Declaration of Jeremy I. Fisher, Ph.D.

A. Background

1. I am a Principal Associate at Synapse Energy Economics ("Synapse") in Cambridge, Massachusetts. I am the primary author of a memorandum provided to the Environmental Protection Agency ("EPA") on September 8, 2015, assessing the Electric Reliability Council of Texas's ("ERCOT") December 2014 report titled "Impacts of Environmental Regulations in the ERCOT Region."[1] I make this declaration in support of EPA's response to Petitioners' motion to stay the final regional haze rule for Texas and Oklahoma, issued by EPA on January 5, 2016. See *Approval and Promulgation of Implementation Plans; Texas and Oklahoma; Regional Haze State Implementation Plans; Interstate Visibility Transport State Implementation Plan To Address Pollution Affecting Visibility and Regional Haze; Federal Implementation Plan for Regional Haze, 81 Fed. Reg. 296* (Jan. 5, 2016) ("Final Rule"). This declaration is based on my personal knowledge and opinions, which I am qualified to provide based on my training and experience in utility-system planning.

2. Synapse is a research and consulting firm that specializes in energy, environmental, and electricity-sector issues and policies, including fossil fuel generation, efficiency, renewable energy, ratemaking and rate design, restructuring and market-power issues, and environmental regulations. For twenty years, Synapse has provided sound guidance and technical assistance to state utility regulators, state consumer advocates and attorneys general, state energy offices, Federal regulatory agencies, and numerous consumer and environmental interveners in electric utility planning, ratemaking, and policy cases across the United States.

[1] TX166-087-131 Synapse Report - ERCOT_Report_Review_Memo_20150908

3. I hold Master of Science (Sc.M.) and Doctorate (Ph.D) degrees in Geological Sciences from Brown University, and Bachelor of Science (B.S.) degrees in both Geology and Geography from the University of Maryland. I have worked at Synapse for nine years, evaluating and facilitating the creation of long-term utility plans, performing planning on behalf of states and municipalities, and helping state regulators navigate Federal environmental regulations. In my role at Synapse, I have worked with EPA to develop tools that allow stakeholders to evaluate the emissions benefits of clean energy programs, to provide rulemaking assistance, and to help rule makers understand energy planning. My resume is attached to this Declaration.

4. Petitioners seek to stay the Final Rule in part because they contend that it will cause a number of coal-fired units to retire in Texas, affecting the reliability of the ERCOT electricity grid. Petitioners claim that a stay of the Final Rule will allow these coal-fired units to delay their compliance investments thereby releasing ERCOT's members and the Public Utility Commission of Texas ("PUCT") from "a choice between two unenviable options": planning for transmission upgrade investments or "accept[ing] the prospect of degraded reliability" in Texas.[2]

5. My declaration refutes the allegation that the Final Rule would definitively cause the affected coal-fired units to retire. Under current market conditions in the ERCOT region, the affected coal-fired units are likely to retire, if at all, *regardless* of the Final Rule. In fact an analysis performed by ERCOT, titled "ERCOT Analysis of the Impacts of the Clean Power Plan: Final Rule Update" (October 16, 2015), indicates that the coal-fired units affected by the Final Rule are non-economic on a forward-looking basis, and the Final Rule does not substantially affect the amount of capacity expected to be retired in ERCOT. Therefore, the Final Rule is not a threat to reliability in ERCOT.

[2] Declaration of Brian H. Lloyd, paragraph 35.

B. THE FINAL RULE WILL NOT CAUSE A CAPACITY SHORTFALL IN TEXAS

6. Like other coal-fired power plants throughout the country, coal-fired units in Texas are becoming less economic, largely due to falling gas and wholesale market energy prices, but also due to significant competition from renewable energy, and the internalization of pollution control costs. From 2010 to 2014, nearly 25,000 MW of coal-fired capacity elected to retire, generally due to the degrading economics of running these power plants.[3] In the last four years, I have worked in sixteen utility regulatory cases across the nation where plant owners sought to make rational decisions about the retirement or continued operation of existing coal-fired units. In almost every situation, the utilities faced similar decisions to those before Petitioners—whether continued investment in existing coal-fired power plants was appropriate.

7. Electric generators in both vertically-integrated (regulated) states and competitive-market states (like Texas) seek to provide the most cost-effective power to the grid possible. In vertically-integrated states, a utility that invests in non-competitive generating infrastructure is considered imprudent, warranting sanctions (such as the disallowance of costs in rates) by regulatory commissioners charged with ensuring competitive behavior. In competitive markets, merchant generators like Petitioners risk violating their fiduciary responsibilities if they make capital investments that they know cannot be recouped in the market. When making these assessments, both vertically-integrated utilities and competitive suppliers review anticipated market conditions over the life of the investment and seek to determine when, if ever, the investment will be recouped relative to either the market or a lower cost resource alternative. In vertically-integrated utilities, planners and regulators seek to understand whether ratepayers would be better served by acquiring energy from other new or existing resources. In competitive

[3] Derived by author from Energy Information Administration (EIA) Form 860, 2014.

markets, investors seek to determine if projected revenues will offset capital investments at existing generators. If projections of market prices and power plant costs indicate that the existing generator has a substantial risk of not breaking even, owners will seek to sell or close the plant.

8. Petitioners state that investing in the air pollution controls required by the Final Rule "would likely challenge the long-term economic viability of [the] units,"[4] such that Petitioners believe the Final Rule threatens these coal units,[5] and may be "shut down because the Final Rule has made them uneconomic to operate."[6] Petitioners further state that "these costs challenge the economic viability of these unit such that it is probable that the units will shut down rather than incur the retrofit costs of the new scrubbers,"[7] "that the retirement of these plants will result in a need for transmission system upgrades,"[8] and that absent a stay, Texas will have to "incur costs that Texas electricity consumers will be forced to bear even through such costs would be unnecessary should the Final Rule be overturned."[9] Petitioners fail to acknowledge, however, that even in the absence of the Final Rule and regardless of the costs of control equipment upgrades or retrofits, the current economic outlook in the ERCOT region favors the retirement of many, if not all, of the affected coal-fired units,.

9. Mr. Brian Lloyd of the PUCT, testifying on behalf of Petitioners, cites to an October 2015 presentation from ERCOT that examines the transmission reliability implications of the

[4] Declaration of Robert Frenzel, paragraph 27.
[5] Declaration of Robert Frenzel, paragraph 3.
[6] Declaration of Robert Frenzel, paragraph 3.
[7] Declaration of Brian Lloyd, paragraph 26.
[8] Declaration of Brian Lloyd, paragraph 30.
[9] Declaration of Brian Lloyd, paragraph 35.

retirement of multiple coal-fired units ("ERCOT 2015 Transmission Study").[10] Mr. Lloyd states that the retirements contemplated in the report are "caused by the [Final Rule],"[11] a use of the data that is expressly disclaimed by the presentation itself.[12] Mr. Lloyd fails to disclose a more comprehensive study released by ERCOT at the same time ("ERCOT 2015 Economic Study"),[13] which clearly informs the presentation, but cites instead to an outdated ERCOT study from December 2014 ("ERCOT 2014 Economic Study").[14]

10. Irrespective of the validity of the study process or assumptions, the ERCOT 2015 Economic Study clearly shows that the vast majority of non-economic coal capacity in the ERCOT region is likely to retire in the near term, even in the absence of the Final Rule. In fact, the ERCOT 2015 Economic Study finds that 1,500 MW of coal-fired capacity in ERCOT is likely to retire even in the absence of a price on carbon dioxide ("CO_2"),[15] which would be responsible for the bulk of retirements, and that the Final Rule might result in the incremental retirement of only 700 MW of coal-fired capacity – or less than one percent of ERCOT's total peak-serving capacity.[16] It is worth recalling that the ERCOT grid has nearly 80,000 MW of

[10] ERCOT, Transmission Impact of the Regional Haze Environmental Regulation (Oct. 15, 2015). Document 00513405270, p160.

[11] Declaration of Brian H. Lloyd, paragraph 30.

[12] ERCOT Presentation page 3 "Disclaimer: This study is not intended to evaluate the viability of specific units, but rather to assess the transmission reliability implications of the retirement of multiple coal-fired units over a relatively short period of time, using the Regional Haze requirements to provide a scope for the analysis."

[13] ERCOT, ERCOT Analysis of the Impacts of the Clean Power Plan Final Rule Update (Oct. 16, 2015). Available at http://www.ercot.com/content/news/presentations/2015/ERCOT_Analysis_of_the_Impacts_of_the_Clean_Power_Plan-Final_.pdf. Reference on Page 1.

[14] ERCOT, Impacts of Environmental Regulations in the ERCOT Region (Dec. 16, 2014). Document: 00513405270, p173.

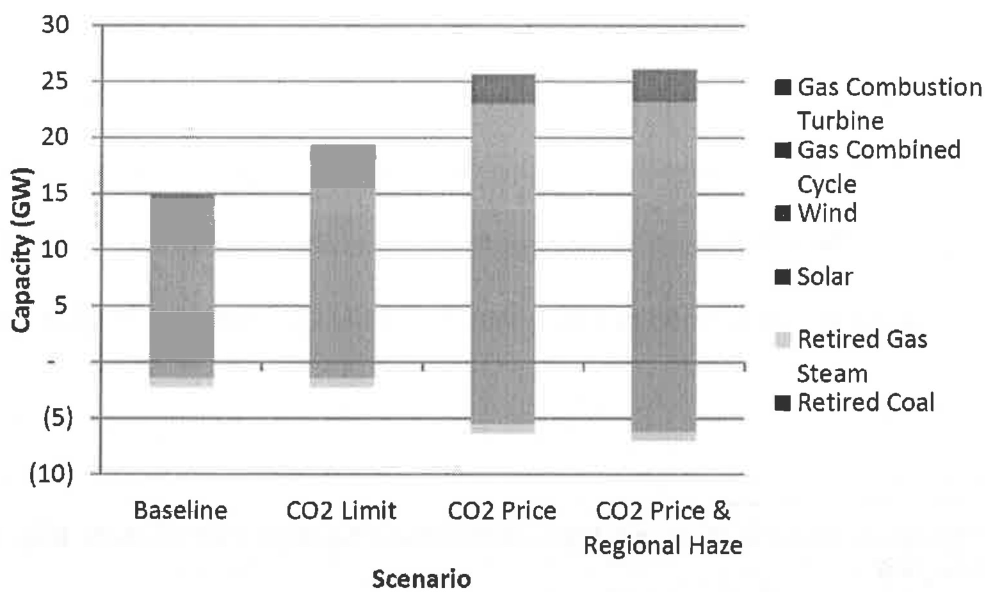
[15] ERCOT, Transmission Impact of the Regional Haze Environmental Regulation (Oct. 15, 2015). Page 7. "The modeling results predict 2,300 MW of unit retirements in the baseline, including 800 MW of gas steam retirements and 1,500 MW of coal unit retirements." Also, *see* Table 2.

[16] *Id. See* Table 2, Retired Coal (MW), difference between values in columns "CO_2 price" and "CO_2 Price & Regional Haze."

peak-serving capacity online today,[17] and has yet another 3,600 MW of summer peak capacity expected to come online in 2016 and 2017.[18] A 700 MW capacity reduction is unlikely to cause a capacity shortfall in the region.

11. The following diagram (Figure 1, below) is provided in the ERCOT 2015 Economic Study, which shows capacity additions and retirements through 2030 in the ERCOT region. The last two columns, titled "CO2 Price" and "CO2 Price & Regional Haze," respectively, show that ERCOT expects coal-fired capacity retirements based on low gas and energy price expectations, and the implementation of a price on CO_2 emissions, irrespective of the Final Rule.

Figure 1. From ERCOT October 2015 Report, "Figure 4. Capacity Additions and Retirements by 2030"



12. In my professional opinion, it is appropriate to assess long-term utility decisions by assuming the implementation of a price on CO_2 emissions. Utilities universally handle decision-

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[17] ERCOT, Seasonal Assessment of Resource Adequacy for the ERCOT Region (Mar. 1, 2016). Page 2, "Total Resources." Available at http://www.ercot.com/content/gridinfo/resource/2016/adequacy/sara/SARA-FinalSpring2016.pdf

[18] ERCOT, Report on the Capacity, Demand and Reserves (CDR) in the ERCOT Region, 2016-2025 (Dec. 1, 2015). http://www.ercot.com/content/gridinfo/resource/2015/adequacy/cdr/CapacityDemandandReserveReport-December2015.pdf

making in the face of long-term uncertainty, and most large utilities have chosen to mitigate the risk from carbon regulation, legislation, or complementary policies by assessing the risks posed by CO_2 pricing. Since 2009, the majority of publicly available integrated resource plans (IRP) from vertically-integrated utilities have assessed the impact of CO_2 pricing as a baseline condition for making resource decisions, including the retirement of existing coal-fired units.[19]

13. Competitive generators are subject to the same uncertainty as vertically-integrated utilities, and shareholders in publicly held competitive companies, such as Petitioners, are very aware of the risks of falling revenues and increased costs. Like the risk-mitigation measures taken by vertically-integrated utilities to insulate ratepayers, large financial institutions demand CO_2 pricing when lending capital to reduce risk. For example, in August 2015, Citibank opined on the "need to start pricing in carbon risk in energy and financial markets."[20] Overall, I believe that an appropriate reference point from which to assess the impacts of the Final Rule is within the context of an economy where CO_2 emissions bear a price.

14. Mr. Lloyd states that the "costs [of the Final Rule] challenge the economic viability of these [coal-fired] units such that it is probable that the units will shut down rather than incur the retrofit costs of the new scrubbers."[21] Both his testimony and that of other declarants testifying on behalf of Petitioners suggest that the Final Rule is the primary mechanism responsible for the loss of value at the affected coal-fired units.[22] This presumption is definitively incorrect. Falling

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[19] Based on a survey of 203 publicly available IRPs from 165 utilities, weighted by load served in 2013. Over 80% (weighted) of IRPs assessed CO_2 risk in 2008-2011; above 90% from 2014-2015. Approximately 65% of IRPs assessed a CO_2 price in "reference case" or baseline conditions (as opposed to a sensitivity) in 2008-2011, rising to nearly 80% or more from 2014-2015. Results presented in EUCI Presentation, May 14, 2015. "Environmental Regulations in Integrated Resource Planning." Available at: http://www.euci.com/energize/Fisher.pdf

[20] Citibank Global Perspectives and Solutions. August 25, 2015. *Time to Price Carbon: Obama's Clean Power Plan Alters Energy Landscape*. https://www.citivelocity.com/citigps/OpArticleDetail.action?recordId=577

[21] Declaration of Brian H. Lloyd, paragraph 26.

[22] *See* Declaration of Robert Frenzel, paragraph 28.

gas and energy prices, a result of technology innovations and larger economic forces beyond the EPA's influence are responsible for the lion's share of loss of value for today's coal-fired fleet.

15. The trend of existing coal-fired generation being non-economically competitive in today's market, even before the implementation of environmental protection rules, is widespread even beyond Texas and Oklahoma. Quoted in West Virginia's Charleston Gazette, Charles Patton, the President of Appalachian Power in West Virginia recently stated that even "without the Clean Power Plan, the economics of alternatives to fossil-based fuels are making inroads in the utility plan," and "companies are making decisions today where they are moving away from coal-fired generation."[23] This trend is largely a function of market forces with far greater impact on the competitive nature of coal than environmental regulations.

16. The U.S. Department of Energy's Energy Information Administration ("EIA") tracks current energy market trends and is a definitive source of information on the state of the electricity system. In a recent publication, EIA discussed how falling natural gas prices have resulted in the displacement of existing coal-fired generation.

> Recently, coal's share of electricity generation has fallen as its market share of natural gas and renewables increased. The average daily natural gas spot price at the Henry Hub, a key natural gas benchmark, fell from $4.38 per million British thermal units (MMBtu) in 2014 to $2.61/MMBtu in 2015, resulting in greater natural gas-fired electricity generation. In April 2015, natural gas-fired electricity generation surpassed that of coal-fired generation on a monthly basis for the first time in history.[24]

[23] Charleston Gazette-Mail. October 27, 2015. *Coal not coming back, Appalachian Power president says.* http://www.wvgazettemail.com/article/20151027/GZ01/151029546 (retrieved on April 1, 2016).
[24] US Energy Information Administration. Today in Energy (January 8, 2016).

17. A later publication by EIA affirms this increasingly clear conclusion: "the recent decline in the generation share of coal, and the concurrent rise in the share of natural gas, was mainly a market-driven response to lower natural gas prices that have made natural gas generation more economically attractive."[25] In my experience, coal generators that were economically marginal (or even viable) are struggling to see a path forward with low gas and energy prices projected into the indefinite future.

18. This decline in the competitive nature of coal generation is relevant to the instant case in that it belies a contention of Petitioners, that the Final Rule bears responsibility for the imminent closure, and thus harm, to Petitioners. There is ample evidence to show that Petitioners are <u>not</u> caused incremental harm by the implementation of the Final Rule, and that ERCOT can and should plan for the imminent retirement of Petitioners' coal plants regardless of the disposition of the Final Rule.

C. <u>PETITIONER LUMINANT'S COAL-FIRED UNITS HAVE BEEN NON-ECONOMIC FOR YEARS.</u>

19. Petitioners' witness Robert Frenzel, CFO of Luminant, states that the compliance expenditures potentially required under the Final Rule are "unrecoverable from either 'ratepayers' or the EPA," and that, "given Texas's competitive market structure, these costs are borne by Luminant alone and directly impact Luminant's profitability."[26] He states that "Luminant would need to immediately proceed with steps to install new scrubbers and upgrade current scrubbers,"[27] and that these "near term costs will still be necessary,"[28] "even if these units are ultimately shut down because the Final Rule has made them uneconomic to operate."[29]

[25] US Energy Information Administration. Today in Energy (March 16, 2016).
[26] Declaration of Robert Frenzel, paragraph 25.
[27] Declaration of Robert Frenzel, paragraph 24.

20. Mr. Frenzel's implication that the Final Rule is the mechanism responsible for the impairment of Luminant's assets is disingenuous, for the reasons explained above, as is his assertion that Luminant would still bear costs to install new scrubbers or upgrade current scrubbers if it were determined that the units should retire on an economic basis. A decision by Luminant to retire the units would preclude the need to install scrubbers because retirement would be sufficient to meet the emission limits of the Final Rule.

21. Luminant, its parent company Energy Future Holdings Corporation, and its predecessor, TXU, have made a series of high-risk, low-payoff choices that have resulted in the loss of revenue at that company and impact Luminant's profitability well in excess of the impacts, if any, of the Final Rule. The company's own financial reports tell the story of its losses over the last decade as a function of falling energy prices, as I will describe below. The company's loss of profitability cannot be ascribed to a CO_2 price or the Final Rule.

22. My colleague, Mr. Bruce Biewald, testified in October 2011 about Luminant's pending debt crisis, driven by a poor decision to hedge substantially on rising natural gas prices in 2007.[30] Luminant's generation portfolio, which is dominated by coal and nuclear generation,[31] is highly sensitive to gas prices, and the value of the company has dropped substantially since that period. Mr. Biewald testified that "while environmental regulations play a role, it is market conditions— and in particular the wholesale prices for energy in ERCOT, along with the company's business

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[28] Declaration of Robert Frenzel, paragraph 25.
[29] *Id.*
[30] United States Court of Appeals for the District of Columbia Circuit (Case 11-1315) *Luminant Generation Co., LLC, et al. Petitioners, v. United States Environmental Protection Agency, et al. Respondents.* Declaration of Bruce E. Biewald. October 6, 2011. http://www.synapse-energy.com/sites/default/files/Biewald-Testimony-Luminant-CSAPR-Challenge-11-084.pdf
[31] On a generation (MWh) basis, not capacity (MW). *See* EFH Corp. 2011 EEI Financial Conference Discussion Deck. November 6-9, 2011. Page 7. 74% coal, 24% nuclear.

strategy— that are the key drivers of Luminant's financial situation."[32] The situation remains the same today and is clear from the company's own financial reporting.

23. In filings before the Securities and Exchange Commission ("SEC") in March 2016, Luminant explained that low wholesale power prices were responsible for the decline of revenues at the company, well before the implementation of the Final Rule's requirements.

> Wholesale electricity revenues decreased $587 million, or 46%, to $680 million in 2015 reflecting a $362 million decrease in sales volumes and a $225 million decrease **due to lower average wholesale electricity prices**. A 29% decrease in wholesale electricity sales volumes was driven by lower generation volumes that resulted from increased economic backdown (including seasonal operations) at our lignite/coal generation facilities. The increased economic backdown at our generation facilities and the lower average wholesale electricity sales prices were **driven by a 35% decline in average wholesale electricity prices** in the year ended December 31, 2015, which was impacted by lower natural gas prices during the period compared to natural gas prices in 2014.[33]

Over the last decade, Luminant's wholesale market revenues have declined by about $200 million per year, a loss of nearly 80% of the company's competitive market revenue stream, as shown in Figure 2, below. Year on year, Luminant has noted that these losses are driven by declining natural gas prices and subsequently lower wholesale electricity prices.

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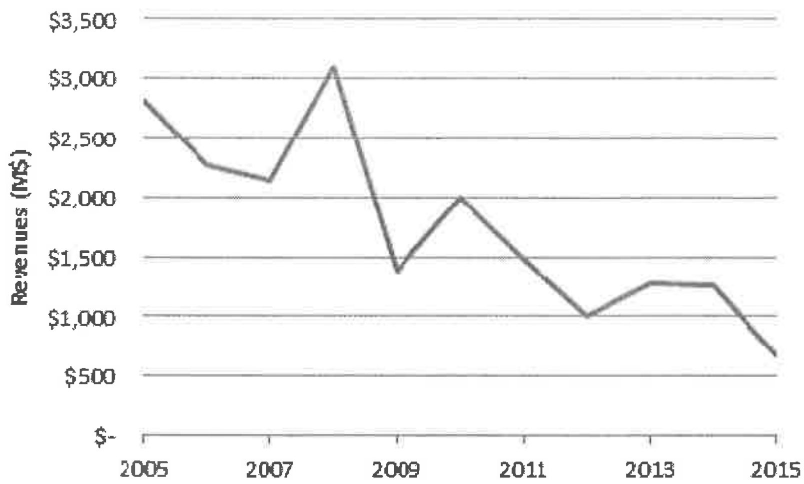
[32] United States Court of Appeals for the District of Columbia Circuit (Case 11-1315). *Luminant Generation Co., LLC, et al. Petitioners, v. United States Environmental Protection Agency, et al. Respondents.* Declaration of Bruce E. Biewald. October 6, 2011. Paragraph 35.
[33] SEC March 1, 2016. Page 56 (emphasis added).

Figure 2 Energy Future Competitive Holdings Company. Wholesale Electricity Revenues (M$)[34]



24. The losses in the wholesale market have had a significant impact on Luminant's coal fleet, beyond any potential influence of the Final Rule. According to SEC filings from Energy Future Holdings Corporation, the company's coal units have begun operating at lower capacity factors,[35] reflecting the fact that they are no longer competitive in the ERCOT market.

> Luminant's lignite/coal fueled generation fleet operated at a capacity factor of 59.5% in 2015, 69.6% in 2014 and 74.1% in 2013. This performance reflects increased economic backdown of the units and the seasonal suspension of certain units due to the persistent low wholesale power price environment in ERCOT.[36]

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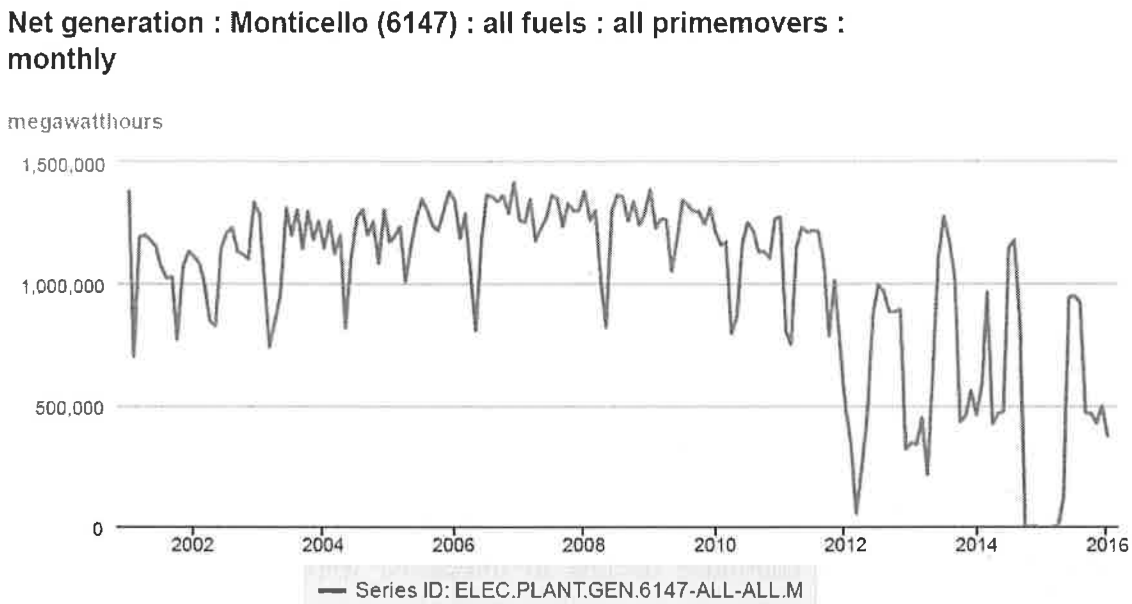
[34] Energy Future Competitive Holdings Company. SEC Form 10-K filings for 2007, 2009, 2011, 2014, & 2016. Table *Revenue and Commodity Hedging and Trading Activities.*

[35] Capacity factor describes how intensively a generator, or fleet of generators, is run. A capacity factor near 100% means a fleet is operating nearly all of the time. It is the ratio of a fleet's actual generation to its maximum potential generation. (EIA. Today in Energy. January 15, 2014.)

[36] Energy Future Competitive Holdings Company. SEC Form 10-K, 2016. (March 1, 2016). Page 5.

For example, as shown below in Figure 3, data from EIA shows that, since 2010, Monticello has dropped in output substantially, with long outages, or what Luminant calls "economic backdown," in 2014 and 2015.[37]

Figure 3. Monthly net generation from Monticello plant, as shown by EIA data.



25. Notably, in 2015, Luminant spent $736 million on coal fuel alone (not including other operating and maintenance expenditures or capital),[38] and had wholesale revenues of only $680 million, a significant net loss. Year after year losses of this magnitude are unsustainable and will likely lead to the rational decision to cut losses by closing non-economic plants. These decisions are, again, based on market positions and trends that precede the implementation of the Final Rule.

26. In the last two years, Luminant has started writing off the losses of their coal-fired plants in the competitive market, recognizing that the units are unlikely to survive falling wholesale

[37] EIA Application Program Interface (API) Data Query for plant-level information. Available at http://www.eia.gov/opendata/qb.cfm?category=3243&sdid=ELEC.PLANT.GEN.6147-ALL-ALL.M
[38] Energy Future Competitive Holdings Company. SEC Form 10-K, 2016. (March 1, 2016). Page 55.

market prices. In 2014 and 2015, the company recorded losses for the "impairment" of their coal fleet, attributed largely to the "decline in forecasted wholesale electricity prices in ERCOT," and recognized that falling wholesale prices might continue to decline and impair the value of the plants.

> **Impairment of Long-Lived Assets** — We record impairment losses on long-lived assets used in our operations when events and circumstances indicate the long-lived assets might be impaired and the undiscounted cash flows generated by those assets are less than the carrying amounts of the assets. During 2014, the decrease in forecasted wholesale electricity prices in ERCOT, potential effects from environmental regulations and changes to our operating plans led to recording $4.670 billion in noncash impairment charges substantially all related to our Martin Lake, Monticello and Sandow 5 generation facilities. We evaluated our generation assets for impairment during 2015 as a result of impairment indicators related to the continued decline in forecasted wholesale electricity prices in ERCOT. Our evaluations concluded that impairments existed, and the carrying values at our Big Brown, Martin Lake, Monticello, Sandow 4 and Sandow 5 generation facilities were reduced in total by $2.541 billion. Additional material impairments related to these or other of our generation facilities may occur in the future if forward wholesale electricity prices in ERCOT continue to decline or if the forecasted costs of producing electricity at our generation facilities increase.[39]

27. The company's outlook on the valuation of its coal fleet is reflected in local tax disputes as well. A report from Fidelity Investments shows an ongoing trend of devaluation of Luminant's coal assets when considered for tax purposes. For example, according to the article, "in Luminant's opinion, the valuations of the Sandow plants dropped 13% in 2011, another 17%

[39] Energy Future Competitive Holdings Company. SEC Form 10-K, 2016. (March 1, 2016). Page 38.

in 2013, and 14% in 2014… represent[ing] an 83% drop in five years."[40] In a similar dispute, Luminant estimated a $50 million valuation for the Monticello plant, a bare fraction (12%) of the public appraiser's value.[41] By all accounts, Luminant sees very little future in its existing coal fleet.

28. Overall, I find it likely that Luminant will seek to retire its coal-fired resources in the near future due simply to the market liability of these units, regardless of the status of the Final Rule. A delay in the Final Rule for several months to a year is not likely to substantially influence Luminant's decision-making on the ultimate disposition of these units.

D. THE HARMS POSITED BY PETITIONER SOUTHWESTERN PUBLIC SERVICE COMPANY ARE NOT CREDIBLE.

29. Mr. David Hudson, President of Southwestern Public Service Company ("SPS"), expresses a concern that "SPS cannot meet its reserve responsibilities without the Tolk Plant," and that "if SPS decides to shut down the Tolk Plant units, it will need to provide capacity and energy."[42] He further states that SPS will seek approval to recover the costs of the Final Rule from utility regulatory commissions in Texas ("PUCT") and New Mexico ("NMPRC"), and that if these commissions delay or reject cost recovery, "SPS could receive inadequate recovery of costs incurred."[43] Finally, Mr. Hudson contends that "the Final Rule, if not stayed by the Court, will expose SPS to immediate and irreparable harm" because "to avoid making an irrevocable

[40] Fidelity, SourceMedia. February 29, 2016. *Valuation Disputes with Power Plant Owner Strain Texas Issuers.*
[41] The Daily Tribune (Mount Pleasant, TX). July 1, 2015. *Board stands ground on plant appraisal.*
[42] Declaration of David Hudson, paragraph 10.
[43] Declaration of David Hudson, paragraph 12.

decision," SPS would pursue both the installation of scrubbers and the replacement of its affected coal-fired units "at substantially greater expense."[44]

30. Mr. Hudson discusses pursuing both the installation of new scrubbers and the procurement of replacement capacity.[45] This is not indicative of good utility practice or a prudent course of action. Most utilities, faced with this decision point, would begin assessing the economic implications of a retrofit against the option of retirement and replacement. SPS should consider a full range of options in a rigorous fashion to identify a least-cost solution for their ratepayers; the simultaneous pursuit of the retrofit and replacement capacity is not likely to represent a least cost pathway. I believe that Mr. Hudson's cumulative harm argument is unreasonable and does not reflect a process that would be acceptable to either a competitive generator, or a utility regulator.

31. Mr. Hudson posits this cumulative expense route to "avoid making an irrevocable decision that could jeopardize the company and its customers."[46] Mr. Hudson claims that SPS would need to begin incurring substantial costs sometime between January 2017 and "the end of 2017" to begin construction on replacement capacity.[47] Mr. Hudson does not discuss any form of market options available to the SPS as a mechanism of providing time and optionality to SPS's customers. As I discuss below, SPS is a member of the Southwestern Power Pool ("SPP"), a reliability organization designed to allow members to centralize electricity system operations, and pool reliability (i.e. capacity) resources. Among other options, SPS could use excess market

[44] Declaration of David Hudson, paragraph 8.
[45] Declaration of David Hudson, paragraph 8.
[46] Declaration of David Hudson, paragraph 8.
[47] Declaration of David Hudson, paragraph 14.

capacity to cover any uncertain period between the compliance deadline in the Final Rule , and the date any new capacity the utility might build would come online.

32. Mr. Hudson's other concerns can be parsed into two different categories: (1) concerns with the utility regulatory process and (2) the requirement to maintain adequate reserve margins (i.e., capacity) for reliability purposes. As I discuss below, SPS would face the same regulatory process that is undertaken for each investment made on behalf of its ratepayers. From a reliability standpoint, SPS can buffer any asserted capacity requirements over the short term through the SPP market and reliability organization.

33. In discussing the regulatory hurdles faced by SPS, Mr. Hudson simply describes the utility planning and regulatory process faced by nearly all vertically-integrated utilities when making investments on behalf of ratepayers. Regulated utilities recover costs through rates approved by regulatory commissions, such as PUCT and NMPRC. In a "rate case," utilities are required to fully disclose the decision-making process used to determine if investments are in the best interests of ratepayers. Some commissions, such as the NMPRC, allow for a process of pre-approval through a Certificate of Public Convenience and Necessity ("CPCN"), wherein the utility's process and decision is vetted prior to the expenditure of significant capital. Mr. Hudson's estimates of the time required to complete these proceedings is not inaccurate, but represents a completely normal and reasonable period in which ratepayers are afforded the opportunity to be assured that a decision is in their best interest. Even with a rigorous regulatory process as described by Mr. Hudson, SPS still has adequate time prior to 2021 to either retrofit Tolk or acquire capacity to meet its reserve requirements. Indeed, Mr. Hudson describes that SPS still has the better part of a year to begin planning and conducting rigorous economic assessments before it would need to file a plan with its respective commissions. SPS would be

seeking a decision from its utility regulators within a year from filing to have certainty on a path forward, but can begin arranging engineering, procurement, and construction (EPC) contracts during that time-period. In other similar cases, the regulatory planning process has moved in parallel with the procurement process and even the rulemaking process. In Wyoming, PacifiCorp began a CPCN process for the installation of Selective Catalytic Reduction (SCR) for control of oxides of nitrogen (NOx) at the Jim Bridger plant under the guidance of a proposed rule[48] while simultaneously moving forward with an EPC contract. PacifiCorp also made plans to move forward concurrently with the finalization of the rule,[49] in its case with a far tighter timeframe.[50]

34. Mr. Hudson does not discuss in his declaration that SPS completed an Integrated Resource Plan ("IRP") in July 2015,[51] in which the issue of regional haze compliance was given remarkably short attention. IRP processes are regularly used for both the evaluation of future resource requirements and the examination of existing resource viability, SPS's 2015 IRP, however, completely failed to examine the costs or benefits of installing dry scrubbers, as contemplated in the regional haze rule proposed at the time, or options and opportunities to retire the units economically. Instead, the SPS IRP assumes that Tolk units 1 and 2 will simply persist through 2042 and 2045, respectively.[52] Other utilities in SPS's position do not ignore the potential impact of proposed regulations on their fleets, and use IRPs and other planning processes to ensure that they are not left with minimal planning time. SPS's failure to provide a meaningful plan to PUCT and NMPRC is not within EPA's purview or responsibility.

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[48] Wyoming Public Service Commission docket 20000-418-EA-12.
[49] 79 Fed. Reg. 5032 (Jan. 30, 2014).
[50] SCRs to be implemented by 2015/2016.
[51] Southwestern Public Service Company. 2015 Integrated Resource Plan. July 16, 2015. Available at https://www.xcelenergy.com/staticfiles/xe/Regulatory/Regulatory%20PDFs/2015-SPS-NM-IRP-Final.pdf
[52] *Id.* Table 3.1 and Section 7.013.

35. Mr. Hudson's simplified contention that SPS cannot meet its reserve responsibilities without the Tolk plant is demonstrably false, both by his own declaration and the IRP. Mr. Hudson explains[53] (and his colleague, Mr. Alan Davidson, expands upon in his own declaration) that SPS could produce a capacity replacement plan that would bring new generation online by 2021. The 2015 IRP confirms this view. In a scenario examining high customer growth, the IRP contemplates being able to build 1,091 MW of new natural gas capacity before 2020[54] and another 735 MW by 2024.[55] This demonstrates that substantial new capacity can be brought online, by SPS, in a timely fashion as part of normal planning for SPS.

36. In addition to building its own replacement capacity, SPS has alternative options. SPS is part of a reliability and market organization called the Southwestern Power Pool ("SPP") that, like ERCOT, operates a central energy-based marketplace. SPP, however, requires that the vertically-integrated utilities in its region maintain or contract for sufficient capacity to meet their own needs, plus a reserve margin. SPS's 2015 IRP explains that, "in addition to SPS's owned generation, SPS currently has long-term PPAs [Power Purchase Agreements] totaling 1,232 MW of firm generation capacity."[56] The IRP further explains that there are multiple routes for meeting reserve requirements:

> Based upon the actual Capacity Margin in any one year, additional generating capacity might be acquired through various methods, including construction of SPS-owned facilities and/or PPAs via competitive resource solicitations.[57]

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[53] Declaration of David Hudson, paragraph 11.

[54] Together, Tolk 1 & 2 have a "net dependable capacity" of 1,072 MW. Southwestern Public Service Company. 2015 Integrated Resource Plan. July 16, 2015. Figure 7-2 (Optimized Results: Expansion Plans). Table 3-1. Location, Net Dependable Capacity, Retirement, & Cost Data for all Generating Units - Calendar Year 2014.

[55] *Id.* Figure 7-2 (Optimized Results: Expansion Plans).

[56] *Id.* Section 3.02.

[57] *Id.* Section 3.05.

In other words, SPS can acquire capacity from other utilities and merchant generators in the SPP reliability area, and maintains market capacity arrangements equal to or greater than the capacity of Tolk units 1 & 2.

37. As a whole, the SPP region is flush on capacity and well above reserve margin requirements. According to a recent reliability assessment from the North American Electric Reliability Corporation ("NERC"), which is charged with maintaining reliability standards, the SPP region is currently maintaining more than a 26% reserve margin, well over its required 13.6% margin.[58] Even with regional growth and expected retirements of 3,000 – 4,500 MW, NERC anticipates that SPP will have nearly 4,000 MW of excess capacity available in 2020. Therefore, even if SPS decided to retire the Tolk plant and declined to build its own new capacity by 2020, there is available excess capacity that could be procured through bilateral contracts, an arrangement that is clearly familiar to SPS.

E. Conclusion

38. I conclude that Mr. Lloyd, Mr. Frenzel, and Mr. Hudson's concerns regarding the reliability implications of the Final Rule are misplaced and unfounded.

- In ERCOT, Petitioners' coal-fired units are non-economic irrespective of the Final Rule and are likely already facing retirement challenges. As such, the Final Rule is not the cause of ERCOT taking reasonable steps to buffer the existing transmission system or finding new capacity to replace already non-economic units.

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[58] North American Reliability Council (NERC). December, 2015. *2015 Long-Term Reliability Assessment*. Page 73, table "Peak Season Demand, Resources, and Reserve Margins". Available at http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/2015LTRA%20-%20Final%20Report.pdf.

- Luminant's contentions that the Final Rule directly impacts Luminant's profitability or will cause their plants to close is contradicted by the company's financial statements and recent actions, showing that the plants have little remaining value to the company and are losing money today, even without the Final Rule.

- SPS's concern that the Final Rule will require an untenable capacity replacement plan stands in opposition to the company's recently filed integrated resource plan, which shows that SPS has the ability to acquire bilateral capacity on a flush market or to procure new capacity before the Final Rule's compliance deadlines. The company's process for assessing new capacity requirements and justifying costs before utility commissions is not unique to SPS; it is a common element of regulated utility planning.

39. In conclusion, while declarants for Petitioners attempt to lay ERCOT's transmission and reliability concerns at the feet of EPA, ERCOT's own assessment and my evaluation confirm that the Final Rule is not the basis for these concerns.

Under 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

Executed on the 5TH of April, 2016.

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