OWEN Electric

A Touchstone Energy Cooperative

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PUBLIC SERVICE COMMISSION

Rate Case No. 2008-00154

THIRD SUPPLEMENTAL REQUESTS OF THE ATTORNEY GENERAL TO OWEN ELECTRIC COOPERATIVE INC

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February 27, 2009

Mr. Jeff Derouen, Executive Director
Public Service Commission
211 Sower Boulevard
Frankfort, KY 40602

RE: **PSC Case No. 2008-00154**
Owen Electric Cooperative, Inc.

Dear Ms. Stumbo:

Please find in Case No. 2008-00154 the original and seven (7) copies of Applicant's Response to "Third Supplemental Data Requests of the Attorney General to Owen Electric Cooperative, Inc." This relates to the application for adjustment rates by Owen Electric Cooperative, Inc.

Contact me at (502) 732-6689 or Rebecca Witt at (502) 484-3471 if there are any questions.

Thanks for your assistance in this matter.

Respectfully yours,

CRAWFORD & BAXTER, P.S.C.

James M. Crawford
Counsel for Owen Electric Cooperative, Inc.

JMC/mns

Enclosures

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF OWEN ELECTRIC COOPERATIVE, INC. FOR ADJUSTMENT OF RATES	)))	**Case No. 2008-00154**

ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUESTS FOR INFORMATION FROM OWEN ELECTRIC COOPERATIVE

Comes now the intervenor, the Attorney General of the Commonwealth of Kentucky, by and through his Office of Rate Intervention, and submits this Supplemental Request for Information to Owen Electric Cooperative, Inc., to be answered by the date specified in the Commission's Order of Procedure, and in accord with the following:

(1) In each case where a request seeks data provided in response to a staff request, reference to the appropriate request item will be deemed a satisfactory response.

(2) Please identify the witness who will be prepared to answer questions concerning each request.

(3) These requests shall be deemed continuing so as to require further and supplemental responses if the company receives or generates additional information within the scope of these requests between the time of the response and the time of any hearing conducted hereon.

(4) If any request appears confusing, please request clarification directly from the Office of Attorney General.

(5) To the extent that the specific document, workpaper or information as requested does not exist, but a similar document, workpaper or information does exist, provide the similar document, workpaper, or information.

(6) To the extent that any request may be answered by way of a computer printout, please identify each variable contained in the printout which would not be self evident to a person not familiar with the printout.

(7) If the company has objections to any request on the grounds that the requested information is proprietary in nature, or for any other reason, please notify the Office of the Attorney General as soon as possible.

(8) For any document withheld on the basis of privilege, state the following: date; author; addressee; indicated or blind copies; all persons to whom distributed, shown, or explained; and, the nature and legal basis for the privilege asserted.

(9) In the event any document called for has been destroyed or transferred beyond the control of the company, please state: the identity of the person by whom it was destroyed or transferred, and the person authorizing the destruction or transfer; the time, place, and method of destruction or transfer; and, the reason(s) for its destruction or transfer. If destroyed or disposed of by operation of a retention policy, state the retention policy.

Respectfully submitted,

JACK CONWAY
ATTORNEY GENERAL OF KENTUCKY

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CERTIFICATE OF SERVICE AND NOTICE OF FILING

I hereby give notice that this the 13th day of February 2009, I have filed the original and ten copies of the foregoing Attorney General's Request for Information with the Kentucky Public Service Commission at 211 Sower Boulevard, Frankfort, Kentucky, 40601 and certify that this same day I have served the parties by mailing a true copy of same, postage prepaid, to those listed below.

Honorable James M. Crawford
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523 Highland Ave.
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Carrollton, KY 41008

Honorable Michael L. Kurtz
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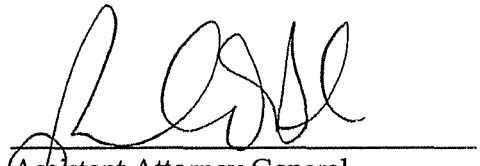


Assistant Attorney General

OWEN ELECTRIC COOPERATIVE
CASE NO. 2008-00154
Attorney General's Third Supplemental Data Request For Information from Owen Electric Cooperative

1. As shown in Exhibit S, pages 2 and 4 and Exhibit G, page 1, in this case Owen is requesting a rate increase of $4,064,395. This requested rate increase is also confirmed in the testimonies of Rebecca Witt and Alan Zumstein. However, Page 3, Question 12 of Mr. Stallons' substitution testimony now references a requested rate increase amount of $3,991,675. This is $72,720 lower than the as-filed rate increase request. In this regard, please provide the following information:

    a. Provide a detailed listing of the various components making up the $72,720 difference between the requested rate increase amounts of $4,064,395 and $3,991,675.
    b. For each of the components making up the $72,720 difference to be provided in the response to part (a), provide workpapers showing the calculations and source references underlying each of these components.
    c. Provide updated and revised Exhibits G, K and S that incorporate the updated rate increase request of $3,991,675.

2. For the last five calendar years, please provide a program description and program budget for any and all energy efficiency and/or demand response programs offered by Owen. Please include a breakdown of residential/commercial customers participating in any and all such programs along with an estimate of the reductions in both KW and KWH for each program identified and describe in detail how such reductions were estimated.

3. Please refer to the substitution testimony of Mr. Stallons, Page 4, Question 16. In the testimony, he testifies that in order to create proper incentives to promote energy innovation, including energy conservation, energy efficiency and demand response, the right retail rate environment must exist. Please identify the party receiving these "proper incentives." Is it Owen or its customers?

    a. If it is Owen, please explain in detail how Owen believes it will benefit from raising the customer charge and demand charge and lowering the energy charges with regard to the promotion of energy innovation, including energy conservation, energy efficiency and demand response.

    b. If it is Owen's customers, please explain in detail how raising the customer charge and demand charge and lowering the energy charges sends an appropriate energy conservation signal to residential customers.

4. Please provide a breakdown of the average bill for Owen's residential and commercial customers using Owens' currently approved rates. Please include in this breakdown, the KWH usage along with any surcharges, etc. which make up a customers *monthly bill.*

5. Please provide a breakdown of the average bill for Owen's residential and commercial customers using the rates proposed by Owen in this case. Please include in this breakdown, the KWH usage along with any surcharges, etc. which make up a customer's monthly bill.

6. Please refer to the substitution testimony of Mr. Stallons, Page 8, Question 25. Please explain in detail how Owen's low income customers would benefit from a higher customer charge, higher demand charge and a lower energy charge. Please provide a copy of the study referred to in Mr. Stallons' answer along with supporting documentation for the statement by Mr. Stallons that "[t]he facts show that increasing our member's customer charge as opposed to increasing the energy charge will not adversely affect our lower income members".

7. Please refer to the substitution testimony of Mr. Stallons, Page 9, Question 25. Please provide an estimate of the reductions in customer usage that Owen believes it can achieve as a result of any demand response/energy efficiency programs. Please provide supporting documentation which indicates how these estimates were calculated.

8. Please refer to the substitution testimony of Mr. Stallons, Page 11, Question 28. Please provide the energy charges for the utilities identified in the question by Mr. Stallons.

9. Please refer to the substitution testimony of Mr. Stallons, Page 11, Question 28. In a manner similar to the table provided on Page 11, please indicate how Owen's current customer and energy charges compare to its sister co-operatives on EKPC's system.

10. Please refer to the substitution testimony of Mr. Stallons, Page 11, Question 28. In a manner similar to the table provided on Page 11, please indicate how Owen's proposed customer and energy charges would compare to its sister co-operatives on EKPC's system.

11. Please provide a breakdown of Owen's electric sales for the last five years by customer class.

Affiant, Mark A. Stallons, states that the answers given by him to the foregoing questions are true and correct to the best of her knowledge and belief.

Mark A. Stallons, President & CEO

Subscribed and sworn to before me by the affiant, Mark A. Stallons, this 27th day of February, 2009.

Notary Laura M. Huggins
State-at-Large

My Commission expires May 2, 2012.

Affiant, Rebecca Witt, states that the answers given by her to the foregoing questions are true and correct to the best of her knowledge and belief.

Rebecca Witt, Senior Vice President of Corporate Services

Subscribed and sworn to before me by the affiant, Rebecca Witt, this 27th day of February, 2009.

Notary Laura M. Scoggins
State-at-Large

My Commission expires May 2, 2013.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

ADJUSTMENT OF ELECTRIC) RATES OF OWEN ELECTRIC) COOPERATIVE)	CASE NO. 2008-00154

CERTIFICATE

STATE OF KENTUCKY }
)
COUNTY OF OWEN)

James R. Adkins being duly sworn, states that he has supervised the preparation of the responses of Owen Electric Cooperative to the Office of the Attorney General Third Supplemental Data Request in the above referenced case, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

James R. Adkins

Subscribed and swoon before me on this 27th day of February, 2009.

Laura M. Scroggins
Notary Public

My Commission expires: May 2, 2012

OWEN ELECTRIC COOPERATIVE
CASE NO. 2008-00154
RESPONSE TO ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUEST

Question No.1:

As shown in Exhibit S, pages 2 and 4 and Exhibit G, page 1, in this case Owen is requesting a rate increase of $4,064,395. This requested rate increase is also confirmed in the testimonies of Rebecca Witt and Alan Zumstein. However, Page 3, Question 12 of Mr. Stallons' substitution testimony now references a requested rate increase amount of $3,991,675. This is $72,720 lower that the as-filed rate increase request. In this regard, please provide the following information:

a. Provide a detailed listing of the various components making up the $72,720 difference between the requested rate increase amounts of $4,064,395 and $3,991,696.

Response

Questions 12, Page 3 of Mr. Stallon's testimony referred to the requested rate increase of $3,991,695 in error. The correct requested rate increase amount is $4,064,395.

b. For each of the components making up the $72,720 difference to be provided in the response to part (a), provide workpapers showing the calculations and source references underlying each of these components..

Response

See the response to part (a) above.

c. Provide updated and revised Exhibits G, K and S that incorporate the updated rate increase request of $3,991,675..

Response

See the response to part (a) above.

OWEN ELECTRIC COOPERATIVE
CASE NO. 2008-00154

RESPONSE TO ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUEST

Question No.2:

For the last five calendar years, please provide a program description and program budget for any and all energy efficiency and/or demand response programs offered by Owen. Please include a breakdown of residential/commercial customers participating in any and all such programs along with an estimate of the reductions in both KW and KWH for each program identified and describe in detail how such reductions were estimated.

Response:

Owen Electric has been actively involved in promoting the efficient use of energy for many years. We have focused our advertising and educational activities on programs that promote energy conservation and energy efficiency. We have increased communications in this area in an effort to educate our membership. Our member service representatives are trained to discuss energy efficiency with our members and our website has numerous energy savings resources throughout. Owen performs energy audits for our members and offers incentives for efficient home building practices and home appliances. We have issued Compact Florescent Lightbulbs (CFL's) to our members at our annual meetings and at others programs. We have hosted and/or have participated in numerous conferences, workshops and programs that deal specifically with energy efficiency. (See attached Schedules #2A and #2B for recap of programs for previous five years and estimated reductions in energy, respectively).

OWEN ELECTRIC COOPERATIVE
CASE NO 2008-00154

Owen Electric Cooperative - Energy Efficiency / Demand Response Programs
Schedule 2A

		2004	2005	2006	2007	2008
Energy Audits		Energy Audits (Residential)	Energy Audits (Residential)	Energy Audits (Residential)	Energy Audits (Residential)	Energy Audits (Residential)
	TOTAL	146	182	151	262	318
		Energy Audits (Commercial)	Energy Audits (Commercial)	Energy Audits (Commercial)	Energy Audits (Commercial)	Energy Audits (Commercial)
	TOTAL	0	4	9	7	6
CFL's Distributed		4242	5280	5300	5452	4808
Energy Efficiency Rebates:						
Touchstone Energy Home		2	6	13	9	4
Energy Efficient Manufactured Home		0	0	0	0	0
Geo-Thermal HVAC		33	40	47	53	53
Hig ficiency HVAC		66	75	197	43	48
High efficiency Water Heater		77	77	61	46	33
Direct Load Control Program (Began late 2008)						Y
--Goal of 5,800 members participating after 5 year period						
Energy Efficiency Programs / Workshops						
Energy Management Conference for Builders		Y	Y	Y		Y
School Programs on Energy Conservation		Y	Y	Y	Y	Y
N.KY Home Show- Energy Efficiency Booth		Y	Y	Y	Y	Y
Cincinnati Home Show- Energy Efficiency Booth		Y	Y	Y	Y	Y
Area Community Events- Energy Efficiency Booth		Y	Y	Y	Y	Y
High Performance Schools Workshop				Y		
N.Ky Home Builders- Efficient Home Programs		Y	Y	Y	Y	Y
Energy Efficiency Workshops for Senior Citizens Groups				Y	Y	Y
Energy Efficiency Workshops for Community Action Groups						Y
Energy Efficiency Education- News Letter,Billing Inserts		Y	Y	Y	Y	Y
Energy Efficiency Programs Budget		**$ 121,676**	**$ 82,468**	**$ 119,484**	**$ 118,967**	**$ 200,654**

OWEN ELECTRIC COOPERATIVE
CASE NO 2008-00154

Owen Electric Cooperative - Energy Efficiency / Demand Response Programs
Estimated Reduction in Energy
Schedule 2B

Program	2004	2005	2006	2007	2008	Per unit
CFLs Distributed	4,242	5,280	5,300	5,452	4,808	
Energy Savings (kWh)	212,100	264,000	265,000	272,600	240,400	50
Winter Demand Savings (kW)	32	40	40	41	36	0.0075
Summer Demand Savings (kW)	32	40	40	41	36	0.0075
T.E.Home	2	6	13	9	4	
Energy Savings (kWh)	5,484	16,452	35,646	24,678	10,968	2742
Winter Demand Savings (kW)	6	17	37	26	11	2.85
Summer Demand Savings (kW)	1	4	10	7	3	0.74
Geo-Thermal HVAC	33	40	47	53	53	
Energy Savings (kWh)	64,746	78,480	92,214	103,986	103,986	1962
Winter Demand Savings (kW)	141	170	200	226	226	4.26
Summer Demand Savings (kW)	31	37	44	49	49	0.93
High Efficiency HVAC	66	75	197	43	48	
Energy Savings (kWh)	53,064	60,300	158,388	34,572	38,592	804
Winter Demand Savings (kW)	0	0	0	0	0	0
Summer Demand Savings (kW)	18	20	53	12	13	0.27
High Efficiency Water Heater	77	77	61	46	33	
Energy Savings (kWh)	16,940	16,940	13,420	10,120	7,260	220
Winter Demand Savings (kW)	4	4	3	2	2	0.05
Summer Demand Savings (kW)	2	2	1	1	1	0.02
Energy Audit	146	182	151	262	318	
Energy Savings (kWh)	102,200	127,400	105,700	183,400	222,600	700
Winter Demand Savings (kW)	85	106	88	152	184	0.58
Summer Demand Savings (kW)	23	29	24	42	51	0.16

Total	**2004**	**2005**	**2006**	**2007**	**2008**	**Annual Cumulative 2004-08**
Energy Savings (kWh)	454,534	563,572	670,368	629,356	623,806	2,941,636
Winter Demand Savings (kW)	267	337	368	447	459	1,877
Summer Demand Savings (kW)	107	132	172	151	153	715

Note: The above calculations are based on data derived from East Kentucky Power Cooperative's (EKPC) 2006 Intergrated Resource Plan (Case 2006-0017).
EKPC uses the EPRI *DSManager* software package to conduct the more detailed quantitative evaluation. *DSManager* calculates the impact of DSM programs on utilities and their customers. *DSManager* produces a quantitative estimate of the costs and benefits for each of the parties using simplified but powerful and flexible models of the electric system and its customers. *DSManager* determines the cost-effectiveness of DSM programs by reporting results according to the cost-benefit tests established in the California Standard Practice Manual for Economic Analysis of Demand Side Programs.(California Public Utilities Commission and California Energy Commission, "Standard Practice Manual for Economic Analysis of Demand-Side Management Programs," Document Number P400-87-006, December 1987.)

OWEN ELECTRIC COOPERATIVE
CASE NO. 2008-00154

RESPONSE TO ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUEST

Question No 3:

Please refer to the substitution testimony of Mr. Stallons, Page 4, Question 16. In the testimony, he testifies that in order to create proper incentives to promote energy innovation, including energy conservation, energy efficiency, and demand response, the right retail rate environment must exist. Please identify the party receiving these "proper incentives." Is it Owen or its customers?

a. If it is Owen, please explain in detail how Owen believes it will benefit from raising the customer charge and demand charge and lowering energy charges with regard to promotion of energy innovation, including energy conservation, energy efficiency and demand response.

b. If it is Owen's customers, please explain in detail how raising the customer charge and demand charge and lowering the energy charges sends an appropriate conservation signal to residential customers.

Response:

Increasing the customer charge will benefit both Owen and Owen's members.

An increased customer charge will benefit Owen because it places less risk on Owen's distribution costs especially during times when customers reduce their energy usage. For all of Owen's members, distribution costs are considered to be fixed costs. Purchased power is the only variable cost that Owen incurs. The most appropriate cost and price relationship for Owen is one where the fixed costs are recovered through a fixed customer charge and all variable costs are recovered through an energy rate that is based on sales volume. Under this scenario, Owen can be more willing to develop innovative strategies to encourage its members to engage in energy conservation because it is not putting itself at risk financially by encouraging its members to reduce consumption. In fact, Owen would be able to develop a variety of rate options that would encourage and incentivise its member-owners to reduce consumption. Examples of two of these rate options are given below:

1. A Time of Day (TOD) Rate: This is a rate design that provides for an on peak and an off peak energy rate. This design allows for a better matching of energy costs with rates and reduces distribution cost risk by providing for a higher customer charge. The member has a much better incentive to switch energy usage to the off-peak hours, because the energy charge is reduced during those hours. Under EKPC's Phase II rates, the incentive for a switch to off-peak usage can be enhanced.

A TOD rate with a higher customer charge is illustrated below:

Customer Charge per month	$21.92
On-peak Energy per kWh	$0.08420
Off-peak Energy per kWh	$0.04721

With a lower customer charge of $9.00, we could construct the following TOD rate.

Customer Charge per month	$9.00
On-peak Energy per kWh	$0.09536
Off-peak Energy per kWh	$0.05836

Owen's wholesale power costs for both situations above are the same and are provided below:

On-peak energy costs per kWh	$0.03674
Off-peak energy costs per kWh	$0.07374

2. Inclining Block Rates: This rate design includes providing for current energy costs in the first block and marginal energy costs in the second block assuming a two step type of inclining block rates. A lower energy rate is established for the first block of KWH usage and a higher rate is established for subsequent usage blocks. The member is encouraged to restrict consumption because there is a higher cost of energy at higher usages. As with the TOD rate, fixed costs would be recovered through a higher customer charge so Owen's costs would be matched with the associated revenue stream.

In addition to developing the rate design options listed above, Owen is in the process of developing an energy innovation plan to present to its Board of Directors to supplement its 2009 Strategic Plan. This plan has not yet been approved by Owen's Board, however, a draft is provided below.

As a part of its 2009 Strategic Plan on or before November 1, 2009, Owen Electric Cooperative will develop an energy innovation plan to accomplish the following objectives:

1. Align the culture and business model of Owen Electric Cooperative to fully meet our members need to manage their energy costs, preserve resources, and consume energy wisely by implementing a culture of Energy Innovation within Owen Electric and its membership.
2. Decouple our revenue from kWh sales by slowly over a reasonable period of time increasing our customer charge to cover our fixed costs. This will allow Owen Electric to become kWh sales neutral and to build a culture of energy innovation where we have no financial disincentives toward energy innovation.
3. Investigate and develop progressive rate designs that encourage energy innovation rather than increasing energy sales. A few possible rate options include but are not limited to increased customer charges coupled with reduced energy charges, time of use rates, and inclining energy block rates.
4. Investigate, develop, and implement energy innovation pilot projects such as home energy efficiency improvements. Measure and verify the energy and demand savings.
5. Develop and understand the relationship between energy innovation member incentives and kWh and kW demand savings. Collect and organize data in such a manner that we begin to understand how increasing or decreasing member incentives affect kWh or kW demand savings.
6. Partner and collaborate with East Kentucky Power Cooperative to develop a comprehensive energy innovation plan that includes all aspects of energy from the generation plant to the member's home.
7. Investigate technological opportunities and develop a plan and pilot project to provide our members with energy usage data and pricing information that enables our members to manage their kWh consumption, their monthly energy bill, and their home comfort.
8. Develop a member education plan to communicate, educate, and encourage energy innovation. Promote controlling costs, preserving resources, and using energy wisely. Promote energy innovation as a tool to mitigate rising energy costs.
9. Identify and utilize all federal and state funding opportunities available to encourage energy innovation.
10. Embrace and promote distributed generation where it is economically and technically viable. Develop rate and pricing strategies to minimize rate class subsidization.

Source used in the development of the items listed above: Rural Electric Management Development Council (REMDC).

A copy of The Energy Innovation Paradigm, prepared by the REMDC is being attached as a supplement to this response.

The Energy Innovation Paradigm

February 2009

Rural Electric Management Development Council

Energy Innovation Task Force

Executive Summary

In early 2008, the Rural Electric Management Development Council (REMDC) created a task force of member cooperatives to examine energy efficiency and its implementation throughout the cooperative network. REMDC, created in 1958, explores ways to improve the effectiveness of management at rural electric systems. REMDC members are granted membership by being able to demonstrate that they practice modern management, and share their successes and failures with others. Member systems range in size from fewer than 5,000 members to systems with over 150,000 members. All REMDC members are also members of NRECA.

The task force first met in June 2008 and convened either in person or via Web conference during the next six months with the hope of developing consensus to clarify energy efficiency objectives for electric cooperatives and to *move forward.* Part of that progress is development and acceptance of a philosophy called Energy Innovation (defined later) for NRECA to utilize and expand upon in educating the cooperative network. Deliberations from those meetings resulted in this white paper: "The Energy Innovation Paradigm." Readers will see a common theme suggesting that true success can't be achieved unless a philosophy is adopted prior to the secondary, yet important, step of investing dollars into implementing solutions.

The white paper serves as the vision for a collaborative undertaking by the cooperative network. With NRECA's adoption of the Energy Innovation philosophy, action items can be developed, shared and resolved by the entire cooperative network. Without NRECA's member cooperative support, the vision's success would likely be unrealized, or, at best, only marginally effective.

Immense industry challenges require cooperatives to explore every realistic opportunity to incorporate energy efficiency/conservation/demand side management/distributed generation into the power supply equation. Adding pressure to those challenges is an increased consumer desire for innovative solutions from the utility/cooperative industry.

Embracing a philosophy required the task force to define what energy efficiency looks like—on both the supply and demand sides. Among members within the cooperative network, there can be misinterpretation and confusion with terms associated with energy efficiency, demand side management, demand response and conservation. To arrive at a starting point, the task force established consensus on a four-legged platform defined as **Energy Innovation**, with each leg explained as:

- **Conservation**—changing behavior to reduce energy use
- **Energy Efficiency**—reducing energy use without changing behavior
- **Demand Response**—shifting energy use to different times
- **Distributed Resources**—generation on the distribution side rather than the supply side

The task force arrived at 10 points that make a case for cooperatives to support Energy Innovation:

1) Innovation is a core value
2) Member-consumers want innovation and solutions (and want them to be affordable)
3) Cost of new generation is high as compared with the past
4) Generation fuel costs are increasing

5) Clean coal solutions are delayed
6) Nuclear energy is a long-term, but necessary, solution
7) Natural gas is a volatile commodity
8) Member-consumers want a way to control the price they pay
9) Carbon/climate legislation is imminent
10) Communications opportunity exists

The case for Energy Innovation requires cooperatives to remain in control of their own future. At some point, cooperatives might not have a choice in whether or not to implement Energy Innovation, so efforts should be made now that give cooperatives more control in how Energy Innovation should be achieved. Members and lawmakers might be nearing a point where they expect it, and in some cases they already do. Where $4 gas was a saturation point that led to behavioral changes in driving habits and in purchasing more efficient vehicles, brownouts and blackouts might serve as the electric utility industry's saturation point. By then, it's too late for immediate and long-lasting solutions. The industry's challenges for meeting growing demand, stagnant generation and environmental issues warrant more than band-aid responses.

Many consumers feel powerless in their ability to control their energy costs. Cooperatives need to educate and empower members to be wise users of energy. Taking a proactive approach to marketing Energy Innovation will surely fend off criticism by uninformed lawmakers and regulators who might seek unrealistic mandates.

The Energy Innovation philosophy encourages consumers to alter their insatiable appetites to use/consume all products/resources with little concern for future resource availability. Many of today's younger generations have never experienced such an uncertain period, where resources were not abundant—especially in regard to electric power.

Consideration should be given to rate structure and marketing philosophy in an era of Energy Innovation. Distribution cooperatives have always marketed electricity to increase kWh sales. To move to a new consumer paradigm, cooperatives need to change how they operate and consider new ways to develop revenue streams. Distribution cooperatives provide a service and should not have to worry about recouping costs through energy sales. Energy Innovation could cause reduced sales and negatively impact a distribution cooperative's financial situation. Therefore, it will be vital for distribution cooperatives to work even more closely with their G&Ts on rates and technology to send the proper signals to their members.

Once cooperatives understand and support the philosophy, only then can true success be found in the investments in Energy Innovation technologies and other creative measures. Part of that philosophy requires a shift in focus. Cooperatives invest hundreds of millions of dollars in new plants based on assumptions. Shouldn't cooperatives invest a fraction of that on Energy Innovation utilizing similar decision-making processes? The cooperative network should build the financial rigor to evaluate Energy Innovation options to compare with traditional supply side options. Each part of the country has different circumstances, which affect the financial attractiveness of energy innovation when compared with building or buying additional capacity. In many cases, Energy Innovation has minimal risk and is socially and politically palatable, especially because of the new paradigm that makes building new plants so difficult.

It is necessary to quantify Energy Innovation solutions as they are implemented to ensure they meet the expected outcomes. With the implementation of Energy Innovation solutions as part of the power supply portfolio, it will be necessary to study potential MWh savings and compare them against the supply-side costs. Performance should not be measured on how much was spent alone, but on the Energy Innovation solution's impact at the consumer, distribution cooperative and G&T levels. It will be important to establish these metrics so G&Ts and distribution cooperatives alike will be able to implement cost-effective solutions for their specific situations.

Distributed generation (DG) technologies are becoming more attractive as their costs become more affordable. Cooperatives must be positioned to accept this reality as supply-side costs continue to increase. Cooperatives need to determine how to incorporate DG into their business model as a revenue-gainer. Dismissing DG altogether is more threatening to a distribution cooperative than seeking ways to embrace it as one of the four legs of Energy Innovation.

Historically, cooperatives have been effective at "cooperatively" working together toward consumer education. Cooperatives must realize the same success in promoting Energy Innovation as they have in communicating the cooperative difference. Politically, it's essential for the industry to show it has been proactive in adopting the four tenets of Energy Innovation. NRECA should take the lead on coordinating national communications messaging and education regarding Energy Innovation.

Shifting Our Culture Toward Energy Innovation

It seems ironic that of all the theories that abound for shoring up the nation's overburdened electric grids and reigning in power costs, the one "buzz" that is still being viewed with the greatest skepticism by many within the electric cooperative network is the one that carries the fewest economic risks and the greatest potential for shedding demand and bolstering capacity. That buzz is energy efficiency.

Many cooperatives, at least until recently, have been reticent to consider any new delivery strategy that seemed counterintuitive to the traditional primer of success—growing load. But mounting economic pressures within today's energy sector are forcing the industry to reconsider the conventional operational paradigm that has steered it for decades. Some G&Ts have discomfort with Energy Innovation as it is viewed as a supply-side resource "capacity" option that cannot be depended upon. We challenge G&Ts to treat Energy Innovation gains on a par basis with traditional supply-side generation resources. Rigorous evaluation of costs associated with energy innovation opportunities must be compared with the costs of building or buying additional capacity. Many distribution systems view Energy Innovation as a threat likely to impact growth to the extent of negatively impacting revenues to cover distribution costs. Best Energy Innovation practices suggest a reduction in the rate of growth, not negative growth. And while the cooperative network has joined the effort to seek solutions to present energy issues, to some extent cooperatives have fallen under the same crippling paralysis afflicting the bulk of the energy sector; a tendency to hold individual and regional bias above a national initiative to make some positive and far-reaching changes in conventional delivery and marketing philosophies. It is important to note that today's challenges aren't the same as those faced by our nation in the 1970s, and conventional marketing and delivery strategies applied then don't seem plausible now.

Promoting the need to incorporate Energy Innovation as a tenet of everyday life in today's America is just now starting to resonate with industry leaders and consumers, alike. The seed has been set for change, but turning it into a viable crop across the national cooperative network and among the members they serve has been slowed to a large extent by the continuing challenge to develop a clear consensus for what energy efficiency truly entails—its method, its scope, its costs, and its inherent value to every player in the energy stream, from the G&T cooperative to the distribution cooperative, and then finally to the consumer. Simply stated, Energy Innovation represents the best efforts to "waste less electricity."

It seems imperative, given the immense challenges facing the electric industry today, that cooperatives must now explore every genuine and realistic opportunity to incorporate Energy Innovation into their operations and communications efforts. Electric cooperatives must define what Energy Innovation looks like—on both the supply-side and the demand-side—and then determine where it can be merged, adopted internally and externally and then promoted aggressively as the natural trinity that should encompass an honest cooperative business model—all the way down the line from the generator to the consumer. Finally, in the spirit of the cooperative business model, and every cooperative's moral obligation to adhere to cooperative principles, cooperatives should feel obligated to find compromise in the development and promotion of national programs that benefit every member across the nation—programs that

shift our national culture toward energy efficient practices and away from the conventional "use all you want—we'll make more" paradigm, and programs that ultimately demonstrate that cooperatives are "looking out for you." Electric cooperatives can lead the industry and the nation in finding solutions to today's energy crisis only by first developing the courage to fail in that effort. Developing a comprehensive national Energy Innovation program is the first credible step toward that leadership role—a role that answers our nation's emerging cry for answers and help, and one that challenges every consumer (not only cooperative members) to adopt new management philosophies in their energy use.

Arriving at a consensus on an energy efficiency/conservation philosophy is an immediate need. However, this task force has endeavored to fulfill an initial requirement of defining efficiency, conservation and demand response. For the purpose of this report, they will fall under the umbrella of "Energy Innovation" and are defined as follows:

Energy Innovation

- Conservation—changing behavior to reduce energy use
- Energy Efficiency—reducing energy use without changing behavior
- Demand Response—shifting energy use to different times
- Distributed Resources—generation on the distribution side rather than the supply side

While these definitions could be considered over-simplified, the task force feels that they serve the purpose of keeping all cooperatives on the same page. Locally, each cooperative has the freedom to massage their messages to suit their respective memberships.

Starting the Energy Innovation Culture

It's becoming increasingly apparent that a dire need exists to develop a culture of Energy Innovation throughout the country. This committee acknowledges the many challenges of creating an Energy Innovation culture, but is taking steps to overcome them.

The U.S. culture today has become one of abundance and plenty, where waste and inefficiency have become tolerated. The attitude is obvious in that despite the constant rise in energy costs, consumers have continued to use electric power at the same, if not greater, level. Larger homes and more electric-powered technologies have offset or surpassed much of the headway that minimal conservation efforts have made to date. Simply put, demand for electricity continues to grow even with some conservation efforts. The same applies for natural gas. As for gasoline, only when it reached $4/gallon did consumers arrive at their saturation point and begin making behavioral changes in their driving habits and in purchasing more efficient vehicles.

How do we keep members from feeling that a "trigger" for electric energy prices has occurred/or been established with the cooperatives?

Older generations who have weathered tough times have become accustomed to a more "comfortable" lifestyle and all of the electric amenities around them. Some in this demographic

segment can afford higher prices and are not forced to conserve for affordability, while others expect government agencies (or some other organization) to come to their rescue with entitlement programs. And still others within this demographic, leading modest lives, simply have a difficult time getting by each day.

Lead by Example

If electric cooperatives are going to ask their members to change their behavior to be more energy efficient, cooperatives must do everything they can to operate efficiently and be energy efficient. We're seeking to convey the message that we are doing everything we know how to do to keep rates as low as possible. Cooperatives cannot tell consumers (our members) that they must take control over their usage levels to reduce the impact of rising costs if the cooperatives aren't practicing that philosophy internally. It would be difficult to maintain our current consumer confidence level (ACSI) by telling members cooperatives are "looking out for them," without supporting that claim through actions.

Leading by example will require a focused education effort to ensure that boards of directors and employees are capable of communicating how their respective cooperative "walks the walk." Some of this can be achieved through NRECA's regional meetings, as well as by statewide associations. However, the lion's share of the training would be required at each distribution cooperative.

No Bad Words

An initial issue that should be dealt with is to establish "energy conservation" or "energy efficiency" as acceptable "words," as opposed to "industry profanity." Electric cooperatives need to look beyond this issue if they are to create progress in doing what they were created to do—serve member-consumers. By accepting that the practices of efficiency and conservation are essential to meet the needs of the members, cooperatives can lead the rest of the industry to embrace energy efficiency and conservation. Defining them as Energy Innovation could go a long way toward acceptance of either efficiency or conservation by eliminating the fruitless debate on nomenclature.

One of the more critical matters to overcome as cooperatives move toward a culture of Energy Innovation is to eliminate the culture created by the utility industry of yesterday, where consumers were encouraged to increase electric consumption and the industry would build additional capacity. Eliminating this mindset will create a foundation for a new consumer paradigm. Education and communication will be essential parts of this effort.

To change consumer culture, the three causations of change should be considered: education, pricing and legislative. Each of these has different levels of effectiveness and different levels of consumer freedom.

Energy Innovation Mitigates Impact of Rising Costs

Consumers' insatiable appetite to use/consume all products/resources with little concern over personal financial risk is clearly evident in how they use electricity. Only recently have American consumers taken a harder look at their electricity consumption practices. Many of

today's younger generations have never experienced a period where resources were not abundant, such as with the electric supply problems of the early 1970s and early 1980s. Conservation is a foreign concept to them. Additionally, the Department of Energy's Energy Star program wasn't created until 1992 and did not become a branded energy efficiency purchasing and consumer information mechanism until the early 2000s. Energy Innovation promotion is still in its infancy.

Utilities today are quick to promote energy efficient practices (especially at the residential level) that "reduce energy costs." Due to the pace of rising energy costs, this communications approach is misleading. For instance, consumers at one electric cooperative paid $0.10 per kWh in May 2007, but in July 2008 the cost was $0.13 kWh. The efficiency and conservation pace is being left in the dust by the pace of rising power costs.

If Energy Innovation programs are implemented, consumers must be educated that this doesn't mean they can use more electricity without impact. For example, if a consumer opts for a utility-sponsored switch on his water heater, he needs to be made aware that he should not use other energy-draining devices (e.g., electric ovens) during that same period of time, or the savings are negated. Also, the economic value of Energy Innovation initiatives must not be just positioned and communicated with consumers as a way to reduce bills. The real value of successful Energy Innovation is the ability to reduce or delay the need for additional generation capacity which translates into lower future wholesale rates—and thus lower total retail rates than otherwise would have occurred.

Communications—Consumers Hold the Reins. Utilities Must Train Them

The key to changing consumer consumption behavior will, somewhat ironically, be the utilities. They will be required to train consumers to be in control of their usage, which will play a role in the direction the industry heads in meeting future demand. The basis will be to educate consumers that the cost of power will continually increase. Today's generation supply and cost scenario is not a blip. The communications portfolio should provide a clear message that states consumers' personal participation in Energy Innovation will be the most effective and expedient way to lessen the pain of rising energy costs. Utilities, as subject matter experts, should be looked upon—and rightly so—to provide the information and *some* of the tools to change the paradigm to one of more consumer involvement. Utilities, which today are promoting "reduced bills," must change the message to *controlling costs* and *preserving resources* —today and in the future—through *responsible consumption practices*. The messages should be communicated so that consumers clearly understand they have a choice in how the rising costs and the rising demand for power will affect them.

Rate Structure and Marketing Philosophy in an Energy Innovation Climate

Since the inception of the distribution cooperatives, rates have been designed around electric energy usage. In addition, distribution cooperatives have always marketed electricity with the objective being increased kilowatt-hour sales. This made sense during eras when the nation was flush with generation facilities. With today's climate of increasing demand while plant construction is at a virtual crawl, cooperatives must look at progressive changes. If cooperatives

are going to drive the transition to a new consumer paradigm, they, too, will need to change how they operate and how they navigate new revenue streams.

When we look at our current business model, most distribution cooperatives are providing a service of electric distribution and should not be recouping costs through energy sales. Therefore, a conflict exists between the purpose of the cooperative and their current rate structure and marketing philosophies. As Energy Innovation practices become utilized, distribution cooperatives must understand that the rate of their growth will be slowed, but it is quite unlikely that even the most successful Energy Innovation program would cause negative growth.

Progressive Rate Design

The committee recognizes that it will be imperative that the consumer be given the responsibility of making educated choices in terms of their electric usage. While the overall concept of the distribution cooperative's rate structure should focus on the cost of providing service, the rates must allow for retail pricing signals that encourage educated electricity consumption. One example of such a pricing structure is time-of-use energy rates. The committee feels strongly that the distribution cooperatives must work with their respective generation and transmission cooperatives (G&T) to establish rate structures that send the proper signals to encourage the end users to utilize electricity wisely, such as time-of-use rates.

Another concept is to overhaul the current distribution rate structure and eliminate the "X factor" (kWh sales) entirely from the financial cost recovery equation. For instance, cooperatives could design fixed cost rates (often referred to as "flat" distribution/consumer charge rates) that are not dependent on kWh sales to produce the required revenue to run the distribution cooperative.

It's important to understand that in a new consumer-driven electric utility paradigm, cooperatives could ultimately have to implement rate increases on a more frequent basis. However, the industry has changed dramatically. In the past, the ratio of distribution costs to wholesale power costs were in the 40-60 percent range. Today, that ratio is closer to 20 percent distribution and 80 percent wholesale power cost. Therefore, if a cooperative's flat/consumer charge rate were $40/month and it had to raise rates by 5 percent every two years, its distribution rate would only increase by a total $10/month over a 10-year period (In this scenario, rate increases would be a maximum of 1-3 percent of the total bill.). If communicated effectively, member resentment should be negligible since any percentage increase on the distribution portion will look very small in comparison with the total bill. Here's why: pricing signals through time-of-use rates actually help make the case for a flat/consumer charge rate with relatively frequent increases. If consumers shift their behavior to use power when it costs the least, they could reduce consumption and their costs (their benefit) and reduce the peak (consumer and utility benefit).

While distribution cooperatives would be raising rates by 5 percent, offering consumers the option of time-of-use could help lead to reduced consumption and levelized peaks leading to lower overall power bills. Therefore, a 5 percent distribution rate increase could, through the changing consumer behavior, actually lead to a 20 percent reduction in, for example, a $100 monthly bill. In other words, cooperatives' $2/month increase every two years *could* save the consumer $40/month.

Old Paradigm of Rewarding Usage Should be on the Decline

Many distribution cooperatives have declining block rates in their rate design as an incentive to reward high usage with reduced rates; this method was based upon a time when generation was easily available. With limited generation capacity, higher fuel costs, volatile market conditions and growing transmission constraints, that paradigm is no longer warranted. As many members have become accustomed to such rates, transitioning away could create a host of public relations challenges, or hopefully, opportunities.

One could argue that economic development efforts are in clear misalignment with Energy Innovation programs. Why attract new business and industry if Energy Innovation seeks to reduce demand and electricity sales? The cooperative network already realizes that while their efforts may have an impact on the location of incremental business and industry, their efforts are just one part of the considerations for business and industry looking to expand or locate. The cooperative network should take the approach that whatever kind of load located in its territory, efforts should be made to make sure the facility uses energy in the most efficient way. Again, the task force looks fondly on the potential of redesigning distribution rates to eliminate these declining block rate rewards. These rates conflict with the goal of creating an energy efficient consumer. A flat distribution/consumer charge rate that is not dependent on kWh sales should be designed to produce the required revenue to operate the cooperative.

Another option that is less attractive for a variety of reasons would be the implementation of an "ascending" or "inclining" block rate. If consumers are to act like consumers, and invest time and research into reducing their electricity usage, this option could certainly nudge them in that direction. A price signal is an effective change causation while still offering the consumer some freedom. The pricing options offered by ascending block rates, however, do have less consumer freedom than time-of-use rates. The prospect of moving to this type of rate philosophy has the potential to create volatility within cooperative board rooms. However, if the focus really is "doing what is right for the membership," directors and management should arrive at a consensus that benefits the members cooperatives serve.

Keeping Competitive

There is some concern that implementing Energy Innovation programs could have a negative impact on rate competitiveness with neighboring IOUs and municipal systems. We would suggest that the emphasis shift from purely a lower rate message to consumers to a message of available products and services to help control individual bills. Consumers only care about rates to the extent it impacts bills, but consumers don't pay rates; they pay bills. Many distribution cooperatives in competitive wires areas have worked very hard over many years to build a competitive edge that has led to numerous load victories in multiple-certified (competitive) areas. While all sides of an issue should be examined, this concern may no longer be valid as many IOUs and municipal systems are implementing or exploring the possibility of implementing energy efficiency and demand-side management programs as well. Further, many IOUs and municipal systems are adding the cost of Energy Innovation programs to their rate recovery. One solution could be the creation of flat distribution/consumer charge rates that are not dependent on kWh sales to produce the required revenue to run the cooperative.

G&T Participation Critical

Energy Innovation will never negate the need to build new generation, but should be incorporated into a G&T's power supply portfolio. Further, any G&T contemplating building additional capacity will need to demonstrate meaningful efforts with Energy Innovation to avoid regulatory intervention, certificate of need delays, and consumer intervention. To implement Energy Innovation, the G&Ts must explore possibilities to restructure their rate design. Historically, G&T ratemaking is based on supply-side economics. Fixed assets generally make up demand charges and fuel/variable costs generally make up energy charges. Energy Innovation can have impact on both demand and energy, but not necessarily the same impact. Distribution cooperatives must work with their G&Ts to determine what the impacts of energy efficiency are on the demand and energy components, then adjust rates accordingly. Wholesale rate structures should appropriately reflect how the G&T incurs costs and the appropriate allocation between energy and demand. This appropriate allocation of costs at the wholesale level will then direct retail rate design, sending the appropriate rate signal ultimately to the end consumer. G&Ts may need to assist distribution systems in retail rate design by clearly articulating how wholesale costs are incurred and how retail customers impact those costs.

To date, there are few G&Ts including Energy Innovation as an active portion of their power supply portfolio that could take a lead in the advancement of Energy Innovation as a viable power supply portfolio option. Much of this probably stems out of a fear of falling into a death spiral. If kWh sales are reduced, determining how to resolve debt service is paramount. However, this position needs to be re-evaluated. G&Ts and their distribution systems must become familiar and comfortable with evaluation tests that recognize the value of Energy Innovation. Past benefit/cost tests have primarily been load-building in nature when G&Ts were 'long' on capacity. With the costs for future generation on the rise, different benefit/cost tests like the Total Resource Cost (TRC) test need to be used to evaluate whether capacity gained through innovation is cheaper than building or acquiring capacity. Also, traditional G&T forecasting and integrated resource planning has not considered the effect of Energy Innovation initiatives. Forecasting models should be modified to treat the gains through Energy Innovation on a par basis with other traditional supply-side resources. Demand for electricity is growing. Even with the most effective and progressive Energy Innovation solutions in place, demand in this country will continue to increase. The supply-side mentality only examines supply-side approaches, which means new power plant construction. Cooperatives invest hundreds of millions of dollars in new plants based on assumptions. Shouldn't cooperatives invest a fraction of that on Energy Innovation utilizing similar decision-making processes? Energy Innovation has minimal risk and is socially and politically palatable, especially because of the new paradigm that makes building new plants difficult. By accepting Energy Innovation as a means to mitigate the impact of rising demand (it's not going down), G&Ts may be able to avoid a substantial amount of costly construction efforts. Plus, when G&Ts work together with distribution cooperatives on Energy Innovation, it gives the cooperative network the best chance to maintain customer satisfaction in an era of rising electricity costs.

It Must be a Collaborative Effort

Most G&Ts are exceptional at performing the generation and the transmission portion of their business. As G&Ts look at Energy Innovation opportunities, they will create relationships with

organizations they may not have ever worked with before. Examples of those kinds of groups include environmental groups, local and regional energy efficiency organizations and consumer intervener groups.

G&Ts have various levels of familiarity with the distribution side of the business. Regardless of the G&T's level of familiarity, G&Ts must take the lead role in working with their members to effectively evaluate Energy Innovation opportunities. Similarly, distribution systems need to understand how their G&T incurs costs and how opportunities to address those costs result in cost-effective Energy Innovation programs. With pressing issues such as high fuel costs, lack of generation capacity, lack of transmission capacity, pending environmental issues and market conditions, demand-side solutions have to be reviewed, selected, deployed and supported. This will not happen until the cooperative program gains a consensus among G&Ts that they will play a proactive role in working with distribution cooperatives to develop cost-effective demand-side solutions. Implementing many of these programs will require significant involvement and leadership by the G&Ts. Ultimately, the G&T board can show true leadership by establishing and supporting Energy Innovation policies that are quantifiable on a continual basis.

We're Technology Dependent

Providing consumers with pertinent data on a real-time basis is essential to enabling the consumer to effectively and accurately improve their electric consumption and their conservation culture. Current technology is growing in this area, but still needs further development. When Energy Innovation goals are set, measurement and verification of program effectiveness is critical. Further, if capacity gains through Energy Innovation are treated as a traditional supply side resource, the G&T must measure and confirm the relative capacity gains and adjust resource forecasting accordingly. Distribution systems within a G&T network likely have different levels and types of automated meter information (AMI) systems in place. The G&T—working in collaboration with the distribution systems—needs to develop coordinated technology integration on the communications side, especially for demand response programs. Affordable technology must be developed and implemented that provides the consumer with real-time information that allows them to make informed consumption decisions. For this to happen, the consumer will need to know where the energy usage is occurring (eg. what appliances/equipment are running, how much electricity they are using, and the current cost of the electricity). A discussion that needs to take place is determining who is to pay for this technology—consumers, utilities, government? Regardless, cooperatives should take a leadership role through partnerships, pilot programs, research, etc., to be better prepared when new technologies reach the commercial market.

Information from smart meters may be an essential tool, especially in the near-term, for driving consumers to be more involved in managing energy use. In-home display technologies need to become more widely deployed and accepted. Smart appliances that have the means to cycle on/off remotely will play a major role. The creation of home energy 'gateways' whereby a member can go to one computerized location and monitor their complete energy usage by appliance, etc., will take in-home displays to the next level. Where do cooperatives fit in? They will have to make, and sooner rather than later, the necessary adjustments to their physical

plants, IT capabilities and customer service to embrace these technologies. The Cooperative Research Network (CRN) will surely play a large role in how electric cooperatives develop and deploy best-in-class technologies.

National Coordination Necessary for Success

It is a challenge to communicate, implement and support energy innovation technology, recognizing the many culturally and operationally diverse G&Ts and distribution cooperatives. The task force explored several possibilities. To date, many G&Ts and distribution cooperatives have experience on staff to deal with energy efficiency. If we are to adopt a stronger Energy Innovation perspective, G&Ts and distribution systems will need to add staff to manage these initiatives. Another option is to embrace the "cooperative" approach and consider a national organization (NRECA) to be lead coordinator and disseminator to educate the network. The task force envisions that this organization could serve as:

- Information/Culture Center
- Clearinghouse for Energy Efficiency/Carbon credits
- Marketing
- Measurement and Verification

Measurement and Verification

An additional issue that needs to be addressed is measuring and verifying how Energy Innovation mitigates the effects of rising power costs and rising demand. It is necessary to quantify Energy Innovation solutions as they are implemented to be able to ensure they meet the expected outcomes. If one accepts the premise that Energy Innovation is to be treated on a par basis with other traditional supply-side resources, then appropriate measurement and verification systems need to be in place to monitor progress. The G&T should assume the lead role in the measurement and verification (M&V) process, not only for integrated resource planning purposes but for political and regulatory reasons as well. Results from the measurement and verification of specific Energy Innovation efforts need to be reviewed within the program models developed in the early stage of Energy Innovation program development to verify expected results and/or change design of the program.

The ability to measure the effectiveness of Energy Innovation is evolving, but is not as advanced as needed to transition to a consumer-driven paradigm. If measures are implemented by the utility (eg. in-home usage monitors, HVAC/water heater switches, etc.), measurement and verification of energy reduction will need to be accurate. Consumer-driven conservation efforts will not be verifiable unless methods can be implemented to encourage consumers to report what measures they have implemented.

Obviously, cooperatives can compare historical consumption patterns against current usage, but uncovering which Energy Innovation practices led to the lower consumption will be a challenge. Much of the solution lies in communications and educational efforts that spur consumers to share this information with their cooperative.

With the implementation of Energy Innovation solutions to the power supply portfolio, it will be

necessary to gain a thorough understanding on the cost per MWh saved to be able to compare and benchmark against the supply-side costs. It will be important to establish these metrics so G&Ts and distribution cooperatives alike will be able to implement the most cost-effective solutions for their specific situations. An unknown organization must come to the forefront quickly to determine a costing method to place results from the demand side on the same metric as the supply side. That information could possibly be derived from efforts by the Cooperative Research Network, consultant studies and established program studies.

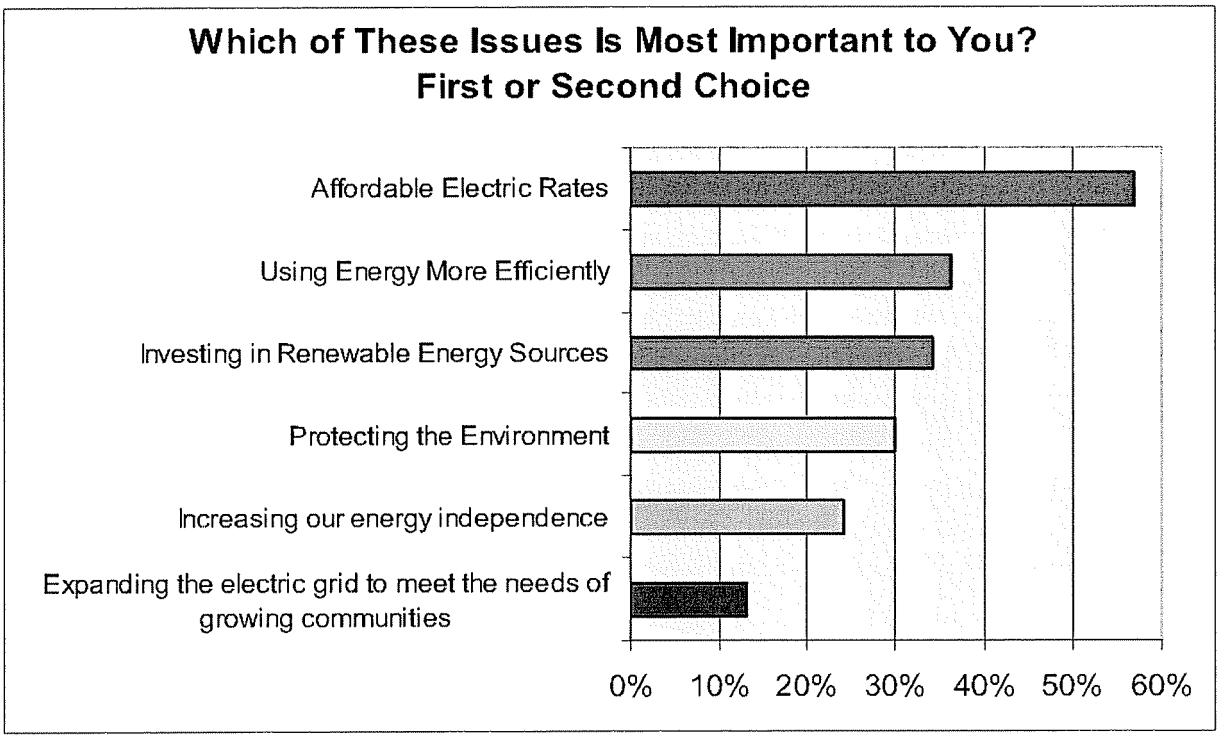
Some cooperatives currently have to report to their regulators annually about the Energy Innovation implementations they have in place and what the benefits of those measures have been. These efforts demonstrate that performance should not be measured on how much was spent, but on the solutions' impact at the consumer, distribution cooperative and G&T levels.

How Do Cooperatives Get the Word Out About Their Efforts?

Historically, cooperatives have been effective at "cooperatively" working together toward consumer education. Much of this can be attributed to Cooperative Principle #6 (Cooperation among Cooperatives) and also to the coordinated efforts of NRECA and other cooperative associations (NCBA, etc.).

Most cooperatives take advantage of similar messaging when distinguishing the cooperative business model from that of their IOU and public power counterparts (e.g., not-for-profit, member-owned, member-representation, capital credits, local, concern for community). Further, many member education resources are available in national Web-based repositories (e.g. cooperative.com and touchstoneenergy.coop), which leads to consistency throughout the cooperative network. The Touchstone Energy Cooperatives branding initiative has also evolved into an effective educational resource and is now incorporating Web-based energy efficiency tools for consumers in addition to its energy efficiency communications and advertising materials (e.g. Touchstone Energy Savers, Touchstone Energy Home, etc.). NRECA's recent "Our Energy, Our Future" campaign is a good example of how cooperatives and their members can effectively reach out to lawmakers using a consistent voice.

Touchstone Energy's 2007 Cooperative Difference Research shows that cooperatives have been effective at touting their strengths. For example, 46 percent of cooperative members acknowledge some cooperative identity, whether they perceive themselves as a member, member-owner, or an owner. However, only in recent years have electric cooperatives launched energy efficiency education campaigns. It's evident that the importance members place on using energy efficiently is rising, with about 35 percent of members saying that using energy efficiently is of great importance to them (see chart). More than 55 percent state affordable rates as their first or second concern.



As costs rise, these topics will likely become more important. Therefore, it would behoove cooperatives to seek the same success in promoting Energy Innovation as they have in communicating the cooperative difference.

While cooperatives are successful in communicating the cooperative difference themes consistently, is there too much "noise" and are there too many disjointed communications themes detracting from the objective of "educating people about changing the utility paradigm to one of more consumer involvement?" Further, many cooperatives are leading the industry in Energy Innovation initiatives and educational campaigns. However, outside of their locales, is anyone aware? Do the lawmakers contacted by members in the "Our Energy, Our Future" call to action know that their cooperative is leading a movement to get consumers to change their consumption habits?

Cooperatives have provided added strength to the national themes by localizing the messages. For example, the "Looking Out For You" tagline is utilized by many cooperatives. The "Our Energy, Our Future" campaign could evolve from getting consumers to be legislatively active to a campaign that motivates behavioral change when it comes to electricity consumption. Also, if we desire lawmakers and policymakers to perceive "electric cooperative" when they hear or see Touchstone Energy, the brand should work in concert with the "Our Energy, Our Future" campaign. It should also support the Energy Star branding initiative.

NRECA, as the cooperatives' national trade association, must take the lead on coordinating national communications messaging regarding Energy Innovation or success will be difficult to capture. It's the opinion of this committee that one of the next message themes supporting the "Our Energy, Our Future" campaign should center on the very issues outlined in this report: getting consumers to realize they have a role to play in energy conservation; getting lawmakers

to realize that electric cooperatives are leading the way in energy efficiency/conservation/DR initiatives; and getting the general public to realize that the issue of rising energy costs and depleting resources is not going to be short-lived.

Individual cooperatives must understand that many Energy Innovation programs require significant behavioral changes by its consumer-members. As an industry, electric utilities have not been known as great marketing innovators. G&Ts and distribution systems must build their marketing capabilities to make Energy Innovation successful. Traditional distribution cooperative communication methods will not ensure successful Energy Innovation participation. Local distribution cooperative boards have the responsibility to support cooperative management in its efforts to better build local marketing and communication expertise.

Once marketing and communication plans have been developed, individual cooperatives will localize the messaging, thus creating a consistent voice throughout the nation. It's also a cost-effective way to educate the media, the public and the various legislative bodies that cooperatives are active in promoting energy efficiency.

Distributed Generation's Role in Energy Innovation

An energy innovation gaining momentum—or at a minimum attracting a tremendous amount of attention today—is distributed generation (DG). Whether on a large commercial scale or on an individual's residence, DG technologies are becoming more financially attractive, and will likely become more mainstream in the not-too-distant future as power costs continue to increase. While widespread distribution generation opportunities are not yet ready for prime time, it is a technology that may become more and more attractive. Cooperatives must be positioned to accept this reality. The cooperative network should position itself as an enabler for this technology as it becomes more attractive and thus build on the cooperative's credibility with consumers built over the years. This is essential not only for cooperatives to determine how to blend it into their business model, but to capitalize on DG as a potential revenue stream (via installation, maintenance, etc.).

Cooperatives need to ensure they are not seen as impediments to implementing DG. Dismissing DG altogether is more threatening to a distribution cooperative than seeking ways to embrace it as one of the four legs of energy innovation. Should cooperatives promote it? Cooperatives, right now, should be the information source to educate members on the true payback. Further, it is essential that members, the general public and policymakers understand that DG is not restricted to renewable options, but that we embrace other options as all of them have great potential for scalable supply solutions at the distribution and G&T levels. Several progressive cooperatives are planning DG symposiums for members.

As mentioned, G&T and distribution cooperatives need to allow interconnection of DG where desired by members without creating undue hardships. Over the years, many cooperatives across the nation have not desired interconnection due to the idea of net-metering. A potential solution to this issue is installation of the flat/customer charge rate which forces net-metering only on the power supply portion of the member's bill; therefore cooperatives do not have to subsidize the

DG installations by returning the distribution cost along with power cost. Cooperatives also should be able to technically support the interconnection, but should be honest about the economics.

Summary

With NRECA cooperatives' support of an Energy Innovation paradigm, electric cooperatives can demonstrate their leadership in meeting the industry challenges of the future. In so doing, they will control much of the dialogue with legislators and regulators that is occurring regarding efficiency requirements, clean coal technology, climate legislation, rising power costs and consumer awareness.

About The White Paper

The Energy Innovation Paradigm white paper was a collaborative effort of the Rural Electric Management Development Council's Energy Innovation Task Force and the G&T Managers Association's Technical Advisory Committee Subcommittee on Energy Efficiency. The information within this white paper was gleaned from numerous meetings and discussions, including participation from NRECA, CRN and Touchstone Energy staff. The resulting white paper is indicative of what can be accomplished by the cooperative network working together and is intended to establish even greater collaboration from the network as a starting point toward meeting Energy Innovation objectives.

OWEN ELECTRIC COOPERATIVE
CASE NO. 2008-00154

RESPONSE TO ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUEST

Question 4:

Please provide a breakdown of the average bill for Owens residential and commercial customers using Owens' currently approved rates. Please include in this breakdown, the kWh usage along with any surcharges, etc. which make up a customers monthly bill.

Questions 5:

Please provide a breakdown of the average bill for Owens residential and commercial customers using the rates proposed by Owen in this case. Please include in this breakdown, the KWh usage along with any surcharges, etc. which make up a customers monthly bill.

Response:

Page 2 of this response provides the requested information.

OWEN ELECTRIC COOPERATIVE
CASE NO. 2008-00154

RESPONSE TO THE ATTORNEY GENERALS THIRD DATA REQUEST

			Revenue						
Rate Class	Average kWh	Average Demand	Customer Charge	Energy Charge	Demand Charge	Subtotal	FAC Revenue	Environ Surcharge	Total
Current Rates									
Schedule I - Farm and Home	1,159	-	$ 5.64	$ 87.30	$ -	$ 92.94	$ 8.76	$ 7.10	$ 108.80
Schedule I - Small Commercial	1,654	-	5.64	124.60	-	$ 130.24	12.40	9.12	151.76
Schedule II - Large Power	63,863	186.5	20.50	3,530.32	979.19	$ 4,530.01	482.39	342.35	5,354.75
Schedule XI - Large Industrial Rate LPB1	700,901	1453.8	1,464.04	29,294.56	8,275.80	$ 39,034.40	5,258	3,039.87	47,332.47
Schedule XIII - Large Industrial Rate LPB	4,694,252	8,054	2,927.05	172,601.60	$31,063.99	$206,592.63	34,236	16,458.35	257,287.26
Schedule XIV - Large industrial Rate LPB	270,805	661.22	1,464.04	11,999.37	3,783.64	$ 17,247.05	2,077.99	1,456.25	20,781.29
Schedule 2-A - Large Power - TOD	40,811	0	59.00	2,926.41	0	$ 2,985.41	326.51	167.11	3,479.03

Rate Class	Average kWh	Average Demand	Customer Charge	Energy Charge	Demand Charge	Subtotal	FAC Revenue	Environ Surcharge	Total
Proposed Rates									
Schedule I - Farm and Home	1,159	$ -	$ 11.20	$ 87.30	$ -	$ 98.50	$ 8.76	$ 7.49	$ 114.75
Schedule I - Small Commercial	1,654	-	13.48	$ 124.60	$ -	$ 138.08	$ 12.40	10.54	$ 161.01

SEE RESPONSE TO ITEM NUMBER 4

OWEN ELECTRIC COOPERATIVE
CASE NO. 2008-00154

RESPONSE TO ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUEST

Question No. 6:

Please refer to the substitution testimony of Mr. Stallons, Page 8, Question 25. Please explain in detail how Owen's low income customers would benefit from a higher customer charge, higher demand charge and a lower energy charge. Please provide a copy of the study referred to in Mr. Stallons' answer along with supporting documentation for the statement by Mr. Stallons that "(t)he facts show that increasing our member's customer charge as opposed to increasing the energy charge will not adversely affect our lower income members.

Response:

Please refer to AG Supplemental Data Request #3, Question No. 3, for a detailed discussion regarding the advantages to all Owen members of a higher customer charge, higher demand charge and a lower energy charge. Specific data regarding the impact of such a rate structure on low income members is contained in the attached schedule. A copy of the data received from East Kentucky Power is also attached. As is evident from the attached data, an increase in the customer charge coupled with a corresponding decrease in the energy charge, results in an essentially revenue neutral rate adjustment that neither harms nor provides an advantage to LIHEAP recipients. The advantages to Owen's lower income members is the same advantage that all members receive as outlined in Question #3 of this data request.

OWEN ELECTRIC COOPERATIVE
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Inpact on members receiving assistance from LIHEAP

					Proposed in Case 2008-00154	
Customer Charge		$ 9.00	$ 10.00	$ 11.20	$	21.92
Energy Charge		$ 0.07723	$ 0.07637	$ 0.07533		0.06608
	KWH	Monthly bill	Monthly bill	Monthly bill		Monthly bill
Avg KWH usage by LIHEAP receipents	1198	$ 101.52	$ 101.49	$ 101.45	$	101.08
Variation in total bill to preceding calculation			$ (0.03)	$ (0.08)	$	(0.41)
Avh KWH usage by all other members	1248	$ 105.38	$ 105.31	$ 105.21	$	104.39
Variation in total bill to preceding calculation			$ (0.07)	$ (0.17)	$	(0.92)

OWEN ELECTRIC COOPERATIVE
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RESPONSE TO ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUEST

Memo from East Kentucky Power Cooperative

RE: LIHEAP Analysis for Owen Electric

January 15, 2009

At Owens Electric's request, EKPC calculated average kWh usage from data that Owen provided. The first data provided was their 2008 annual billing file and the second data provided was a list of those residential customers designated as LIHEAP customers. From this data, a calculation was done on residential average usage for the two groups.

As a result of the analysis completed, the results showed that for Owen, the average usage for the LIHEAP group was about 1,198 kWh and for the other group of residential customers not designated as LIHEAP, the average usage was 1,248 kWh.

EKPC

OWEN ELECTRIC COOPERATIVE
CASE NO. 2008-00154

RESPONSE TO ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUEST

Question No.7:

Please refer to the substitution testimony of Mr. Stallons, Page 9, Question 25. Please provide an estimate of the reductions in customer usage that Owen believes it can achieve as a result of any demand response/energy efficiency programs. Please provide supporting documentation which indicates how these estimates were calculated.

Response:

At the end of 2008, Owen Electric began the first stages of a direct load control program. The attached (Schedule #7A) shows the estimated reductions (over the next five years) in customer usage related to the direct load control program. This, coupled with the on-going and cumulative reductions from Owen's other programs (see Item No. 2, Schedule 2B), points to significant reduction in energy usage as a result of our demand response/energy efficiency programs.

Beginning in 2009, Owen will participate in an energy efficiency home improvement pilot program for low income members. This program will involve applying energy efficiency home improvement measures to a sample of homes. Measurements will be taken before and after on these homes and energy usage will be monitored to evaluate the effectiveness of the program.

Additionally, Owen's Advanced Metering Infracture (AMI) system provides a communications link to our member's electric meter and affords us a unique opportunity to begin to assist our members with understanding their energy usage more completely. With AMI, Owen is able to record, analyze and explain energy usage patterns (in daily and hourly increments) to its members, thus equipping our members with valuable information on how and when they use energy. Owen will work with our technology partners to investigate more advanced home energy communications tools that will enable our members to monitor their energy consumption in 'real-time', thus empower them to make informed decisions about what changes they may be able to make to reduce consumption.

OWEN ELECTRIC COOPERATIVE
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Owen Electric Cooperative - Energy Efficiency / Demand Response Programs
Anticipated Future Reduction in Energy (Direct Load Control)
Schedule 7A

DLC program

		Cumulative				
	Target participants per year	2009	2010	2011	2012	2013
CAC	1160	*1,160*	*2,320*	*3,480*	*4,640*	*5,800*
WH	500	*500*	*1,000*	*1,500*	*2,000*	*2,500*

Annual kWh

	per unit savings	2009	2010	2011	2012	2013
CAC	138	160,080	320,160	480,240	640,320	800,400
WH	10	5,000	10,000	15,000	20,000	25,000
Total		**165,080**	**330,160**	**495,240**	**660,320**	**825,400**

Winter kW

	per unit savings	2009	2010	2011	2012	2013
CAC	0	-	-	-	-	-
WH	0.52	260	520	780	1,040	1,300
Total		**260**	**520**	**780**	**1,040**	**1,300**

Summer kW

	per unit savings	2009	2010	2011	2012	2013
CAC	0.9	1,044	2,088	3,132	4,176	5,220
WH	0.37	185	370	555	740	925
Total		**1,229**	**2,458**	**3,687**	**4,916**	**6,145**

CAC = Central Air Conditing*
WH = Water Heater

*includes savings from programmable thermostats

Note: The above calculations are based on data derived from East Kentucky Power Cooperative's (EKPC) 2006 Intergrated Resource Plan (Case 2006-0017).
EKPC uses the EPRI *DSManager* software package to conduct the more detailed quantitative evaluation. *DSManager* calculates the impact of DSM program-s on utilities and their customers. *DSManager* produces a quantitative estimate of the costs and benefits for each of the parties using simplified but powerful and flexible models of the electric system and its customers. *DSManager* determines the cost-effectiveness of DSM programs by reporting results according to the cost-benefit tests established in the California Standard Practice Manual for Economic Analysis of Demand Side Programs.(California Public Utilities Commission and California Energy Commission, "Standard Practice Manual for Economic Analysis of Demand-Side Management Programs," Document Number P400-87-006, December 1987.)

OWEN ELECTRIC COOPERATIVE
CASE NO. 2008-00154

RESPONSE TO ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUEST

Question No 8:

Please refer to the substitution testimony of Mr. Stallons, Page 11, Question 28. Please provide the energy charges for the utilities identified in the question by Mr. Stallons.

Response:

Please see attached table.

Cooperative	ST	Customer Charge	Energy Charge/kWh
United Cooperative Services	TX	$17.30	Summer Rate - $ 0.073168 Winter Rate – First 800 = $ 0.073168 Over 800 = $ 0.05316
Cass County Electric Cooperative	ND	$12.00 City/Village $16.00 Rural	Residential Urban: First 900 = $ 0.075 Over 900 = $ 0.060 ---------- Residential Rural (low den): First 1200 = $ 0.086 Over 1200= $ 0.062
Rappahannock Electric Cooperative	VA	$10.00	Residential: First 600 = $ 0.02693 Over 600 = $ 0.02276
Shenandoah Valley Electric Cooperative	VA	$13.76-VA $26.00-WV	Residential: First 300 = $ 0.21920 Over 300 = $ 0.02076 ---------- All = $ 0.08418
Northeastern REMC	IN	$15.00	First 500 = $ 0.06350 Next 1,000 = $ 0.05660 Over 1,500 = $ 0.04560
Shelby Electric Cooperative	IL	$29.00	First 1000 = $ 0.1077 Over 1000 = $ 0.1059
Egyptian Electric Cooperative	IL	$24.00	First 500 = $ 0.1004 Over 500 = $ 0.077
Iowa Lakes – Contact: Nancy	IA	$28.50	First 750 = 0.110 Over 750 = $ 0.075
Tri-County EMC	GA	$25.00	First 20 = $ 25.00 Next 630 = $ 0.08498 Next 350 = $ 0.09064 Next 1000 = $ 0.09476 Next 1000 = $ 0.09976 Next 3000 = $ 0.10476
Flint Energies	GA	$20.00	All = $ 0.0810
Owen Electric Cooperative	KY	$5.64	All = $ 0.07533

OWEN ELECTRIC COOPERATIVE
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RESPONSE TO ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUEST

Question No. 9 & 10:

Please refer to the substitution testimony of Mr. Stallons, Page 11, Question 28. In a manner similar to the table provided on Page 11, please indicate how Owen's proposed customer and energy charges would compare to its sister cooperatives on EKPC's system.

Response:

Owen's proposed customer charge is $11.20 and the proposed energy charge is $0.007533. The customer charges and energy charges for the residential rate classes for Owen's sister cooperatives on the EKPC system are as follows.

Cooperative	Customer Charge		Energy Charge
Big Sandy	$7.75		$0.07527
Blue Grass Energy	8.75		0.07658
Clark Energy	5.48		0.07588
Cumberland Valley Electric	5.13		0.07621
Farmers-(Includes 50 kWh)	7.48		0.06936
Fleming-Mason	9.75		0.07564
Grayson	8.16		0.07868
Inter-County	8.14		0.08157
Jackson Energy	9.50		0.08563
Licking Valley	7.17		0.073386
Nolin	8.13		0.07341
Owen	5.64		0.07533
Salt River	7.91		0.06720
Shelby Energy	7.37	1st 600 kWh	0.07574
		Next 1400 kWh	0.07395
		Over 2000 kWh	0.07259
South Kentucky	8.20		0.07259
Taylor County	7.10		0.06952

Source: Website of the Kentucky Public Service Commission

SEE RESPONSE TO ITEM NUMBER 9

OWEN ELECTRIC COOPERATIVE
CASE NO. 2008-00154
RESPONSE TO ATTORNEY GENERAL'S THIRD SUPPLEMENTAL DATA REQUEST

Question No.11:

Please provide a breakdown of Owen's electric sales for the last five years by customer class:

Response

See attached schedule.

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OWEN ELECTRIC COOPERATIVE
CASE NO 2008-00154

Revenue in dollars

	2003	2004	2005	2006	2007
Residential Sales	$42,680,828	$47,113,587	$55,724,664	$58,817,668	$66,458,715
Comm. and Industrial 1000 KV or less	$9,321,338	$10,366,170	$12,767,620	$15,921,270	$18,073,852
Comm. And Industrial over 1000 KV	$42,436,410	$50,358,952	$55,117,578	$52,056,623	$55,319,968
Public Street & Highway Lighting	$47,060	$42,854	$44,451	$58,784	$52,325
Other Sales to Public Authorities	$790,773	$864,730	$929,977	$970,492	$1,312,489
Total Revenue by Class	$95,276,409	$108,746,293	$124,584,290	$127,824,837	$141,217,349

KWH Sales

	2003	2004	2005	2006	2007
Residential Sales	621,330,747	652,705,506	696,107,196	679,964,307	746,858,240
Comm. and Industrial 1000 KV or less	150,926,754	161,106,275	178,068,306	207,408,159	226,685,405
Comm. And Industrial over 1000 KV	1,126,931,163	1,181,741,263	1,165,884,543	1,177,002,458	1,178,657,108
Public Street & Highway Lighting	664,915	570,391	522,176	681,403	588,969
Other Sales to Public Authorities	11,883,437	12,420,957	11,927,938	11,585,449	15,009,322
Total KWH Sales by Class	1,911,737,016	2,008,544,392	2,052,510,159	2,076,641,776	2,167,799,044