Grayson Rural Electric Cooperative Corporation

109 Bagby Park • Grayson, KY 41143-1292 Telephone 606-474-5136 • 1-800-562-3532 • Fax 606-474-5862

January 9, 2013

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

RE: Case No. 2012-00484

RECEIVED

JAN 1 0 2013

PUBLIC SERVICE COMMISSION

Mr. Derouen:

Please find attached the original and six (6) copies of the joint applicants' responses to the Commission's first request for information in the above referenced case.

If there are any questions, please feel free to contact Don M. Combs at (606) 474-5136.

Sincer Grayson Rural Electric

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

JOINT APPLICATION OF BIG SANDY RURAL ELECTRIC COOPERATIVE CORP., FLEMING-MASON ENERGY COOPERATIVE, INC., GRAYSON RURAL ELECTRIC COOPERATIVE CORP., FOR AN ORDER APPROVING KY ENERGY RETROFIT RIDER PERMANENT TARIFF

CASE NO. 2012-00484

<u>COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION TO</u> <u>BIG SANDY RURAL ELECTRIC COOPERATIVE CORPORATION,</u> <u>FLEMING-MASON ENERGY COOPERATIVE, INC., AND GRAYSON RURAL</u> <u>ELECTRIC COOPERATIVE CORPORATION</u>



A Touchstone Energy Cooperative

The undersigned, Joni K. Hazelrigg, as CFO of Fleming-Mason Energy Cooperative, Inc. being first duly sworn, states that the responses to Commission Staff's First Request for Data in PSC Case No. 2012-00484 dated December 14, 2012, herein are true to the best of my knowledge and belief formed after reasonable inquiry.

Dated: January 9, 2013

Fleming-Mason Energy Cooperative, Inc.

By: Anik Hazelrigg

Subscribed, sworn to, and acknowledged before me by <u>Joni K. Hazelrigg</u> for <u>Fleming-Mason Energy</u> on behalf of said Corporation this <u>9th</u> day of <u>January</u>, 2013.

Notary Public:	Jany & wills
My Commission Expires:	11-9-13
	COMMISSION COMUNICATION COMUNICATIO

The undersigned, Don M. Combs, as Manager of Finance and Accounting of Grayson Rural Electric, being first duly sworn, states that the responses to an order dated December 14, 2012, herein are true to the best of my knowledge and belief formed after reasonable inquiry.

Dated: January 10, 2013

Grayson Rural Electric

By:

Don M. Combs Mgr. Finance & Accounting

Subscribed, sworn to, and acknowledged before me by <u>Don Combs</u>, as <u>Mgr. Finance & Acct</u> for <u>Grayson RECC</u> on behalf of said Corporation this <u>10th</u> day of <u>January</u>, 2013.

marsha a. Diacker Notary Public, State-at-large Ky. My commission expires 1-9-2015.



Big Sandy Rural Electric Cooperative Corporation

504 11th Street Paintsville, Kentucky 41240-1422 (606) 789-4095 • Fax (606) 789-5454 Toll Free (888) 789-RECC (7322)

The undersigned, Bruce Aaron Davis, as Manager of Billing/Member Services of Big Sandy Rural Electric Cooperative Corporation, being first duly sworn, states that the responses to an order dated December 16, 2010, herein are true to the best of my knowledge and belief formed after reasonable inquiry.

Dated: 1-9-2013

Big Sandy Rural Electric Cooperative Corporation

Bruce Aaron Davis Manager of Billing/ Member Services

Subscribed, sworn to, and acknowledged before me by bruce (laron laws) as <u>Managuef Billin</u>for <u>Brig Sandy Rec</u>on behalf of said Corporation this <u>9</u>²² day of <u>January</u>, 2013.

Judy McCline Notary Public



Item _/ Page _/ of _/ Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

1. Refer to footnote 3 on page 3 of the Application and the Data Report for the period of December 1, 2011 through May 31, 2012, contained in the Semi Annual Report filed on June 20, 2012. In the Data Report, Jackson Energy was the most active cooperative with respect to the Kentucky Energy Retrofit Rider ("KER Rider"), but the footnote states than Jackson Energy is not filing for a permanent rider at this time.

a. If known, explain why Jackson Energy is not proposing a permanent rider at this time.

b. If known, explain when and if Jackson Energy expects to propose a permanent KER Rider.

Response:

- a. It is not known by the applicants why Jackson Energy is not proposing a permanent rider at this time.
- b. Again, this is not known by the applicants.

.

.

Item <u>2</u> Page <u>1</u> of <u>1</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

2. In the Application, the Joint Applicants state that they will partner with the Mountain Association for Community Economic Development ("MACED") to operate the KER Rider program. Provide the total dollar amount, to date, of funds paid by MACED to your particular cooperative, as well as the total amount of funds paid by your particular cooperative to MACED for the retrofit project.

Response:

	Paid by MACED	Paid by COOP to MACED
Fleming Mason	\$151,703.93	\$5,079.91
Grayson	87,994.44	\$4,204.00
Big Sandy	93,099.82	\$4,536.75

.

·

Item <u>3</u> Page <u>1</u> of <u>2</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

3. Refer to page 4, Item No. 11 of the Application.

a. The response states that to date, \$538,008 in capital has been deployed through the program. For each of the Joint applicants, provide a breakdown of the manner in which the capital has been deployed at your particular cooperative, including:

(1) The types of costs involved, including costs of actual projects, advertising and promotional costs, and administrative costs;

(2) The associated dollar amounts, for each type of cost shown in the response to Item 3.a.(1) above.

b. The average monthly retrofit project charge is stated as \$38.70. Provide the average payback period associated with the \$38.70 charge.

Response:

- a. See Response for Item 2 for Capital Deployed for applicants (Paid by MACED). \$538,000 has been revised currently to \$ 560,302 and includes Jackson's participation (\$227,504.28).
 - Other costs not included in the Projects costs include general administrative and accounting labor costs, UCC filing and software fees..
 - 2. The labor costs have not resulted in addition costs for the Cooperatives, but have been absorbed by reallocating job

Item <u>3</u> Page <u>2</u> of <u>2</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

duties. See response to Item #4. The UCC and software fees have been insignificant and have been covered by the Project management fee.

b. 14.5 years

Item <u>4</u> Page <u>1</u> of <u>2</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

4. Refer to page 4, Item No. 12 of the Application. Joint Applicants state that some additional accounting costs incurred have been, to date, adequately covered by the existing project management fee calculated as part of the Retrofit Project Charge.

a. Provide the dollar amount of the additional accounting costs incurred by your particular cooperative that have been covered by the existing project management fee.

b. Provide the average amount of the project management fee at your particular cooperative for projects to date.

c. Provide the total amount of funding provided through the Kentucky Home Performance Program to your particular cooperative for reimbursement of the initial training costs associated with attaining Building Performance Institute certification.

d. Explain the reasons for the additional costs. In the explanation, state whether the costs are considered significant, and whether the costs are expected to be covered by the existing fee for the foreseeable future.

Item <u>4</u> Page <u>2</u> of <u>2</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

Response:

- As stated in the response to Item 3 a. (2), the accounting labor costs have been included in existing labor costs and do not represent a net increase in labor costs.
- <u>Average Project Management Fees (incl UCC & Software Fees)</u>
 Big Sandy \$ 209.52

Fleming Mason - \$285.11

Grayson - \$191.29

c. Received from MACED for training & Equipment

Including KY Home performance

Big Sandy - \$ 13,096.90

Fleming Mason \$8,097.00

Grayson - \$10,538.52

d. These costs are considered insignificant and would be partly offset by the project management fee. See Response to Item 4(a) above.

Item <u>5</u> Page <u>1</u> of <u>1</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

5. Refer to page 4, Item No. 13 of the Application. Joint Applicants state that only one of the 98 completed retrofit projects is currently inactive. Joint Applicants further state that repayment has been suspended on that account and that the Retrofit Project Charge will resume when service resumes at that location. Additionally, Joint Applicants state that, in a few cases, some participating locations have significant damage resulting from fire or natural disaster, but electric service has remained current at those locations, resulting in no interruption of the repayment of the Retrofit Project Charge. For each of the Joint Applicants:

a. Provide for your particular cooperative the specific number of participating locations that have significant damage from fire or natural disaster, as defined by the Joint Applicants.

b. Provide for your particular cooperative the total number of completed retrofit project locations that have been sold, foreclosed upon, or for which, owners have had a change of address since the completion of the retrofit projects.

Response:

- Big Sandy 1 due to a natural disaster
 Grayson 0
 Fleming Mason 0
- b. Grayson 2 due to foreclosure
 Big Sandy 0
 Fleming Mason 0



Item <u>6</u> Page <u>1</u> of <u>1</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

 State whether payments made on projects are returned to the pool of capital set aside for future energy retrofit projects. If returned, state approximately what percentage of the total payments are returned to the pool.

Response:

The capital source for How\$mart to date has been MACED's lending portfolio. When funds are repaid to MACED per the loan agreements between MACED and the co-op, these funds revert to MACED's general pool of capital for lending. MACED indicates no foreseeable problem with continuing to be able to furnish sufficient capital for this work even with significant expansion of the program and additional co-ops participating.

Item <u>7</u> Page <u>1</u> of <u>2</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

7. Refer to page 5, Item No. 15 of the Application.

a. Joint Applicants attempt to clarify in Item 15(b) that the investment is tied to the physical location, not an account. Explain the necessity of tying the investment to the physical location as opposed to the account of an individual customer.

b. Refer to page 5, Item No. 16 of the Application. Joint Applicants state that the KER Rider "remains a voluntary tariff available to customers". Explain how the KER Rider is considered "voluntary," given the Joint Applicants' proposal is to tie the investment to the physical location, rather than the individual account holder.

Response:

a. The fundamental concept of this program is to increase the energy efficiency of physical structures that will have a useful life of 15 years or more. The underlying premise being that the occupant of the structure will receive the benefit of the retrofit with lower electric bills for however long they live there. While in most cases, the customer plans to remain at the location, it is not a requirement to qualify for this program. The joint applicants felt that it was important to make the distinction that the investment is tied to the location rather than the occupant or customer.

Item <u>7</u> Page <u>2</u> of <u>2</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

b. The term "voluntary tariff" simply means that any customer that qualifies and chooses to participate may do so. The joint applicants will not require participation by any customer. If a customer voluntarily participates in the program, it is explained that this investment will remain tied to the electric bill until payment in full of the project cost.

Item <u>&</u> Page <u>I</u> of <u>31</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

8. Refer to pages 5 and 6, Item No. 16 of the Application.

a. On page 6, Joint Applicants state that the proposed KER Rider requires the development of a Conservation Plan for each retrofit option proposed for a customer. For your particular cooperative, provide an example of Conservation Plans developed during the pilot program.

b. For your particular cooperative, provide an analysis of the projected savings associated with each identified Conservation Plan as compared to the actual savings experienced by the customer on each account.

Response:

. .

a. See Pages <u>2</u> - <u>31</u> of this Item.

b.	Monthly	Proje	ected Savings	<u>Actua</u>	al Savings
	BS #1	\$	67	\$	48
	BS #2		24		100
	BS #3		28		28
	FM #1		92		174
	FM #2		93		124
	G #1		71		166
	G #2		33		45



ver. 11/17/2011

Location ID:	Customer Information
Name	
OwnerName	Removed for Privacy.
Phone	
Assessor	
Date	
Date	

Example Conservation Plan

How Your Home Uses Energy

	model baseline	Elec	Gas	Propane	Wood/Coal	Your home uses
l	-	14,400 kWh	0 kBTU	0 kBTU	0 kBTU	energy for heating, cooling, and base load
*	🗧 Cooling	2310 kWh	0 kBTU	0 kBTU		(which is everything
	Base	12200 kWh	0 kBTU	0 kBTU		that is not heating or
	Total (vr)	28,910 kWh	0 kBTU	0 kBTU	0 kBTU	cooling).
		28600 kWh	0 kBTU	0 kBTU	0 kBTU	

How Your Home Could Save Energy

Replace HVAC Heating	with New HVAC Heating S	System.	- 1999 1997								
	eplace HVAC Cooling with New HVAC Cooling System.										
Reduce the house air le	akage from 5020 to 3000) cfm50.									
4. Rim joist insulation li	sted above will contribut	e to air sealing.									
3. Repair and replace pa	aneling missing on A fran	ne ceiling.									
2. Remove window AC	units.										
1. Air seal basement do	or.										
Create a new, sealed ar	nd insulated attic access f	rom closet in addit	ion.								
Add Rim Joist Insulation	٦.	_									
Install R-19 insulation in	nstall R-19 insulation in floor.										
Add Insulation in attic t	o 12" total from existing.										
Install Programmable T	hermostat.										
Savings from Baseline:	Savings from Actuals:	Conversions to Fuel	Current Rates Project	ted Savings (yr)							
7671 kWh (Elec)	7,361 kWh (Elec)	7,361 kWh	0.11 /kWh	\$810							
0 kBTU (Gas)	0 kBTU (Gas)	0 therms	2.00 /Therm	\$0							
0 kBTU (Propane)	0 kBTU (Propane)	0 Gal	2.50 /Gal	\$0							
Based on savings from insulation	n and air seal only due to calibratic	on.	Projected Avg Energy Savings (m	10) \$67							

before monthly How\$mart Charge

Financing

\$9,815.60 Cost of Improvements (est):

\$1,963.12 Kentucky Home Preformance

\$	7,852	2.48	Utility Contribution
	\$8	,310	Not to Exceed Amount (90% of Savings)
	0	3%	
0	ver	15	years
	\$!	57	Monthly Charge
			of projected savings

Next Steps

- 1. Sign Purchase Agreement
- 2. Select contractor and schedule the job
- 3. Energy Specialist returns to inspect completed work
- 4. Savings begin and installments charge appears on utility bill.
- If, after operation, any of the upgrades fail, the Utility will reevaluate the work.

Acceptance:

I understand that:

Values on previous page are estimates only and are not a guarantee of savings. Energy savings are a best-effort estimation calculated using a computer model. The model takes into account previous usage and characteristics of the house to determine usage and potential savings. Actual savings will vary depending on behavior, weather events, maintenance of the efficiency improvements, and future utility rates.

The Utility has explained what I can do to reduce my energy consumption including, but no limited to: thermastat and other equipment settings, the impact of lighting changes, and additional appliance or home investments not covered under How\$martKY.

Value of the improvements (cost of work) is an estimate and will be verified with the selected contractor. Final monthly charge will be determined at the time of contractor selection. If final project cost is more than the "not to exceed" amount, then customer may opt out of the installation.

Non-payment of the charge will be treated like non-payment of the utility bill potentially resulting in disconnection of service.

The Kentucky Energy Retrofit Rider (marketed as How\$martKY) is a voluntary utility tariff that amortizes the cost of the efficiency improvement over the course of fifteen years or 75% of the expected life of the improvement (whichever is less) at a fixed interest rate. The expected cumulative cost to the customer over the course of the payback period of the improvements is as follows:

		Estimate	Not to Exceed		
Fixed Monthly Charge		\$57	\$61		
Capital Investment		\$7,852	\$8,310		
·	4 500/				15
Project Fee(s)	4.50%	\$353	\$374	Payback Period (years)	15
Capital Fee	0.50%	\$39	\$42	Cost of Capital	3%
Total Interest over life of pa	ayback	<u>\$2,043</u>	<u>\$2,247</u>		
Total Cost over life of payb	ack	\$10,249	\$10,931		
Account Holder:			Owner:		
print name			print name		
Date:			Date:		



Energy Efficiency for Everyone

8	
2	
5	
ല	
<u> </u>	
S	
Ð	
60	
sheet for the example conservation plan given for Page 5 Iter	
Δ.	
2	
ų	
5	
ž	
.00	
2	
Ē	
÷	
Ω	
ç	
<u>.0</u>	
Ľ,	
S	
\leq	
ů.	
2	
ō	
Ũ	
e C	
Ó	
Ē	
r the example	
Š	
ତ	
n)	
Ĕ,	
Ŧ	
5	
.0	
Đ.	
ē	
2	
ş	
ğ	
s Oct 2012 Sprea	
Ē	
3	
S	
2	
2	
2	
5	
0	
5	
its Oct 2	
fits	
orfits	
etorfits	
Retorfits	
Retorfit	
_Retorfit	
_Retorfit	
_Retorfit	
_Retorfit	
pleted_Retorfit	
_Retorfit	
pleted_Retorfit	
Completed_Retorfit	
_Completed_Retorfit	
ll_Completed_Retorfit	
ll_Completed_Retorfit	
ll_Completed_Retorfit	
ll_Completed_Retorfit	
ata_All_Completed_Retorfit	
ll_Completed_Retorfit	
ata_All_Completed_Retorfit	
rData_All_Completed_Retorfit	
rData_All_Completed_Retorfit	
rData_All_Completed_Retorfit	
atherData_All_Completed_Retorfit	
WeatherData_All_Completed_Retorfit	
atherData_All_Completed_Retorfit	
WeatherData_All_Completed_Retorfit	
t from the N_WeatherData_All_Completed_Retorfit	
n exert from the N_WeatherData_All_Completed_Retorfit	

This is an exert Example 3	This is an exert from the N_WeatherData_All_Completed_Retorfits Oct 2012 Spreadsheet for the example conservation plan given for Page 5 item 8 Example 3	ערסטווכו עמ							
CoopCode	Location	DataStatus	LocationID DataStatus Pres Rdg Dt Billing Dt	Days Use kW	Days Use kWh_Usage StartDate	EndDate	TotalHDD TotalCDD HDD200+	otalCDD H	DD200+
bigsandyrecc	512002 BR	12 BR	17-Aug-10 2010-08-25	31	1827 2010-07-18	2010-08-17	1.1	432.8	
bigsandyrecc	512002	BR	17-Sep-10 2010-09-25	31	1404 2010-08-18	2010-09-17	26	280.8	
bigsandyrecc	512002	BR	17-0ct-10 2010-10-25	30	1095 2010-09-18	2010-10-17	182.4	138.6	
bigsandyrecc	512002	BR	14-Nov-10 2010-11-22	28	2123 2010-10-18	2010-11-14	377.3	24	377.3
bigsandyrecc	512002	BR	17-Dec-10 2010-12-25	33	4668 2010-11-15	2010-12-17	987.7	2.1	987.7
bigsandyrecc	512002	BR	17-Jan-11 2011-01-25	31	4835 2010-12-18	2011-01-17	1119.5	0	1119.5
bigsandyrecc	512002	BR	16-Feb-11 2011-02-24	30	4115 2011-01-18	2011-02-16	1015.1	0	1015.1
bigsandyrecc	512002	BR	17-Mar-11 2011-03-25	29	2438 2011-02-17	2011-03-17	565.5	0.4	565.5
bigsandyrecc	512002	BR	17-Apr-11 2011-04-25	31	2031 2011-03-18	2011-04-17	438.2	38.8	438.2
bigsandyrecc	512002	BR	17-May-11 2011-05-25	30	1286 2011-04-18	2011-05-17	204.8	67.1	204.8
bigsandyrecc	512002	BR	16-Jun-11 2011-06-24	30	1520 2011-05-18	2011-06-16	44.8	240.6	
bigsandyrecc	512002	BR	16-Jui-11 2011-07-24	30	1438 2011-06-17	2011-07-16	4.5	281.1	
bigsandyrecc	512002	BR	17-Aug-11 2011-08-25	32	1592 2011-07-17	2011-08-17	4.9	402.7	
bigsandyrecc	512002 AR	12 AR	24-Mar-12 2012-04-01	31	1262 2012-02-23	2012-03-24	383.4	41	383.4
bigsandyrecc	512002	AR	22-Apr-12 2012-04-30	29	980 2012-03-25	2012-04-22	301.9	30.9	301.9
bigsandyrecc	512002	AR	24-May-12 2012-06-01	32	1072 2012-04-23	2012-05-24	129.1	117.5	
bigsandyrecc	512002	AR	21-Jun-12 2012-06-29	28	1048 2012-05-27	2012-06-25	44.6	248.1	
bigsandyrecc	512002	AR	24-Jul-12 2012-08-01	33	1291 2012-07-27	2012-08-25	20.6	275.3	
bigsandyrecc	512002	AR	24-Aug-12 2012-09-01	31	1112 2012-08-27	2012-09-25	82.4	184.9	
bigsandyrecc	512002	AR	24-Sep-12 2012-10-02	31	1015 2012-09-27	2012-10-25	9.2	7.1	

The conservation plan estimated a monthly savings of 67 dollars.

Using weather normalization to estimate the actual savings accounting for weather.

s 05 57																	438 Weather Normaliz
CDD200+ kWhHDD2tkWhCDD2tProjectedB NrmlSav %NrmlSav %DirectSa Averages 432.8 1827 0.52805 280.8 1404 100.4367										48%	52%		31%	10%	30%	28%	4
%NrmlSav										35%	5 40%			7 12%		28%	
NrmlSav										681.2292	645.4346		399.7401	177.5797	287.3185		
ProjectedB										1943.229	1625.435	1072	1447.74	1468.58	1399.318	1015	
WhCDD2(F 1827 1404							1520	1438	1592				1048	1291	1112		
WhHDD21k	2123	4668 4835	4115	2438	2031	1286				1262	980						
CDD200+ K/ 432.8 280.8							240.6	281.1	402.7				248.1	275.3	184.9		

438 Weather Normalized Monthly kwh Average Saved
27% Weather Normalized Percentage of Savings
48.21 Weather Normalized savings based on \$0.11

ŝ



ver. 11/17/2011

Example

Plan

Conservation



How Your Home Uses Energy

	model baseline	Elec	Gas	Propane	Wood/Coal	
8	Heating	5,680 kWh	0 kBTU	0 kBTU	0 kBTU	energy for heating, cooling, and base load
*	Cooling	2130 kWh	0 kBTU	0 kBTU		(which is everything
N	Base	18400 kWh	0 kBTU	0 kBTU		that is not heating or
=	Total (yr)	26,210 kWh	0 kBTU	0 kBTU	0 kBTU	cooling).
		26400 kWh	0 kBTU	0 kBTU	0 kBTU	

How Your Home Could Save Energy

Add Rim Joist Insulation.

Install R-19 insulation in floor.

Reduce the house air leakage from 3278 to 2240 cfm50.

7. Spray foam on band board (listed elsewhere) will contribute to air sealing.

6. Air seal large penetrations where accessible in attic and crawl with foam board and / or spray foam as needed.

5. Create and install foam board box with weatherstrip over attic stairs to air seal opening.

4. Seal foam board in attic on skylight shaft. Tape corners and foam top and bottom edges.

3. Cap open kitchen soffits on attic side with foam board, sealed at edges.

2. Replace laundry door to garage. . ..

1

1.1

<u>Savings from Baseline:</u>	Savings from Actuals:	Conversions to Fuel	Current Rates Projected	<u>Savings (yr)</u>
2374 kWh (Elec)	2,564 kWh (Elec)	2,564 kWh	0.11 /kWh	\$282
0 kBTU (Gas)	0 kBTU (Gas)	0 therms	2.00 /Therm	\$0
0 kBTU (Propane)	0 kBTU (Propane)	0 Gaí	2.50 /Gal	\$0
	0 kBTU (Propane) n and air seal only due to calibratio		2.50 /Gal Projected Avg Energy Savings (mo)	•

Financing

Cost of Improvements (est): \$3,415.00

\$683.00 **Kentucky Home Preformance**

\$2,732.00	Utility Contribution
\$2,895	Not to Exceed Amount (90% of Savings)
@ 3%	
over 15	years
\$20	Monthly Charge
84%	of projected savings

before monthly How\$mart Charge

8	
5 ltem	
sheet for the example conservation plan given for Page 5	
r Pa	
en fo	
ı give	
plan	
vation plaı	
conservat	
suos	
ple (
xam	
the examp	
for t	
leet	
•••	
Spread	
s Oct 2012 Sp	
Oct 2	
fits (
etor	
sd_R	
pleted_	
Com	
ata_	
therData	
Veat	
s z	
the	
is is an exert from	
kert 1	
an e	5
is is a	10000

479038 BR 17-5ep-10 2010-09-25 31 1822 2010-08-18 2010-09-17 479038 BR 17-5ep-10 2010-10-25 30 1030 2010-08-18 2010-11-14 479038 BR 17-5ec-10 2010-11-25 33 3279 2010-11-15 2010-11-17 479038 BR 17-Dec-10 2010-12-25 31 3141 2011-01-17 479038 BR 17-Dac-10 2011-01-25 31 3141 2011-01-17 479038 BR 17-Mar-11 2011-01-25 30 2787 2011-01-18 2011-01-17 479038 BR 17-Mar-11 2011-02-25 30 1771 2011-02-17 2011-04-18 479038 BR 17-Mar-11 2011-05-25 30 1770 2011-06-16 17-4 479038 BR 17-Mar-11 2011-05-25 30 2170 2011-06-17 2011-06-17 479038 BR 17-Mar-11 2011-05-25 30 2702	Example 2	100040001	Intetactor C	Rilling Dt	Dave Lise kWh	kWh Usage StartDate	EndDate	TotalHDD To	TotalCDD HDD200+	DD200+
479038 BR 17-Oct-10 2010-10-25 30 1030 2010-10-18 2010-11-14 3 479038 BR 14-Nov-10 2010-11-25 33 3279 2010-11-15 2010-11-14 3 479038 BR 17-Jec-10 2010-11-25 33 3279 2010-11-15 2010-11-17 11 479038 BR 17-Jan-11 2011-02-24 30 2787 2011-01-18 2011-01-17 11 479038 BR 17-Mar-11 2011-04-25 30 1773 2011-02-16 10 479038 BR 17-May-11 2011-07-24 30 3043 2011-07-15 21 479038 BR 17-Mug-11 2011-07-24 30 3043 2011-07-15 21 479038 BR 17-Mug-11 2011-07-24 30 3043 2011-07-15 2011-07-15 479038 BR 17-Mug-11 2011-07-24 30 3043 2011-07-17 2011-07-17 479038 B	bigsandvrecc	479038	BR	2010-09-25	31	1822 2010-08-18	2010-09-17	26	280.8	
479038 BR 14-Nov-10 2010-11-12 28 1313 2010-11-15 2010-11-17 11 479038 BR 17-Dec-10 2010-11-25 33 3279 2010-11-15 2010-12-17 11 479038 BR 17-Der-11 2011-01-25 33 3141 2011-01-17 11 479038 BR 17-Mar-11 2011-02-24 30 2787 2011-01-18 2011-02-16 10 479038 BR 17-May-11 2011-05-25 30 1773 2011-05-17 21 4 479038 BR 16-Jun-11 2011-07-24 30 1707 2011-05-17 2011-05-17 2 479038 BR 15-Jun-11 2011-07-24 30 3043 2011-05-17 2011-05-17 2 479038 BR 17-Aug-11 2011-07-24 30 3043 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07-17 2011-07	bigsandyrecc	479038	BR		30	1030 2010-09-18	2010-10-17	182.4	138.6	
479038 BR 17-Dec-10 2010-12-25 33 3279 2010-11-15 2010-12-17 9 479038 BR 17-Jan-11 2011-01-25 31 3141 2011-01-17 11 479038 BR 17-Jan-11 2011-02-24 30 2787 2011-01-17 11 479038 BR 17-Apr-11 2011-02-25 31 1713 2011-02-17 2011-03-17 2 479038 BR 17-Aug-11 2011-05-25 30 1770 2011-04-17 4 479038 BR 16-Jun-11 2011-05-24 30 3043 2011-06-16 4 479038 BR 15-Jun-11 2011-07-24 30 3043 2011-07-17 2011-07-17 479038 BR 17-Aug-11 2011-07-24 30 3043 2011-06-16 10 479038 BR 17-Aug-11 2011-07-24 30 3043 2011-09-17 2011-09-17 479038 BR 17-Aug-11 2011-09-26 11 211-09-26 2011-09-17 2011-09-17 479038	bigsandyrecc	479038	BR		28	1313 2010-10-18	2010-11-14	377.3	24	377.3
479038 BR 17-Jan-11 2011-01-25 31 3141 2011-01-17 11 479038 BR 17-Jan-11 2011-02-24 30 2787 2011-01-18 2011-02-16 10 479038 BR 17-Apr-11 2011-02-25 30 1713 2011-02-17 2011-03-17 5 479038 BR 17-Amy-11 2011-05-25 30 1707 2011-05-17 2011-05-17 2 479038 BR 16-Jun-11 2011-05-24 30 3043 2011-06-16 4 479038 BR 15-Jun-11 2011-07-24 30 3043 2011-07-17 2 479038 BR 17-Aug-11 2011-07-24 30 3043 2011-07-17 2011-07-16 479038 BR 17-Aug-11 2011-09-25 31 3043 2011-07-17 2011-09-17 2 479038 BR 17-Sep-11 2011-09-26 31 3419 2011-09-17 2 2 479038 AR 27-47 31 3419 2011-09-17 2 2 2 <td>bigsandyrecc</td> <td>479038</td> <td>BR</td> <td></td> <td>33</td> <td>3279 2010-11-15</td> <td>2010-12-17</td> <td>987.7</td> <td>2.1</td> <td>987.7</td>	bigsandyrecc	479038	BR		33	3279 2010-11-15	2010-12-17	987.7	2.1	987.7
479038 BR 16-feb-11 2011-02-24 30 2787 2011-01-18 2011-02-16 10 479038 BR 17-Apr-11 2011-03-25 31 1713 2011-03-17 2011-03-17 5 479038 BR 17-Apr-11 2011-06-25 31 1770 2011-04-17 4 479038 BR 17-May-11 2011-05-25 30 1707 2011-04-18 2011-05-17 2 479038 BR 16-Jul-11 2011-05-24 30 3043 2011-05-17 2 479038 BR 16-Jul-11 2011-07-24 30 3043 2011-07-16 1 479038 BR 17-Aug-11 2011-09-25 17 2011-07-17 2011-09-17 2 479038 BR 17-Aug-11 2011-09-25 17 1060 2011-09-17 2 2 479038 AR 17-Sep-11 2011-09-25 17 1060 2011-09-17 2 2 479038 AR 24-Jan-12 2012-09-26 31 3 2 2 2	bigsandyrecc	479038	BR		31	3141 2010-12-18	2011-01-17	1119.5	0	1119.5
479038 BR 17-Mar-11 2011-03-25 29 1802 2011-02-17 2011-03-17 5 479038 BR 17-Apr-11 2011-06-25 30 1707 2011-06-17 2011-04-17 4 479038 BR 17-May-11 2011-06-25 30 1707 2011-06-17 2011-06-17 2 479038 BR 16-Jun-11 2011-07-24 30 3043 2011-05-17 2 2 479038 BR 17-Aug-11 2011-07-24 30 3043 2011-07-16 2 2 479038 BR 17-Aug-11 2011-09-25 31 3043 2011-09-17 2011-09-17 2 479038 BR 17-Sep-11 2011-09-25 31 3419 2011-02-12 2 2 479038 AR 24-Jan-12 2012-02-01 31 3419 2011-02-25 7 7 479038 AR 24-Jan-12 2012-02-01 31 248 2012-01-24 8 8 7 2012-02-22 7 7 479038 AR	bigsandyrecc	479038	BR		30	2787 2011-01-18	2011-02-16	1015.1	0	1015.1
479038 BR 17-Apr-11 2011-04-25 31 1713 2011-03-18 2011-04-17 4 479038 BR 17-May-11 2011-05-25 30 1777 2011-05-18 2011-05-17 2 479038 BR 16-Jun-11 2011-06-24 30 3043 2011-05-18 2011-07-16 479038 BR 16-Jun-11 2011-07-24 30 3043 2011-07-17 2011-07-16 479038 BR 17-Aug-11 2011-09-08 14 997 2011-08-17 2011-09-17 479038 BR 17-Sep-11 2011-09-25 17 1060 2011-07-16 2011-09-17 479038 AR 17-Sep-11 2011-09-25 31 3419 2011-02-12 2012-02-02 479038 AR 24-Jan-12 2012-04-30 31 3419 2011-02-12 2012-02-02 479038 AR 24-Mar-12 2012-04-30 31 248 2012-01-24 31 479038 AR 21-Jun-12 2012-04-30 32 252 2012-01-25 31	bigsandyrecc	479038	BR		29	1802 2011-02-17	2011-03-17	565.5	0.4	565.5
479038 BR 17-May-11 2011-05-25 30 1707 2011-05-17 2 479038 BR 16-Jun-11 2011-06-24 30 1983 2011-06-18 2011-07-16 479038 BR 16-Jun-11 2011-07-24 30 1983 2011-06-17 2011-07-16 479038 BR 17-Aug-11 2011-08-25 32 2700 2011-07-17 2011-08-18 2011-08-18 2011-08-18 2011-08-18 2011-08-17 2012-01-24 8 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	bigsandyrecc	479038	BR		31	1713 2011-03-18	2011-04-17	438.2	38.8	438.2
479038 BR 16-Jun-11 2011-06-24 30 1983 2011-05-18 2011-06-16 479038 BR 16-Jul-11 2011-07-24 30 3043 2011-07-17 2011-07-16 479038 BR 17-Aug-11 2011-08-25 32 2700 2011-07-17 2011-08-17 479038 BR 17-Aug-11 2011-09-08 14 997 2011-08-18 2011-08-31 479038 BR 17-Sep-11 2011-09-25 17 1060 2011-09-01 2011-09-17 479038 BR 17-Sep-11 2011-09-26 31 3419 2011-12-25 2012-01-24 8 479038 AR 24-Mar-12 2012-04-01 31 248 2012-02-22 7 479038 AR 22-Apr-12 2012-04-30 29 169 2011-12-25 2012-02-22 7 479038 AR 22-Amr-12 2012-04-30 31 248 2012-02-23 3 3 479038 AR 21-Jun-12 2012-04-30 32 552 2012-01-25 2012-05-24 3	bigsandyrecc	479038	BR		30	1707 2011-04-18	2011-05-17	204.8	67.1	204.8
479038 BR 16-Jul-11 2011-07-24 30 3043 2011-06-17 2011-07-16 479038 BR 17-Aug-11 2011-08-25 32 2700 2011-07-17 2011-08-17 479038 BR 31-Aug-11 2011-09-08 14 997 2011-08-31 479038 BR 17-Sep-11 2011-09-25 17 1060 2011-09-01 2011-09-17 479038 BR 17-Sep-11 2011-09-25 17 1060 2011-012-01 8 479038 AR 24-Jan-12 2012-02-01 31 3419 2011-12-25 2012-01-24 3 479038 AR 22-Feb-12 2012-04-30 29 169 2012-01-25 3 479038 AR 22-Apr-12 2012-04-30 31 248 2012-06-29 3 479038 AR 21-Jun-12 2012-06-29 28 73 2012-01-27 3 479038 AR 21-Jun-12 2012-06-29 28 73 2012-07-27 3 479038 AR 24-Jul-12 2012-06-29	bigsandyrecc	479038	BR		30		2011-06-16	44.8	240.6	
479038 BR 17-Aug-11 2011-08-25 32 2700 2011-07-17 2011-08-17 479038 BR 31-Aug-11 2011-09-08 14 997 2011-08-18 2011-08-17 479038 BR 17-Sep-11 2011-09-25 17 1060 2011-09-01 2011-09-17 479038 BR 17-Sep-11 2011-09-201 31 3419 2011-12-25 2012-01-24 8 479038 AR 22-Feb-12 2012-03-01 31 3419 2011-12-25 2012-01-24 8 479038 AR 22-Apr-12 2012-04-01 31 248 2012-01-25 31 479038 AR 22-Apr-12 2012-04-30 29 169 2012-02-23 2012-03-24 3 479038 AR 22-Apr-12 2012-06-29 28 73 2012-05-24 3 479038 AR 21-Jun-12 2012-06-29 28 73 2012-05-24 3 479038 AR 21-Jun-12 2012-06-29 28 73 2012-05-27 3 479038<	bigsandyrecc	479038	BR		30	3043 2011-06-17	2011-07-16	4.5	281.1	
479038 BR 31-Aug-11 2011-09-08 14 997 2011-08-18 2011-09-17 479038 BR 17-Sep-11 2011-09-25 17 1060 2011-09-01 2011-09-17 479038 BR 17-Sep-11 2011-09-25 17 1060 2011-12-25 2012-01-24 8 479038 AR 24-Jan-12 2012-03-01 31 3419 2011-12-25 2012-01-24 8 479038 AR 22-Feb-12 2012-03-01 31 248 2012-02-22 7 479038 AR 22-Apr-12 2012-04-30 29 169 2012-02-23 3 3 479038 AR 22-Apr-12 2012-06-01 32 552 2012-04-23 3 3 3 3 2012-05-24 1 479038 AR 24-Jun-12 2012-06-29 28 73 2012-06-25 3 2 2012-06-25 3 2 3 2 3 2 2 2 3 2 2 3 3 2 3 3 2 <td< td=""><td>bigsandyrecc</td><td>479038</td><td>BR</td><td></td><td>32</td><td>2700 2011-07-17</td><td>2011-08-17</td><td>4.9</td><td>402.7</td><td></td></td<>	bigsandyrecc	479038	BR		32	2700 2011-07-17	2011-08-17	4.9	402.7	
479038 BR 17-Sep-11 2011-09-25 17 1060 2011-09-01 2011-09-17 479038 AR 24-Jan-12 2012-02-01 31 3419 2011-12-25 2012-01-24 8 479038 AR 22-Feb-12 2012-03-01 31 3419 2011-12-25 2012-01-24 8 479038 AR 22-Apr-12 2012-03-01 31 248 2012-01-25 3 479038 AR 22-Apr-12 2012-04-01 31 248 2012-02-23 2 3 479038 AR 22-Apr-12 2012-06-01 32 552 2012-04-23 3 479038 AR 21-Jun-12 2012-06-29 28 73 2012-05-27 3 479038 AR 21-Jun-12 2012-06-29 28 73 2012-05-27 3 479038 AR 24-Jul-12 2012-06-01 33 961 2012-07-27 2012-06-25 479038 AR 24-Jul-12 2012-08-01 31 729 2012-09-25 2012-09-25 479038	bigsandyrecc	479038	BR		14	997 2011-08-18	2011-08-31	5.3	129.3	
479038 BR 17-Sep-11 2011-09-25 17 1060 2011-09-01 2011-09-17 479038 AR 24-Jan-12 2012-02-01 31 3419 2011-12-25 2012-01-24 8 479038 AR 22-Feb-12 2012-03-01 29 2581 2011-12-55 2012-02-22 7 479038 AR 22-Apr-12 2012-04-01 31 248 2012-02-23 3 479038 AR 22-Apr-12 2012-04-30 29 169 2012-02-23 3 479038 AR 22-Apr-12 2012-06-01 32 552 2012-04-23 3 479038 AR 24-May-12 2012-06-01 32 552 2012-04-23 3 479038 AR 21-Jun-12 2012-06-29 28 73 2012-05-27 3 479038 AR 24-Jul-12 2012-08-01 33 961 2012-07-27 2012-06-25 479038 AR 24-Jul-12 2012-08-01 33 961 2012-07-27 2012-06-25 479038 AR										
479038 AR 24-Jan-12 2012-02-01 31 3419 2011-12-25 2012-01-24 8 479038 AR 22-Feb-12 2012-03-01 29 2581 2012-01-25 2012-02-22 7 479038 AR 24-Mar-12 2012-04-01 31 248 2012-01-25 2012-03-24 3 479038 AR 22-Apr-12 2012-04-30 29 169 2012-03-25 3 479038 AR 22-Apr-12 2012-06-01 32 552 2012-04-23 3 479038 AR 21-Jun-12 2012-06-29 28 73 2012-06-25 3 479038 AR 21-Jun-12 2012-06-29 28 73 2012-07-27 2012-06-25 479038 AR 24-Jul-12 2012-08-01 33 961 2012-07-27 2012-06-25 479038 AR 24-Jul-12 2012-08-01 31 729 2012-07-27 2012-08-25 479038 AR 24-Jul-12 2012-08-01 31 772 2012-09-25 479038 AR <td>bigsandyrecc</td> <td>479038</td> <td>BR</td> <td></td> <td>17</td> <td>1060 2011-09-01</td> <td>2011-09-17</td> <td>59.5</td> <td>95.3</td> <td></td>	bigsandyrecc	479038	BR		17	1060 2011-09-01	2011-09-17	59.5	95.3	
479038 AR 22-Feb-12 2012-03-01 29 2581 2012-01-25 2012-02-22 7 479038 AR 24-Mar-12 2012-04-01 31 248 2012-02-23 2012-03-24 3 479038 AR 22-Apr-12 2012-04-30 29 169 2012-03-25 2012-04-22 3 479038 AR 22-Amay-12 2012-06-01 32 552 2012-04-23 2012-04-22 3 479038 AR 21-Jun-12 2012-06-01 32 552 2012-04-23 2012-05-24 1 479038 AR 21-Jun-12 2012-06-29 28 73 2012-05-27 2012-05-25 479038 AR 24-Jul-12 2012-08-01 33 961 2012-07-27 2012-08-25 479038 AR 24-Aug-12 2012-09-01 31 729 2012-09-25 479038 AR 24-Aug-12 2012-09-01 31 705 2012-09-25 479038 AR 24-Aug-12 2012-09-01 31 105 2012-09-25	bigsandyrecc	47903	8 AR		31	3419 2011-12-25	2012-01-24	858.3	0	858.3
479038 AR 24-Mar-12 2012-04-01 31 248 2012-02-23 2012-03-24 3 479038 AR 22-Apr-12 2012-04-30 29 169 2012-03-25 3 3 479038 AR 24-May-12 2012-06-01 32 552 2012-04-23 2012-04-22 3 479038 AR 24-Jun-12 2012-06-29 28 73 2012-05-27 1 479038 AR 24-Jul-12 2012-06-29 28 73 2012-05-27 2012-06-25 479038 AR 24-Jul-12 2012-08-01 33 961 2012-07-27 2012-06-25 479038 AR 24-Jul-12 2012-09-01 31 729 2012-07-27 2012-09-25 479038 AR 24-Aug-12 2012-09-01 31 729 2012-09-25 479038 AR 24-Aug-12 2012-09-01 31 105 2012-09-25	bigsandyrecc	479038	AR		29	2581 2012-01-25	2012-02-22	759.9	0	759.9
479038 AR 22-Apr-12 2012-04-30 29 169 2012-03-25 2012-04-22 3 479038 AR 24-May-12 2012-06-01 32 552 2012-04-23 2012-05-24 1 479038 AR 21-Jun-12 2012-06-29 28 73 2012-05-27 2012-06-25 479038 AR 24-Jul-12 2012-08-01 33 961 2012-07-27 2012-08-25 479038 AR 24-Jul-12 2012-08-01 33 961 2012-07-27 2012-08-25 479038 AR 24-Jul-12 2012-09-01 31 729 2012-09-25 479038 AR 24-Aug-12 2012-09-01 31 702 2012-09-25 479038 AR 24-Aug-12 2012-09-01 31 705 2012-09-25	bigsandyrecc	479038	AR		31	248 2012-02-23	2012-03-24	383.4	41	383.4
479038 AR 24-May-12 2012-06-01 32 552 2012-04-23 2012-05-24 1 479038 AR 21-Jun-12 2012-06-29 28 73 2012-05-27 2012-06-25 479038 AR 24-Jul-12 2012-08-01 33 961 2012-07-27 2012-08-25 479038 AR 24-Aug-12 2012-09-01 31 729 2012-08-25 479038 AR 24-Aug-12 2012-09-01 31 729 2012-08-27 2012-09-25 479038 AR 24-Aug-12 2012-10-07 31 705 2012-09-25	bigsandyrecc	479038	AR		29	169 2012-03-25	2012-04-22	301.9	30.9	301.9
479038 AR 21-Jun-12 2012-06-29 28 73 2012-05-27 2012-06-25 479038 AR 24-Jul-12 2012-08-01 33 961 2012-07-27 2012-08-25 479038 AR 24-Aug-12 2012-09-01 31 729 2012-08-27 2012-09-25 479038 AB 41176 2012-10-01 31 729 2012-08-27 2012-09-25	bigsandyrecc	479038	AR		32		2012-05-24	129.1	117.5	129.1
479038 AR 24-Jul-12 2012-08-01 33 961 2012-07-27 2012-08-25 479038 AR 24-Aug-12 2012-09-01 31 729 2012-08-27 2012-09-25 470038 AB 41176 2012-10-02 31 105 2012-09-27 2012-10-25	bigsandyrecc	479038	AR		28		2012-06-25	44.6	248.1	
479038 AR 24-Aug-12 2012-09-01 31 729 2012-08-27 2012-09-25	bigsandyrecc	479038	AR		33	961 2012-07-27	2012-08-25	20.6	275.3	
x70030 AD X1176 2012-10-02 31 105 2012-09-27 2012-10-25	bigsandyrecc	479038	AR		31		2012-09-25	82.4	184.9	
4/3030 AN +11/0 2012-10-02 JI 100 2012 10-02	bigsandyrecc	479038	AR	41176 2012-10-02	31	105 2012-09-27	2012-10-25	9.2	7.1	

The conservation plan estimated a monthly savings of 24 dollars.

Using weather normalization to estimate the actual savings accounting for weather.

verages				913 Weather Normalized Monthly kwh Average Saved 53% Weather Normalized Percentage of Savings \$100.44 Weather Normalized savings based on \$0.11
%DirectSa			-9% 86% 90% 96% 68%	0.494066
%NrmiSav			-28% -4% 86% 90% 57% 61%	o.494066
V rmiSav			-758.168 -104.712 1522.181 1448.332 741.254 2337.223 1524.032	1507.404 0
rojectedB 1			2660.832 2476.288 1770.181 1617.332 1293.254 2485.032 2485.032	2235.404 105
WhCDD2(F 1822		1983 3043 2700		677
VhHDD2(K)	1313 3279 3141 2787 1802 1713		3419 2581 248 169 552	
CDD200+ kWhHDD2tkWhCDD2tProjectedB NrmlSav %NrmlSav %DirectSa Averages 280.8 1822		240.6 281.1 402.7	248.1	184.9

Kentucky Retrofit Rider Conservation Plan



BS	<u>#</u> 3
----	------------

PAGE 10 OF 31

ver. 11/17/2011

Location ID:	Customer Information
Name	
OwnerName	Removed for Privacy.
Phone	
Assessor	
Date	

Example Conservation Plan

How Your Home Uses Energy

	2010-001-001-001-001-001-001-001-001-001	model baseline	Elec	Gas	Propane	Wood/Coal	Your home uses
	J	Heating	4,660 kWh	0 kBTU	0 kBTU	0 kBTU	energy for heating, cooling, and base load
	举	Cooling	433 kWh	0 kBTU	0 kBTU		(which is everything
	N	Base	16300 kWh	0 kBTU	0 kBTU		that is not heating or
	=	Total (yr)	21,393 kWh	0 kBTU	0 kBTU	O kBTU	cooling).
ł		о <i>у цурс</i> то и — то истин а	21900 kWh	0 kBTU	0 kBTU	0 kBTU	

How Your Home Could Save Energy

Add Insulation in attic to 12" total from existing.

Seal Duct Work to 10% of fan capacity.

3. Air seal all large penetrations in the crawl space subfloor, with special attention to plumbing under tub(s).

2. Replace batt insulation over the soffit areas after installing air barrier.

1. Install a foam board air barrier over the attic side of the dropped kitchen soffits. Edges and seams bust be sealed						
Savings from Baseline:	Savings from Actuals:	Conversions to Fuel	Current Rates	<u>Projected Savings (vr)</u>		
2556 kWh (Elec)	3,063 kWh (Elec)	3,063 kWh	0.11 / kWh	\$337		
0 kBTU (Gas)	0 kBTU (Gas)	0 therms	2.00 /Therm	\$0		
0 kBTU (Propane)	0 kBTU (Propane)	0 Gal	2.50 /Gal	\$0		

Based on savings from insulation and air seal only due to calibration.

Projected Avg Energy Savings (mo) \$28

before monthly How\$mart Charge

Financing

- \$1,820.00 Cost of improvements (est):
 - \$364.00 Kentucky Home Preformance

\$1,456.00 \$1,572 Wility Contribution \$1,572 Not to Exceed Amount (90% of Savings) @ 3% over 6 years \$23 Monthly Charge

83% of projected savings

Next Steps

- 1. Sign Purchase Agreement
- 2. Select contractor and schedule the job
- 3. Energy Specialist returns to inspect completed work
- 4. Savings begin and installments charge appears on utility bill.
- If, after operation, any of the upgrades fail, the Utility will reevaluate the work.

Acceptance:

I understand that:

Values on previous page are estimates only and are not a guarantee of savings. Energy savings are a best-effort estimation calculated using a computer model. The model takes into account previous usage and characteristics of the house to determine usage and potential savings. Actual savings will vary depending on behavior, weather events, maintenance of the efficiency improvements, and future utility rates.

The Utility has explained what I can do to reduce my energy consumption including, but no limited to: thermastat and other equipment settings, the impact of lighting changes, and additional appliance or home investments not covered under How\$martKY.

Value of the improvements (cost of work) is an estimate and will be verified with the selected contractor. Final monthly charge will be determined at the time of contractor selection. If final project cost is more than the "not to exceed" amount, then customer may opt out of the installation.

Non-payment of the charge will be treated like non-payment of the utility bill potentially resulting in disconnection of service.

The Kentucky Energy Retrofit Rider (marketed as How\$martKY) is a voluntary utility tariff that amortizes the cost of the efficiency improvement over the course of fifteen years or 75% of the expected life of the improvement (whichever is less) at a fixed interest rate. The expected cumulative cost to the customer over the course of the payback period of the improvements is as follows:

Fixed Monthly Charge		<u>Estimate</u> \$23	<u>Not to Exceed</u> \$25		
Capital Investment		\$1,456	\$1,572		
Project Fee(s)	4.50%	\$66	\$71	Payback Period (years)	6
Capital Fee	0.50%	\$7	\$8	Cost of Capital	3%
Total Interest over life of pa	ayback	<u>\$151</u>	<u>\$177</u>		
Total Cost over life of payba	ack	\$1,672	\$1,819		

Account Holder: print name	 Owner: print name	
Date:	 Date:	



Energy Efficiency for Everyone

8
tem
e 5 1
Pag
n for
givel
olan
tion plan given for
Ка
onse
ple c
the example conser
he e
for t
neet
ads
Spre
2012
Oct 2
rfits (
Seto
ed_F
nplet
Con
rData
the
Weat
e N_V
om the l
This is an exert fr
s an
This i

7/15/2010 8/18/2010 9/17/2010 9/18/2010 10/18/2010 11/14/2010 9/18/2010 11/14/2010 3 10/18/2010 11/14/2010 3 12/18/2010 1/17/2011 11 12/18/2011 1/17/2011 11 1/18/2011 1/17/2011 10 2/17/2011 3/17/2011 10 3/18/2011 5/17/2011 10 3/18/2011 5/17/2011 10 1/17/2011 8/17/2011 10 7/17/2011 8/17/2011 7 11/24/2011 1/24/2011 7 11/25/2012 3/24/2012 3 3/25/2012 3/24/2012 3 3/25/2012 5/24/2012 3 3/25/2012 5/27/2012 3
0,10/2010 $0,11/2010$ 1663 $9/18/2010$ $11/14/2010$ 2976 $11/15/2010$ $12/17/2010$ 2856 $12/18/2010$ $12/17/2011$ 1579 $2/17/2011$ $3/17/2011$ 1579 $2/17/2011$ $3/17/2011$ 1454 $3/18/2011$ $4/17/2011$ 1066 $4/18/2011$ $5/17/2011$ 1311 $5/17/2011$ $7/16/2011$ 1373 $6/17/2011$ $7/16/2011$ 1373 $6/17/2011$ $8/17/2011$ 1373 $6/17/2011$ $1/24/2011$ 1742 $11/24/2011$ $1/24/2012$ 1002 $1/25/2012$ $3/24/2012$ 1028 $3/25/2012$ $4/22/2012$ 1111 $4/23/2012$ $4/22/2012$ 11111 $4/23/2012$ $4/22/2012$ 11111 $4/23/2012$ $4/22/2012$ 11111 $4/23/2012$ $4/22/2012$ 11111 $4/23/2012$ $4/22/2012$
1808 10/18/2010 11/14/2010 2976 11/15/2010 12/17/2011 1 2856 12/18/2011 1/17/2011 1 22228 1/18/2011 2/17/2011 1 1579 2/17/2011 3/17/2011 1 1454 3/18/2011 4/17/2011 1 1311 5/18/2011 4/17/2011 1 13373 6/17/2011 7/16/2011 1 1373 6/17/2011 1/16/2011 1 1373 6/17/2011 8/17/2011 1 1373 6/17/2011 1/16/2011 1 1373 6/17/2011 1/12/2011 1 1507 7/17/2011 8/17/2011 1 1502 1/22/2012 1/22/2012 1 1 1655 1/22/2012 1/22/2012 1 1 1656 1/22/2012 3/24/2012 1 1 1657 1/22/2012 3/24/2012 1 1 1658 3/25/2012 3/24/2012 1 1 1658 3/25/2012
2976 11/15/2010 12/17/2010 2856 12/18/2010 1/17/2011 1 2228 1/18/2011 2/17/2011 1 1579 2/17/2011 3/17/2011 1 1579 2/17/2011 3/17/2011 1 1454 3/18/2011 4/17/2011 1 1066 4/18/2011 6/17/2011 1 1311 5/18/2011 6/17/2011 1 1373 6/17/2011 8/17/2011 1 1507 7/17/2011 8/17/2011 1 1507 7/17/2011 8/17/2011 1 1507 7/17/2011 8/17/2011 1 1507 7/17/2011 1/24/2011 1 1665 1/25/2012 2/22/2012 1 2/22/2012 1665 1/22/2012 3/24/2012 1 1 2/22/2012 1678 3/25/2012 3/24/2012 1 1 2/22/2012 1 168 3/25/2012 3/24/2012 1 1 1 2/22/2012 1 1028 3/25/2
2856 12/18/2010 1/17/2011 1 2228 1/18/2011 2/15/2011 1 1579 2/17/2011 3/17/2011 1 1454 3/18/2011 4/17/2011 1 1311 5/18/2011 4/17/2011 1 1311 5/18/2011 6/16/2011 1 13373 6/17/2011 7/16/2011 1 1373 6/17/2011 8/17/2011 1 1507 7/17/2011 8/17/2011 1 1742 11/24/2011 12/24/2011 1 1742 11/24/2011 1/2/24/2011 1 1902 12/25/2012 2/22/2012 1 1655 1/22/2012 3/24/2012 1 1164 2/23/2012 3/24/2012 1 1028 3/25/2012 4/22/2012 1 1 1111 4/23/2012 6/25/2012 6/25/2012 1 1180 5/27/2012 6/25/2012 6/25/2012 1 1180 5/27/2012 6/25/2012 6/25/2012 1
2228 $1/18/2011$ $2/16/2011$ 1579 $2/17/2011$ $3/17/2011$ 1454 $3/18/2011$ $3/17/2011$ $14/17/2011$ 1066 $4/18/2011$ $5/17/2011$ 1373 1373 $6/17/2011$ $5/17/2011$ 1373 $6/17/2011$ $7/16/2011$ 1507 $7/17/2011$ $8/17/2011$ 1742 $11/24/2011$ $1/24/2011$ 1742 $11/24/2011$ $1/24/2012$ 1902 $12/25/2011$ $1/24/2012$ 1655 $1/25/2012$ $3/24/2012$ 1028 $3/25/2012$ $4/22/2012$ 1111 $4/23/2012$ $6/25/2012$ 1180 $5/27/2012$ $6/25/2012$
1579 $2/17/2011$ $3/17/2011$ 1454 $3/18/2011$ $4/17/2011$ 1066 $4/18/2011$ $5/17/2011$ 1311 $5/18/2011$ $6/16/2011$ 1373 $6/17/2011$ $7/16/2011$ 1507 $7/17/2011$ $8/17/2011$ 1742 $11/24/2011$ $12/24/2011$ 1902 $12/25/2012$ $1/24/2012$ 1655 $1/225/2012$ $2/22/2012$ 1655 $1/25/2012$ $2/22/2012$ 1028 $3/25/2012$ $4/22/2012$ 1111 $4/23/2012$ $5/27/2012$ 1180 $5/27/2012$ $6/25/2012$
1454 3/18/2011 4/17/2011 1066 4/18/2011 5/17/2011 1311 5/18/2011 5/17/2011 1373 6/17/2011 6/16/2011 1507 7/17/2011 8/17/2011 1742 11/24/2011 12/24/2011 1902 12/25/2011 1/24/2012 1655 1/25/2012 2/22/2012 1164 2/23/2012 3/24/2012 1028 3/25/2012 4/22/2012 1111 4/23/2012 1111 1180 5/27/2012 6/25/2012
1066 4/18/2011 5/17/2011 1311 5/18/2011 6/16/2011 1373 6/17/2011 6/16/2011 1507 7/17/2011 8/17/2011 1742 11/24/2011 12/24/2011 1902 12/25/2011 1/24/2012 1655 1/25/2012 2/22/2012 1164 2/23/2012 3/24/2012 1028 3/25/2012 4/22/2012 1111 4/23/2012 5/24/2012 11180 5/27/2012 6/25/2012
1311 5/18/2011 6/16/2011 1373 6/17/2011 7/16/2011 1507 7/17/2011 8/17/2011 1742 11/24/2011 12/24/2011 1902 12/25/2011 1/24/2012 1655 1/25/2012 2/22/2012 1164 2/23/2012 3/24/2012 1028 3/25/2012 4/22/2012 1111 4/23/2012 5/24/2012 1180 5/27/2012 6/25/2012
1373 6/17/2011 7/16/2011 1507 7/17/2011 8/17/2011 1742 11/24/2011 12/24/2011 1902 12/25/2011 1/24/2012 1655 1/25/2012 2/22/2012 1164 2/23/2012 3/24/2012 1028 3/25/2012 4/22/2012 1111 4/23/2012 6/25/2012 1180 5/27/2012 6/25/2012
1507 7/17/2011 8/17/2011 1742 11/24/2011 12/24/2011 1902 12/25/2011 1/24/2012 1655 1/25/2012 2/22/2012 1164 2/23/2012 3/24/2012 1028 3/25/2012 4/22/2012 1111 4/23/2012 5/24/2012 1180 5/27/2012 6/25/2012
1742 11/24/2011 12/24/2011 1902 12/25/2011 1/24/2012 1655 1/25/2012 2/22/2012 1164 2/23/2012 3/24/2012 1028 3/25/2012 4/22/2012 1111 4/23/2012 5/24/2012 1180 5/27/2012 6/25/2012
1902 12/25/2011 1/24/2012 1655 1/25/2012 2/22/2012 1164 2/23/2012 3/24/2012 1028 3/25/2012 4/22/2012 1111 4/23/2012 5/24/2012 1180 5/27/2012 6/25/2012
1655 1/25/2012 2/22/2012 1164 2/23/2012 3/24/2012 1028 3/25/2012 4/22/2012 1111 4/23/2012 5/24/2012 1180 5/27/2012 6/25/2012
1164 2/23/2012 3/24/2012 1028 3/25/2012 4/22/2012 1111 4/23/2012 5/24/2012 1180 5/27/2012 6/25/2012
1028 3/25/2012 4/22/2012 1111 4/23/2012 5/24/2012 1180 5/27/2012 6/25/2012
1111 4/23/2012 5/24/2012 1 1180 5/27/2012 6/25/2012
1180 5/27/2012 6/25/2012
33 1656 7/27/2012 8/25/2012 20.6
31 1214 8/27/2012 9/25/2012 82.4
31 1027 9/27/2012 10/25/2012 9.2

The conservation plan estimated a monthly savings of 28 dollars.

Using weather normalization to estimate the actual savings accounting for weather.

																					257 Weather Normalized Monthly kwh Average Saved	14% Weather Normalized Percentage of Savings
CDD200+ kWhHDD2tkWhCDD2tProjectedB NrmlSav %NrmlSav %DirectSa Averages 432.8 2418 280.8 2043											41%	33%	26%	26%	29%	-4%	10%	-21%	19%	50%	25	149
6NrmlSav											15%	18%	23%	21%	22%	-10%	24%	-7%	21%	50%		
rmiSav											313	431	499	305	293	-104	365	-104	316	0		
ojectedB N											2055	2333	2154	1469	1321	1007	1545	1552	1530	1027		
vhCDD2(Pr 2418 2043								1311	1373	1507							1180	1656	1214			
/hHDD2(KW	1808	2976	2856	2228	1579	1454	1066				1742	1902	1655	1164	1028	1111						
CDD200+ KW 432.8 280.8								240.6	281.1	402.7							248.1	275.3	184.9			

\$28.27 Weather Normalized savings based on \$0.11

Kentucky Retrofit Rider Conservation Plan



FM #1

PAGE 14 OF 31

ver. 11/17/2011

Location ID:	Customer Information
Name	
OwnerName	Removed for Privacy.
Phone	
Assessor	
Date	

Example Conservation Plan

How Your Home Uses Energy

	model baseline	Elec	Gas	Propane	Wood/Coal	Your home uses
1	Heating	7,730 kWh	0 kBTU	0 kBTU	0 kBTU	energy for heating, cooling, and base load
\	Cooling	4300 kWh	0 kBTU	0 kBTU		(which is everything
N	Base	14200 kWh	0 kBTU	0 kBTU		that is not heating or
=	Total (yr)	26,230 kWh	0 kBTU	0 kBTU	0 kBTU	cooling).
		26400 kWh	0 kBTU	0 kBTU	0 kBTU	-

How Your Home Could Save Energy

Low-flow shower heads.
Insulate water lines.
Install ventilation fans.
Install dryer vent.
Install curtain drain.
Install CO monitor.
Improve electrical safety.
Crawl space vapor barrier.
Replace existing hi consumption blubs with CFL's.
Install R-19 insulation in floor.
Add Insulation in attic to 12" total from existing.
Replace HVAC Heating with New HVAC Heating System.
Seal Duct Work to 0.
Replace HVAC Cooling with New HVAC Cooling System.
Reduce house air leakage to 1000 cfm50.
PAGE 15 OF 31

Savings from Baseline:	Savings from Juals:	Conversions to Fuel	Currenes	<u>Projected Savings (yr)</u>
9893 kWh (Elec)	10,063 kWh (Elec)	10,063 kWh	0.11 /kWh	\$1,107
0 kBTU (Gas)	0 kBTU (Gas)	0 therms	2.00 /Therm	\$0
0 kBTU (Propane)	0 kBTU (Propane)	0 Gal	2.50 /Gal	\$0

Based on savings from insulation and air seal only due to calibration.

Projected Avg Energy Savings (mo) \$92 before monthly How\$mart Charge

Financing

- \$11,870.13 Cost of Improvements (est):
 - \$2,000.00 Kentucky Home Preformance
 - \$995.46 Rebates Utility

\$8,874.67 Utility Contribution

\$11,361 Not to Exceed Amount (90% of Savings)

@ 3% over 15 years \$64 Monthly Charge

70% of projected savings

Next Steps

- 1. Sign Purchase Agreement
- 2. Select contractor and schedule the job
- 3. Energy Specialist returns to inspect completed work
- 4. Savings begin and installments charge appears on utility bill.
- If, after operation, any of the upgrades fail, the Utility will reevaluate the work.

Acceptance:

I understand that:

Values on previous page are estimates only and are not a guarantee of savings. Energy savings are a best-effort estimation calculated using a computer model. The model takes into account previous usage and characteristics of the house to determine usage and potential savings. Actual savings will vary depending on behavior, weather events, maintenance of the efficiency improvements, and future utility rates.

The Utility has explained what I can do to reduce my energy consumption including, but no limited to: thermastat and other equipment settings, the impact of lighting changes, and additional appliance or home investments not covered under How\$martKY.

Value of the improvements (cost of work) is an estimate and will be verified with the selected contractor. Final monthly charge will be determined at the time of contractor selection. If final project cost is more than the "not to exceed" amount, then customer may opt out of the installation.

Non-payment of the charge will be treated like non-payment of the utility bill potentially resulting in disconnection of service.

The Kentucky Energy Retrofit Rider (marketed as How\$martKY) is a voluntary utility tariff that amortizes the cost of the efficiency improvement over the course of fifteen years or 75% of the expected life of the improvement (whichever is less) at a fixed interest rate. The expected cumulative cost to the customer over the course of the payback period of the improvements is as follows:

	Estimate	Not to Exceed		
	\$64	\$83		
	\$8,875	\$11,361		
4.50%	\$399	\$511	Payback Period (years)	15
0.50%	\$44	\$57	Cost of Capital	3%
bayback	<u>\$2,309</u>	<u>\$3,072</u>		
back	\$11,583	\$14,944		
		\$64 \$8,875 4.50% \$399 0.50% \$44 bayback <u>\$2,309</u>	\$64 \$83 \$8,875 \$11,361 4.50% \$399 \$511 0.50% \$44 \$57 payback <u>\$2,309</u> <u>\$3,072</u>	\$64 \$83 \$8,875 \$11,361 4.50% \$399 0.50% \$44 \$57 Cost of Capital payback \$2,309

Account Holder: print name	Owner: print name	
Date:	Date:	



Energy Efficiency for Everyone

%NrmlSav %DirectSa Averages
hCDD2t ProjectedB NrmlSav
CDD200+ KWhHDD2I KWhCDD2I Projec
CDD200+

		1585 Weather Normalized Monthly kwh Average Saved 63% Weather Normalized Percentage of Savings
		64% 72% 54%
		67% 53% 53%
		1899 1678 1178
		2850 2459 2221
2669 2756 2279		951 781 1043
	1222 1535 2657 1931 1268 1033	
280.1 377 292.4		423.5 275.3 184.9

\$174.37 Weather Normalized savings based on \$0.11

N_WeatherData_All_Com	Page 5 Item 8	
ming-Mason Energy Example Conservation Plan 2		

This is an exert	This is an exert from the N_WeatherData_All_Completed_Retorfits Oct 2012 Spreadsheet for the example conservation plan given for Page 5 Item 8	a_All_Complete	d_Retorfits C	oct 2012 Spread	sheet fo	r the example	e conservation	ı plan given	for Page 5 Ite	m 8
Fleming-Mason	Fleming-Mason Energy Example Conservation Plan 2	/ation Plan 2								
CoopCode	LocationID DataStatus Pres Rdg Dt	s Pres Rdg Dt	Billing Dt	Days Use kWh_Usage	_Usage	StartDate	EndDate	TotalHDD	TotalCDD HI	HDD200+
flemmasrecc	210649011 BR	2-Jun-11	6/10/2011	31	2387	5/3/2011	6/2/2011	164.4	143.4	
flemmasrecc	210649011 BR	4-Jul-11	7/12/2011	32	2669	6/3/2011	7/4/2011	11.6	280.1	
flemmasrecc	210649011 BR	1-Aug-11	8/9/2011	28	2756	7/5/2011	8/1/2011	0.2	377	
flemmasrecc	210649011 BR	31-Aug-11	9/8/2011	30	2279	8/2/2011	8/31/2011	10.2	292.4	
flemmasrecc	210649011 BR	2-Oct-11	10/10/2011	32	1485	9/1/2011	10/2/2011	148.7	121.8	
flemmasrecc	210649011 BR	31-Oct-11	11/8/2011	29	1222	10/3/2011	10/31/2011	321	31.6	321
flemmasrecc	210649011 BR	30-Nov-11	12/8/2011	30	1535	11/1/2011	11/30/2011	459.6	3.7	459.6
flemmasrecc	210649011 BR	4-Jan-12	1/12/2012	35	2657	12/1/2011	1/4/2012	881.9	0	881.9
flemmasrecc	210649011 BR	31-Jan-12	2/8/2012	27	1931	1/5/2012	1/31/2012	716.5	0	716.5
flemmasrecc	210649011 BR	29-Feb-12	3/8/2012	29	1268	2/1/2012	2/29/2012	722.3	0.3	722.3
flemmasrecc	210649011 BR	1-Apr-12	4/9/2012	32	1033	3/1/2012	4/1/2012	328.2	48	328.2
flemmasrecc	210649011 BR	30-Apr-12	5/8/2012	0	0	5/1/2012	4/30/2012			
flemmasrecc	210649011 AR	3-Jul-12	7/11/2012	30	951	6/27/2012	7/25/2012	2.7	423.5	
flemmasrecc	210649011 AR	31-Jul-12	8/8/2012	28	781	7/27/2012	8/25/2012	20.6	275.3	
flemmasrecc	210649011 AR	3-Sep-12	9/11/2012	34	1043	8/27/2012	9/25/2012	82.4	184.9	
flemmasrecc	210649011 AR	2-Oct-12	10/10/2012	29	651	9/27/2012	10/25/2012	9.2	7.1	

The conservation plan estimated a monthly savings of 92 dollars.

Using weather normalization to estimate the actual savings accounting for weather.

Kentucky Retrofit Rider Conservation Plan



FM #2 Location ID: **Customer Information** Removed for Privacy. OwnerName

Name

Phone

Date

Assessor

PAGE 19 OF 31

ver. 11/17/2011

Example Conservation Plan

How Your Home Uses Energy

	model baseline	Elec	Gas	Propane	Wood/Coal	Your home uses
l	Heating	9,170 kWh	0 kBTU	0 kBTU	0 kBTU	energy for heating, cooling, and base load
✵	Cooling	4620 kWh	0 kBTU	0 kBTU		(which is everything
N	Base	28000 kWh	0 kBTU	0 kBTU		that is not heating or
=	Total (yr)	41,790 kWh	O kBTU	0 kBTU	0 kBTU	cooling).
		41900 kWh	0 kBTU	0 kBTU	0 kBTU	د

How Your Home Could Save Energy

Add spray foam to root	f deck behind attic knee v	walls		
Add Rim Joist Insulation	n.			
Add Crawlspace Wall Ir	nsulation.			
Install Programmable T	Thermostat.			
Replace HVAC Heating	with New HVAC Heating	System.		
Seal Duct Work to 10%	of fan capacity.			
Replace HVAC Cooling	with New HVAC Cooling	System.		
2. Spray foam insulatio	on in attic and crawl space	e will contribute to	reduction of whole house air leakage.	
1. Weatherstrip, sweep	o, and / or adjust all (five)	exterior doors as	needed to create a	
Savings from Baseline:	Savings from Actuals:	Conversions to Fuel	Current Rates Projecte	d Savings (yr)
10078 kWh (Elec)	10,188 kWh (Elec)	10,188 kWh	0.11 /kWh	\$1,121
0 kBTU (Gas)	0 kBTU (Gas)	0 therms	2.00 /Therm	\$0
0 kBTU (Propane)	0 kBTU (Propane)	0 Gal	2.50 /Gal	\$0
Based on savings from insulatio	n and air seal only due to calibration	on.	Projected Avg Energy Savings (mo) \$93
			before monthly How\$mart Charg	ge

Financing				
\$14,322.00	Cost of Improvements (est):	\$11,50	2.00	Utility Contribution
		\$11	,502	Not to Exceed Amount (90% of Savings)
\$2,000.00	Kentucky Home Preformance			
\$520.00	Customer Contribution	@	3%	
\$300.00	Rebates - Utility	over	15	years
<i>4300.00</i>	Reputes - Only	Ś	83	Monthly Charge
		Ŧ		

89% of projected savings

Next Steps

- 1. Sign Purchase Agreement
- 2. Select contractor and schedule the job
- 3. Energy Specialist returns to inspect completed work
- 4. Savings begin and installments charge appears on utility bill.
- If, after operation, any of the upgrades fail, the Utility will reevaluate the work.

Acceptance:

I understand that:

Values on previous page are estimates only and are not a guarantee of savings. Energy savings are a best-effort estimation calculated using a computer model. The model takes into account previous usage and characteristics of the house to determine usage and potential savings. Actual savings will vary depending on behavior, weather events, maintenance of the efficiency improvements, and future utility rates.

The Utility has explained what I can do to reduce my energy consumption including, but no limited to: thermastat and other equipment settings, the impact of lighting changes, and additional appliance or home investments not covered under How\$martKY.

Value of the improvements (cost of work) is an estimate and will be verified with the selected contractor. Final monthly charge will be determined at the time of contractor selection. If final project cost is more than the "not to exceed" amount, then customer may opt out of the installation.

Non-payment of the charge will be treated like non-payment of the utility bill potentially resulting in disconnection of service.

The Kentucky Energy Retrofit Rider (marketed as How\$martKY) is a voluntary utility tariff that amortizes the cost of the efficiency improvement over the course of fifteen years or 75% of the expected life of the improvement (whichever is less) at a fixed interest rate. The expected cumulative cost to the customer over the course of the payback period of the improvements is as follows:

Fixed Monthly Charge		<u>Estimate</u> \$83	<u>Not to Exceed</u> \$84		
Capital Investment		\$11,502	\$11,502		
Project Fee(s)	4.50%	\$518	\$518	Payback Period (years)	15
Capital Fee	0.50%	\$58	\$58	Cost of Capital	3%
Total Interest over life of pay	/back	<u>\$2,993</u>	<u>\$3,110</u>		
Total Cost over life of payba	ck	\$15,012	\$15,129		

Account Holder:	Owner: _ print name	•
Date:	Date:	



Energy Efficiency for Everyone

srages		 \$1,130.00 Weather Normalized Monthly kwh Average Saved 32% Weather Normalized Percentage of Savings \$124.35 Weather Normalized savings based on \$0.11
birectSa Ave		42% 38% 39%
√rmiSav <mark> </mark> %E		33% 40% 35% 22%
mlSav %N		1087 1496 1209 730
ojectedB Nr		3319 3747 3480 3318
VhCDD2(Pr 3974 4237		3647 2941 2232 2251 2271 2588 2588
VhHDD2ikV	2455 3920 5368 4039 3453 3115 2218	
CDD200+ kWhHDD2tkWhCDD2tProjectedB NrmlSav %NrmlSav %DirectSa Averages 375.5 3974 413.8 4237		256.1 369 185.5 423.5 275.3 184.9

for the example conservation plan given for Page 5 Item 8	
d_Retorfits Oct 2012 Spreadsheet	
s is an exert from the N_WeatherData_All_Complete	ning-Mason Energy Example Conservation Plan 3

This is an exert Fleming-Mason	This is an exert from the N_WeatherData_All_Completed_Retorfits Oct 2012 Spreadsheet for the example conservation plan given for Page 5 Item 8 Fleming-Mason Energy Example Conservation Plan 3	_All_Complete ation Plan 3	ed_Retorfits O	ct 2012 Sprea	dsheet fo	r the exampl	e conservatior	n plan given f	or Page 5 lt	em 8
CoopCode	LocationID DataStatus Pres Rdg Dt	Pres Rdg Dt	Billing Dt	Days Use kWh_Usage	h_Usage	StartDate	EndDate	TotalHDD 1	TotalCDD HDD200+	DD200+
flemmasrecc	320439012 BR	2-Aug-10	8/10/2010	29	3974	7/5/2010	8/2/2010	0.3	375.5	
flemmasrecc	320439012 BR	5-Sep-10	9/13/2010	34	4237	8/3/2010	9/5/2010	12.7	413.8	
flemmasrecc	320439012 BR	3-Oct-10	10/11/2010	28	2565	9/6/2010	10/3/2010	87.7	193.6	
flemmasrecc	320439012 BR	1-Nov-10	11/9/2010	29	2455	10/4/2010	11/1/2010	261.8	59.9	261.8
flemmasrecc	320439012 BR	2-Dec-10	12/10/2010	31	3920	11/2/2010	12/2/2010	606.5	7.7	606.5
flemmasrecc	320439012 BR	4-Jan-11	1/12/2011	33	5368	12/3/2010	1/4/2011	1208.8	0	1208.8
flemmasrecc	320439012 BR	1-Feb-11	2/9/2011	28	4039	1/5/2011	2/1/2011	1026.6	0	1026.6
flemmasrecc	320439012 BR	2-Mar-11	3/10/2011	29	3453	2/2/2011	3/2/2011	774.5	0.3	774.5
flemmasrecc	320439012 BR	4-Apr-11	4/12/2011	33	3115	3/3/2011	4/4/2011	612.4	16.5	612.4
flemmasrecc	320439012 BR	3-May-11	5/11/2011	29	2218	4/5/2011	5/3/2011	217.1	45.5	217.1
flemmasrecc	320439012 BR	6-Jun-11	6/14/2011	34	3834	5/4/2011	6/6/2011	147.4	184.4	
flemmasrecc	320439012 BR	6-Jul-11	7/14/2011	30	3647	6/7/2011	7/6/2011	11	256.1	
flemmasrecc	320439012 BR	2-Aug-11	8/10/2011	27	2941	7/7/2011	8/2/2011	0.2	369	
flemmasrecc	320439012 AR	4-Jun-12	6/12/2012	34	2232	5/2/2012	6/4/2012	80.1	185.5	
flemmasrecc	320439012 AR	3-Jul-12	7/11/2012	29	2251	6/27/2012	7/25/2012	2.7	423.5	
flemmasrecc	320439012 AR	1-Aug-12	8/9/2012	29	2271	7/27/2012	8/25/2012	20.6	275.3	
flemmasrecc	320439012 AR	4-Sep-12	9/12/2012	34	2588	8/27/2012	9/25/2012	82.4	184.9	
flemmasrecc	320439012 AR	3-Oct-12	10/11/2012	29	1997	9/27/2012	10/25/2012	9.2	7.1	

The conservation plan estimated a monthly savings of 93 dollars.

Using weather normalization to estimate the actual savings accounting for weather.

Kentucky Retrofit Rider Conservation Plan



PAGE 23 OF 31 ver. 11/17/2011

Grayson Rural Electric A Touchstone Energy[®] Cooperative Depart of Amora currenter

Customer Information
Removed for Privacy.

Example Conservation Plan

How Your Home Uses Energy

	model baseline	Elec	Gas	Propane	Wood/Coal	Your home uses
1	Heating	4,430 kWh	0 kBTU	0 kBTU	0 kBTU	energy for heating, cooling, and base load
*	Cooling	1960 kWh	0 kBTU	0 kBTU		(which is everything
N	Base	14700 kWh	0 kBTU	0 kBTU		that is not heating or
=	Total (yr)	21,090 kWh	0 kBTU	O kBTU	0 kBTU	cooling).
		24700 kWh	0 kBTU	0 kBTU	0 kBTU	-

How Your Home Could Save Energy

					۲
Add Rim Joist Ins	ulation.				
Install R-19 insula	ation in floor.				
Install Programm	able Thermostat.				
Replace HVAC He	eating with New HVAC Heating	System.			
Replace HVAC Co	ooling with New HVAC Cooling	System.			
Seal or remove v	/hole house fan				
Seal beams in liv	ing room and kitchen				
Seal attic access	in rear bedroom closet				
Reduce house ai	r leakage from 2287 to 1100 cf	m50.			
Savings from Baselin	e: Savings from Actuals:	<u>Conversions to Fuel</u>	<u>Current</u>	<u>Rates</u>	<u>Projected Savings (yr)</u>
4134 kWh (Elec) 7,744 kWh (Elec)	7,744 kWh	0.	11 /kWh	\$852
0 kBTU (Gas	s) 0 kBTU (Gas)	0 therms	2.	00 /Therm	\$0
0 kBTU (Pro	pane) 0 kBTU (Propane)	0 Gal	2.	50 /Gal	\$0
Based on savings from	insulation and air seal only due to calibrat	ion. E	Projected Av	vg Energy Sa	vings (mo) \$71
			-	ionthly How\$	
Financing					
\$7,298.23	Cost of Improvements (est):	ç	5,338.58	Utility Contr	ibution
			\$8,743	Not to Exceed	Amount (90% of Savings)
\$1,459.65	Kentucky Home Preforman	Ce			
\$500.00	Rebates - Utility		@ 3%		
<i>4000.00</i>			over 15	years	
			\$39	Monthly Ch	arge

55% of projected savings

Next Steps

- 1. Sign Purchase Agreement
- 2. Select contractor and schedule the job
- 3. Energy Specialist returns to inspect completed work
- 4. Savings begin and installments charge appears on utility bill.
- If, after operation, any of the upgrades fail, the Utility will reevaluate the work.

Acceptance:

I understand that:

Date:

Values on previous page are estimates only and are not a guarantee of savings. Energy savings are a best-effort estimation calculated using a computer model. The model takes into account previous usage and characteristics of the house to determine usage and potential savings. Actual savings will vary depending on behavior, weather events, maintenance of the efficiency improvements, and future utility rates.

The Utility has explained what I can do to reduce my energy consumption including, but no limited to: thermastat and other equipment settings, the impact of lighting changes, and additional appliance or home investments not covered under How\$martKY.

Value of the improvements (cost of work) is an estimate and will be verified with the selected contractor. Final monthly charge will be determined at the time of contractor selection. If final project cost is more than the "not to exceed" amount, then customer may opt out of the installation.

Non-payment of the charge will be treated like non-payment of the utility bill potentially resulting in disconnection of service.

The Kentucky Energy Retrofit Rider (marketed as How\$martKY) is a voluntary utility tariff that amortizes the cost of the efficiency improvement over the course of fifteen years or 75% of the expected life of the improvement (whichever is less) at a fixed interest rate. The expected cumulative cost to the customer over the course of the payback period of the improvements is as follows:

		<u>Estimate</u>	Not to Exceed		
Fixed Monthly Charge		\$39	\$64		
Capital Investment		\$5,339	\$8,743		
Project Fee(s)	4.50%	\$240	\$393	Payback Period (years)	15
Capital Fee	0.50%	\$27	\$44	Cost of Capital	3%
Total Interest over life of p	bayback	<u>\$1,389</u>	<u>\$2,364</u>		
Total Cost over life of payl	back	\$6,968	\$11,500		
Account Holder:			Owner		
print name			print nam	9	

How\$martKY

Date:

Energy Efficiency for Everyone

This is an exert from the N_WeatherData_All_Completed_Retorfits Oct 2012 Spreadsheet for the example conservation plan given for Page 5 Item

CoopCode	LocationID	DataStatus	Pres Rdg Dt	Billing Dt	Days Use	Days Use kWh_Usage	StartDate	EndDate	TotalHDD
GRAYSONRECC	540104076012	BR	12-Apr-10	4/20/2010	31	1497	3/13/2010	4/12/2010	381.3
GRAYSONRECC	540104076012	BR	11-May-10	5/19/2010	29	948	4/13/2010	5/11/2010	202.6
GRAYSONRECC	540104076012	BR	12-Jun-10	6/20/2010	32	1410	5/12/2010	6/12/2010	34.5
GRAYSONRECC	540104076012	BR	11-Jul-10	7/19/2010	29	1822	6/13/2010	7/11/2010	4.4
GRAYSONRECC	540104076012	BR	12-Aug-10	8/20/2010	32	1861	7/12/2010	8/12/2010	0.9
GRAYSONRECC	540104076012	BR	12-Sep-10	9/20/2010	31	1790	8/13/2010	9/12/2010	19.4
GRAYSONRECC	540104076012	BR	12-Oct-10	10/20/2010	30	1337	9/13/2010	10/12/2010	146.9
GRAYSONRECC	540104076012	BR	12-Nov-10	11/20/2010	31	1523	10/13/2010	11/12/2010	392.5
GRAYSONRECC	540104076012	BR	11-Dec-10	12/19/2010	29	2897	11/13/2010	12/11/2010	751.8
GRAYSONRECC	540104076012	BR	12-Jan-11	1/20/2011	32	3649	12/12/2010	1/12/2011	1197.7
GRAYSONRECC	540104076012	BR	12-Feb-11	2/20/2011	31	3120	1/13/2011	2/12/2011	1116.5
GRAYSONRECC	540104076012	BR	11-Mar-11	3/19/2011	27	2462	2/13/2011	3/11/2011	541.3
GRAYSONRECC	540104076012	BR	11-Apr-11	4/19/2011	31	2243	3/12/2011	4/11/2011	471
graysonrecc	540104076012	AR	12-Jan-12	1/20/2012	32	862	12/12/2011	1/12/2012	772.9
graysonrecc	540104076012	AR	11-Feb-12	2/19/2012	30	386	1/13/2012	2/11/2012	829.3
graysonrecc	540104076012	AR	12-Mar-12	3/20/2012	30	270	2/12/2012	3/12/2012	652
graysonrecc	540104076012	AR	12-Apr-12	4/20/2012	31	273	3/13/2012	4/12/2012	241.3
graysonrecc	540104076012	AR	12-May-12	5/20/2012	30	302	4/13/2012	5/12/2012	188.7
graysonrecc	540104076012	AR	12-Jun-12	6/20/2012	31	427	5/27/2012	6/25/2012	44.6
graysonrecc	540104076012	AR	12-Jul-12	7/20/2012	30	208	6/27/2012	7/25/2012	2.7
graysonrecc	540104076012	AR	12-Aug-12	8/20/2012	31	253	7/27/2012	8/25/2012	20.6
graysonrecc	540104076012	AR	12-Sep-12	9/20/2012	31	386	8/27/2012	9/25/2012	82.4

The conservation plan estimated a monthly savings of 71 dollars.

Using weather normalization to estimate the actual savings accounting for weather.

Kentucky Retrofit Rider Conservation Plan

G #2

PAGE 27. OF 31

Example

Plan

Conservation

ver. 11/17/2011

Grayson Rural Electric

A Touchstone Energy Cooperative

Location ID:	Customer Information
Name	
OwnerName	Removed for Privacy.
Phone	
Assessor	
Date	

How Your Home Uses Energy

	model baseline	Elec	Gas	Propane	Wood/Coal	Your home uses
ß	Heating	4,820 kWh	0 kBTU	0 kBTU	0 kBTU	energy for heating, cooling, and base load
*	Cooling	1700 kWh	0 kBTU	0 kBTU		(which is everything
N	Base	14500 kWh	0 kBTU	0 kBTU		that is not heating or
=	Total (yr)	21,020 kWh	0 kbtu	0 kBTU	0 kBTU	cooling).
L		21100 kWh	0 kBTU	0 kBTU	0 kBTU	

How Your Home Could Save Energy

Install Programmable T	hermostat.			
Replace HVAC Heating	with New HVAC Heating	System.		
Seal Duct Work to 10%	of fan capacity.			
Replace HVAC Cooling	with New HVAC Cooling S	System.		
Savings from Baseline:	Savings from Actuals:	Conversions to Fuel	Current Rates	Projected Savings (yr)
3468 kWh (Elec)	3,548 kWh (Elec)	3,548 kWh	0.11 /kWh	\$390
0 kBTU (Gas)	0 kBTU (Gas)	0 therms	2.00 /Therm	\$0
0 kBTU (Propane)	0 kBTU (Propane)	0 Gal	2.50 /Gal	\$0

Based on savings from insulation and air seal only due to calibration.

Projected Avg Energy Savings (mo) \$33

before monthly How\$mart Charge

Financing				
\$4,250.00	Cost of Improvements (est):	\$2,900	.00	Utility Contribution
		\$4,	005	Not to Exceed Amount (90% of Savings)
\$850.00	Kentucky Home Preformance			
\$500.00	Rebates - Utility	@	3%	
·	-	over	15	years
		\$2	1	Monthly Charge
			65%	of projected savings

erages																					1514	80% \$166.53	$\Big $
irectSa <mark>/</mark> Av													76%	88%	89%	88%	68%	20%	89%	86%	78%		Ļ
rmlSav													68%	86%	89%	81%	76%	72%	89%	84%	73%		
niSav %N													1792	2400	2099	1130	978	1125	1713	1356	1033		
ectedB Nrm													2654	2786	2369	1403	1280	1552	1921	1609	1419		
ICDD2(Proj		1410	1822	1861	1790													427	208	253	386		
VhHDD2(kWf	1497 948						1523	2897	3649	3120	2462	2243	862	386	270	273	302						
DD200+ kV		221.5	354.7	431.2	306.2													248.1	423.5	275.3	184.9		
301 CI	381.3 202.6						392.5	751.8	1197.7	1116.5	541.3	471	772.9	829.3	652	241.3	188.7						
TotalCDD HDD200+ CDD200+ kWhHDD2(kWhCDD2(ProjectedB NrmlSav %NrmlSav %DirectSav 20.4 20.4 4.07 4.07	61.7 61.7	221.5	354.7	431.2	306.2	175.1	28.5	3.1	ο	0	0.4	35.7	0	0	1.1	55.9	83.9	248.1	423.5	275.3	184.9		

PAGE 26 OF 31

∞

Next Steps

- 1. Sign Purchase Agreement
- 2. Select contractor and schedule the job
- 3. Energy Specialist returns to inspect completed work
- 4. Savings begin and installments charge appears on utility bill.
- If, after operation, any of the upgrades fail, the Utility will reevaluate the work.

Acceptance:

I understand that:

Values on previous page are estimates only and are not a guarantee of savings. Energy savings are a best-effort estimation calculated using a computer model. The model takes into account previous usage and characteristics of the house to determine usage and potential savings. Actual savings will vary depending on behavior, weather events, maintenance of the efficiency improvements, and future utility rates.

The Utility has explained what I can do to reduce my energy consumption including, but no limited to: thermastat and other equipment settings, the impact of lighting changes, and additional appliance or home investments not covered under How\$martKY.

Value of the improvements (cost of work) is an estimate and will be verified with the selected contractor. Final monthly charge will be determined at the time of contractor selection. If final project cost is more than the "not to exceed" amount, then customer may opt out of the installation.

Non-payment of the charge will be treated like non-payment of the utility bill potentially resulting in disconnection of service.

The Kentucky Energy Retrofit Rider (marketed as How\$martKY) is a voluntary utility tariff that amortizes the cost of the efficiency improvement over the course of fifteen years or 75% of the expected life of the improvement (whichever is less) at a fixed interest rate. The expected cumulative cost to the customer over the course of the payback period of the improvements is as follows:

Fixed Monthly Charge \$20 \$21 Capital Investment \$2,732 \$2,895 Project Fee(s) 4.50% \$123 \$130 Payback Period (years) 15 Capital Fee 0.50% \$14 \$14 Cost of Capital 3% Total Interest over life of payback \$711 \$783 \$783 Total Cost over life of payback \$3,566 \$3,808 \$3,808			<u>Estimate</u>	Not to Exceed		
Project Fee(s) 4.50% \$123 \$130 Payback Period (years) 15 Capital Fee 0.50% \$14 \$14 Cost of Capital 3% Total Interest over life of payback \$711 \$783 \$783 Total Cost over life of payback \$3,566 \$3,808 \$400 Account Holder: Owner: \$100 \$100	Fixed Monthly C	Charge	\$20	\$21		
Capital Fee 0.50% \$14 \$14 Cost of Capital 3% Total Interest over life of payback \$711 \$783 \$783 \$763 \$3,566 \$3,808	Capital Investme	ent	\$2,732	\$2,895		
Total Interest over life of payback \$711 \$783 Total Cost over life of payback \$3,566 \$3,808 Account Holder: Owner:	Project Fee(s)	4.50%	\$123	\$130	Payback Period (years)	15
Total Cost over life of payback \$3,566 \$3,808 Account Holder: Owner:	Capital Fee	0.50%	\$14	\$14	Cost of Capital	3%
Account Holder: Owner:	Total Interest ov	ver life of payback	<u>\$711</u>	<u>\$783</u>		
	Total Cost over	life of payback	\$3,566	\$3,808		
	Account Holder:			Owner:		
			······································			
Date: Date:	Date:			Date:		



Energy Efficiency for Everyone

Next Steps

- 1. Sign Purchase Agreement
- 2. Select contractor and schedule the job
- 3. Energy Specialist returns to inspect completed work
- 4. Savings begin and installments charge appears on utility bill.
- If, after operation, any of the upgrades fail, the Utility will reevaluate the work.

Acceptance:

I understand that:

Values on previous page are estimates only and are not a guarantee of savings. Energy savings are a best-effort estimation calculated using a computer model. The model takes into account previous usage and characteristics of the house to determine usage and potential savings. Actual savings will vary depending on behavior, weather events, maintenance of the efficiency improvements, and future utility rates.

The Utility has explained what I can do to reduce my energy consumption including, but no limited to: thermastat and other equipment settings, the impact of lighting changes, and additional appliance or home investments not covered under How\$martKY.

Value of the improvements (cost of work) is an estimate and will be verified with the selected contractor. Final monthly charge will be determined at the time of contractor selection. If final project cost is more than the "not to exceed" amount, then customer may opt out of the installation.

Non-payment of the charge will be treated like non-payment of the utility bill potentially resulting in disconnection of service.

The Kentucky Energy Retrofit Rider (marketed as How\$martKY) is a voluntary utility tariff that amortizes the cost of the efficiency improvement over the course of fifteen years or 75% of the expected life of the improvement (whichever is less) at a fixed interest rate. The expected cumulative cost to the customer over the course of the payback period of the improvements is as follows:

Fixed Monthly Charge		<u>Estimate</u> \$21	<u>Not to Exceed</u> \$29		
Capital Investment		\$2,900	\$4,005		
Project Fee(s)	4.50%	\$131	\$180	Payback Period (years)	15
Capital Fee	0.50%	\$15	\$20	Cost of Capital	3%
Total Interest over life of	payback	<u>\$755</u>	<u>\$1,083</u>		
Total Cost over life of pay	back	\$3,785	\$5,269		
Account Holder: print name			Owner: print name		
Date:			Date:		



Energy Efficiency for Everyone

This is an exert from the N_WeatherData_All_Completed_Retorfits Oct 2012 Spreadsheet for the example conservation plan given for Page 5 | ervation Plan 2 Graveon Evample Con

Grayson Example	Grayson Example Conservation Plan 2	2							
CoopCode	LocationID	DataStatus	Pres Rdg Dt	Billing Dt	Days Use	kWh_Usage	StartDate	EndDate	TotalHDD
graysonrecc	542206033017	BR	10-Jul-10	7/18/2010	29	1757	6/12/2010	7/10/2010	4.3
graysonrecc	542206033017	BR	12-Aug-10	8/20/2010	33	2037	7/11/2010	8/12/2010	~~1
graysonrecc	542206033017	BR	12-Sep-10	9/20/2010	31	1577	8/13/2010	9/12/2010	19.4
graysonrecc	542206033017	BR	12-Oct-10	10/20/2010	30	1192	9/13/2010	10/12/2010	146.9
graysonrecc	542206033017	BR	11-Nov-10	11/19/2010	30	1418	10/13/2010	11/11/2010	380.4
graysonrecc	542206033017	BR	11-Dec-10	12/19/2010	30	2182	11/12/2010	12/11/2010	763.9
graysonrecc	542206033017	BR	11-Jan-11	1/19/2011	31	2464	12/12/2010	1/11/2011	1152.4
graysonrecc	542206033017	BR	11-Feb-11	2/19/2011	31	2402	1/12/2011	2/11/2011	1129.4
graysonrecc	542206033017	BR	12-Mar-11	3/20/2011	29	1529	2/12/2011	3/12/2011	586.9
graysonrecc	542206033017	BR	10-Apr-11	4/18/2011	29	1465	3/13/2011	4/10/2011	455.2
graysonrecc	542206033017	BR	12-May-11	5/20/2011	32	1314	4/11/2011	5/12/2011	233
graysonrecc	542206033017	BR	12-Jun-11	6/20/2011	31	1432	5/13/2011	6/12/2011	87.3
graysonrecc	542206033017	BR	12-Jul-11	7/20/2011	30	1470	6/13/2011	7/12/2011	11.2
graysonrecc	542206033017	AR	11-Feb-12	2/19/2012	30	1552	1/13/2012	2/11/2012	829.3
graysonrecc	542206033017	AR	12-Mar-12	3/20/2012	30	1195	2/12/2012	3/12/2012	652
graysonrecc	542206033017	AR	12-Apr-12	4/20/2012	31	1173	3/13/2012	4/12/2012	241.3
graysonrecc	542206033017	AR	12-May-12	5/20/2012	30	1035	4/13/2012	5/12/2012	188.7
graysonrecc	542206033017	AR	11-Jun-12	6/19/2012	30	923	5/27/2012	6/25/2012	44.6
graysonrecc	542206033017	AR	12-Jul-12	7/20/2012	31	1114	6/27/2012	7/25/2012	2.7
graysonrecc	542206033017	AR	12-Aug-12	8/20/2012	31	1083	7/27/2012	8/25/2012	20.6
graysonrecc	542206033017	AR	12-Sep-12	9/20/2012	31	1074	8/27/2012	9/25/2012	82.4

The conservation plan estimated a monthly savings of 33 dollars.

Using weather normalization to estimate the actual savings accounting for weather.

	rages 418 \$45.96
	TotalCDD Miniliary Mi
	IrmISav %Di 34% 34% 37% 30% 16%
	IISav %N 485 603 73 140 848 848 848 848 203
	ojectedB Nrm 2037 1798 1175 1459 1962 1962 1537 1277
	VhCDD2(Pr 1757 2037 1577 1577 1577 1577 1577 1577 1470 1114 1083 1074
	WhHDD2(kV 1418 2464 2402 1529 1465 1314 1314 1173 1173 1173 1173
	DD200+ kV 357.6 443.5 306.2 306.2 206.2 206.2 206.2 206.2 206.2 206.2 206.2 21.9 251.9 251.9 251.9 251.9 251.9 251.9 251.9 251.9 251.9 251.9 251.9 251.9 251.6 275.3 276.1 275.3 276.1 276
	2D200+ C 380.4 763.9 1152.4 1129.4 586.9 455.2 233 233 652 241.3 188.7
ltem 8	TotalCDD HI 357.6 357.6 443.5 306.2 306.2 175.1 27.2 55.9 0 1.1 55.9 0 1.1 55.9 83.9 83.9 248.1 1.1 251.9 1.1 251.9 1.1 275.3 184.9

PAGE 30 OF 31

Weather Normalized Monthly kwh Average Saved Weather Normalized Percentage of Savings Weather Normalized savings based on \$0.11

Item <u>9</u> Page <u>1</u> of <u>1</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

9. Refer to page 6, Item No. 17 of the Application. For your particular cooperative, provide an itemized breakdown of all funding sources, including name and dollar amount, that will be providing funds for the program administration, sources of the funding, and any adjustments to the revenue structure of the program.

Response:

To date, MACED has raised \$1 million to cover the operating expenses associated with conducting the KER pilot program. This money does not include the lending capital MACED has raised. This funding comes from a mix of grants from private foundations and state agencies, including: blue moon fund; Chorus Foundation; Civil Society Institute; David Rockefeller Fund; F. B. Heron Foundation; Ford Foundation; Kentucky Housing Corporation; Mary Reynolds Babcock Foundation; Merck Family Fund; Mertz Gilmore Foundation; New World Foundation: Rockefeller Brothers Fund; Surdna Foundation; and William Randolph Hearst Foundation. It should be noted that, aside from three of the funders listed. KER pilot funding is drawn from grants that support other aspects of MACED's work beyond the KER pilot. Currently, MACED has recently been approved for \$300,000 in funding from a TVA Environmental Mitigation Grant to be applied to KER. Going forward, MACED will continue to seek outside funding sources and will also institute a schedule of fees for the services provided under the KER program to assist with the long-term sustainability of the program. TVA Environmental Mitigation Grant funds will be used to subsidize a portion of these fees.

-

Item <u>10</u> Page <u>1</u> of <u>2</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

10. Refer to the Application, pages 6 and 7, Item No. 18.

a. On pages 6 and 7 there is a discussion about the September 2012 United State Department of Agriculture's Rural Utilities Service ("RUS") Notice of Proposed Rulemaking regarding the Energy Efficiency and Conservation Loan Program ("Program"), which proposes to allow qualified energy-efficiency programs, the standards to which the KER Rider programs appears to comply, to constitute an eligible use of the program funds for active borrowers in good standing with RUS.

(1) Explain what steps your particular cooperative has taken in an attempt to ensure the KER Rider is an eligible use of the Program funds.

(2) If known, state when Program funds will be available for your particular cooperative for energy-efficiency programs.

(3) Identify all procedures and costs necessary to implement the Program at your particular cooperative.

b. Explain whether any additional funding supporting the on-bill financing program has been earmarked or received to date at your particular cooperative.

Item <u>10</u> Page <u>2</u> of <u>2</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

Response:

a.

1. Comments were made during the comment period that

expressed our interest in the program. As of this date a

final ruling has not been made

- 2. Not known at this time.
- 3. Not known at this time.
- b. None

Item <u>11</u> Page <u>1</u> of <u>1</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

11. Refer to Exhibit A of the Application. Joint Applicants describe Exhibit A as the current KY Energy Retrofit Rider Tariff with proposed changes indicated by striking over deletions and adding or changing text as noted. Confirm that Exhibit A is actually the proposed tariff and Exhibit B is the tariff with changes indicated.

Response:

We confirm that Exhibit A is actually the proposed tariff and Exhibit B is the tariff with changes indicated.

Item <u>12</u> Page <u>1</u> of <u>1</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

12. Refer to Exhibit B, page 3, of the existing rider where there is a proposed text change to revise the annual interest rate in the Retrofit Project Charge from the Company's current average cost of long-term debt to the cost of capital used by the capital provider to finance the project.

a. Explain the basis of this proposed change.

b. Identify how the KER Rider would be jeopardized if this specific change is not made to the existing program.

c. State whether this change represents an increase in the Retrofit Project Charge.

d. State whether the terms "annual interest rate" and "cost of capital" are synonymous for purposes of the Retrofit Project Charge.

Response:

a. The purpose of the change is to directly tie the cost of the capital used to the interest rate in the retrofit project charge, thus keeping the capital cost revenue neutral.

b. If the capital costs are not revenue neutral, additional capital costs could accrue to the customer or to the coop.

c. No

d. Yes



Item <u>14</u> Page <u>1</u> of <u>1</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

14. This Item is requested only of Fleming-Mason. In Case No. 2012-00369,² Fleming-Mason Energy Cooperative Inc. is requesting a rate design change as well as new tariffs for Time of Day Rates and Inclining Block Rates in a revenue neutral case. If approved, describe what impacts, if any, the proposed changes will have on the administration and costs of the KER Rider at Fleming-Mason.

Response:

These changes will have no effect on the cost of the KER Rider or the administration.

² Case No. 2012-00369, Application of Fleming-Mason Energy Cooperative, Inc. for an Order Authorizing a Change in Rate Design for Its Residential Rate Classes, and the Offering of Several Optional Rate Designs for the Residential Rate Classes, filed Nov. 21, 2012.

Item <u>13</u> Page <u>1</u> of <u>1</u> Witness: Big Sandy – Bruce Aaron Davis Fleming Mason – Joni Hazelrigg Grayson – Don Combs MACED – Bill Blair

Case No. 2012-00484 First Data Request –Dec. 14, 2012

13. This Item is requested only of Big Sandy. In Case No. 2012-00030,¹ Big Sandy was granted a rate increase accompanied with a change in its rate design. Describe what impacts, if any, the granted changes will have on the administration and costs of the KER Rider at Big Sandy.

Response:

These changes will have no effect on the cost of the KER Rider or the administration.

¹ Case No. 2012-00030, Application of Big Sandy Rural Electric Cooperative Corporation for an Adjustment of Rates, (Ky. PSC Oct. 31, 2012).