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VIA HAND DELIVERY

November 23, 2009

Mr. Jeff Derouen
Executive Director
Kentucky Public Service Commission
211 Sower Blvd
Frankfort, KY 40601

RECEIVED
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PUBLIC SERVICE
COMMISSION

Re: Case No. 2009-00408

Dear Mr. Derouen:

Enclosed please find an original and nine copies of Duke Energy Kentucky Inc.'s Responses to Staff's First Set of Data Requests in the above captioned case.

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

Sincerely,

Dianne B. Kuhnell
Senior Paralegal

cc: Parties of Record

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Duke Energy Kentucky, Inc.
Case No. 2009-408
First Set Staff Data Requests
Date Received: November 12, 2009

STAFF-DR-01-001

REQUEST:

Refer to paragraph 7 of Duke Kentucky's application, which indicates that customer funds may be used for the development of Duke Kentucky's own renewable energy projects, or to purchase Renewable Energy Credits ("RECs") and/or Carbon Offsets. A Carbon Offset represents a 500-pound block of CO₂ reduction, the equivalent of approximately one-fourth of a Carbon Credit.

a. Describe Duke Kentucky's plans to develop its own renewable energy projects. Include how Duke Kentucky would recover the costs for its own renewable energy projects. Include how Duke Kentucky would recover the costs for its own renewable energy through Rider GP, or otherwise.

b. If customer funds are used to purchase RECs or Carbon Credits, both tradable commodity units, explain whether the customer or Duke Kentucky owns the tradable commodity rights.

c. If the customer owns the tradable commodity rights, explain what happens to those rights if the customer ceases to participate in the proposed green power program.

RESPONSE:

a. Currently, the Company does not have plans to develop its own renewable energy projects through the program. If Duke Energy Kentucky decides to do something in the future, the Company would follow the proper approval protocol before the Commission (e.g. Certificate of Convenience and Necessity or an appropriate waiver if applicable) prior to implementation. The language was meant to provide flexibility in the future should the Company decide to develop its own renewable project. The Company would present its plan at that time. The intent was that the tariff could allow a customer to pay to offset their own footprint through a REC generated by the Company.

b. RECs funded by consolidated customer contributions would be purchased through a third party. They would be certified real and retired and could no longer be traded in the market.

c. N/A

PERSON RESPONSIBLE:

John Langston

STAFF-DR-01-002

REQUEST:

2. Refer to paragraph 7 of Duke Kentucky's application.

a. Duke Kentucky states that similar power offerings are currently available to customers of Duke Energy Ohio, Inc. ("Duke Ohio") and Duke Energy Indiana, Inc. ("Duke Indiana").

(1) Does Duke Kentucky intend to use marketing materials in Kentucky similar to those used by its Midwest affiliates? If yes, provide the marketing materials produced for the green power offerings from Duke Ohio and Duke Indiana.

(2) Does Duke Kentucky plan to partner with Duke Ohio and Duke Indiana to purchase RECs and Carbon Offsets? If yes, explain the advantages to Duke Kentucky for participating in such a partnership.

b. Under Duke Kentucky's program, either RECs or Carbon Offsets, or both, may be purchased.

(1) Explain why Duke Kentucky decided to offer both options, rather than just RECs or Carbon Offsets.

(2) Given the choice between 200 kWh of RECs or a 500-pound block of Carbon Offsets, explain whether one will be more environmentally responsible than the other. Include in the response how a typical residential customer will be able to make that determination.

RESPONSE:

a. (1) Yes, Duke Energy Kentucky will use marketing materials similar to Ohio and Indiana. Please See Attachment KYPSC- DR-01-02a

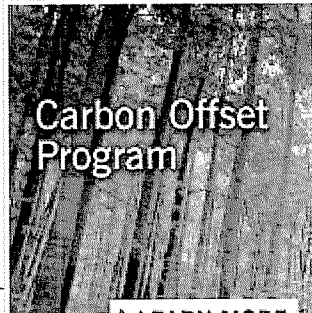
a. (2) Yes, it will be necessary initially to leverage the other programs with REC purchases from the other jurisdictions to meet the minimum wholesale threshold for purchasing RECs from a third party at a reasonable price. In the long term, it is anticipated that this will provide a volume discount and ultimately keep the RECs at a reasonable and affordable price for Kentucky participants.

b. (1) Duke Energy Kentucky subscribes to a threefold model for its customers: 1) Energy Efficiency, 2) invest in Renewable Energy and 3) offset the rest of your carbon footprint with Carbon Offsets. This allows alternatives for customers and a greater say in how they want to impact their own footprint.

b. (2) In comparing the two options, Option 1 buys the environmental attribute of green power. In this program, adding Renewable Energy to the Grid would cost minimum of 2 blocks for 200 kWh of green energy, mitigating 400 lbs carbon according to Duke Energy Kentucky's energy generation mix. Option 2 would mitigate greenhouse gases. In this program, buying Carbon Offsets, denoted in 1 block or 500 lbs carbon. Both contribute to a cleaner environment and it depends on the customer objective. For those interested in promoting or investing in green energy, Option 1 is preferred. For those interested in offsetting their carbon footprint, Option 2 provides more value.

PERSON RESPONSIBLE:

John Langston



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Products & Services

Duke Energy's GoGreen Power

Duke Energy's GoGreen Power

How you can help.

As a Duke Energy GoGreen Power participant, you can purchase the minimum of two 100 kilowatt-hour (kwh) blocks of green power for only \$5 a month, which is about 18 percent of an average residential customer's electricity usage. Beyond this minimum, you can purchase additional 100 kwh blocks of green power for \$2.50 a month. All you have to do is decide how many blocks you want to buy, and it will be added to your energy bill. It's that easy!

Under the program, Duke Energy will obtain energy from environmentally friendly generating sources located within our service area as they become available. We'll also purchase renewable energy from third parties in the form of renewable energy certificates.

Benefits of Duke Energy's GoGreen Power.

Advances the development of renewable, environmentally friendly energy sources.

Offsets carbon dioxide emissions in the atmosphere.

Diversifies energy supply and lessens demand for fossil fuel generation.

RELATED LINKS

[Duke Energy's GoGreen Power Brochure \(pdf, 151 KB\)](#)

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Rage for rain barrels relents even as drought returns
 A 65-gallon rain barrel had been the must-have tool to save water, fight drought and show the neighbors you're the greenest dog on the block. Now the rain barrel looks like this year's Hula-Hoop. Updated: Jul. 1, 2009 4:10 AM | Full story

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 Cleveland Community College

Advanced Search >



Microsite: BalanceYourEquation.com

What's the situation? What are offsets? How do they help? Where does the money go?

Balance Your Equation

Home > Vehicle > Travel > Balance Your Equation

How much electricity do you use each month?

kWh

1000 kWh (Duke Energy average)

What type of house do you live in?

▼

What size is your house?

▼

How do you heat your home?

Oil ▼

Gallons per Year

0 lbs of Carbon

Carbon Credits

Next ▶

Sign up now to offset your carbon.

Equations developed using data from the Energy Information Administration, Environmental Protection Agency and U.S. Department of Energy, along with Duke Energy Carolinas' generation mix and average customer usage.

Duke Energy Kentucky, Inc.
Case No. 2009-408
First Set Staff Data Requests
Date Received: November 12, 2009

STAFF-DR-01-003

REQUEST:

Refer to paragraph 8 of the application. Duke Kentucky states that amounts collected under its proposed GoGreen Kentucky program will be used for the acquisition of RECs and/or Carbon Offsets and “to cover the costs of educational materials, marketing materials and advertising” the program.

a. Provide the budget for administrative costs, educational materials, marketing materials and advertising costs for the program.

b. Explain how Duke Kentucky’s proposed rates for Green Power and Carbon offsets were derived. The response should reflect how the market prices for the two commodities and the budgeted data provided in response to part a. of this request were used in developing the proposed rates.

RESPONSE:

a. 2010 Budget for the programs are:

Residential - KY

Go Green Budget: 2010

	Total
Blocks	1,348
Revenue (\$2/block)	\$ 2,696.00
Capital Expenses: IT	\$ 50,000.00
Operating Expenses:	
Administrative Expense (labor, overhead)	\$ 8,916.00
Customer Acquisition	\$ 50,000.00
RECs	\$ 4,675.00

Carbon Offset Budget: 2010

	Total
Blocks	1,099
Revenue (\$4/block)	\$ 4,396.00
Capital Expenses: IT	\$ 50,000.00
Operating Expenses:	
Administrative Expense (labor, overhead)	\$ 8,916.00
Customer Acquisition	\$ 100,000.00
Carbon Credits	\$ 5,000.00

Call Center Expenses	\$ 2,500.00
Ongoing IT Support	\$ 500.00
Total Expense	\$ 116,591.00
Net Total	\$ (113,895.00)

Call Center Expenses	\$ 900.00
Ongoing IT Support	\$ 500.00
Total Expense	\$ 165,316.00
Net Total	\$ (160,920.00)

- b. The proposed price for Duke Energy’s GoGreen Kentucky of \$2.00 per 100 kWh block with a minimum purchase of two blocks is in line with the findings from the National Renewables Energy Laboratory (“NREL”) report Green Power Marketing in the United States: A Status Report (2008 Data). The report shows Utility Green Pricing programs had an average premium as follows:

Year	2001	2002	2003	2004	2005	2006	2007	2008
*Cents	2.93	2.82	2.62	2.45	2.36	2.12	1.85	1.8

The average cost per kWh for the three year period, 2006-2008, is 1.92 cents which is well within the 2.0 cents we are recommending.

(*Note that these numbers are based on a variety of Utility Green Programs some of which have been in the market for a number of years allowing current pricing to reflect recovery of startup cost to launch a new program.)

The proposed pricing of Carbon Offsets at \$4.00 which offsets 500 lbs of carbon is below average in comparison to other retail programs throughout the nation. According to the NREL, as of December 2008, the average price per ton for programs with Green-e certification projects or self-certified projects is \$17.00 per ton or about \$4.25 per Carbon Offset block. Furthermore, it is reasonable because the program offers a low entry price on a partial ton block basis (approximately ¼ of a metric ton).

PERSON RESPONSIBLE:

John Langston

Duke Energy Kentucky, Inc.
Case No. 2009-408
First Set Staff Data Requests
Date Received: November 12, 2009

STAFF-DR-01-004

REQUEST:

Refer to the paragraph 9 of the application. Explain how and when Duke Kentucky plans to notify participating customers of a change in the price of green power when it determines that a price change is necessary.

RESPONSE:

Customers would receive written notice of a price change once approved by the Commission. Customers would have the ability to choose to either continue to participate or contact the Company and request to withdraw or change the level of their participation.

PERSON RESPONSIBLE:

John Langston

Duke Energy Kentucky, Inc.
Case No. 2009-408
First Set Staff Data Requests
Date Received: November 12, 2009

STAFF-DR-01-005

REQUEST:

Explain whether the RECs to be offered under the proposed plan are only for the environmental attributes of each 100 kWh block of power, or if Duke Kentucky can actually offset 100 kWh of its own generation for each 100 kWh Block purchased.

RESPONSE:

Duke Energy Kentucky's program would only purchase the environmental attributes of each 100 kWh block of power.

PERSON RESPONSIBLE:

John Langston

Duke Energy Kentucky, Inc.
Case No. 2009-408
First Set Staff Data Requests
Date Received: November 12, 2009

STAFF-DR-01-006

REQUEST:

Refer to paragraph 10 of the application, which indicates that 30 days' notice is required for a customer to request removal from the program. Explain the need to 30 days' notice and identify in what form(s), written, telephonic, or electronic, the notice must be made.

RESPONSE:

Duke Energy Kentucky's billing system requires a full billing cycle to make this adjustment so customers must provide 30 days notice in order to not be charged for the following month. Customers can call, email or send a letter to unsubscribe. Participation is completely voluntary and there are no fees to cancel

PERSON RESPONSIBLE:

John Langston

Duke Energy Kentucky, Inc.
Case No. 2009-408
First Set Staff Data Requests
Date Received: November 12, 2009

STAFF-DR-01-007

REQUEST:

Refer to paragraph 11 of the application, which states that Duke Kentucky will file an annual report of costs for, among other things, expenditures for research. Describe the types of research in which the company expects to participate and the projected costs of each type thereof.

RESPONSE:

Research is recommended to better understand customer satisfaction and experience. The research would primarily be through customer surveys and they would be used to gauge the success of the program and if any program changes should be made to increase participation. Surveys would be administered by phone, online or written.

Since our Market Analytics group can create and process results in house from the phone, online, and written surveys the estimated cost is in the \$10,000 - \$15,000 range.

PERSON RESPONSIBLE:

John Langston

Duke Energy Kentucky, Inc.
Case No. 2009-408
First Set Staff Data Requests
Date Received: November 12, 2009

STAFF-DR-01-008

REQUEST:

Refer to pages 5 and 6 of the Direct Testimony of John D. Langston (“Langston Testimony”). Duke Kentucky requests authority to adjust, up or down, the price paid per 100 kWh block of Green Power and for the price paid per Carbon Offset block. Explain whether Duke Kentucky considered offering Green Power and Carbon Offset blocks at fixed amounts while allowing the number of kWh or Carbon Offset blocks to vary. Include in the explanation why one method is preferable over the other.

RESPONSE:

The intent of the program is to allow customers to offset their own personal footprint and have control over their personal environmental impact in the simplest fashion. As designed, a customer will know the size of their personal carbon impact and what it would take in terms of defined blocks to offset their footprint. The customer then determines, based upon price, what level of total impact they would like to make. For example, if a customer’s total load is 1000 kWh per month, they would know that it would take 10 blocks of Green Power to satisfy their entire load. While fixing the cost and adjusting the number of kWh or Carbon offset blocks may provide greater price certainty, the customer loses the ability to easily determine how many REC or offset blocks will be required to manage their total footprint. The underlying calculation could potentially change.

PERSON RESPONSIBLE:

John Langston

Duke Energy Kentucky, Inc.
Case No. 2009-408
First Set Staff Data Requests
Date Received: November 12, 2009

STAFF-DR-01-009

REQUEST:

9. Refer to paragraph 16 of the Langston Testimony. Duke Kentucky states that Green Power, RECs and Carbon Offsets are openly traded in a competitive marketplace and that their prices fluctuate.

a. Explain how Duke Kentucky will obtain these commodities and provide the costs it expects to incur in doing so. Include in the explanation whether Duke Kentucky will use third parties to obtain the commodities. Also include a description of the REC market and the Carbon Offset market.

b. If third parties are to be used: (1) provide the name of each of the parties, the services they provide and the commodities each party will obtain and (2) explain how each party will be selected and provide the fees they will charge.

c. Explain whether prices of Green Power, RECs and Carbon Offsets have fluctuated over the three most current calendar years (2007, 2008 and 2009). Provide examples of the price fluctuations with citations to the sources of the information.

RESPONSE:

a. Duke Energy Kentucky would procure RECs or Carbon Credits through an in house purchasing agent who considers the market price, projects and their locations. Focus would be on regional projects with best value.

REC Market:

REC-based products may be supplied from a variety of renewable energy sources throughout the country and sold to customers nationally, or they may be supplied from renewable energy sources in a particular region or locality and marketed as such to local customers. More than 25 companies offer certificate-based green power products to retail customers via the Internet, and a number of other companies market RECs solely to commercial and industrial customers. RECs are also sold in the wholesale market and are frequently used by utilities and marketers who bundle RECs with commodity electricity to sell green power to retail customers. In fact, RECs are used to supply most of the programs where default suppliers have teamed with green power marketers.

Carbon Offset Market

Carbon offsets represent a reduction in greenhouse gas emissions from an activity or project in one place to compensate for or to balance out emissions that are produced elsewhere. Purchasing offsets provides funding for emissions reduction projects such as methane recovery, biogas, and forest conservation. Demand for carbon offsets has been growing steadily as more consumers and organizations want to take action to reduce their impact on climate change or “carbon footprint.” This is fueling tremendous growth in the market, which turned carbon offsets into a \$112.5 million industry in the U.S. in 2007.

Since no single certification standard exists, there are conflicting notions about how to verify that offset purchases contribute significantly to a project’s financial viability and how to determine whether they meet the criteria of additionality, meaning that the project reduces emissions below the quantity emitted in a business-as-usual scenario.

b. 1. Third party brokers are used for finding projects. In other programs, Duke has contracted with 3Degrees Group Inc. in San Francisco and Carbon Solution Group, LLC in Chicago for RECs. Both firms are in the business of marketing RECSs and Carbon Credits from producers and reselling them to individual, retail and wholesale customers.

b 2. For outside projects, Duke will select projects that provide Green-e certified RECs or Green-e Climate certified carbon credits. The REC charge is an all inclusive contract rate per MWh for the purchase price. Carbon credits would be similar although have not been purchased yet by Duke.

9c The proposed price for Duke Energy’s GoGreen Kentucky of \$2.00 per 100 kWh block with a minimum purchase of two blocks is in line with the findings from the National Renewables Energy Laboratory (“NREL”) report Green Power Marketing in the United States: A Status Report (2008 Data). The report shows Utility Green Pricing programs had an average premium as follows:

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NREL, as of December 2008, the average price per ton for programs with Green-e certification projects or self-certified projects is \$17.00 per ton or about \$4.25 per Carbon Offset block. Furthermore, it is reasonable because the program offers a low entry price on a partial ton block basis (approximately $\frac{1}{4}$ of a metric ton).

PERSON RESPONSIBLE:

John Langston

Duke Energy Kentucky, Inc.
Case No. 2009-408
First Set Staff Data Requests
Date Received: November 12, 2009

STAFF-DR-01-010

REQUEST:

10. Refer to Attachment JDL-1 to the Langston Testimony, the proposed tariff rider, Rider GP. Explain how Duke Kentucky chose three years as the term of its proposed green power pilot program.

RESPONSE:

Experience shows it takes about 3 years to achieve meaningful participation and to recover costs. Duke Energy Kentucky feels this is a reasonable period to assess the program and whether it should continue longer or be revised. The objective is zero net gain in the long term. We estimate it takes 3 years time to reassess the market. For example, in GoGreen Indiana, the program started out at \$2.50 per block but after 3 years, Duke was able to reduce the price to \$2/block and still maintain funds to manage and promote the product.

PERSON RESPONSIBLE:

John Langston