

1

**North America**

Fossil Fuels | Natural Gas

Regulators Reconsider Utility Hedging Policies Given Shifts In Natural Gas Flow

Utilities Prioritize Price Stability Over Cost Reduction In Fuel Procurement

December 21, 2015

Policy Brief

Author

Erin Carson
Chief Policy Strategist

Janis Kreilis
Analyst

Contact

(212) 537.4797
info@enerknol.com
www.enerknol.com

Key Takeaways:

- Florida's investor-owned utilities will continue to employ current natural gas hedging practices, which have resulted in approximately \$6B opportunity costs
- Evolving supply-demand dynamics of the natural gas market spur utility commissioners to reconsider hedging policy
- Ongoing state efforts to enhance hedging mechanisms reflect the need for long-term supply contract structures

Entities Mentioned:

- American Natural Gas Association
- Energy Information Administration
- Environmental Protection Agency
- Florida Public Service Commission
- Kentucky Public Service Commission
- Louisiana Public Service Commission
- Public Utility Commission of Oregon
- Washington Utilities and Transportation Commission

Related Research

[Utilities And Grid Operators Seek Clean Power Plan Compliance Despite Litigation](#)

[New Pipeline Expansions Target Emerging North American Demand Centers](#)

This report is for industry information only and we make no investment recommendations whatsoever with respect to any of the companies cited, mentioned, or discussed herein. Please refer to the end of this report for analyst certification[s] and other important disclosures.

2

3

1

DECEMBER 21, 2015

Insight for Industry – Florida Natural Gas Hedging Programs Prioritize Price Stability over Cost Savings

On December 3, 2015, the Florida Public Service Commission (PSC) voted to approve the continuation of the state's investor-owned utilities' (IOUs) natural gas financial hedging activities. The decision is a setback for consumer groups, which requested that hedging be abandoned in view of prolonged periods of losses. Florida's natural gas hedging programs have cost ratepayers more than \$6 billion since 2002, with projected losses of \$789 million in 2015 alone. Hedging allows utilities to manage the risk of volatility in natural gas prices by locking in prices ahead of time. It serves to ensure price stability and prevent the impacts of high price spikes for customers. While physical hedging involves long-term fixed price contracts with suppliers in order to fix the fuel price over a period, financial hedging involves swap contracts and options to fix the price at the time the hedge instrument is executed for delivery at a future date.

While utilities support hedging strategy as a prudent risk management practice, consumer groups argue that current practices which only aim to mitigate fuel price volatility impose an unreasonable burden for customers who bear the entire cost of hedging. Consumer groups say that Florida IOUs should reconsider their hedging programs in light of declining volatility, lower projected prices, and increased production and reserve levels.

The Florida PSC maintained that the main objective of hedging programs is to reduce the customer's exposure to fuel price volatility rather than reducing fuel costs. It held that the level of opportunity savings and costs – hedging-induced gains and losses – should not be a key factor in determining whether to continue hedging practices. The PSC Staff recommended continuing hedging programs, saying that despite losses, the hedging strategy works to minimize natural price volatility. The PSC plans to consider revisions next year with options to limit losses, such as placing a cap on hedging.

Among other states, Kentucky and Nevada have ended their hedging programs, citing declining price volatility, while Washington, Louisiana, and Oregon are planning revisions to enhance their utilities' risk management programs.

Florida PSC Approves Continuation of Natural Gas Hedging Programs Despite Prolonged Periods of Losses

Though hedging-induced gains and losses are expected to offset over time, hedging losses have continued to mount since 2002 when the Florida PSC first issued an order providing a framework to incorporate hedging into fuel procurement. For the period 2004 to 2008, the cumulative hedging costs/losses for the state's four IOUs were approximately \$121.7 million. For the period 2009 to 2014, the cumulative hedging costs/losses soared to approximately \$5.2 billion (Figure 1).

Florida's natural gas hedging programs have cost ratepayers more than \$6 billion since 2002, with projected losses of \$789 million in 2015 alone

While utilities support hedging strategy as a prudent risk management practice, consumer groups argue that current practices which only aim to mitigate fuel price volatility impose an unreasonable burden for customers

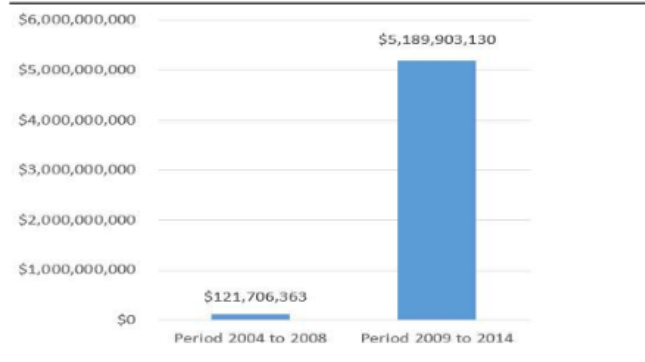
2

3

1

DECEMBER 21, 2015

Figure 1 - Total Hedging Losses of Florida IOUs



Source: Florida Public Service Commission

Following an analysis of utilities and consumer groups' positions in proceedings regarding fuel and purchased power adjustment and generating performance incentive factor clause (Docket No. 150001-EI), Florida PSC Staff found that continuing fuel price hedging activities serves consumer interest.

Groups representing a wide range of consumers – the Florida Office of Public Counsel (OPC), Florida Retail Federation, and Florida Industrial Power Users Group – argued that prolonged periods of losses justify discontinuation of natural gas hedging programs in the state. The OPC expressed support for programs that meet the objectives of lowering overall utility fuel costs and reducing volatility in consumer electric bills.

Florida Power & Light Company (FPL), Gulf Power Company (Gulf), and Tampa Electric Company (TECO) sought to continue hedging programs saying that market price risks and volatility continue to exist as gas producers and consumers adapt to regulatory and market price changes and uncertainty. Duke Energy Florida (DEF) expressed support for the strategy as a prudent risk management practice to address price volatility but said it was a policy decision for PSC to determine. Utilities also found that the PSC-approved hedging guidelines provide reasonable tradeoffs to mitigate volatility.

Significant fluctuations in natural gas and oil prices in 2000 and 2001 prompted the PSC to address issues regarding the utilities' management of fuel price risk as part of its 2001 fuel clause proceeding. In 2008, the PSC established guidelines for risk management plans clarifying the timing and content of regulatory filings for hedging activities, while allowing IOUs flexibility in creating and implementing programs, finding that these programs provide customer benefits by mitigating price volatility. The PSC noted that a hedging program's primary purpose is to reduce the impact of volatility in the fuel adjustment charges paid by an IOU's customers. The PSC also recognized the

Significant fluctuations in natural gas and oil prices in 2000 and 2001 prompted the Florida PSC to address issues regarding the management of fuel price risk as part of its 2001 fuel clause proceeding

2

3

1

DECEMBER 21, 2015

need for a balanced, systematic, and long-term view of hedging transactions for appropriate review of hedging programs.

The PSC recognized that hedging could result in significant lost opportunities for saving costs when fuel prices drop to levels lower than at the time of placing hedges. However, the Commission explained that lost opportunities are a reasonable trade-off to reduce exposure to cost increases that would result when prices ascend to higher levels. These programs should be non-speculative and designed to meet the objective of minimizing price volatility. The Commission directed staff to work with stakeholders on a collaborative process on considering changes to hedging programs next year for the benefit customers.

Florida Regulators Fear Gas Price Volatility because of Rising Demand in Electricity Generation and Exports

Despite the downward trend in natural gas prices over the last few years, the PSC staff found that price volatility remains high and unpredictable. Price volatility is interconnected to supply and demand in the natural gas market, which has substantially changed from 2002-2015. In addition, prices become more volatile when weather affects supply or demand, as evident from the January 2014 polar vortex, which had a significant impact on natural gas prices (Figure 2).

Florida PSC found that lost opportunities are a reasonable trade-off to reduce exposure to cost increases that would result when prices ascend to higher levels

Figure 2 - Drop in Natural Gas Prices Following Strong Production Growth



Source: EIA

Apart from federal and state regulations for hydraulic fracturing, natural gas production is influenced by increasing demand, particularly for electric generation. In Florida, natural gas represents a significant share in electricity generation. For 2016, DEF, FPL, TECO, and Gulf estimate 73 percent, 72 percent, 52 percent and 44 percent, respectively, of generation from natural gas. Demand will also be influenced by exports, scheduled to begin in 2015 year-end and several under-construction export terminals. In the absence of hedging practices, the PSC concludes that customers have significant exposure to price volatility.

2

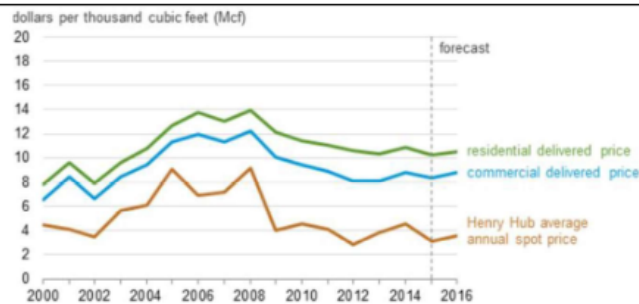
3

1

DECEMBER 21, 2015

Changes in natural gas spot and residential prices are closely linked over longer periods (Figure 3). According to the Energy Information Administration (EIA), considerable declines in wholesale spot prices since the end of 2014 have not translated directly into lower retail prices for consumers due to the hedging practice involved in utility regulation.

Figure 3 – Natural Gas Spot and Delivered Price (2000-2016)



Source: EIA

Local distribution companies (LDCs) or the utility companies that serve consumers employ several approaches to shield the company from price fluctuations in the spot market. For example, LDCs can purchase gas ahead of time for later delivery by using New York Mercantile Exchange (NYMEX) futures contracts that lock in a certain price for the utility. LDCs may also use a physical hedge by buying and storing natural gas several months ahead of the upcoming winter to ensure supply adequacy and purchasing additional natural gas as needed on the spot market during the winter heating season. Due to hedging, residential and commercial prices often reflect the cost of gas purchased several months ago. In addition, requirements by state regulators may cause a further lag in changes in the LDC's costs of purchasing gas.

Consumer Groups Seek to End Hedging Due to Substantial Opportunity Costs, Declining Volatility, and Cost-Free Alternatives

The Florida OPC underscored that the billions of dollars in costs incurred by customers greatly outweighs the perceived benefits from hedging. It found that natural gas hedging programs have lost approximately \$5.3 billion from 2002-2014, with additional losses projected for 2015 (Table 1).

The Florida OPC underscored that the billions of dollars in costs incurred by customers greatly outweighs the perceived benefits from hedging

Table 1 - Hedging-Induced Losses for Florida IOUs

Year	Duke	Gulf	TECO	FPL	Total
2002-2014	\$1,267,848,634	\$127,278,227	\$381,417,733	\$3,516,671,769	\$5,293,216,363
2015 (estimated)	\$215,000,000	\$44,000,000	\$40,000,000	\$490,000,000	\$789,000,000
Total	\$1,482,848,634	\$171,278,227	\$421,417,733	\$4,006,671,769	\$6,082,216,363

Source: Florida Public Service Commission

2

3

1

OPC also pointed to declining natural gas prices and price volatility drawing on the EIA's 2015 long term forecast of increased supply and lower natural gas prices compared to the 2011 forecast. Since 2011, known natural gas reserves have increased by nearly 31 trillion cubic feet, which is approximately 10 percent above the level in EIA's 2011 Annual Energy Outlook. Apart from prolonged periods of losses, the OPC explained that declining volatility, increased production and reserve levels, and forecasted lower prices justify reconsideration of hedging programs. Customers directly benefit from a decrease in price on the unhedged portion of natural gas. The OPC also suggested the annual fuel factor—which stabilizes price volatility—as a cost-free alternative to hedging. However, PSC staff found that the annual fuel factor does not limit the potential for fuel increases or decreases, whereas hedging can limit potential changes in costs and mitigate price and fuel factor volatility.

Illustrating the recognition for the natural gas price trend, the OPC noted that utility regulatory commissions of Nevada and Kentucky have terminated utility natural gas hedging programs. The Kentucky PSC ended utilities' hedging programs, finding that continued low and stable gas prices obviate the need for hedging and that it is no longer reasonable to pass hedging costs to customers, namely, because it has resulted in net costs rather than net savings. In March, the Kentucky PSC denied Duke Energy's request to continue its hedging program, stating that customer benefits in terms of reduced volatility is not significant enough to justify extension of the hedging program. Previously, the Kentucky PSC had denied requests of Columbia Gas of Kentucky and Atmos Energy Corporation to continue their gas cost hedging programs. In October 2014, Delta Natural Gas Company filed a letter informing the Kentucky PSC of its decision to discontinue its hedging program based on those denials. The Kentucky PSC 2001 order had allowed LDCs to consider limited hedging programs as a means to obtain low-cost gas supplies, minimize price volatility, and maintain supply reliability. In ending the practice, Kentucky PSC found that current conditions and the outlook for future natural gas supplies and prices are sufficiently different from those in 2001 and therefore dispel concerns regarding the potential adverse impact of price volatility on customer bills.

Potential Demand Growth in Power Sector and Export Market Spur Efforts to Develop Prudent Hedging Standards that Protect Customers

Despite hedging-induced losses, demand growth driven by increased consumption for natural gas-fired generation and export markets is prompting states to continue developing hedging programs. Several state utility regulators are exploring new approaches to create an effective framework for hedging practices.

Dockets to watch:

- In July, the Washington Utilities and Transportation Commission (UTC) released a study outlining an innovative approach to develop

The Kentucky PSC ended utilities' hedging programs, finding that continued low and stable gas prices obviate the need for hedging and that it is no longer reasonable to pass hedging costs to customers, as it has resulted in net costs rather than net savings

2

3

1

standard hedging practices for regulated natural gas LDCs, as part of an investigation of gas utility hedging practices that began in 2013. The report supports a more sophisticated approach with proper evaluation and a step-by-step process to adopt a new hedging program by 2018. A 2013 report by the UTC found that aggregate hedge losses from November 2002 through October 2012 were approximately \$1.15 billion, on a system basis, for the state's four LDCs – Puget Sound Energy, Cascade Natural Gas, Avista, and Northwest Natural Gas. The 2013 report identified issues with the LDCs' hedging practices, such as the absence of hedging tolerances, apparent lack of efforts to mitigating hedge losses, and the utilities' decisions to lock in a large percentage of projected loads through programmatic hedging. A UTC workshop, held in January 2014, determined the need for additional discussion on regulatory policies to provide an effective framework for hedging practices. The UTC is exploring the strategy in Docket UG-132019, engaging regulated utilities, industrial customers, and consumer advocates.

A 2013 report by the Washington UTC found that aggregate hedge losses from November 2002 through October 2012 were approximately \$1.15 billion, on a system basis, for the state's four LDCs

- In June, the Louisiana Public Service Commission (LPSC) issued a general order (R-32975) to develop a Long-Term Natural Gas Hedging Pilot Program. Under the long-term pilot program, the state electric IOUs would be required to consider a range of long-term gas procurement plans to secure long-term natural gas price stability. The program would allow LPSC and IOUs to assess the effectiveness of long-term procurement policy without over-committing customers to a specific course of action. LPSC expects a three-year pilot program to supply sufficient data for the assessment. Despite the low profile risk on the long-term forward curve, LPSC finds that IOUs and LDCs purchase much of their gas with short-term contracts, employing a potentially higher risk strategy than long-term, fixed-price procurement. The LPSC envisions increased demand for electricity generation and LNG export facilities currently under construction in southern Louisiana.
- In March, the Public Utility Commission of Oregon (PUCO) opened a docket (Docket No: UM 1720) to investigate the Northwest Natural Gas Company's long-term hedging policy in an attempt to explore the benefits associated with long-term hedging that can facilitate a stable and reliable natural gas supply.

Evolving Natural Gas Markets Could Motivate Utility Regulators to Reconsider Hedging Policy

Key considerations for state utility regulators seeking to reevaluate natural gas hedging practices pertain to opportunity costs incurred as part of fuel costs paid by customers; anticipated decline in volatility of natural gas prices to determine the need for hedging; and stability in market conditions with regard to supply-demand dynamics.

2

3

1

In its comments to the proposals of LPSC and PUCO, the American Natural Gas Association (ANGA) expressed support for long-term programs emphasizing the need for contracts that are structured to facilitate a fair, flexible, timely, and transparent process for utilities to enter into long-term arrangements. ANGA commended LPSC for recognizing the benefit of allowing the marketplace to propose price and contract structures. Program characteristics should incentivize producers and marketers to deliver contract structures that meet the objective of price stability and predictability, delivering benefits to consumers. Instead of setting prescriptive standards, ANGA recommends guidelines that allow utilities to establish flexible policies that can be adjusted to meet changing market conditions and accommodate basic structures, such as contractual arrangements for fixed or formula-priced supply contracts between the utility and a fuel provider or reserves investment arrangements that allow utilities to invest in reserves for future production at a predictable cost. Long-term contracts should aim to increase diversity in the portfolio strategy to deliver price stability and predictability rather than outperform the spot market on any one day year.

Despite the trend towards lower prices and abundant supply forecast, the natural gas market remains dynamic. While natural gas prices are projected to stay low, lower prices will increase demand for electricity generation, petrochemical production, and LNG exports, placing some upward pressure on prices. The Environmental Protection Agency's (EPA) regulations on carbon emissions could result in retirement of older coal-fired electric generation facilities, potentially requiring combined cycle natural gas generation to fill the generation gap. Cheniere Energy's Sabine Pass facility, with a total liquefaction capacity of three billion cubic feet of natural gas per day (bcf/d), is expected to be the first to liquefy natural gas produced in the Lower 48 states for export and is scheduled to come online in late 2015. Export facilities will greatly increase natural gas demand when they come on line. Demand is also influenced by weather and pipeline constraints. For these reasons, hedging could reach a point where the current costs to consumers turn into substantial benefits.

While natural gas prices are projected to stay low, lower prices will increase demand for electricity generation, petrochemical production, and LNG exports, placing some upward pressure on prices

2

3

1

Disclosures Section

RESEARCH RISKS

Regulatory and Legislative agendas are subject to change.

AUTHOR CERTIFICATION

By issuing this research report, Erin Carson as author of this research report, certifies that the recommendations and opinions expressed accurately reflect her personal views discussed herein and no part of the author's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

IMPORTANT DISCLOSURES

This report is for industry information only and we make no investment recommendations whatsoever with respect to any of the companies cited, mentioned, or discussed herein. EnerKnol Inc. is not a broker-dealer or registered investment advisor.

Information contained herein has been derived from sources believed to be reliable but is not guaranteed as to accuracy and does not purport to be a complete analysis of the company, industry or security involved in this report. This report is not to be construed as an offer to sell or a solicitation of an offer to buy any security or to engage in or refrain from engaging in any transaction. Opinions expressed are subject to change without notice. The information herein is for persons residing in the United States only and is not intended for any person in any other jurisdiction.

This report has been prepared for the general use of the wholesale clients of EnerKnol Inc. and must not be copied, either in whole or in part, or distributed to any other person. If you are not the intended recipient you must not use or disclose the information in this report in any way. If you received it in error, please tell us immediately by return e-mail to info@enerknol.com and delete the document. We do not guarantee the integrity of any e-mails or attached files and are not responsible for any changes made to them by any other person. In preparing this report, we did not take into account your investment objectives, financial situation or particular needs. Before making an investment decision on the basis of this (or any) report, you need to consider, with or without the assistance of an adviser, whether the advice is appropriate in light of your particular investment needs, objectives and financial circumstances. We accept no obligation to correct or update the information or opinions in it. No member of EnerKnol Inc. accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this report and/or further communication in relation to this report. For additional information, please visit enerknol.com or contact management team at (212) 537-4797.

Copyright EnerKnol Inc. All rights reserved. No part of this report may be redistributed or copied in any form without the prior written consent of EnerKnol Inc.

2