Research Protocol Natural Gas and the Clean Power Plan

Prepared by Elizabeth Glass Geltman, JD, LLM

May 2015
Natural Gas Use and the Clean Power Plan

I. Primary Data Collection


b. Dates covered in the dataset: June 2014 – May 2015

c. Data Collection Methods: The purpose of this study was to evaluate the increase of natural gas expected after redispatch of coal-fired power plants to alternate fuel sources. The inquiry was done on a state-by-state basis using the numbers calculated by US EPA. The data was published on the US EPA website and followed by a series of workshops and outreach efforts by US EPA.


d. Databases used:

i. Information about US EPA’s proposed Clean Power Plan can be found at the following website: http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule

ii. The Clean Power Plan was published in the Federal Register and can be found in PDF format at the following link: https://www.federalregister.gov/articles/2014/06/18/2014-13726/carbon-pollution-emission-guidelines-for-existing-stationary-sources-electric-utility-generating
iii. All numerical data used for this project was taken from US EPA estimates. The data was published on the US EPA website. U.S. Environmental Protection Agency, Clean Power Plan Proposed Rule Technical Documents, Data File: Goal Computation Appendix 1&2, http://www2.epa.gov/sites/production/files/2014-06/20140602tsd-state-goal-data-computation_1.xlsx

iv. The Clean Power Plan was challenged in court before being promulgated. The suit is In re: Murray Energy Corp. v. Environmental Protection Agency, et al., No. 14-1112, consolidated with No. 14-1151 (D.C. Circuit 2014). The hearing for the suit was recorded and can be found at: http://www.cadc.uscourts.gov/recordings/recordings.nsf/DocsByMonday?OpenView&StartKey=201504&Count=34&scode=4

II. Coding

a. Development of Coding Scheme:

After completing a detailed literature review, we developed a preliminary set of questions to be used for coding based on the results of the literature review. Three coders each independently evaluated the EPA data set to ensure congruency in coding and refined the questions used for coding. Once the questions for coding were finalized, the three coders evaluated the data and recorded the results using LawAtlasSM Workbench.

b. Coding methods:

The final ten questions used for coding were as follows:

1) “What was the 2012 Natural Gas Combined-Cycle (NGCC) power plant capacity factor for this state?” The purpose of this question is to establish the state’s historic use of natural gas to fire power plants.
2) “What is US EPA’s post redispatch assumed NGCC capacity factor for Existing Fleet (at target of up to 70%)?”

The purpose of question two is to establish the percentage of natural gas expected to be used by the state after the Clean Power Plan is implemented. The values are based on US EPA mandates as set out in the supporting documentation to the proposed Clean Power Plan. The values provided were set after US EPA held a series of workshops with states on conversion from coal fired power to other power sources, including natural gas. US EPA set 70% use of natural gas as the target for power plants after conversion from coal use; hence 70% is the ceiling presented in the data set.

3) “What will be the increased gas usage in this state at US EPA’s target of up to 70%?” Question three compares the historic use of natural gas to the target projected for each state. The question explores how much use of natural gas will increase once the state hits the target.

4) “Will this state meet US EPA’s target of 70%?” The fourth question requires a yes or no answer. The purpose of the question is to allow a visual representation across the country of states that will and will not hit the 70% target.

5) “If not, what will be the increased natural gas usage in this state if the target of 70% was hit?” This question explores how much more natural gas would be used if the state did in fact hit US EPA’s target of 70% rather than the number currently projected in the proposed plan.

6) “What figure does US EPA use as this state’s post redispatch NGCC capacity factor for existing power plant fleet (at alternate target of up to 65%)?” US EPA proposes the use of 65% rather than 70% as an alternate proposal. The purpose of question six is to establish the percentage of natural gas expected to be used by the state if the 65% alternate Clean Power Plan is implemented. Again, the values are based on US EPA mandates as set out in the supporting documentation to the proposed Clean Power Plan. The values provided were set after US EPA held a series of workshops with states on conversion from coal fired power to other power sources, including natural gas. US EPA set 65% use of natural gas as the alternate target for power plants after conversion from coal use; hence in this question 65% is the ceiling presented.
7) “What will be the increased gas usage in this state at US EPA’s alternate target of up to 65%?” Question seven compares the historic use of natural gas to the target projected for each state. The question explores how much use of natural gas will increase once the state hits the alternate target of 65%.

8) “Will this state meet US EPA’s alternate target of 65%?” The eighth question requires a yes or no answer. The purpose of the question is to allow a visual representation across the country of states that will and will not hit the 65% target.

9) “If not, what will be the increased natural gas usage in this state if the target of 65% was hit?” This question explores how much more natural gas would be used if the state did in fact hit US EPA’s alternate target of 65% rather than the number currently projected in the proposed plan.

“Does this state support US EPA’s Clean Power Plan?” This question explores whether the state took an active legal role in either supporting or opposing US EPA’s proposed Clean Power Plan. The question has three answer choices: (1) Yes, the state filed an amicus curiae brief in support of EPA’s proposed Clean Power Plan in In re: Murray Energy Corp. v. Environmental Protection Agency, et al., No. 14-1112, consolidated with No. 14-1151 (D.C. Circuit 2014). (2) No, the state has joined the law suit as a movant-intervenor challenging EPA’s authority to issue the Clean Power Plan in In re: Murray Energy Corp. v. Environmental Protection Agency, et al., No. 14-1112, consolidated with No. 14-1151 (D.C. Circuit 2014). (3) The state has taken no legal position on the Clean Power Plan and is not a participant (either supporting or opposing the proposed rule) in the suit In re: Murray Energy Corp. v. Environmental Protection Agency, et al., No. 14-1112, consolidated with No. 14-1151 (D.C. Circuit 2014).

c. Quality Control
After the coders each evaluated the data and recorded the results using LawAtlasSM Workbench, the coders cross checked and verified results to insure consistent coding. Coders met on a regular basis to discuss and resolve coding discrepancies.