

#### DUKE ENERGY CORPORATION

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Kristen Cocanougher Sr. Paralegal E-mail: Kristen cocanougher@duke-energy com

## VIA OVERNIGHT DELIVERY

May 16, 2012

Jeff Derouen Executive Director Kentucky Public Service Commission 211 Sower Boulevard Frankfort, Kentucky 40602-0615 RECEIVED

MAY 1 7 2012

PUBLIC SERVICE COMMISSION

## Re: Duke Energy Kentucky, Inc.'s 2012 Natural Gas Hedging Plan

Dear Mr. Derouen:

Enclosed please find an original and twelve copies of *Duke Energy Kentucky, Inc.'s* Application for Approval of New Hedging Plan and the Petition of Duke Energy Kentucky, Inc. for Confidential Treatment Contained in the Natural Gas Hedging Plan. Also enclosed is one copy of the Confidential Material to be Filed Under Seal as requested in the Petition for Confidential Treatment.

Please date-stamp the extra two copies of the filing and Petition and return to me in the enclosed envelope.

Sincerely,

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Kristen Cocanougher

cc: Larry Cook (w/enclosures)

## **COMMONWEALTH OF KENTUCKY**

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# BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION RECEIVED

In the Matter of the Application of Duke Energy Kentucky, Inc. to Implement a Hedging Program to Mitigate Price Volatility in the Procurement of Natural Gas

) ) Case No. 2012-\_\_\_\_\_ ) MAY 17 2012

PUBLIC SERVICE COMMISSION

## PETITION OF DUKE ENERGY KENTUCKY, INC. FOR CONFIDENTIAL TREATMENT OF INFORMATION CONTAINED IN ITS NATURAL GAS HEDGING PLAN

Duke Energy Kentucky, Inc. ("Duke Energy Kentucky"), pursuant to 807 KAR 5:001, Section 7, respectfully requests the Commission to classify and protect as confidential certain information that is contained in its Natural Gas Hedging Plan in this proceeding, which is being filed contemporaneously with this petition. In support thereof, Duke Energy Kentucky states:

1. Duke Energy Kentucky has filed today documents containing sensitive and confidential information relating to the volumes of gas that Duke Energy Kentucky purchased through the use of hedging instruments for its hedging plan and information regarding a new three year hedging plan. Disclosure of this information would damage Duke Energy Kentucky by alerting suppliers as to how much gas Duke Energy Kentucky intends to purchase through hedging instruments at any particular point in time, which could allow suppliers to raise the cost of their hedging instruments to Duke Energy Kentucky, thus making it more costly to Duke Energy Kentucky to acquire hedging instruments for future gas supply. As required by 807 KAR 5:001, Section 7(2)(b), Duke

Energy Kentucky is providing one copy of the hedging program volume information under seal.

2. The Kentucky Open Records Act exempts from disclosure certain commercial information. KRS 61.878 (1)(c). To qualify for this exemption and, therefore, maintain the confidentiality of the information, a party must establish that disclosure of the commercial information would permit an unfair advantage to competitors of that party.

3. This information was, and remains, integral to Duke Energy Kentucky's effective execution of business decisions. And such information is generally regarded as confidential or proprietary. Indeed, as the Kentucky Supreme Court has found, "information concerning the inner workings of a corporation is generally accepted as confidential or proprietary." Hoy v. Kentucky Industrial Revitalization Authority, Ky., 904 S.W.2d 766, 768.

4. The hedging volume information described above contains sensitive commercial information, the disclosure of which would injure Duke Energy Kentucky for the reasons stated above. Duke Energy Kentucky's purchases of hedging instruments are confidential. Public release of this information would allow other suppliers to have access to this information and could enable such suppliers to charge higher prices to Duke Energy Kentucky for hedging instruments. The Commission previously granted confidential treatment to similar information in Case No. 2011-00091 on March 31, 2011.

5. The information for which Duke Energy Kentucky is seeking confidential treatment is not known outside of Duke Energy Kentucky, and it is not disseminated

within Duke Energy Kentucky except to those employees with a legitimate business need to know and act upon the information.

6. The public interest will be served by granting this Petition, in that Duke Energy Kentucky's ability to obtain low cost gas supplies will be fostered and the cost of gas to Duke Energy Kentucky's customers will thereby be minimized.

WHEREFORE, Duke Energy Kentucky respectfully requests that the Commission classify and protect as confidential the specific information described herein.

Respectfully submitted,

DUKE ENERGY KENTUCKY, INC.

Rocco O. D'Ascenzo (92796) Associate General Counsel Amy B. Spiller (85309) Deputy General Counsel Duke Energy Business Services, LLC 139 East Fourth Street, 1303 Main Cincinnati, Ohio 45201-0960 Phone: (513) 287-4320 Fax: (513) 287-4385 e-mail: rocco.d'ascenzo@duke-energy.com

# CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing filing was served on the following via

overnight mail, postage prepaid, this \_\_\_\_\_ day of May 2012:

Hon. Larry Cook Assistant Attorney General Kentucky Office of the Attorney General Capital Center Drive, Suite 200 Frankfort, Kentucky 40601-8204

Rocco O. D'Ascenzo

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RECEIVED

#### COMMONWEALTH OF KENTUCKY

PUBLIC SERVICE COMMISSION

MAY 1 7 2012

## BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of the:

APPLICATION OF DUKE ENERGY)KENTUCKY, INC. TO IMPLEMENT)A HEDGING PROGRAM TO MITIGATE)PRICE VOLATILITY IN THE)PROCUREMENT OF NATURAL GAS)

CASE NO. 2012-\_\_\_\_

# DUKE ENERGY KENTUCKY, INC.'S APPLICATION FOR APPROVAL OF NEW HEDGING PLAN

Pursuant to 807 KAR 5:001, Section 8 and consistent with the Commission's Order dated August 8, 2011 in Case No. 2011-00091, Duke Energy Kentucky, Inc (Duke Energy Kentucky) respectfully states as follows:

1. Duke Energy Kentucky is a Kentucky corporation and a public utility as defined in Section 278.010 of the Kentucky Revised Statutes (KRS) and is subject to the Commission's jurisdiction. Duke Energy Kentucky is engaged in the business of furnishing gas and electric services to various municipalities and unincorporated areas in Boone, Campbell, Gallatin, Grant, Kenton and Pendleton Counties in the Commonwealth of Kentucky.

2. Duke Energy Kentucky's business address is 139 East Fourth Street, Cincinnati,

Ohio 45202. The Company's local office in Kentucky is Duke Energy Envision Center,

4580 Olympic Boulevard, Erlanger, Kentucky 41018.

3. Duke Energy Kentucky's articles of incorporation are on file with the 441769

Commission in Case No. 2009-00202 and are incorporated by reference herein pursuant to 807 KAR 5:001, Section 8(3).

4. In an Order dated August 8, 2011 in Case No. 2011-00091, the Commission approved Duke Energy Kentucky's hedging program and required, among other things, periodic reports on the results of the hedging program, and for Duke Energy Kentucky to file for further extension of its natural gas hedging plan no later than June 1, 2012. Duke Energy Kentucky filed its annual report on May 15, 2012. Duke Energy Kentucky is filing its request to continue its hedging plan at this time.

5. Paragraph 2 of the August 8, 2011 Order approved Duke Energy Kentucky's natural gas hedging plan through September 30, 2012, and permitted Duke Energy Kentucky to enter into contracts for gas purchases through April 2015. Pursuant to such order, Duke Energy Kentucky respectfully requests approval to institute a new three year hedging plan as a regular part of its gas supply planning. A copy of Duke Energy Kentucky's proposed new hedging plan, in redacted form, is at Attachment 1.

6. Duke Energy Kentucky proposes that the Commission approve the new hedging plan to cover hedging activity through March 31, 2015 and allow for hedging of natural gas deliveries through October 31, 2017. The resulting parameters for hedging purchases are similar to the parameters approved by the Commission for Duke Energy Kentucky's previous hedging programs. The new hedging plan utilizes the same types of hedging instruments used for Duke Energy Kentucky's previous hedging programs and sets a limit so that there is not an over reliance on a single type. The new plan also incorporates the same procedural safeguards, consisting of periodic management meetings, written

minutes and annual reports to the Commission on the results of the hedging plan. The plan continues to provide for hedging of a portion of Duke Energy Kentucky's summer purchases and to allow Duke Energy Kentucky to hedge a portion of its gas supply for up to 31 months following the time period covered by the hedging plan. This will provide Duke Energy Kentucky with additional flexibility to stagger its hedging purchases, thus increasing the diversity of cyclical pricing influences. This should better enable Duke Energy Kentucky to mitigate price volatility for its customers.

7. Duke Energy Kentucky's experience with its previous hedging programs demonstrates that hedging has accomplished the goals that Duke Energy Kentucky projected at the outset of its hedging program, that is, hedging would not always result in the lowest gas costs, but hedging does serve a valuable purpose in protecting customers against extreme high prices and hedging also mitigates price volatility. The new hedging plan incorporates the procedural safeguards, developed in response to the Commission's Orders in Duke Energy Kentucky's previous hedging proceedings, to ensure that hedging decisions are made in a prudent manner. Finally, the parameters of the new hedging plan, the types of hedging instruments provided therein and the annual reports provided by Duke Energy Kentucky give the Commission oversight of the new hedging plan. Duke Energy Kentucky therefore requests that the Commission approve its new hedging plan so that Duke Energy Kentucky can continue to provide for its customers the benefits resulting from hedging of a portion of gas supply purchases, as described above.

WHEREFORE, Duke Energy Kentucky respectfully requests that the Commission

approve Duke Energy Kentucky's application for a new hedging plan as described herein and in the accompanying Attachments.

> Respectfully submitted, Duke Energy Kentucky, Inc.

Rocco O. D'Ascenzo Associate General Counsel 139 East Fourth Street, 1303 Main Cincinnati, Ohio 45201-0960 Phone: (513) 287-4320 Fax: (513) 287-4385 e-mail: rocco.d'ascenzo@duke-energy.com

# CERTIFICATE OF SERVICE

I certify that a copy of the foregoing pleading was served of the parties listed

below by regular United States mail, postage prepaid, this \_\_\_\_\_ day of March, 2012.

Rocco O. D'Ascenzo

Hon. Larry Cook Assistant Attorney General Kentucky Office of the Attorney General Capital Center Drive, Suite 200 Frankfort, Kentucky 40601-8204

Duke Energy Kentucky Inc. 2012 Natural Gas Hedging Plan Attachment I

# DUKE ENERGY KENTUCKY, INC

# NATURAL GAS HEDGING PLAN

May 2012

## 1. Introduction

On July 16, 2001, the Kentucky Public Service Commission approved Duke Energy Kentucky, Inc's ("Duke Energy Kentucky") Pilot Gas Hedging Program. Since that time, Duke Energy Kentucky has sought, and was granted, approval for similar hedging programs in 2002, 2003, 2005, 2008 and 2011 with the most recent program covering hedging activity through September 30, 2012. As documented in the reports of the actual results, filed in May of each year, the hedging strategy reduced volatility and protected customers against price spikes. Since the hedging plans have achieved their goal of reducing the volatility in purchased gas costs, hedging natural gas prices should become a standard part of Duke Energy Kentucky's gas supply portfolio.

In Case No. 2003-00151, Duke Energy Kentucky proposed that a similar plan to what was adopted for the 2001-2002 and 2002-2003 heating seasons be approved on a continuing basis, with the inclusion of hedging for summer months as well as winter. This was later revised to be a three-year plan, ended March of 2006. However, in the Order dated June 19, 2003, the Commission ordered Duke Energy Kentucky to file any continued hedging plan by May 15, 2005. In Case No. 2005-00191, the commission approved Duke Energy Kentucky's Hedging Plan ("HP-2005") for both winter and summer seasons through March 31, 2008 (three years). Although this plan covered hedging activity through March of 2008, the months for which natural gas was purchased extended through October 31, 2010. In Case No. 2008-00175, the commission approved Duke Energy Kentucky's Hedging Plan ("HP-2008") for both winter and summer seasons through March 31, 2011 (three years). Although this plan covered hedging activity through March of 2011, the months for which natural gas was purchased extended through March of 2011, the months for which natural gas was purchased extended through March of 2011, the months for which natural gas was purchased extended through March of 2013, 2013.

In Case No. 2011-00091, the commission approved the Hedging Plan ("HP-2011") for only a single year to allow for more time to determine whether or not hedging should continue in an era of low and relatively stable prices. Duke Energy Kentucky believes that hedging is still an appropriate tool for purchasing natural gas even though natural gas prices are at a 10 year low. In addition, supply quantities are being reported at historically high levels, which may continue to keep prices at low levels for some period. Duke Energy Kentucky strongly believes that now is truly the best time to have a hedging program. Because of the unpredictability of future pricing, it is important to state that the purpose of the hedging program is to decrease the impact of price volatility on customers rather than attempt to "beat the market" or guarantee the lowest possible cost.

#### 2. Justification for Continuation of Hedging Plan

The NYMEX futures price represents the market opinion as to forecasts of natural gas prices. Therefore, when a company locks in a hedging contract based on the NYMEX futures price, it is locking in a price based the market's estimate of that future price at that time. If the estimate turns out to be accurate and there were no transaction costs, then there is no difference between the previously hedged price and the ultimate market price. However, usually unforeseen circumstances, such as the recent record setting warm winter or major hurricane damage to supply areas, causes daily and monthly market prices to be higher or lower than the previously hedged price. Therefore, while there is no actual "cost" of Duke Energy Kentucky's hedging plan, the actual price paid for the natural gas may be higher or lower than the market priced supply that would otherwise have been purchased.

Similarly, base supply that is purchased for the month at a monthly indexed price can turn out to be higher or lower than swing supply purchased at a daily index. While after the fact, it's possible to determine whether a hedged, monthly or daily price resulted in the lowest cost, it's not possible to determine this ahead of time. Therefore, Duke Energy Kentucky believes in a balanced portfolio approach for purchasing natural gas. The table below shows the total annual percentage of supply purchased using each type of pricing and the average annual cost since 2004.

	Hedging		Mo	nthl	ly Index			Daily Index				W	eight	ed	
	%		\$/Dth	%	)		\$/Dth		%		\$/Dth	L	A	verag §/Dth	ge 1
2004															
2005															
2006															
2007															
2008															
2009															
2010															
2011															

While it's possible to look back after the fact and determine which option provided the lowest price, this determination would not have been possible at the time the purchase decisions were made. In some years the lowest cost would have been achieved by hedging 100% of the load, while in others purchasing all gas in the daily or monthly market would provide the lowest cost. By utilizing all three options in purchasing natural gas, Duke Energy Kentucky realizes a weighted average price that is neither the highest nor the lowest of the available options, but has much less volatility. The table below shows the standard deviation of the average monthly cost for each of the three pricing options as well as for the weighted average of all three from January 2004 through December 2011.

	Hedging	Monthly	Daily	Weighted Avg.
Standard Deviation				

As may seem intuitively obvious, daily price are more volatile than monthly, which are more volatile than hedging. By including hedging in the portfolio of pricing options, Duke Energy Kentucky can effectively reduce the volatility of market prices, which is the primary goal of the hedging plan.

Further, natural gas prices are currently as low as they've been in over 10 years. Therefore, further decreases in the market price of natural gas are less likely than increases, since there is a real limit to how much lower prices can fall. No supplier will give gas away for free or pay customers to take it. However, as was experienced during the first decade of the new millennium, there is much more room for prices to go higher. Therefore, a period of historic low prices may be the best time to lock in hedged supply.

Comparing current NYMEX prices with forecasts from PIRA and EIA give further support to continuing the hedging program. Based on PIRA's forecast published on April 25, 2012, the average Henry Hub price for June 2012 through December 2013 was \$3.36 per dth. EIA's forecast, published on April 10, 2012 for the same time period was \$3.12 per dth. The NYMEX price for the same time period on April 27, 2012 was \$3.02 per dth, slightly lower than the forecasts of both PIRA and EIA (see chart below). This shows that although prices are at historic low levels, and relatively stable, there are still significant differences in price forecasts from different sources.



## 3. Proposed Plan (HP-2012)

Similar to what was approved by the Commission in previous cases, Duke Energy Kentucky is seeking to institute another natural gas hedging plan, and re-establish a three year term ("HP-2012"), to mitigate market volatility. The following Hedging Plan, HP-2012 is similar to the previous plan and would cover hedging activity through March of 2015 which would allow purchases for gas delivered through October 31, 2017.

Under HP-2012, Duke Energy Kentucky will hedge between 36% and 36% of its estimated total winter system supply, assuming normal weather and 36% to 36% of its summer system supply, including purchases to refill storage. As in previous years, hedging will be accomplished through the use of fixed price contracts, price caps, or nocost collars. The Hedging Plan specifies a range for the volumes of gas that Duke Energy Kentucky will acquire each month, up to 36 months into the future. The Hedging Plan strikes a reasonable balance between: (1) providing the Commission with the specific parameters of gas volumes for which Duke Energy Kentucky will receive cost recovery through the GCA; and (2) leaving Duke Energy Kentucky with adequate management discretion to time the purchases at projected optimal points within the framework preapproved by the Commission.

The purpose of the hedging plan is to decrease volatility in gas costs rather than to "beat the market" or guarantee the lowest possible cost. Duke Energy Kentucky will target a reduction in the standard deviation of the monthly average commodity cost of gas of at least . when compared to what the standard deviation would have been absent the hedging plan.

Duke Energy Kentucky will make its hedging decisions based on its analysis of gas prices. Duke Energy Kentucky will continue to monitor gas prices on a daily basis, by studying NYMEX futures prices versus historic prices and expected future prices. Duke Energy Kentucky determines expected future gas prices based on a thorough review of various industry publications such as Gas Daily, PIRA Energy Group (PIRA) North American Gas Forecast Monthly, and the Energy Information Administration (EIA) Short-Term Energy Outlook.

During May 2008, Duke Energy Kentucky entered into an agreement with Tenaska Gas Storage, LLC (Tenaska) for a storage-like service. Tenaska provided Duke Energy Kentucky **Definition** Dth's during the deal's term of November 1, 2008 through March 31, 2009. Duke Energy Kentucky was required to take all **Definition** Dth's. The maximum daily quantity to Duke Energy Kentucky was limited to **Definition** Dth's/day. Duke Energy Kentucky was responsible to pay Tenaska a monthly reservation charge during the effective period as well as a commodity price based on a Commodity Charge

Index agreed to by Duke Energy Kentucky. Duke Energy Kentucky has entered into comparable agreements with Tenaska since the initial agreement, with the most recent terminating March 31, 2012. Duke Energy Kentucky entered into a similar deal with National Energy & Trade for the 12 months ending March 31, 2013. Duke Energy Kentucky will continue to evaluate potential increases to available storage or the continuation of the storage-like supply services at similar volumes.

### 4. Amount of Duke Energy Kentucky's Gas Supply Subject to the Hedging Plan

Duke Energy Kentucky will hedge between  $\mathbf{M}$ % and  $\mathbf{M}$ % of its estimated total system supply for the winter season, assuming normal weather. This range could change based on the level of interstate pipeline storage contracts or supply contracts which mimic storage service that Duke Energy Kentucky maintains in the future. Combined with estimated storage withdrawals and storage-like service, which currently provides approximately  $\mathbf{M}$ % of a normal winter's system supply, the total percentage of system supply that could be insulated from winter season market volatility would be  $\mathbf{M}$ % -  $\mathbf{M}$ % (See Attachment A). The total percent of winter gas supply at known prices, both hedged and storage, will be limited to a maximum of  $\mathbf{M}$ %. Duke Energy Kentucky will hedge between  $\mathbf{M}$ % and  $\mathbf{M}$ % of its total system supply for the summer season, including purchases to refill storage.

#### 5. Schedule for Purchase of Hedging Instruments

Duke Energy Kentucky will use a seasonal schedule for obtaining price hedges for its system supply (please see charts below). These schedules reflect the continuation of hedging purchases which were made in accordance with previous hedging plans. Target levels of hedging will be accomplished by October 31<sup>st</sup> for winter system supply and by March 31<sup>st</sup> for summer system supply. The pattern established by these schedules will continue until cancelled or revised by the company. By including minimum quantities to be hedged, Duke Energy Kentucky will gain the advantages of a mechanistic feature for part of its hedging program, to spread the hedging purchases out over a longer period of time, while preserving management discretion as to the timing of gas supply purchases. No hedging will take place for delivery months further than 36 months from the date of the hedging transaction (strike date).

System Supply Hedged for the Winter Season

October X	Nov X – Mar X+1	Nov X+1 – Mar X+2	Nov X+2 – Mar X+3		
Minimum					
Maximum					

#### System Supply Hedged for the Summer Season

Γ	March X	Apr X –	Oct X	Apr X+1	- Oct X+1	Apr X+2 – Oct X+2		
ſ	Minimum							
Γ	Maximum							

### 6. Types of Hedging Products

Duke Energy Kentucky's hedging methodology uses a combination of fixed price contracts with cost-averaging, fixed price contracts without cost averaging, price caps and no-cost collars. Duke Energy Kentucky will not purchase futures contracts on the NYMEX or any other financial instruments to effectuate its hedging strategy. Duke Energy Kentucky will utilize the following hedging products to price gas supplies at a fixed, capped or collared price. Duke Energy Kentucky will not hedge more than  $\blacksquare$ % of its estimated winter season system supply, or  $\blacksquare$ % of its summer system supply using a single type of hedging product.

#### A. Fixed Price Contracts

Fixed price contracts are the simplest form of hedging instruments. Perhaps the most widely known fixed price contract for gas purchases is a contract to purchase gas from a supplier at a fixed price, based on the NYMEX. Duke Energy Kentucky will not actually purchase futures contracts on the NYMEX, but rather will enter into a contract with a supplier to obtain physical delivery of gas based on NYMEX prices at the time the hedging agreement is arranged.

Duke Energy Kentucky will take actual physical delivery of the gas into an interstate pipeline in which Duke Energy Kentucky holds Firm Transportation capacity, or will take delivery at Duke Energy Kentucky's city gate. NYMEX prices are based on delivery at the Henry Hub in southern Louisiana. The difference in price between the Henry Hub and the interstate pipeline receipt point at which the supplier can deliver the gas into the interstate pipeline (referred to as the "basis") will either be locked-in or will remain open at the discretion of Duke Energy Kentucky.

One set of fixed price hedging products Duke Energy Kentucky utilizes sets the price on an average NYMEX strip price over a period of time. A strip simply means the purchase of a specified volume of gas for a specified number of months (*i.e.*, November through March). Duke Energy Kentucky may utilize cost-averaging products that price the gas supply for the upcoming winter season at a price set by averaging the actual NYMEX daily closing price for a strip from a start date through the last day that the strip trades on NYMEX or any other mutually agreed time period. Each day during this period, a portion of the price will be established by fixing the price of the proportionate volume for each corresponding month at the NYMEX daily close.

### B. Price Caps

A price cap is a form of option contract that establishes a maximum price for gas deliveries during a specified month. Suppliers charge Duke Energy Kentucky for this option, based on the NYMEX price in effect at the time the option is purchased for the month that will be subject to the price cap.

Duke Energy Kentucky and the supplier will agree to whether the cost must be paid when the price cap is purchased or when the gas is delivered. Other than a slight difference due to the time value of money, the end result is the same. The practical result that occurs when price caps are utilized is that, if the market price at the time of delivery is lower than the price cap, then Duke Energy Kentucky pays the market price plus the cost of the price cap. On the other hand, if the market price is higher than the price cap at the time of delivery, then Duke Energy Kentucky pays the cap price plus the cost of the price cap.

#### C. No-Cost Collars

Collars are a combination of a price cap (ceiling) and a lower price limit (floor). If the cost of the ceiling is equal to the value of the floor, then there is no charge for the collar (no-cost collar). At the time of delivery, the supplier will charge the market price unless it is outside the range set by the collar. The range for a no-cost collar is established by Duke Energy Kentucky first specifying either a floor or a ceiling price, and then the supplier calculates the other bound for the collar. The supplier also adds in the basis for the interstate pipeline receipt point specified by Duke Energy Kentucky. In a no-cost collar, the ceiling of the range is usually set at a greater distance from the current NYMEX price than the floor. After the supplier determines the remaining bound

for the collar, Duke Energy Kentucky decides whether to agree to price the gas subject to the no-cost collar. Duke Energy Kentucky will determine prices from at least two suppliers to verify that the offered price is consistent with the market.

#### 7. Price Ranges for Purchases

#### A. Fixed Price Contracts

To the extent that Duke Energy Kentucky enters into any fixed price contracts with cost-averaging, Duke Energy Kentucky will enter into such contracts at the NYMEX closing price during the specified period. To the extent that Duke Energy Kentucky enters into any fixed price contracts without cost averaging, Duke Energy Kentucky will enter into such contracts between the highest and lowest price that NYMEX trades on the day that Duke Energy Kentucky and the supplier agree to the fixed price (strike date).

#### B. Price Caps

To the extent that Duke Energy Kentucky enters into any price cap contracts during any month, Duke Energy Kentucky will enter into such contracts with a ceiling (cap) price not to exceed **\$**\_\_\_\_\_/dth over the NYMEX open price for the respective months on the day that Duke Energy Kentucky and the supplier agree to the cap (strike date).

#### C. No-Cost Collars

To the extent that Duke Energy Kentucky enters into any collar contracts during any month, Duke Energy Kentucky will enter into such contracts with a ceiling (cap) price not to exceed **\$**\_\_\_\_\_/dth over the NYMEX open price for the respective months on the day that Duke Energy Kentucky and the supplier agree to the collar (strike date).

#### 8. Reduction in Volatility

The purpose of the hedging program is to decrease volatility rather than to "beat the market" or guarantee the lowest possible cost. The hedging program will most likely increase costs during seasons when market prices are relatively low and decrease costs during seasons when market prices are high. Based on a more statistical definition of volatility, the goal of the hedging program is to reduce the standard deviation of the average commodity cost of gas by at least 2%. Attachment B shows an example of the reduction in volatility during the 12 months ended March 31, 2011.

#### 9. Conclusion

HP-2012 will allow Duke Energy Kentucky to hedge up to  $\mathbf{M}$ % of its system supply in the winter and  $\mathbf{M}$ % of its system supply in the summer, including storage injections. By allowing hedging activity as early as 36 months prior to the month of delivery, the plan can further stabilize prices by taking advantage of favorable market conditions for longer periods of time. In addition, the minimum hedged percentages will assure that hedging transactions will take place gradually over the three years prior to the delivery season, without resorting to a strict mechanistic approach.

Including current projected storage withdrawals, which are fixed at summer prices, the quantity of winter supply at known prices represents  $\blacksquare - \blacksquare\%$  of Duke Energy Kentucky total winter supply (assuming normal weather). The total percent of winter gas supply at known prices, both hedged and storage, will be limited to a maximum of  $\blacksquare\%$ . Consequently, Duke Energy Kentucky will be able to obtain a substantial volume of its gas supply at fixed prices. Duke Energy Kentucky will

purchase the majority of its remaining gas supply requirements at either the *Inside FERC First of Month Index* or the *Gas Daily Midpoint*, assuming these indices continue to be published. Attachment A depicts how the Duke Energy Kentucky would obtain its gas supply requirements for a typical winter season utilizing this Hedging Plan.

HP-2012 provides several important benefits. First, the Plan will reduce the impact of price volatility for Duke Energy Kentucky's customers. Second, the Plan allows the Commission to see clear parameters within which Duke Energy Kentucky's management will operate. Third, the Plan provides Duke Energy Kentucky management sufficient flexibility to make purchase decisions within these parameters.

Attachment A Example of How Duke Energy Kentucky's Base Supply for Typical Winter Season Could be Obtained Through Hedging Plan



(1) Fixed price, no-cost collar, or price cap at Duke Energy Kentucky's discretion

(2) Based on storage of and additional storage of

#### Attachment B Duke Energy Kentucky Hedging Plan Reduction in Volatility



	With	Without	Reduction	Reduction
	Hedging	Hedging	\$	%
Standard Deviation				