/kWh to comply with the proposed 111(d) rule, this would yield an annual increase of \$450.86 to average residential electric bills.

94 GHG Abatement Measures TSD 2-33, 2-36; Sargent & Lundy, LLC, Coal-Fired Power Plant Heat Rate Reductions: Final Report at 1-1 (Jan. 22, 2009).

95 GHG Abatement Measures TSD at 2-36 n. 31.

96 Proposed Rule, 79 Fed. Reg. at 34,859.

97 GHG Abatement Measures TSD at 2-23.

98 GHG Abatement Measures TSD at 2-23.

99 GVEA Response, at 2 and Exhibit A, RCA Docket I-14-007 (Oct. 16, 2014); GVEA Supplemental Response at 2, 5 and Revised Exhibit A-1, RCA Docket I-14-007 (Oct. 31, 2014).

100 GVEA Supplemental Response, Revised Exhibit A-1, RCA Docket I-14-007 (Oct. 31, 2014).

101 *See* Proposed Rule, 79 Fed. Reg. at 34,859 n.111; Sargent & Lundy at 5.1 (noting that emission control technologies can consume large amounts of auxiliary power); Consent Decree, *United States v. Golden Valley Elec. Ass’n, Inc.*, No. 4:12-cv-00025–RRB ¶¶59-63 (D. Alaska 2012) (“GVEA Consent Decree”).

102 GVEA Supplemental Response, Revised Exhibit A-1, RCA Docket I-14-007 (Oct. 31, 2014); GVEA Consent Decree.

¹⁰³ GVEA Supplemental Response, Revised Exhibit A-1, RCA Docket I-14-007 (Oct. 31, 2014); GVEA Consent Decree.

¹⁰⁴ Proposed Rule for Modified and Reconstructed EGUs, 79 Fed. Reg. at 349817/3.

¹⁰⁵ *See Utility Air Regulatory Group v. EPA*, 134 S.Ct. 2427, 2444 (2014).

¹⁰⁶ *Id.* at 2444-2446.

¹⁰⁷ *See* Proposed Rule, 79 Fed. Reg. at 34924/2; Questions Concerning EPA's Proposed Clean Power Plan and other Grid Reliability Challenges: Hearing on FERC Perspective Before the Subcomm. on Energy and Power of the H. Comm. on Energy and Commerce, 113th Cong. (2014) (written testimony of Tony Clark, Commissioner, Federal Energy Regulatory Commission) ("if states agree to play by the EPA's rules, they are ceding ultimate authority of the regulation of their state's public utilities and energy development to the EPA"). EPA acknowledges that the BSER measures include the same measures typically addressed in state energy policy. Proposed Rule, 79 Fed. Reg. at 34924/2 ("many of the decisions that states will make while developing compliance approaches are fundamentally state decisions that will have impacts on issues important to the state, including cost to consumers and broader energy policy goals.").

¹⁰⁸ Proposed Rule, 79 Fed. Reg. at 34917/3; State Plan Considerations at 3, 13 (allowing states to assign compliance responsibilities to entities other than emission sources "provides states with broad discretion to develop plans that best suit their circumstances and policy objectives.").

¹⁰⁹ Proposed Rule, 79 Fed. Reg. at 34901/1 ("The EPA is proposing that all measures relied on to achieve the emission performance level be included in the state plan, and that inclusion in the state plan renders those measures federally enforceable."); State Plan Considerations at 17 n. 17 (citing 42 USC §7604); Proposed Rule, 79 Fed. Reg. 34954/1 (Proposed 40 CFR §60.5785) ("State plans can only be revised with approval by the Administrator."); Proposed Rule, 79 Fed. Reg. 34917/1 ("If the state wishes to revise enforceable measures in its approved state plan, the EPA proposes that the state must submit the revised enforceable measures to the EPA and demonstrate that the revised set of enforceable measures in the modified plan will result in emission performance at affected EGUs that is equivalent to or better than the level of emission performance required by the original state plan.").

¹¹⁰ AS 44.99.115.

¹¹¹ EIA, Electricity Data Browser: Net generation for electric power, annual, available at <http://www.eia.gov/electricity/data/browser> (select "net generation" data set, filter for "electric power" and Alaska) (reporting net electric generation of 1426GWh from hydroelectric, 1442GWh from other renewable energy resources, and 5964GWh from all fuels for Alaska in 2013).

¹¹² The 167GWh includes: 21MWh of HEA consumer generation; 1,241MWh from Delta Wind; 71,009MWh from Eva Creek Wind; 45,460MWh from Fire Island; 159MWh from GVEA SNAP solar and wind; 46,319MWh JBER landfill gas; 2,982MWh from South Fork hydro. EPA did not include hydroelectric in the 2012 baseline; but new and incremental hydroelectric may be used for compliance. *See* Proposed Rule, 79 Fed. Reg. at 34867/1-2; GHG Abatement Measures at 4-5. EPA likely considers landfill gas a RE resource eligible for compliance credit. *See* RIA at 6A-5; EPA, Alternative RE Approach TSD at 3 n.6; Proposed Rule, 79 Fed. Reg. 34843-34844 n. 30.

¹¹³ *See* AEA, Renewable Energy Atlas of Alaska: A Guide to Alaska's Clean, Local, and Inexhaustible Energy Resources at 18 (April 2013) available at www.akenergyauthority.org/PDF%20files/2013-RE-Atlas-of-Alaska-final.pdf ("Renewable Energy Atlas"); GVEA Response, RCA Docket I-14-007 at 4 (Oct. 16, 2014); HEA Response, RCA Docket I-14-007 at 6 (Oct. 16, 2014); ML&P Response, RCA Docket I-14-007 at 4 (Nov. 3, 2014); Chugach Response, RCA Docket I-14-007 at 4-5 (Oct. 31, 2014).

¹¹⁴ Chugach Response, RCA Docket I-14-007 at 6-7 (Oct. 31, 2014); GVEA Supplemental Response, RCA Docket I-14-007 at 4 (Oct. 31, 2014).

¹¹⁵ See *e.g.* State Plan Considerations TSD at 23 (noting that states must distinguish between RE and EE measures that avoid CO₂ emissions from an affected EGU versus a non-affected EGU).

¹¹⁶ See Alaska comment letter at 33-34; *also see e.g.*, Denali Commission Annual Performance Report (APR) Fiscal Year 2011, at 14 (identifying 134 ton reduction in CO₂ emissions during the first four months of operation after upgrade of the Kwethluk Power Plant).

¹¹⁷ Bill White, Guide to Alaska natural gas projects (September 10, 2014) available at <http://www.arcticgas.gov/guid-alaska-natural-gas-projects#lng>.

¹¹⁸ Alaska Energy Authority, Pre/Post – Watana Transmission Study Draft Report (March 17, 2014) (“Watana Transmission Study”).

¹¹⁹ EPA, Legal Memorandum at 43.

¹²⁰ EPA, GHG Inventory, EPA-HQ-OAR-2013-0602-0557, at ES-5; Center for Climate Strategies, Alaska Greenhouse Gas Inventory and Reference Case Projections, 1990-2020 at v (July 2007).

¹²¹ According to EPA, in 2012 Alaska’s electric utility sector generated approximately 6,898GWh. See EPA, kWh sales by state, EPA-HQ-OAR-2013-0602-0588. The net output of the “affected EGUs” identified by EPA in 2012 was 3,162GWh. See 2012 unit level data using eGrid.

STATE CAPITOL
P.O. Box 110001
Juneau, AK 99811-0001
907-465-3500
fax: 907-465-3532



550 West Seventh Avenue, Suite 1700
Anchorage, AK 99501
907-269-7450
fax 907-269-7461
www.Gov.Alaska.Gov
Governor@Alaska.Gov

Governor Sean Parnell
STATE OF ALASKA

December 1, 2014

The Honorable Gina McCarthy
Administrator
Environmental Protection Agency
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: State of Alaska's Comments on Proposed Carbon Pollution Emission Guidelines
For Existing Stationary Sources: Electric Utility Generating Units
Docket ID No. EPA-HQ-OAR-2013-0602

Dear Administrator McCarthy,

I am deeply troubled that the Obama Administration just announced its plan for 3,415 new regulations, including 130 new Environmental Protection Agency (EPA) regulations. See, Environment and Energy Publishing, "*Sweeping regulatory document outlines White House agenda*", November 25, 2014, enclosed.

EPA's proposal will result in higher electricity prices and seizes control of energy policy "outside the fence" from Alaskans and local utilities. Incredibly, EPA's costly new rule does very little to reduce worldwide emissions. "Upon full implementation in 2030, the carbon reduced from this massive and costly regime would offset the equivalent of just 13.5 days of emissions from China." *U.S. Chamber of Commerce Institute for 21st Century Energy*.

Why regulate then? The answer from EPA is that higher costs of energy, which hurt low and middle class families, are necessary to bolster EPA's international image and "prompt and leverage international discussions and actions." *Washington Examiner, EPA admits new coal regulations won't reduce global warming*, September 25, 2013, enclosed.

Instead of unilaterally dictating regulations and increasing electricity costs on Americans for the sake of our perceived image abroad, EPA should bring emission issues to Congress and develop a bill that can pass Congress. The bill must allow individual states and utilities to have a primary role in deciding energy plans for their citizens and ratepayers, and take into account the impact of higher electricity costs on low and middle income families, jobs, and small businesses.

The Honorable Gina McCarthy

December 1, 2014

Page 2

The United States Supreme Court just made the limits on federal agency power clear (Alaska participated in the case against EPA). When statutory authority is ambiguous about whether the EPA can issue expensive new regulations that seize control of large parts of the economy, EPA must go back to Congress:

“The fact that EPA’s ... interpretation ... would place plainly excessive demands on limited government resources is alone a good reason for rejecting [EPA claim of regulatory authority]; but that is not the only reason. EPA’s interpretation is also unreasonable because it would bring about an enormous and transformative expansion in EPA’s regulatory authority without clear congressional authorization. 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. ... Since the statute does not compel EPA’s interpretation, it would be patently unreasonable—not to say outrageous—for EPA to insist on seizing expansive power that it admits the statute is not designed to grant.”

Emphasis added. *Utility Air Regulatory Group v. Environmental Protection Agency*, 154 S.Ct. 2427, 2444 (2014)

In addition, Alaska has taken significant steps to promote an energy policy with reduced emissions such as a gas pipeline, trucking natural gas to Fairbanks and eventually rural communities, multiple hydroelectric projects, and hundreds of millions of dollars in State funding for renewable energy, energy efficiency, and weatherization projects.

I have directed the Attorney General to fight EPA’s attempt to seize control of Alaska’s energy policy and impose higher cost electricity on Alaskans. We are participating in that case now.

I am also urging Congress to use its authority under the Regulatory Review Act to stop EPA’s proposed regulations.

A set of detailed comments on the proposed regulations from State agencies is attached.

Sincerely,



Sean Parnell
Governor

Enclosures

FEDERAL AGENCIES:

Sweeping regulatory document outlines White House agenda

Amanda Peterka, E&E reporter / Published: Monday, November 24, 2014

The White House late Friday released its latest regulatory agenda, a sweeping plan that details both short- and long-term regulatory goals for every agency in the government.

Notable items on the agenda include the renewable fuel standard, key air rules, major oil and gas regulations for hydraulic fracturing, the administration's stream protection rule, delayed requirements for extractive companies to disclose payments and a final rule to toughen crude-by-rail safety standards.

All told, the fall issue of the biannual "Unified Agenda of Federal and Regulatory and Deregulatory Actions" says that the White House is planning 3,415 regulations, 189 of which are considered major regulations costing more than \$100 million. For U.S. EPA, the administration has in the works 130 proposed and final rules.

Renewable fuels, air rules

The regulatory agenda provides a hint as to the Obama administration's next steps in setting the targets under the renewable fuel standard, the federal policy mandating that refiners use conventional ethanol and advanced biofuels. According to the agenda, EPA is planning to propose its targets for 2015 in May and to finalize that proposal in August.

The timeline comes after the administration announced Friday that it is punting a decision on a controversial proposal to roll back the targets in 2014, largely on concerns raised by the oil industry about the limits to the amount of biofuels that can be used in existing fuel infrastructure (*Greenwire*, Nov. 21).

EPA said Friday that it planned to take action on the 2014 renewable fuel standard rule next year and that it was considering addressing the 2014, 2015 and 2016 mandates all next year. The agency would likely combine a rule retroactively setting the 2014 targets with the 2015 rule.

The agency has been long delayed on setting the yearly targets; by law, EPA is supposed to finalize the following year's targets by Nov. 30 of the preceding year.

EPA also has on its agenda several air pollution decisions, most notably its finalization of greenhouse gas regulations for new and existing power plants and a revision of the federal ozone standard.

EPA rolled out its draft for future power plant greenhouse gases in September of last year but didn't publish it in the *Federal Register* until Jan. 18. Agency officials have stayed mum about when a final rule will be released, but the Unified Agenda shows it plans to meet its statutory deadline of January 2015 -- one year after the proposal. The agency plans to finish its regulations for existing power plants in June.

Under a court-ordered deadline, EPA is required to decide whether to propose a tighter ozone standard by Dec. 1 and to finalize that decision by Oct. 1 of next year; the agenda affirms both deadlines. EPA is also planning to release a long-delayed final rule advising states on how to implement the 2008 ozone standard in March of next year.

EPA has a busy first half of the year when it comes to other air standards. In January, it plans to finalize a proposed package of changes to requirements for states to monitor concentrations of pollutants in the air.

A month later, the agency plans to finalize a rule updating 25-year-old standards for home woodstoves, which EPA estimates contribute to 13 percent of soot pollution in the country.

According to the agenda, EPA in May will finalize a rule that calls for upgraded emission controls, new fence-line monitoring requirements and new flaring restrictions at the nation's 149 petroleum refineries (*Greenwire*, Oct. 30).

Water, agriculture

EPA is maintaining that its proposed Waters of the U.S. rule aimed at clarifying which streams and wetlands fall under the scope of the Clean Water Act also remains on track to be finalized next spring, even though the agency twice extended the public comment period.

The agency also says proposed standards for wastewater from unconventional oil and gas wells will be out in February. The proposed rule is aimed at concerns that municipal wastewater treatment plants can't adequately treat the water produced from hydraulically fractured wells, which often contains salts, carcinogens and radioactive elements. It was sent to the White House Office of Management and Budget last week for review. EPA is planning to finalize the proposal in spring of 2016.

EPA will begin soliciting input on future changes to pesticide labels next May, according to the agenda. The agency's pesticides office has been under pressure to alter its labels on at least two fronts: to prevent the evolution of herbicide-resistant weeds and to reduce the incidence of spraying around pollinators like honeybees.

Jack Housenger, director of EPA's Office of Pesticide Programs, told an audience in September that EPA is looking to rework the labels in a effort to warn growers not to rely too much on a single herbicide, which can lead to resistant weeds (*Greenwire*, Sept. 11). Environmental groups are also pressuring the agency to take action on neonicotinoid insecticides, pest controls that have been linked to recent massive honeybee deaths.

The agency also expects to finalize revisions to the federal Agricultural Worker Protection Standards, the first update to the program in more than two decades, in May. The standards would amend how workers are trained and educated on working around pesticides. EPA estimates the cost of the regulations to be between \$62 million and \$73 million annually, with most of the cost on the agricultural employer. The benefits are estimated to be between \$5 million and \$14 million annually, from avoided acute illnesses.

The break-even point where the costs would equal the benefits would be reached with 53 fewer cases of severe chronic illnesses, such as Parkinson's disease, non-Hodgkin's lymphoma, prostate cancer, lung cancer, chronic bronchitis and asthma. While farmworker advocacy groups have lauded EPA for the changes, groups like the National Association of State Departments of Agriculture say the conclusions drawn in the proposed changes are too broad (*Greenwire*, Aug. 18).

The Agriculture Department will continue to roll out its rulemakings tied to the 2014 farm bill, which was signed into law in February.

A farm bill rule that would make federal crop insurance eligibility contingent on the adoption of conservation practices on highly erodible land or wetlands is set for release in February, at which time USDA will also publish a cost-benefit analysis.

An interim final rule for the Environmental Quality Incentives Program -- which provides financial and technical assistance to help private landowners take on conservation practices -- was set to be published earlier this month. The interim final rule is still slated for this month, according to the agenda, with a final rule expected in July.

USDA was also supposed to have promulgated an interim final rule for the Agricultural Conservation Easement Program, which consolidated three farm bill conservation programs into one, on Nov. 4, but will publish it in December, with a final rule date set for July. The Conservation Stewardship Program final rule is also set to be finalized in July.

The Biomass Crop Assistance Program rule, which was developed to help growers plant and harvest second-generation biofuel crops, will be finalized next month. A final rule for the Conservation Reserve Program, which will pay farmers to take acres out of production, is set for April.

USDA is also set to propose four rules on the National Organic Program. A rulemaking to guide dairy farmers on transitioning their cattle from conventional to organic is set to begin by Dec. 31. Another rulemaking to set standards for farmed aquatic animals will begin by Feb. 28. Standards for organic pet food are slated for April 30, and a rulemaking to incorporate amendments to organic beekeeping products standards will begin on July 31.

The Center for Food Safety has criticized the possibility of organic farmed fish, saying the practice runs counter to the standards of the organic program (*Greenwire*, Oct. 21).

Department of the Interior

The Interior Department in the coming months is scheduled to advance three major oil and gas regulations for hydraulic fracturing, exploratory drilling in the Arctic Ocean and the payment of onshore royalties.

Making its debut in the regulatory agenda is a Bureau of Land Management plan to seek input on how and whether it should revise royalties for oil and gas produced on public lands.

The advance notice of proposed rulemaking, scheduled for next month, is a long time in the making. Former Interior Secretary Ken Salazar as far back as winter 2012 spoke of plans for a 50 percent hike in the onshore oil royalty rate, calling it a matter of fairness to American taxpayers at a time of strong crude prices.

Interior's former assistant secretary for policy, management and budget, Rhea Suh, a year ago told the Government Accountability Office that BLM plans to move ahead with a regulation that would make it easier for the Interior secretary to raise and lower royalty rates for oil and gas. That was in response to GAO's finding that Interior's ability to ensure fair return for the U.S. Treasury under current regulations was "limited."

Conservation groups and some Democrats have lobbied BLM to consider raising royalty rates to match those charged by states and by Interior for offshore drilling. But industry groups have argued that companies already pay more to drill on federal lands because of permitting delays and that new royalty hikes could actually reduce BLM revenue.

BLM by this month is also scheduled to release a final rule to more tightly regulate hydraulic fracturing at thousands of wells drilled on federal lands. The agency's revised proposed rule in spring 2013 angered both industry groups, which argued it was redundant, and environmentalists, who said it was too weak. The rule will boost safeguards for the decades-old technique used to coax oil and gas from 90 percent of wells drilled on federal lands.

The final fracking regulation has been under review at the Office of Management and Budget since late August. OMB has held several meetings with environmentalists and industry groups.

Also making its first appearance in the agenda is a BLM proposal to amend its planning regulations.

Due next March, the proposed rule will seek to make BLM land-use plan revisions more efficient and more responsive to the public. The agency is exploring the idea of planning across larger landscapes while paring down some of the land-use decisions it includes in resource management plans (RMPs).

RMPs govern all land uses across 250 million acres of public lands, so there's a lot at stake for a range of interested parties.

The Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement this month plan to release a draft rule governing oil and gas exploration in the Arctic. The rule will likely codify some of the voluntary enhanced safety measures Royal Dutch Shell PLC has agreed to follow in its inaugural exploration campaigns in the Beaufort and Chukchi seas over the past few summers.

Conservationists have complained that regulations should be stronger in the frigid Arctic, where ice, storms and limited infrastructure make drilling significantly riskier than in the Gulf of Mexico. Companies also want clear rules to inform multibillion-dollar investment decisions.

By next February, BSEE is also planning to release a draft rule for the design, manufacture and maintenance of blowout preventers, the critical devices that help prevent the uncontrolled release of oil and gas. The rule is categorized as "major," which means it could cost more than \$100 million annually to the economy or have a significant effect on consumers or the offshore industry.

Other rulemakings of note between next March and October include: a National Park Service proposed rule in March governing the drilling for private minerals within national park boundaries; a BLM proposed rule in April to curb the waste of natural gas through venting, flaring and fugitive emissions; Fish and Wildlife Service final rules by April governing the adverse modification of critical habitat for endangered species and how to exclude lands from habitat designations; an FWS proposed rule governing drilling for private minerals within wildlife refuges; and an NPS final rule in September 2015 to ban certain predator hunting and trapping techniques on national preserves in Alaska.

Coal and mining

The Obama administration has also made significant updates to rulemaking affecting coal- and non-coal-mining companies, including the long-awaited Stream Protection Rule.

The Office of Surface Mining, Reclamation and Enforcement may this month take final action to scrap the 2008 Stream Buffer Zone Rule after U.S. District Judge Barbara Rothstein for the District of Columbia struck it down this year (*Greenwire*, Sept. 21).

OSMRE, as expected, is not planning to release its replacement until sometime next year. The new target date for proposing the long delayed Stream Protection Rule is April 2015.

OSMRE also plans to release a proposal for using coal combustion waste in coal mine reclamation at around the same time. Environmental groups have already expressed concern about the action.

A final rule may come sooner to help states that have finished cleaning up their abandoned coal mines use federal dollars to remediate old hardrock mines. And a proposal to boost the safety of coal slurry ponds is also on tap.

Elsewhere at Interior, BLM has been taking input on a potential rule on coal mine methane emissions. The administration has not set a target date for release.

At EPA, the agency's final rule for regulating the disposal of coal ash is under the review of OMB. The agency plans to have it signed by Dec. 19, pursuant to a court order.

The agency is also moving forward with rules affecting the uranium mining and milling industry. It expects to finalize a radon proposal, questioned by environmental groups, by next August.

Then a proposal that could boost regulation of in-situ recovery uranium extraction, also known as in-situ leach, could emerge as soon as this month.

At the Mine Safety and Health Administration, the agency plans to release a long-awaited final rule on protecting miners from large mining machines by next month. A proposal to protect miners from other machines may come early next year.

MSHA, which already released regulations to protect miners from respirable coal dust, plans to issue a proposal regarding silica late next year. It is also requesting information on diesel emissions at underground mines.

Department of Transportation

A closely watched priority for the Pipeline and Hazardous Materials Safety Administration is wrapping up work by March on a final rule to toughen crude-by-rail safety standards. In a lengthy proposal unveiled in July, the agency seeks to strengthen rail tank car designs and outline how shippers can retool older DOT-111 cars that have been prone to puncture during accidents.

In January, PHMSA rule writers also want to move forward with proposals to ensure the safe operation of hazardous liquid pipelines located onshore, as well as revisit safety requirements for gas transmission pipelines.

The Federal Highway Administration is still playing catch-up with a host of regulatory changes imposed by MAP-21 (short for "Moving Ahead for Progress in the 21st Century Act"), the 2012 law reauthorizing road, bridge and transit programs. The latest two offerings included in the agenda both involve the setting of performance measures for states to use in meeting goals laid out in the law.

The highway administration says it will shortly release a notice of proposed rulemaking that will cover performance standards for bridges and pavement, according to the agenda. Freight issues and the Congestion Mitigation and Air Quality Improvement Program will be handled in a separate rulemaking scheduled for March.

Also on the MAP-21 front, the Federal Transit Administration plans to launch a notice of proposed rulemaking in January to set standards for state safety oversight of rail transit systems.

Securities and Exchange Commission

According to the new agenda, the Securities and Exchange Commission is delaying a proposal to require oil and mining companies to disclose the money they pay to foreign governments. The administration is now planning on an October release, bumped back from the planned spring 2015 rollout announced in the administration's last regulatory agenda.

A federal court struck down the SEC's first version of the rule, which was originally called for in the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act. The rule would have required publicly listed extraction companies to report to the SEC, on a project-by-project basis, the money they pay to governments. It allowed for no exemptions in countries that have forbidden such disclosure.

The rule has been a priority for anti-poverty organizations, which say it's key to stemming corruption in resource-rich countries. In September, Oxfam America filed a lawsuit against the SEC over the delay in

releasing the rule. In a statement today, Oxfam Senior Policy Adviser Isabel Munilla noted that the SEC has now been out of compliance with the deadlines written into the Dodd-Frank law for three years.

"Other markets like the U.K. are moving quickly ahead, leaving the U.S., and U.S. companies, far behind," she said. "These rules are more important than ever, as new oil, gas and mineral development quickly expands in places like Burma, Kenya, Cambodia, and in the Gulf of Mexico -- meaning millions of dollars in payments will be shrouded in secrecy."

Transmission, nuclear rules

The Nuclear Regulatory Commission is in various stages of more than two dozen rulemakings, some of which would boost security and coping capabilities at the country's 100 nuclear plants following the 2011 earthquake and tsunami that crippled three reactors in Japan.

The raft of regulatory action is likely to draw the attention of Sen. James Inhofe (R-Okla.), who is poised to become the chairman of the Environment and Public Works Committee, which oversees the NRC.

Inhofe has repeatedly questioned whether the agency is overregulating the industry (*E&E Daily*, Feb. 6, 2013).

The NRC continues to craft a complex and controversial rule that would address severe accidents at nuclear reactors using Mark I and Mark II containment systems -- identical to the Japanese reactors that were knocked out of commission in 2011. The NRC will provide a regulatory basis for crafting a rule in September, according to the agenda.

The NRC is also finalizing a "station blackout" rule, which would ensure power-hungry nuclear plants in the United States have the right strategies or equipment on- and off-site -- to cool a reactor's core and hot, spent fuel in nearby pools for an indefinite amount of time if outside power is cut.

The agenda also includes a few new items tied to transmission.

The Federal Energy Regulatory Commission is working on a proposed rule that would ensure that two important segments of the nation's energy sector -- the electric and gas industries -- are aligned. FERC's proposed rule, part of a series of orders, would revise the agency's current regulations to better coordinate the schedule of gas and power markets, a needed step in light of the country's growing dependence on natural gas.

Comments on the proposal are due Friday.

FERC unveiled the proposals earlier this year to better align the country's increasingly gas-dependent electric grid with an expanding pipeline complex, a move aimed at thwarting gas outages and rolling blackouts that have hit the Southwest in past years (*Greenwire*, March 20).

Separately, the Energy Department is slated to update its process for approving electricity exports in June.

DOE will propose a rule to provide utilities with more detail on how to apply for federal approval to export power to foreign countries, specifically Mexico and Canada, a significant move as the United States' international power trade rises with its neighbors.

The department's Office of Electricity Delivery and Energy Reliability is responsible for authorizing exports of electric energy and issuing presidential permits for the construction, operation, maintenance and connection of electric transmission facilities at the international border.

Reporters Manuel Quiñones, Jean Chemnick, Phil Taylor, Sean Reilly, Tiffany Stecker and Hannah Northey contributed.

The Examiner

WASHINGTON

EPA admits new coal regulations won't reduce global warming

BY ASHE SCHOW | SEPTEMBER 25, 2013 | 12:00 AM

An Environmental Protection Agency proposal designed to reduce CO2 emissions and reduce global warming will actually have no "notable CO2 emission changes."

So, a rule that will essentially ban new coal-fired power plants will actually have no impact on global warming. Got it.

"The EPA does not anticipate that this proposed rule will result in notable CO2 emission changes, energy impacts, monetized benefits, costs, or economic impacts by 2022," the EPA writes under the comments section of its proposal.

The EPA also admits that "the owners of newly built electric generating units will likely choose technologies that meet these standards even in the absence of this proposal due to existing economic conditions as normal business practice."

So, a rule that will make it nearly impossible to built an effective, new coal plant wasn't even necessary in the first place? The rule has nothing but downsides.

What's interesting is that in the paragraph immediately preceding the admission that the regulation will do nothing, EPA claimed that the rule would "contribute to the actions required to slow or reverse the accumulation of [greenhouse gas] concentrations in the atmosphere."

But if the rule does absolutely nothing, how does it contribute to reducing global warming?

EPA Administrator Gina McCarthy gave the answer last week, saying that this proposed rule, along with the Obama administration's other global warming rules, "positions the U.S. for leadership on this issue." That, she said, would "prompt and leverage international discussions and actions."

Lisa Miller, spokeswoman for the American Coalition for Clean Coal Electricity, said that the EPA's "piecemeal" approach to global warming is an "ineffective and expensive way to reduce CO2 emissions."

She added that "without comparable actions by other countries to reduce emissions, the U.S. is at a competitive disadvantage."

The EPA's rule appears to not actually be about impacting global warming, but all about making the U.S. look good on the issue in the international community. That, and the elimination of coal.

"Even if the entire U.S. coal fleet was somehow eliminated, the decrease in projected sea level rise would be less than the thickness of a dime," Miller said.



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of Law

CIVIL DIVISION

1031 West 4th Avenue, Suite 200
Anchorage, Alaska 99501
Main: 907.269.5100
Fax: 907.276.3697

December 1, 2014

Via Email

Ms. Gina McCarthy
Administrator
Environmental Protection Agency
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Ave, NW
Washington, D.C. 20460
Mccarthy.gina@epa.gov

Mr. Dennis McLerran
Regional Administrator
EPA Region X
RA 140
1200 Sixth Ave
Seattle, WA 98101
McLerran.Dennis@epa.gov

U.S. Environmental Protection Agency
EPA Docket Center (EPA/DC)
Mail Code: 28221
Attn: Docket ID No. EPA-HQ-OAR-2013-0602T
1200 Pennsylvania Ave., NW
Washington, DC 20460
A-and-R-Docket@epa.gov

Re: State of Alaska's Comments in Response to the Environmental Protection Agency's Proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units
Docket # EPA-HQ-OAR-2013-0602

Dear Ms. McCarthy and Mr. McLerran:

On behalf of the State of Alaska, we submit the following comments on the proposed guidelines for carbon dioxide (CO₂) emissions from existing utility electric generating units (EGUs) ("Proposed Rule"). The Proposed Rule would require states to develop and implement federally enforceable plans designed to achieve mandated reductions in the average CO₂ emission rate of certain fossil-fuel fired generators – "affected EGUs." These mandated emission rates are based on the application of four Best System of Emission Reduction (BSER) building blocks that collectively assert significant authority over the generation, transmission, and consumption of electricity: (1) heat rate improvements at coal-fired generating units, (2) re-dispatch from coal EGUs to

natural gas combined cycle EGUs, (3) new renewable energy generation, and (4) demand side energy efficiency measures. The Proposed Rule presumes that states can implement a combination of these BSER building blocks in order to achieve the target emission rate by 2030.¹ Contrary to this presumption, for the reasons outlined below, these measures cannot be implemented in Alaska to achieve the emission rate assigned by the Environmental Protection Agency (EPA).

EPA does not possess the authority to promulgate this Proposed Rule under the Clean Air Act (CAA). These far reaching BSER measures, together with the numerical CO₂ emission limits, would effectively establish a national energy policy.² For Alaska, implementing the rule is particularly problematic because EPA designed the rule for generating units that are interconnected through a robust transmission grid. A lack of interconnectivity is the very characteristic that most distinguishes Alaska's electric utility sector from the rest of the country. Because of this difference and others, Alaska should be exempted from any final rule limiting CO₂ emissions from existing EGUs. Alternatively, EPA must conduct the necessary analysis to determine an achievable and reasonable CO₂ emission rate for existing EGUs in Alaska based on an accurate factual record.

I. EPA lacks authority under the Clean Air Act to issue these regulations.³

The Proposed Rule exceeds EPA's authority under the Clean Air Act (CAA). First, application of §111(d) is limited to source categories that are not already regulated under §112; EPA has already elected to regulate coal-fired power plants under §112.⁴ Second, regulations governing emissions from new sources under §111(b) are a necessary predicate for any §111(d) regulation of existing sources; here, EPA has only issued proposed §111(b) regulations. Third, the Proposed Rule impermissibly expands EPA's authority beyond air pollution control into the management of state energy generation and usage. Fourth, the Proposed Rule mandates firm, numerical emission targets rather than the guidelines and procedures contemplated by §111(d). This Proposed Rule would

¹ *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Generating Units, Proposed Rule*, 79 Fed. Reg. 34,830, 34,836-34,837 (June 18, 2014) ("Proposed Rule").

² *See Proposed Rule*, 79 Fed. Reg. at 34,924.

³ The legal defects summarized in this section are described more fully in the attached Legal Memorandum (Attachment A).

⁴ CAA §111(d)(1)(A)(i), 42 U.S.C. § 7411(d)(1)(A)(i).

effectively negate state authority to evaluate EPA's guidelines in the context of costs, technical and physical feasibility, energy needs, other environmental impacts, and the "remaining useful life of the existing source." Fifth, the BSER measures proposed by EPA improperly include measures beyond the physical or legal control of the regulated sources. Standards of performance established under §111(d) must be achievable through source-level, inside-the-fence line measures. Sixth, the Proposed Rule conflicts with the balance of federal and state authority with respect to energy policy established in the Federal Power Act.

Most frustrating for our state, EPA simply has not presented facts or reasoning to support the application of this rule in Alaska. EPA's foundational assumptions regarding the generation and transmission of electricity, particularly the premise of a robust interconnected grid, have little relevance to Alaska. The technical analyses – including the crucial Integrated Planning Model (IPM) and Regulatory Impact Analysis (RIA) – fail to evaluate the application of this rule in our state. EPA has no basis to conclude that the costs of implementing the proposed BSER measures in Alaska would be reasonable, that the rule will not impair the reliability of electric service in the state, or that the measures are even technically feasible.

II. Alaska should be exempted from the rule.

Alaska should be exempted from any §111(d) rule governing carbon emissions from EGUs because Alaska's electric utility sector differs in critical respects from the industry in the continental U.S. Perhaps most significantly, Alaska does not have a robust interconnected grid. Because of the lack of transmission interconnections and other unique circumstances, Alaska cannot reasonably implement the BSER measures. However, Alaska is already achieving carbon emission savings pursuant to our own policies without federal intervention.

It bears noting that even the primary policy motivation for this rule – the finding that fossil fuel-fired EGUs are the largest emitters of GHGs among stationary sources in the U.S. – does not apply to Alaska. Nationally, power plants account for roughly one-third of all domestic GHG emissions.⁵ EPA reports that, in 2005, sources in the U.S. emitted 7,195.3 million metric tons (MMT) of CO₂e.⁶ Of that, emissions from the electric

⁵ Executive Office of the President, The President's Climate Action Plan, at 6 (June 2013), available at http://www.whitehouse.gov/sites/default/files/image/president_27sclimateactionplan.pdf; also see Proposed Rule, 79 Fed. Reg. at 34,880; EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011 Executive Summary, EPA-HQ-OAR-2013-0602-0557 at ES-21 (2013) ("EPA GHG Inventory").

⁶ EPA GHG Inventory, at ES-7 (Table ES-2).

power industry accounted for 2,445.7 MMT – slightly more than one-third of U.S. CO₂e emissions.⁷ By comparison, in 2005,⁸ electric generation in Alaska produced 3.2 MMT CO₂e – only 6 percent of the state’s total 52.1 MMT CO₂e emissions.⁹ By our count, the five “likely affected fossil sources” in Alaska accounted for only 4.4% of statewide GHG emissions.¹⁰ These emissions are *de minimus* in the context of the issue EPA seeks to address in this rulemaking. The policy rationale behind the Clean Power Plan’s focus on the electric utility sector does not apply to Alaska.

While the opportunity to reduce CO₂ emissions from Alaska’s electric utility sector is negligible, attempts to comply with the Proposed Rule would result in extraordinary costs. Implementing the Proposed Rule may also raise issues regarding the reliability of electric service, and may result in irrational consequences – including greater impairment to air quality in Fairbanks. This rule should not be applied in Alaska.

A. Alaska’s utility sector is fundamentally different from the electric utility industry in the continental U.S.

Alaska’s electric utility sector differs in many ways from the industry in the rest of the United States. The utility power sector in the continental U.S., as described by EPA, is characterized by the interconnection of a variety of generation resources by robust transmission grids extending over large regions.¹¹ The interconnected nature of the continental grid enables flexible dispatch of generation resources and renders electricity a generally fungible product.¹² The fungible nature of electricity and the flexibility in dispatch practices permitted by an interconnected transmission grid are “central” to EPA’s evaluation of the “best system of emission reductions.”¹³ However, EPA’s

⁷ *Id.* at ES-21 (Table ES-7).

⁸ 2005 is the most recent year for which statewide data is publically available.

⁹ Center for Climate Strategies, Alaska Greenhouse Gas Inventory and Reference Case Projections, 1990-2020, at v, Table ES-1 (July 2007), *available at* <http://dec.alaska.gov/air/doc/AK-GHG-EI-2007.pdf>.

¹⁰ *See id.*

¹¹ Proposed Rule, 79 Fed. Reg. at 34,862/1-2.

¹² Proposed Rule, 79 Fed. Reg. at 34,862/1-2.

¹³ EPA, Legal Memorandum for Proposed Carbon Pollution Emission Guidelines for Existing Electric Utility Generating Units at 43 (“EPA Legal Memorandum”); *also see*, Proposed Rule, 79 Fed. Reg. at 34,862/1-2.

description of the utility power sector in the continental U.S., does not describe the electric utility sector in Alaska.

Alaska does not have a robust infrastructure of looped transmission facilities interconnected with generation facilities extending over large regions. Rather, as a state, Alaska is “islanded” – we have no interconnection with other states or regions.¹⁴ Our relatively small population (0.3% of U.S. population) is dispersed over a substantial geographic area (16% of U.S. landmass or 570,641 square miles).¹⁵ Transmission lines do link a few major population centers, but these systems have limits. Because the Proposed Rule relies on a factual premise that does not apply to Alaska, our state should be exempted from the rule.

1. Alaska’s electric utility sector lacks interconnectivity.

Alaska’s utilities face unique challenges in providing electric service – in fact, electric utility service is not universally available. 128 electric utilities serve our major population centers and rural communities.¹⁶ The service areas for these utilities include over 150 remote, stand-alone electric distribution systems serving villages, most of which are inaccessible by road.¹⁷ In these rural locations, service is provided by small

¹⁴ B.C. Hydro serves a small electric load in the remote coastal community of Hyder, Alaska. Otherwise, no Alaska load is served by electric generation resources located outside of the state.

¹⁵ U.S. Census Bureau, State & County QuickFacts: Alaska, <http://quickfacts.census.gov/qfd/states/02000.html>. By comparison Wyoming, with the lowest population of any state, has a population density of 5.8 people per square mile, *Id.* at Wyoming, <http://quickfacts.census.gov/qfd/states/56000.html>, 483% greater than the 1.2 people per square mile in Alaska.

¹⁶ Regulatory Commission of Alaska, Fiscal Year 2012 Annual Report 70-72 (Nov. 2012), *available at* <http://rca.alaska.gov/RCAWeb/ViewFile.aspx?id=acc2839e-81bb-4f93-a2f1-0fb2698ffd2c> (“RCA 2012 Annual Report”).

¹⁷ Alaska Energy Authority, Renewable Energy Atlas of Alaska at 2 (April 2013) *available at* www.akenergyauthority.org/PDF%20files/2013-RE-Atlas-of-Alaska-final.pdf (“Renewable Energy Atlas”); also *see id.* at 2-4 (illustrating Alaska’s electric generation and transmission infrastructure).

generation units that either operate in isolation or are only weakly linked to other small electric generation units.¹⁸

In addition to lacking interconnection amongst our electric utility systems, we also lack an interconnected road or natural gas pipelines linking our cities, towns and villages. In this context, one utility, Alaska Village Electric Corporation, serves 54 villages, including Old Harbor and Savonga – communities 734 miles apart.¹⁹ Another utility, Alaska Power Company, serves 26 communities, including Klawock and Tok – communities separated by 645 miles.²⁰ The absence of transmission lines to share power among communities and a road or pipeline system to transport fuel to remote areas, presents a huge challenge for providing affordable and reliable power to rural consumers.

With some notable exceptions, the power and heating needs for these remote areas are met by diesel barged up from lower-48 suppliers or transported from petroleum refineries in Nikiski or Valdez, Alaska.²¹ After seasonal freeze-up, many remote communities must rely on fuel that is stored in local tank farms, or pay a premium for fuel flown in by air tankers.²² When fuel reserves run short in these remote communities, truly extraordinary (and expensive) measures may be necessary to ensure the availability of fuel.²³ To help communities meet their energy needs the state supports programs to maintain fuel tanks, improve power generation and end use efficiency, and exploit local renewable energy sources such as wind, biomass, solar, geothermal, and hydroelectric.²⁴

¹⁸ EPA's exclusion of 472 Alaskan EGUs from the electric power sector modeling illustrates our reliance on small, isolated generating units. EPA, Documentation for EPA Base Case v.5.13 Using the Integrated Planning Model, EPA-HQ-OAR-2013-0602-0212, at 4-64, Table 4-35 (Nov. 2013), *available at* <http://www.epa.gov/airmarkets/progsregs/epa-ipm/BaseCasev513.html>.

¹⁹ RCA 2012 Annual Report 16.

²⁰ *Id.* at 15.

²¹ Renewable Energy Atlas 2.

²² *Id.*

²³ *See, e.g.*, William Yardley, Tanker with Crucial Fuel Delivery is Sighted Off Nome, N.Y. Times, Jan. 14, 2012, at A14, *available at* http://www.nytimes.com/2012/01/14/us/fuel-tanker-renda-and-icebreaker-healy-are-sighted-off-nome.html?_r=0.

²⁴ Renewable Energy Atlas 2.

The provision of electric utility service in Alaska cannot be compared to the more densely populated areas of the country. Elsewhere in the U.S., most electric consumers are connected to an extensive electric grid. These interconnected states also have well-established interconnected energy markets that provide for the sale and transmission of power from where it can be most economically produced to where demand exists. Here, other than Anchorage and Matanuska load centers, no Alaskan load centers are interconnected by redundant transmission infrastructure. Alaskan loads are too small and too distant to support the type of electric transmission grid available in the continental U.S.

2. Even Alaska's major population and electric load centers have limited interconnectivity.

There are a few larger electric utility load centers in Southeast, Southcentral, and Interior Alaska. Four of these load centers have limited transmission interconnections: the Kenai Peninsula, Anchorage, Matanuska, and Fairbanks load centers. Because the transmission lines generally follow the 470-mile long Alaska Railroad corridor between Seward and Fairbanks, these loosely interconnected electric load centers are jointly referred to as the "Railbelt."²⁵

The Municipality of Anchorage is Alaska's largest population center with 291,826 people (in 2010) and a land area of 1,705 square miles.²⁶ Our largest city is spread over seventy percent more land area than the State of Rhode Island which had a population more than three times that of Anchorage in 2010.²⁷ With a land area of 24,608 square miles and a population in 2010 of 88,995,²⁸ the Matanuska-Susitna Borough is larger than

²⁵ In addition to the transmission lines generally following the railroad corridor, the Railbelt transmission system also includes: approximately 376 miles of transmission line south of the railroad corridor on the Kenai Peninsula, approximately 168 miles of transmission line west of the railroad corridor on the north side of Cook Inlet, and approximately 100 miles east of Fairbanks to Fort Greely where the railroad is currently being extended.

²⁶ U.S. Census Bureau, State & County QuickFacts: Anchorage Municipality, <http://quickfacts.census.gov/qfd/states/02/02020.html>.

²⁷ U.S. Census Bureau, State & County QuickFacts: Rhode Island, <http://quickfacts.census.gov/qfd/states/44000.html>.

²⁸ U.S. Census Bureau, State & County QuickFacts: Matanuska-Susitna Borough, <http://quickfacts.census.gov/qfd/states/02/02170.html>.

ten states, each of which has a population many times larger than the Matanuska-Susitna Borough.²⁹ Even in our “urban” areas, Alaskan utilities have a lot of ground to cover to deliver power from generating units to load.

a. Railbelt Utilities

The Railbelt load centers are served by six vertically integrated, cooperative or municipally owned utilities. The Kenai Peninsula is served by Homer Electric Association (Homer), the City of Seward, and Chugach Electric Association (Chugach). The Anchorage load center is served by Chugach, Anchorage Municipal Light and Power (ML&P), and Matanuska Electric Association (MEA). MEA also serves in the Matanuska load center. Golden Valley Electric Association (GVEA) serves the Fairbanks load center³⁰ Each of these independent utilities is governed by a locally elected board.

²⁹ U.S. Census Bureau, State & County QuickFacts: Rhode Island, <http://quickfacts.census.gov/qfd/states/44000.html> (Rhode Island - population 1,052,567); U.S. Census Bureau, State & County QuickFacts: Delaware, <http://quickfacts.census.gov/qfd/states/10000.html> (Delaware - pop. 897,934); U.S. Census Bureau, State & County QuickFacts: Connecticut, <http://quickfacts.census.gov/qfd/states/09000.html> (Connecticut - pop. 3,574,097); U.S. Census Bureau, State & County QuickFacts: Hawaii, <http://quickfacts.census.gov/qfd/states/15000.html> (Hawaii - pop. 1,360,301); U.S. Census Bureau, State & County QuickFacts: New Jersey, <http://quickfacts.census.gov/qfd/states/34000.html> (New Jersey - pop. 8,791,894); U.S. Census Bureau, State & County QuickFacts: New Hampshire, <http://quickfacts.census.gov/qfd/states/33000.html> (New Hampshire - pop. 1,316,470); U.S. Census Bureau, State & County QuickFacts: Vermont, <http://quickfacts.census.gov/qfd/states/50000.html> (Vermont - pop. 625,741); U.S. Census Bureau, State & County QuickFacts: Massachusetts, <http://quickfacts.census.gov/qfd/states/25000.html> (Massachusetts - pop. 6,547,629); U.S. Census Bureau, State & County QuickFacts: Maryland, <http://quickfacts.census.gov/qfd/states/24000.html> (Maryland - pop. 5,773,552); U.S. Census Bureau, State & County QuickFacts: West Virginia, <http://quickfacts.census.gov/qfd/states/54000.html> (West Virginia - pop. 1,852,994).

³⁰ The Fairbanks load area includes the Denali Borough, the Fairbanks-North Star Borough (FNSB) and unincorporated regions surrounding the FNSB. Black & Veatch, Alaska Railbelt Regional Integrated Resource Plan (RIRP) Study 1-1 (Feb. 2010) (“Alaska RIRP”).

The Railbelt utilities serve a region of approximately 100,000 square miles, approximately half the size of the area served by the Electric Reliability Council of Texas (ERCOT). ERCOT provides independent system operator (ISO) service through a unified system controlling 43,000 miles of transmission infrastructure and 550 generation units.³¹ By contrast, our Railbelt utilities independently provide service in their territories utilizing a total of 1,500 miles of transmission infrastructure and 39 utility or state owned generation units, plus purchases from a few small independent power producers. Even if an ISO were created in Railbelt Alaska, it would take a substantial investment in infrastructure to have the same system operational flexibility enjoyed by ERCOT.

The Railbelt utilities generate approximately 80% of the state's electricity and serve a peak load of around 870 MW.³² All five of the "likely affected EGUs" identified by EPA – Nikiski Cogeneration, George M. Sullivan Plant 2, Beluga Power Plant, Southcentral Power Plant, and Healy Unit 1³³ -- provide electricity within the Railbelt. With the exception of transmission between the Anchorage and Matanuska load centers, the Railbelt load centers, and thus the affected EGUs, are connected by only single contingency outage transmission tie lines. Because loss of these single contingency lines means no energy can be transported amongst load centers, each utility must carry sufficient reserve locally to meet their loads.³⁴

b. Railbelt Transmission Connections

The Kenai Peninsula load center is connected to the Anchorage load center by a 90-mile, single contingency 115kV transmission tie line owned by Chugach. The ability to move power on the Kenai to Anchorage transmission line is constrained by a stability limit of approximately 70 to 75MW, the need for approximately 10MW of reserve capacity, and increased line losses associated with increased energy transfer.

³¹ Electric Reliability Council of Texas, Inc., About ERCOT, www.ercot.com/about (last visited Nov. 26, 2014).

³² Alaska RIRP 3-2. By comparison, many electric utilities in the continental U.S. have single coal or nuclear plants that exceed 900MW of capacity. *Id.*

³³ EPA, Goal Computation TSD, Appendix 7: 2012 Plant-Level Data for Likely Covered Fossil Sources, EPA-HQ-OAR-2013-0602-0256. Although EPA listed Healy Unit 1 as "likely affected EGU," because of an ambiguity in the Proposed Rule, it is unclear whether unit meets the criteria. *See* discussion *infra* Part III.B.

³⁴ Alaska RIRP § 3.1, 3-2.

The Matanuska and Anchorage load centers are connected by multiple transmission systems. The first is a 230 kV transmission system owned by Chugach. This system connects Chugach's and ML&P's generation plants to the Teeland Substation in the western portion of the Matanuska load center. The second system is a 115 kV transmission line jointly owned by ML&P, Chugach and MEA. This 115kV line connects the Eklutna Hydroelectric Project to the Anchorage load center and to the eastern portion of the Matanuska load center. Finally, MEA owns a 115 kV transmission system that connects the eastern and western portions of the Matanuska load center, creating a looped system with the Anchorage load center.

The Matanuska and Anchorage load centers are connected to the Fairbanks load center by a 200-mile, single contingency transmission system currently operated at 138kV running from Teeland Substation to Healy. This includes (1) a 6 mile 138kV line connecting the Teeland and Hollywood substations, which is currently owned by the State and due to transfer to MEA in 2018; (2) a 21 mile 115 kV line connecting Hollywood and Douglas that is owned by MEA; and (3) the 173-mile Alaska Intertie built to a 345 kV design connecting the Douglas and Healy substations and owned by the State. From Healy, two 138kV transmission lines carry power to Fairbanks – a 103 mile line running to the Goldhill substation and the 97 mile long Northern Intertie running into Wilson Substation. While conditions can vary, the Alaska Intertie is typically operated at or near its usual stability limit of approximately 70-80 MW throughout the year to deliver electricity generated at hydroelectric and natural gas facilities to Fairbanks. Energy purchases are generally scheduled to the maximum capacity of the line, depending on the availability of hydroelectric and gas generation capacity, and the availability of natural gas fuel.

These transmission lines follow routes that are often remote from all road access,³⁵ and are subject to outages during winter peak loads caused by avalanches and ice loading. In particular, the Alaska Intertie has two cables bundled together about 8 inches apart for each phase. The snow/ice loading on the Intertie can be particularly dramatic when the accumulated snow and ice bridges the gap between the two cables. Once such a bridge is formed, snow and ice accumulate across the entire platform, causing accumulations of more than one-foot diameter. There is a particular risk of ground fault when uneven snow loading causes the lines to sag to the ground.

³⁵ An exception to this is the Alaska Intertie, which runs parallel to the Parks Highway as it crosses through Denali National Park.

3. Regulatory Environment

Alaska's regulatory environment differs from the framework presumed by EPA. In the continental U.S., FERC regulates interstate electric energy transmission and the wholesale energy market.³⁶ However, because Alaska has no interstate electric energy transmission, Alaskan utilities are largely unaffected by FERC transmission and wholesale market rules.³⁷ Instead, wholesale transactions between utilities are regulated by our public utility commission, the Regulatory Commission of Alaska (RCA).³⁸

The RCA regulates electric utilities according to traditional economic ratemaking principles – requiring that reliable service is provided at just, reasonable, non-discriminatory rates.³⁹ Utilities, under RCA oversight, must apportion charges to their respective customer classes according to the “cost causer-cost payer” principle.⁴⁰ The RCA and the Alaska Energy Authority (AEA), through the Intertie Management Committee, may implement reliability standards.⁴¹

³⁶ Federal Power Act (FPA) § 201(a) & (b)(1), 16 U.S.C. § 824(a) and (b)(1); Congress directed FERC “to divide the country into regional districts for the voluntary interconnection and coordination of facilities for the generation, transmission, and sale of electric energy,” and “to promote and encourage such interconnection and coordination.” FPA § 202(a), 16 U.S.C. § 824a(a). FERC also regulates the rates and charges for interconnection and transmission to ensure the rates are “just and reasonable,” and that no person is subjected to “undue prejudice or disadvantage” or “any unreasonable difference in rates, charges, service, facilities, or in any other respect, either as between localities or as between classes of service.” FPA § 205(a)–(b), 16 U.S.C. § 824d(a)–(b). Congress empowered FERC to take action on its own motion in order to ensure these measures are implemented. FPA § 206(a), 16 U.S.C. § 824e(a).

³⁷ FPA §201(b)(1), 16 U.S.C. § 824(b)(1).

³⁸ AS 42.05.431(b).

³⁹ AS 42.05.431.

⁴⁰ 3 AAC 48.510.

⁴¹ AS 42.05.291; *see* The Intertie Management Committee's Railbelt Operating and Reliability Standards (Oct. 1, 2013) *available at* <http://www.akenergyauthority.org/PDF%20files/IMC%20Railbelt%20Operating%20&%20Reliability%20Standards.pdf>.

There are limits to the RCA's statutory authority. Unlike public utility commissions in many other states,⁴² the RCA does not have general facility siting authority. Also, while other states have enforceable resource plans, in Alaska, utilities submit 10-year capital improvement plans for informational purposes only.⁴³ Significantly, municipal and cooperative utilities, including all of the utilities affected by this rule, may choose to be altogether exempt from economic regulation by the RCA.⁴⁴

Nor is the limited Alaska transmission system managed by a Regional Transmission Organization or ISO as is typical elsewhere in the country. Here, individual electric utilities or state agencies own discrete portions of the transmission infrastructure. Each utility operates the transmission infrastructure it owns and, in some cases, operates transmission infrastructure owned by the State under contract. Interconnection agreements exist, if at all, only when each of the participating utilities find the terms of the agreement to be in their individual members or customers best interests.

No organized wholesale power market exists in Alaska. Instead, wholesale power transactions between utilities are based upon bilateral agreements, and typically involve hour-ahead non-firm economy energy transactions. Existing transmission system limitations prevent most Alaska utilities from entering into firm wholesale power transactions. By contrast, within the interconnected continental grid, power can be bought on a firm or non-firm basis, and for varying blocks of time.

Although outlined in AS 44.99.115, Alaska's energy policy is not integrated in a single statute. Our policies are integrated through multiple statutes that establish and allocate duties and authority amongst numerous state departments and agencies, including AEA, DEC and the RCA.

⁴² See EPA, State Plan Considerations TSD, EPA-HQ-OAR-2013-0602-0463, at 69 (June 2014).

⁴³ 3 AAC 50.790, 770(e)(1).

⁴⁴ AS 42.05.711(b) and (h).

B. Alaska should be exempted from the rule because without an interconnected grid we cannot execute the “best system of emission reductions” as outlined by EPA.

1. EPA’s evaluation of the statutory BSER criteria presumes, and relies on, the existence of an interconnected grid.

The existence of an interconnected and integrated electricity system is “central” to EPA’s rationale for the Proposed Rule:

Central to our BSER determination is the fact that the nation’s electricity needs are being met, and have for many decades been met, through a grid formed by a network connecting groups of EGUs with each other and, ultimately, with the end-users of electricity. ... Through the interconnected grid, fungible products – electricity and electricity services – are produced and delivered by a diverse group of EGUs operating in a coordinated fashion in response to end-users’ demand for electricity.⁴⁵

EPA’s determinations respecting the impact on the reliability of electric service and the cost of these measures also clearly reference the assumption that “affected EGUs” will be connected to this integrated grid.⁴⁶ EPA’s BSER determinations for three of the building blocks explicitly rely on the “inherent flexibility of the current regionally interconnected and integrated electricity system.”⁴⁷ In theory, this interconnected system will enable utilities to reliably and affordably reduce generation, and therefore CO₂ emissions, from “affected EGUs” by generating power with less carbon intensive units or by reducing the demand altogether.⁴⁸

⁴⁵ EPA Legal Memorandum 43-44.

⁴⁶ Proposed Rule, 79 Fed. Reg. at 34,836/3.

⁴⁷ *Id.*

⁴⁸ Proposed Rule, 79 Fed. Reg. at 34,835/2-34,836/3; EPA Legal Memorandum 49-50 (reasoning that building blocks 2, 3, and 4 qualify as a “system of emission reduction” because “through the integrated grid, the measures reduce overall demand for, and therefore utilization of, higher emitting, fossil fuel –fired EGUs, which, in turn, reduces CO₂ emissions from those EGUs.”).

However, as described in detail above, Alaska does not have “a regionally interconnected and integrated transmission system.” Our limited transmission capacity is already fully utilized to replace petroleum fuel generation with hydroelectric or natural gas power. Thus, the EGUs EPA assumes may be re-dispatched under building block 2 are located at opposite ends of a 200 mile long transmission system that is subject to single contingency outages. Integration of significant new renewable generation resources would likewise be limited by these transmission constraints. The lack of interconnection also has significant implications for any evaluation of how the BSER measures may affect electric service reliability. Our generation is neither interconnected nor interchangeable in the manner envisioned by EPA in its BSER determinations.

EPA’s supporting technical analyses, the Integrated Planning Model (IPM) and Regulatory Impact Analysis (RIA), only examine the continental U.S. and southern Canadian Provinces, ignoring Alaska.⁴⁹ Even for these interconnected regions, the IPM did not account for the situation facing Alaska – inadequate transmission capacity to deliver resources within a region.⁵⁰ EPA has not yet articulated a basis to conclude that the proposed BSER measures, premised upon an interconnected grid, are technically feasible in Alaska or that they can be implemented at a reasonable cost without compromising the reliability of electric service or public safety.

2. Constructing 200 miles of new electric transmission line to improve connectivity amongst load centers and generating resources is not a reasonable solution for Alaska.

EPA recognizes that implementation of these BSER building blocks may require new investment in infrastructure.⁵¹ EPA dismisses infrastructure constraints out of hand by reasoning that “these considerations have not limited past rapid increases in NGCC generation levels.”⁵² EPA concludes that natural gas supply and delivery systems as well

⁴⁹ EPA, Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and Emission Standards for Modified and Reconstructed Power Plants, at ES-15 n.7 (June 2014) (noting EPA’s lack of information regarding impacts in Alaska and Hawaii); *Id.* at 3-46 (noting that IPM does not account for costs or benefits of Proposed Rule in Alaska) (“RIA”).

⁵⁰ Proposed Rule, 79 Fed. Reg. at 34,864/2; EPA, Resource Adequacy and Reliability TSD, EPA-HQ-OAR-2013-0602-0163, at 2.

⁵¹ Proposed Rule, 79 Fed. Reg. at 34,857-34,858.

⁵² *Id.*

as electric transmission systems “would be capable of supporting the degree of increased NGCC utilization needed for states to achieve the proposed goals.” EPA provides three reasons for this conclusion: (1) transmission systems can sustain usage levels achieved during peak periods for longer periods of time;⁵³ (2) isolated system constraints would not prevent an increase in NGCC generation overall across a region;⁵⁴ and (3) “pipeline and transmission planners have repeatedly demonstrated the ability to methodically relieve bottlenecks and expand capacity. Further, EPA believes “the proposal’s compliance schedule provides flexibility and time for investment in additional natural gas and electric industry infrastructure if needed.”⁵⁵ However, historic pipeline and transmission expansion trends in the continental U.S. have no bearing on unique conditions in Alaska.

Significant upgrades to the electric transmission infrastructure would be necessary to re-dispatch natural gas generation to offset coal generation capacity in Alaska. Both of the Alaska coal fueled EGUs are located at the coal mine mouth in Healy. All of Alaska’s natural gas generation capacity is located more than 200 miles south - in the Matanuska, Anchorage, and Kenai load centers. A single transmission line operated at 138kV connects Healy to the Teeland Substation, where multiple interconnections with the Matanuska and Anchorage load centers exist. The 80 MW capacity limit and single-contingency outage nature of the existing transmission tie-lines between Healy and Teeland prevents firm energy transfers and the sharing of reserves between the Fairbanks, and Anchorage or Matanuska load centers.

Although prepared for other purposes, the State of Alaska recently commissioned a planning study that looked at the cost of constructing a second transmission line from the Matanuska load center to the Fairbanks load center.⁵⁶ This possible line would run from a new Lorraine Substation to Healy, through Douglas Substation, and would cost an estimated \$387.9 million.⁵⁷ This second line would allow firm energy transfers from the Matanuska and Anchorage load centers to the Fairbanks load center.⁵⁸ It would increase

⁵³ *Id.* at 34,863/3.

⁵⁴ *Id.* at 34,864/1.

⁵⁵ *Id.* at 34,857-58; 34,864/1-2.

⁵⁶ Alaska Energy Authority, Pre/Post – Watana Transmission Study Draft Report (March 17, 2014) (“Watana Transmission Study”).

⁵⁷ *Id.* at 13.

⁵⁸ *Id.* at 12.

total transmission transfer capacity to 125 MW, although system operating stability limits dictate that no more than 110 MW actually be transferred.⁵⁹ Upgrade of the Northern Intertie from Healy to Fairbanks to 230 kV operations, at a cost of \$106.8 million, may be required to actually get this additional capacity and Healy generation output to Fairbanks.⁶⁰

Based upon the recently commissioned study, it would cost at least \$387.9 million, and possibly \$494.7 million to create enough additional transfer capacity to offset the 27 MW Healy Unit 1 coal generation with natural gas generation. If the \$387.9 million were amortized over forty years, using the three percent discount rate utilized in the RIA, this second transmission line would have approximately \$16.7 million per year in capital costs. If the \$387.9 million were amortized over forty years, using GVEA's average 3.735% cost of debt and authorized 1.79 TIER, this second transmission line would have approximately \$27.9 million per year in capital costs.

For the twelve-month period ending July 31, 2014, GVEA averaged spending \$0.0477/kWh on incremental costs for 199,966,700 kWh of energy generated by Healy Unit 1.⁶¹ For that same period, GVEA spent \$0.11160/kWh for economy energy purchased from Chugach,⁶² plus \$0.00373 to wheel that energy to GVEA's system.⁶³ If you assume that GVEA could purchase an additional 199,966,700 kWh of economy energy from Chugach at this same average price as paid during the twelve-month period ending July 31, 2014, and assume that the MEA/Alaska Intertie wheeling rate during that time period would equal the wheeling rate for the new transmission line, use of the second transmission line to offset coal-fueled generation by Healy Unit 1 with Chugach natural gas generation would cost GVEA an additional \$13.5 million per year.⁶⁴

⁵⁹ *Id.* at 12, 34.

⁶⁰ *Id.* at 13.

⁶¹ GVEA, Tariff Advice Letter 255-13, filed with the RCA, at Ex. 7c (filed August 29, 2014) ("TA255-13").

⁶² TA255-13 Ex. 7a.

⁶³ TA255-13 Ex. 4a (this is the price GVEA paid to MEA and the State to transmit the energy purchased from Chugach and delivered by Chugach to Teeland Substation over the MEA transmission system and Alaska Intertie to Healy).

⁶⁴ $([\$0.11160/\text{kWh} + \$0.00373/\text{kWh}] - [\$0.0477/\text{kWh}]) \times (199,966,700 \text{ kWh}) = \$13,523,747.92$

GVEA is currently reporting an emission rate for Healy Unit 1 of 3,564.89 pounds of carbon dioxide per MWh. Chugach currently reports an emission rate of 1,717.16 pounds of carbon dioxide per MWh from a simple cycle natural gas unit. Thus replacing 199,966,700 kWh of energy generated by Healy Unit 1 with an equivalent amount of energy⁶⁵ generated at a simple cycle Beluga unit would save approximately 163,000 metric tonnes of carbon dioxide emissions.⁶⁶ Using the annual capital costs \$16.7 to \$27.9 million for the second transmission line and energy replacement costs of \$13.5 million as discussed above, it would cost between \$185.28 and \$253.99 per metric ton of carbon emission saved to replace generation from Healy Unit 1 with output from a simple cycle natural gas unit at Beluga. In the public notice for the Proposed Rule, the EPA could not find that a cost of converting coal fueled units to natural gas fuel ranging from \$83 - \$150 per metric ton of carbon dioxide emission reduction was reasonable for inclusion as BSER.⁶⁷ The EPA did find redispatch costing on average \$30 per metric ton of carbon dioxide emission reduction to be reasonable for inclusion as BSER. For Alaska, the cost of even partial redispatch is six times the range found reasonable, and is greater than the range that could not be found reasonable, thus Alaska should be exempted from the Proposed Rule.

C. Alaska should be exempted from the Proposed Rule because we cannot reasonably implement the “best system of emission reductions.”

The Proposed Rule suggests compliance mechanisms that have limited, if any, application in Alaska and presupposes an energy market that does not exist here. Application of the Proposed Rule to Alaska, notwithstanding the physical impossibility of implementing the building blocks, would result in extraordinary costs, severely impair the reliability of electric service, and aggravate air quality concerns in the Fairbanks area. Therefore, our state should be exempted from the Proposed Rule.

⁶⁵ 103 % to account for line losses. *See*, Watana Transmission Study 35 fig. 7-1.

⁶⁶ $[(199,966.7 \text{ MWh}) \times (3,564.89 \text{ pounds/MWh}) \div (2,204.62 \text{ pounds/MT})]$ Healy Unit 1 - $[(\{199,966.7 \text{ MWh}\} \times \{1.03\}) \times (1,717 \text{ pounds/MWh}) \div (2,204.62 \text{ pounds/MT})]$ SPP = 162,937.9

⁶⁷ EPA, GHG Abatement Measures TSD, EPA-HQ-OAR-2013-0602-0437, at 6-9 (June 10, 2014).

1. Heat rate improvements of six percent cannot be achieved at the Healy Power Plant.

The first BSER measure proposed by EPA is a six percent heat rate improvement (HRI) at coal-fired steam generating units. EPA evaluated two general approaches to improving heat rates: (1) implementing “best practices” in operations and maintenance and (2) equipment upgrades.⁶⁸ Applying this building block to Alaska, EPA assumed a six percent reduction in the CO₂ emission rate at Healy Unit 1 – from 2,852 to 2,681 lb/MWh.⁶⁹ This element of the goal calculation is not reasonable as applied to Alaska.

First, as EPA recognizes, heat rate improvements may be accomplished through the use of “best practices” or equipment upgrades only to the extent those measures have not already been implemented at a facility.⁷⁰ However, although EPA applies this element to Healy Unit 1 in the goal calculation, the agency does not provide information to support a determination that “best practices” or equipment upgrades are available to that EGU. Worse, the baseline and goal calculations ignore Healy Unit 2 altogether.

Second, EPA’s analysis of equipment upgrades relies on Sargent & Lundy (2009), a study that evaluated HRI at coal units between 200 MW and 900MW.⁷¹ The units evaluated in that report are an order of magnitude larger than the 27 and 52.5MW Healy units. Without closer study, EPA cannot reasonably conclude that the same equipment upgrades evaluated for those large units are technically feasible for the Healy units. Even if some of the equipment upgrades are technically feasible, EPA failed to support a conclusion that those upgrades otherwise qualify as BSER for small coal EGUs.⁷²

⁶⁸ Proposed Rule, 79 Fed. Reg. at 34,851, 34,856, 34,860.

⁶⁹ This figure appears to be in error. According to GVEA’s GHG emissions report, the emission rate at Healy Unit 1 was actually 3,564.89 lbs/MWh in 2012.

⁷⁰ Proposed Rule, 79 Fed. Reg. at 34,859.

⁷¹ GHG Abatement Measures TSD 2-33, 2-36 (“The EPA also reviewed the engineering studies available in the literature and selected the Sargent & Lundy 2009 study as the basis for our assessment of heat rate improvement potentials from equipment and system upgrades.”); *see* Sargent & Lundy, LLC, Coal-Fired Power Plant Heat Rate Reductions: Final Report at 1-1 (Jan. 22, 2009).

⁷² For example, one BSER criterion is cost. EPA recognizes that economy of scale causes most HRI methods to be more costly (\$/kW) on smaller unit sizes. GHG Abatement Measures TSD 2-36 n. 31.

The only information currently available reveals that a six percent HRI cannot be achieved by the Healy units. GVEA reports that a number of the HRI measures recommended by EPA have already been implemented at the coal plant and some are not available to the Healy units.⁷³ GVEA's initial evaluation suggested that heat rate improvements of 2.11% and 2.15% might be achievable at Healy Unit 1 and Unit 2, respectively.⁷⁴ Although, given variability in operating conditions, application of these measures would not necessarily result in the forecasted improvement as compared to the 2012 baseline.⁷⁵

Installation of pollution control technologies, as required by a consent decree with EPA will reverse these gains.⁷⁶ The consent decree requires GVEA to install (1) selective catalytic reduction (SCR) equipment at Unit 2⁷⁷; selective non-catalytic reduction (SNCR) controls at Unit 1⁷⁸; and (3) SCR controls at Unit 1.⁷⁹ GVEA anticipates that the SNCR equipment will degrade the heat rate of Healy Unit 1 by about 0.1% and that the installation of SCR equipment will result in a 2.87% degradation of the heat rate at each unit.⁸⁰ Thus, there are no net heat rate improvements possible in Alaska and application of this measure to determine Alaska's goal is unreasonable.

⁷³ GVEA Response, RCA Docket I-14-007, at 2 (Oct. 16, 2014).

⁷⁴ GVEA Response, RCA Docket I-14-007, Exh. A-1 (Oct. 31, 2014).

⁷⁵ GVEA Response, RCA Docket I-14-007, at 2 (Oct. 31, 2014).

⁷⁶ See Proposed Rule, 79 Fed. Reg. at 34,859 n.111; Sargent & Lundy at 5.1 (noting that emission control technologies can consume large amounts of auxiliary power).

⁷⁷ Consent Decree, *United States v. Golden Valley Elec. Ass'n, Inc.*, No. 4:12-cv-00025-RRB ¶59 (D. Alaska 2012) ("GVEA Consent Decree").

⁷⁸ *Id.* at ¶60.

⁷⁹ *Id.* at ¶¶61-63.

⁸⁰ GVEA Response, RCA Docket I-14-007, Exh. A-1 (Oct. 31, 2014).

2. Re-Dispatch cannot be executed as EPA describes because our transmission lines already operate at, or near, capacity to replace carbon intensive generation with hydroelectric and natural gas generation.

The second general category of measures that EPA identifies as BSER is to substitute generation at carbon-intensive units with generation from less carbon-intensive EGUs. Specifically, EPA evaluates displacing coal-fired steam (and oil/gas-fired steam) generation in each state by increasing generation from existing NGCC capacity toward a 70 percent target utilization rate.⁸¹ For Alaska, EPA reassigned the 2012 baseline generation at Healy Unit 1 to NGCC units to arrive at a final goal of 47% capacity factor for Alaska's NGCC units.⁸² Again, the calculation does not account for Healy Unit 2. Essentially, EPA calculated Alaska's goal based on the assumption that all generation at the Healy Power Plant could be displaced by NGCC generation. This assumption is false, both because of the transmission system limitations discussed above and because of the planned retirement of the Beluga and Sullivan NGCC EGU's.⁸³

The Healy Power Plant will provide a total of 80 MW of generation capacity for the Fairbanks load center. The plant is located adjacent to the Usibelli Coal Mine and has two coal-fired steam generating units. Healy Unit 1 commenced generation in 1967 and has a gross capacity of 27MW. Healy Unit 2, or the Healy Clean Coal Project, has a nameplate capacity of 52.5MW and, like Healy Unit 1, uses the locally produced coal.⁸⁴

⁸¹ Proposed Rule, 79 Fed. Reg. at 34,851; GHG Abatement Measures TSD 3-9, 3-26.

⁸² See Proposed Rule, 79 Fed. Reg. at 34,858 n. 106 (substitution would only occur to the extent that there is both NGCC capacity whose generation could be increased and steam EGUs whose generation could be decreased); Goal Computation TSD, App. 1.

⁸³ Chugach Response, RCA Docket I-14-007, at 11, Table 3 (Oct. 31, 2014). The Beluga and George Sullivan steamer units are being retired, converting those NGCC EGUs to simple cycle units. Chugach and ML&P have jointly built SPP as an NGCC plant, and ML&P is building George Sullivan Plant 2A as an NGCC plant. Overall, Railbelt NGCC capacity is decreasing by approximately 60 MW, reflecting the disaggregation of generation plant within the Railbelt. Simple cycle natural gas generation capacity in the Railbelt is increasing.

⁸⁴ Healy Unit 2 was constructed in 1998 as an experimental waste coal demonstration plant under the U.S. Department of Energy's Clean Coal Technology Program. However, the unit did not perform as expected and federal testing ceased in 1999.

GVEA is investing significant resources to reconstruct Healy Unit 2. This includes \$190 million in investments and a recent consent decree with EPA requiring additional pollution control measures at both Healy units. The Healy Power Plant is connected to Fairbanks, 97 miles to the north, by two transmission lines owned and operated by GVEA.

The NGCC EGUs that EPA's goal computation assumes can replace Healy's 80MW of coal generation are located more than 200 miles south of Healy, beyond the other end of the Alaska Intertie. As discussed above, this 80MW transmission line is already generally operated at capacity to deliver hydroelectric and natural gas generation to GVEA's customers in the Fairbanks load area.⁸⁵ There are no NGCC EGUs connected to the Fairbanks load center other than those connected through the south end of the Alaska Intertie. Given the current generating and transmission resources, Alaska cannot execute the second building block.

Hypothetically, GVEA could have two options to replace Healy power – (1) upgrading the Alaska Intertie to allow more power north or (2) generating power locally from other fossil-fuel fired units. Both scenarios would substantially increase the cost of power in Fairbanks – already among the most expensive regions in the country for power– significantly, raise serious resource availability and reliability concerns, and compromise the state's ability to address the PM_{2.5} non-attainment finding for Fairbanks. These options are not realistic.

a. Premature retirement of the Healy units would result in incredible costs for the utility's 45,000 ratepayers.

In any scenario, requiring GVEA to generate or purchase power from a source other than the Healy Power Plant would increase the cost of electricity. First, retiring the Healy units prematurely would involve nearly \$450 million in stranded capital costs and remaining loan principal payments.⁸⁶ Second, because coal is GVEA's least expensive power, replacing Healy coal-fueled generation would also result in significant additional annual variable costs between \$47.4 and \$60.7 million per year.⁸⁷ Upgrading the Alaska

⁸⁵ Notably the Healy units provide voltage support to the Intertie. If the Healy units were not operating, the loss of the Healy SVC would result in a reduction of transfer capacity of approximately 11 MW.

⁸⁶ H. Dale LLC, Stranded Cost Calculations for Healy Unit 1 and Unit 2 (Sept. 2014) (Attachment B).

⁸⁷ H. Dale LLC, Cost Analysis for Shutting Down GVEA Coal Units (Sept. 2014) (Attachment C).

Intertie to transport more natural gas generation north would also result in approximately \$30.2 - \$41.4 million of additional annual costs to consumers, as discussed above.

To put this in perspective, GVEA residential ratepayers already pay \$0.235668/kWh for electric utility service.⁸⁸ This is substantially higher than the rates paid anywhere else in the nation, except other parts of Alaska and Hawaii.⁸⁹ In 2013, GVEA sold a total of 1,253,161,000 kWh at retail.⁹⁰ Inflating that at the 0.78% growth rate used in the Proposed Rule would leave GVEA with sales of 1,529,731,800 kWh in 2030. Just the annual cost increases of \$90.9 million related to shutting down the Healy units identified above would result in rate increases for GVEA consumers of between \$0.05 and \$0.07/kWh. The EPA indicates that implementation of the Proposed Rule will result in rate increases of approximately \$0.01/kWh nationwide.⁹¹ There is no justification for making Fairbanks consumers bear a burden roughly six times greater than the rest of the nation, particularly when, as discussed above, the carbon emissions at issue are minimal.

b. Premature retirement of the Healy units would compromise the reliability of electric service and create risk to human health and safety as well as risk for property damage.

In any scenario, requiring GVEA to prematurely retire the Healy units would create unreasonable risks for Fairbanks area residents. First, relying on other Fairbanks area generation would be problematic because the units that would be replacing the Healy generation are scheduled to retire before 2030. Second, even if the Alaska Intertie could transport more energy north, relying on hundreds of miles of remote, difficult to access transmission line to deliver the region's energy requirements would raise reliability concerns.

As succinctly stated by GVEA's vice president of transmission and distribution, relying on NGCC generation from Southcentral Alaska would essentially put Fairbanks

⁸⁸ GVEA's Tariff at Tariff Sheets 33, 39, 39.1.

⁸⁹ RIA 2-22, fig. 2-6.

⁹⁰ GVEA's Annual Report, filed with the RCA 304 (May 1, 2014).

⁹¹ RIA 2-20 (indicating 2011 average price of just under \$0.10/kWh); *Id.* 3-42 (indicating 2030 average price of \$0.109/kWh).

“on a 350-mile extension cord.”⁹² If 100-140MW of power was carried on one line north to Fairbanks and it tripped, GVEA may experience a system-wide blackout or at the very least experience an outage for approximately 60% of its members.⁹³ In Fairbanks, loss of electric service in the winter months poses a threat to health and safety of residents. At minus 50 degrees Fahrenheit (a regular feature of our sub-arctic winters), a significant power outage would have devastating consequences for Fairbanks residents in a matter of hours.

Premature retirement of the Healy units would also compromise fuel source diversity, another essential component of reliable electric service. Generation from natural gas and hydroelectric resources is currently available to the Fairbanks load center only through the single outage contingency Alaska Intertie and only up to that line’s capacity. Petroleum fuel is available to the Fairbanks load center through the single outage contingency Trans-Alaska Pipeline System (TAPS). Coal fueled generation at Healy is available to the Fairbanks load center through both the Alaska Intertie and the Northern Intertie. The limited availability of generation and transmission resources heightens the importance of each resource to reliability.

Geographic circumstances render the continued availability of coal of particular importance to Fairbanks. To illustrate, in the event a major earthquake damaging the transmission lines and TAPS Fairbanks would be left with limited fuel and generation resources.⁹⁴ Coal from the mine that supplies the Healy Plant would be one of those few resources. Coal could be hauled to the small co-generation units in Fairbanks, which have sufficient capacity to meet emergency electric service requirements.⁹⁵

⁹² Alan Baily, EPA emission rule comes under scrutiny: Utilities say one size fits all approach to regulating power plant CO2 emissions may not work in Alaska’s unique situation, 19 Petroleum News 47, at 7 (Nov. 23, 2014).

⁹³ GVEA Supplemental Response, RCA Docket I-14-007, at 3 (Oct. 31, 2014).

⁹⁴ The southern portion of Alaska, which includes the Railbelt, suffers a greater than magnitude 8 earthquake on average every thirteen years. In 1964, Railbelt Alaska suffered the second largest earthquake ever recorded worldwide. Alaska Seismic Hazards Safety Commission, Earthquake Risk in Alaska, http://seismic.alaska.gov/earthquake_risk.html (last visited November 26, 2014). The Alaska Intertie and TAPS were constructed after 1964, and although designed to withstand an earthquake of similar magnitude, that design has not yet been tested by nature.

⁹⁵ These small coal-fueled co-generation units also provide essential space and water heating utility services to buildings on the University of Alaska Fairbanks campus, in downtown Fairbanks, and on local military bases. The water heating utility service is

Because the mine in Healy is the only operating coal mine in Alaska, emergency coal for Fairbanks will only be available if that mine remains economically viable. The mine mouth Healy 1 unit has long been part of the market keeping the coal mine operating, and as the world coal export markets retract, the Healy 2 unit will be an important factor in keeping that mine operating in the future. Without coal as a fuel source, the Fairbanks load center is just two contingencies away from inadequate electric service once locally stored petroleum fuel products have been consumed.

The importance of reliability should not be underestimated as it directly impacts the health and safety of Alaskans in our frequently extreme climatic conditions. Wintertime power disruptions caused by system integration and stability problems become life threatening in a manner of minutes when temperatures dip below minus 50 degrees Fahrenheit, as happens annually in Fairbanks. Keeping coal fuel available for use in Fairbanks is an important part of public safety.

c. Premature retirement of the Healy units may aggravate the PM_{2.5} pollution in Fairbanks.

Either option for premature retirement of the Healy units may also aggravate the PM_{2.5} pollution in the Fairbanks air shed. The increased cost of energy would encourage more residents to burn wood, a more affordable option, for space heat. And, were GVEA to rely on Fairbanks area generation, more fossil-fuel (diesel) electric generation in the Fairbanks region would again add more PM_{2.5} to the air shed.

d. Premature retirement of the Healy units would not result in significant reductions in carbon emissions.

Without upgrades to the Alaska Intertie, which is currently operating at or near capacity, the only generation resources that could replace the Healy coal generation are old, oil-fueled generation resources in North Pole and Fairbanks. Such a substitution would not result in a significant net reduction in carbon emissions. In fact, such a substitution may result in no net carbon emission reduction as the substitution could result in curtailment of non-firm renewable energy generation resources – some spill of Eva Creek wind may be required in the absence of load following generation resources at Healy. Furthermore, the total carbon footprint of these other generating resources also

essential to both the local water and sewer utility service, as their pipes would freeze during the winter in the absence of heat purchased from the coal-fueled cogeneration units in downtown Fairbanks.

includes the cost of transporting the fuel. By contrast, Healy is co-located with its fuel source, Usibelli Coal Mine.

e. Premature retirement of the Healy units conflicts with the spirit of EPA's recent consent decree with GVEA and the State.

Significantly, in November 2012, the EPA entered into a consent decree with GVEA and the Alaska Industrial Development and Export Authority (AIDEA) resolving the EPA's concerns regarding possible adverse impacts on air quality from restarting Healy Unit 2. In reliance on that consent decree, GVEA purchased Healy Unit 2 from the State and has invested nearly \$190 million to acquire, upgrade, and restart the unit.⁹⁶ Upgrades have been accomplished through a loan from the U.S. Department of Agriculture, Rural Utilities Service (RUS).

Prior to approving this loan, in April 2013, RUS prepared a Supplemental Final Environmental Impact Statement (SFEIS).⁹⁷ This SFEIS incorporated the GVEA, EPA consent decree.⁹⁸ The SFEIS specifically found that restarting Healy Unit 2 would have no "significant cumulative effects on water, air quality, or fisheries and aquatic habitat in the vicinity of the Healy Plant."⁹⁹

The EPA issued the a finding in 2009 that well mixed GHG emissions, including carbon dioxide emissions, "may reasonably be anticipated both to endanger public health and to endanger public welfare."¹⁰⁰ The EPA relied upon this finding in development of

⁹⁶ Comment letter from Cory R. Borgeson, President & CEO, GVEA, to U.S. Environmental Protection Agency at 3 (Oct. 15, 2014) (filed in docket EPA-HQ-OAR-2013-0603) ("GVEA Comment").

⁹⁷ Rural Utilities Services, U.S. Dep't of Agriculture, Supplemental Final Environmental Impact Statement for the Restart of Healy Power Plant Unity #2 (April 2013) ("SFEIS").

⁹⁸ SFEIS 1-15 to 1-16, 3-14 to 3-5.

⁹⁹ SFEIS 4-10.

¹⁰⁰ EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66496, 66497 (Dec. 15, 2009) ("Endangerment Finding").

the Proposed Rule,¹⁰¹ and thus this information was known in 2012 when EPA signed the consent decree with GVEA and the State of Alaska, and in 2013 when RUS prepared the SFEIS. The EPA did not indicate in either the 2012 consent decree or the 2013 SFEIS that the Healy Unit 1 and Unit 2 would not be allowed to operate for their full economic lives. Nor did EPA indicate that GVEA would be economically penalized for operating these plants beyond the penalties specifically stated in the consent decree.

GVEA, the State of Alaska, and RUS have all proceeded with restarting operation of Healy Unit 2 in reasonable reliance on the consent decree and EPA's silence during development of the SFEIS. As discussed above, neither Healy Unit 1 nor Healy Unit 2 can execute building block one to improve their heat rates as EPA assumes in the goal calculation. Applying building blocks two, three, or four to avoid use of these units would effectively be a federal taking of the investment GVEA is reasonably making to restart Healy Unit 2. Nor would it be reasonable for EPA to penalize other entities for the reasonable actions of GVEA through the imposition lower emission limits to offset the emissions the Healy units. EPA should exclude Healy Unit 1 and Unit 2 from the list of affected EGUs in Alaska for purposes of determining compliance with the Proposed Rule.

3. There are real limits to our ability to include new renewable energy resources in the generation mix.

EPA's third building block requires substituting generation at affected EGUs with expanded low-or zero-carbon generation. Specifically, EPA proposes completing all nuclear units currently under construction, thereby avoiding retirement of about six percent of existing nuclear capacity,¹⁰² and increasing renewable electric generation capacity over time through state-level renewable generation targets consistent with renewable generation portfolio standards that have been established by states in the same region.¹⁰³ EPA assumes that new and incremental renewable energy can be integrated into electric distribution and transmission systems at a reasonable cost and without compromising safety or reliability. There are significant limits to our ability to implement building block 3 in Alaska.

¹⁰¹ RIA 1-1.

¹⁰² The measures relating to nuclear generation do not relate to Alaska. *See* AS 44.99.120.

¹⁰³ Proposed Rule, 79 Fed. Reg. at 34,851.

First, geographic and economic constraints limit the availability of utility grade renewable energy resources. Utility grade wind and geothermal generation resources are generally located in southwest and western Alaska, hundreds of miles away from transmission facilities connected to affected EGUs.¹⁰⁴ Given the current state of technology and the low angle of sunlight during much of the year, our solar resources are not utility grade.¹⁰⁵ Alaska is actively investigating biomass, hydrokinetic, and hydroelectric resources, and developing those that appear viable. However, again, many of these resources are also not located within economic reach of load served by an affected EGU.¹⁰⁶

Second, transmission and economic constraints dictate that only smaller renewable energy projects can be integrated. As previously described, the relevant transmission lines are already operated substantially at capacity to transfer hydroelectric and natural gas generation to load. The cost of making substantial upgrades to the existing transmission infrastructure would make most renewable energy projects uneconomic. Therefore, most new renewable energy projects will have to be sized to interconnect with their local distribution system. Generally only projects producing 2 MW or less can be interconnected with local distribution systems. This lack of scale substantially affects project economics. Without economies of scale, Alaska does not have the same opportunities to develop projects as the interconnected continental states.

Third, the affected utilities in Alaska have limited capacity to accommodate additional non-firm energy, particularly intermittent generation sources such as wind and solar.¹⁰⁷ To ensure reliability of the system, firm generation resources must be available to follow intermittent generation resources. Firm generation resource capacity that is sufficiently nimble to continuously follow load in addition to intermittent generation resources such as wind and solar must be continuously online. The availability of this type of firm generation capacity is limited in Alaska. Additionally, increased cycling of fossil units occasioned by following intermittent generation will decrease the unit's efficiency, leading to an increase in CO₂ emissions.

¹⁰⁴ Renewable Energy Atlas 2-4 (existing); 8-9 (geothermal); 16-17 (wind).

¹⁰⁵ *Id.* at 14-15.

¹⁰⁶ *Id.* at 6-7 (biomass); 10-11 (hydroelectric); 12-13 (hydrokinetic).

¹⁰⁷ Storage hydroelectric generation can be firm. However, in Alaska, many water resources freeze in winter – seasonally limiting the availability of storage hydroelectric generation capacity to the amount of water in storage at the time of freeze-up. Because the output of these resources tends to fluctuate seasonally in a predictable manner, continuous following is not required.

Measures to regulate wind and solar generated energy could include installation of large batteries and flywheels at cost of about \$2,000 per kW.¹⁰⁸ The integration of significant amounts of non-firm power may also significantly de-optimize dispatch and result in higher fuel and generation operation and maintenance costs.¹⁰⁹ While our utilities are actively examining options for new renewable energy resources, many renewable energy projects are simply uneconomic. At least one utility notes that the projects typically cost two to three times the avoided cost of gas-fired generation.¹¹⁰

Fourth, our ability to incorporate new renewable energy, particularly on the timeline required by this rule, is infused with substantial uncertainty. In many cases, federal environmental studies and permitting requirements and policy create significant barriers to developing even reliable firm renewable energy resources that could be safely absorbed into Alaska's electric utility systems, such as storage or lake tap hydroelectric generation. Declining prices for Alaska oil is reducing the State's ability to provide financing for new renewable energy projects.

4. Demand side energy efficiency programs are not sufficiently supported and are not suitable for inclusion in a state plan.

The fourth BSER measure proposed by EPA is demand side energy efficiency programs. EPA proposes adjusting the CO₂ emission rate for affected EGUs by the amount of generation that is avoided as a result of demand-side energy efficiency measures. Specifically, EPA proposes increasing demand side energy efficiency efforts by an additional increment each year from 2020 to 2029.¹¹¹

To calculate the impact of demand side energy efficiency measures, EPA estimated that each state's annual incremental savings rate increases from its 2012 baseline to a target rate of 1.5 percent of statewide generation over a period of years starting in 2017. States are estimated to increase their savings rate level by 0.2% per year. Once reached, the 1.5% incremental annual savings is maintained through 2029. Alaska would achieve 1.2% cumulative savings by 2020 and 9.45% savings by 2029.¹¹² The

¹⁰⁸ Chugach Response, RCA Docket I-14-007, at 4 (Oct. 31, 2014).

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ Proposed Rule, 79 Fed. Reg. at 34,858.

¹¹² Proposed Rule, 79 Fed. Reg. at 34,843.

avoided generation is a percent of *statewide* electric generation which here translates to avoiding 744GWh of generation annually by 2030.¹¹³

EPA's record does not contain a basis for the mandated implementation of demand side energy efficiency measures. First, EPA acknowledges that the proposed level of DSM performance is beyond what may be achievable – the proposed level of performance has not been previously sustained nationally and that the presumed cumulative energy efficiency savings are well above the average savings that most states have achieved to-date. Second, EPA relied on very limited data. EPA used information reported by only 792 utilities in EIA Form 861 to determine the historic and current impacts of EE programs.¹¹⁴ Of the 792 reporting utilities, only six are in Alaska. Of those, only one, GVEA, is connected to an affected EGU. GVEA reported a total savings of 1,517 MWh in 2012 from energy efficiency efforts of 982 residential and 535 commercial customers.¹¹⁵ These savings, around 0.2% per year, do not match the rate of EE implementation dictated by EPA, 1.5% per year. The experience of one utility does not provide adequate support for the magnitude of electric energy efficiency measures EPA forecasts as achievable statewide over the next 13 years.

The high cost of power in Alaska already incentivizes consumers to implement energy efficiency measures without government intervention. This conclusion is supported GVEA's and Chugach's reports of declining trends in per customer usage since 2004 and 2000 respectively.¹¹⁶ Our utilities also note that they have actively educated their customers about measures to reduce energy consumption.¹¹⁷ At some point, the reasonable cost options for reducing energy consumption will be exhausted. Presuming, as EPA does in this Proposed Rule, that declining trends will be maintained at the same pace indefinitely is irrational.

¹¹³ GHG Abatement Measures TSD, App. 5-4, Opt 1 – Cum Savings GWh, at Q55.

¹¹⁴ GHG Abatement Measures TSD 5-16, 5-31; EIA, Electric power sales, revenue, and energy efficiency Form EIA-861 detailed data files for 2012, *dsm_2012.xls*, available at <http://www.eia.gov/electricity/data/eia861/>.

¹¹⁵ EPA, GHG Abatement Measures TSD, App. 5-4, Comprehensive Results: State Goal Setting and Impacts Assessment, EPA-HQ-OAR-2013-0602-1294.

¹¹⁶ Chugach Response, RCA Docket I-14-007, at 4 (Oct. 31, 2014); ML&P Response, RCA Docket I-14-007, at 5 (Nov. 3, 2014).

¹¹⁷ Chugach Response, RCA Docket I-14-007, at 8.

This does not mean that the State of Alaska has not implemented energy efficiency programs. The attached November 25, 2014 Alaska Housing Finance Corporation Board Report shows that since 2008, the Alaska Legislature has appropriated \$602.5 million just for home energy efficiency and weatherization programs. These programs have resulted in upgrades to over 37,000 residences, with an annual savings of the equivalent of 932 GWh of electricity. Of course, most of these residences are not interconnected with our EGUs and what we are saving is fuel oil or firewood consumed in relatively inefficient residential units. The net carbon dioxide emission savings from this investment cannot be calculated, but is almost certainly greater than would have been saved if an equivalent number of MWh of generation had been reduced from our comparatively efficient EGUs.

Demand side energy programs are popular, because they provide low income consumers an opportunity to reduce their cost of living and provide public benefits. However, in Alaska we have determined that the emphasis of demand side energy programs needs to be placed on the space heating needs of our residents. In our climate, space heating is a health and safety concern that simply has to have priority over other potential demand side energy efforts. Our efforts have probably resulted in, and will continue to result in, a greater reduction in total carbon dioxide emissions than the goal established by the EPA for Alaska under the fourth BSER. The EPA should exempt Alaska from the fourth BSER rather than try to force us into divert limited resources into efforts that are unlikely to be as effective at reducing carbon dioxide emissions.

Several other characteristics of energy efficiency programs call into question the appropriateness of this measure as a building block generally. First, as a non-dispatchable resource, energy efficiency cannot be reasonably relied upon to replace generation. Second, DSM energy efficiency programs are voluntary on the part of consumers and inclusion of these programs expands enforceability into the homes and businesses of Alaskan residents. The state cannot guarantee or enforce consumer participation in any energy efficiency programs designed to meet an emissions limit. Third, DSM energy efficiency cannot be measured or verified – measurement of these types of programs is based on multiple layers of estimates.¹¹⁸ In addition, energy efficiency programs are subject to a rebound effect as customers use the more efficient technology more than the old inefficient technology. Therefore, energy efficiency savings rarely result in the savings expected.

5. Attempt to implement the Proposed Rule in Alaska would likely result impose unreasonable costs.

¹¹⁸ State Plan Considerations TSD 42 (recognizing that “many states with energy efficiency programs use different input values and assumptions” to estimate energy savings from such programs).

It must be recognized that ratepayers in Alaska will bear a substantially greater burden under this rule than ratepayers in the interconnected states. The cost of electric service is already high here. In 2010, Alaska had the seventh highest cost of electricity, 13.28 cents/kWh, compared to other states (average 9.1 cents/kWh).¹¹⁹ GVEA customers paid approximately 19.08 cents/kWh in 2010 – more than any other state except Hawaii.¹²⁰ GVEA's current tariffs reflect residential rates of approximately 23.56 cents/kWh.

With so few ratepayers, Alaska cannot take advantage of economies of scale that may be available to other states. The Midcontinent Independent System Operator (MISO) concluded that “bigger is better” when meeting the Proposed Rule – that compliance costs could be reduced substantially through a regional approach to compliance.¹²¹ However, Alaska does not have economies of scale itself, and does not have the opportunity to participate in a regional compliance approach. Alaska's population and energy market are small compared to other states; the costs of implementation borne by fewer ratepayers than elsewhere in the U.S. Moreover, the affected EGUs in Alaska all belong to either cooperative or municipal utilities. As a result, the financial impact of this rule will be unavoidably felt by utility members and resident ratepayers, not investors.

6. EPA's BSER measures cannot be implemented or enforced within the scope of current state law and policy.

Under this Proposed Rule, the EPA requires that all measures in an implementing State Plan must be enforceable and verifiable. Given the current statutory authority of the relevant state agencies, and how those statutory provisions have been interpreted historically, it is unlikely that Alaska's state agencies currently have the statutory authority to implement EPA's regulations. In fact, the BSER measures will likely directly conflict with the ratemaking principles employed by the RCA.¹²²

¹¹⁹ Alaska RIRP 3-2.

¹²⁰ Alaska RIRP 3-4 to 3-5.

¹²¹ *See also*, EPA Legal Memorandum 90 n. 73, 91 (acknowledging costs are less for region-wide re-dispatch as compared to an intra-state approach).

¹²² FERC Commissioner Clark observes that “it's not hard to envision a future jurisdictional train wreck.”

For example, in ensuring utility rates are set according to the “cost-causer, cost-payer principle -- costs are assigned to each class of customer (e.g., residential, commercial, and industrial) in accordance with costs incurred to provide service to the class. Anytime one class of customer pays more than its respective allocated costs, the class is cross-subsidizing other classes. Here, because the Proposed Rule sets an emission rate for all “affected EGUs” in the state, rather than the specific affected EGUs, cross-subsidies may occur amongst ratepayers of the various utilities in the state. While cross-subsidies may be sorted out in context of setting rates for a single utility – sorting out the allocation of compliance costs amongst several utilities may prove challenging.

Consequently, implementation of this rule will likely require involvement of the Governor’s office and the legislature. New legislation may be required to (1) allocate responsibility for compliance and enforcement amongst state agencies; (2) require mandatory integrated resource plans (IRPs) based on models consistent with the Proposed Rule; (3) provide the RCA with siting authority; (4) authorize new energy efficiency and demand side energy efficiency standards as well as the accompanying evaluation, measurement and verification (EM&V) methods. The necessary remedial legislation may be difficult to obtain and would involve some additional costs for the state. Given the rule’s potential impact on the cost and reliability of electric service, as well as, the recurring observation that this rule would require states to cede authority to EPA¹²³ – obtaining the necessary remedial legislation may be difficult.

D. Alaska should be exempted from the rule because we are already reducing carbon emissions using methods tailored to our unique circumstances - focused on rural communities and non-affected EGUs – that are incompatible with EPA’s approach.

While Alaska cannot reduce carbon emissions from the specific “affected EGUs” in a timely manner without exorbitant cost or compromising reliability of electric service, Alaska’s existing informal energy policy has the impact of reducing carbon emissions –

¹²³ FERC Commissioner Tony Clark observed that the Proposed Rule has the potential to “comprehensively reorder the jurisdictional relationship between the federal government and the states, dramatically altering these traditional lines of authority” and in spite of EPA’s promises of flexibility, states are “ceding ultimate authority to EPA” by “voluntarily agreeing to seek EPA approval of its overall integrated regulation of the electrical industry.” testimony before the House Committee on Energy and Commerce (July 29, 2014). Commenting on the reliability implications of the rule, FERC Commissioner Mueller cautioned that EPA must involve state and federal agencies with expertise governing the electric utility sector since “the laws of physics trump written words.”

the state supports several renewable energy, energy efficiency, and natural gas development programs. However, these efforts likely will not count toward compliance with the Proposed Rule because they impact non-affected EGUs or target space heat, rather than electric, efficiency. Furthermore, our Railbelt utilities are just completing a substantial upgrade of their generation fleet, resulting in substantial heat rate improvements. EPA should exempt Alaska from this rule and allow the state to continue with ongoing energy projects.

1. New Generation Fleet

Five of the Railbelt utilities have new generation units with useful lives exceeding 30 to 40 years. In 2012, Chugach began receiving energy from the privately owned 17.6 MW Fire Island Wind Project in Anchorage. Later in 2012, GVEA began taking energy from its 25 MW Eva Creek Wind Project. In 2013, Chugach and ML&P jointly commissioned the 183 MW NGCC the Southcentral Power Plant (SPP) in Anchorage. Later in 2013, HEA completed addition of a steamer unit to their Nikiski simple cycle unit, making that an 80 MW NGCC. In 2013, MEA began construction of a 170 MW, ten-unit reciprocating engine natural gas fueled generation plant in Eklutna, which is anticipated to be completed in 2015. In 2014, HEA installed a new 47 MW simple cycle natural gas unit in Soldotna. In 2014, ML&P began construction of the new 120 MW NGCC George Sullivan Plant 2A, next door to its existing George Sullivan Plant 2. Plant 2A is expected to be complete in 2016. In 2013, GVEA acquired Healy Unit 2 from the State of Alaska, and in 2014 began construction of the upgrades required to restart that 52.5 MW coal fueled unit. Healy Unit 2 is expected to be restarted in 2016.

With the installation of these new units, Chugach plans on retiring the steamer unit 8 at Beluga in 2015, and retiring the remaining Beluga units over the following few years. ML&P plans on retiring the George Sullivan Plant 2 steamer unit 6 immediately, and using the remaining Plant 2 units in simple cycle. With Healy Unit 2 in operation, GVEA plans on substantially reducing generation from its oil fueled units. The new NGCC units have substantially better heat rates than the retired units, and the new simple cycle units have substantially better heat rates than the older simple cycle units. By 2016, it is anticipated the three George Sullivan Plant 2A units and Healy Unit 2 will qualify as affected EGUs. By 2017, it is anticipated that no Beluga or George Sullivan Plant 2 units will qualify as affected EGUs. It is not anticipated that the MEA Eklutna units or the HEA Soldotna unit will ever qualify as affected EGUs.

Given the recent installation of these new units, Alaska has already made strides towards improving our carbon profile from our electric utility sector – federal intervention at this juncture may only result in unintended financial consequences for our

utilities. This would be particularly irrational given the limited significance of carbon emissions from this sector in Alaska.

2. Significant renewable energy generation and energy efficiency programs have been implemented in Alaska

Second, though many of these projects would not be eligible for inclusion in a state plan under the Proposed Rule, Alaska has, and continues to, aggressively pursue renewable energy generation and energy efficiency opportunities. To promote development of renewable energy generation and energy efficiency measures, Alaska's legislature established aspirational energy goals¹²⁴ to source fifty percent of the state's total yearly electric load from renewable and alternative energy sources by 2025 and to facilitate a fifteen percent increase in energy efficiency by 2020. Since 2008, Alaska has appropriated in excess of \$1.34 billion pursuing this informal energy policy.¹²⁵ These funds have created and supported the Renewable Energy Fund,¹²⁶ the Emerging Energy Technology Fund,¹²⁷ the Alaska Housing Finance Corporation's Energy Rebate Program,¹²⁸ the Power Project Fund,¹²⁹ and others.

¹²⁴ Sec. 1, ch. 82, SLA 2010.

¹²⁵ Chapter 11, Section 22, 2008 Alaska Session Laws (\$300,000,000); Chapter 1, Sections 4 and 6, 2008 Alaska Fourth Special Session Laws (\$110,000,000); Chapter 12, Sections 1 and 2, 2009 Alaska Session Laws (\$1,149,700); Chapter 15, Section 1, 2009 Alaska Session Laws (\$31,200,000); Chapter 17, Section 7, 2009 Alaska Session Laws (\$56,622,700); Chapter 41, Sections 1 and 2, 2010 Alaska Session Laws (\$2,481,300); Chapter 43, Sections 7, 10, and 23(c), 2010 Alaska Session Laws (\$84,383,050); Chapter 3, Sections 1 and 2, 2011 Alaska First Special Session Laws (\$4,492,400); Chapter 5 Sections 1, 4, and 19(c), 2011 Alaska First Special Session Laws (\$370,602,031); Chapter 15, Section 1 2012 Alaska Session Laws (\$5,769,000); Chapter 17, Sections 1 and 15(b), 201 Alaska Session Laws (\$95,051,159); Chapter 14, Section 1, 2013 Alaska Session Laws (\$6,728,700); Chapter 16, Sections 1, 4, and 21(b), 2013 Alaska Session Laws (\$180,250,000); Chapter 16, Section 1, 2014 Alaska Session Laws (\$6,728,700); Chapter 18, Sections 1 and 4, 2014 Alaska Session Laws (\$89,115,060).

¹²⁶ AS 42.45.045.

¹²⁷ AS 42.45.375.

¹²⁸ AS 18.56.410.

¹²⁹ AS 42.45.010.

Just one of these programs, the Renewable Energy Fund (REF), has resulted in substantial gains towards our renewable energy goals. The REF assists communities in reducing and stabilizing the cost of energy by providing public funding for the development of qualifying and competitively selected renewable energy projects. The program is designed to produce cost-effective renewable energy for heat and electric power to benefit Alaskans statewide.

| Renewable Energy Fund Rounds 1-6 Funding Summary | Totals |
|---|----------|
| RE Project Applications Funded | 251 |
| Appropriated (\$M) | \$ 227.5 |
| Match Provided (\$M) | \$ 102.6 |
| Other Known Funding (\$M) ¹³⁰ | \$ 26.1 |
| Total appropriated, match and other known funding | \$ 356.2 |

Between its inception in 2008 and 2012, the Renewable Energy Fund has contributed to the completion of 38 renewable energy projects, 23 of which produce electricity.¹³¹ These early projects avoided the emission of 115,527 tonnes of carbon emissions in 2012.¹³² Statewide, another 72 projects have been funded through construction, and 66 more have been funded for earlier phases of development such as final design and feasibility.¹³³

In 2013, the constructed REF projects displaced over 12.9 million gallons of diesel fuel equivalent and avoid approximately 131.7MT of CO₂.¹³⁴ Most of the displaced fuel

¹³⁰ Represents only amounts recorded in grant document, does not capture all other funding.

¹³¹ Alaska Energy Authority, Renewable Energy Grant Recommendation Program: Impact Evaluation Report 7-11 (October 29, 2012) available at http://www.akenergyauthority.org/re-fund-6/4_Program_update/AlaskaREFundImpactEvaluationReport_Volume2.pdf (annual savings of 9.8 million gallons of diesel consumption through first 38 projects completed) ("AEA Impact Report").

¹³² AEA Impact Report at 11.

¹³³ AEA Impact Report at 9.

¹³⁴ Alaska Energy Authority, Renewable Energy Fund: Status Report and Round VII Recommendations 2 (Rev. April 2014) available at http://www.akenergyauthority.org/re-fund-7/4_Program_update/REFStatusReport2014_0426_Final_LowRes.pdf ("REF Status Report").

is diesel fuel, with smaller displacement of naphtha, natural gas, and propane. As more of the projects complete construction, the renewable energy generation and displacement of fossil fuels will continue to grow. By 2015, these efforts are forecast to displace nearly 20 million gallons fuel equivalent annually – avoiding 204.2 MT of CO₂ emissions.¹³⁵

Notably, State funds have been used to finance hydroelectric projects serving communities throughout the state. By example, the state has financially supported the Terror Lake Project on Kodiak, the Solomon Gulch and Allison Creek Projects near Valdez, the Power Creek and Humpback Creek projects near Cordova, Chuniisax Creek Project in Atka, Town Creek Project in Akutan, Delta Creek Project near King Cove, and the Yerrick Creek Project in Tok. The state is also currently assessing the Susitna-Watana hydroelectric project to serve the affected EGU's service areas. New wind generation from Eva Creek and Fire Island are other recent, and significant, additions to Alaska's renewable energy generation.

The state of Alaska also funds demand-side energy programs¹³⁶ The Commercial Building Energy Audit (CBEA) program reimburses owners for the cost of an ASHRAE level II audit. The Village Energy Efficiency Program (VEEP) provides grants to small communities (population up to 8,000) with high energy costs for efficiency measures in public buildings and facilities, including water systems. The state also supports public education and outreach campaigns. Other programs focus on the residential sector. Our weatherization program provides efficiency upgrades for income eligible households. The Home Energy Rebate program provides rebates of up to \$10,000 for efficiency upgrades to owner-occupied homes regardless of income. There are also interest rate credits available for home mortgages. Like, renewable energy projects, energy efficiency projects are frequently implemented in rural communities with islanded electric systems.

3. EPA's proposed approach to reduce carbon emissions does not align with Alaska's policies.

Alaska's energy efficiency programs often focus on improving thermal, rather than electric, efficiency. More than 35% of total REF funding has gone to heat recovery and biomass heat projects. This focus is appropriate. First, thermal energy efficiency measures displace diesel fuel and reduce carbon emissions. But this approach also serves to reduce, rather than increase, costs to customers. In a typical Alaska household, 80% of

¹³⁵ REF Status Report 5.

¹³⁶ Weatherization, Home Energy Rebate Program, Energy Efficiency and Education and Outreach, Commercial Building Energy Audit Program, Village Energy Efficiency Program, and loan funds for both public and private building efficiency retrofits.

the energy consumed is used for space and water heat. Consequently, the programs tend to be more successful as homeowners are more inclined to invest in energy efficiency measures that reduce thermal energy consumption. Furthermore, in our arctic and sub-arctic climate, thermal energy has significantly greater import for health and human safety.

Alaska's renewable energy and energy efficiency projects also often focus on communities with the highest costs. Of the nearly quarter of a billion dollars committed to renewable energy projects in Alaska through the REF, only 12% has been for projects in the affected EGU's service areas.¹³⁷ There are also good reasons to focus on projects in rural communities. In rural communities, power costs can be as high as \$2.16 /kwh.¹³⁸ By comparison, the weighted average cost of power in Anchorage, Fairbanks and Juneau is approximately \$0.1482 /kwh.¹³⁹ Alaskan consumers pay among the highest rates for heating and electricity in the country—50% higher than the U.S. average. According to the Energy Information Administration, in 2012, Alaska ranked second in residential electricity costs with an average price of 17.91 cents/kWh as compared to the national average of 11.52 cents/kWh. However, 159 rural villages or 85% of Alaska's communities surpass 1st ranked Hawaii's 37.05 cents/kWh. Remote communities face greater challenges in ensuring electric service reliability.¹⁴⁰

To be credited towards compliance with this Proposed Rule, energy efficiency measures must relate to electric energy produced at affected EGUs. Thus, the rule will likely forcibly refocus state energy efficiency programs from thermal energy to electric generation. Similarly, because many rural communities are not connected to the "affected EGUs" the renewable energy and energy efficiency measures may not qualify for inclusion in Alaska's State Plan. Forcing Alaska to focus on reducing carbon emissions within the Railbelt could jeopardize funding for existing and future energy programs in

¹³⁷ REF Status Report 3.

¹³⁸ Alaska Energy Authority, Power Cost Equalization Program Statistical Data by Community: July 1, 2012 to June 30, 2013, at 98 (February 2014), *available at* <http://www.akenergyauthority.org/PDF%20files/pcereports/FY13StatisticalRptComt.pdf> (Lime Village).

¹³⁹ Order U-14-080(1), *Order Issuing Notice of Proposed Base Amount for Power Cost Equalization Calculations, Setting Comment Deadline, Scheduling Hearing, Addressing Statutory timeline, Designating commission Panel, and Appointing Administrative Law Judge*, at Appendix A (RCA May 19, 2014).

¹⁴⁰ AEA Impact Report 15.

rural communities where the state is partnering with Village Corporations, Tribal entities and Village Utility Cooperatives.¹⁴¹ This result is contrary to common sense and Alaska's current energy policy; and furthermore, inconsistent with EPA's environmental justice mandate to avoid disproportionately high and adverse human health or environmental effects on minority and low income communities.

4. The several projects seeking to bring natural gas to Fairbanks would not be "enforceable" measures qualifying for inclusion in a State Plan.

There are a number of concurrent, ongoing efforts to bring natural gas to Fairbanks that may be compromised by the application of this rule.¹⁴² For example, the State of Alaska is investing approximately \$350 million dollars through the Interior Energy Project to bring liquefied natural gas (LNG) into Fairbanks by 2016.¹⁴³ Work on this "supply chain" project construction of a North Slope LNG plant, securing long range transport contracts, increasing community LNG storage capacity, expanding the existing limited natural gas distribution system in Fairbanks and starting a new distribution utility in the outlying area. An important aspect of this effort is engaging potential large anchor consumers of natural gas to purchase the LNG from this project. Converting from liquid fuels to cost-effective natural gas for local electrical generation will help to solidify the economics of the natural gas project, thus helping to ensure that cleaner burning fuel is also available for distribution for space heating through a local utility. Delivering natural gas to Fairbanks and converting electric generation from liquid fuels would also reduce carbon emissions.

However, these extraordinary efforts would not qualify for inclusion in any state plan under this Proposed Rule. First, these projects are not measures that could be "enforceable" or that should be subject to citizen suits. Second, many of the generators that may be affected by the arrival of natural gas in Fairbanks are diesel or naphtha units not covered by the rule. Third, to the extent these efforts focus on space heating, those

¹⁴¹ This result is also inconsistent with EPA's environmental justice mandate to avoid disproportionately high and adverse human health or environmental effects on minority and low income communities. *See* Executive Order 12,898, 59 Fed. Reg. 7629 (February 16, 1994).

¹⁴² Bill White, Guide to Alaska natural gas projects (September 10, 2014) available at <http://www.arcticgas.gov/guid-alaska-natural-gas-projects#lng>.

¹⁴³ Interior Energy Project: Bringing North Slope Natural Gas to Alaskans, <http://www.interiorenergyproject.com> (updated Oct. 8, 2014).

measures would not reduce emissions at “affected EGUs” and would not be credited to the state.

As with the retirement of the Healy coal units, disrupting Alaska’s plans to bring natural gas to Fairbanks may also have the irrational result of contributing to air quality problems. A portion of the Fairbanks North Star Borough, including the cities of Fairbanks and North Pole, is designated as a fine particulate matter nonattainment area. Space heating from wood, coal, and fuel oil all contribute to the issue. One of the challenges in reducing PM_{2.5} air pollution in these communities is a lack of available, affordable, cleaner-burning natural gas in the community. The increasing cost of electricity in this region has contributed to a significant increase in the use of wood burning stoves for space heating, increasing both particulate and carbon emissions as residents try desperately to lower their overall monthly energy costs. EPA’s Proposed Rule would only further increase energy costs. By contrast, projects already being assessed in Alaska could have substantial benefits to the state and national economy while simultaneously reducing carbon emissions.

III. Alternatively, the proposed interim and final emission rates should be clarified and revised.

If EPA applies a 111(d) rule to existing EGUs in Alaska, several modifications should be made to the rule. First, EPA should clarify the criteria for “affected EGUs. EPA should apply correct data to the goal calculation. Additionally, while EPA may not have the authority to require certain measures, EPA should allow compliance credit for actions that reduce CO₂ emissions even if the action does not relate to an “affected EGU.”

A. Affected Electric Generating Units

1. States should be given compliance credit for the full measure of CO₂ emissions avoided by fuel conversion.

The Proposed Rule is unclear on how existing units that convert from liquid fuel to natural gas are to be addressed in any state plan to implement and attain the proposed CO₂ emission target. This is relevant for Alaska. GVEA has a combined cycle unit in North Pole that currently operates on naphtha. Naphtha is a liquid fuel, sometimes referred to as jet fuel, and thus the carbon emissions from this unit were excluded from the calculation of the EPA’s proposed goal for Alaska.¹⁴⁴ However, the North Pole combined

¹⁴⁴ Goal Computation TSD 29-30; EPA, 2012 Unit-Level Data Using the eGRID Methodology (xls), EPA-HQ-OAR-2013-0602-0254, Lines 9220, 9221, column F (showing that these units use Jet Fuel) (“2012 Unit-Level Data”).

cycle unit was designed for economic conversion to use of natural gas as fuel, should natural gas fuel become economically available in North Pole.

In 2012, the North Pole combined cycle unit produced 423,592 MWh of energy and emitted 222,586.3 tons of carbon dioxide according to the EPA.¹⁴⁵ This equates to an emission rate of 1,158.5 pounds/MWh.¹⁴⁶ Also according to EPA, on average use of natural gas as fuel would result in a 26.6% lower carbon dioxide emission rate than jet fuel.¹⁴⁷ Assuming that there is no heat rate penalty in converting the North Pole combined cycle unit to natural gas, at 2012 energy production levels such conversion would result in a net savings of 59,208 tons of carbon dioxide for a net emission rate of 850 pounds/MWh.

It appears that, as currently drafted, the Proposed Rule would give Alaska credit for producing 423,592 MWh of energy from an affected EGU with an emission rate of 850 pounds/MWh. This would effectively ignore the emissions savings achieved between the 1,158.5 pounds/MWh actually achieved by the North Pole combined cycle unit in 2012, and the 1,003 pounds/MWh goal established by the EPA. In effect, in paying to get natural gas fuel to North Pole, GVEA ratepayers would be reducing their carbon dioxide emissions by nearly 30,000 tons, and getting no credit for that expenditure under the Proposed Rule.¹⁴⁸ The Proposed Rule needs to be rewritten to provide incentives for ratepayers to make this sort of investment.

2. EPA should clarify the actual sales criteria for affected EGUs.

The “affected EGU” criteria in proposed 40 C.F.R. §60.5795 (b)(1) should include the “and supplies” language included in (b)(2). This would be consistent with EPA’s intent to include an actual sales threshold in the “affected EGU” criteria for existing steam boilers.¹⁴⁹ However, as currently drafted, without the “and supplies” component,

¹⁴⁵ 2012 Unit-Level Data, Lines 9220, 9221, columns M, N.

¹⁴⁶ $[(222,586.3 \text{ MT}) \times (2,204.62 \text{ pounds/MT})] \div 423,592 \text{ MWh} = 1,158.469$ pounds/MWh.

¹⁴⁷ 2012 Unit-Level Data, EFCO2eGRIDyr2010.xls, lines 13, 21 $[(19.70 - 14.46) \div 19.70] = 0.265989$.

¹⁴⁸ $[(1,158.5 \text{ pounds/MWh} - 1,003 \text{ pounds/MWh}) \times 423,592 \text{ MWh}] \div 2,204.62$ pounds/MT = 29,877.5

¹⁴⁹ Proposed Rule, 79 Fed. Reg. at 34,854/2. Alaska supports EPA’s intention to include an actual sales threshold to the “affected EGU” criteria. It would be unreasonable

the proposed regulation fails to clearly convey this intent. EPA should also clarify that when a unit is de-rated such that the potential electric output falls under the 25MW net capacity or 219,000MWh net output threshold, the unit no longer qualifies as an affected EGU.

This clarification is necessary to understand the status of Healy Unit 1 under the Proposed Rule. Healy Unit 1 is a coal fueled steam generating unit constructed for the purpose of supplying 22 MW of net electric output to the grid.¹⁵⁰ Today, Healy Unit 1 is capable of providing a gross output of 27 MW.¹⁵¹ Still, in practice, the net output of Healy Unit 1 typically falls short of 219,000MWh per year.¹⁵²

to expect small, low generating steam units to bear the burden of complying with this rule – especially where EPA has only evaluated the feasibility and cost of compliance for larger units.

¹⁵⁰ Comment letter from Cory R. Borgeson, President & CEO, GVEA, to U.S. Environmental Protection Agency at 1 (Oct. 15, 2014) (filed in docket EPA-HQ-OAR-2013-0603) (“GVEA Comment”). At the time the unit was constructed Healy Unit 1 likely did not meet the “affected EGU” criteria outlined in proposed 40 C.F.R. §60.5795. Proposed Rule, 79 Fed. Reg. at 34,954; *also see id.* at 34,854/2.

¹⁵¹ GVEA Comment 1.

¹⁵² For the twelve month period ending April 2014, Healy Unit 1 net output was **202,687.2 MWh**. GVEA, TA254-13 at Exhibit 7c filed (May 30, 2014). For the twelve month period ending December 31, 2013, Healy Unit 1 net output was **190,763.5 MWh**. GVEA, 2013 Annual Report, 402 (filed May 1, 2014). For the twelve month period ending December 31, 2012, Healy Unit 1 net output was **215,203.5 MWh**. GVEA, 2012 Annual Report, 402 (filed May 1, 2013) For the twelve month period ending December 31, 2011, Healy Unit 1 net output was **177,552.2 MWh**. GVEA, 2011 Annual Report, 402 (filed April 26, 2012). For the twelve month period ending December 31, 2010, Healy Unit 1 net output was **189,306.0 MWh**. GVEA, 2010 Annual Report, 402 (filed April 4, 2011). For the twelve month period ending December 31, 2009, Healy Unit 1 net output was **212,950.0 MWh**. GVEA, 2009 Annual Report, 402 (filed April 2, 2010). For the twelve month period ending December 31, 2008, Healy Unit 1 net output was **220,576.0 MWh**. GVEA, 2008 Annual Report, 402 (filed May 5, 2009). For the twelve month period ending December 31, 2007, Healy Unit 1 net output was **213,900.0 MWh**. GVEA, 2007 Annual Report, 402 (filed April 1, 2008). For the twelve month period ending December 31, 2006, Healy Unit 1 net output was **210,713.0 MWh**. GVEA, 2006 Annual Report, 402 (filed April 2, 2007). For the twelve month period ending December 31, 2005, Healy Unit 1 net output was **219,800.0 MWh**. GVEA, 2005 Annual Report, 402 (filed April 4, 2006). For the twelve month period ending December 31, 2004, Healy

Both, the potential and actual output of Healy Unit 1 may decrease in the future. First, the parasitic load associated with additional pollution control equipment, required by GVEA's consent decree with EPA, will reduce the unit's net output -- perhaps below 25 MW.¹⁵³ Second, Second, GVEA's utilization of Healy Unit 1 may decrease once Healy Unit 2 recommences commercial operation in 2015 or 2016. If Healy Unit 1 continues to be operational at a reasonable cost to GVEA may choose to retire its diesel units in Fairbanks and North Pole first.¹⁵⁴ In fact, depending on future energy availability, GVEA may operate Unit 1 beyond 2030.¹⁵⁵

Unit 1 net output was **211,264.0 MWh**. GVEA, 2004 Annual Report, 402 (filed April 11, 2005).

¹⁵³ See discussion *supra* in Part II.C.1; GVEA Consent Decree ¶¶ 60-63 (requiring installation of SNCR at Healy Unit 1 on or before September 30, 2015 or 18 months after Unit 2 first fires coal, whichever is later; and, requiring either installation of SCR at Healy Unit 1 or retirement of the EGU by December 31, 2024); GVEA anticipates that SNCR will be installed and operational by 2017 and will cause a 0.01% degradation to heat rate attributable to the parasitic load. GVEA reports a 1.5MW energy penalty and 2.87% degradation in heat rate may be caused by installation of SCR. GVEA, Supplemental Response, RCA Docket I-14-007, Ex. A-1 (Oct. 31, 2014).

¹⁵⁴ GVEA, Supplement Response, RCA Docket I-14-007, Exh. D (Oct. 31, 2014) (outlining anticipated retirement dates and remaining depreciable value of GVEA's generation fleet). A number of the diesel units in GVEA's generation fleet have a lower remaining depreciable value than Healy Unit 1. *Id.* Also, at 30.8 or 54.7 cents/kWh in 2013, diesel is GVEA's most expensive fuel source. P. Ashbridge, Rates & Regulatory Section, GVEA, 2013 Annual Fuel Cost Breakdown (Feb. 5, 2014). In comparison; at 4.8 cents/kWh, Healy Unit 1 uses GVEA's least cost fuel. *Id.*

¹⁵⁵ Comment letter from Cory R. Borgeson, President & CEO, GVEA, to U.S. Environmental Protection Agency 3 (Oct. 15, 2014) (filed in docket EPA-HQ-OAR-2013-0603). In the context of GVEA's comment regarding "future energy availability," EPA should consider that GVEA anticipates a possibility of retiring other significant generation resources during the compliance period for this Proposed Rule. GVEA Supplemental Response, RCA Docket I-14-007, Ex. D (Oct. 31, 2014). The age of GVEA's generation fleet dictates careful consideration of resource adequacy and reliability service before finalizing a rule that may require premature retirement of a significant generation resource.

Continued generation at Healy could provide net benefits from an environmental and human health perspective. Some of GVEA's diesel units are more carbon intensive than Healy Unit 1.¹⁵⁶ Avoiding generation from the Fairbanks and North Pole diesel units would also reduce particulate matter loading in the Fairbanks air-shed would reduce the likelihood of non-attainment area. Available generation capacity on the west side of GVEA's service territory may also make a greater contribution to the reliability of the system when Healy Unit 2 is down for maintenance or other reasons. These cost, emission, and energy considerations support clarifying the proposed regulation to remove small or low-utilization steam generating units from the category "affected EGU."

B. Heat Rate Improvements and Coal

As explained above, the coal EGUs in Alaska cannot achieve heat rate improvements through any reasonable measures. If the Proposed Rule is applied to Alaska, EPA cannot assume any savings through heat rate improvements when calculating our goal. Further, if EPA applies the Proposed Rule to Alaska, the following corrections should be made to properly account for coal EGUs in the baseline.

Alaska's emission baseline and goal should be adjusted to reflect the actual emissions from Healy Unit 1.¹⁵⁷ EPA's materials contained conflicting data regarding the CO₂ emission rate and total emissions from Healy Unit 1 in 2012. In one file, EPA reported an emission rate of 2,901.4 lb/MWh and total emissions of 312,493.2 tons from the unit.¹⁵⁸ In another spreadsheet EPA reported total emissions of 307,155.732 for the same unit over the same period.¹⁵⁹ In a third file, EPA reported an emission rate of 2,852 lb/MWh.¹⁶⁰ However, GVEA measured, and reported an actual CO₂ emission rate of

¹⁵⁶ Compare, 2012 Unit-Level Data, Lines 9224, 9225, columns M and N (Fairbanks diesel output and emissions) with Line 9226, columns M and N (Healy Unit 1 output and emissions).

¹⁵⁷ The figure provided in GVEA's GHG reports reflects the actual emissions from the unit as measured by the continuous emission monitoring system (CEMS). The CEMS data should be used here since EPA contemplates using the CEMS measurements for compliance purposes. See Proposed Rule, 79 Fed. Reg. 34,954 (proposed 40 C.F.R. §60.5805(a)(2)(i)).

¹⁵⁸ 2012 Unit Level Data, "State yr 2012 data ELEC GEN" worksheet at D6 & E6

¹⁵⁹ 2012 Unit Level Data, "All Units yr 2012 data" worksheet at N79

¹⁶⁰ Goal Computation TSD, Appendix 7: "Plant Level Data," at G6, C9, EPA-HQ-OA-2013-0602-0256.

3,564.89 lb/MWh for Healy Unit 1 in 2012.¹⁶¹ Alaska's emission baseline and goal should be adjusted to reflect this rate.

Alaska's emission baseline and goal should also be adjusted to recognize Healy Unit 2. The EIA materials incorrectly assign Healy Unit 2 an "indefinitely postponed" status. GVEA anticipates commencing generation at this unit in 2015 or early 2016. Thus, if the Proposed Rule is applied to Alaska, our baseline should be adjusted to account for anticipated operations at Healy Unit 2 because it is an existing unit to which the utility is financially committed. GVEA anticipates that Healy Unit 2 will operate at about an 85% capacity factor with an emission rate of approximately 2,700lbs/MWh. An allowance for Healy Unit 2 – generating approximately 391,000MWh with an emission rate around 2,700lbs/MWh – should be included when calculating Alaska's 2012 baseline and targets if the Proposed Rule is applied to Alaska.

C. Re-Dispatch

If the rule is applied to Alaska, the goal calculation should not include any provision for re-dispatch from coal units to NGCC units. As discussed above, the coal and NGCC units in Alaska are separated by over 200 miles. Our transmission capacity is already used to its limit and reliance on the single contingency line would have significant implications for reliability and resource adequacy in the Fairbanks area. Alaska cannot re-dispatch coal generation at a reasonable cost.

D. New Renewable Generation

There may be potential for new renewable (RE) generation in Alaska; however, if the rule is applied here, EPA should clarify what RE generation qualifies for compliance purposes. First, EPA should calculate the goal in a manner that is consistent with recognized compliance measures. As currently drafted, EPA appears to have calculated the goal on the basis of statewide renewables (in 2002 and 2012). However, these projects are not all interconnected with affected EGUs and therefore would not qualify as standards of performance "for" affected stationary sources. If the rule is applied to Alaska, while EPA cannot require off-grid projects, EPA should allow states to count the carbon dioxide emission reductions achieved in rural locations (not interconnected with an affected EGU) towards compliance. This principle applies to both the RE and EE building blocks and is discussed below as an in-state renewable energy credit (REC).

¹⁶¹ GVEA Supplemental Response, RCA Docket I-14-007, Revised Ex. B-1 (Oct. 31, 2014); *also see* GVEA, 2012 GHG Annual Report for Healy Power Plant (March 15, 2013); *compare* GVEA, 2013 GHG Annual Report for Healy Power Plant (Feb. 28, 2014).

Second, Alaska should receive credit for renewable projects that came online between 2012 and June 18, 2014. EPA states that State Plans cannot claim credit for reductions in CO₂ emissions resulting from pre-existing programs, measures etc. unless the “action” leading to the reduction took place after the date of the proposal – June 18, 2014.¹⁶² EPA takes the position that this provision “would not apply to existing renewable energy requirements, programs and measures because existing renewable energy generation prior to the date of the proposal of the emission guidelines was factored into the state-specific CO₂ goals as a part of building block 3.”¹⁶³ However, the proposed regulatory language creates an ambiguity that would be significant to the State of Alaska. Eva Creek Wind commenced generation in 2013. If the final rule is applied to Alaska, EPA should clarify that all RE projects that commenced generation between December 31, 2012 and June 18, 2014 may also count toward state compliance.

Alaska supports EPA’s apparent position that new and incremental hydroelectric generation may be credited to compliance. However, there is some ambiguity in the materials overall. Alaska would like an unambiguous statement regarding how hydroelectric will be treated if the proposal advances. We ask that EPA clarify that new renewable hydroelectric generation, and upgrades to existing hydroelectric generation, would be a qualifying adjustment to the state’s emission rate.

EPA should also credit states with actions taken to replace hydroelectric generation capacity lost because of federal permitting requirements. For example, the generation capacity of Chugach’s Cooper Lake Hydroelectric project will be reduced substantially, by about 50%, due to a FERC relicensing requirement to divert water for fisheries restoration. To offset this loss, Chugach and the state have invested substantial funds to divert another stream, Stetson Creek, into Cooper Lake.¹⁶⁴ The full measures of generation capacity made possible by the Stetson Creek diversion should be treated as an incremental gain (even to the extent it replaces the incremental loss).

EPA should also allow compliance credits for actions that make more renewable generation available to offset generation from “affected EGUs.” For example, the amount

¹⁶² Proposed Rule, 79 Fed. Reg. at 34,918/2 (proposed 40 C.F.R. §60.5750).

¹⁶³ Proposed Rule, 79 Fed. Reg. at 34,918 n. 293.

¹⁶⁴ Rindi White, Cooper Lake Hydroelectric Upgrade: Restoring stream habitat, improving aquatic conditions, Alaska Business Monthly (July 2013) *available at* <http://www.akbizmag.com/Alaska-Business-Monthly/July-2013/Cooper-Lake-Hydroelectric-Upgrade/>.

of Bradley Lake hydroelectric power that can move north to the Anchorage and Fairbanks load centers is limited by the capacity of the transmission lines. Any future upgrades to the transmission system that allow generation at "affected EGUs" to be replaced by renewable (or less carbon intensive) generation should be credited against emission target.

EPA should also allow compliance credit for electric generation from landfill gas. Using landfill methane for electric generation captures significant efficiencies and reduces overall GHG emissions.

E. Demand Side Energy Efficiency

As discussed above, the demand side efficiency (EE) goals proposed by the EPA are problematic because they are based on very limited data, have uncertain funding and may require legislative action.¹⁶⁵ State funding for energy efficiency programs is variable and uncertain. With the exception of the weatherization program (which receives a portion of program funds from federal sources), all of the efficiency programs noted above run on state general funds as part of capital appropriations. There is not a secure or consistent source of funds for these programs and appropriations have been highly variable year to year. Decreasing oil production and thus revenue to the state has created an uncertain fiscal situation. Future state funding for efficiency programs is not certain as revenues continue to decline.

In light of the paucity of data to evaluate the reasonableness of the EE measures assigned by EPA, the EM&V which must accompany each EE program under the rule, and the uncertainty of funding, EPA should use a more conservative annual incremental savings target. Between EPA's proposals of 1.5% or 1.0% incremental savings – the smaller increment would be less problematic. We also note however, that the demonstrated savings for GVEA runs around 0.2%.

There should be some symmetry between the goal calculation and the measures permitted for compliance. Currently, EPA calculates the contribution of EE measures to Alaska's target rate on the basis of statewide electric sales. EPA should calculate the amount generation is avoided due to EE measures as a percent of forecasted generation from affected EGUs or, in the alternative, allow statewide EE measures to count for compliance purposes.

EPA should adjust the scope of EE programs that would qualify for compliance credit under this Proposed Rule. States should be credited with the generation avoided

¹⁶⁵ GHG Abatement Measures TSD 5-2; State Plan Considerations TSD.

because of energy efficiency measures implemented before June 2014, the date of this Proposed Rule, and which continue to have an impact within the compliance period. Given the significant health and human safety concerns associated with heating in Alaska, EPA should also allow credit for thermal energy efficiency programs that reduce fossil-fuel consumption.

F. EPA should allow an in-state administrative REC that captures renewable energy and energy efficiency projects that are not connected to an affected EGU.

Given the lack of interconnections between Alaska's EGUs and its rural electric utilities, and the compelling policy rationale for continued investment in rural communities, EPA should allow offsets for reduced or avoided carbon emissions in rural communities to count toward compliance. Conceptually, such an in-state REC program would parallel the interstate REC programs. An in-state REC would recognize, but not require, reduced carbon emissions resulting from replacing diesel (or other fossil fuel) generation with less-carbon intensive generation, such as renewables. The quantifiable emission reductions would then be applied in the formula for determining compliance with the mandated state-wide emission rate.¹⁶⁶

We recognize that EPA proposes to require that the RE/EE be grid-connected generally. EPA expresses uncertainty as to whether, under §111(d), RE and EE may be considered implementing measures in state plans if they are not directly tied to required emission reductions at affected "sources."¹⁶⁷ However, certain implementation measures already proposed by EPA do not, in fact, require a direct, physical relationship between a particular affected EGU and RE/EE.¹⁶⁸ The CAA may limit the measures EPA may require, but should not limit what EPA allows.

¹⁶⁶ The accounting of avoided CO₂ emissions or avoided fossil generation could be the same accounting proposed by EPA for RE and EE grid-connected to an affected EGU. *See* State Plan Considerations TSD 21-23.

¹⁶⁷ Proposed Rule, 79 Fed. Reg. at 34,902/1-34,903/2.

¹⁶⁸ *See* Proposed Rule, 79 Fed. Reg. at 34,922 (EPA proposes that RE/EE credits may be traded amongst states and EGUs); State Plan Considerations TSD 22 (EPA proposes allowing states the option of adjusting regional CO₂ emissions based on the avoided CO₂ emissions from RE and EE within the same region); State Plan Considerations TSD 22-23 (EPA also discusses the option of crediting the RE and EE to the overall statewide emission performance for affected EGUs); State Plan Considerations TSD at 67, 94 (EPA recognizes a REC model for EM&V documentation and tradable regional RE/EE credit markets for adjusting emission rates from affected EGUs); State Plan Considerations

An in-state REC for Alaska could capture synergies between EPA and Alaska's policy goals. Here an in-state REC program would apply to the same industry sector and would achieve the same goal of reducing CO₂ emissions. The emission reductions would be accomplished through the same mechanism of replacing or reducing fossil generation with RE and EE programs. In many cases, the off-grid projects would affect small electric systems – consisting of a single, identifiable fossil-fuel powered EGU. Consequently, there is no possibility that the new RE or EE measures would be offsetting emissions from a new EGU (regulated under 111(b)), offsetting other RE generation, or are otherwise already required by another regulatory requirement for a different source category. Nor would there be a potential for double counting RE/EE credits. The offset of fossil generation is direct and quantifiable. This common-sense approach would provide Alaska greater access to building blocks 3 and 4, achieve EPA's goal of reducing carbon emissions from fossil fuel electric generating units, and avoid the counterproductive result of depriving our rural communities of state support.

The Proposed Rule does not clearly explain what RE and EE measures may be used to adjust the statewide emission rate for compliance purposes. In particular the rule is unclear with respect to the extent to which a state must demonstrate that RE and EE measures factually result in reduced generation at "affected EGUs." Most electric power in Alaska is generated from fossil fuels such as natural gas or diesel fuel and carbon reductions are being achieved in many communities not connected to "affected EGUs." Crediting Alaska for new RE generation not connected to "affected EGUs" also makes sense because EPA used statewide RE generation figures for our baseline and target rate. Therefore we ask that EPA clarify that the rule would allow states to adjust the emission rate from "affected EGUs" to reflect reductions in carbon emissions from other fossil fuel carbon emission sources.

G. EPA should adjust requirements for State Plans.

EPA should allow more time for states to develop plans pursuant to these regulations. The Proposed Rule requires states to submit plans by June 30, 2016, with the option of requesting a one-year extension to submit a complete plan by June 30, 2017. One year is insufficient for a state to prepare a complex air quality plan; two years is

TSD 20 (EPA also proposes that to account for RE and EE states may "administratively adjust the average CO₂ emission rate of affected EGUs through [the use of credits] when demonstrating achievement of the required emission rate performance level in the state plan."); State Plan Considerations TSD 20 n. 22 (explaining that the credits could be non-tradable credits administratively apportioned to affected EGUs – an administrative adjustment applied by the state).

marginal given that 111(d) plans, and particularly a plan covering CO₂, is a new type of plan for states to develop. In addition to developing and adopting new regulations, multiple regulatory agencies will be involved in the process, increasing the complexity and time needed to complete the process. Additional time may likely be required to receive additional grants of legislative authority and funding. One or two years is simply not adequate to complete the technical analyses as well as legislative and regulatory processes.

EPA should allow states to determine when their plans need to be updated. Given the accelerated timeline for developing state plans, in addition to the length of the period the plan will cover and changing nature of the power sector, state plans will likely need to be updated during the plan's lifetime. States should have the flexibility to determine when plan updates are needed, with the expectation that EPA will review submittals for adequacy.

EPA must provide guidance on plan development at the time the rule is promulgated. The planning window for this complex rule is very short and states need to be able to make maximum use of the time available.

H. EPA should introduce flexibility into the rule by allowing revisions to the emission target.

It is essential that the final rule allow flexibility in the assigned target emission rate. Currently, EPA proposes that "once the final goals have been promulgated, a state would no longer have an opportunity to request that the EPA adjust its CO₂ goal."¹⁶⁹ EPA also proposes to remove flexibility that is generally permitted in implementing EPA regulations to deviate from a standard of performance based on facility specific considerations.¹⁷⁰ This proposal takes the rule in the wrong direction. In Alaska, there are a limited number of affected EGUs, a limited transmission system, and a small ratepayer base. We have serious reservations about our ability to implement this rule in the first instance. Further, EPA has not evaluated the feasibility of impact of the rule here and the data provided by EPA contained errors and imprecise data. If Alaska is not exempted, there must be a mechanism to re-evaluate the target rate after the rule is finalized.

EPA's proposal to limit the flexibility usually allowed by EPA appears to be based on the belief that the framework of this Proposed Rule creates compliance flexibility. EPA emphasizes that BSER elements may be used in any combination and at any level

¹⁶⁹ Proposed Rule, 79 Fed. Reg. at 34,835/1.

¹⁷⁰ Proposed Rule, 79 Fed. Reg. at 34,925/1-2 (citing 40 C.F.R. §60.24(f)).

and measures other than those identified as BSER may be used to achieve state goal.¹⁷¹ EPA also points to the availability of multistate or regional compliance strategies, the timeline for reaching a emissions target, and the option of rate or mass based goals as elements of the rule that create compliance flexibility.¹⁷² This “compliance flexibility” is illusory however.

The existence of flexibility depends on specific circumstances; Alaska’s circumstances restrict compliance options. The flexibility available to Alaska is limited by the number of EGUs at issue, the role of those EGUs in the generation mix, the number of ratepayers to bear compliance costs, transmission constraints, climate and geography, as well as other factors. In particular, our review of available data during the comment period suggests that achieving the mandated emission rate will require retiring one of the Healy coal units. In fact, EPA’s goal calculation presumed that neither of the Healy units would operate. Given the importance of maintaining reliability of electric service for the Fairbanks load center, EPA should not promulgate a rule that would require such a result.

We do support EPA’s proposal to allow an alternative mass-based emission target. This provision introduces a degree of flexibility that may avoid penalizing states for reducing total CO₂ emissions from affected EGUs when the same event increases the per megawatt hour emission rate because of a shift in the proportion of fuel sources.

I. Re-Publication to Provide Meaningful Opportunity to Comment

The vagueness and uncertainty of this Proposed Rule, as well as the absence of a BSER analysis relevant to Alaska, dictates an additional opportunity to evaluate and comment on a revised and re-published rule. Alaska has spent considerable resources studying and analyzing the Proposed Rule designed for states with highly interconnected electricity systems.¹⁷³ It is apparent that the Proposed Rule is not crafted for a state

¹⁷¹ Proposed Rule, 79 Fed. Reg. at 34,835, 34,837; Goal Computation TSD 19.

¹⁷² Proposed Rule, 79 Fed. Reg. at 34,837.

¹⁷³ The errors and inconsistent data in EPA’s record created confusion and required time to evaluate. The conflicting data for the emission rate of Healy Unit 1 has already been outlined. Another example – EPA’s materials reported that unit 7 at Sullivan Plant 2 has a 102.6MW generation capacity. However, no unit with 102.6 MW capacity exists. Unit 7 has a nameplate capacity of 81.7MW.

The 2012 RE baseline of 39,958MWh for Alaska conflicts with the data provided in the docket. The 2012 unit level data reported a total of 19,268MW of non-

lacking such interconnectedness and that its potential application to Alaska has not been sufficiently analyzed. A thorough evaluation of the Proposed Rule proved challenging within even the extended comment period. The absence of a relevant BSER analysis and the sheer volume of information, compounded by the release of additional data late in the comment period, contributed to this challenge. Further, the absence of final 111(b) rules for new electric generating units inhibits our ability to fully understand the impacts of the Proposed Rule for existing units. If EPA does not withdraw the Proposed Rule or exempt Alaska, we urge EPA to re-publish a more concrete Proposed Rule with some analysis of the relevant impacts on Alaska to allow for meaningful comment.¹⁷⁴

hydroelectric renewable power generation in Alaska for 2012. This power was generated from wind units – Kotzebue and Pillar Mountain. After considerable effort, we discovered the source of the 39,958MWh baseline on the EIA website. While the data provided in the docket reported no generation from Delta Wind and Fire Island Wind in 2012, the EIA website reported 18,125MWh from these two facilities. The EIA website also pointed to a biomass facility in Dutch Harbor that is not listed in the EPA's 2012 unit level data – which added another 2,565MWh to our RE baseline.

¹⁷⁴ See *Kennecott Corp. v. E.P.A.*, 684 F.2d 1007 (D.C. Cir. 1982) (the notice and comment proceeding contemplated by the Clean Air Act includes availability of relevant data during the public comment period).

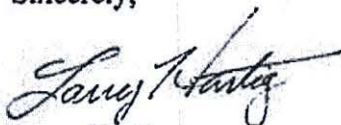
Ms. Gina McCarthy, Administrator
Mr. Dennis McLerran, Regional Administrator
Re: Proposed Carbon Pollution Emission Guidelines for Existing
Electric Utility Generating Units, Docket # EPA-HQ-OAR-2013-0602

December 1, 2014
Page 52 of 52

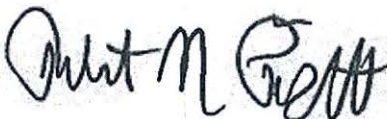
IV. Conclusion

The Proposed Rule would mandate changes in how electricity is generated, distributed, transmitted, and used by a subset of mostly residential consumers at a cost those ratepayers cannot afford. Moreover, EPA did not adequately analyze or consider Alaska's circumstances in designing the Proposed Rule. Because the approach taken by this rule is unworkable for our state, EPA should exempt Alaska from the Final Rule.

Sincerely,



Larry Hartig
Commissioner
Alaska Department of Environmental
Conservation



Robert M. Pickett
Chairman
Regulatory Commission of Alaska



Sara Fisher-Goad *for*
Executive Director
Alaska Energy Authority

Enclosures

Attachment A: Legal Memorandum

The Proposed Rule exceeds the authority granted to the Environmental Protection Agency (EPA) under 111(d) of the Clean Air Act (CAA). First, EPA's application of §111(d) to a source category already regulated under §112 and before finalizing a rule under §111(b) contradicts the regulatory framework outlined by the statute. Second, the Proposed Rule seeks to regulate considerably more than existing sources or air emissions. The Proposed Rule would govern the generation, transmission, distribution, sale, and consumer use of electricity, effectively preempting state regulation of intrastate electric utility service.

Many states and organizations may raise similar concerns regarding EPA's authority to issue this rule; however, these issues are especially acute in Alaska because of our unique circumstances. The factual underpinnings for this Proposed Rule do not apply here. Consequently, the technical feasibility and impacts analyses EPA has provided in this docket are incorrect for Alaska. Given the shortcomings of this proposal, EPA should withdraw the Proposed Rule or exempt Alaska from its application.

- I. **EPA may not regulate CO₂ emissions from power plants under §111(d) of the Clean Air Act.**
 - A. **Having elected to regulate fossil fuel-fired power plants under §112 of the Clean Air Act, EPA may not also regulate the same source category under §111(d).**

The Clean Air Act (CAA) prohibits regulation of emissions from a "source category" under §111(d) where that source category is already regulated under §112.¹ EPA classified power plants a "source category" under §112 in 2000.² In 2012, under §112, EPA promulgated the Mercury and Air Toxics Standard for utility power plants.³

¹ 42 U.S.C. § 7411(d)(1)(A)(i); see *Am. Elec. Power Co., Inc. v. Connecticut*, 131 S. Ct. 2527, 2537 n.7 (2011) ("EPA may not employ §7411(d) if existing stationary sources of the pollutant in question are regulated under the national ambient air quality standard program, §§ 7408 – 7419, or the 'hazardous air pollutants' program, § 7412.").

² EPA, Notice of Regulatory Finding, 65 Fed. Reg. 79,825, 79,830 (Dec. 20, 2000).

³ EPA, National Emission Standards for Hazardous Air pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 77 Fed. Reg. 9,304 (Feb. 16, 2012).

Given that existing coal-fired power plants are now regulated under §112, what EPA recognizes as the “literal” terms of the CAA prohibit EPA’s effort to impose additional regulations on these same sources under §111(d).⁴

B. The conforming amendment cannot override the concurrent substantive amendment to §111(d) to authorize regulation of electric generating units already regulated under §112.

To avoid the literal terms of the §111(d), EPA relies on a clerical error in the 1990 amendments to §111(d).⁵ The U.S. House of Representatives and the U.S. Senate passed different versions of §111(d) in the 1990 Amendments. The version passed by the Senate included only a conforming amendment to §111(d), striking “(1)(A)” from “7412(b)(1)(A)” to correct the cross reference. The version passed by the House included a substantive amendment to §111(d). The House amendment first struck “or 7412(b)(1)(A)” from §111(d) and then added “or emitted from a source category which is regulated under section 7412” to the enumerated exclusions. Both versions were incorporated in the amendments signed by the President and included in the Statutes at Large. In keeping with uniform practice, the U.S. Code excludes the conforming amendment.⁶ EPA reasons that the conforming amendment conflicts with the substantive revision, rendering §111(d) ambiguous and subject to EPA’s interpretation.⁷

Contrary to EPA’s interpretation, the House and Senate amendments are, in fact, compatible. Read together, the two versions prohibit using §111(d) as authority to regulate both (1) source categories actually regulated under §112, and (2) pollutants already subject to regulation under §112. EPA can give full effect to both versions of the statute.

To the extent the two versions do conflict, the substantive amendment made by the House must control. Where conforming and substantive amendments are inconsistent, the

⁴ EPA, Legal Memorandum for Proposed Carbon Pollution Emission Guidelines for Existing Electric Utility Generating Units at 26 (EPA Legal Memorandum).

⁵ EPA Legal Memorandum at 20-26.

⁶ Revisor’s Note, 42 U.S.C. § 7411.

⁷ EPA Legal Memorandum at 25-27.

substantive change is given effect and the conforming amendment is ignored as a scrivener's error.⁸ Here, the Senate amendment simply corrected a cross-reference.⁹ The House amendment defined the entities that could be regulated under the section and substantively altered the statute. The mistake should not be considered when construing the substantive provision.¹⁰ The House version, which prohibits dual regulation under both §111(d) and §112, properly controls.

C. EPA may not prescribe regulations for existing sources under §111(d) before finalizing regulations for new sources of the same type under §111(b).

Section 111(d) authorizes EPA to prescribe regulations under which states establish standards of performance for "any existing source for any pollutant . . . to which a standard of performance under this section would apply if such source were a new source."¹¹ This provision limits regulation of existing sources under §111(d) until EPA has issued a final rule for "new sources of the same type."¹² Here, EPA identifies the ongoing rulemaking dockets for new electric generating units (EGUs) and modified and reconstructed EGUs as the §111(b) predicate.¹³ However, these rules must be finalized before undertaking the process to issue regulations for existing sources.

⁸ See, e.g., Revisor's Note, 23 U.S.C. § 104; Revisor's Note, 26 U.S.C. § 105; Revisor's Note, 26 U.S.C. § 219; Revisor's Note, 26 U.S.C. § 613A; Revisor's Note, 26 U.S.C. § 1201; Revisor's Note, 26 U.S.C. § 4973; Revisor's Note, 26 U.S.C. § 6427; Revisor's Note, 29 U.S.C. § 1053; Revisor's Note, 33 U.S.C. § 2736; Revisor's Note, 37 U.S.C. § 414; Revisor's Note, 38 U.S.C. § 3015.

⁹ Revisor's Note, 42 U.S.C. § 7411.

¹⁰ See, e.g., *Am. Petroleum Inst. v. SEC*, 714 F.3d 1,329, 1,336-37 (D.C. Cir. 2013).

¹¹ 42 U.S.C. § 7411(d)(1)(A)(ii).

¹² *Am. Elec. Power Co., Inc. v Connecticut*, 131 S.Ct. 2527, 2437 n. 7 (2011); See EPA, Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 1,430, 1,496 (Jan. 8, 2014) (Proposed Rule for New EGUs) (explaining the proposed rule for new sources will serve as a necessary predicate for the regulation of existing sources within this source category under CAA section 111(d)).

¹³ *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Generating Units, Proposed Rule*, 79 Fed. Reg. 34,830 at 34,852 (June 18, 2014) (Proposed Rule).

This statutorily mandated sequence, regulating “new” and modified sources before instituting parallel regulations for existing sources, recognizes the reliance and sunk cost concerns involved with regulating existing sources. Here, the concurrent rulemaking efforts undermine the goal of ensuring the owners or operators of an existing source have clear notice of and a chance to prepare for the application of a new regulatory scheme. EPA’s reliance on regulations that are not finalized also compromises stakeholders’ opportunity to comment on the Proposed Rule. Because the §111(b) rule for new sources has not been finalized, stakeholders cannot know with certainty which existing units will be affected by the §111(d) proposal.

This has been a particular challenge for Alaska. For example, EPA proposes different applicability criteria for existing and new steam generating units. A new steam generating unit would be covered by the 111(b) rule only if it “was constructed for the purpose of supplying, and supplies” a threshold amount of electric output.¹⁴ By comparison, and contrary to the intent articulated in the preamble,¹⁵ the proposed §111(d) rule omits the “and supplies” from the applicability criteria for existing EGUs.¹⁶ If this disjuncture persists, EPA would be seeking to regulate existing sources under §111(d) that would not be regulated as new sources under §111(b). Without a final 111(b) rule, we cannot evaluate whether one of our coal units will be an “affected EGU.” This information is critical to understanding the possible impact of the rule in Alaska for evaluating what concerns should be raised in our §111(d) our comments.

II. Even if EPA could properly regulate existing utility generating units under §111(d), the Proposed Rule exceeds EPA’s authority.

¹⁴ Proposed Rule for New EGUs, 79 Fed Reg. at 1,511/1 (proposed 40 CFR §60.5509(1)).

¹⁵ Proposed Rule, 79 Fed. Reg. at 34,854/2 (“The minimum electricity sales condition applies on an annual basis for boilers and IGCC facilities and over rolling three-year periods for combustion turbines (or as long as the unit has been in operation, if less).”). EPA also states other than the “commence construction” date, the proposed 111(d) rule covers existing sources, that the “meet the applicability criteria for coverage under the proposed GHG standards for new fossil fuel-fired EGUs” Proposed Rule, 79. Fed. Reg. at 34,854/1 (citing Proposed Rule for New EGUs, 79 Fed. Reg. at 1,430).

¹⁶ Proposed Rule, 79 Fed. Reg. 34,954 (proposed 40 C.F.R§§ 60.5795(b)(1)).

A. As “standards of performance” the strict emission rates proposed exceed EPA’s authority to promulgate emission guidelines.

Section 111(d) establishes specific roles for EPA and states. First, §111(d) authorizes EPA to promulgate regulations establishing the “procedure” under which states submit plans for regulating emissions from affected existing sources.¹⁷ In turn, state plans establish standards of performance for existing sources.¹⁸ When evaluating the sufficiency of state plans, §111(d) directs EPA to allow states to vary a standard for a particular source in light of cost, practical achievability, remaining useful life, and other source specific factors.¹⁹ Only if a state fails to submit a satisfactory plan does §111(d) contemplate that EPA would prescribe a plan that establishing standards of performance.²⁰

EPA proposes specific mandatory “goals,” or target emission rates, for each state – characterizing these numerical limits as “emission guidelines.”²¹ EPA will not adjust the mandated emission rate where a state cannot implement one of the building blocks, unless the state demonstrates that it cannot achieve the rate by other means – by applying the *other* BSER building blocks more aggressively or through some other “related, comparable measures.”²² Once finalized, EPA does not intend to allow states to alter the target emission rates.²³ These inflexible emission limits are inconsistent with the state role defined by Congress in §111(d).

¹⁷ 42 U.S.C. § 7411(d)(1).

¹⁸ *Id.*; cf 42 U.S.C. § 7411(b)(1)(B) (authorizing EPA to establish Federal standards of performance for new sources directly).

¹⁹ 42 U.S.C. § 7411(d)(1); *see also* 40 C.F.R. § 60.24(f).

²⁰ 42 U.S.C. § 7411(d)(2); *see also* 40 C.F.R. § 60.27(c)(3); *Cf. Alaska Dep’t of Envtl. Conservation v. EPA*, 540 U.S. 461, 494 (2004) (ultimate issue in Prevention of Significant Deterioration program is whether state agency’s determinations are “reasonable, in light of the statutory guides and the state administrative record”).

²¹ EPA Legal Memorandum at 32. Compare 40 C.F.R. §60.21(d), discussed in EPA’s Legal Memorandum at 31, with 42 U.S.C. §7411(a) (EPA’s definition of “emission guideline” is nearly identical to the statutory definition of “standard of performance” in §111 of the Clean Air Act.)

²² Proposed Rule, 79 Fed. Reg. at 34,893.

²³ Proposed Rule, 79 Fed. Reg. at 34,835 (“Once the final goals have been promulgated, a state would no longer have an opportunity to request that the EPA adjust

EPA argues that states retain the flexibility to apply less stringent standards to individual sources because the goals represent an average emission rate for all “affected EGUs” in a state.²⁴ In Alaska, this flexibility does not exist. There are only a handful of affected sources, very few ratepayers to bear the costs of compliance, and very real geographic challenges that limit the compliance options available to our state. Our initial evaluation of the rule suggests that, despite recent installation of highly efficient new NGCC units and considerable new renewable generation already online, Alaska cannot meet the goal with both of the potentially covered coal units operating as planned. This is not “flexibility.”

More to the point, §111(d) is properly read to allow a range of actual state-wide emission rates achieved through state plans. As a state exercises its authority to adjust EPA’s “guidelines” for certain sources and classes of sources, affected sources may collectively achieve a higher or lower emission rate. EPA’s §111(d) regulations must be limited to guidelines for source emissions—not absolute, inflexible emission limits.

B. The proposed rule exceeds EPA’s authority to regulate emissions from individual sources under the Clean Air Act.

A “standard of performance” is a source-specific limit. The CAA defines “standard of performance” generally as “a requirement of continuous emission reduction, including any requirement relating to the operation or maintenance *of a source* to assure continuous emission reduction.”²⁵ In §111 specifically, a “standard of performance” is defined as “a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair

its CO₂ goal.”); *Id.* at 34,897-98 (rejecting suggestion that states be allowed to treat EPA’s goals “as advisory rather than binding”); *Id.* at 34,892 (noting that the emission rates promulgated in the final rule will be binding emission guidelines for state plans).

²⁴ See Proposed Rule, 79 Fed. Reg. at 34,925-26.

²⁵ 42 U.S.C. § 7602(l) (emphasis added). The use of the term “applied” or “application” supports the conclusion that standards of performance- and the underlying BSER measures – are limited to actions at the source. The term “apply” consistently references individual sources in the context of various emission standards. See 42 U.S.C. § 7479(3); 42 U.S.C. § 7501(3).

quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.”²⁶ Consistent with the interpretation of “standard of performance” as a source specific requirement, Congress directed that “in applying a standard of performance to any particular source” states may “take into consideration, among other factors, the remaining useful life of the existing source to which such standard applies.”²⁷ A standard of performance is “a requirement” which 111(d) contemplates states “applying” to a “particular source.”

This Proposed Rule would require compliance measures beyond the physical or legal control of the emission sources.²⁸ Of the four measures, or BSER “building blocks” used by EPA to establish statewide standards of performance, only the first—heat-rate improvements at coal-fired steam generating units— may be executed at an affected source.²⁹ The remaining three “building blocks” involve shifting generation function from coal- to gas-fired plants, replacing fossil fuel generation with renewable energy resources, and avoiding generation through end-use efficiency measures.³⁰ In general, and in Alaska specifically, the standards of performance assigned in this Proposed Rule cannot be achieved through measures at the regulated sources.

In the Proposed Rule, EPA interprets the use of “system” in “best system of emission reduction” to encompass “outside-the-fenceline” measures.³¹ EPA reasons that a “system” is a “set of things”; and, in turn, a “system of emission reduction” is a “set of things” which an affected source may utilize to reduce CO₂ emissions.³² EPA presumes that reducing generation and fuel use at an “affected EGU” would reduce the CO₂ emissions from an affected source.

²⁶ 42 U.S.C. § 7411(a)(1).

²⁷ 42 U.S.C. § 7411(d)(1).

²⁸ Proposed Rule, 79 Fed. Reg. at 34,872 n. 174 (“All end-use sectors (residential, commercial, and industrial) are targeted by energy efficiency programs...”).

²⁹ *Id.* at 34,859-62.

³⁰ Proposed Rule, 79 Fed. Reg. at 34,862-75.

³¹ Proposed Rule, 79 Fed. Reg. at 34,885-86; EPA Legal Memorandum 36.

³² EPA Legal Memorandum 81.

EPA's interpretation of "system" conflicts with standard canons of statutory interpretation. "The definition of words in isolation ... is not necessarily controlling." Rather, interpretation of a word or phrase depends upon reading the whole statutory text, considering the purpose and context of the statute, and consulting any precedents or authorities that inform the analysis."³³ Here, in the context of emission controls, the Clean Air Act consistently refers to "systems" as source-specific measures.³⁴ There is no basis for departing from this usage in §111(d).

EPA's interpretation of "system" conflicts with the agency's past application of §111(d). Only five source categories have been subject to regulation under § 111(d).³⁵ Where EPA has regulated existing sources under §111(d), the impact of the rule was generally limited. In one rule, EPA regulated a source category that contained as few as

³³ *Dolan v. U.S. Postal Serv.*, 546 U.S. 481, 486 (2006).

³⁴ See 42 U.S.C. § 7410(j) (conditioning issuance of permits on a showing by the owner or operator of each source "that the technological *system* of continuous emission reduction *which is to be used at such source* will enable it to comply with the standards of performance which are to apply to such source . . .") (emphases added); 42 U.S.C. § 7411(b)(5) (limiting the Administrator's authority to require "any new or modified source *to install and operate* any particular technological *system* of continuous emission reduction to comply with any new source standard of performance") (emphases added); 42 U.S.C. § 7412(r)(7)(A) (providing that regulations may "make distinctions between various types, classes, and kinds of facilities, devices and *systems* taking into consideration factors including, but not limited to, the size, location, process, process controls, quantity of substances handled, potency of substances, and response capabilities present *at any stationary source*") (emphases added); 42 U.S.C. § 7479(3) (defining best available control technology as an "emission limitation based on maximum degree of reduction of each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable *for such facility* through application of production processes and available methods, *systems*, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant") (emphasis added); CAA § 206(a)(2), 42 U.S.C. § 7525(a)(2) ("The Administrator shall test any emission control *system incorporated in a motor vehicle or motor vehicle engine* submitted to him by any person . . .") (emphasis added).

³⁵ EPA Legal Memorandum 9-10.

31 sources.³⁶ In another, affected source categories existed in only a limited number of states.³⁷ The only previous application of §111(d) to regulate a common source category was projected to impose annual costs of about \$90 million.³⁸ EPA's current §111(d) proposal, with an annualized of over \$8.8 billion and affecting 1,228 sources, will have a substantially greater impact than any of these past §111(d) regulations.³⁹

EPA's interpretation of "system" conflicts with precedent defining the scope of compliance measures contemplated by the CAA. The D.C. Circuit previously rejected interpretations of "best system of emission reduction" that resulted in aggregate, facility-wide, emission limits rather than an emission limit for individual sources. In *ASARCO v. EPA*, the court invalidated EPA regulations that would "allow a plant operator who alters an existing facility in a way that increases its emissions to avoid application of the NSPSs by decreasing emissions from other facilities within the plant."⁴⁰ The court rejected EPA's assertion of "'discretion' to define a stationary source as either a single facility or a combination of facilities,"⁴¹ reasoning:

EPA has attempted to change the basic unit to which the NSPSs apply from a single building, structure, facility or installation the unit prescribed in the

³⁶ 45 Fed. Reg. 26,294 (Apr. 17, 1980); Primary Aluminum: Guidelines for Control of Fluoride Emissions from Existing Primary Aluminum Plants, EPA-450/2-78-049b, § 3.1.1, at 3-1 (Dec. 1979).

³⁷ Final Guideline Document: Control of Fluoride Emissions from Existing Phosphate Fertilizer Plants, EPA-450/2-77-005, § 3.1, at 3-5 to 3-15 (Tables 3-3 to 3-6) (March 1977) (affected sources found in 17 states); Primary Aluminum: Guidelines for Control of Fluoride Emissions from Existing Primary Aluminum Plants, EPA-450/2-78-049b, § 3.1.1, at 3-3 to 3-5 (Table 3-1) (affected sources found in 16 states).

³⁸ 61 Fed. Reg. 9,905, 9,916 (March 12, 1996).

³⁹ Proposed Rule, 79 Fed. Reg. at 34,839, 34,840; EPA, Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and Emission Standards for Modified and Reconstructed Power Plants at 3-47 (June 2014).

⁴⁰ *ASARCO Inc. v. EPA*, 578 F.2d 319, 326-27 (D.C. Cir. 1978).

⁴¹ *Id.* at 326.

statute to a combination of such units. The agency has no authority to rewrite the statute in this fashion.⁴²

Here, by applying standards of performance to the entire power sector rather than individual “existing sources,” EPA has asserted even broader authority. If EPA cannot apply performance standards to several sources at a single industrial site collectively, the narrower “best system of emission reduction” cannot be interpreted to encompass measures and emission limits applied to the entire electric utility sector.

Since the publication of this Proposed Rule, the Supreme Court issued a decision noting limits on EPA’s authority expand the scope of measures that may be required to achieve an emission limit. In *Utility Air*, the Court upheld EPA’s decision to require “best available control technology” (BACT) for greenhouse gases emitted by sources already otherwise subject to prevention of significant deterioration (PSD) review.⁴³ The Court observed that the petitioners’ concerns about unbounded regulatory authority were mitigated by limitations on what EPA could reasonably require as BACT stating, “for one, BACT is based on ‘control technology’ for the applicant’s ‘proposed facility,’” therefore it has long been held that BACT cannot be used to order a fundamental redesign of the facility.”⁴⁴ The Court’s reasoning hinged on the petitioners’ failure to demonstrate that EPA would implement its proposal broadly and that the relevant emission standard, BACT, was limited.

For several reasons, the Supreme Court’s observations with respect to BACT should inform the scope of §111(d) “standards of performance.” Both terms are “emission limitations.” But BACT represents the most stringent limitation achievable, whereas “performance standards” represent the “best system ... adequately demonstrated” after taking into consideration a number of additional factors.⁴⁵ BACT is stricter, authorizing EPA to apply more burdensome requirements, than a “standard of performance.” Similarly, the statutory definitions of “emission limitation” and “standard of performance” indicate that BACT “emission limitations” encompass a broader range

⁴² *Id.* at 327.

⁴³ *Utility Air Regulatory Group v. EPA*, 134 S.Ct. 2427 (2014) (“*Utility Air*”).

⁴⁴ *Id.* at 2448.

⁴⁵ 42 U.S.C. § 7479(3); 42 U.S.C. § 7411(a)(1).

of measures than “standards of performance.”⁴⁶ Thus, any constraint on “emission limitation,” and therefore on BACT, to inside-the-fenceline measures must apply to “standards of performance” as well.⁴⁷ If EPA cannot define BACT to include measures applied to an entity other than the source, EPA cannot define §111(d) standard of performance to include a broader universe of compliance strategies.

C. EPA’s reliance on outside the fence measures impermissibly preempts state regulation of electric utilities and state energy policy.

EPA’s broad interpretation of “standard of performance” and “best system of emission reduction” would result in a profound shift in the balance of state and federal authority over electric utilities and energy policy. EPA asserts jurisdiction over the production and dispatch of electricity by requiring reduced generation from some affected EGUs – coal plants – and increased use of gas-fired combined cycle generation, renewable generation, and demand side management energy efficiency. The mix of electric generation and fuel resources used by the public utility sector is a regulatory field beyond the scope of the Clean Air Act, traditionally occupied by the states, and explicitly left to the states under the Federal Power Act.

1. State Authority

Significant changes in our generation mix would be required to achieve our assigned emission rate. Our initial review suggests that Alaska’s compliance options would be very limited – the premature retirement of at least one coal plant, at great and unreasonable expense to ratepayers, may be necessary. EPA’s goal also assumes Alaska can mandate consumer energy efficiency practices with the impact of avoiding 744 GWh of generation (almost a quarter of the total generation from “affected EGUs” in 2012 and perhaps a third of “affected EGU” generation in 2030). Our small population and limited electric utility infrastructure render the EPA’s hypothetical compliance strategies impossible to implement at a cost that provides affordable and reliable essential electric utility service to Alaska ratepayers.

⁴⁶ Compare 42 U.S.C. § 7602(k) and 42 U.S.C. § 7602(i).

⁴⁷ Other sources confirm the relationship between BACT in the PSD program and “standards of performance” under §111. For example, Congress restricted EPA’s ability to rely on data from facilities receiving assistance under the Energy Policy Act of 2005 when establishing either BACT or standards of performance under the Clean Air Act. 42 U.S.C. § 15962(i).

EPA points to the state role in implementing this rule, suggesting that the regulatory framework respects state authority. EPA notes that the “building blocks” are measures that some states are already undertaking and⁴⁸ that the beyond-the-fenceline “building blocks” may reduce emissions “by significant amounts and at lower costs” than inside-the-fenceline strategies.⁴⁹ But a state’s exercise of its own policy making discretion does not confer authority on a federal agency and EPA may require measures only to the extent they are within EPA’s power to propose. EPA places great emphasis on the “compliance flexibility” the agency believes to be inherent in its approach. While EPA may be able to imagine limitless scenarios by which utilities can dispatch generation resources to achieve the mandated emission limit, individual states and the utilities they regulate are constrained by facts and the laws of physics.

This rule has less compliance flexibility than what is typically allotted to states under §111(d). Section 111(d) grants states the authority, in applying a standard of performance to particular sources, to take into account the source’s remaining useful life or other factors. However, in this case, EPA proposes that, given the degree of flexibility allegedly inherent in the BSER approach, the statutory allowance for source specific considerations will not be allowed.⁵⁰ The statutory directive to allow states to take those factors into consideration should not be ignored in any context, but especially here where our options are so limited already.

These emission limits are not just suggestions, EPA points to its enforcement authority. EPA requires that the states’ standards of performance must not be less stringent than the EPA’s emission guideline.⁵¹ If a state does not submit an implementation plan, or if EPA finds a submitted plan unsatisfactory, the agency will then prescribe a *federal* implementation plan for that state.⁵² Presumably, a federal plan would apply the “building blocks” to the state in whatever measure EPA believes necessary to achieve the assigned emission rate. Such a plan may regulate an affected source by establish binding emission limits for coal - and gas-fired power plants. Application of the other three components of EPA’s “system of emission reductions”

⁴⁸ Proposed Rule, 79 Fed. Reg. at 34,856.

⁴⁹ Proposed Rule, 79 Fed. Reg. at 34,856.

⁵⁰ Proposed Rule, 79 Fed. Reg. at 34,925.

⁵¹ EPA Legal Memorandum at 3-4.

⁵² 42 U.S.C. § 7411(d)(2).

extend EPA's reach to other "affected entities." EPA would regulate dispatch protocols and the mix of generation resources and fuels used in a state. Implementation of building block three may involve mandatory renewable portfolio requirements that require construction of renewable generation resources. A federal implementation plan that reflected EPA's BSEER determination would also involve EPA mandated efficiency standards for consumers of electricity. Moreover, any federally enforceable plan, whether authored by a state or EPA, would subject the state, utilities, and numerous other private parties to citizen suits to compel compliance with a state or federal plan.

2. Congress did not authorize EPA to preempt the role of states in regulating the power sector or establishing state energy policy.

Given the traditional state role regulating electric utilities and setting energy policy, Congress must make an explicit statement of its intention to authorize a federal agency to preempt the state's role.⁵³ Here, Congress has given no clear indication of its intent to authorize EPA to invade state authority to decide energy and resource-planning policy. Rather, under the "usual constitutional balance," areas of traditional state jurisdiction, and that any arguable ambiguity found, must be resolved in the states' favor by reference to the "basic principles of federalism."

However ambiguous the statutory term "system" may be, statutes cannot be read so broadly as to extend an agency's reach into an entirely new area of regulation. Administrative agencies may not transform limited grants of statutory authority into broad mandates on the basis of arguably "ambiguous" statutory terms. The D.C. Circuit rejected the Federal Energy Regulatory Commission's recent attempt to regulate retail energy demand in the guise of regulating wholesale electric markets.⁵⁴ The court noted that FERC's regulation would impair states' exclusive right to regulate retail electric

⁵³ *Bond v. United States*, 134 S. Ct. 2077 (2014) (overturning a conviction under the implementing legislation for the Chemical Weapons Convention, the Court reasoned "because our constitutional structure leaves local criminal activity primarily to the States, we have generally declined to read federal law as intruding on that responsibility, unless Congress has clearly indicated that the law should have such reach."); *American Bar Association v. FTC*, 430 F.3d 457, 471-72 (D.C. Cir. 2005).

⁵⁴ *Electric Power Supply Association v. FERC*, 753 F.3d 216 (D.C. Cir. 2014).

markets and lacked any meaningful “limiting principle.”⁵⁵ Similarly, the D.C. Circuit also rejected FERC’s attempt to replace the California Independent System Operator Corporation’s governing board under its authority to regulate “practice[s]” affecting “rates and charges” in the wholesale electric markets.⁵⁶ The lack of a limiting principle on FERC’s assertion of authority again undermined the agency’s proposed interpretation of statutory language.

In *Utility Air*, the Court considered EPA’s interpretation of its permitting authority under the Act’s prevention of significant deterioration preconstruction permitting program.⁵⁷ EPA interpreted “air pollution” to include greenhouse gases among those pollutants that trigger an emitting source’s permitting obligation, thereby massively expanding the program. The Court held EPA’s interpretation unreasonable in part “because it would bring about an enormous and transformative expansion in EPA’s regulatory authority without clear congressional authorization.”⁵⁸

By contrast, when upholding EPA’s authority to require BACT to limit GHG emitted from sources already regulated under the PSD program in the same decision, the Court placed great weight on the fact that EPA had not yet applied the BACT requirements in a manner that would have such far reaching consequences:

[A]pplying BACT to greenhouse gases ... need not result in such a dramatic expansion of agency authority, as to convince us that EPA’s interpretation is unreasonable. We are not talking about extending EPA jurisdiction over millions

⁵⁵ *Id.* at 221. The lack of a limiting principle was key to the court’s reasoning. If this justification for FERC’s exercise of its authority prevailed, it could authorize virtually any intrusion on state retail electric market regulatory authority, allowing FERC to arrogate broad authority that Congress did not confer. Notably, the connection between FERC’s area of authority (wholesale electricity market) and the challenged regulation (retail energy demand) was considerably more direct than here yet the regulation was nonetheless held to exceed the Commission’s statutory authority.

⁵⁶ *California Independent System Operator Corp. v. FERC (“CAISO”)*, 372 F.3d 395, 399 (D.C. Cir. 2004).

⁵⁷ *Utility Air*, 134 S. Ct. 2427 (2014).

⁵⁸ *Id.* at 2444.

of previously unregulated entities, but about moderately increasing the demands EPA (or a state permitting authority) can make of entities already subject to its regulation. And it is not yet clear that EPA's demands will be of a significantly different character from those traditionally associated with PSD review. In short, the record before us does not establish that the BACT provision as written is incapable of being sensibly applied to greenhouse gasses.⁵⁹

In sum, the standard of performance in the PSD permitting program – BACT – could not be interpreted to bring about a “transformative expansion in EPA’s regulatory authority.” This line of authority prohibits EPA’s attempt in this Proposed Rule to interpret the Clean Air Act to regulate greenhouse gases in a manner far beyond the usual scope of the statute and without any meaningful limiting principle.

3. Congress explicitly preserved the role of states in regulating the electric utility sector in the Federal Power Act.

Congress expressly reserved regulation of intrastate electric generation and transmission to the states. The Federal Power Act (FPA) delineates the respective state and federal roles in regulating the electric industry and developing energy policy. While states regulate most intrastate matters, interstate electric power transmission and interstate wholesale electric sales fall within federal authority. There are a few exceptions to this delineation – which are specifically outlined in the statute.⁶⁰

EPA argues §111(d) authorizes EPA to regulate inter- and intrastate generation, sale, and transmission of electric power because Congress did not expressly constrain it from doing so. But “[w]here a problem of interpretation was apparently not foreseen by Congress, it is appropriate to consult and be guided by those areas covering the same subject where the expression of legislative intent is clear.”⁶¹ When Congress passes new legislation, “it acts aware of all previous statutes on the same subject.”⁶² Presumably

⁵⁹ *Utility Air*, 134 S.Ct. at 2448-2449.

⁶⁰ 16 U.S.C. § 824(b)(1); *New York v. FERC*, 535 U.S. 1, 21 (2002).

⁶¹ *U.S. v. Stauffer Chem. Co.*, 684 F.2d 1174, 1187 (6th Cir. 1982); *Erlenbaugh v. United States*, 409 U.S. 239, 245 (1972) (statutes “intended to serve the same function” are construed together).

⁶² *Erlenbaugh*, 409 U.S. at 244.

aware of the FPA when subsequently enacting the Clean Air Act, Congress would not have granted EPA broader regulatory authority than that given to FERC without an explicit statement.

Furthermore, the state and federal commissions charged with regulating the energy sector are chosen for their subject matter expertise and the respective legislative bodies have granted the commissions powers with a view to that subject matter.⁶³ EPA's authority to regulate air pollution from stationary sources should not be read to cut across this complex scheme of federal and state regulation.

Given the general delineation of state and federal authority and the care taken to define those specific areas where federal authority would be asserted over matters previously governed by states, §111(d) should not be interpreted to grant EPA authority to govern state electric generation and energy-efficiency policies without limit.⁶⁴

III. Even if the Clean Air Act did confer broad authority regulate electric power, application of the rule to Alaska would be arbitrary and capricious.

EPA's rationale for this rule does not apply to Alaska. As set out in the State of Alaska's main comment letter, Alaska's electric utility sector differs in several respects from the interconnected and integrated industry described by EPA. In particular, Alaska's electric utility sector lacks connectivity – transmission connections between load centers and “affected EGUs” are limited. These characteristics are significant in this rulemaking because EPA explicitly bases its evaluation of three of the proposed BSER measures on the existence of an “integrated electricity system.”⁶⁵ Applying a rule developed for different factual circumstances would be arbitrary and capricious.

The criteria considered in determining “best system of emission reductions” (BSER) include: (1) technical feasibility, including whether the proposed emission levels are “achievable” with “adequately demonstrated” technology, (2) cost; (3) health and

⁶³ *CAISO*, 372 F.3d at 404.

⁶⁴ *Cf. Boumediene v. Bush*, 553 U.S. 723, 777 (2008) (“If Congress had envisioned [Detainee Treatment Act] review as coextensive with traditional habeas corpus, it would not have drafted the statute in this manner.”) (noting absence of savings clause in that Act).

⁶⁵ Proposed Rule, 79 Fed. Reg. at 34880.

environmental impacts; (2) energy requirements.⁶⁶ EPA must offer a reasonable evaluation of these statutory factors.⁶⁷

EPA's Regulatory Impact Analysis (RIA) and Integrated Planning Model (IPM) figured prominently in the agency's evaluation of the BSER criteria.⁶⁸ These technical documents evaluate the application of the Proposed Rule in the continental U.S. (and some Canadian Provinces) but do not include Alaska. Similarly, EPA's Resource Adequacy and Reliability TSD failed to evaluate the impact of the Proposed Rule in Alaska.⁶⁹ The record is not entirely silent, however; EPA acknowledges the lack of information to inform the BSER analysis for Alaska.⁷⁰

EPA appears to believe the perceived "compliance flexibility" in its building block approach adequately accounts for variability in factual circumstances.⁷¹ As noted, the existence of flexibility in compliance pathways hinges on specific circumstances. The flexibility available to Alaska is limited by the number of EGUs at issue, the role of those

⁶⁶ Proposed Rule, 79 Fed. Reg. at 34,890.

⁶⁷ See *Sierra Club v. Costle*, 657 F.2d 298 (D.C. Cir. 1981).

⁶⁸ Proposed Rule, 79 Fed. Reg. at 34,839/2 (identifying role of RIA and IPM in evaluating degree of emission reductions achievable, costs and benefits), 34,861 n. 119 & 120 (HRI) 34,864/3 -34,865/1 (outlining role of RIA and IPM in evaluating re-dispatch), 34875 (demand side energy efficiency); 34968 (new renewable generation); 34,934/3 (energy market impacts discussed in RIA); 34,935/1 (RIA evaluates compliance costs); 34941 (RIA evaluates benefits); 34,949 (RIA provides economic impact analysis and evaluation of energy effects); 34,949/3 (RIA provides EPA's analysis regarding the health and ecosystem effects).

⁶⁹ See Resource Adequacy and Reliability TSD, EPA-HQ-OAR-2013-0602-0163, Appendix C (Maps) (illustrating the regions evaluated in the TSD).

⁷⁰ See Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and Emission Standards for Modified and Reconstructed Power Plants, EPA-HQ-OAR-2013-0602-0391, at ES-15 n. 7 (June 2014) ("We do not have emission reduction information or air quality modeling available to estimate the air pollution health co-benefits in Alaska and Hawaii anticipated from implementation of the proposed guidelines."); *Id.* at 3-46 (IPM does not represent electricity markets in Alaska, Hawaii, and U.S. territories outside the contiguous U.S. and therefore the costs (and benefits) that may be expected from the proposed rule in this [sic] states and territories are not accounted for in the compliance cost modeling")

⁷¹ Proposed Rule, 79 Fed. Reg. at 34837; Goal Computation TSD at 19.

EGUs in the generation mix, the number of ratepayers to bear compliance costs, transmission constraints, climate and geography, as well as other factors will restrict our compliance options. The “compliance flexibility” gloss does not resolve our concerns about the feasibility and impact of the Proposed Rule in Alaska.

When promulgating regulations under the Clean Air Act, EPA must articulate a reasonable explanation of the specific analysis and evidence relied upon as a basis for the rule.⁷² A generalized discussion of relevant factors does not satisfy this responsibility – EPA must explain how it arrived at the specific conclusion.⁷³ This requirement persists even where there is no evidence in the record contradicting the agency’s decision.⁷⁴ Here, EPA’s analysis variously excludes or ignores Alaska’s utility sector. Furthermore, the facts presented in our main comment letter affirmatively demonstrate that the proposed measures do not satisfy the statutory criteria in Alaska. Given that Alaska’s utility sector differs from the industry in the continental U.S. – with respect to the precise characteristic that EPA’s BSER analysis relies upon – EPA has not articulated a reasonable basis for applying the Proposed Rule to our state.

⁷² See *Bluewater Network v. EPA*, 370 F.3d 1, 21 (D.C. Cir. 2004).

⁷³ *Id.*

⁷⁴ *Id.*

Stranded Cost Calculations for Healy 1 and 2

| | Book Value 1/1/2020 | Book Value 1/1/2025 | Book Value 1/1/2030 |
|---------------------|------------------------|------------------------|------------------------|
| Healy Unit 1 | | | |
| Land | 188,306 | 188,306 | 188,306 |
| Current Assets | 5,680,817 | 1,172,739 | 138,185 |
| Interest | 2,180,463 | 1,409,950 | 779,556 |
| | <u>8,049,586</u> | <u>2,770,995</u> | <u>1,106,046</u> |
| Healy EMD | | | |
| Current Assets | 288,817 | 220,860 | 152,903 |
| Healy Unit 2 | | | |
| Land | 126,013 | 126,013 | 126,013 |
| Assets | 188,228,247 | 163,670,827 | 139,113,407 |
| Interest | 82,871,961 | 53,217,958 | 29,335,404 |
| | <u>271,226,221</u> | <u>217,014,798</u> | <u>168,574,824</u> |

| Total Stranded Costs Calculation | | | |
|----------------------------------|-----------------------|-----------------------|-----------------------|
| Combined | 1/1/2020 | 1/1/2025 | 1/1/2030 |
| Land | \$ 314,319 | \$ 314,319 | \$ 314,319 |
| Assets | \$ 194,197,881 | \$ 165,064,426 | \$ 139,404,494 |
| Interest | \$ 85,052,424 | \$ 54,627,908 | \$ 30,114,960 |
| | <u>\$ 279,564,624</u> | <u>\$ 220,006,653</u> | <u>\$ 169,833,773</u> |

| Remaining Loan Principal Payments | | | |
|-----------------------------------|-----------------------|-----------------------|-----------------------|
| | 1/1/2020 | 1/1/2025 | 1/1/2030 |
| Healy 1 | \$ 4,573,146 | \$ 3,865,276 | \$ 3,022,102 |
| Healy 2 | \$ 164,848,693 | \$ 137,329,678 | \$ 105,996,212 |
| | <u>\$ 169,421,839</u> | <u>\$ 141,194,954</u> | <u>\$ 109,018,314</u> |

| Stranded Costs and Remaining Loan Principal Payments | | | |
|--|-----------------------|-----------------------|-----------------------|
| | 1/1/2020 | 1/1/2025 | 1/1/2030 |
| Stranded Costs | \$ 279,564,624 | \$ 220,006,653 | \$ 169,833,773 |
| Debt Principal | \$ 169,421,839 | \$ 141,194,954 | \$ 109,018,314 |
| | <u>\$ 448,986,463</u> | <u>\$ 361,201,607</u> | <u>\$ 278,852,087</u> |

Assumes no capital additions to either plant

| | Book Value 1/1/2020 | Book Value 1/1/2025 | Book Value 1/1/2030 |
|---------------------|------------------------|------------------------|------------------------|
| Healy Unit 1 | | | |
| Land | 188,306 | 188,306 | 188,306 |
| Current Assets | 5,680,817 | 1,172,739 | 138,185 |
| Healy EMD | | | |
| Current Assets | 288,817 | 220,860 | 152,903 |
| Healy Unit 2 | | | |
| Land | 126,013 | 126,013 | 126,013 |
| Assets | 188,228,247 | 163,670,827 | 139,113,407 |
| Combined | | | |
| Land | 314,319 | 314,319 | 314,319 |
| Assets | 194,197,881 | 165,064,426 | 139,404,494 |

Assumes no capital additions to either plant

Stranded Cost Calculations - Debt - Healy Unit 1

| | | | |
|---------------------|----------------------|----------------|------------|
| Assumptions: | AW-8 RUS Loan | | |
| | Draws | \$30,000,000 | June, 2016 |
| | Interest Rate | 3.500% Fixed | |
| | Interest Fee | 0.125% Fixed | |
| | Maturity | December, 2042 | |
| | Amortization Type | Level Debt | |

| | AW-8 RUS Loan Remaining Principal Payments As of Jan 1, 20XX | NRUCFC 9034 Loan Remaining Principal Payments As of Jan 1, 20XX | Total Hiy Unit 2 Remaining Principal Payments As of Jan 1, 20XX | AW-8 RUS Loan Remaining Interest Payments As of Jan 1, 20XX | NRUCFC 9034 Loan Remaining Interest Payments As of Jan 1, 20XX | Total Hiy Unit 2 Remaining Interest Payments As of Jan 1, 20XX | Total Hiy Unit 2 Remaining Debt Service As of Jan 1, 20XX |
|------------|---|--|--|--|---|---|--|
| 1-Jan-2020 | 4,573,146 | 0 | 4,573,146 | 2,180,463 | 0 | 2,180,463 | 6,753,610 |
| 1-Jan-2025 | 3,865,276 | 0 | 3,865,276 | 1,409,950 | 0 | 1,409,950 | 5,275,227 |
| 1-Jan-2030 | 3,022,102 | 0 | 3,022,102 | 779,556 | 0 | 779,556 | 3,801,658 |

| | AW-8 RUS Loan Annual Principal Payment | NRUCFC 9034 Loan Annual Principal Payment | Total Hiy Unit 2 Annual Principal Payment | AW-8 RUS Loan Annual Interest Payment | NRUCFC 9034 Loan Annual Interest Payment | Total Hiy Unit 2 Annual Interest Payment | Total Hiy Unit 2 Annual Debt Service |
|------|--|---|---|---|--|--|--|
| 2013 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 2014 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 57,216 | 0 | 57,216 | 91,084 | 0 | 91,084 | 148,300 |
| 2017 | 118,945 | 0 | 118,945 | 177,546 | 0 | 177,546 | 296,491 |
| 2018 | 123,163 | 0 | 123,163 | 173,177 | 0 | 173,177 | 296,340 |
| 2019 | 127,530 | 0 | 127,530 | 168,654 | 0 | 168,654 | 296,184 |
| 2020 | 131,603 | 0 | 131,603 | 164,420 | 0 | 164,420 | 296,023 |
| 2021 | 136,720 | 0 | 136,720 | 159,136 | 0 | 159,136 | 295,856 |
| 2022 | 141,568 | 0 | 141,568 | 154,115 | 0 | 154,115 | 295,683 |
| 2023 | 146,588 | 0 | 146,588 | 148,915 | 0 | 148,915 | 295,503 |
| 2024 | 151,391 | 0 | 151,391 | 143,927 | 0 | 143,927 | 295,318 |
| 2025 | 157,155 | 0 | 157,155 | 137,971 | 0 | 137,971 | 295,126 |
| 2026 | 162,728 | 0 | 162,728 | 132,199 | 0 | 132,199 | 294,927 |
| 2027 | 168,499 | 0 | 168,499 | 126,222 | 0 | 126,222 | 294,721 |
| 2028 | 174,142 | 0 | 174,142 | 120,366 | 0 | 120,366 | 294,508 |
| 2029 | 180,650 | 0 | 180,650 | 113,637 | 0 | 113,637 | 294,287 |
| 2030 | 187,058 | 0 | 187,058 | 107,002 | 0 | 107,002 | 294,058 |
| 2031 | 193,689 | 0 | 193,689 | 100,132 | 0 | 100,132 | 293,821 |
| 2032 | 200,298 | 0 | 200,298 | 93,278 | 0 | 93,278 | 293,576 |
| 2033 | 207,661 | 0 | 207,661 | 85,661 | 0 | 85,661 | 293,322 |
| 2034 | 215,025 | 0 | 215,025 | 78,034 | 0 | 78,034 | 293,059 |
| 2035 | 222,650 | 0 | 222,650 | 70,137 | 0 | 70,137 | 292,787 |
| 2036 | 230,369 | 0 | 230,369 | 62,136 | 0 | 62,136 | 292,505 |
| 2037 | 238,715 | 0 | 238,715 | 53,498 | 0 | 53,498 | 292,213 |
| 2038 | 247,181 | 0 | 247,181 | 44,730 | 0 | 44,730 | 291,911 |
| 2039 | 255,946 | 0 | 255,946 | 35,652 | 0 | 35,652 | 291,598 |
| 2040 | 264,941 | 0 | 264,941 | 26,333 | 0 | 26,333 | 291,274 |
| 2041 | 274,418 | 0 | 274,418 | 16,520 | 0 | 16,520 | 290,938 |
| 2042 | 284,151 | 0 | 284,151 | 6,442 | 0 | 6,442 | 290,593 |
| 2043 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | \$ 5,000,000 | \$ - | \$ 5,000,000 | \$ 2,790,924 | \$ - | \$ 2,790,924 | \$ 7,790,924 |

Stranded Cost Calculations - Debt - Healy Unit 2

| | | | |
|----------------------|-------------------------|-----------------|--|
| Assumptions: | NRUCFC 9034 Loan | | |
| Draws | \$45,000,000 | December, 2013 | |
| Interest Rate | 5.113% Fixed | | |
| Maturity | September, 2043 | | |
| Amortization Type | Level Principal | | |
| AW-8 RUS Loan | | | |
| Draws | \$30,000,000 | December, 2014 | |
| | \$30,000,000 | June, 2015 | |
| | \$30,000,000 | September, 2015 | |
| | \$30,000,000 | December, 2015 | |
| | \$22,800,000 | June, 2016 | |
| Interest Rate | 3.500% Fixed | | |
| Interest Fee | 0.125% Fixed | | |
| Maturity | December, 2042 | | |
| Amortization Type | Level Debt | | |

| | AW-8 RUS Loan Remaining Principal Payments As of Jan 1, 20XX | NRUCFC 9034 Loan Remaining Principal Payments As of Jan 1, 20XX | Total Hiy Unit 2 Remaining Principal Payments As of Jan 1, 20XX | AW-8 RUS Loan Interest Payments As of Jan 1, 20XX | NRUCFC 9034 Loan Interest Payments As of Jan 1, 20XX | Total Hiy Unit 2 Interest Payments As of Jan 1, 20XX | Total Hiy Unit 2 Remaining Debt Service As of Jan 1, 20XX |
|------------|---|--|--|---|--|--|--|
| 1-Jan-2020 | 128,924,323 | 35,924,370 | 164,848,693 | 61,470,757 | 21,401,204 | 82,871,961 | 247,720,654 |
| 1-Jan-2025 | 108,968,333 | 28,361,345 | 137,329,678 | 39,748,764 | 13,469,195 | 53,217,958 | 190,547,636 |
| 1-Jan-2030 | 85,197,893 | 20,798,319 | 105,996,212 | 21,976,937 | 7,358,467 | 29,335,404 | 135,331,616 |

| | AW-8 RUS Loan Annual Principal Payment | NRUCFC 9034 Loan Annual Principal Payment | Total Hiy Unit 2 Annual Principal Payment | AW-8 RUS Loan Annual Interest Payment | NRUCFC 9034 Loan Annual Interest Payment | Total Hiy Unit 2 Annual Interest Payment | Total Hiy Unit 2 Annual Debt Service |
|------|--|---|---|---|--|--|--|
| 2013 | \$ - | \$ - | \$ - | \$ - | \$ 189,111 | \$ 189,111 | \$ 189,111 |
| 2014 | 0 | 1,512,605 | 1,512,605 | 0 | 2,164,618 | 2,164,618 | 3,677,223 |
| 2015 | 490,865 | 1,512,605 | 2,003,470 | 1,909,598 | 2,092,260 | 4,001,858 | 6,005,327 |
| 2016 | 2,964,132 | 1,512,605 | 4,476,737 | 4,722,098 | 2,019,894 | 6,741,992 | 11,218,729 |
| 2017 | 3,353,241 | 1,512,605 | 4,865,847 | 5,005,303 | 1,947,616 | 6,952,919 | 11,818,766 |
| 2018 | 3,472,154 | 1,512,605 | 4,984,759 | 4,882,144 | 1,875,428 | 6,757,572 | 11,742,331 |
| 2019 | 3,595,284 | 1,512,605 | 5,107,889 | 4,754,617 | 1,803,092 | 6,557,709 | 11,665,598 |
| 2020 | 3,710,089 | 1,512,605 | 5,222,694 | 4,635,271 | 1,730,732 | 6,366,003 | 11,588,697 |
| 2021 | 3,854,347 | 1,512,605 | 5,366,953 | 4,486,302 | 1,658,452 | 6,144,754 | 11,511,706 |
| 2022 | 3,991,031 | 1,512,605 | 5,503,636 | 4,344,738 | 1,586,282 | 5,931,020 | 11,434,656 |
| 2023 | 4,132,561 | 1,512,605 | 5,645,166 | 4,198,154 | 1,514,306 | 5,712,460 | 11,357,625 |
| 2024 | 4,267,963 | 1,512,605 | 5,780,568 | 4,057,528 | 1,442,237 | 5,499,766 | 11,280,333 |
| 2025 | 4,430,460 | 1,512,605 | 5,943,065 | 3,889,615 | 1,368,962 | 5,258,578 | 11,201,643 |
| 2026 | 4,587,574 | 1,512,605 | 6,100,179 | 3,726,891 | 1,295,541 | 5,022,433 | 11,122,611 |
| 2027 | 4,750,258 | 1,512,605 | 6,262,863 | 3,558,397 | 1,222,130 | 4,780,527 | 11,043,390 |
| 2028 | 4,909,341 | 1,512,605 | 6,421,946 | 3,393,308 | 1,148,735 | 4,542,043 | 10,963,988 |
| 2029 | 5,092,808 | 1,512,605 | 6,605,413 | 3,203,615 | 1,075,359 | 4,278,974 | 10,884,387 |
| 2030 | 5,273,409 | 1,512,605 | 6,786,014 | 3,016,564 | 1,001,993 | 4,018,557 | 10,804,571 |
| 2031 | 5,460,415 | 1,512,605 | 6,973,020 | 2,822,880 | 928,588 | 3,751,468 | 10,724,488 |
| 2032 | 5,646,722 | 1,512,605 | 7,159,327 | 2,629,665 | 855,189 | 3,484,854 | 10,644,181 |
| 2033 | 5,854,297 | 1,512,605 | 7,366,902 | 2,414,932 | 802,397 | 3,217,329 | 10,584,231 |
| 2034 | 6,061,902 | 1,512,605 | 7,574,507 | 2,199,913 | 725,058 | 2,924,971 | 10,499,478 |
| 2035 | 6,276,869 | 1,512,605 | 7,789,474 | 1,977,269 | 647,718 | 2,624,987 | 10,414,461 |
| 2036 | 6,494,477 | 1,512,605 | 8,007,082 | 1,751,717 | 570,379 | 2,322,096 | 10,329,178 |
| 2037 | 6,729,767 | 1,512,605 | 8,242,373 | 1,508,197 | 493,039 | 2,001,236 | 10,243,609 |
| 2038 | 6,968,419 | 1,512,605 | 8,481,024 | 1,261,023 | 415,700 | 1,676,723 | 10,157,747 |
| 2039 | 7,215,533 | 1,512,605 | 8,728,138 | 1,005,084 | 338,360 | 1,343,444 | 10,071,583 |
| 2040 | 7,469,125 | 1,512,605 | 8,981,730 | 742,356 | 261,021 | 1,003,377 | 9,985,107 |
| 2041 | 7,736,281 | 1,512,605 | 9,248,886 | 465,739 | 183,681 | 649,421 | 9,898,307 |
| 2042 | 8,010,676 | 1,512,605 | 9,523,282 | 181,598 | 106,342 | 287,940 | 9,811,221 |
| 2043 | 0 | 1,134,454 | 1,134,454 | 0 | 29,002 | 29,002 | 1,163,456 |
| | \$ 142,800,000 | \$ 45,000,000 | \$ 187,800,000 | \$ 82,744,516 | \$ 33,493,223 | \$ 116,237,739 | \$ 304,037,739 |

H Dale LLC

Box 60173
Fairbanks, AK 99706
907-322-9228
Henri@HDaleLLC.com

GVEA requested H Dale LLC to do an analysis of the cost of shutting down its coal fired units evaluated for the years 2020, 2025, and 2030 to be completed by 9/17/14. The economic analysis was to use GVEA's production costing program and was to be presented in today's dollars. GVEA's production forecasting program returns only the variable (purchased power, fuel and VOM).

The results of the forecasts are shown below. GVEA's base case is that both units are available, i.e. H1 & H2. The value of the coal units can be determined by taking the difference, for example, the value of having both H1 and H2 available versus both of the coal units removed from service in 2030 is \$124.1M - 63.2M = \$60.9M for that year, or in other words, it would cost \$60.9M in replacement energy (fuel and/or purchased power) to replace the output of these units in that year.

| Unit Available | 2020 | 2025 | 2030 |
|----------------|---------|---------|---------|
| H1 & H2 | \$73.9 | \$63.3 | \$63.4 |
| H1 only | \$112.1 | \$104.3 | \$110.9 |
| H2 only | \$83.8 | \$70.3 | \$76.6 |
| No H | \$121.3 | \$116.8 | \$124.1 |

In general, it is clear that removal of any of GVEA coal units result in significantly higher fuel and purchased power costs to its members. The general reduction in dollars between 2020 and 2025 runs are due to reduced loads (and consequently less fuel and purchased power) required. The increase in 2030 is due to the expiration of the Aurora Energy (coal based units) contract.

ASSUMPTIONS

Load: GVEA staff recommended using the 2012 PRS low load case (due to the less than expected load growth these last several years) with manual changes to some of the GS3 customers. In particular, Ft. Knox was modeled to shutdown prior to 2020, but have a residual 6 MW load up to but not including 2025. Pogo has an end of life scheduled for prior to 2020, but have been on record as having expected reserves that will allow them to extend its life. It is modeled to continue until just before 2025. In the near term, Pump 9 is expected to draw heavily as a

method to heat crude due to the recent shutdown of Flint Hills Refinery. It is expected they will find a more economic method to heat crude prior to 2020, so an increase is not modeled in these runs. Flint Hills Refinery is removed from the model. Clear AF site is modeled as a 6 MW load.

Generation: With the exception of the Healy units being evaluated, all units are assumed to be available for use (no retirements and no new units) through the study period. It is assumed for convenience only, that Eva Creek Wind farm turbines will be replaced as they fail which is statistically expected during this time period. There is no accommodation in the model for forced outages while waiting for cranes and replacement turbines. No changes have been made to accommodate any potential UAF or DoD generation changes.

Generation maintenance generally follows a pattern with some outages longer than others, for example, a major overhaul takes longer than an inspection. The pattern generally exceeds 1 year in periodicity. To treat all three years the same, a typical annual maintenance profile was applied the same to each year.

March NPC borescope - 2 days
April CH5 spring maint - 14 days
April H1 1 ½ yr maint - 16 days
May H2 - 14 days
Oct CH5 fall maint - 7 days
Nov NPC borescope - 2 days

Purchased Power: It is assumed that energy from south central is available up to the operational limits of the Alaska Intertie, and that up to 70 MW of energy may flow on the Intertie when Healy 1, Healy 2, and Eva Creek are all at full load. Anchorage natural gas fuel prices are assumed to be based on Henry Hub with a \$3.55/Mcf adder to reflect what we are currently seeing between Cook Inlet and Henry Hub as it is applied to northbound energy sales. The Battle Creek diversion at Bradley Lake is expected to happen. The Aurora Energy contract is due to expire at the end of 2030. The 2030 model has been modified to allow the Aurora Energy contract to have already been expired in 2030, so that this year would be more representative of expected post 2030 operation. The Aurora Contract annual escalation has been reduce by 2.5% to approximate "real" dollars.

Fuel: Fuel contracts are assumed to have been negotiated with similar pricing structure as current contracts, and in the quantities needed in the three evaluation years. NPE is expected to burn a Naphtha/LSR mix, the remaining combustion turbines are modeled using HS diesel. The commodity fuel prices are from EIA and in today's dollars. Coal is assumed to have similar terms and appropriate end dates for the units being removed from service in the study. To capture "real" dollars, coal prices have been held constant. It is recognized, but not modeled, that the coal production escalation indices may not be the same as inflation.

Major Projects: The model did not simulate Livengood Mine, Watana, and availability of fuel via a gas line or via trucked LNG as these projects are still speculative.

Dispatch: Economic commitment and dispatch was used. An exception is that commitment was set to allow Eva Creek to fully swing randomly during the course of a day. It is likely that there are cases were it would be more economical to spill small amounts of wind rather than to run, for

example, NPE in simple cycle which would give the system room to swing during certain hours of the month. An analysis has not been made to determine where this economic breakpoint may occur. When, the only other option was to shut down a coal unit, small amounts of potential wind was curtailed.

Other: 2020 is a leap year, it has an additional day of costs as compared to the other years. It is assumed there is no major transmission outages for maintenance, retirement, or construction of new lines.



Interior Alaska – The “Place” To Do Business

100 Cushman St., Suite 102 | Fairbanks, Alaska 99701-4665
ph (907) 452-1105 | fax (907) 456-6968 | www.FairbanksChamber.org

March 12, 2015

Honorable Senators Bishop & Micciche
Co-Chairs, Special Committee on Energy
Alaska State Legislature

RE: Letter of Support for Senate Bill 57 – Clean Air Act Plan

Dear Senators Bishop and Micciche,

The Greater Fairbanks Chamber of Commerce supports SB 57, an Act relating to the development of state emission standards in accordance with the federal Clean Air Act.

SB 57 protects Alaska’s ratepayers from the EPA’s proposed rule regulating existing power plants. The proposed rule is built on assumptions that are unworkable in Alaska due to limited availability of viable energy options. For example, the Interior does not currently have access to natural gas for power generation; nor is there existing capacity available on the Intertie to send more gas-fired power from Southcentral Alaska.

Coal is Interior Alaska’s lowest-cost source of energy. On a per Btu basis, coal is half the cost of natural gas, one-third the cost of naphtha, and one-sixth the cost of diesel. If Golden Valley Electric Association were forced to shut down Healy #1, a coal-fired power plant, energy costs in Interior Alaska would be significantly higher. Bringing Healy #2 online will double the amount of coal-fired power capacity available to GVEA, which will stabilize rates and have potential savings of as much as \$30 million annually, because of coal’s much lower cost relative to other fuels. Yet, the EPA’s proposed rules threaten GVEA’s ability to provide this opportunity.

Our community is already facing exorbitant energy costs that continue to impact our economy. The Chamber’s Board of Directors remains committed to supporting efforts that reduce the cost of energy. We urge you to support Senate Bill 57.

Sincerely,

GREATER FAIRBANKS CHAMBER OF COMMERCE

Lisa Herbert
Executive Director

Jennifer Imus
Board of Directors, Chair

INVESTORS

DIAMOND

- Alaska Airlines
- BP Exploration
- ConocoPhillips
- ExxonMobil
- Fairbanks Daily News-Miner
- Fairbanks Memorial Hospital & Denali Center
- Flint Hills Resources Alaska
- Mt. McKinley Bank

PLATINUM

- Alyeska Pipeline Service Co.
- Doyon, Limited
- Fred Meyer Stores
- Golden Heart Utilities
- Wells Fargo Bank Alaska

GOLD

- Carlson Center
- Denali State Bank
- Design Alaska
- Doyon Utilities LLC
- First National Bank Alaska
- GCI
- Kinross Fort Knox Mine
- Lynden
- Northrim Bank
- Sumitomo Metal Mining Pogo LLC
- Usibelli Coal Mine
- WAL-MART Stores, Inc.

SILVER

- Agency 49
- Alaska Communications
- Alaska Railroad
- Alaska USA
- Dr. Christopher Henry
- Henry Orthodontics
- Everts Air Cargo, Everts Air AK
- Exclusive Paving & University Redi-Mix
- Fairbanks Natural Gas
- Flowline Alaska
- General Teamsters Local 959
- Gene’s Chrysler, Jeep & Dodge
- Hale & Associates, Inc.
- JL Properties, Inc.
- Key Bank
- MAC Federal Credit Union
- Personnel Plus
- Sam’s Club
- Seekins Ford Lincoln
- Shell Exploration & Production Co.
- Spirit of Alaska FCU
- State Farm Insurance
- Tammy Randolph, Agent
- Ed Randolph, Agent
- Tanana Valley Clinic
- TDL Staffing
- Totem Ocean Trailer Express
- Tower Hill Mines-Livengood Gold Project
- University of Alaska Fairbanks
- Verizon Wireless
- Vivamore Companies
- Yukon Title Company



March 12, 2015

Senator Cathy Giessel
Chair, Senate Resources Committee
State Capitol #427
Juneau, Alaska 99801

Dear Senator Giessel:

The Alaska Railbelt Cooperative Transmission and Electric Company (ARCTEC) appreciates your sponsorship of SB 57 Clean Air Act Plan, and supports its passage.

Created in 2011, ARCTEC consists of four Railbelt utilities working collectively to solve the Railbelt's energy needs and challenges. The current members of ARCTEC are Chugach Electric Association, Matanuska Electric Association, Seward Electric System, and Golden Valley Electric Association.

The proposed suite of green house gas rules by the Environmental Protection Agency (EPA) creates great uncertainty. Alaska is unique, and the EPA's proposed rules do not properly fit Alaska's generation and transmission system. The rule will negatively impact Alaska's electricity consumers. The EPA's target reduction for Alaska is 26 percent. This is unrealistic and is based on flawed assumptions.

ARCTEC members understand the value of reducing carbon emissions. As you know, some Railbelt utilities have recently constructed new power plants. These are among the most advanced generators with the best available control technology that exists today. However, the EPA's proposed rule on regulating carbon dioxide emissions from existing power plants could force electric cooperatives to abandon their generation investments, unnecessarily increase electricity rates if forced to switch from lower cost energy to more expensive alternatives, and create grid instability.

Upon the EPA's finalization of this rule, the Alaska Department of Environmental Conservation (ADEC) will have to create a state implementation plan. While ADEC continues to work with the EPA on understanding Alaska's unique generation and transmission circumstances, SB 57 strengthens Alaska's position.

SB 57 sets parameters on that implementation plan which protect Railbelt ratepayers. As you know, electric cooperatives are charged with providing reliable, affordable power. Without the safeguards in SB 57, ARCTEC is uncertain if Alaska will be able to meet the EPA's target.

Very truly yours,

A handwritten signature in blue ink, appearing to read 'D. Gillespie', with a long horizontal stroke extending to the right.

David Gillespie
Chief Executive Officer,
Alaska Railbelt Cooperative Transmission and Electric Company

NEWS

March 5

McConnell Pushes 'Just Say No' Campaign Against EPA's Clean Power Plan

From Energy and Climate Report

FREE TRIAL



By Andrew Childers and Anthony Adragna

March 4 — Senate Majority Leader Mitch McConnell (R-Ky.) urged states not to comply with the Environmental Protection Agency's Clean Power Plan, elevating a tactic that has been debated recently among opponents of the proposed rule.

States should “hold back” plans for complying with the rule, which would set carbon dioxide emissions limits for existing power plants, to allow litigation over its legality to proceed and to allow Congress more time to act, McConnell wrote in an op-ed piece March 3.

“Think twice before submitting a state plan—which could lock you in to federal enforcement and expose you to lawsuits—when the administration is standing on shaky legal ground and when, without your support, it won't be able to demonstrate the capacity to carry out such political extremism,” McConnell wrote in Kentucky's the Lexington Herald-Leader. “Refusing to go along at this time with such an

extreme proposed regulation would give the courts time to figure out if it is even legal, and it would give Congress more time to fight back.”

Refusing to comply with the rule once it's finalized, a tactic that has been dubbed “just say no,” has been debated recently by legal scholars and opponents of the EPA regulations.

Some academics and attorneys argue that states refusing to develop their own plans to comply with the Clean Power Plan will only be hurting their own ratepayers because the EPA will be forced to issue a federal plan that is less flexible and more costly.

“The benefits of saying no are really twofold,” Brian Potts, an attorney at Foley & Lardner LLP, told Bloomberg BNA March 4. “One is politics, and two is it makes EPA's life harder and it makes it less likely the Clean Power Plan will succeed,” Potts said. “The flipside is you hurt your ratepayers.”

Potts had argued that states choosing not to develop their own plans likely would face larger rate increases under federal plans in a Feb. 3 editorial in Real Clear Energy.

Up to 20 States Could Forgo Plans

However, he predicts between 15 states and 20 states could forgo developing their own compliance plans, forcing the EPA to issue federal plans.

The proposed Clean Power Plan (RIN 2060-AR33) would establish unique carbon dioxide emissions rates for the power sector in each state. The EPA rule would be implemented by states, which would determine how best to achieve the emissions targets.

However, if states choose not to develop their own plans, the EPA will issue a federal implementation plan (FIP) for them. The agency said it plans to issue a draft federal plan this summer when it finalizes the Clean Power Plan to guide states in developing their own state implementation plans.

Rule Called 'Unfair,' 'Probably Illegal.'

McConnell called the proposed rule “unfair” and “probably illegal” and added that it would have a negligible impact on the global environment but cost thousands of jobs.

The Senate majority leader argued the EPA won't accept state plans that deviate much from its ideological agenda, meaning it won't make much difference if states submit their own plans or must instead follow a federal implementation plan designed by the agency.

“As they have in the past, opponents of EPA's efforts to clean up air pollution exaggerate claims about the potential impacts of the rule on reliability and costs,” the EPA said in a March 4 statement. “The fact is that EPA is following the law and developing a flexible program, building on successful efforts in states across the country to move to cleaner sources of energy.”

McConnell, a staunch opponent of the EPA rules, has previously pledged to use a number of congressional approaches to fight the regulations, including standalone legislation and the appropriations process which he described as his “best tool”.

Said Administration Has 'Ideological Agenda.'

“The Obama administration is still threatening to impose its own—presumably more draconian—plan on any state that doesn't do as it's told,” McConnell wrote. “Since the Obama administration has already decreed that it will be the judge of whether a plan is acceptable or not, it's hard to see the White House agreeing to much that diverges from its ideological agenda.”

Rather than commit resources to compliance at this point, states instead shouldn't embark on the “costly process of complying” until there is greater clarity from courts and Congress, McConnell said.

McConnell's editorial was endorsed March 4 by Sens. Jim Inhofe (R-Okla.), chairman of the Senate Environment and Public Works Committee, and David Vitter (R-La.) in comments to Bloomberg BNA.

Just Say No

McConnell is the most prominent official to endorse the “just say no” effort, which has been debated by legal scholars since it was raised in a November 2014

Federalist Society white paper written by Peter Glaser, Carroll W. McGuffey III and Hahnah Williams Gaines, who are all attorneys at Troutman Sanders LLP.

That paper questioned how stringent a federal implementation plan could be given that the EPA lacks statutory authority to require power plants to do more than improve how efficiently they operate. The EPA may not be able to require significant improvements in power plant efficiency because they would be cost-prohibitive, and a plan that limits how long coal-fired units could operate might jeopardize electricity reliability, the authors said.

"Certainly, EPA has imposed federal plans in the past. But EPA has never faced a situation where it will need to force a state to reengineer such an important sector of the state's economy with such potentially enormous consequences," the white paper said. "The outcome of a state's refusal to comply cannot be predicted, but it would leave the state no worse off than if the state begrudgingly agreed to become EPA's partner in producing potentially disastrous consequences for the state."

EPA Lacks State Flexibility

Throughout its extensive outreach efforts prior to and after proposing the Clean Power Plan, the EPA has stressed that the rule would give states the maximum flexibility to determine how best to achieve the proposed emissions rates for themselves.

The Clean Power Plan outlines four "building blocks" states could use to comply with the rule, including heat rate improvements at power plants, shifting generation from coal-fired units to natural gas, building new renewable energy generating capacity and investing in energy efficiency programs.

However, the EPA lacks the statutory authority to force states to invest in renewable energy or fund efficiency programs, Potts said. That means the agency would have to develop federal compliance plans that are likely to focus almost exclusively on preventing carbon dioxide emissions from coal-fired power plants, probably increasing compliance costs in those states.

Impact Examined of Federal Implementation Plan

Daniel Selmi, a professor of law at Loyola Law School, Los Angeles, and a visiting scholar at the Columbia Law School Sabin Center for Climate Change Law, also

argued in a March 3 report that the EPA could impose more severe emissions standards on power plants as part of a federal plan if it fears it lacks the statutory authority to impose other compliance options, such as demand reduction and renewable energy investments.

The federal plans could open up individual power plants to lawsuits by outside groups seeking to have the required emissions reductions enforced, Selmi said.

"These limits are likely to be severe, perhaps on the order of a thirty percent reduction, and under such a FIP the legal responsibility to attain the reductions would lie solely on the power plants," he wrote. "If so, and absent other action by the state to reduce emissions elsewhere, the plants must meet those limits or face enforcement actions from EPA or possibly from citizens groups."

States Fear Wasted Effort

State air officials, who will be charged with implementing the Clean Power Plan, say the call to defy the EPA is driven by politics rather than practical concerns. State compliance plans are due a year after the rule is finalized, and air pollution officials already have begun discussing with the EPA what measures should be included in the plans.

"I have observed a Grand Canyon-like gap in the rhetoric from some elected officials to the level of effort and optimism that many state air pollution regulators are demonstrating in responding to the Clean Power Plan," Bill Becker, executive director of the National Association of Clean Air Agencies, told Bloomberg BNA March 4.

Becker said state officials have been meeting with the EPA for two years as it prepared and then proposed the Clean Power Plan. All of those efforts would be wasted if state officials ordered regulators not to develop their own compliance plans, he said.

It's a particular concern as the EPA has already given several indications that it plans to revise portions of the Clean Power Plan, particularly the interim emissions rate targets that states must meet beginning in 2020, in response to state concerns, Becker said.

Would be 'Wasted Effort.'

"All of that would be a wasted effort if Senator McConnell and others were successful in bringing this rule to a halt," Becker said.

McConnell's home state of Kentucky, for example, has already passed legislation that limits the tools that state air regulators may use to develop a compliance strategy to largely heat rate improvements at the power plants themselves.

"What we hear is, I'll stop short of saying it'll be a slam dunk for Kentucky, but it would have been far, far easier for Kentucky to comply if the legislature had not restricted its authority," Becker said.

Clint Woods, executive director of the Association of Air Pollution Control Agencies, said the EPA's upcoming model federal implementation plan, expected with the final rule, could provide states guidance on how to write their own compliance plans. That model could dictate how many states choose not to pursue their own plans, he said.

"The fact is that EPA is going to provide that model, and hopefully it's at a level of detail that provides all the information that states need to have to decide the best option for their states," Woods told Bloomberg BNA March 4.

To contact the reporters on this story: Andrew Childers and Anthony Adragna in Washington at achilders@bna.com and aadragna@bna.com

To contact the editor responsible for this story: Larry Pearl at lpearl@bna.com

Sen. Mitch McConnell's op-ed piece is available at http://www.kentucky.com/2015/03/03/3725288_states-should-reject-obama-mandate.html?rh=1.

Try Energy and Climate Report now

LEGAL & BUSINESS

TAX & ACCOUNTING

ENVIRONMENT, HEALTH & SAFETY

HUMAN RESOURCES

RELATED NEWS

Kerry Urges States, Cities to Offer Pledges in Run-up to End-of-Year Paris Negotiations

EPA Head Unbowed on Plans to Finalize Power Plant Carbon Rules This Summer

States Say Clean Power Plan Targets Achievable Despite Critiques of Proposal

Senators Seek White House Response to Public Comments on Carbon's Social Cost

'Extraordinarily Dirty' Oil From Keystone XL Could Present Climate Risks, Obama Says

COMPANY

[About Us](#)

[Careers](#)

[Contact Us](#)

[Media](#)

BLOOMBERG BNA

[Legal](#)

[Tax & Accounting](#)

Environment, Health & Safety

Human Resources & Payroll

Bloomberg
BNA



[My Invoice](#)

[Privacy Policy](#)

[Accessibility](#)

[Terms & Conditions](#)

[Bloomberg.com](#)

Copyright © 2015 The Bureau of National Affairs, Inc.
All Rights Reserved

EPA's Climate Rules:

Central Planning for a More Expensive and Less Secure Future

BACKGROUND: EPA's climate rules require states to reduce carbon dioxide emissions from the electricity sector by an average of 30 percent nationally. Each state is prescribed an "electricity budget" based upon a complex web of assumptions that include future electricity demand, dramatic shifts in electricity supply sources, adding intermittent sources and reducing energy use.

1) EPA's plan is another step in the administration's policies designed to eliminate low cost and reliable electricity and replace it with more expensive and less reliable sources

- Reducing the diversity and reliability of nation's electricity supply will make our nation's energy supply more expensive by forcing out low cost coal electricity that supplies 40 percent of the nation's electricity and replacing it with higher cost and less reliable sources.
 - This will hurt U.S. economic recovery by making manufacturers less competitive.
 - Manufacturing will be hit with the one-two punch of higher electricity and natural gas costs.
 - Job losses will be significant as manufacturing moves overseas.
 - Families will be saddled with higher utility bills (electricity and natural gas) leaving them with less disposable income.
- States with the highest concentration of manufacturing are states that rely predominantly on low cost coal electricity.
 - Low cost coal electricity is the principal source in 30 states.
 - In the 17 states that receive more than half of their electricity from coal generation, electricity rates are on average 30 percent lower.
 - Low cost electricity keeps manufacturers globally competitive and generates high-wage jobs that pay well-above the national average.
- Middle income and lower income families and retirees will be hit hardest by substantially higher electricity and natural gas bills.
 - U.S. government data show that families with the average or lower than median income (approximately one-half of all households) spend 20 percent of their disposable income on energy—two to three times more than those families above the national median income.
- Electricity and natural gas prices will increase substantially across the nation and some regions will be at risk of brown outs. A recent [study](#) found that regulations EPA issued two years ago will have the following effects even before EPA's climate rules take hold:
 - Wholesale power prices will increase between 27-55 percent across the nation with the additional closure of power plants over the next two years. Higher natural gas prices could cost businesses and households another \$35 billion above the high costs experienced this past winter.
 - The combination of another cold winter and an unusually warm summer would cost consumers \$100 billion in higher electricity and natural gas prices.
- Preliminary studies of EPA's carbon reduction targets — using realistic estimates of efficiency improvements and renewable energy growth — conclude costs will be in the \$50 billion a year range (U.S. Chamber [study](#)). Annual job losses could total 225,000 from the implementation date to 2030.

2) The Costs are real, the benefits are not

- EPA does not claim—because it cannot—that the rule will make any material difference in global temperatures. Theoretically, the rule might at best result in a reduction in global concentrations of carbon dioxide of less than one percent and theoretically reduce global temperatures by less than a hundredth of a degree.
- In the absence of any "climate benefits" EPA resorts to claiming indirect health benefits by engaging in a text book example of double counting benefits that are the product of other rules EPA has already issued.
 - The health benefits EPA claims are from the reduction of other emissions already regulated under the Clean Air Act.
 - These regulations set specific limits at a level to protect public health with an adequate margin of safety.
- EPA also pads its benefits calculation by counting theoretical benefits from a controversial formula called the "social cost of carbon"—and, a recent Brookings study found most of those speculative benefits occur in foreign countries, not the United States.
- There will be health effects from these rules—poorer health from lost jobs and lower standards of living caused by rising energy costs.
 - Studies find that a one percent hike in unemployment correlates with a two percent increase in premature deaths.
 - Policies that make energy more expensive and less accessible are not healthy.

3) EPA is attempting to completely overhaul and control States' electricity systems

- EPA says it doesn't tell states how to do it - but it tells them *what* to do: re-engineer their entire electricity systems based upon EPA-picked electricity sources that fit EPA's energy budget for each state.
 - EPA's state energy budgets are based upon complex and unproven assumptions about the future energy needs of each state; switching electricity generation to more expensive and less reliable sources; and, forced electricity rationing for businesses and households.
 - EPA's plan will result in increased electricity and natural gas prices as both the agency and the President now admit.
 - EPA lacks the competence—and legal authority—to regulate states' power supplies. But if a state is unable to meet EPA's budget and electricity formula, EPA can impose a federal plan that will control the state's electricity system.
- The same agency that grossly underestimated the severity of power plant closures from its 2012 rules now tells states not to worry about the impact of its far more vast carbon dioxide rule. EPA said its MATS rule would remove 5,000 megawatts of low cost coal electricity; in fact, the Department of Energy says it will be 12 times more: 60,000 megawatts—enough low cost power for 35 million homes.
- EPA is backing states into a cap-and-trade and carbon tax programs—two approaches EPA says are acceptable, but ones Congress has rejected. Other nations and some states are moving away from these schemes because they are creating energy poverty and destroying their domestic industries.
 - In California and New England, where cap and trade schemes are used, citizens and businesses have the highest electricity costs in the country.
 - In Europe, the combination of taxes, carbon trading and renewable mandates with subsidies have destroyed the competitiveness of major industries and pushed a larger portion of the population into fuel poverty.

4) Pushing the nation's electric grid over the edge

- EPA promises states “flexibility” but actually deprives them of the most meaningful flexibility by reducing their use of the lowest cost and most reliable sources of electricity generation and forcing reliance on more expensive, volatile and intermittent sources.
- Grid operators, utilities and state regulators are worried about the economic and financial ramifications of an electricity system becoming increasingly dependent on more volatile and less reliable sources of electricity supply.
 - *“The experience of this winter strongly suggests that our nation's bulk power system is at its limits”*—Phillip D. Moeller, commissioner, Federal Energy Regulatory Commission, April 10, 2014
 - *“Because less expensive coal generation is being replaced by high energy cost resources, excess generation will narrow and energy prices could become more volatile due to increasing reliance on natural gas for electricity generation”*—Michael Kormos, PJM Interconnection, April 1, 2014
 - *“EPA rules will lead to higher prices and less reliable service over time”*—Anthony Alexander, CEO, First Energy, April 8, 2014
 - *“The unreliability of gas, wind and solar provided the lesson that fuel diversity is needed for reliability as well as for other policy reasons”*—John Sturm, Alliance for Cooperative Energy Services, April 1, 2014
 - *“It became clear that we are having to make a choice in the winter between committing natural gas resources to generating electricity or to heating homes”*—we face a very real possibility that we will have to make that choice more often in the future—Nick Akins, CEO, American Electric Power, April 10, 2014
 - *“The flexibility of having a diverse source of electricity generation with coal fueled plants saved Southern Company customers more than \$100 million in the first three months of 2014 alone”*—Tom Fanning, CEO, Southern Company, April 30, 2014

5) Emissions can be reduced without damaging the economy or the electric grid

- A more balanced approach would continue the trend of emissions reduction and preserve electricity supply diversity with policies that allow the use of advanced coal technologies.
 - New higher efficiency coal plants will reduce emissions up to 30 percent as compared with the older plants they will replace.
 - This approach would be entirely consistent with EPA's emphasis on increasing the efficiency of power generation—but is precluded by EPA's earlier proposal that bans new coal power plants unless they use unproven technology.
- Greenhouse gas emissions from power plants have already been reduced below levels from a decade ago. Committing the U.S. to unilateral reductions would be a symbolic, but expensive, gesture.

Electricity Prices

EPA Power Plant Policies Impose Regressive Electricity Tax

The Environmental Protection Agency's (EPA) power plant regulations eliminate low cost electricity and replace it with more expensive and volatile electricity sources. These policies hit the middle class and lower income households disproportionately and jeopardize middle class wage jobs.

Households Ultimately Pay the Bills

EPA regulations affect energy prices — typically raising energy costs for businesses and consumers. In the case of electricity, EPA policies have been designed to make America's electric grid less diverse, less reliable and more expensive. As electricity becomes more expensive, the cost of producing goods and services in all economic sectors increases and is passed through with higher prices ultimately paid by consumers.

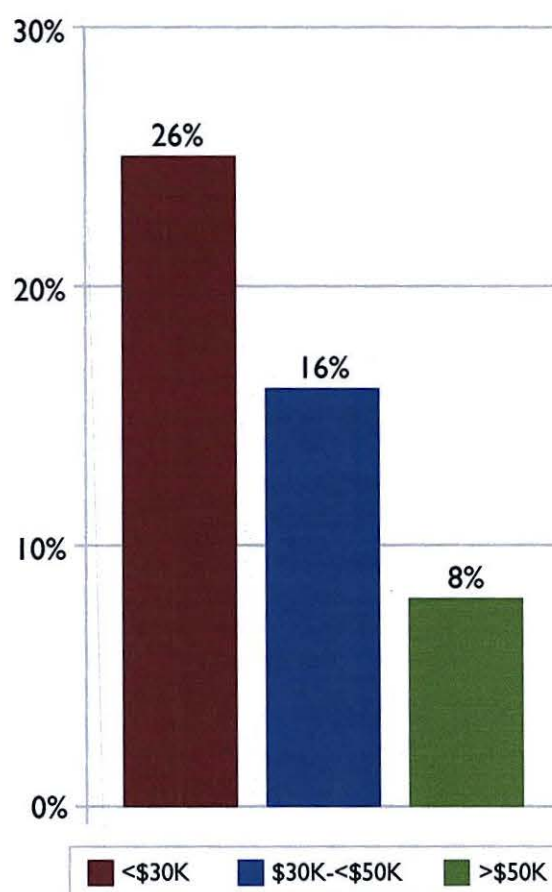
The Department of Energy estimates that EPA rules issued just two year ago will force the closure of close to 200 power plants that can generate more than 60,000 megawatts of electricity — enough low cost electricity to light and heat 30 million homes. New EPA regulations to regulate carbon dioxide emissions from power plants could force the closure of another 30,000 megawatts of electricity generation — denying an additional 14 million families low cost electricity.

Energy Poverty — A New Reality

The burden of increased energy costs is borne disproportionately by the middle class and lower income households. A recent report from the Stanford Institute for Economic Policy concluded that carbon regulations are regressive “with households in the lowest 10 percent of the income distribution paying roughly three times what the richest 10 percent pay, in terms of cost percentage of income.”

U.S. government data show that families with the average median incomes or lower (approximately one-half of all U.S. households) spend two to three times more of their after-tax household income on energy than those families earning above the national median income.

Energy Costs as Percentage of Annual Household After-Tax Income (2014 estimated)



SOURCE: U.S. Energy Information Administration and U.S. Bureau of Census

Middle and lower income families are more vulnerable to increases in electricity costs than higher income families because energy represents a larger portion of their household budgets. Policies that induce the replacement of low cost coal electricity with higher cost sources impose a regressive electricity tax on middle and lower income families, reducing the amount of income they have left to spend on food, housing, health care and other basic needs.

Electricity Grid Reliability: Close to the Edge

Harsh Winter Exposes Threats from EPA Policies

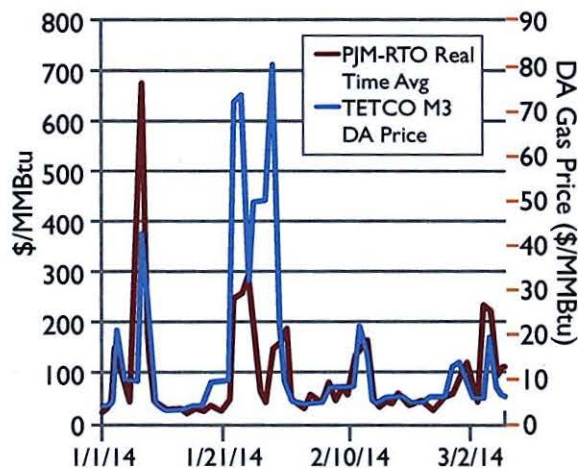
As U.S. Environmental Protection Agency (EPA) regulations force more coal based power plants to close, Americans will pay more for their power and heat according to utility executives. Recent harsh weather exposed the threat from EPA's rules—a less diverse, less reliable and more expensive electricity supply.

Winter 2013-14: A Warning Signal

Electricity consumers in nearly every region of the United States this winter experienced calls from electric utilities to turn down their thermostats and turn off their lights because the power supply system was being stretched to its limits. Despite their efforts, customers will be receiving higher electric and heating bills in the future.

According to Federal Energy Regulatory Commission acting Chairman Cheryl LaFleur the electricity grid was "close to the edge" of breaking. Her colleague, Commissioner Phillip Moeller, has said that "the power grid is now already at the limit" with so many retirements of coal base load power plants as a result of EPA rules. Power company executives warn that future EPA rules for greenhouse gases will make matters even more precarious and expensive.

Natural Gas Prices Soar



SOURCE: U.S. Federal Energy Regulatory Commission analysis of ICE data.

The Cost of EPA Bringing the Grid to the Edge

The Department of Energy estimates that EPA rules that take effect next year will force several hundred coal-based electricity plants to close—plants that have the capacity to power and heat 32 million homes. Pending EPA rules for greenhouse gases could close another 100 power plants. This past winter provided a preview of the future if EPA continues with extreme regulations:

- With fewer coal electricity plants available due to retirements, demand for natural gas reached record levels to heat homes and generate electricity. Natural gas prices spiked to as much as \$123 per million Btu (compared to \$3 to \$5 per million Btu on a normal day).
- Electricity prices reached record levels soaring as high as \$2,000/MWh in some regions. The prime factor leading to high electric prices in the East and Midwest was historically high natural gas prices.
- Coal base load electricity availability and reliability exceeded natural gas, wind and solar generation. Many coal plants that are being forced to close next year due to EPA regulations were running at 90 percent of their capacity.
- Future EPA regulations could force additional coal plant closures that will lead to both greater electric reliability deficiencies and higher costs for consumers.
- The closure of additional coal base load power plant will force more frequent choices between committing natural gas to generating electricity or heating homes.

What Experts Are Saying About Electricity Reliability and Affordability

"EPA rules . . . will lead to higher prices and less reliable service over time. As a result of the US EPA's mercury and air toxic standards, an estimated 376 coal-based units will close in 38 states over the next three to five years—nearly 17 percent of our nation's coal fleet's capacity. And, there are additional EPA rules being considered that could have similar impacts on the fleet."

— **Anthony Alexander, CEO, First Energy,**
April 8, 2014

"Our latest winter exposed an increasingly fragile balance of supply and demand in many areas. Prices at times were extraordinarily high [and] consumers are now beginning to receive utility bills that in some cases are reportedly several times what they paid during similar periods in previous years. The experience of this winter strongly suggests that parts of the nation's bulk power system are in a more precarious situation than I had feared in years past."

— **Philip D. Moeller, commissioner, Federal Energy Regulatory Commission,** April 10, 2014

"Coal and nuclear plant availability far exceeded gas-fired plant, wind, and solar availability and provided much needed system stability and reliability during emergency conditions. The unreliability of gas, wind, and solar provided the lesson that fuel diversity is needed for reliability as well as for other policy reasons."

— **John Sturm, Alliance for Cooperative Energy Services,** April 1, 2014

"Because less expensive coal generation is retiring and in part is being replaced by demand response or other potential high energy cost recourses, excess generation will narrow and energy prices could become more volatile due to the increasing reliance on natural gas for electricity generation."

— **Michael Kormos, PJM Interconnection,**
April 1, 2014

"It became clear that we are having to make a choice in the winter between committing natural gas resources to generating electricity or to heating homes. Right now, we cannot do both. Given the number of additional base load generating units that will be retired in the next 14 months, we face a very real possibility that we will have to make that choice more often in the future."

— **Nick Akins, CEO, American Electric Power,**
April 10, 2014

A common sense approach to grid reliability supports a balanced energy portfolio with coal, which generates more than 40 percent of our electricity—more than any other source in the U.S. today.

EPA imposes costly power plan on Tennessee, all states

Hal Quinn 11:07 a.m. CDT March 9, 2015



(Photo: Submitted)

American households and businesses currently reaping the benefits of low oil prices may soon lose them to higher electricity bills. For this, we can thank an Environmental Protection Agency (EPA) plan designed to replace low cost power supplies with more expensive and less reliable ones.

A growing number of energy experts, including overseers of the Nation's electricity grid, regional power transmission authorities, power plant operators and energy economists are all warning that the EPA Clean Power Plan will lead to higher energy bills for Tennessee's consumers and a less reliable electricity grid for the country.

The North American Electric Reliability Corporation (NERC) — an international regulatory body charged with assessing the adequacy of our electric power system — says implementing EPA's plan will be difficult, if not impossible, without weakening the reliability of the electricity supply. That's because states are asked to reduce their use of affordable electricity and transform their electricity grid based on four wholly unrealistic assumptions about future energy demand, shifts in sources of electricity generation, adding more variable power sources and reduced energy use. EPA ironically calls these "building blocks" but experts say they actually cause the plan to crumble.

For example, NERC found EPA underestimated the number of power plants that will be closed by its new emissions standards — and overestimated the amount of both new power sources and energy efficiency it hopes will offset the power generation lost. EPA may be content to just guess whether the lights will stay on or go out but the rest of us should demand certainty.

Meanwhile, regional power authorities across the country are sounding alarms too. The Southwest Power Pool warns EPA's plan will result in cascading outages and voltage collapse in six of the eight states where it operates the electric grid. The Midcontinent Independent System Operator forecasts that the power reserves needed for 15 Midwestern states will fall below safe margins by 2016, and fall further after that.

Because EPA uses an overly simplistic analysis of what is actually possible in the real world, engineers at the Electric Power Research Institute predict the agency's plan will result in a less diverse and increasingly degraded grid — the same grid American households and industries rely on for essential electric power. American Electric Power, one of the largest electric utilities, echoed this dire forecast after its tests predicted similar outcomes.

Then there are the costs. Energy economists say that replacing more affordable sources of electricity with costlier and less reliable ones means EPA's Clean Power Plan will become the Costly Power Plan.

That's what Tennessee may call it. When independent economic consultants recently examined EPA's plan, they found Tennessee's retail electricity costs would spike as high as 18 percent when already more than half of the state's households spend 20 percent of their after-tax income on energy.

Tennessee's industries will pay another \$116,000 per year for power, putting manufacturing jobs at risk. As coal use declines, demand for other energy sources to fill the gap will raise Tennessee's natural gas costs by more than one billion dollars over ten years. Studies examining two broad options for implementing the EPA plan found the result was the same. The choice is between dumb and dumber. There are no low cost options being offered.

More disturbing than these warnings may be the Obama administration's determination to ignore them. Despite fears of what lies ahead, the EPA is blithely steering the nation's electricity supply into the dark at high speed, wholly in denial about the costs. Icebergs lie dead ahead, yet EPA stays the course, risking a titanic crisis.

The nation's governors don't have that luxury. Long after this administration is gone from office, state officials will be left to explain power outages and higher utility bills to their constituents.

Roman emperors made their architects sleep under the bridges they built, just to be sure. Today, the nation's governors are being asked to sleep under the bridges EPA builds. That should keep governors awake at night.

Hal Quinn is president and CEO of the National Mining Association, a nationwide trade group representing the U.S. mining industry based in Washington D.C.

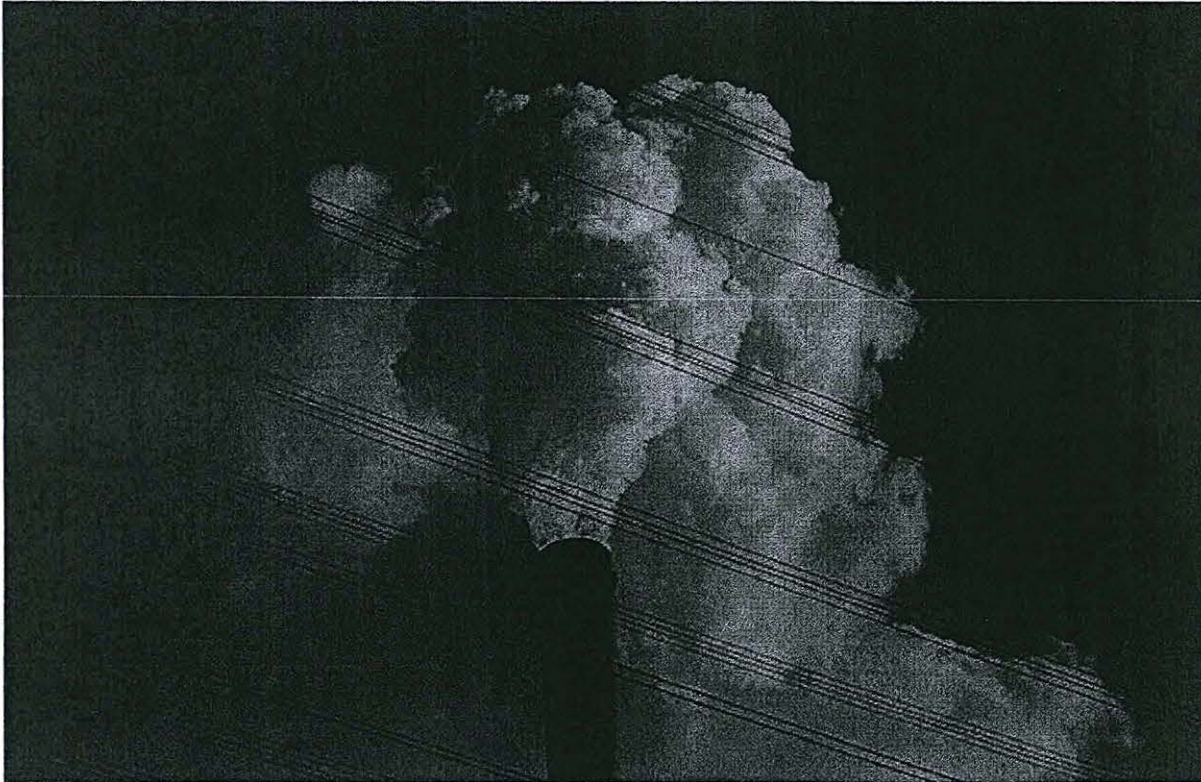
Read or Share this story: <http://tnne.ws/1BYSOIA>

MORE STORIES

MINNPOST

Why the EPA's Clean Power Plan makes even green Minnesota a little nervous

By Devin Henry | 03/11/15



REUTERS/Ina Fassbender

The EPA rules seem particularly targeted at carbon emissions from coal power plants.

WASHINGTON — It has one of those sunny, innocuous Washington-esque names that doesn't nearly convey its scope, or the controversy it's about to attract.

The Clean Power Plan is an ambitious proposed rule from the Environmental Protection Agency to reduce greenhouse gas emissions by 30 percent nationally before 2030. The rule sets individual reduction targets for each state, but state governments have the leeway to write proposals for reducing their emissions as they see fit.

The rule will be expensive — the EPA projects compliance costs could eventually hit \$8.8 billion annually — and utility companies are leery because the plan targets coal, a cheap and prevalent source of energy.



Many Republicans are downright hostile towards it, which indicates legislative and legal challenges.

But until those challenges materialize, many states are pushing forward formulating their approaches to reducing carbon emissions under the plan. Minnesota is one of them. Under the EPA's plan, the state has one of the most aggressive reduction targets in the nation, but one that officials say they expect to hit.

“When you look at the programs that we have in place, I think they're all moving us down the pathway that will allow us to approach the target the EPA has proposed,” David Thornton, a Minnesota Pollution Control Agency administrator, said at a Capitol Hill event on Tuesday.

Minnesota to rely on 2007 state law

Minnesota's target is a 41 percent reduction in carbon dioxide emissions from power plants by 2030, using 2012 numbers as a starting point (that number could change before the EPA finalizes its rule this summer).

Minnesota's target is one of the highest in a nation, largely due to the state's lower-emission natural gas power plants, and an EPA expectation that it will rely on those more going forward than elsewhere.

Carbon emissions targets

Minnesota had one of the lowest carbon emissions rates of peer states in the Midcontinent Independent System Operator power transmission network...

...but its carbon-emissions-reduction target set by the EPA is among the most aggressive, at 41%.

Source: Minnesota PCA

States aren't bound by the EPA's expectations of how they will hit the targets, as long as they meet the percentage-reduction goals. There are a few options available to states: they can clean up existing power plants (many of Minnesota's biggest are coal-based), rely on renewable or nuclear power, reduce demand through energy efficiency programs or some combination of those.

Minnesota officials have their misgivings about the target, and they hope the EPA will tweak it before it finalizes its rule this summer. They say the guidelines are based on some faulty data, and they would like to be able to take credit for work Minnesota did on emissions before 2012, the year that set the EPA's emissions baseline.

In spite of concerns about Minnesota's specific target, state officials are supportive of the plan in general. "We don't want the EPA to weaken it overall, because we want it to be as aggressive as possible," Thornton said.

The state is considering how to comply with the plan, and Thornton is bullish on Minnesota's ability to meet even these lofty goals because they could fit under a law the state already has in place. In 2007 lawmakers approved the Next Generation Energy Act, which sets a goal of reducing greenhouse gas emissions before 2050, requiring utility companies get 25 percent of their power production from renewable sources by 2025, and improving efficiency in the state's electric grid annually.

Compliance with that law could help the state reach the goals set by the EPA. MPCA numbers show greenhouse gas emissions from electricity use fell by 16 percent between 2003 and 2012, and Thornton said the state's utilities are on pace to meet their renewables goal. Some Democrats, in fact, wants to increase the renewable energy standard to 40 percent by 2030.

"We would like to see that happen. It would certainly help. And we're certainly headed that direction anyway," Thornton said. "There are a lot of good reasons to increase the renewable energy standard. Until we know what EPA's final target is, it's hard to know if we absolutely need to do that."

Industry: EPA has exceeded authority

The Clean Power Plan is central to the Obama administration's approach to tackling climate change, and it's an aggressive plan, enough so to have drawn backlash from energy companies.

Utility groups, including those backed by coal interests, have warned that the plan could lead to higher fuel costs for consumers (coal is cheap) and a less efficient power grid (environmental groups and regulators say experience doesn't back that up). In coal producing states like Kentucky, officials and lawmakers worry it could mean less demand and fewer jobs.

The industry has also questioned whether the EPA has the power to enforce these rules. The agency made the rules under a section of the Clean Air Act that the EPA says gives it power to regulate emissions from existing power plants, but the industry — and several red-state governors who have already sued over the rules — dispute that interpretation of the law.

Minnesota's affected power plants

According to the MPCA, the following power plants in Minnesota will be affected by the EPA's proposed rules.

| Company | Plant | Primary fuel types |
|----------------------------------|-----------------------|--------------------|
| Austin Utilities | NE Power Station | Coal |
| Minnesota Municipal Power Agency | Faribault Energy Park | Natural gas |
| Hutchinson Utilities | Hutchinson #2 | Natural gas |

| | | |
|----------------------------|---|-------------------|
| Interstate Power & Light | Fox Lake | Oil |
| - | LSP Cottage Grove Cogeneration Facility | Natural gas |
| - | Mankato Energy Center LLC | Natural gas |
| Minnesota Power | Laskin Energy Center | Coal |
| Minnesota Power | Tac Harbor Energy Ctr | Coal |
| Minnesota Power | Boswell Energy Ctr | Coal |
| Minnesota Power | Hibbard Renewable Energy Ctr | Biomass, coal |
| Otter Tail Power Co | Hoot Lake Plant | Coal |
| Rochester Public Utilities | Silver Lake | Coal |
| Xcel Energy | Allen S King Generating | Coal |
| Xcel Energy | Black Dog | Coal, natural gas |
| Xcel Energy | Riverside Generating Plant | Natural gas |
| Xcel Energy | Sherburne Generating Plant | Coal |
| Xcel Energy | High Bridge | Natural gas |

Jason Bohrer, the CEO of Lignite Energy Council, a pro-coal group of energy companies in North Dakota and Minnesota, said he thinks the agency may also be overstepping its bounds, or at the very least, its expertise, by so strictly regulating power plants. The agency knows how to deal with pollution, he said, but not necessarily the energy industry.

“I don’t think this is the appropriate regulation for the EPA to issue at all,” Bohrer said. “I don’t think they have the legal authority, and I don’t think they have the expertise even if they had the legal authority.”

Politics could get messy

Bohrer said state regulators are making a “good faith effort” to write plans that give utility companies flexibility to comply with the rule. But rather than giving the EPA the job of writing new power plant regulations, Bohrer recommended a more democratic, but dramatically less likely, approach: ask Congress to do it instead.

"I think people in the industry have said, whether we get [regulation] from EPA or from Congress, it's probably on its way," he said. "But we would rather have a legislative solution rather than a regulatory solution."

Already in St. Paul and Washington, lawmakers are considering how to deal with the Clean Power Plan, but they're unlikely to find any common ground on what should come next.

Republicans in the state Legislature have said they want to be able to sign off on any new Minnesota emissions plan under the EPA's requirements. A House panel passed a bill saying so Monday, over objections from some Democrats and the MPCA, which says it would constrict the time they have to write their plan.

"The timing issue is difficult enough, and that would take what is already an aggressive 12-month work process and collapse it into six months," Thornton said.

In Washington, two coal-country Republicans hold key positions that would let them take direct aim at the plan if they want to.

First, Kentucky Sen. Mitch McConnell is the Senate Majority Leader. He wrote an op-ed last week encouraging states to not write their own clean power regulations and let the federal government step in and do it for them. That could help bolster legal challenges against potential EPA overreach, he wrote.

John Moore, a lawyer with the Natural Resources Defense Fund, said he doesn't expect that to happen in many places. States will want the flexibility the plan provides them to define their own emissions standards.

"It would be foolhardy to the extreme," he said.

McConnell's power is blunted by the fact he would need a lot of Democratic support to avoid a filibuster and pass something through the Senate. But there's also Kentucky U.S. Rep. Hal Rogers, the chairman of the House Appropriations Committee.

Rogers' committee handles federal spending, and could conceivably use the power of the purse to try blocking the plan. When EPA administrator Gina McCarthy testified before the committee last month, Rogers criticized President Obama's budget for requesting \$4 billion to help states begin to implement their emissions plans, which he said "are shuttering power plants all over the country and causing coal mines to close their doors."

Republicans might be able to find a few coal-state Democratic allies in any potential fight against the EPA, but many Democrats have sided with the administration — Minnesota Sen. Al

Franken released a statement Tuesday saying the EPA's proposal will "help clean up the air and create a lot of renewable energy and energy efficiency jobs in Minnesota and across the nation."

Finally, if Republicans do try to force the issue legislatively, Obama would likely threaten to veto anything they try to do against the rules.

All of that — a president pushing a legacy policy, an important (and deep-pocketed) industry opposed to that policy, and a divided Congress — make a legislative fix to the plan unlikely. Legal challenges to the EPA's authority are inevitable, but until then, states across the country will have to determine how best to meet their new goals.

Devin Henry can be reached at dhenry@minnpost.com. Follow him on Twitter: @dhenry

Get MinnPost's top stories in your inbox

SUBSCRIBE NOW

Daily newsletter

Sunday review

Greater Minnesota newsletter

RELATED CONTENT:



EARTH JOURNAL

Our 'clean coal' fantasy isn't dead — but perhaps it ought to be

BY RON MEADOR | 02/20/15

Though partisan attackers like to paint the Obama administration as pursuing a "war on coal," as Mitch McConnell is fond of putting it, that's disingenuous.

Related Tags:

ABOUT THE AUTHOR:

Devin Henry

Devin Henry covers Minnesota's congressional delegation and reports on developments out of Washington that are important to Minnesota readers.



COMMENTS (7)

All you have to know about

SUBMITTED BY JOE SMITH ON MARCH 11, 2015 - 11:07AM.

All you have to know about the EPA and this administration is Obama threatened to veto a bill that would require EPA to make public any scientific data used to justify regulations..... Enough said.

Obama's opponents have made

SUBMITTED BY JEFF KLEIN ON MARCH 11, 2015 - 7:48PM.

Obama's opponents have made it clear that they're not mature enough to handle scientific data.

"Clean Power Plan"

SUBMITTED BY ALAN MULLER ON MARCH 11, 2015 - 2:12PM.

There are surely many complexities and absurdities in this rule.

Minnesota needs reductions of 41 percent and North Dakota needs only 12 percent?? That could be taken as an example of the maxim that no good deed goes unpunished.

On the other hand, if the point is really to reduce climate-changing emissions, then we should be pleased that Minnesota is considered by the EPA to be in a position to make real progress. We should not accept utility arguments that compliance should amount to credit for previous reductions.

No Good Deed Goes Unpunished

SUBMITTED BY ROBERT MOFFITT ON MARCH 12, 2015 - 6:59AM.

The unusually high bar Minnesota has to reach doesn't really seem fair when we already do so much better than other states, but we are up to the challenge.

There is need for a lot more thoughtful discussion of this stuff

SUBMITTED BY ALAN MULLER ON MARCH 11, 2015 - 9:59PM.

Amazing, not, how the editorial views, and frequently the reporting, of the Duluth News Tribune reflects the views of local industrial interests.

I, also, object to some of the "Clean Energy and Jobs" agenda. They are right to be calling for more investment in efficiency, but they are wrong to want to increase quotas for "renewable energy" that includes filthy sources such as "biomass" and garbage burners.

Thanks for the Great Article

SUBMITTED BY TERRY GIPS ON MARCH 12, 2015 - 1:53AM.

Thanks for your excellent article Devin. It was really helpful to hear the perspectives you shared. At the Alliance for Sustainability we have been supporting the Clean Energy Plan.

One thing I wanted to mention is that EPA Commissioner Gina McCarthy is a she, not a he.

With Appreciation and Sustainability,
Terry Gips, President
Alliance for Sustainability
www.afors.org

Clarification

SUBMITTED BY TOM NEHIL ON MARCH 12, 2015 - 9:03AM.

Hi Terry,

The "he" in that sentence refers to U.S. Rep. Hal Rogers, not McCarthy. I've edited the sentence to make that clearer.

Thanks!

MinnPost | 900 6th Avenue SE | Minneapolis, MN 55414 | 612.455.6950



Study: Obama's Carbon Rules Could Cost Thousands of Manufacturing Jobs in Your State

Kelsey Harkness / February 17, 2015

A new study predicts that more than a half million manufacturing jobs will be eliminated from the U.S. economy as a result of the Obama administration's proposed regulations to curb carbon dioxide emissions.

"Every state would experience overwhelming negative impacts as a result of these regulations, but especially those with higher-than-average employment in manufacturing and mining," said Nick Loris, a co-author of the study, which was completed by energy experts at The Heritage Foundation—the parent organization of The Daily Signal.

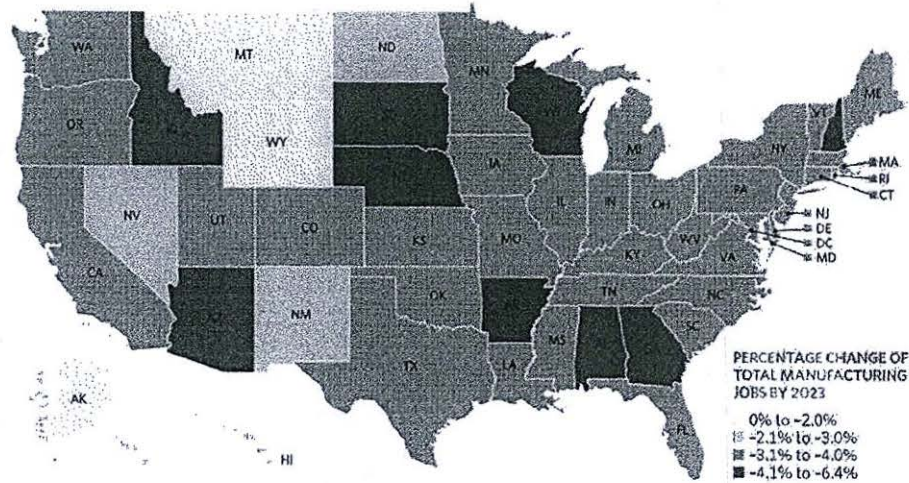
The researchers projected how many manufacturing jobs would be eliminated in each state and congressional district as a consequence of the carbon plan, which is the centerpiece of President Obama's effort to combat climate change.

The results show that 34 states would lose three to four percent of manufacturing jobs by 2023, and nine other states would lose more.

MAP1

EPA Regulations Would Eliminate 586,000 Manufacturing Jobs

EPA regulations on carbon dioxide emissions would significantly impact the U.S. manufacturing sector. By 2023, 34 states would lose 3-4 percent of their manufacturing jobs, and nine other states would lose more.



| State | Jobs Lost | % Total | State | Jobs Lost | % Total | State | Jobs Lost | % Total |
|----------------------|-----------|---------|----------------|-----------|---------|----------------|-----------|---------|
| Alabama | 10,718 | -4.14% | Kentucky | 9,819 | -3.40% | North Dakota | 1,037 | -2.33% |
| Alaska | 524 | -1.59% | Louisiana | 6,288 | -3.53% | Ohio | 31,747 | -3.82% |
| Arizona | 7,964 | -4.02% | Maine | 2,371 | -3.30% | Oklahoma | 6,497 | -3.09% |
| Arkansas | 6,826 | -4.16% | Maryland | 5,893 | -3.36% | Oregon | 7,643 | -3.84% |
| California | 65,330 | -3.62% | Massachusetts | 12,080 | -3.82% | Pennsylvania | 28,926 | -3.69% |
| Colorado | 7,116 | -3.80% | Michigan | 28,294 | -3.71% | Rhode Island | 2,260 | -3.16% |
| Connecticut | 7,571 | -3.94% | Minnesota | 14,771 | -3.67% | South Carolina | 10,731 | -3.70% |
| Delaware | 1,605 | -3.47% | Mississippi | 6,068 | -3.80% | South Dakota | 1,622 | -5.05% |
| District of Columbia | 147 | -0.34% | Missouri | 12,500 | -3.76% | Tennessee | 14,159 | -3.51% |
| Florida | 17,314 | -3.77% | Montana | 839 | -1.75% | Texas | 42,760 | -3.74% |
| Georgia | 18,082 | -4.10% | Nebraska | 3,974 | -4.32% | Utah | 5,431 | -3.51% |
| Hawaii | 773 | -0.97% | Nevada | 2,006 | -2.40% | Vermont | 1,378 | -3.41% |
| Idaho | 2,695 | -5.76% | New Hampshire | 3,452 | -6.39% | Virginia | 11,503 | -3.41% |
| Illinois | 29,868 | -3.72% | New Jersey | 14,827 | -3.58% | Washington | 13,077 | -3.79% |
| Indiana | 21,848 | -3.76% | New Mexico | 1,727 | -2.39% | West Virginia | 2,467 | -3.25% |
| Iowa | 8,968 | -3.74% | New York | 24,196 | -3.89% | Wisconsin | 20,421 | -4.19% |
| Kansas | 6,871 | -3.72% | North Carolina | 20,996 | -3.63% | Wyoming | 489 | -0.58% |

Source: Authors' calculations based on data from the Heritage Energy Model. For more information, see the Appendix.

heritage.org

Graphic: John Fleming

In Ohio alone, 31,747 jobs would be lost.

The study predicts that the Midwest would be hit the hardest, with Illinois, Indiana, Michigan, Ohio and Wisconsin losing more than 20,000 jobs each.

On a local level, 68 percent of U.S. Congressional districts are expected to lose more than 1,000 manufacturing jobs.

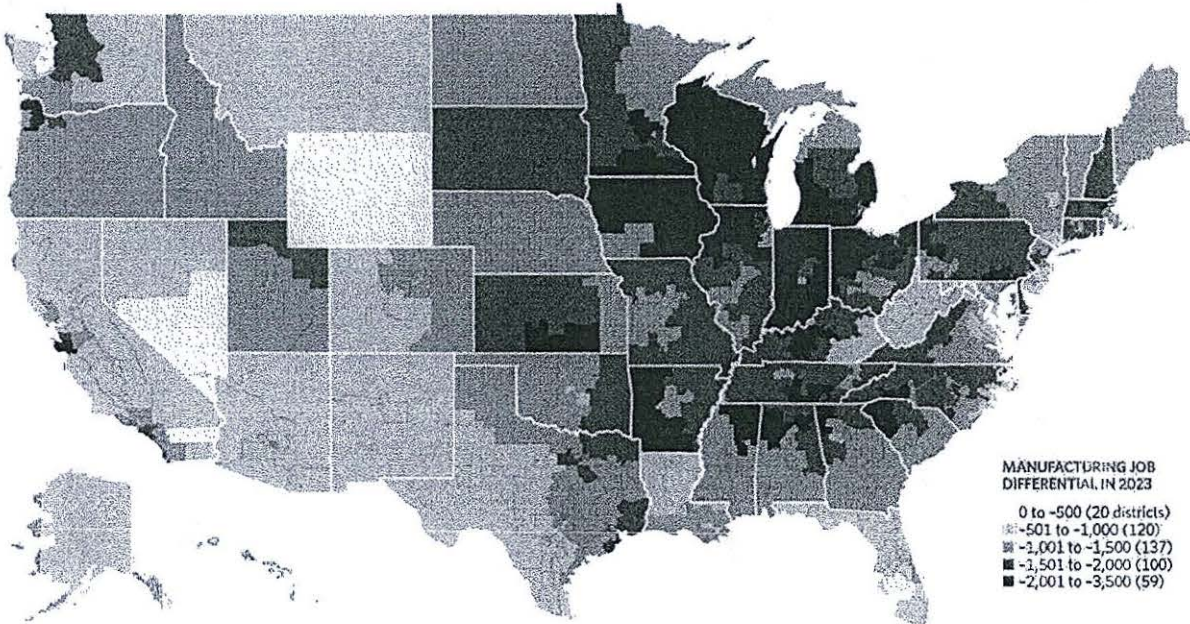
Loris says the manufacturing sector is an "important piece of the puzzle" that should not be overlooked when considering the administration's proposed rule meant to limit carbon pollution.

"Our analysis shows that it's not just coal-country that's hit hard by the federal government's climate regulations," he said. "Because America's industrial base relies on affordable, reliable energy, these regulations would deal a crushing blow to the manufacturing sector, particularly impacting the Midwest."

MAP 2

Where EPA Regulations Would Hit the Hardest

States in the Midwest would lose the largest number of manufacturing jobs due to proposed EPA regulations on carbon dioxide emissions. A total of 296 U.S. congressional districts would lose 1,000 or more jobs.



Source: Authors' calculations based on data from the Heritage Energy Model. For more information, see the Appendix.

heritage.org

Map: John Fleming

The analysis comes just months before the Environmental Protection Agency is set to finalize its carbon regulations covering new, existing and modified/reconstructed power plants by mid summer of 2015.

Heritage's study looked at the totality of the Obama administration's efforts to limit carbon dioxide emissions—from motor vehicles and power plants, both new and existing.

The EPA's plan forces states to cut power-industry emissions by 30 percent in 2030 from 2005 levels.

In response to the study, EPA Press Secretary Liz Purchia argued that action against climate change does not dull America's competitive edge. Rather, it sharpens it. She told The Daily Signal:

The energy sector sees the writing on the wall. Businesses like Spectra Energy are investing billions in clean energy. And utilities like Exelon and Entergy are weaving climate considerations into business plans. This means more jobs, not less. We'll need thousands of American workers, in construction, transmission, and more, to make cleaner power a reality.

Purchia points to "more than 200 U.S. companies" who came together to voice their support for the administration's climate plan—including Kellogg's, Starbucks, Ikea, Levi Strauss and Nestlé—as proof that the regulations are good for the economy.

"[B]usinesses are concerned about the immediate and long-term implications of climate change. As they said, 'Tackling climate change is one of America's greatest economic opportunities of the 21st century,'" said Purchia.

The EPA's proposed regulations work by setting target emission caps for each state based on assumptions about how much that state can reduce its carbon dioxide emissions.

Once targets are established for each state, the EPA tasks states with writing their own plans for how they will comply with the those guidelines.

In addition to reaching the EPA's 2030 goal, states must also comply with guidelines set for 2020, as a way of demonstrating their progress.

Many states have called the EPA's goals unrealistic and are pushing back against the proposed regulations.

While some like Oklahoma are lobbying for substantial changes to the 2020 interim targets, others, like Louisiana, are calling to scrap the policies altogether.

Responding to those complaints, EPA Administrator Gina McCarthy on Tuesday backed off those state deadlines, hinting that there would be flexibility in when states must meet their carbon-cutting targets.

"We want the states to have flexibility to explore options," McCarthy said at a conference of the National Association of Regulatory Utility Commissioners in Washington.



Environmental Protection Agency Administrator Gina McCarthy. (Photo: Jim Lo Scalzo/Newscom)

But even with those concessions, Loris predicts the regulations will stifle business owners.

"To attract state buy-in, the EPA is touting these regulations as being cooperative with the states and awarding the states flexibility in crafting the regulations," Loris said. "But flexibility would merely shift the costs around, not prevent them from happening."

He added:

Instead of trying to cash in and protect special interests, both federal and state legislators should flat out reject the administration's plan. That is the only true way to protect the families and business owners in their states.



March 13, 2015
Senator Cathy Giessel
State Capitol Room 427
Juneau AK, 99801

Re: Support for SB 57, an act relating to state emission standards and the federal Clean Air Act

Dear Senator Giessel:

The Alaska Chamber supports Senate Bill 57 (SB 57), an act relating to the development of state emission standards in accordance with the federal Clean Air Act (CAA).

The Chamber is an organization dedicated to improving the business environment in Alaska. The Chamber represents hundreds of businesses from Ketchikan to Barrow that share a common goal: to make Alaska a viable and competitive place to do business. The Chamber supports efficient regulation, fiscal responsibility and efforts taken to improve or protect the business environment in Alaska.

The Environmental Protection Agency (EPA) intends to issue a final rule under 111(d) of the CAA addressing performance standards to regulate emissions from power generators. The rule has the potential to increase the cost of power throughout Alaska, raising existing hurdles for business. As Alaska's Department of Environmental Conservation (DEC) develops an implementation plan to comply with the new rule, it is essential that any new regulations ensure that Alaska's businesses and consumers are protected from the typically arduous and stifling directives issued from Washington, DC.

The Chamber supports affordable energy for Alaska's rural communities, and an overall reduction in the high cost of power across the state. SB 57 is written to guide DEC in its planning process, by establishing protections for Alaska's rate payers in statute. Further, the bill directs DEC to consider employment, economic development and the overall competitive position of our state while developing an implementation plan.

The Chamber supports environmental policies based on a sound scientific basis with grounding in real world applications, over the precautionary methods typically driven by the EPA. While we do not believe the proposed rule meets these standards, we nonetheless support the State's efforts to ensure that Federal directives are complied in a manner that protects Alaskan businesses and workers. On behalf of Alaska's business community, thank you for your efforts.

Sincerely,

A handwritten signature in blue ink that reads 'Rachael Petro'.

Rachael Petro
President and CEO

Senator Cathy Giessel
State Capitol
Juneau, AK 99801

ATTN: A Letter in Support of SB57

Dear Senator Giessel:

Consumer Energy Alliance – Alaska strongly supports SB57

The proposed carbon emissions rule on existing electric generating units will undoubtedly cause reliability and affordability concerns for many states, particularly those that utilize coal for a large portion of their electricity generation.

The proposed rule will force states to make some difficult decisions that will ultimately lead to fuel switching and higher prices. Forcing a change in our energy mix limits our options and disrupts the fuel diversification that has been critical to low electricity costs.

Higher costs will be borne on every consumer – including our most vulnerable. Already, low income families spend nearly 12 percent of their disposable income on energy, 30 percent higher than the average family. Alaska already has some of the highest energy prices in the nation.

The same goes for manufacturers whose global competitiveness and profitability can be upended by even a one- or two-cent increase in the price per kilowatt hour. America is experiencing a manufacturing renaissance that has lowered unemployment and boosted U.S. exports. However, our manufacturing base depends on low cost energy. Factories across the Midwest and Southeast, where this rule will sting most, could be forced to lay-off workers and slow assembly lines to account for the consequences of this rule.

We appreciate your amendment to the proposed 111d rule, as the 26% reduction goal set by the EPA does not fit Alaska. The "building blocks", or guidelines, for state implementation are inappropriate. In Alaska, the plan development will be more difficult to attain than assumed by the EPA due to limited availability of viable energy options.

In closing, CEA urges Alaska's Senate to adopt SB57 to prioritize Alaska's energy consumers by ensuring these rules do not negatively affect the reliability and affordability of electricity.

Sincerely,



Anne Seneca
Executive Director
Consumer Energy Alliance – AK
ceaak@consumerenergyalliance.org
(907)764-0629
200 W. 34th Ave., Suite 412
Anchorage, AK 99503



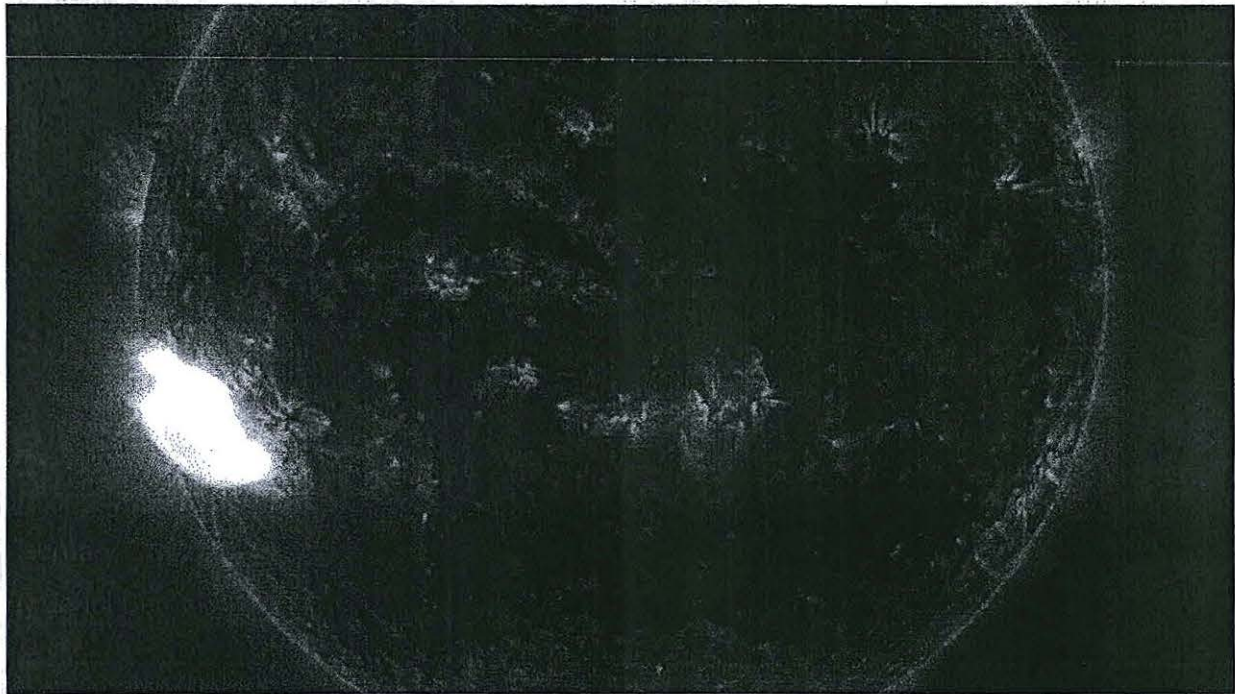
The Pew Charitable Trusts / Research & Analysis / Stateline / States Work to Protect Electric Grid

Stateline

States Work to Protect Electric Grid

February 27, 2015

By Jenni Bergal



A solar flare, a powerful burst of intense radiation from the sun's surface, is captured by NASA's Solar Dynamics Observatory in October. Some scientists and government officials fear that a solar superstorm or a nuclear detonation could disable the electric grid. That has prompted legislators in nearly a dozen states to sponsor grid-protection measures. (NASA/SDO/Rex Features)

A huge solar superstorm fries hundreds of high-voltage transformers, shutting down the nation's electrical power grid. A hostile nation or a group of terrorists detonates a nuclear weapon above the U.S. atmosphere, raining gamma rays and causing massive blackouts.

While these sound like sci-fi movie plots, some scientists and government officials think either scenario could actually occur and end up disabling the country's electrical grid for weeks, months or years, leaving telecommunications and emergency services severely disrupted and affecting the food supply, sanitation and drinking water.

Congress has commissioned reports and held hearings over the years on bills focused on protecting the grid from such catastrophic disturbances, but it hasn't taken any action. So a number of state legislators have decided to file their own grid-related measures, and in some cases, the legislation has been adopted.

"This is an area in which we are extremely vulnerable. It's a real problem. What if the power doesn't come back on?" said Virginia Republican state Sen. Bryce Reeves, who sponsored a measure that passed last year mandating a legislative commission to study the issue and come up with ways to protect against such threats.

Other experts and scientists are skeptical of the dire warnings, saying the chances of such doomsday scenarios are extremely remote. And utility companies argue that they are already highly regulated and prepared for disasters, and that the electrical grid is safe.

"We are the only sector with mandatory and enforceable cyber and physical security standards," said Scott Aaronson, senior director of national security policy at the Edison Electric Institute, a trade association for investor-owned utilities. "I bristle at the assertion that the industry is moving too slowly on this. Instead, we are moving deliberately to ensure the reliability of the electric grid."

Grid Protection Measures

Some legislators say the states have a responsibility to take action because they have regulatory authority over the electric grid's transmission and distribution systems.

States can require power companies to install blocking devices or other technologies to protect large transformers and generators against man-made electromagnetic pulse (EMP) attacks created by nuclear detonations or geomagnetic disturbances caused by solar storms.

A report last year by the National Governors Association found that 70 percent of the nation's transmission lines and transformers are at least 25 years old, and 60 percent of circuit breakers are at least 30 years old. It noted that much of the infrastructure was designed in the 1950s, making the system "vulnerable to disruption."

The report, which didn't focus on solar storms or manmade electromagnetic disturbances, did note that both pose threats to the grid and "should be considered alongside efforts to modernize the electric power grid."

Kristy Hartman, senior energy policy specialist for the National Conference of State Legislatures (NCSL), said that since 2013, EMP or solar storm-related legislation has been filed in at least 11 states. It was enacted in five, failed in three and is pending in the rest.

The measures have ranged from establishing commissions to study the potential threats and make recommendations to requiring electric providers to install certain technology to protect the infrastructure. Among those that have passed:

- Arizona last year required its emergency management agency to develop preparedness recommendations for the public in the event of an EMP or solar flare occurrence.
- Louisiana last year asked the governor's emergency preparedness office to study the potential threats and consequences of a sudden burst of electromagnetic radiation caused by a natural or man-made event.
- Kentucky in 2013 voted to establish an interagency working group to identify risks and assess the state's preparedness to respond to acts of war or terrorism, including an EMP.

In Virginia, state Rep. Reeves' 2014 grid-related measure passed the legislature unanimously. This session, Reeves sponsored a bill requiring the state's emergency management agency to formulate a plan for disasters caused by EMPs or geomagnetic disturbances. It passed this month and is awaiting the governor's signature.

"This is a nonpartisan issue for us," Reeves said. "And in our state, the utility companies get it. They understand and are on board with it. They don't want to be 'the bad people.' They are at the table and are not opposed to placing protections from EMPs on the grid."

While Reeves' colleagues have given his proposals a thumbs up, some lawmakers in other states say they've had a tougher time getting legislation passed.

In Florida, Democratic state Rep. Michelle Rehwinkel Vasilinda sponsored a measure last year that urged Congress to direct the Department of Homeland Security to request resources to protect the nation's grid and recover from such natural or man-made events. It never had a hearing. She also filed an amendment to another measure that would have required the state to develop an emergency response plan in preparation for those types of disasters. It failed in committee.

"We are a state that has been very much ready for hurricanes, but this is different. We are not prepared for an event like this at all," she said, noting that she is planning to file another grid-protection measure this session.

Rehwinkel Vasilinda said she ran up against strong industry opposition.

"There is a reticence on the part of the utility companies, and in Florida, they are very politically powerful," she said.

Utility industry officials scoff at such criticism. They say that they support state policymakers partnering with the industry to learn more about grid reliability, protections and recovery plans. But they argue that piecemeal state legislation isn't the way to go.

“This is a technical and technological issue, not a regulatory or legislative one,” said the industry’s Aaronson, who noted that he finds it “very troubling” that some state legislators are pushing measures that would require utilities to install blocking devices without knowing whether they would work.

“Until the electrical engineers who have the expertise to operate the grid are convinced that a particular strategy will be successful and not have unintended consequences, we’re going to resist the notion that there is a silver bullet that can solve all of our problems,” he said.

Another Carrington Event?

Those pushing for more grid protections say they worry about the devastation that could result if an incident occurred similar to the Carrington Event of 1859.

That powerful solar storm's electric currents made telegraph machines worldwide go haywire, sending shocks to wire operators and setting telegraph paper on fire. They refer to a 2012 study by a senior scientist published in the journal *Space Weather* that concluded there is a 12 percent chance of a Carrington-type storm in the next decade.

They also point to a less serious solar storm that struck Quebec, Canada, in 1989 that caused a nine-hour blackout that cost \$2 billion and burned up a major transformer at a New Jersey nuclear power plant.

But utilities officials argue that they are prepared. A system already exists that would warn of a potential solar event up to hours in advance, according to the National Rural Electric Cooperative Association, which represents nonprofit rural electric cooperatives and public power districts.

The group says that the industry also is participating in research projects and planning for solar storms and EMPs, and working with federal regulators on standards addressing those concerns.

Industry officials say the likelihood of a high-altitude nuclear detonation is extraordinarily low, and that it would be a national security issue within the purview of the military and federal government, not utility companies and states.

Even so, they say utility companies have implemented a number of protections to secure the grid, such as installing shielding on some substations that house the digital infrastructure that supports equipment controls as well as some operations centers.

“There is no such thing as 100 percent security,” said Aaronson of the Edison Electric Institute. But he added that key parts of the grid are resilient and have a high level of protection.

Maine Out Front

Maine’s legislature was the first to pass a grid protection bill aimed at solar storms and EMPs, approving it overwhelmingly in 2013.

The law requires the state’s public utilities commission to examine the system’s vulnerabilities and come up with options for protection, costs and policy implications and report back to the legislature.

Former Maine Democratic state Rep. Andrea Boland, who spearheaded the measure and is aiding in a national effort to raise awareness about EMPs and solar storms, said legislators need to understand that they are on the front line against such potential disasters.

“The feds don’t seem to be getting anything done,” Boland said. “We need to protect the states so that a terrible event wouldn’t be able to keep the grid down for months or years.”

Boland said that in her state and others, utility companies makes it sound as though installing grid-protection devices would be exorbitantly costly. She argues that the technology isn’t expensive, and that placing blocking systems on major transformers in Maine would cost each household only about \$1.50 a year or less over four to five years.

Boland also argues that the industry has been resistant to legislation, partly because it doesn’t want more regulation.

Utilities official Aaronson disagrees, saying his industry isn’t resistant to regulation or to installing protection devices if they actually are proven to work.

The Electric Power Research Institute, a nonprofit research group funded by the utility industry, is examining various technological solutions.

“We have every economic incentive to ensure the lights stay on,” Aaronson said. “Our companies are not making money if the lights aren’t on.”

In Wisconsin, one power company took action without state intervention.

Earlier this month, American Transmission Company installed a geomagnetic blocker on a substation in northeastern Wisconsin that is supposed to protect the grid against solar storms, according to spokesperson Jackie Olson. She said the company spent \$500,000 on the device, engineering and installation.

“There’s an increasing emphasis from the industry to take a look at where you’re vulnerable,” Olson said.

NEXT POST >

[Editor's Picks From Around the Web](#)

< PREV POST

[Editor's Picks From Around the Web](#)

PLACES


[United States](#), [Arizona](#), [Florida](#), [Kentucky](#), [Louisiana](#), [Maine](#), [Virginia](#)

TAGS

[Energy and Environment](#)

Explore

By Tag 

By State 

SENATOR
CHARLIE HUGGINS
SENATE PRESIDENT

Alaska State Legislature

SENATOR
JOHN COGHILL
SENATE MAJORITY LEADER

SENATOR
LESIL MCGUIRE
RULES CHAIR



SENATOR
KEVIN MEYER
SENATE FINANCE CO-CHAIR

Senate Leadership

November 24, 2014

A-and-R-Docket@epa.gov

Administrator Gina McCarthy
Office of the Administrator 1101A
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Environmental Protection Agency
EPA Docket Center (EPA/DC), Mail code 28221T
Attn: Docket ID No. EPA-HQ-OAR-2013-0602
1200 Pennsylvania Ave. NW
Washington, DC 20460

Office of Information and Regulatory Affairs, OMB
Attn: Desk Officer for the EPA
725 17th St. NW
Washington, DC 20503

Re: EPA-HQ-OAR-2013-0602 – Proposed Rule – Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units

Dear Administrator McCarthy:

Leadership for the Alaska Senate Majority has reviewed the proposed rule under the authority of the Clean Air Act ("CAA") section 111(d) and provide the following comments:¹

¹ See <https://www.federalregister.gov/articles/2014/06/18/2014-13726/carbon-pollution-emission-guidelines-for-existing-stationary-sources-electric-utility-generating>. The proposed rule shall apply to all fossil-fuel plants, including coal, diesel, gas, and naphtha, greater than 25 megawatts ("MW") in Alaska. Exceptions shall include plants on military installations, and the plant on the University of Alaska Fairbanks ("UAF") Campus.

I. Alaska Must Be Exempt from the Proposed Rule, or, Alternatively, the EPA Deadlines Must Be Extended Five Years As Affected Coal-Fired Electric Generating Units (“EGUs”) Are Already, in Good Faith, Proactively Attempting to Meet Proposed EPA Standards

Alaska must be exempt from the proposed rule. As discussed below, the state does not have the infrastructure, interconnectedness, transmission capacity, or population to offset losses associated with any alleged “environmental gains” envisioned by the EPA. Leadership continues to object to any proposed rule which yields negative economic consequences to already burdened ratepayers.

In the event Alaska is not exempt from the rule, we, alternatively, look for “across-the-board” reasonable extensions of five years for proposed timeframes on affected coal-fired EGUs. The purpose of this letter is to focus on the alternative ability of Alaska coal-fired EGUs to address proposed standards in the rule and educate the EPA as to measures already taken. Some potential compliance problems also arise.

Noteworthy: The proposed rule requires Alaska to reduce its CO₂ emissions rate from some existing fossil fuel plants to meet Alaska-specific standards (in pounds per MWh) starting in 2020. The final rate shall be for 2030 and beyond. The EPA also calculated “Option 2” standards (which are less stringent emission rate reductions that must be met by 2025 instead of 2030). For the purposes of these comments, the focus shall be on the 2030 deadline.² Regardless of whether the final deadline is 2025 or 2030, in either scenario, the state (if there is not an outright exemption from the rule) should be allowed additional time (five years) for Alaska-based coal-fired EGUs to meet expected CO₂ reduction thresholds.

A. Analysis of EPA’s Building Blocks

The state is required to meet the standards based on four primary building blocks. Each block is designed to help lower CO₂ emissions into the atmosphere. The blocks include: (1) requiring coal plant efficiencies; (2) displacing coal-fired generation and increasing generation from natural gas; (3) substituting generation at affected electric generation units with expanded low-or zero carbon generation (i.e. renewables); (4) using demand-side energy efficiency measures.³

For Alaska, the building block reduction is as follows:⁴

² The details on “Option 1” and “Option 2” are found at:
<http://www2.epa.gov/sites/production/files/2014-05/documents/20140602proposal-cleanpowerplan.pdf>.

³ See <https://www.federalregister.gov/articles/2014/06/18/2014-13726/carbon-pollution-emission-guidelines-for-existing-stationary-sources-electric-utility-generating>.

⁴ See U.S. Environmental Protection Agency, *Technical Support Document (“TSD”) for the Clean Air Act, Section 111(d) Emission Guidelines for Existing Power Plants: Goal Computation, Appendix 5*. See also <http://www.c2es.org/federal/executive/epa/carbon-pollution-standards-map>.

| State | Emissions Rate of Power System, including zero-carbon generation (lbs CO ₂ / MWh) (2012) | Block 1 (Coal-plant Efficiency) | Adding Block 2 (Natural Gas Fuel Switching) | Adding Block 3 (Renewable and Nuclear Generation) | Final Target by Adding Block 4 (Demand-side Energy Efficiency) | Total Emissions Reduction Target by 2030 |
|--------|---|---------------------------------|---|---|--|--|
| Alaska | 1351 | 1340 | 1237 | 1191 | 1003 | 25.8% |

An important point arises:

- The initial rate-based emission is derived from 2012 CO₂ emissions from Alaska’s existing EGUs. Emissions from Healy Unit 2 are not considered because the plant was not operational in 2012. Since Healy 2 would increase the proposed initial fossil fuel rate in lbs/MWh, the initial emission rate is inaccurately low.

Regardless, affected EGUs, including Alaskan-based utilities (particularly in the Interior, such as Golden Valley Electrical Association (“GVEA”)), have been proactive in already addressing some of the issues found in the proposed rule change. Some of the changes can realistically be made. Other changes face challenges because of cost or infrastructure issues.

Because of the proactive attempts by EGUs, many question the need for the EPA to move forward with the rule-making process.

The proactive attempts by EGUs include, (as categorized by the EPA’s proposed building blocks):

1. Block 1 – Coal Plant Efficiency

GVEA has communicated with the EPA and implemented some “best practices” equipment upgrades/activities at Healy Unit 1 & 2.⁵ “Best practice” options may include, but are not limited to, condenser cleaning, boiler feed pump rebuilds, air heater and duct leakage control, turbine overhauls, condenser improvement, and pulverizer maintenance.

⁵ See *In the Matter of Investigating the Potential Impacts of the United States Environmental Protection Agency’s Proposed Clean Air Act Section 111(d) Rule Establishing Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, GVEA’s October 16, 2014 Response to I-14-007(1) from the Regulatory Commission of Alaska at page 2.

2. Block 2 – Natural Gas Fuel Switching

GVEA is giving consideration to receiving natural gas combined cycle generation from South-central Alaska to replace some coal-fired generation assets.

In addition, as natural gas production expands in Cook Inlet (and, potentially, on the North Slope), the state has continued to review low-cost alternatives for interior communities for heat and power generation. One such alternative is the Interior Energy Project (“IEP”).

The IEP attempts to bring low-cost natural gas to the Fairbanks North Star Borough (“FNSB”). The intent, is to have “anchor customers,” including GVEA (to build “economies of scale”), thereby lowering fuel and electrical costs throughout the borough.

There are concerns however.

Projected costs for the IEP may range from \$16 to \$25/MMBtu and may be one-third more expensive than coal.⁶ Whether natural gas comes to the FNSB from the North Slope or Cook Inlet may merit further review (as advocates debate the issue, particularly as it pertains to cost differences).

If the IEP is delayed, there is a real probability that buying potential “stop-gap” natural gas powered electricity from South-central may cost more than coal-fired electrical generation in the Interior. This probability, aligned with previous sunk-costs for GVEA, may create a potential adverse economic effect to Interior ratepayers.

3. Block 3 - Renewable and Nuclear Generation

Although there is no nuclear power in Alaska, the state is giving serious consideration to renewable energy. The Susitna-Watana dam (though perhaps years away because of state fiscal constraints and transmission capacity issues) will provide long-term power to thousands of people across Alaska. The project will generate 2,800,000 megawatt hours (MWh) of annual energy (or 50 percent of the current electric demand on the Railbelt).

Susitna-Watana includes construction of a dam, reservoir, and related facilities on the Susitna River. To minimize disruption to salmon migration, the project will be 184 river miles from the Cook Inlet, 87 river miles beyond Talkeetna, and 22 to 32 river miles above Devils Canyon.

⁶ Northern Economics, Inc., *Fairbanks North Star Borough Gas Distribution System Analysis*, Prepared for the Fairbanks North Star Borough, FNSB Project Number: 11-PWDPRJ-02, June 29, 2012.

Coal, by all accounts, is the cheapest form of energy in Interior Alaska (which is already burdened with high energy costs). High costs occur because of sustained low temperatures in the winter, transportation costs, etc.

Construction of transmission lines (connecting the Railbelt transmission system) would need to occur.

However, like with most large projects, there are ongoing concerns with Susitna-Watana.

Many wonder whether cost thresholds can be met (during times where the state may face, potentially, years of constricted budgets). Historically, because of expense, “phased-funding” has occurred with Susitna-Watana. Whether ongoing “phased-funding” continues will likely be the subject of debate in the forthcoming months.

4. Block 4 – Demand-Side Energy Efficiency

Demand-side Energy efficiency programs have been operating in Alaska for decades. For most in Interior Alaska, members have already implemented cost effective measures. The high cost of energy in general is already a major driver in reducing electricity consumption.

One potential question arises: Who bears the costs for implementing demand-side energy efficiency programs?

In some cases, the utilities bear the majority of the costs for programs it cannot offer for free. The services provided must be reasonably priced for members (which, depending on the circumstances, may have to pay 20% of the audit costs). However, a potential problem arises. Certain members may not have the resources to avail themselves of the services. If so, the cost will have to be absorbed by the utility and may further get passed along to the rest of the ratepayers.

II. Presumptive Savings and CO₂ Reductions May Not Apply to Alaska

The majority of Rule 111(d) presumes levels of cooperation with neighboring states. Each state’s approach will depend on its regulatory structure, renewable resource base, level of interstate power flows (relative to its load), and other factors affecting costs and options for emission reduction.

In those instances of interstate cooperation, transmission systems may be connected to multiple, varied generation units (including natural gas, hydro, and nuclear). Transmission assets in the “lower 48” can and will connect millions of people.

Alaska is different. Alaska is an “island” for connectivity and transmission purposes. As a result, unlike most of the United States, Alaska (if not granted an exemption) will require a stand-alone implementation plan.⁷

Noteworthy: EPA’s projected national compliance cost savings under the proposed rule have little relevance to the “Alaska analysis.” In the absence of multi-state opportunities and regional cooperation, Alaska-specific cost savings may not occur as anticipated by the EPA.

⁷ Other “lower-48” states may submit multi-state plans because of their proximity to neighboring connection and generation assets. In 2015, once a final rule is crafted, Alaska will have until June 2016 to submit an initial state implementation plan. The plan shall be a stand-alone plan and shall be finalized by June 2017.

The ultimate cost to Alaska will likely depend on the CO₂ abatement cost curve and the mixture of CO₂ reduction measures. If the EPA's assumed emissions reductions, based on the Best System of Emissions Reductions ("BSER") are large, but few low-cost abatement opportunities exist, then potential compliance could be quite costly.

On the other hand: If there are more low-cost options than the EPA assumed, then the costs of compliance may be less.

The concern is that Alaska, which has a limited grid-system, (primarily on the Railbelt) will have few low-cost abatement opportunities, particularly in the Interior where coal-fired generation is more common.⁸

Sincerely,



Senator Charlie Huggins



Senator John Coghill



Senator Lesil McGuire



Senator Kevin Meyer

cc: Governor Sean Parnell
Senator Lisa Murkowski
Senator Mark Begich
Congressman Don Young
Alaska Attorney General Michael Geraghty

⁸ Additionally, many are concerned about the adverse economic effect the rule may have on coal producers like Usibelli Coal Mine in Healy. Usibelli's market is overwhelmingly from "in-state demand." Should demand decrease, what are the consequences to the community of Healy? What adverse effects occur to the Alaska Railroad? Many share the view that Rule 111(d) would financially damage those interests.



ALASKA MINERS ASSOCIATION

121 W. FIREWEED SUITE 120 | ANCHORAGE, ALASKA | 99503 | 907.563.9229 | ALASKAMINERS.ORG

March 16, 2015

Senator Cathy Giessel
Senate Special Committee on Energy and Resources
State Capitol Building
Juneau, AK 99801

Dear Senator Giessel:

The Alaska Miners Association thanks you for the opportunity to submit comments on SB57, an act relating to state emission standards in accordance with the Clean Air Act.

AMA is a non-profit membership organization established in 1939 to represent the mining industry in Alaska. We are composed of more than 1,800 members that come from seven statewide branches: Anchorage, Denali, Fairbanks, Juneau, Kenai, Ketchikan/Prince of Wales, and Nome. Our members include individual prospectors, geologists, engineers, vendors, suction dredge miners, small family mines, junior mining companies, and major mining companies. We look for and produce gold, silver, platinum, molybdenum, lead, zinc, copper, coal, limestone, sand and gravel, crushed stone, armor rock, and other materials.

In 2014, the Environmental Protection Agency (EPA) proposed a ruling under the Clean Air Act outlining greenhouse gas emission reductions and mandating States to develop implementation plans to achieve those reductions. On the statement that power plants are responsible for the largest source of carbon pollution in the United States, the EPA has assigned Alaska with a 26% emission reduction goal. However, power generation plays a minimal role in Alaska's carbon emissions - a fact that EPA did not consider. EPA also did not consider Alaska's unique energy challenges when assigning the broad target applied to multiple other states. The rule is expected to be finalized in June of this year (2015), and if so, States (in Alaska, under the Department of Environmental Conservation) will be required to submit their plans to the EPA by June 30, 2016.

AMA is gravely concerned about the proposed and expected finalized rule. Alaska's geographic location, and the location of the majority of our communities, limits options for meeting the new standards. Our already staggering energy costs will just go higher; negatively impacting Alaskans without actually benefitting the environment. This will compound on Alaska's mines, energy-intensive operations that often are located in remote areas without infrastructure and affordable energy options.

While ADEC will be required to submit an implementation plan to EPA next year, it is important that such a plan is created with consideration of economic impacts to Alaskans. This should include the cost and availability of energy to households and businesses, jobs in the energy and fuel sector, state and local revenues, and more. SB57 has thoroughly outlined those important considerations, and we encourage the Alaska Legislature to pass the bill this Session.

Thank you for the opportunity to provide comments on this important issue.

Sincerely,

Deantha Crockett
Executive Director



PO Box 71249, Fairbanks, AK 99707-1249 • (907) 452-1151 • www.gvea.com

Your Touchstone Energy® Cooperative 

March 16, 2015

Senator Cathy Giessel
Alaska State Legislature
State Capitol, Room 427
Juneau, AK 99801
T: (907) 465-4843
F: (907) 465-3871
Senator.Cathy.Giessel@akleg.gov

RE: Senate Bill No. 57 — CO2 Emission Reduction Implementation Plan

Dear Senator Giesel,

Golden Valley Electric Association appreciates your introducing Senate Bill No. 57 recognizing how important electric generation with coal is for the interior of Alaska.

Many special considerations affect generation and delivery of electric power in Alaska, particularly for GVEA. The GVEA service area is located in Interior Alaska. In a climate which drops to 50 degrees below zero, having reliable generation is imperative; truly a matter of life and death. Available fuel is restricted in the Interior largely to naphtha, diesel, and coal. Reasonably priced or low cost liquid fuel has rarely been available, a cost issue that has been exacerbated with the closure of the Flint Hills Resources (FHR) refinery at North Pole, Alaska in 2014. This closure has also increased the vulnerability of the liquid fuel supply chain to interruption. Given this increased vulnerability and the high cost, additional oil-fired EGUs are not an appropriate option for compliance with Subpart UUUU. Local natural gas resources do not exist in the region and no natural gas pipeline to Interior Alaska exists. Natural gas would need to be liquefied and trucked into the Interior from significantly distant locations. As a result, installing cost effective natural gas-fired generation is not an option at this time.

Unlike the lower 48 states, Alaska is stranded from inter-state transmission grids. Alaska is electrically isolated from the lower-48 states and our nearest neighbor, Canada. One constrained transmission system, the Railbelt Grid, exists. The Railbelt Grid provides limited interconnection within the most populated region of the state. Currently, GVEA typically maximizes the capabilities of the existing transmission system. Additional transmission of power from Southcentral Alaska to the Interior is not an option without significant costly upgrades. Transmission is limited to a single 80 megawatt (MW) transmission line between Anchorage and Healy where the line bifurcates into two lines, both serving the GVEA service area. In addition, in the past, the purchase of energy from Southcentral utilities has been limited during the winter months due to limited gas supplies in extreme cold weather. Regardless of the availability of power from Southcentral utilities, the transmission infrastructure between Southcentral Alaska and the Interior cannot support the transmission of additional energy.

Moreover, reliance on transmission of electrical power from outside of the Interior introduces increased reliability risk to GVEA members. GVEA must have the ability to supply electricity to the Interior 365 days a year, particularly during the winter to protect against the loss of life and destruction of property under extreme climate conditions and deliver the power despite system upsets and malfunctions. Any electrical transmission line from Southcentral Alaska to the Interior must navigate the mountains of the Alaska Range and hundreds of miles of rugged, remote areas. Repair and maintenance of this remote line is challenging at best. Given the climate and rugged territory, particularly in the winter months, it is not prudent or acceptable for GVEA members to rely primarily or exclusively on electrical transmission from Southcentral Alaska.

The Interior lacks economically viable renewable resources. GVEA has already developed one of the more practicable RE resources, installing approximately 25 MW of wind generation near Eva Creek. GVEA is currently evaluating the Eva Creek windpower units to determine whether the equipment will withstand sub-arctic climate conditions and produce power at predicted rates. Even if the wind-power units are successful, these units and other renewable resources cannot displace Units 1 and 2 at the Healy Power Plant as essential baseload units.

Given the natural gas, renewable resource, and transmission constraints, GVEA members rely on electric power produced by the small coal-fired steam generating units at the Healy Power Plant. Healy Unit 1 has heat input capacity of 327.0 million British thermal units per hour (MMBtu/hr), a name plate output rating of 22 MW, and a nominal gross output of 27 to 28 MW. Healy Unit 2, also known as the Healy Clean Coal Project, has a heat input capacity of 658.0 MMBtu/hr and an anticipated net output of 52.5 MW following the mandated installation of selective catalytic reduction (SCR) for nitrogen oxides (NO_x) emission control. Though small, these units help ensure the delivery of reliable and affordable power to GVEA members. Both units are existing steam generating units as defined in proposed 40 CFR 60 Subpart UUUU.

Golden Valley supports Senate Bill No. 57 objectives of requiring the Alaska Department of Environmental Conservation (DEC) to request a waiver from the EPA's proposed rule known

as "Existing Source Performance Standards" under Section 111 D of the Clean Air Act and for DEC to develop a state implementation plan if the rule goes into effect.

If you should have any further questions, please advise.

Very Truly Yours,

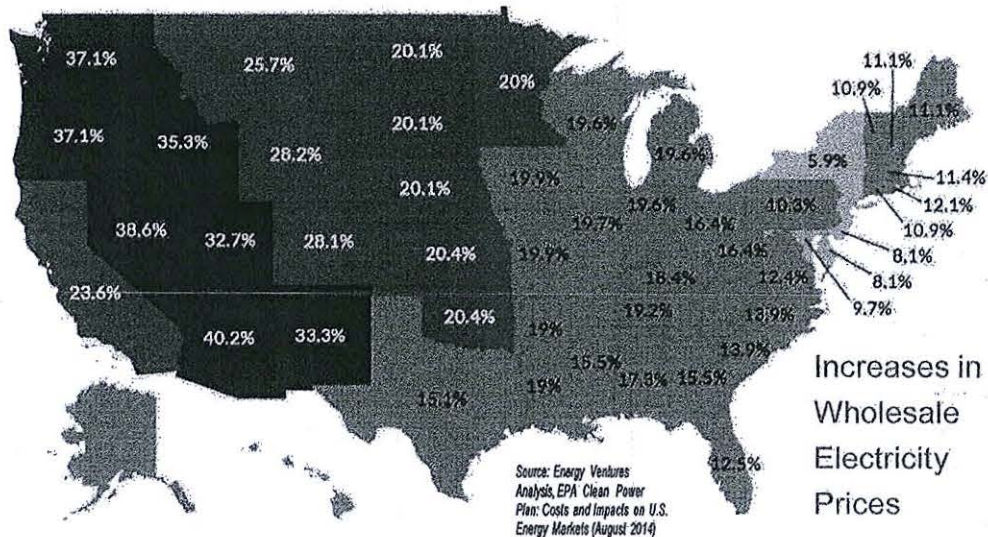
A handwritten signature in blue ink, appearing to read "Cory R. Borgeson", with a long horizontal flourish extending to the right.

Cory R. Borgeson
President and Chief Executive Officer

EPA Clean Power Plan

EPA Power Plant Carbon Regulations Increase Costs, Jeopardize Reliability

The U.S. Environmental Protection Agency (EPA) has proposed sweeping regulations requiring states to reduce carbon dioxide emissions from the electricity sector by an average of 30 percent nationally. The EPA proposal is a stunning attempt to remake the nation's electric grid by eliminating low cost and reliable electricity and replacing it with more expensive and less reliable sources. The proposal will increase energy costs, suppress economic growth and jeopardize the reliability of the electric grid that is already close to the edge.



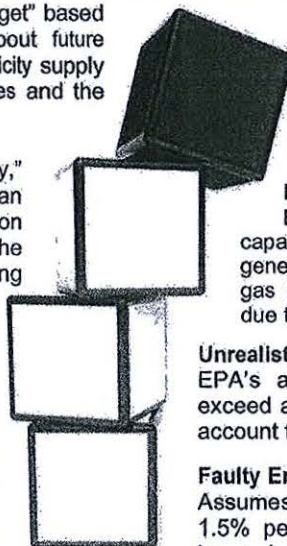
Increases in Wholesale Electricity Prices

EPA's GHG "Building Blocks" for States Don't Stack Up

Each state is prescribed an "electricity budget" based on a complex web of assumptions about future electricity demand, dramatic shifts in electricity supply sources, the addition of intermittent sources and the reduction of energy use.

EPA claims that it affords states "flexibility," but in reality EPA's plan places states in an "energy straightjacket." The emission targets for each state are firm, but the options, or building blocks, for meeting them are weak and unworkable.

As each "building block" crumbles under the weight of unrealistic assumptions, it places unsustainable pressure on the remaining ones. EPA's plan cannot be fixed - the math simply does not work. State implementation of the plan would risk the economic and energy security of its citizens.



Power Plant Efficiency Improvements by 6% Flawed assumption based on statistical manipulation of data and an outdated study. Coal plants currently operate at optimal efficiency.

Flawed Gas Generating and Price Projections EPA projects NGCC operating at consistent 70% capacity factor will displace substantial coal generation. Increased gas generation will increase gas prices and result in bottlenecks in gas delivery due to insufficient pipeline infrastructure.

Unrealistic Estimates for Renewable Expansion EPA's assumptions for increased renewables far exceed all government projections. EPA also fails to account for permitting, financing and transmission.

Faulty Energy Efficiency Saving Analysis Assumes each state can improve efficiency savings by 1.5% per year. These improvements have already been incorporated into utility systems. Additional savings can only be achieved by suppressing economic growth.



**GENERAL
TEAMSTERS
LOCAL 959
STATE OF ALASKA**

Affiliated with the International Brotherhood of Teamsters

Rick Boyles, Secretary-Treasurer

520 E. 34th Ave., Suite 102, Anchorage, Alaska 99503

Phone (907) 751-8501 • Fax (907) 751-8599

March 16, 2015

Honorable Cathy Giessel
Senator District N
State Capitol
120 4th Street
Juneau, AK 99801

Re: Senate Bill 57 – Development of State Emission Standards in accordance with the Federal Clean Air Act

Teamsters Local 959 represents about eighty (80) employees at Usibelli Coal Mine (UCM) and has done so for roughly forty (40) years. We thank you for introducing SB 57 referenced above.

In June of 2014, the Environmental Protection Agency (EPA) released a PROPOSED rule to regulate emissions from power generators. If the rule is finalized, Alaska will have to meet a 26% reduction of CO2 by the year 2030.

Currently, there are six (6) coal fired plants in the Alaska interior. The EPA lists five (5) plants in Alaska that would be subject to the new rule. We are very concerned that the coal plants will be unfairly targeted. Since 1943, UCM has provided a fuel source relied on in Interior Alaska at a reasonable and affordable cost to the communities. UCM's DIRECT payroll is \$14.7 million in year round employment. If you include indirect, induced and power plant jobs wages exceed \$48.5 million. The interior alone relies on about 30% coal for its generation mix. UCM also provides coal as an export, which the Alaska Railroad Corporation transports as freight at about 20% of their revenue.

We are concerned that some or all of UCM coal production could be negatively impacted by this rule. Our members and others could see job losses. Interior Alaska could see a huge cost increase in their fuel source.

SB 57 requires the Department of Environmental Conversation (DEC) to seek a waiver or similar exemption from the Environmental Protections Agency's (EPA) proposed rule, known as "Existing Source Performance Standards under section 111(d) of the Clean Air Act." The bill also provides very important guidance to the DEC, should the rule go into effect, regarding the development of a state implementation plan.

Honorable Cathy Giessel
Senator District N

Re: Senate Bill 57 – Development of State Emission Standards in accordance with the
Federal Clean Air Act

March 16, 2015

Page 2

We ask both Senate and House legislators to seriously consider passage of this bill. It is important to all Alaskans directly, and indirectly, that we have a plan in place ready to execute if the EPA rule is finalized. Your time and consideration regarding this matter is greatly appreciated.

Sincerely,

A handwritten signature in cursive script that reads "Rick Boyles". To the right of the signature is a circular stamp containing a stylized logo or initials.

Rick Boyles
Secretary Treasurer

RB:jk

c: Christy Baily, International Brotherhood of Teamsters
Barbara Huff-Tuckness, Teamsters Local 959

Lynne Smith

From: Robin Forsi
Sent: Tuesday, March 17, 2015 12:35 PM
To: Lynne Smith
Subject: FW: Please reject SB 57

From: sharon whytal [mailto:swhytal@alaska.net]
Sent: Tuesday, March 17, 2015 12:15 PM
To: Sen. Click Bishop; Sen. Peter Micciche; Sen. Lyman Hoffman; Sen. Bert Stedman; Sen. Dennis Egan
Subject: Please reject SB 57

Honorable legislators, Member of the Special Committee on Energy,

Regarding the EPA's Clean Power Plan, I am concerned now about SB 57--the EPA CPP has been legally tested, and is moving forward! As I understand it, "the final rule for the plan is due out this summer or early fall and the intent of the program is to put the states in charge of implementation. It also includes a flexible timeline for states to follow for submitting plans to the agency. Plans are due in June 2016, with the option to use a two-step process for submitting final plans if more time is needed."

Now, SB 57 has been introduced, and tells the state Department of Environmental Conservation that it cannot prepare a unique, state specific implementation plan. SB 57 would prohibit our utilities and regulators from having a seat at the table to craft a solution specific to these unique circumstances. SB 57 employs generic language from the American Legislative Exchange Council (ALEC), a corporate organization funded largely by the billionaire Koch Brothers. This language is not Alaska specific. In fact, it has been used in several other states. The generic nature of SB 57 undercuts the argument that Alaska should be treated differently as a state with unique needs. Our very unique energy situation in Alaska calls for a state-specific plan. Alaskan utilities and regulators should be driving the process of implementation, not the federal government.

You, our state legislature is in the process of adopting an Arctic policy for Alaska, and staking a leadership role in Arctic issues for America. Alaska has made great strides in energy efficiency and renewable energy promotion. As an arctic state in an arctic nation, Alaska should recognize the need for a collaborative plan that curbs dangerous greenhouse gas emissions. We should be at the table as leaders.

PLEASE do not allow SB 57 to thwart this important process that is already underway~

Sincerely,
Sharon Whytal
Homer, AK