EPA's Clean Power Plan

Select Federal Natural Resource Management Committee

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Proposed CO2 Regulations 111(b) and (d)

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

Timeline for Section 111 Regulations for EGUs

April 2012	EPA issued a proposed NSPS for GHGs from new EGUs.
June 2013	President's Climate Action Plan
January 2014	EPA re-proposed NSPS for GHGs from new EGUs. Comment period ended in May 2014.
June 2014	EPA proposed NSPS for GHGs from modified and reconstructed EGUs. Comment period ended October 2014.
June 2014	EPA proposed **Clean Power Plan** - guidelines for the development of state plans under 111(d) for GHGs from existing EGUs. Comment period ended December 2014.
Summer 2015	EPA to finalize NSPS for new, modified, and reconstructed EGUs and concurrently finalize **Clean Power Plan**.

EPA's Proposed Clean Power Plan (111(d))

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- Background
  - Wyoming sends electricity to the Eastern and Western power grids
    - Washington to Iowa
  - Wyoming generated 49.6 MMWh of electricity in 2012
    - 88% coal
    - 9% wind
    - 3% natural gas and hydropower
  - 66% of electricity produced is consumed beyond Wyoming's borders

EPA's Proposed Clean Power Plan (111(d))

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- June 18, 2014 Proposal
  - Over 1600 Pages
  - Impacts Each State Differently
    - Based on each state's unique characteristics and energy portfolio
    - For Wyoming the proposed goal is problematic and unrealistic
  - Four Building Blocks Used to Calculate Each State's Target Goal
    - 1 – Efficiency upgrades at coal fired EGU's of 6%
    - 2 – Increase utilization of natural gas generation
    - 3 – Increase utilization of renewable energy resources and nuclear fleets; and
    - 4 – Decrease use of electricity through demand-side energy efficiency

Target Value

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- Target 1,714 lbs CO2/MWh by 2030
  - Interim Targets (2020-2029)
  - EPA math states target is a 19% reduction from current rate
    - Assumes starting rate of 2,115 lbs. CO2/MWh
    - Actual starting rate of 2,331 lbs. CO2/MWh 26% (reduction)

- Allocation of Emissions and Renewable Credits
  - Approximately two thirds of fossil fuel energy produced in Wyoming consumed out of State
  - Approximately 85% of Wyoming renewables consumed out of State

Issues with EPA's Proposed Clean Power Plan (111(d))

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- Legal questions
  - Inside the Fence vs. Outside the Fence
  - CAA 112 v. CAA 111(d)
- Compressed Timeline for Implementation
  - Typical SIP timeline 3 years/111(d) State Plans 1 year (2 years if multistate)
  - No consideration for development of state legislation
- The "Cliff"
  - For Wyoming 54% of EPA Target to be achieved by 2019
    - One maybe two years after plan approval
  - State Plan Submittals due Summer 2016 (2017 if multistate plan)
  - EPA approval Summer 2018

Issues with
EPA's Proposed Clean Power Plan (111(d))

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- **Building Block 1**
  - EPA assumes heat rate improvement of 6%
  - Review with utilities and other states suggests 2% is more realistic
  - Many plants in WY have already taken steps to improve heat rates
    - Steam turbine upgrades
    - Replaced ageing equipment
  - EPA expects heat rate improvements in place by 2019

Issues with
EPA's Proposed Clean Power Plan (111(d))

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- **Building Block 2**
  - Re-dispatch of existing or under construction natural gas combined cycle power plants
  - One facility in Wyoming
  - This Building Block in nearly moot for Wyoming

Issues with
EPA's Proposed Clean Power Plan (111(d))

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- **Building Block 3**
  - Renewable energy
  - Growth factor applied to all 4 MMWh
    - Only 666,212 MWh used in Wyoming
    - 85% exported to other states
  - 9.4 MMWh renewables assumed by 2030 under the proposed plan
  - 1,415% increase in renewables used in Wyoming
  - Equivalent to a 52% RPS

Issues with
EPA's Proposed Clean Power Plan (111(d))

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- **Building Block 3 – Renewable Energy**
  - Who gets credit for emissions?
  - Who gets credit for renewables?
  - NEPA not considered
    - Transmission and Wind Projects proven to take at least 8 years
  - Available lands for renewable energy development over estimated
    - EPA failed to consider high priority, environmental conflicts
    - Sage Grouse, Critical Habitats and Other protected areas of cultural and historical significance not accounted for
    - Only 16.5% of total land area EPA identified in WY for Wind Energy is actually available

Issues with
EPA's Proposed Clean Power Plan (111(d))

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- **Building Block 4**
- Demand side energy efficiency
- Based on broad conclusions from other states with energy efficiency programs
- WYPSC analysis demonstrates much less opportunity than EPA assumes
  - Low population
  - Industrial base load

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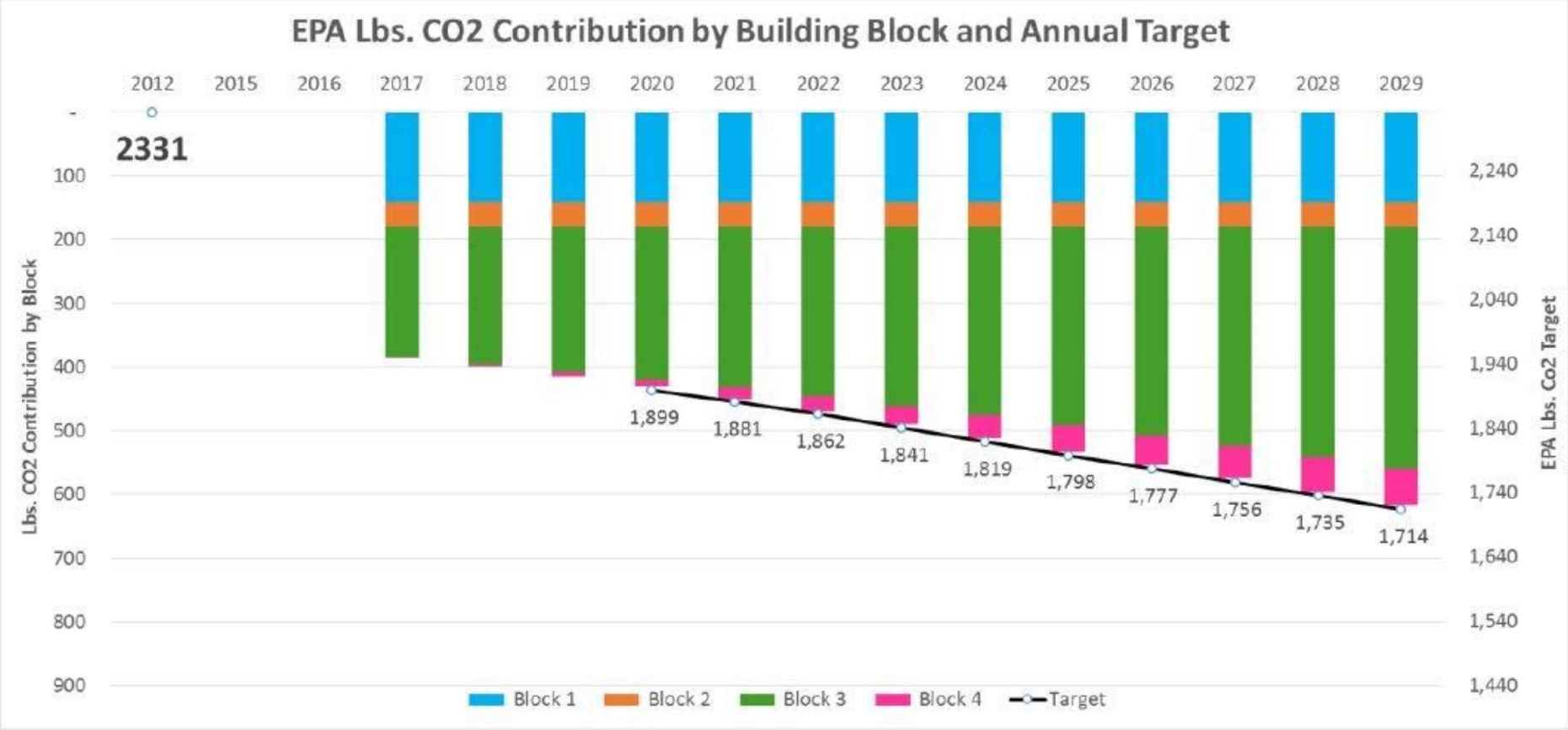

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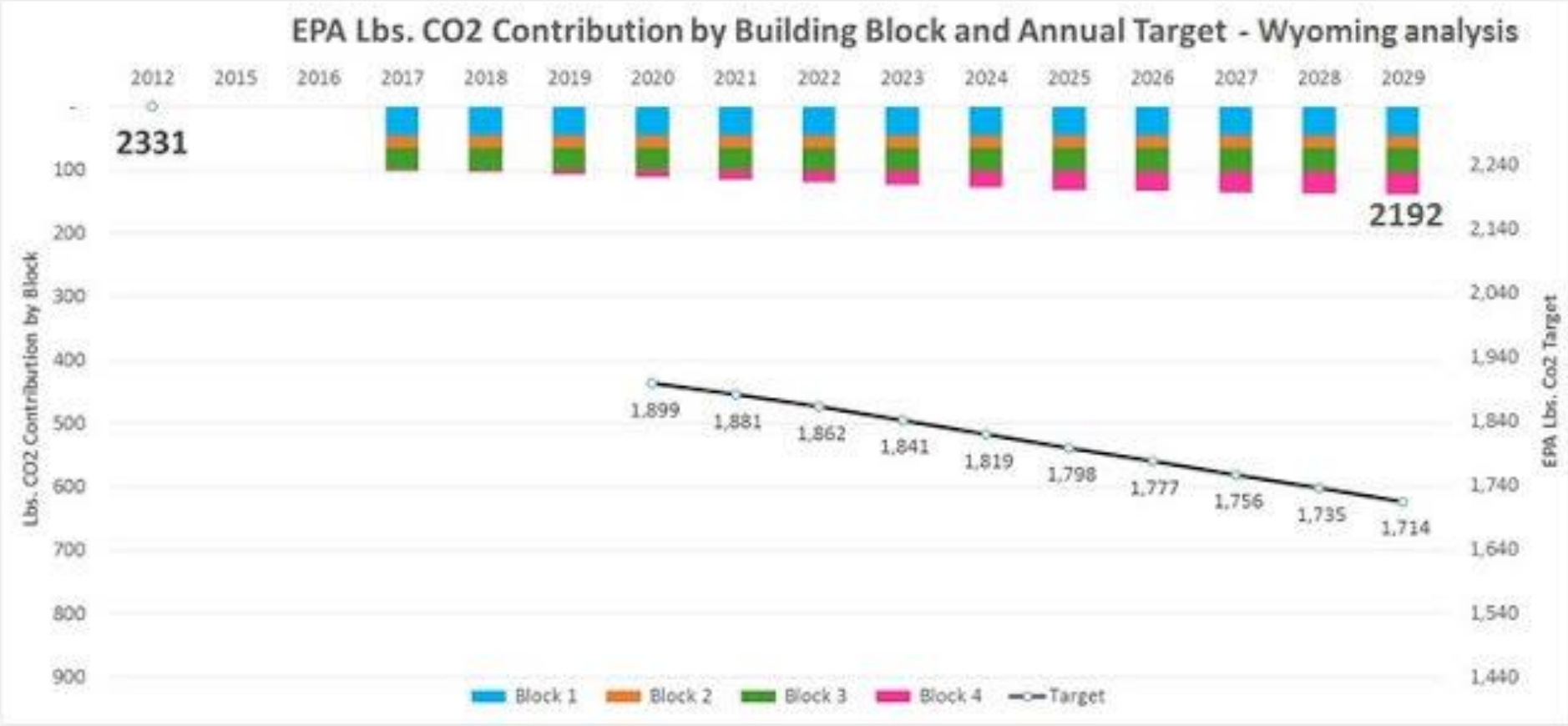

EPA's Proposed Clean Power Plan (111(d))

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- Limited options for Wyoming to achieve EPA's target goal

- A simple illustration to show an avenue to meet EPA's proposed 2020 goal is to consider how many coal fired plants must close in order of scheduled full depreciation to minimize stranded investment.

  - Premature closure of Dave Johnston, 816 megawatts
  - Premature closure of Naughton, 707 megawatts
  - Premature closure of Jim Bridger 2,317 megawatts
  - Premature closure of Wyodak, 335 megawatts

- This represents 4,175 megawatts of the states total coal fleet of 6,748 megawatts.

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- Stranded investment for these 4 power plants as determined by the Wyoming Public Service Commission
  - Dave Johnston: $393 million
  - Naughton: $326 million
  - Jim Bridger: $524 million
  - Wyodak: $248 million
- Stranded investment at the year 2020 would be $1.491 billion and does not include the cost of replacement power

Clean Power Plan

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Department Activities Related to Clean Power Plan

June 18, 2014 through December 1, 2014

- Coordinated with PSC, Governor's Office, and AG to develop and submit comments on the NSPS for modified and reconstructed power plants and the NSPS for existing power plants
- Conference calls with EPA
- Conference calls, webinars, and face-to-face meetings with Air Quality regulatory groups
- DEQ was present during EPA's regional public hearings held in Denver
- Participated in CNEE conference calls and regional meetings
- Held stakeholder meetings with industry, PSC, Governor's Office, and AG

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Department Activities Related to Clean Power Plan (cont.)

December 1, 2014 to current

- Conference call with EPA Region 8 and Headquarters to discuss the State's comments on data quality issues within the proposed rule for existing power plants
- Testimony before the Senate Environment and Public Works Committee regarding impacts of EPA's **Clean Power Plan** on Wyoming
- Continued meetings with PSC, Governor's Office, AG, and industry
- Conference calls and regional meeting with CNEE to stay informed of ongoing regional efforts related to the **Clean Power Plan**

Clean Power Plan

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Department Activities Related to Clean Power Plan (cont.)

Summer 2015

- 111(b) and 111(d) rules are expected to be finalized mid summer
- EPA's federal plan due out mid summer
- OMB has been reviewing EPA's separate rules for CO_2 emissions from new, modified, and reconstructed EGUs under Section 111(b) of the Clean Air Act since May
- EPA submitted its final **Clean Power Plan** to the White House Office of Management and Budget (OMB) on June 1 for interagency review