Testimony of Barry T. Smitherman

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Before The Committee on Energy and Commerce, Subcommittee on Energy and Power

United States House of Representatives

Hearing: American Energy Security and Innovation

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Mr. Chairman and Members of the Committee and Subcommittee:

Thank you for the opportunity to provide testimony regarding natural gas and electric coordination challenges. As Chairman of the Railroad Commission of Texas, Chair of the Gas Committee for the National Association of Regulatory Utility Commissioners (NARUC), and former Chair of the Public Utility Commission of Texas (PUC), I am keenly aware of the significant role natural gas now has in fueling our nation. Natural gas is a clean, reliable, low-priced source of fuel. It is being produced in abundance, particularly in Texas, but it is important to note that natural gas is not the only source of fuel that drives this county. However, because the federal government and the EPA continue to set unreasonable roadblocks to diverse fuel production, the natural gas industry is challenged to supply enough energy for the nation. The interdependence of Texas', and the United States', electric infrastructure with natural gas infrastructure brings many issues into question, including how natural gas reserve margins will affect the electric market, the long-term reliability of natural gas, and how the EPA has affected or attempted to affect the market in Texas specifically.

The first issue to address regarding energy production is the effect of recent actio s by the EPA and the federal government. The EPA has implemented such onerous restrictions on the ability to build new coal plants that it has greatly impacted fuel supply in Texas and the nation.

These restrictions, coupled with the fact that nuclear plants have become prohibitively expensive to build, have put added pressure on the role of natural gas as a fuel source. Further, the subsidizing of wind allows for essentially negative prices for the resource, thereby making other sources noncompetitive. The combination of these factors, all driven by the federal government and the EPA, creates some major problems for our nation's fuel supply.

A few examples from Texas can illustrate the problems the EPA has created, or attempted to create, in energy production. According to the EPA, the Cross-State Air Pollution Rule (CSAPR) was proposed to address air emissions that cross state lines and contribute to ozone and particulate matter pollution in the eastern United States. The final rule included federal implementation plans to reduce sulfur dioxide and nitrogen oxide emissions from electric power plants in 32 states, including Texas. This goal was to be accomplished through abatement standards promulgated by the EPA, as well as a voluntary cap and trade program. The rule would require the 32 numerated states to cut power plant sulfur dioxide emissions by 71% and nitrogen oxide emissions by 52% from 2005 levels. These cuts were to be met by 2014, with emissions reductions beginning in January 2012.

Originally, in the EPA's proposed rule, Texas was not included in the states to be affected by the rule. The states included were those that allegedly contributed significantly to nonattainment, or interfered with maintenance by a downwind area of national ambient air quality standards. Once the rule was adopted by the EPA, however, Texas was included in the affected states. Instead of including Texas based on actual measurements and sound science, the EPA included Texas as an affected state, at the last minute, based solely on EPA modeling indicating that Texas would contribute significantly to nonattainment in 2012 by slightly

affecting parts of Illinois. Based on their modeling, the EPA planned to require Texas to reduce potential emissions which would potentially lead to the modeled contribution of nonattainment.

The Railroad Commission, the Public Utility Commission (PUC), the Texas Commission on Environmental Quality (TCEQ), and the General Land Office sued the EPA in federal court. Because Texas was added to the final rule but was not included in the original proposed rule for comment, the Texas agencies argued that the EPA failed to provide proper notice of the rule or a true and fair opportunity for comment to the rule's application to Texas. In addition, the state agencies argued that the EPA failed to provide notice of the factual data and analysis used in the determination to include Texas as an affected state in the rule. If the EPA had done so, Texas would have been afforded an opportunity to challenge the data.

The Texas agencies requested a stay of the effective date of the Cross-State Air Pollution Rule from the federal court. Without a reprieve from the EPA's designated effective date of January 1, 2012, generation plants would have been unable meet the aggressive deadlines in order to comply. Plants would be forced to cease operation, likely causing rotating electricity outages throughout the ERCOT region. Texas would also be required to comply with emission allocations under the rule starting January 1, 2012, which was only five months after the final rule was published in the Federal Register. These draconian measures, the agencies argued, would cause Texas would suffer irreparable harm. Texas was ultimately successful in its appeal of the rule to the DC Circuit Court of Appeals, as the court found that the EPA had exceeded its statutory authority in its rule-making.

In the same month, the Fifth Circuit Court of Appeals struck down the EPA's rejection of Texas' Flexible Permits Program. The EPA had claimed that Texas' program did not meet the

standards of the Clean Air Act. However, the Court held that the EPA's findings were based not on actual standards or procedures, but instead based on wording.

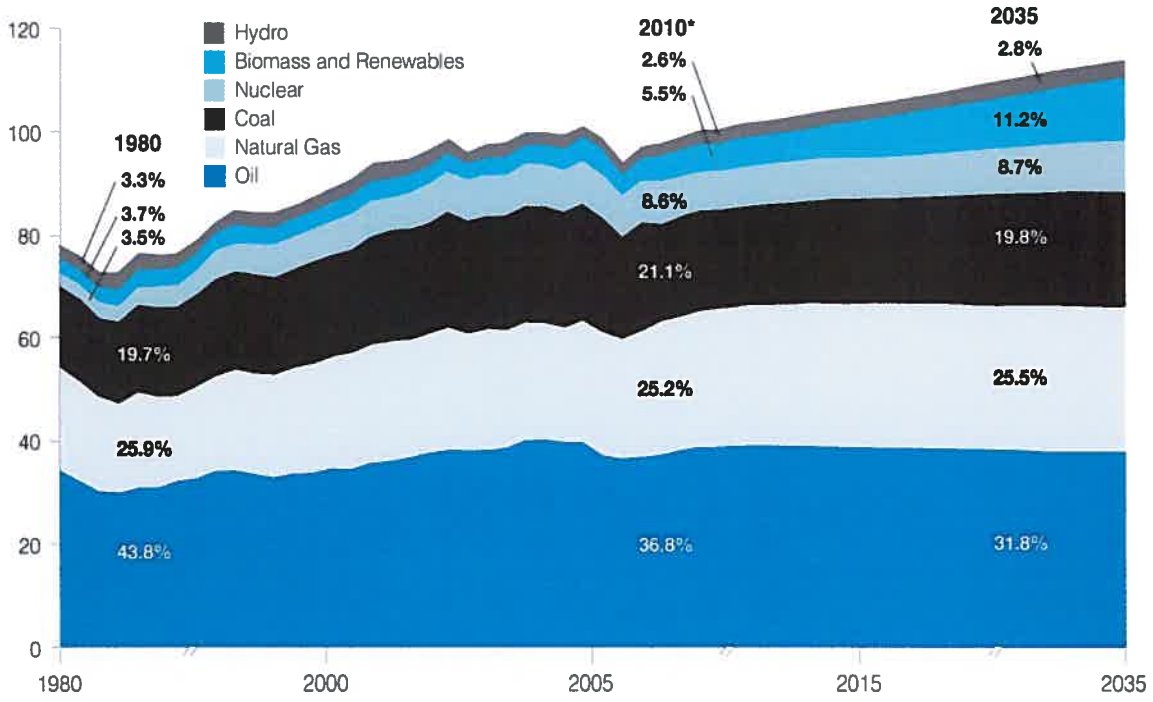
Texas has recently fought several battles against the EPA, and the state has been successful so far due to the EPA's overreaching. However, upcoming rules on methane gas emissions, in addition to decisions on the suite of rules concerning greenhouse gas emissions, will continue to pose potential problems for the state in energy production. The EPA's rules on coal production have exacerbated the use of natural gas because coal plants, and coal production, is slowing to a halt. There are several reasons that natural gas is an excellent resource to turn to, although it not the only answer.

The booming natural gas industry, especially in Texas, has certainly helped increase the nation's use of natural gas as a fuel source for electricity. The domestic supply of natural gas has grown dramatically in recent years, due in major part to new technologies in the development of shale gas production. This is particularly true in Texas, where the Barnett, Haynesville, and Eagle Ford shale plays have greatly increased natural gas production. In 2012, Texas produced over 7 trillion cubic feet of natural gas, 19.5 billion cubic feet per day. In 2011, production was over 7 trillion cubic feet as well. In 2001, natural gas production was at 5.8 trillion cubic feet. The Railroad Commission of Texas issued 22,479 oil and gas drilling permits in 2012, 22,480 in 2011, and 18,029 in 2010. To contrast, in 2002, 9,716 drilling permits were issued.

Natural gas is not only abundant, but natural gas-fired generation facilities are quicker to build and require less initial capital outlays than other options. As stated above, the EPA's major air quality regulations regarding coal make it difficult to build new coal plants to generate reliable electricity. Natural gas is a clean source of fuel and firm, reliable power, and it is

projected to continue to contribute a significant amount of electricity needs, although cannot supply all electricity needs. The figure below illustrates reliance on natural gas, among other fuels.

Future U.S. Energy Demand (Quadrillion Btu)



Source: EIA, *Annual Energy Outlook 2012*, Tables A1 and A17

In addition to being an abundant resource, natural gas prices have remained relatively stable and low in the past few years. Natural gas-fired technologies have also resulted in more efficient generation units, allowing for a larger volume of electricity per unit of natural gas to be burned. Illustrated below are natural gas prices from 2002-2012. Changes throughout the years show the variety of prices for natural gas, with lower numbers in recent years.

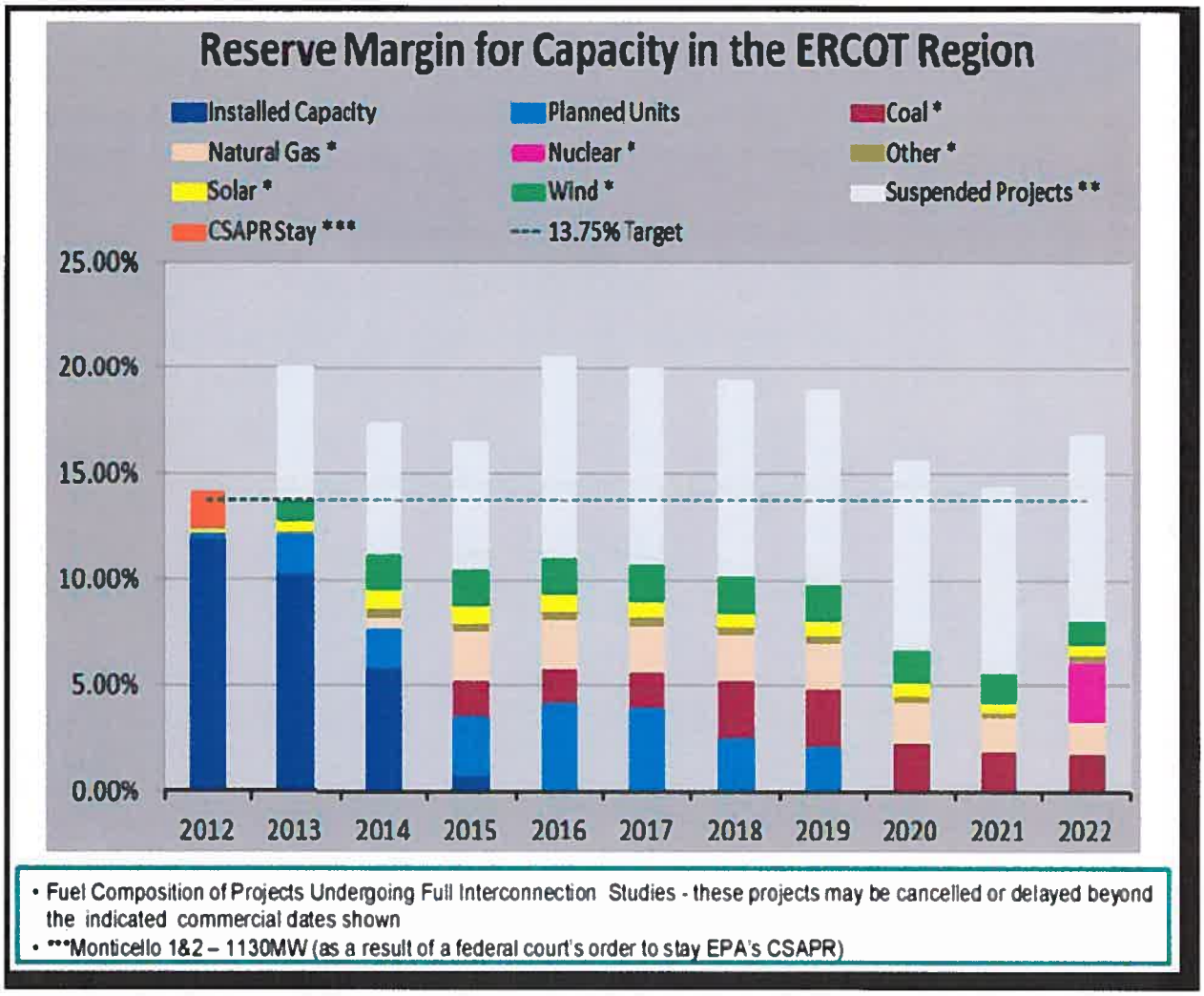
Texas Natural Gas Price Sold to Electric Power Consumers (Dollars per Thousand Cubic Feet)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2002	2.65	2.36	2.96	3.57	3.52	3.39	3.37	3.21	3.49	3.95	4.09	4.28
2003	5.11	6.91	7.20	5.20	W	5.97	5.27	5.06	4.91	4.62	4.49	5.39
2004	5.92	5.41	5.22	5.54	6.14	6.45	6.07	5.86	5.13	5.85	6.57	6.59
2005	6.01	6.04	6.47	7.07	6.66	6.88	7.29	8.41	10.43	11.30	9.32	10.72
2006	8.48	7.48	6.76	6.82	6.34	6.08	6.06	7.03	5.83	5.09	6.87	6.92
2007	6.42	7.34	6.90	7.29	7.51	7.48	6.55	6.19	5.88	6.68	6.58	7.00
2008	7.73	8.08	8.92	9.95	10.48	12.18	11.34	8.63	7.10	6.26	5.72	5.91
2009	5.24	4.42	3.67	3.62	3.82	3.87	3.77	3.54	3.13	4.05	4.11	5.26
2010	6.19	5.60	4.76	4.21	4.32	4.80	4.81	4.62	4.12	3.83	3.81	4.54
2011	4.51	4.75	4.22	4.53	4.56	4.75	4.70	4.45	4.22	3.90	3.60	3.55
2012	3.10	2.90	2.52	2.26	2.54	2.71	3.13	3.21	3.04	3.46	3.74	3.72

While now inexpensive natural gas has been a benefit to consumers, it also discourages new investment due to a lack of returns. Low prices, coupled with EPA's restrictions on coal, have caused a narrowing of reserve margins in Texas. The Electric Reliability Council of Texas (ERCOT) and the Public Utility Commission (PUC) are attempting to address the balance of low costs with a need for more power.

ERCOT operates the power grid and manages the electric market for the majority of the state. The wholesale electricity market in Texas has been deregulated since 1995. Deregulation has helped create a competitive and efficient energy wholesale market, as market forces drive the supply of energy and standby reserves for the ERCOT region in Texas. While this model may provide less stability or predictability than more tightly regulated models, the benefits of a free market place construction risks on shareholders, not customers, and end-use customers enjoy reasonable prices and more retail choices.

Although in the past generators were easily able to realize revenues that ensured reserve resources in Texas, upcoming years are expected to provide more of a challenge. Lower natural gas prices have affected generator revenues. In addition, wind production tax credits have contributed to low wholesale prices, particularly in off peak settlement intervals at night, as well as certain months in the spring and fall when wind blows a lot and electricity demand is lower. Lower priced gas and low-priced wind generation have reduced potential revenues for Texas generators, discouraging capital investments in new generation capacity. To address some of these issues, the Texas Public Utility Commission (PUC) recently voted to raise the system-wide offer cap, or the amount generators may bid into the market, from $3,000/MWh to $4,500/MWh, ultimately to $9,000 in the summer of 2015. In order to increase reserve margins, ERCOT and the PUC will have to find a way to further incent investment in new generation. The figure below illustrates the challenges ahead.

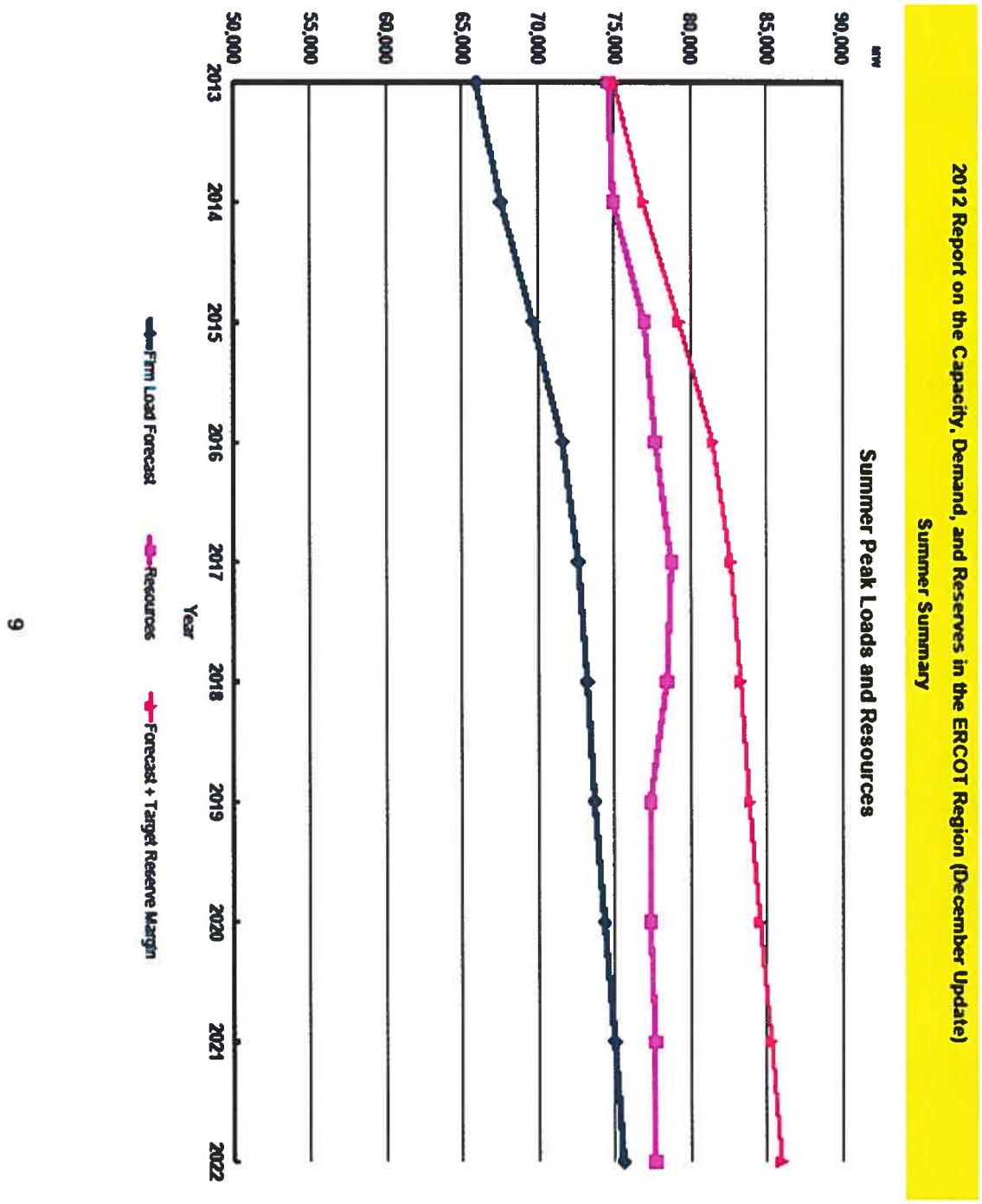


As it stands today, ERCOT forecasts that reserve margins may fall below the desired reserve level of 13.75% in coming years. ERCOT has predicted that in upcoming summer months, similar to last summer, the amount of electricity available for consumer demand will be tight. Electricity needs are expected to be met during the spring, however, barring any extreme weather events during the early part of the season, when power plants undergo regular maintenance in preparation for the summer.

ERCOT's 2013 summer assessment projects a peak demand of 67,998 megawatts. This projection is based on a summer weather outlook similar to 2010's. Without accounting for

power plant outages, ERCOT anticipates 73,308 MW of generation capacity. Power plant outages typically account for a total of 2,600 MW during an operating day, resulting in a net of 70,708 MW. The summer is expected to be hotter and drier than normal, although no prolonged heat waves are expected. Therefore, although ERCOT will have more resources available for summer demands than in 2012, there is also expected to be a higher demand. Air conditioning use in homes and businesses put high power demands on ERCOT in the summer. For example, the ERCOT region reached an all-time record high on August 3, 2011, where consumer demand reached 68,305 MW.

Reserve margins in the ERCOT region are expected to be below the target reserve margin of 13.75% for the 2013 peak season and to remain below that target level for the duration of the reporting period. The planning reserve margin for the peak season of 2014 is forecasted to be 10.9%. However, according to ERCOT, there are three combined-cycle projects that are currently under construction and are scheduled to enter commercial operation in the third quarter of 2014. These units may be available to provide energy in test mode, or may be commercially available by the time of system peak in August of 2014. Because of that late date, they are not included in the Planned Units (Not Wind) category for 2014, but if all of the units are available at the time of system peak, the effective planning reserve margin will be 13.6%. Below is a figure that illustrates the estimated Summer Peak Loads and Resources, provided by ERCOT.


2012 Report on the Capacity, Demand, and Reserves in the ERCOT Region (December Update)
Summer Summary
Summer Peak Loads and Resources
MW
90,000
85,000
80,000
75,000
70,000
65,000
60,000
55,000
50,000
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Year
Firm Load Forecast
Resources
Forecast + Target Reserve Margin

Challenges clearly exist in increasing Texas' reserve margins, but ERCOT, the PUC, and the Railroad Commission of Texas are in coordination to address these issues. A reliable supply of natural gas and power, prices that will incent investment and the authority to allow a free and competitive market to address these problems will help the state provide valuable energy sources, now and in the future. For this to occur, the EPA and the federal government must not interfere unnecessarily with overly burdensome restrictions on fuel production. Unchecked regulation poses a danger to these vital resources, and is something the natural gas community must continue to address.

Thank you for the opportunity to testify before the Subcommittee and for your attention to this urgent matter.

Sincerely,

Barry T. Smitherman
Chairman
Railroad Commission of Texas