

Natural Gas Market Overview

Presented to MN PUC
May 29, 2014

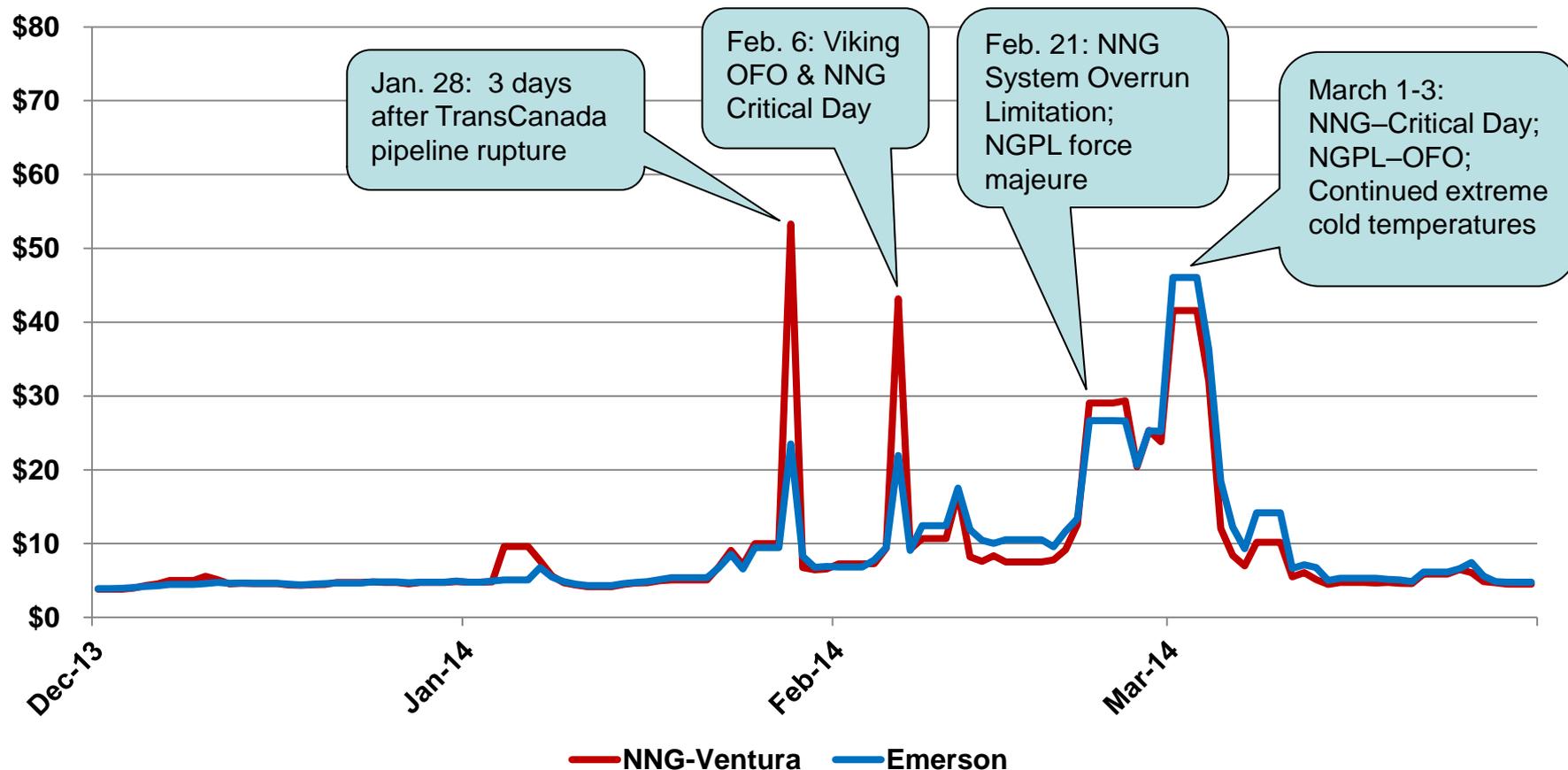
Winter 2013-2014: External Events



This winter there was a confluence of events that caused significant market disruptions, resulting in high daily market prices in many Midwest and Northeast US markets, including areas where CenterPoint purchases gas. The market price aberrations were the result of:

- Severe sustained cold temperatures in Canada, Midwest US and Eastern US, creating significant gas heating demand.
- Increased demand in natural gas for electric generation due to extreme cold weather, and increased gas usage in the East and Southeast U.S.
- Several disruptions in gas production during Q1 2014 as a result of well freeze-offs in regions tributary to the company's pipeline receipt points (western Canada, US Rockies and US Midcontinent).
- Capacity utilization through Demarc and Emerson was maximized for most of Q1 2014, which meant additional supply had to come from other sources.
- Multiple pipeline constraints including explosions, compression failure, curtailments and operational flow orders on Viking Gas Transmission, Northern Natural and NGLPL contributed to significant price spikes.
- Very significant seasonal draw-down in U.S. and Canadian working gas storage inventory, especially in the East region and US total.

Winter 2013-2014: Daily Prices and Pipeline Operational Issues

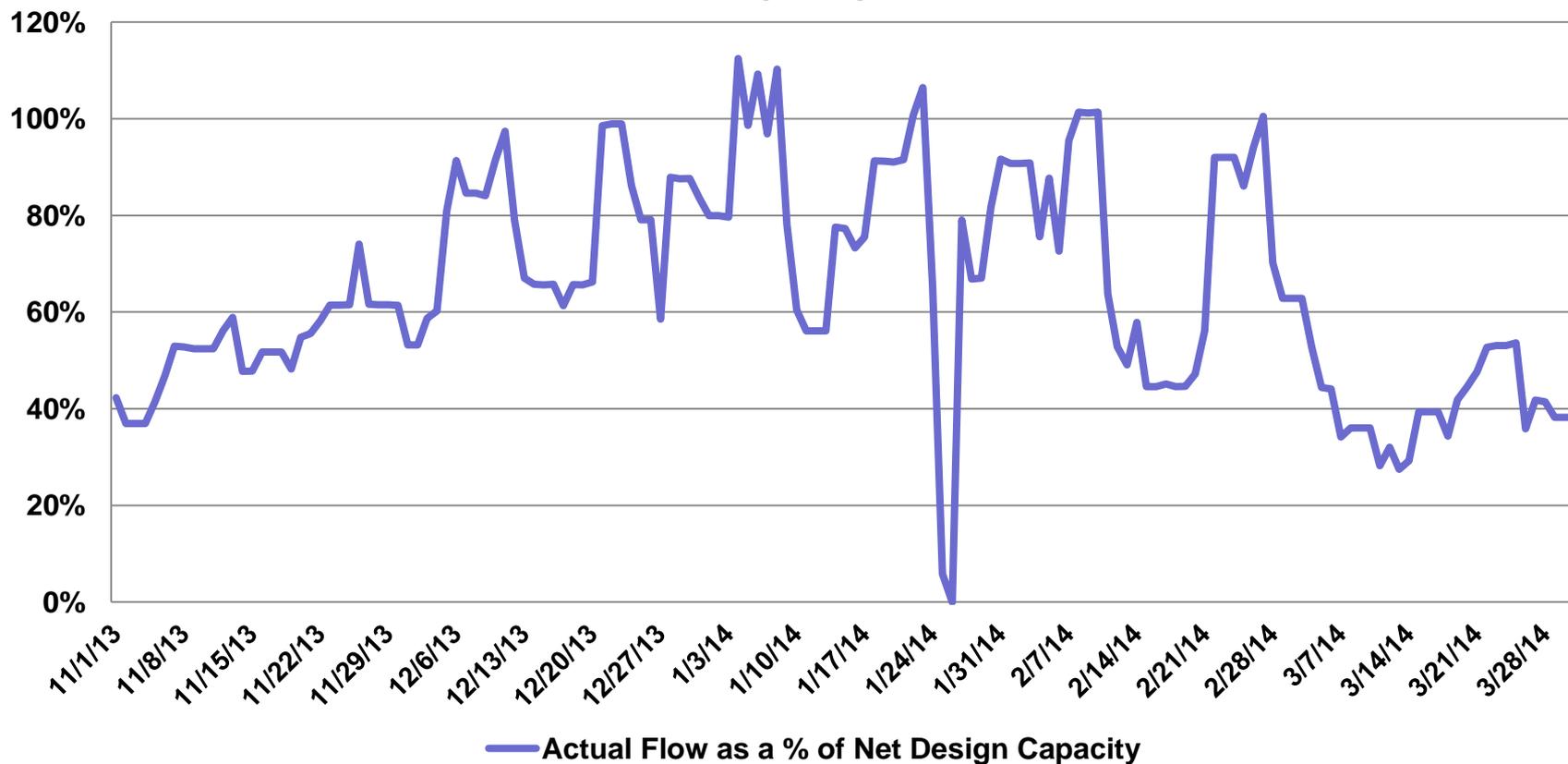


Note: Prices shown are daily midpoint prices of the traded range of prices. For example, the price range for Ventura for January 28th was \$30.00 to \$85.00 with a midpoint posting of \$53.305 per Dth.

Winter 2013-2014: Pipeline flows were often at capacity



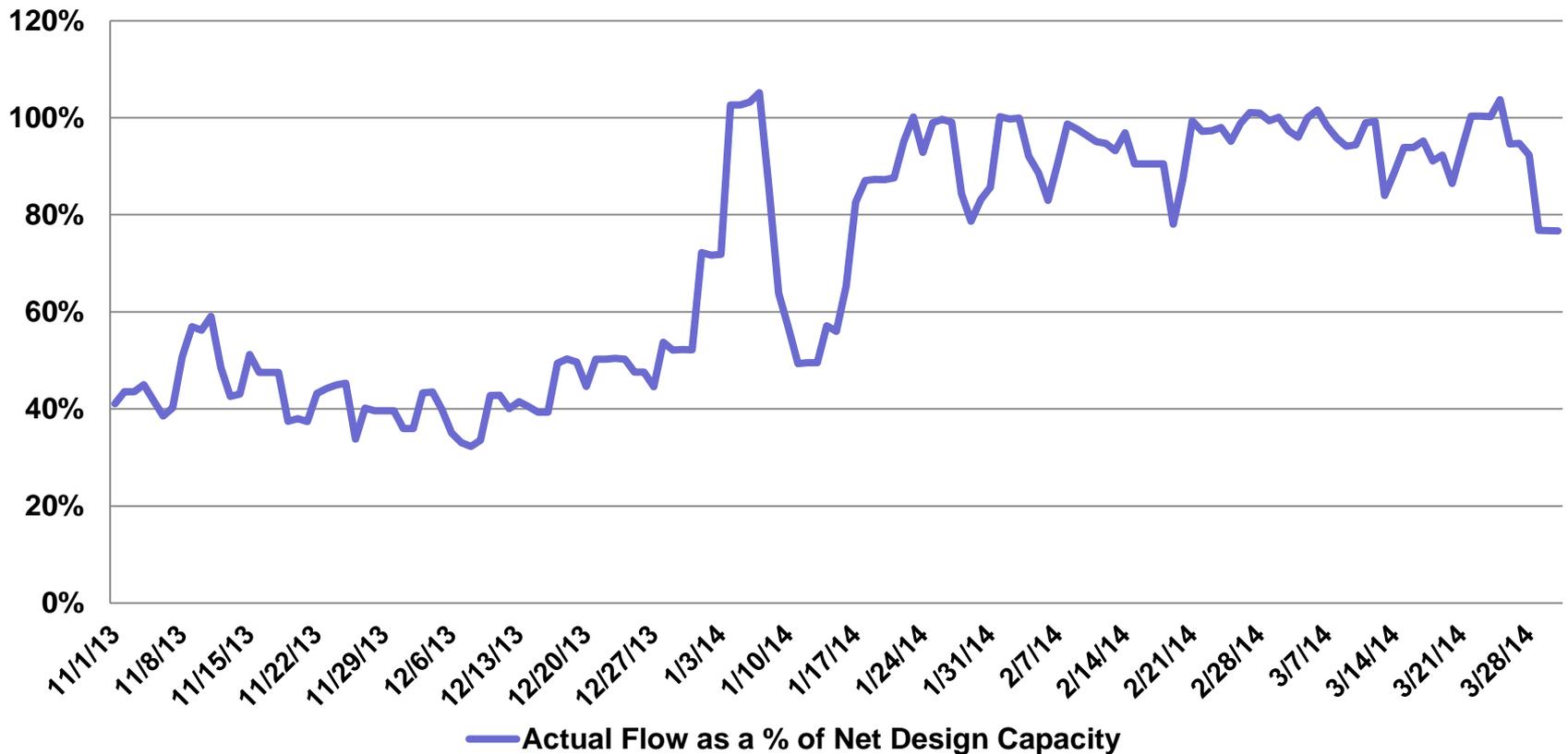
Viking Gas Transmission Emerson Capacity Utilization



Winter 2013-2014: Pipeline flows were often at capacity



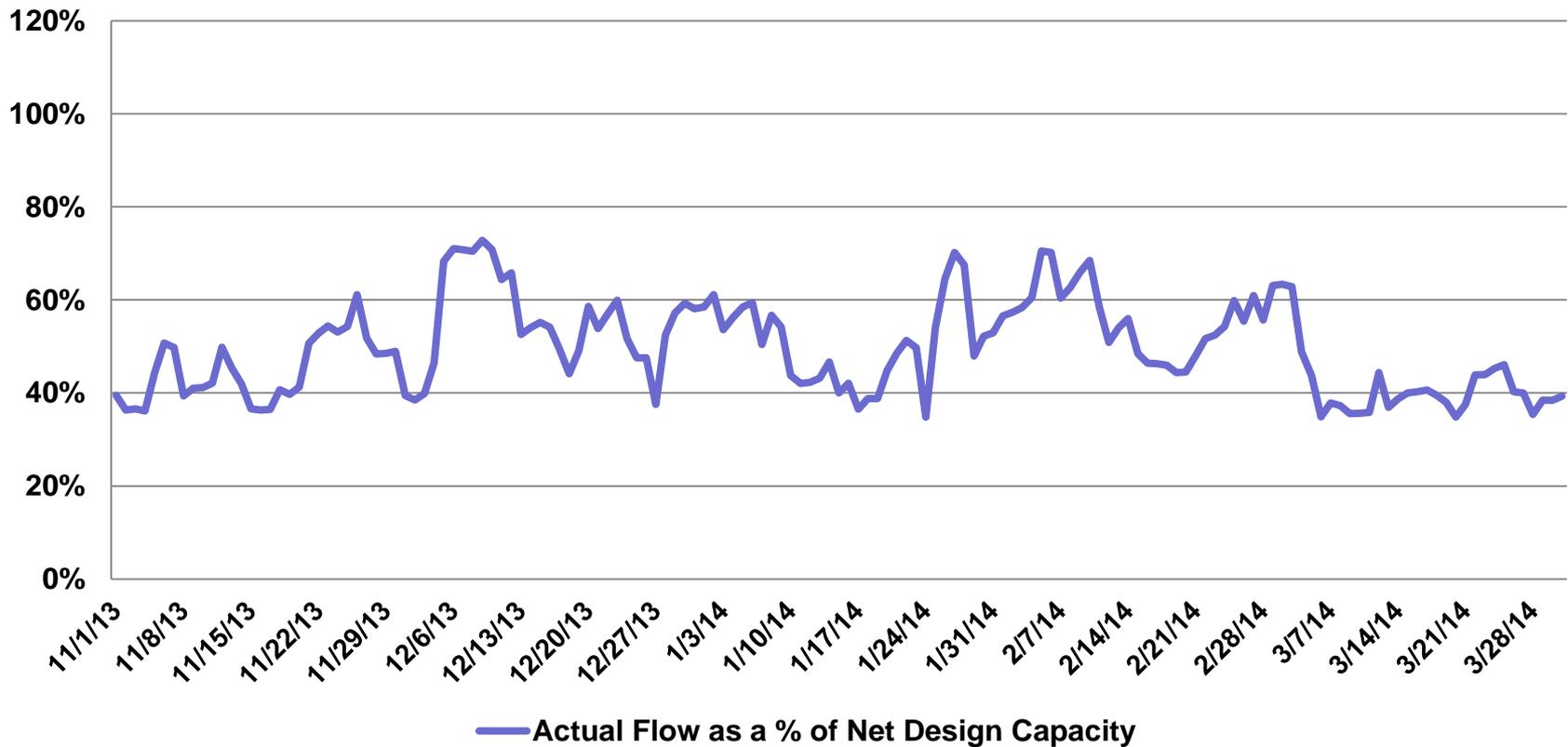
Northern Natural Gas Pipeline Demarc Capacity Utilization



Winter 2013-2014: Pipeline flows were often at capacity



Northern Natural Gas Pipeline Ventura Capacity Utilization



Market Outlook: Issues Affecting Future Gas Supply & Prices



Short-term Influences:

- U.S. natural gas storage refill and end of summer inventory
- Summer gas supply production
- Summer gas demand – electric generation, industrial, storage refill
- El Niño
- Daily call option pricing

Long-term influences:

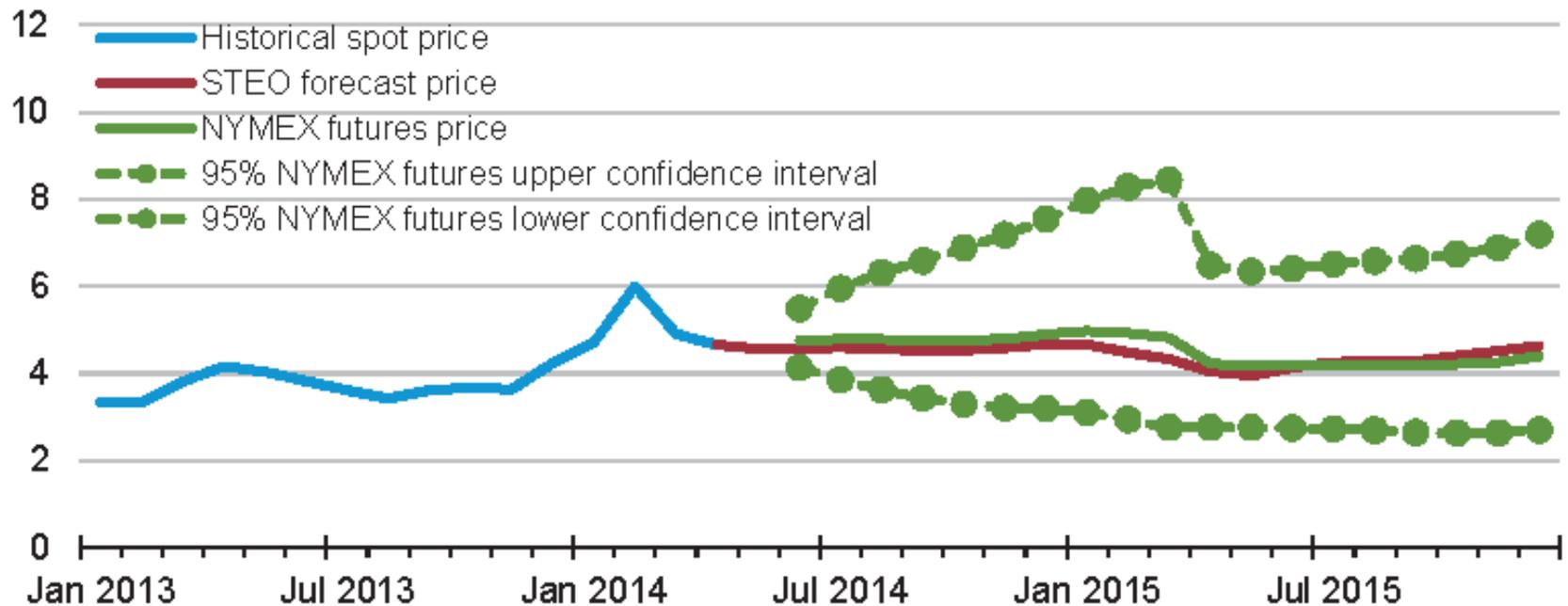
- LNG exports
- Exports to Mexico
- Increased demand: electric generation and industrial
- Gas production – liquid rich basins vs. dry gas production
- Fracking regulations
- Pipeline construction to move gas from production basins to market areas

Market Outlook: Gas Price Forecast



Henry Hub Natural Gas Price

dollars per million Btu



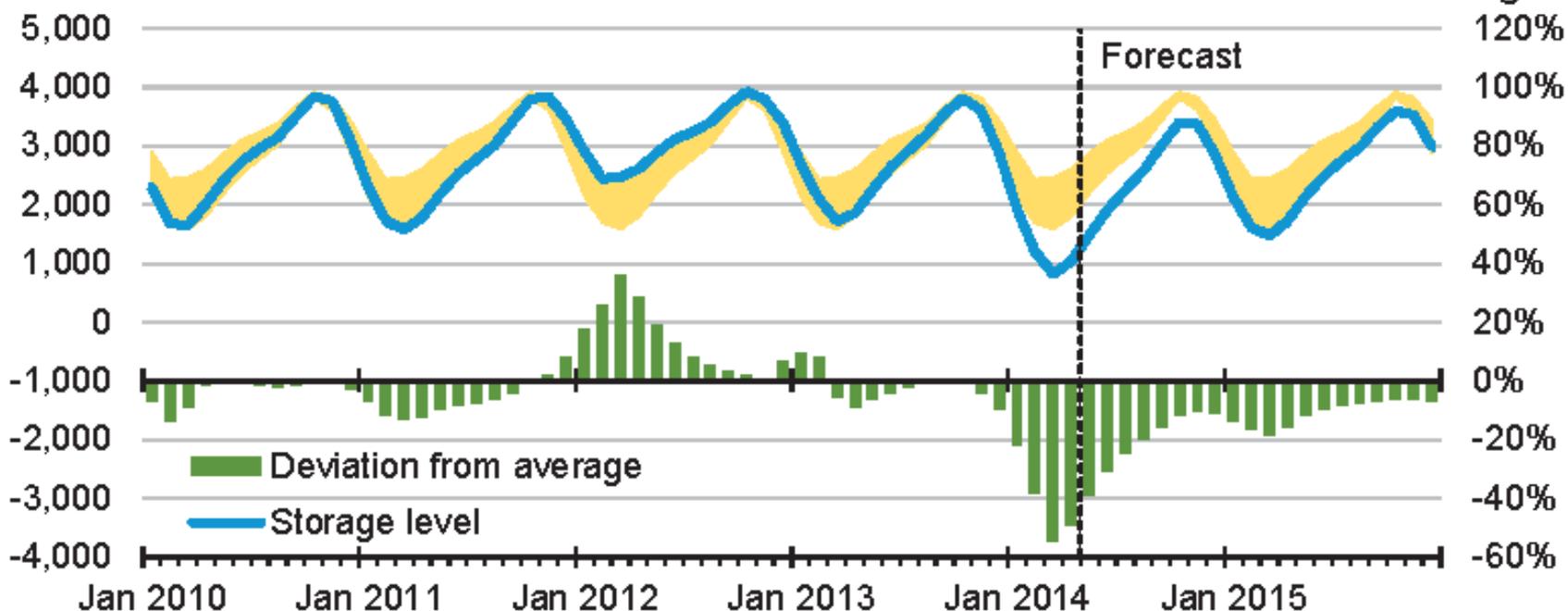
Note: Confidence interval derived from options market information for the 5 trading days ending May 1, 2014. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, May 2014.

Market Outlook: U.S. Storage

U.S. Working Natural Gas in Storage

billion cubic feet



deviation from average

Forecast

■ Deviation from average

— Storage level

Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2009 - Dec. 2013.

Source: Short-Term Energy Outlook, May 2014.

Market Outlook:

There will be enough gas to fill storage



- According to Bentek:
 - Supply will be up 3.5 Bcf/day in summer 2014 vs. summer 2013
 - Demand will be up 0.7 Bcf/day
 - This leaves 2.8 Bcf/day surplus for storage refill
- EIA's Short Term Energy Outlook states:
 - Weekly injections must be 20 Bcf/week (2.86 Bcf/day) greater this summer compared to the 5-year average injection rate in order to reach an end of summer inventory of 3.4 Tcf – this would be lower than last year's inventory but still a reasonable level for beginning of winter
- These 2 sources appear to agree storage will be adequate for beginning next winter

Market Outlook: What about daily pricing?



- Most LDCs would build a winter gas supply portfolio consisting of:
 - Base load gas at first of month (“FOM”) index pricing
 - Base load gas with FOM hedge pricing (fixed price, price collars, ceiling price)
 - Storage withdrawals at average summer injection price
 - Daily swing gas (daily call gas at daily price posting or FOM index)
 - Daily purchases at daily price posting
 - Peak shaving (LNG or propane-air)
- Daily price of gas is influenced by operational issues
 - Over the 10 winter seasons prior to winter 2013-14, CenterPoint’s swing gas at daily pricing was less expensive than had it purchased daily swing gas at FOM price
 - Unusual pipeline operational issues coupled with the 6th coldest winter in the past 119 years caused demand that resulted in very high daily prices last winter
- FOM daily calls are expensive
 - Recent quotes for next winter gas delivery indicate reservation fees would be 4 times greater than similar products for last winter
 - FOM daily call reservation fees could add 33¢/Dth to next winter’s overall gas cost

Market Outlook: Will El Niño return?

On May 8th, the National Weather Service, Climate Prediction Center issued its monthly El Niño Watch bulletin

- The chance that El Niño forms this summer is 65%
- El Niño prospects reach a peak probability of ~80% during the late fall/early winter of this year (*this also means a 20% chance that the El Niño prospects could fizzle*)
- The National Weather Service forecasters remain non-committal on the possible strength of El Niño preferring to watch the system for at least another month or more before trying to infer the intensity
- El Niño events are also associated with reduced frequency of Atlantic hurricanes, cooler summers across the nation, and warmer winter temperatures across the northern United States

Market Outlook:

Long-term factors that could affect price



U.S. gas demand:

- LNG exports could begin in the 2015 to 2018 time period
- Exports to Mexico could double by 2018
- Increased electric generation – new power plants & replacement of coal retirements could reach 5 Bcf/day by 2018
- Industrial demand from plant expansions and new projects could increase gas demand up to 4.9 Bcf/day by 2019

U.S. gas supply:

- Robust shale gas production could increase supply by 14.6 Bcf/day by 2018
- Liquids rich supply basins are less sensitive to gas prices due to liquids value
- Dry gas basins are very sensitive to price, generally needing prices above \$5 to encourage production
- Adverse fracking regulations could limit expected gas production
- More pipelines are needed to move gas from new supply basins to market

CenterPoint Energy
Always There