



THE COMMITTEE ON ENERGY AND COMMERCE

MEMORANDUM

February 25, 2014

TO: Members, Subcommittee on Energy and Power

FROM: Committee Staff

RE: Hearing on “Benefits of and Challenges to Energy Access in the 21st Century: Electricity”

On February 27, 2014, at 10:15 a.m. in 2123 of the Rayburn House Office Building, the Subcommittee on Energy and Power will hold a hearing on the “Benefits of and Challenges to Energy Access in the 21st Century: Electricity.” The hearing will focus on the benefits of access to affordable and reliable electricity, including why such access is critical to promoting economic and job growth, raising standards of living, and responding to severe weather events and natural disasters. The hearing also will focus on current challenges to energy access, including U.S. regulatory policies that may affect access to electricity both domestically and internationally.

I. WITNESSES

The Honorable Edward S. Finley, Jr.
Chairman
North Carolina Utilities Commission

Mr. Mel Coleman
Chief Executive Officer
Northern Arkansas Electric Cooperative

Mr. Todd Moss
Chief Operating Officer and Senior Fellow
Center for Global Development

Ms. Karen Kerrigan
President and Chief Executive Officer
Small Business & Entrepreneurship Council

Mr. Bruce Biewald
Chief Executive Officer
Synapse Energy Economics

Mr. Paul O’Brien
Vice President for Policy and Campaigns
Oxfam America

II. BACKGROUND

Electricity is an essential part of modern life.¹ In the United States, electricity is currently generated from a diverse combination of resources, including coal, natural gas, and nuclear power, which provide the vast majority of the nation’s “baseload” electricity.² The U.S. Energy Information Administration (EIA) [projects](#) that in 2014, natural gas-fired generation will account for a 27.0% share of total generation during 2014, coal-fired generation for 40.3%, renewable energy sources, including hydropower, for 12.9%, and nuclear generation for approximately 19% of total generation.

¹ In 2000, the National Academy of Engineering [cited](#) electrification, and the vast networks of electricity that power the developed world, as the greatest achievement affecting quality of life in the 20th Century.

² Baseload power is power that is provided continuously and is available 24 hours-a-day to meet demand.

Despite this diverse electricity generation portfolio, the North American Electric Reliability Corporation (NERC) has stated that [“\[o\]ver the next 10 years, the electric industry will face a number of significant emerging reliability issues.”](#) The nation’s generation fleet is experiencing a dramatic shift away from coal-fired generation and increasingly towards use of natural gas and renewable energy sources, spurred by low natural gas prices and a suite of new environmental regulations. This shift will occur largely over the next few years as natural gas prices are expected to remain low and recent environmental regulations accelerate the retirement of a significant portion of the nation’s coal-fired power plants, primarily between 2014 and 2016 as environmental regulations become effective.³ As recently as February 14, 2014, EIA has [projected](#) that there will be more coal-fired power plant retirements by 2016 than have been scheduled, and that 60 gigawatts (GW) of capacity will retire by 2020.

Examples of the challenges that may arise in coming years due to this dramatic shift developed during the recent polar vortex and cold winter weather. With the recent cold weather in January, the EIA [reported](#) significant increases in demand, which led to spikes in wholesale electricity prices, especially demonstrated in the increasingly natural-gas-reliant electricity supply in the Northeast.⁴ [During the early January freeze in New England](#), day-ahead on-peak power prices at the Massachusetts hub rose [above \\$235 per megawatthour](#). In the Mid-Atlantic region, EIA [reported](#) that record-high winter peak demand along with unexpected outages of power plants and natural gas equipment drove peak electricity prices even higher than in New York and New England. American Electric Power’s CEO [stated](#) on January 27, 2014, that during recent cold weather “89% of our coal capacity slated for retirement in mid-2015” was running to provide power.

In addition to existing regulations currently impacting the U.S. electricity sector and contributing to plant closures, there are pending regulations under development at the EPA under the President’s [“Climate Action Plan”](#) that also have the potential to impact the affordability and reliability of U.S. electricity in the coming years. The EPA recently has proposed standards that would prohibit the construction of new coal plants unless they deploy carbon capture and sequestration (CCS) technologies, which at present are not commercially available,⁵ effectively banning future coal-fired electricity generation in the United States. EPA is expected to propose regulations for existing power plants in June 2014, which also may impact significantly the operation of the nation’s fossil fuel-fired electric power plants.

Internationally, U.S. climate policies also have the potential to restrict access to electricity in the developing world where the World Bank [estimates](#) there are still over 1.2 billion people, or 20% of the world’s population, without electricity. Since 2009, the Overseas Private Investment

³ See NERC, [2013 Long-Term Reliability Assessment](#), Dec. 2013 (“The amount of coal-fired generation during peak is expected to decline substantially, as 39.4 GW of retirements and derates outpace 4.3 GW of new additions, resulting in a net reduction of 35.1 GW by 2023. Most unit retirements are planned between 2014 and 2016, when requirements of environmental regulations become effective.”). The 2014-2016 timeframe is triggered by the Environmental Protection Agency’s [Mercury and Air Toxics Standards \(MATS\)](#) (a/k/a “Utility MACT”), which are scheduled to take effect in April 2015, with a deadline that may be extended by up to one year by state permitting agencies. In addition to coal retirements, NERC has identified a variety of emerging reliability challenges, including challenges associated with reliably integrating high variable renewable generation, nuclear generation retirements, and other challenges. *Id.* at pp. 2-4.

⁴ See EIA [Short-Term Energy Outlook Overview](#), Feb. 11, 2014.

⁵ See [Standards of Performance for New Stationary Sources: Electric Utility Generating Units](#), 79 Fed. Reg. 1429 (Jan. 8, 2014).

Corporation (OPIC) and the Export-Import Bank of the United States (“Ex-Im Bank”) have been pursuing climate policies to restrict financing for fossil fuel-fired projects.⁶ Recently, in response to the President’s “[Climate Action Plan](#),” which calls for an end to U.S. government support for public financing of new coal plants overseas except in extremely limited circumstances, OPIC has [proposed](#) to prohibit financing for new coal-fired power plants, except for the poorest countries or projects that deploy CCS. The Treasury Department has issued similar [Guidance](#), as has the Ex-Im Bank, which recently finalized similar [Supplemental Guidelines for High Carbon Intensity Projects](#).⁷ These guidance documents, which effectively seek to implement internationally the same CCS requirements EPA is seeking to impose domestically, together with other existing climate policies restricting financing for fossil fuel-fired electricity generation, have the potential to restrict access to electricity in the developing world.

III. ISSUES

The following issues are expected to be examined at the hearing:

- The benefits of access to affordable and reliable electricity;
- The importance of energy access to economic and job growth;
- The importance of energy access to high standards of living and alleviating poverty;
- The importance of energy access to respond to severe weather events and natural disasters;
- The impacts on consumers and businesses of higher electricity costs;
- Challenges to access to affordable, reliable electricity in the U.S.; and
- Challenges to access to affordable, reliable electricity in the developing world.

IV. STAFF CONTACT

If you have any questions regarding the hearing, please contact Mary Neumayr, Patrick Currier, or Tom Hassenboehler of the Committee staff at (202) 225-2927.

⁶ See OPIC “[Environmental and Social Policy Statement](#)”; Ex-Im Bank General Bank Policies: “[Carbon Policy](#),” “[Supplemental Guidelines for High Carbon Intensity Plants](#),” and revised “[Environmental and Social Due Diligence Procedures and Guidelines](#).”

⁷ The [Consolidated Appropriations Act, 2014](#) limits use of funds through September 30, 2014 for enforcement of the modification proposed by OPIC and the Ex-Im Bank guidelines intended to limit overseas coal investments.