AEP
KENTUCKY POWER®
A unit of American Electric Power

Kentucky Power
P O Box 5190
101A Enterprise Drive
Frankfort, KY 40602
KentuckyPower.com

Stephanie L. Stumbo, Executive Director
Kentucky Public Service Commission
P. O. Box 615
211 Sower Boulevard
Frankfort, KY 40602

August 25, 2008

Dear Ms. Stumbo:

Re: Case No. 2008-00349

In the Matter of the Joint Application Pursuant to 1994 House Bill No. 501 for the Approval of Kentucky Power Company Collaborative Demand-Side Management Programs, and for Authority to Recover Costs, Net Lost Revenues and Receive Incentives associated with the Implementation of Three New Residential Demand-Side Management Programs beginning January 1, 2009.

The Joint Applicants seek authority for Kentucky Power Company, to implement three new residential DSM programs to recover costs including net lost revenues and incentives related to those programs.

In this filing, the DSM Collaborative is requesting Commission approval of a new High Efficiency Heat Pump Program. This program will be targeted to residential customers living in site-built homes within the Kentucky Power service territory that utilize an electric central heating and cooling system. A financial incentive will be provided to participating customers who up-grade to a high-efficiency heat pump that meets program guidelines. HVAC dealers installing qualifying equipment in customer homes are also eligible for an incentive.

The DSM Collaborative is also requesting approval of a new Energy Education for Students Program. Kentucky Power Company (KPCo) will partner with the National Energy Education Development Project (NEED) to implement an energy education program targeted to 7th grade students at participating middle schools throughout the KPCo service territory. Educational materials on energy, electricity, environment and economics will be provided. The program will also provide a package of four 23 watt compact fluorescent lamps (CFLs) that will allow students to install the CFLs in their

homes as part of the curriculum.

Finally, the DSM Collaborative is requesting approval of a new Community Outreach Compact Fluorescent Lighting (CFL) Program. This program is designed to educate and encourage KPCo residential customers to purchase and use compact fluorescent lighting (CFLs) in their homes. A package of four-23 watt CFLs will be distributed to customers attending community outreach activities sponsored by KPCo.

As is customary, the Company requests the Commission provide a letter of acknowledgement of this filing. If you have any questions, please contact me at (502) 696–7010.

Sincerely,

Errol K. Wagner
Director of Regulatory Services

enclosure

Table of Contents

High Efficiency Heat Pump Program

1. DESCRIPTION

Kentucky Power Company (KPCo) will offer a financial incentive to residential customers living in site-built homes who purchase a new high-efficiency heat pump for upgrades of less efficient electric heating and cooling systems.

2. RATIONALE FOR PROGRAM

The high-efficiency heat pump program is designed to reduce residential electric energy consumption by upgrading less efficient electric heating and cooling systems with high-efficiency heat pumps. Advanced technology has increased the efficiency of heat pump systems, resulting in higher energy savings and a greater demand reduction. This program is appropriate, as it helps lower electric bills for all residential customers and allows KPCo to utilize its existing generating capacity more efficiently, thereby deferring the need for new generation as well as conserving our country's valuable natural resources.

3. PARTICIPATION GOALS

	Resistant Heat Replacement	Heat Pump Replacement
Jan. 2009 thru Dec. 2009	50	50
Jan. 2010 thru Dec. 2010	100	100
Jan. 2011 thru Dec. 2011	100	100

4. ELIGIBLE CUSTOMERS

Residential retail customers living in the KPCo service territory who currently utilize an electric central heating and cooling system (or plan to install a central cooling system) are eligible to participate and receive financial incentives. Dealers installing qualifying equipment in homes of customers as outlined above will also be eligible to receive an incentive.

5. INCENTIVES

KPCo will offer customers and the HVAC dealer a financial incentive according to predetermined guidelines based on the efficiency (cooling SEER, heating HSPF) of the installed unit. The incentive will be structured as follows:

For upgrades of an **electric resistance heating system** with a high efficiency heat pump unit (SEER greater than or equal to 13; HSPF greater than or equal to

7.7), the residential customer will receive an incentive of $400.00. An incentive of $50.00 will be given to the participating HVAC dealer.

For upgrades of an **electric heat pump unit** with a ultra-high efficiency heat pump unit (SEER greater than or equal to 14; HSPF greater than or equal to 8.2), the residential customer will receive an incentive of $400.00. An incentive of $50.00 will be given to the participating HVAC dealer.

5. IMPLEMENTATION PLAN

A. Promotion

KPCo will develop relationships with trade allies (i.e., manufacturers, dealers, and contractors) in order to promote high-efficiency heat pump technology. Media advertising, such as newspaper, radio, television, and billboard, may also be used. A co-op advertising program may be offered to trade allies where the Company would share the cost of advertisements promoting high-efficiency heat pumps.

B. Delivery

KPCo representatives will work in conjunction with trade allies to promote high efficiency heat pumps in place of less efficient electric heating and cooling systems.

C. Quality Assurance

The program will be regularly reviewed by KPCo staff responsible for the program as well as the Company's DSM Collaborative. The Company will maintain communication with trade allies as well as respond to any customer inquiries. A selected sample of installations will be inspected to verify quality of installation.

D. Evaluation

KPCo will perform an evaluation relating to the program's impact and processes, including program objectives, data collection procedures, quality assurance methodologies, reporting timelines, costs, and the program's cost/benefit analyses.

The program evaluation objectives will be to:

1. Assess participant satisfaction with the program;
2. Gain insight into the market potential, including the participant characteristics, participation rate, and customer awareness of energy efficiency;
3. Determine the program impacts, including energy savings (KWh) and demand reduction (kW), and program value to customers;
4. Assess the program's cost-effectiveness based on various economic tests;

5. Assess the effectiveness of program delivery mechanisms.

6. TIMELINE

Action	Start	End
Program Approval	08/08	10/08
Implementation	01/09	12/11
Evaluation	01/10 01/11	06/10* 06/11*

* Evaluation report will be provided on 08/15/10 and 08/15/11.

7. ANNUAL BUDGET

	Year 1	Year 2	Year 3
Program Incentives	$45,000	$ 90,000	$ 90,000
Promotion	$ 8,000	$ 8,000	$ 8,000
Evaluation	$ 0,000	$ 7,000	$ 7,000
TOTAL COSTS	$53,000	$105,000	$105,000

8. EXPECTED SAVINGS / BENEFITS

a. Anticipated load Impact Per Participant :

Upgrading Resistant Heat to Heat Pump Customers:

Energy Savings Per Year = 4,176 kWh
Demand Reduction = 2.900 kW
(@ system winter peak)
= 0.000 kW
(@ system summer peak)

Upgrading Heat Pump Customers:

Energy Savings Per Year = 858 kWh
Demand Reduction = 0.444 kW
(@ system winter peak)
= 0.235 kW
(@ system summer peak)

b. Annual Expected Program Savings/Benefits (including T&D losses) @ 200 units in one year:

Summer Peak Demand (kW) Reduction	Winter Peak Demand (kW) Reduction	Annual Energy (MWh) Reduction
18 kW	327 kW	462 MWh

Projected energy savings and demand reductions are estimated based on the anticipated number of installations. The estimated effects of freeriders are included.

c. Projected Program MWh Savings and kW Reduction Assuming Participation (Including T&D losses):

Goal of 500 units is achieved (all customers in three years)

Energy Savings	=	1,155 MWh
Demand Reduction	=	818 kW
	(@ system winter peak)	
	=	45 kW
	(@ system summer peak)	

9. COST / BENEFIT ANALYSIS

Benefit / cost ratios based on the best information available at the time of program design.

a.	Total Resource Cost	=	2.64
b.	Ratepayer Impact Measure	=	1.59
c.	Participant	=	1.93
d.	Utility Cost	=	5.40

ENERGY EDUCATION FOR STUDENTS PROGRAM

1. DESCRIPTION

Kentucky Power Company (KPCo) will partner with the National Energy Education Development Project (NEED) to implement an energy education program at participating middle schools throughout the KPCo service territory.

2. ELIGIBLE PARTICIPANTS

All 7th grade students at participating schools will be eligible for the program.

3. PARTICIPATION GOALS

Jan. 2009 through Dec. 2009	1,200 Students
Jan. 2010 through Dec. 2010	1,700 Students
Jan. 2011 through Dec. 2011	2,000 Students

4. IMPLEMENTATION PLAN

A. *Promotion*

NEED staff will conduct training workshops on a scheduled basis to ensure all participating schools are reached during a calendar year. Educational materials on energy, electricity, environment and economics will be provided. The program will also provide a package of four 23 watt compact fluorescent lamps (CFLs) that will allow students to directly install the CFLs in their homes as it relates to the curriculum. This allows learning and direct savings from the program.

B. Delivery

NEED staff will mail invitations to each middle school within the KPCo service territory. KPCo and NEED staff members will coordinate the enrollment of participating schools, delivery of educational materials & compact fluorescent lamps and scheduling of educational workshops.

5. *EVALUATION*

A. Goals

KPCo will perform an evaluation assessing and documenting the program's processes and estimating the program's impacts as well as performing a benefit/cost analysis.

B. Objectives

The program evaluation objectives will be to:

1. Assess educator and student satisfaction with the program;
2. Gain insight into the potential for expanding the program to additional grade levels;
3. Determine the program impacts, including energy savings (KWh) and demand reduction (kW), and program value to educators and students;
4. Assess the program's cost-effectiveness based on various economic tests;

6. TIMELINE

Action	Start	End
Program Approval	08/08	10/08
Implementation	01/09	12/11
Evaluation	01/10 01/11	06/10* 06/11*

* Evaluation report will be provided on 08/15/10 and 08/15/11.

7. ANNUAL BUDGET

	Year 1	Year 2	Year 3
Program Development & Administration	$ 4,000	$ 3,000	$ 3,000
Promotion	$ 1,000	$ 1,000	$ 1,000
Educational Workshops (Includes food costs)	$ 5,000	$ 5,000	$ 5,000
Compact Fluorescent Lamps	$12,000	$17,000	20,000
Evaluation	$ 0,000	$ 5,000	$ 5,000
TOTAL COSTS	$22,000	$31,000	$34,000

8. EXPECTED SAVINGS / BENEFITS

a. Anticipated load Impact Per Lamp:

Energy Savings Per Year	=	46	kWh
Demand Reduction	=	.023	kW
	(@ system winter peak)		
	=	.001	kW
	(@ system summer peak)		

b. Annual Expected Program Savings/Benefits @ 4,800 CFLs in one year:

Summer Peak Demand (kW) Reduction	Winter Peak Demand (kW) Reduction	Annual Energy (MWh) Reduction
14	359	220.8

Projected energy savings and demand reductions are estimated based on the anticipated number of students living within the KPCo service territory and installing compact fluorescent lamps in their homes.

c. Projected Program MWh Savings and kW Reduction Assuming Participation:

Goal of 19,600 CFLs is achieved (all students in three years)

Energy Savings	=	717.6	MWh
Demand Reduction	=	110	kW
	(@ system winter peak)		
	=	4	kW
	(@ system summer peak)		

9. COST / BENEFIT ANALYSIS

Benefit / cost ratios based on the best information available at the time of program design.

a.	Total Resource Cost	=	8.09
b.	Ratepayer Impact Measure	=	2.39
c.	Participant	=	28.73
d.	Utility Cost	=	12.55

Community Outreach Compact Fluorescent Lighting (CFL) Program

1. DESCRIPTION

This program is designed to educate and influence Kentucky Power Company (KPCo) residential customers to purchase and use compact fluorescent lighting (CFLs) in their homes. To encourage customers to purchase CFLs as replacements for incandescent bulbs, a package of four 23 watt CFLs will be distributed to customers attending community outreach activities sponsored by KPCo.

2. ELIGIBLE PARTICIPANTS

Residential retail customers in Kentucky Power's service territory are eligible to participate.

3. PARTICIPATION GOALS

Jan. 2009 through Dec. 2009	3,500 customers
Jan. 2010 through Dec. 2010	4,000 customers
Jan. 2011 through Dec. 2011	4,000 customers

4. IMPLEMENTATION PLAN

A. Promotion

KPCo will promote the CFL program through the use of Consumer Circuit, advertising and community outreach activities. Consumer Circuit will be cycled through the KPCo's service territory.

B. Delivery

KPCo will devise and implement procedures to obtain the customer's account number, his/her name and electric service billing address in order for the CFL to be provided to KPCo customers (information will be used for follow up measurement and verification, and customer satisfaction).

5. EVALUATION

A. Goals

KPCo will perform an evaluation assessing and documenting the program's processes and estimating the program's impacts as well as performing a benefit/cost analysis.

B. Objectives

The program evaluation objectives are to:

1. Assess participant satisfaction with the program; Survey
2. Quantify the participant characteristics, participation rate, and installation rate.
3. Estimate the program impacts, including energy savings (kWh) and demand reduction (kW), and program value to customers;
4. Assess the program's cost-effectiveness based on various economic tests;
5. Assess the effectiveness of program delivery mechanisms.

C. Methodology

KPCo or its contractor/affiliate will periodically survey the parties receiving the compact fluorescent lamps. Survey questions will address customer satisfaction, installation information, program awareness, hours of operation, and future purchase intentions, and customer status.

6. TIMELINE

Action	Start	End
Program Approval	08/08	10/08
Implementation	01/09	12/11
Evaluation	01/10 01/11	06/10* 06/11*

* Evaluation report will be provided on 08/15/10 and 08/15/11.

7. ANNUAL BUDGET

	Year 1	Year 2	Year 3
CFLs	$35,000	$40,000	$40,000

Promotion	$ 3,200	$ 3,900	$ 4,000
Administration	$ 2,000	$ 2,000	$ 2,000
Evaluation	$ 0,000	$ 8,000	$ 8,000
TOTAL COSTS	$40,200	$53,900	$54,000

8. EXPECTED SAVINGS / BENEFITS

a. Anticipated Load Impact Per Lamp :

Energy Savings Year = 46 kWh
Demand Reduction = .023 kW
(@ system winter peak)
= .001 kW
(@ system summer peak)

b. Annual Expected Program Savings/Benefits
@ 14,000 bulbs in one year:

Summer Peak Demand (kW) Reduction	Winter Peak Demand (kW) Reduction	Annual Energy (MWh) Reduction
13	322	644

Projected energy savings and demand reductions are estimated based on the anticipated number of compact fluorescent lamps installed. Estimated effects of freeriders are not included.

c. Projected Program MWh Savings and kW Reduction Assuming Participation :

Goal of 46,000 bulbs is achieved (all customers in three years)

Energy Savings = 2,116 MWh
Demand Reduction = 1.1 MW

(@ system winter peak)
= 0.42 MW
(@ system summer peak)

9. COST / BENEFIT ANALYSIS

Benefit / cost ratios based on the best information available at the time of program design.

a.	Total Resource Cost	=	13.08
b.	Ratepayer Impact Measure	=	3.06
c.	Participant	=	29.05
d.	Utility Cost	=	30.28