

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

DIRECT TESTIMONY OF

SUSAN K. NATHAN

**ON BEHALF OF
KANSAS CITY POWER & LIGHT COMPANY**

**IN THE MATTER OF THE APPLICATION OF
KANSAS CITY POWER & LIGHT COMPANY
TO MODIFY ITS TARIFFS TO CONTINUE THE
IMPLEMENTATION OF ITS REGULATORY PLAN**

DOCKET NO. 07-KCPE-____-RTS

1 **Q: Please state your name and business address.**

2 A: My name is Susan K. Nathan. My business address is 1201 Walnut, Kansas City,
3 Missouri 64106-2124.

4 **Q: By whom and in what capacity are you employed?**

5 A: I am employed by Kansas City Power & Light Company (“KCPL”) as Manager,
6 Marketing and Product Management.

7 **Q: What are your responsibilities?**

8 A: My responsibilities include providing leadership and direction to the Marketing and
9 Product Management Team, including the development of overall marketing programs
10 and the coordination and execution of promotional strategies and programs to efficiently

1 and effectively promote and implement KCPL's products and services. My duties
2 include initiating and bringing to market new products, as well as improvements and
3 innovations to existing products and services. My duties also include the development,
4 implementation and evaluation of affordability, energy efficiency, and demand response
5 programs

6 **Q: Please describe your education, experience and employment history.**

7 A: I graduated from Metropolitan State University in Minneapolis with a Bachelor of Arts
8 degree in 1985. I graduated from the University of St. Thomas in 1990 with a Master in
9 Business Administration degree. I was first employed at KCPL in 2003 as the Manager,
10 Product Management. In this capacity, I perform all marketing functions for KCPL.
11 Prior to my employment at KCPL, I worked at Aquila from 1997 to 2002 in Retail
12 Operations and Marketing. Prior to moving to Kansas City to work for Aquila, I worked
13 at Minnegasco (now CenterPoint Energy) in Minneapolis from 1981 through 1996.
14 During that time, all but one year was spent implementing and managing energy
15 efficiency programs.

16 **Q: Have you previously testified in a proceeding at the Kansas Corporation
17 Commission ("KCC") or before any other utility regulatory agency?**

18 A: I testified before the KCC concerning KCPL's Regulatory Plan, Docket No. 04-KCPE-
19 1025-GIE, ("Regulatory Plan Stipulation and Agreement") and provided written
20 testimony in KCPL's 2006 Rate Case, Docket No. 06-KCPE-828-RTS. I testified before
21 the Missouri Public Service Commission ("MPSC") in Case No. EO-2005-0329—
22 KCPL's Missouri Regulatory Plan proceeding, and I provided written testimony before
23 the MPSC in KCPL's 2006 Rate Case in Case No. ER-2006-0314. I have also testified

1 before the Minnesota Public Utilities Commission on behalf of Minnegasco on matters
2 concerning Minnegasco's demand-side management programs.

3 **Q: What is the purpose of your testimony?**

4 A: The purpose of my testimony is to provide a progress report on the development and
5 implementation of the portfolio of Affordability, Energy Efficiency, and Demand
6 Response programs, which were commitments KCPL made in the Regulatory Plan
7 Stipulation and Agreement, which the KCC approved in August 2005. For these
8 programs, I will provide an update explaining what steps KCPL has taken thus far with
9 respect to these initiatives, including participation and expenditures through
10 December 31, 2006. I will also provide an update concerning favorable developments in
11 the implementation of our credit card payment program.

12 **Q: What did the Regulatory Plan Stipulation and Agreement provide concerning
13 KCPL's Affordability, Energy Efficiency and Demand Response programs?**

14 A: The Regulatory Plan Stipulation and Agreement provided a listing of the proposed
15 portfolio of programs in Appendix B. Appendix B-1 provided an estimated cost and
16 kW and kWh savings associated with each Affordability, Energy Efficiency and Demand
17 Response program for the five (5) year period of the Regulatory Plan. The cost of
18 \$23.8 million (Kansas jurisdictional share) was also detailed in Appendix B-1. The
19 breakdown of the budgeted expenditures for the five (5) year period for Kansas are
20 \$0.5 million for Affordability programs, \$9.7 million for Energy Efficiency programs,
21 and \$13.6 million for Demand Response programs.

1 **Q: What programs make up the portfolio?**

2 A: The portfolio consists of two proposed Affordability programs, ten proposed Energy
3 Efficiency programs, two proposed Demand Response programs, and one proposed
4 additional funding area. Specifically, the proposed programs are as follows:

5 Affordability

- 6 • Affordable New Homes (New Construction)
- 7 • Low Income Weatherization

8 Energy Efficiency

- 9 • Residential:
 - 10 • Online Energy Information and Analysis (Home Energy Analyzer)
 - 11 • Home Performance with Energy Star (Training)
 - 12 • Change a Light, Change the World
 - 13 • Cool Homes Program (High Efficiency Cooling Rebates)
 - 14 • Energy Star Homes (New Construction)
- 15 • Commercial/Industrial (“C&I”):
 - 16 • Online Energy Information and Analysis (Business Energy Analyzer)
 - 17 • C&I Energy Audit
 - 18 • C&I Custom Rebates – Retrofit
 - 19 • C&I Custom Rebates – New Construction
 - 20 • Building Operator Certification (Training)

1 Energy Star® rated lighting fixtures and up to \$400 for additional attic, floor or
2 crawlspace insulation.

3 **Low Income Weatherization Program**

4 Qualified lower income customers can get help managing their energy use and bills
5 through KCPL’s Low Income Weatherization Program which was approved by the KCC
6 in December 2005 as shown in Schedule SKN-1. The program works directly with local
7 Community Action Program (“CAP”) agencies that already provide weatherization
8 services to low income customers. KCPL provides supplemental funds to the CAP
9 agencies to cover the cost of additional cost-effective weatherization measures. KCPL
10 residential customers in owner-occupied, one to four-unit structures with income up to
11 185% of the federal poverty guidelines may participate. Renters are allowed to
12 participate if the landlord pays 50% of the weatherization cost and agrees not to raise the
13 rent for a pre-agreed period of time.

14 During 2006, 23.5% of the participation goal was accomplished and 28.6% of the
15 budget was expended. Toward the end of 2006, KCPL discovered that the guidelines
16 used in Kansas to determine eligibility for low income weatherization was 60% of State
17 median income. KCPL’s guideline of 185% of Federal Poverty Guidelines is much lower
18 than 60% of State median income, so KCPL will file a modified tariff that incorporates
19 the eligibility guidelines used by Kansas CAP agencies.

20 To improve the process of referring potential applicants to the Low Income
21 Weatherization program, KCPL developed a list of its retail customers who received third
22 party assistance in paying their bills and who meet other weatherization eligibility
23 requirements. KCPL sent a letter to these customers informing them of the availability of

1 the program in the event that they, or someone they know, might be interested in
2 participating. KCPL will continue to implement direct marketing efforts for this
3 program. KCPL also implemented a marketing campaign to social service agencies,
4 requesting referrals to the Low Income Weatherization program. In addition, KCPL's
5 Customer Care Center and its Credit and Collection areas are informing customers of the
6 availability of this service.

7 **Q: Please describe the Energy Efficiency programs designed for residential customers**
8 **included in the portfolio and provide an update on their implementation status.**

9 A: Following is a description of each of the five residential customer Energy Efficiency
10 programs and their current implementation status.

11 **Home Energy Analyzer**

12 The Home Energy Analyzer (On-line Energy Information and Analysis) provides
13 information to customers on how they use energy based on their specific home usage
14 data. It also provides information on ways customers can save energy and what their
15 payback might be based on the improvements made. The tariff for this program was
16 approved by the Commission in March 2006.

17 KCPL is looking to this program as the efficiency "starting point" and "direction
18 provider" for customers. Customers come to the Energy Analyzer site and, based on their
19 needs and interests, get 'routed' to various programs that may be of benefit to them.

20 Therefore, creating customer awareness of this site is critical. Because of this, KCPL ran
21 extensive campaigns to introduce and promote this website. Our efforts were rewarded
22 with participation exceeding goals by over 400%. Expenditures were at 149.9% of
23 budget.

1 **Home Performance With Energy Star®**

2 Home Performance With Energy Star® is a training program that enhances the traditional
3 home energy audit service and uses the Energy Star® brand to help encourage and
4 facilitate whole-house energy improvements. Contractors are trained to provide “one-
5 stop” problem solving to identify multiple improvements that, as a package, will increase
6 the home’s energy efficiency. This program is under development and has not yet been
7 submitted for Commission approval. KCPL plans to do so in 2007.

8 **Change a Light, Change the World**

9 This program provides rebates for compact fluorescent lights (“CFLs”) at point of
10 purchase in specific stores and is administered by the Midwest Energy Efficiency
11 Alliance (“MEEA”). KCPL submitted this program for KCC approval in 2005 and
12 subsequently withdrew the request. KCPL did not submit the program for approval in
13 Kansas in 2006 although we have had considerable success with this program in
14 Missouri. In fact, Westlake Hardware, one of the participating chains offering CFLs
15 under the Missouri program, also provided the program in Kansas on its own in order to
16 be able to offer CFLs at all of its regional stores.

17 **Cool Homes Program**

18 This program is designed to incent customers to install high efficiency cooling
19 equipment. Program development is complete and KCPL expects to submit a tariff for
20 approval in the near future. Originally, the program threshold for qualifying equipment
21 was a rating of SEER 13 or higher based upon a minimum standard efficiency rating of
22 SEER 10; however, the minimum standard efficiency for manufactured cooling

1 equipment was increased to SEER 13 in January 2006 so the program threshold was
2 raised to a minimum of SEER 14.

3 Proper installation measures will also be required as part of the program. KCPL
4 has redesigned the program and will seek Commission approval for it as a
5 re-commissioning/early replacement program in place of the original program design.
6 Early replacement will target replacement of SEER 6 to 8 equipment with SEER 14 or
7 higher equipment. All installations will utilize CheckME!TM, a software program that
8 ensures quality installation through proper charging of the refrigerant and airflow over
9 evaporator coils, while the contractor is at the premise. Those who request and receive a
10 cooling system evaluation also receive CFLs, adding to the savings achieved through this
11 program.

12 **Energy Star® Homes (New Construction)**

13 Energy Star® Homes requires that new homes be constructed to a standard at least 30%
14 more energy efficient than the 1993 National Model Energy Code. These savings are
15 based on heating, cooling, and hot water energy use and are typically achieved through a
16 combination of building envelope upgrades, high performance windows, controlled air
17 infiltration, upgraded heating and air conditioning systems, tight duct systems, and
18 upgraded water-heating equipment. Homes are qualified as an Energy Star® home with
19 use of the Building Option Packages which represent a set of construction specifications
20 for a specific climate zone.

21 KCPL anticipated this program would be researched in Year 1 and implemented
22 in Year 2; however, the program rollout was delayed by one year to allow for research
23 and design with builders who support the building of energy efficient homes. KCPL's

1 plan is to have the program fully designed and filed for approval by the end of 2007 and
2 implement the program to coincide with the 2008 building season.

3 **Q: Please describe the Energy Efficiency programs designed for commercial and**
4 **industrial customers included in the portfolio and provide an update on their**
5 **implementation status.**

6 A: Following is a description of each of the five commercial/industrial customer Energy
7 Efficiency programs and their current implementation status.

8 **Business Energy Analyzer**

9 The Business Energy Analyzer (“BEA”) provides information to business customers on
10 how they use energy based on their specific usage data. It provides information on ways
11 they can save energy and what their payback might be based on the improvements made.
12 It also allows businesses to benchmark themselves against like businesses. Program
13 participation goals were set based upon the significant response rate in the residential
14 market; however, despite promotions, the commercial market has been slower to adopt
15 the benefits of this program.

16 The BEA program was approved by the Commission in December 2006. The
17 vendor and KCPL are currently working together to make improvements to the website
18 and KCPL will continue to actively promote this service. Four focus groups were held
19 with commercial customer representatives. Based upon the findings of the study, we
20 have identified specific areas for improvement. Once the improvements are complete, we
21 will strengthen our campaign to inform our customers about the website and the BEA
22 program.

1 **C&I Energy Audits, C&I Custom Rebates-Retrofit, and C&I Custom Rebates-New**
2 **Construction**

3 For the C&I Audit Rebate (formerly C&I Energy Audit), KCPL offers rebates to
4 customers to cover 50% of the cost of an energy audit, up to \$300 for customers with
5 facilities less than 25,000 square feet and up to \$500 for customers with facilities over
6 25,000 square feet. In order to receive the rebate, the customer must implement at least
7 one of the audit recommendations that qualify for a KCPL C&I Custom Rebate.

8 For the C&I Custom Rebate programs, Retrofit and New Construction, KCPL
9 offers rebates to customers that install, replace or retrofit qualifying electric savings
10 measures including heating, ventilation and air conditioning (“HVAC”) systems, motors,
11 lighting, pumps, etc. Custom rebates are calculated as the lesser of a buy-down to a two-
12 year payback or 50% of the incremental cost.

13 Originally, KCPL proposed to implement the New Construction Custom Rebate
14 program in Year 1 and the Audit Rebate and Retrofit Custom Rebate programs in Year 2;
15 however, due to the similarities of the programs, KCPL decided to implement all three
16 programs at the same time and promote them together. KCPL will track activities and
17 expenditures for each program area separately. KCPL will have separate budgets for the
18 small, medium and large C&I customers to ensure availability of opportunity and funds
19 for all C&I customer classes.

20 Since these programs were approved in Kansas in January 2007, KCPL has not
21 received any projects from Kansas customers.

1 **Building Operator Certification (Training)**

2 Building Operator Certification is a market transformation effort to train facility
3 operators in efficient building operations and management (“O&M”), establish
4 recognition of and value for certified operators, support the adoption of resource-efficient
5 O&M as the standard in building operations, and create a self-sustaining entity for
6 administering and marketing the training. This program was filed in Kansas on
7 January 3, 2007 and is awaiting approval.

8 **Q: Please describe the Demand Response programs included in the portfolio and
9 provide an update on the implementation status of each.**

10 A: KCPL included two Demand Response programs in its portfolio; one for residential and
11 small commercial customers and one for large commercial and industrial customers. The
12 following describes these two programs.

13 **Energy Optimizer (Air Conditioning Cycling)**

14 The Energy Optimizer program is an air conditioning cycling program by which KCPL
15 can reduce residential and small commercial air conditioning load during peak summer
16 days. This load reduction is achieved by sending a paging signal to a control device in a
17 thermostat attached to the customer’s air conditioner. The control device then turns the
18 air conditioner off and on or ramps up the temperature over a period of time depending
19 on the load reduction strategy established by KCPL.

20 Through a bidding process, Honeywell Utility Solutions was selected to partner
21 with KCPL in implementing this program. Honeywell has opened an office in Kansas
22 City and hired office and field personnel to ensure the success of the program. Various
23 methods of marketing the program have been implemented including website, bill inserts,

1 direct mail, trade show and festival participation, news releases, short vignettes on
2 several news and talk show programs, customer on-site presentations, and interviews on
3 radio talk shows. In July and August 2006, digital billboards promoted this program.
4 Program participation is significant for the Energy Optimizer program. KCPL received
5 recognition in the press and in TV coverage that spurred participation in the program.

6 Honeywell's current thermostat serves single-stage systems and not double-stage
7 systems often used in commercial applications. Therefore, KCPL has completed an
8 Alpha test of the White-Rogers thermostat. While this thermostat can handle the more
9 complex systems, is considered very user-friendly and can cycle compressors, it is unable
10 to ramp temperatures. A decision on this issue will be made in the near future.

11 Since the inception of this program following Commission approval in January
12 2006, KCPL has enjoyed tremendous success in obtaining customer participation in this
13 program. While our first year goal for Kansas was 2.6 MW and our 3-year program goal
14 for Kansas was 8.2 MW, we have achieved 5.7 MWs in 14 months. This represents
15 219.2% of our first year goal and 69.5% of our 3-year goal. We are at 217.9% of our first
16 year budget and 36.5% of our 3-year budget.

17 **MPower**

18 MPower is a C&I curtailment program whereby customers with the ability to curtail
19 200 kW or more are incented to contract with KCPL to curtail their load when requested
20 by KCPL. Under MPower, the customer is invited to use the curtailment method(s) that
21 best meets their capabilities and needs. This could include turning on a back-up
22 generator, shutting off lights or production lines, raising their cooling system temperature
23 several degrees, or closing the company and sending their employees home.

1 Despite the redesign of the Peak Load Curtailment Credit Rider (“PLCC”) into
2 the MPower Rider based on customer feedback, MPower has been slower to take hold.
3 Only one customer in Missouri signed a contract for the 2006 cooling season and another
4 signed a contract in December. Following approval of the program in Kansas in late
5 September 2006, no Kansas customers have yet signed a contract. This experience of
6 having only one customer available to curtail during the cooling season has demonstrated
7 the need for a diversified portfolio of demand response programs, both incentive-induced
8 and price-induced programs. We contracted with KEMA Consulting to study our
9 existing programs and to propose recommendations for revision of existing programs and
10 development of new programs. KCPL is currently studying those recommendations.

11 **Q: Which programs have been approved and implemented in Kansas?**

12 A: Schedule SKN-1 shows the eight programs that have been approved and implemented in
13 Kansas. Two additional programs have been filed for approval and another is expected to
14 be filed in the near future. This table also provides actual and estimated filing times for
15 the remaining three programs.

16 **Q: For the programs that have been implemented, what progress has been made in
17 terms of participation and spending through December 31, 2006?**

18 A: Details by program for participation and actual expenditures are shown in Schedule
19 SKN-2.

20 **Q: What research activities that support Affordability, Energy Efficiency and Demand
21 Response has KCPL engaged in?**

22 A: KCPL has engaged in or started three key projects to enhance our capabilities in this
23 program area.

1 (1) As mentioned above, KCPL contracted with KEMA to propose a portfolio of
2 Demand Response programs. These include both incentive-induced and price-
3 induced demand response programs and include new programs as well as
4 suggested modifications to existing programs.

5 (2) KCPL contracted with RLW Analytics to expand the Missouri Assessment Study
6 into a DSM potential study for the KCPL residential market in both Missouri and
7 Kansas.

8 (3) KCPL contracted with Summit Blue to provide assistance and training in
9 conducting an avoided cost study and a DSM potential study for the C&I market.
10 Phase I of this study will focus on KCPL's four largest customer segments and the
11 avoided cost study. Phase II will focus on the remainder of KCPL's largest
12 customer segments and proposed program design for the end uses with the largest
13 potential. KCPL intends to perform much of the study using its own employees
14 but with Summit Blue's guidance.

15 **Q: Will these studies be completed in the near future?**

16 A: KCPL expects these studies to be completed by mid-year 2007.

17 **Q: Have any evaluations been completed to date on the programs KCPL has
18 implemented and, if so, what were the results of those evaluations?**

19 A: A preliminary impact evaluation was completed on the Energy Optimizer program.
20 Initially, KCPL estimated a 1.1 kW reduction per participant. This was an average based
21 on a participation mix of commercial and residential customers obtained from other
22 utility reports. KCPL participants in the 2006 cooling season were primarily residential
23 customers. Based on their participation, and based on preliminary report findings, our

1 residential customers are reducing demand by 0.92 kW for Kansas single family homes.
2 KCPL is pleased with this result and expect that this average will increase as more
3 commercial customers participate in the program. Multi-family units are producing
4 demand reductions that are approximately half of that for single family homes. It is our
5 intent to re-run the benefit cost analysis and, based on the analysis results, provide a
6 recommendation on the future of this program.

7 **Q: When will other evaluations be completed?**

8 A: For programs that have an evaluation plan, KCPL has committed to completing an
9 evaluation of the initial two years of each program within six months of the end of the
10 program's second year. KCPL has the option, especially for programs with large
11 budgets, to perform evaluations earlier to ensure efficiency and effectiveness. The
12 Energy Optimizer is an example of an evaluation performed prior to the completion of
13 two full years.

14 **Q: Did you perform any other evaluations?**

15 A: KCPL planned to evaluate MPower; however, with only one customer participating, it
16 would not be worth the cost. KCPL is also starting to collect data to evaluate the low
17 income weatherization program.

18 **Q: What are the current expected costs of the programs?**

19 A: The total estimated costs provided in the Regulatory Plan Stipulation and Agreement still
20 reflect the total expected program costs. Those costs were estimated based on staffing
21 and implementation costs in a maintenance mode, rather than a start-up mode. Therefore,
22 actual costs may be slightly higher during the start-up phase of each program. Also, as

1 KCPL gains experience in implementing the programs, we will have a better basis on
2 which to estimate future costs.

3 **Q: Are there other circumstances that may impact the budget?**

4 A: Yes. For example, as I noted earlier in my testimony, the Cool Homes program design
5 was changed due to changes in Federal regulation that required all new cooling systems
6 manufactured to meet a minimum of SEER 13. Therefore, rather than providing a rebate
7 for equipment replacement at failure, the program was redesigned to be a
8 re-commissioning and early replacement program, requiring a higher incentive for the
9 latter. Another example is higher than expected market demand for our programs.
10 Demand for the Energy Optimizer, for example, was so high that the 3-year MW goal
11 was nearly accomplished in just 14 months. This impacted actual budget. The total
12 estimated costs, and the proposed allocation by State, are detailed in Appendix C to the
13 Regulatory Plan Stipulation and Agreement.

14 **Q: Are you addressing the ratemaking treatment of customer program costs?**

15 A: No, KCPL witness John P. Weisensee discusses the ratemaking treatment in his direct
16 testimony, and includes the related Adj-31 in Schedule JPW-2 attached to his direct
17 testimony.

18 **Q: Could you please provide an update of KCPL's implementation of its credit card
19 payment program?**

20 A: KCPL began offering card payment options to its residential customers on February 1,
21 2007, beginning with acceptance through the interactive voice response ("IVR") systems
22 of KCPL and Western Union. KCPL currently accepts credit and debit cards with either
23 VISA or Mastercard brands. KCPL has contracted with Western Union to act as a

1 payment processor to help ensure that customer card information is handled, processed
2 and stored securely. Western Union, through its SpeedPay system, is one of the largest
3 processors of credit card payments in the United States. Due to favorable pricing on
4 transactions that can be processed through the ATM payment network, KCPL was able to
5 offer Mastercard in addition to VISA at the outset. This is a change from our original
6 plan of starting with VISA and adding Mastercard at an unspecified future date.

7 **Q: What are the estimated annual costs for KCPL's card payment program?**

8 A: KCPL expects its total Company annual costs in 2007 will be approximately \$563,000, as
9 reflected in Adj-56 on the Summary of Adjustments attached to the direct testimony of
10 KCPL witness John P. Weisensee. The Kansas portion of this cost is expected to be
11 about \$263,000.

12 **Q: Does that conclude your testimony?**

13 A: Yes, it does.

