FERC Podcast Transcript
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Winter Assessment Presented by FERC Staff

Craig Cano: Welcome to "Open Access," the podcast series of the Federal Energy Regulatory Commission, or FERC. I'm Craig Cano, your host.

Our goal here is to have a conversation about FERC, what it does and how that can affect you. FERC can get very legal and very technical, so we will strive to keep it simple. FERC is an independent regulatory agency that oversees the interstate transmission of electricity, natural gas and oil. FERC's authority also includes review of proposals to build interstate natural gas pipelines and liquefied natural gas terminals, and licensing of nonfederal hydropower projects. FERC protects the reliability of the high-voltage interstate transmission system through mandatory reliability standards and it monitors interstate energy markets to ensure that everyone in those markets is playing by the rules.

Today, Mary O'Driscoll and I talk with members of the FERC Office of Enforcement staff about the 2016-2017 Winter Energy Market Assessment.

Mary O'Driscoll: Well, autumn has arrived and as they say, winter is coming. So today we are taking a look at FERC staff's annual winter energy market assessment. The outlook, which staff described as "cautiously optimistic," was presented to the Chairman and Commissioners at their October 20, 2016 agenda meeting and it finds that natural gas and power markets are well supplied going into the winter. New infrastructure, both gas pipelines and electric transmission lines, has strengthened energy delivery to alleviate price differences and mitigate price spikes. And natural gas storage balances remain above the five-year average.

Craig Cano: Mary, that's good news for energy consumers. But at the same time, staff cautioned there may be some challenges in markets like New England and California, where operational issues could create some regionalized gas and power risk.

Mary O'Driscoll: One of the key conclusions in the assessment is that new gas pipelines will reduce regional price differences. We asked the Office of Enforcement's Adam Bennett about that.

Adam Bennett: New pipeline capacity in and around the Appalachian Basin has allowed growing production to better reach markets.

Roughly 6 Bcfd of new transport capacity was added to the region since early 2015, and another 2 Bcfd of new transport capacity will be added before the start of 2017, with much of that focused on carrying Marcellus gas to market areas. The pipeline expansions and additions include Spectra's Algonquin Incremental Market, which will add about 350 MMcfd of new transport capacity into the greater Boston and Massachusetts market.

The added capacity should help mitigate the worst price spikes. New England natural gas prices have routinely reached winter peaks above $30/MMBtu and during the 2014 polar vortex soared to nearly $90/MMBtu. While those price levels may recur under extreme circumstances, staff estimates that on average the new transport capacity will lower New England basis significantly this winter. Under normal winter conditions, prices at Algonquin city-gates could be as much as $4 to $5/MMBtu less than they would be under the same conditions without the pipeline additions.

Mary O'Driscoll: Craig, as you mentioned earlier, the assessment also said that certain operational issues could create some regionalized gas and power risk issues. Adam also talked with us about one of those challenges.

Adam Bennett: One area that may face challenges is Southern California. As discussed in a recent technical conference, the leak and subsequent closure of the Aliso Canyon natural gas storage field has created operational challenges for gas and power markets in the Southern California market. Aliso Canyon is vital to power generators in the LA Basin, which will have to pull more supply from interconnecting regional pipelines as testing and inspection of Aliso Canyon's 114 wells continues.

As of October 7, state regulators have approved 27 wells to continue service, while taking 78 out of operation, limiting injection and withdrawal capability. SoCalGas' total inventory sits at 61.7 Bcf as of October 11, a significant reduction from the 122 Bcf in storage at this point last year. Low storage levels leave the region susceptible to upstream supply issues like freeze-offs or major pipeline operation problems. State regulators have said the prices in the region should be stable without additional capability from Aliso Canyon given normal winter conditions, but may face up to a 1 Bcfd shortage if winter weather reaches extremes, potentially causing price dislocations.

Barring extreme weather conditions, California officials have concluded that Aliso Canyon's reduced capacity should not compromise Southern California's electric reliability in the coming winter. Moreover, CAISO should be able to re-dispatch generation off Southern California Gas Company's system if gas supply becomes constrained during the winter; however, the Los Angeles Department of Water and Power has less flexibility to re-dispatch generation. Given the uncertainty of weather and system conditions, conservation and other mitigation measures are expected to help meet winter electricity needs.

Nonetheless, Southern California may face additional challenges, especially during evening ramps. Electricity demand in winter months differs from other seasons, not only in the amount of demand but also in the pattern during the day.

CAISO experiences two pronounced demand ramps during the winter months, one in the morning and one in the evening. Renewable generation serves more load during the middle of the day, but natural gas-fired generation is increasingly called upon to ramp up output in the afternoon and evening as solar generation declines and load increases.

Craig Cano: The assessment also looked at the changing electric generation mix as the country continues a move away from large centralized generation plants. As Hillary Huffer explained, this change in the resource mix – with coal-fired generating capacity decreasing and natural gas-fired generation becoming more important – can pose challenges for winter operations.

Hillary Huffer: On the power generation side we continue to see a shift away from large centralized power plants. The majority of new entrants expected to come on-line between now and February 2017 are primarily small to mid-size generators, which are less than 400 MW, and renewable projects.

These generators will make-up nearly 90 percent of the new generating capacity expected to become available and renewables will account for nearly 80 percent of new generating capacity over that time frame.

Ensuring that the electricity generated by these new plants can be delivered to where it is needed requires a comprehensive transmission planning process. Many of these projects will serve areas that have been identified by staff as having persistent price divergences, and may help to alleviate those divergences.

In terms of upcoming generator retirements, the Fort Calhoun nuclear power plant in Nebraska is the only major announced nuclear plant retirement this winter. However, significant price impacts are not anticipated from its closure as two previously retired units are being brought back into service and one that was scheduled for retirement is no longer being retired.

Since 2010, overall generation capacity in ISO-NE, NYISO, and PJM has decreased, including a decrease of nearly 7,500 MW from 2014 to 2015. This reflects the decrease in coal-fired generating capacity and the increasing importance of natural gas for electricity generation.

This change in the resource mix can pose challenges for winter operations, especially in ISO-NE, where approximately 44% of generation capacity is now gas-fired and disruptions in gas supply and pipeline capability can occur due to the configuration of the system.

Historically, ISO-NE has been able to rely on coal and oil-fired power plants in the winter when residential and commercial demand peaks.

However, coal accounts for a relatively small amount, approximately 6 percent, of ISO-NE's system capacity. To help maintain reliability with its changing resource mix, ISO-NE has implemented a Winter Reliability Program that is designed to prevent overreliance on natural gas-fired generators, as well as to implement other proactive measures during the winter months.

The Winter Reliability Program provides incentives for three types of resources: oil and dual-fuel generators to increase oil inventories, LNG to augment natural-gas-fired generators' pipeline gas, and demand response.

More broadly, residential gas customers served by local utilities have priority on the pipeline system to meet heating needs during the winter. The high demand for natural gas during periods of extreme cold weather over a large portion of the country can reduce the availability of natural gas for generation plants.

NYISO and PJM experience winter problems similar to ISO-NE. In NYISO, nearly 50 percent of capacity is natural gas-fired and NYISO's demand response programs, which reduce energy use at peak times, can be activated to help support regional reliability and manage demand during the winter months.

In PJM, natural gas accounts for more than 30 percent of generating capacity. PJM continues to build on the gas-electric coordination efforts established after the 2014 Polar Vortex. Also, this winter will be the first year that PJM's new capacity performance market design will be in effect.
For the delivery year that began June 1, 60 percent of all resources that cleared are capacity performance resources that must be available when called on during times of system stress or else they must pay significant penalties that may equal or exceed capacity revenues.

Mary O'Driscoll: So the outlook for the Winter Energy Market is cautious optimism. And you can be sure that, as always, FERC staff will continue to monitor developments in the electric and natural gas markets. Our thanks to Adam Bennett and Hillary Huffer of FERC's Office of Enforcement for joining us on this podcast. A copy of the 2016-2017 Winter Assessment is available at FERC.gov, where you also can watch the video of staff's presentation at the October 20, 2016 Commission meeting. Thanks for joining us today.

Craig Cano: Thank you for listening to "Open Access," the podcast series of the Federal Energy Regulatory Commission. Unless otherwise noted, the views expressed on these podcasts are personal views and do not necessarily express the views of individual commissioners or of the Commission as a whole. This podcast is a production of the Federal Energy Regulatory Commission Office of External Affairs, Leonard Tao, director. We will be updating our posts when we've got news, so be sure to check out our website, www.FERC.gov, and follow us on Facebook, Twitter and LinkedIn to find out when our next podcast airs.