American
Public Power
Association

1875 Connecticut Avenue, NW
Suite 1200
Washington, DC 20009-5715

Ph: 202.467.2900
Fax: 202.467.2910
www.PublicPower.org

Point of Contact: Desmarie Waterhouse
202-467-2930
dwaterhouse@publicpower.org

Statement of the

AMERICAN PUBLIC POWER ASSOCIATION

Submitted to the

SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

For the May 14, 2013 Natural Gas Forum on

"Infrastructure, Transportation, & Innovation"

(Submitted June 10, 2013)

The American Public Power Association (APPA) welcomes the opportunity to submit this statement for the record in relation to the Senate Energy & Natural Resources Committee natural gas forum on "Infrastructure, Transportation, Research, and Innovation."

APPA is the national service organization representing the interests of over 2,000 municipal and other state- and locally-owned, not-for-profit electric utilities throughout the United States (all but Hawaii). Collectively, public power utilities deliver electricity to one of every seven electricity consumers (approximately 47 million people), serving some of the nation's largest cities. However, the vast majority of APPA's members serve communities with populations of 10,000 people or less.

Overall, public power utilities' primary purpose is to provide reliable, efficient service to local customers at the lowest possible cost, consistent with good environmental stewardship. Public power utilities are locally created governmental institutions that address a basic community need: they operate on a not-for-profit basis to provide an essential public service, reliably and efficiently, at a reasonable price.

Greater Use of Natural Gas and Renewables for Electric Generation Will Impact Utility Operations and Potentially Impact Grid Reliability

APPA commends Chairman Wyden for holding a forum that explores what the next applications are for natural gas and how this new demand will be met. While much of the forum focused on the transportation sector, the association is pleased that it also examined the issues surrounding the greater use of natural as a fuel source for electric generation. APPA members are impacted by the greater use of natural gas to generate electricity and backup intermittent renewables, and will likely experience a variety of operational issues as they bring more of these resources online. The shift from coal to natural gas for electric generation creates several challenges that must be addressed, including potential price volatility for utilities and their customers, inadequate pipeline capacity and storage, lack of flexibility in pipeline

rate schedules to accommodate the needs of electric generation, and misalignment of, and lack of intra-day flexibility within, the gas and electric days.

Given these challenges, it is important that Congress continues to examine the short- and long-term implications of federal policies that promote more use of natural gas as a fuel source for electric generation on electricity prices and grid reliability. APPA respectfully requests that the Energy & Natural Resources Committee hold a hearing or another forum that focuses exclusively on the use of natural gas by the electric sector.

Natural Gas Is Becoming the Dominant Fuel Source for Electric Generation

As the Committee is well aware, there are a variety of factors driving electric utilities away from the use of coal-fired generation. The Environmental Protection Agency (EPA) has issued several regulations, such as utility Maximum Achievable Control Technology (MACT), that are driving utilities to retire coal-fired power plants and replace them with natural gas-fired ones. At the same time, the low cost of natural gas in the U.S., due to increased production, is making the use of coal for generation less economic, particularly when factoring in the regulatory landscape. Just a few years ago, coal was the predominant fuel type used for electric generation. Today, its share has declined as electric generation from natural gas and renewables such as wind and solar increase. The use of coal for electric generation in the U.S. will further decline when EPA finalizes its New Source Performance Standards (NSPS) for greenhouse gas (GHG) emissions from new power plants because no commercial technology exists to reduce such emissions.

A January 2013 APPA report examining new generation capacity in the U.S. highlights these trends in the industry. It finds that "the share of coal-fired capacity continues to diminish, as solar and nuclear, in addition to wind and natural gas, have surpassed it in the under construction category."[1] Over 40 percent of new plant construction is natural gas, with 19.1 percent wind, 12.7 percent solar, and 11.4 percent nuclear.[2] In addition, since 2007, the share of coal plants under construction has dropped dramatically. The report also notes that natural gas has the largest share of operating capacity (43.4 percent), with coal at 30 percent.[3] The operating capacity of coal will continue to drop as more coal-fired plants are retired due to age, EPA regulations, and the generally lower price of natural gas. In 2012 alone, over 12,200 megawatts (MW) of capacity was retired. Two-thirds of those retirements were coal-fired.[4]

There will be long-term implications from the greater use of natural gas for electric generation. Utilities are spending hundreds of millions of dollars to convert existing coal facilities, where possible, to natural gas or to construct new natural gas plants. They are also using natural gas generation to back up wind and solar power, variable energy sources that cannot be relied on to generate power at all times. These are long-term investments being made to generate cleaner power, but they increase the risk of greater volatility in electricity prices for consumers, and potentially reduce electric reliability. As a commodity, natural gas is subject to price volatility. Prices may be low today, but can easily rise in the years to come due to a variety of factors including potential new or existing regulations on hydraulic fracturing, increased utility and industrial demand, exports, and increasing use in the transportation sector.

---

[1] *See* APPA Report on New Generating Capacity: 2013 Update, January 2013, available at http://www.publicpower.org/files/PDFs/New_plants_analysis_2013.pdf. The data used in the report are from the Velocity Suite database.
[2] *Id.* at 2.
[3] *Id.* at 15.
[4] *Id.* at 17.

In addition, it is not clear yet whether there will be sufficient infrastructure or storage to accommodate the greater use of natural gas by electric utilities.[5] While the Federal Energy Regulatory Commission (FERC) is examining how to promote greater coordination between the electricity and natural gas industries, no one knows whether all the changes needed for fuel switching on this scale can be accomplished in the time needed to comply with EPA regulations. As is evidenced in New England, a region of the country heavily dependent on natural gas for electric generation, there are issues with pipeline capacity and competing demand for gas for home heating. Electricity prices in the region were four to eight times higher than normal in February 2013 because of the lack of fuel diversity.[6]

New England is not the only region of the country with potential reliability concerns. A January 2013 EPA Compliance Update by the Midcontinent Independent System Operator (MISO) states the ISO has concerns about whether there is sufficient resource adequacy in the Midwest beginning in 2016. With the significant number of coal-fired generation units retiring due to EPA regulations and low natural gas prices, MISO projects there will be a potential 11.7 gigawatts (GW) shortfall of resource adequacy in the winter of 2016 and a 3.5 GW one in the summer of 2016.[7] MISO anticipates increased utilization of natural gas fuel generation that will result in "changes to the system's generation configuration and concerns about the ability of the current pipeline infrastructure's ability to deliver enough gas."[8] On May 14, 2013, the Committee heard directly from ISO-New England President and CEO Gordon van Welie about these and other challenges regional grid operators face and potential electric reliability impacts.

There are also market-related challenges arising from greater use of natural gas for electric generation. Electric utilities are concerned about the misalignment of, and intra-day flexibility within, the gas and electric days and the range of pipeline service offerings available to accommodate generator needs (e.g., flexibility of pipeline rate schedules). They are also concerned about the lack of sufficient communications between the two industries and how efforts to improve communications going forward could potentially violate FERC's Standards of Conduct (SoC). It is unclear to both industries what type of information they can share with one another without running afoul of the SoC. Many of these issues are solvable, but will require time to do so. Congressional oversight of these challenges is needed to ensure they are addressed.

Thank you again for this opportunity to submit a statement for the record and we welcome any questions Chairman Wyden or other members of the committee might have.

cc: The Honorable Lisa Murkowski

---

[5] A July 2010 APPA Study by the Aspen Environmental Group, Implications of Greater Reliance on Natural Gas for Electricity Generation, examines the impacts on natural gas and deliveries to electric utilities from fuel switching.

[6] *See* In New England, a Natural Gas Trap, New York Times, February 15, 2013, available at http://www.nytimes.com/2013/02/16/business/electricity-costs-up-in-gas-dependent-new-england.html?_r=0

[7] See MISO EPA Compliance Update, January 11, 2013, available at https://www.misoenergy.org/Library/Repository/Communication%20Material/Power%20Up/EPA%20Compliance%20Update.pdf.

[8] https://www.misoenergy.org/WhatWeDo/StrategicInitiatives/Pages/EPACompliance.aspx