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**Via Overnight Mail**

September 12, 2006

Beth A. O'Donnell, Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, Kentucky 40602

RECEIVED

SEP 13 2006

PUBLIC SERVICE  
COMMISSION

Re: **Case No. 2006-00172**

Dear Ms. O'Donnell:

Please find enclosed the original and twelve (12) copies of the Direct Testimony and Exhibits of Kevin C. Higgins filed on behalf of The Kroger Co. and St. Elizabeth Medical Center in the above-referenced matter. By copy of this letter, all parties listed on the Certificate of Service have been served.

Please place this document of file.

Very Truly Yours,



Michael L. Kurtz, Esq.  
Kurt J. Boehm, Esq.

**BOEHM, KURTZ & LOWRY**

MLKkew  
Attachment

cc: Certificate of Service

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing was served by mailing a true and correct copy, via electronic mail and by first-class postage prepaid mail to all parties on the 12<sup>th</sup> day of September, 2006.

Honorable Elizabeth E. Blackford  
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**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE**  
**KENTUCKY PUBLIC SERVICE COMMISSION**

In the Matter of Application of The )  
Union Light, Heat and Power )  
Company d/b/a Duke Energy ) Case No. 2006-00172  
Kentucky, Inc. for an Adjustment of )  
Electric Rates )

**RECEIVED**  
SEP 13 2006  
PUBLIC SERVICE  
COMMISSION

**Direct Testimony of Kevin C. Higgins**  
**on behalf of**  
**The Kroger Co. and St. Elizabeth Medical Center**

**September 13, 2006**

**DIRECT TESTIMONY OF KEVIN C. HIGGINS**

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**Introduction**

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

A. Kevin C. Higgins, 215 South State Street, Suite 200, Salt Lake City, Utah,  
84111.

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

A. I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies  
is a private consulting firm specializing in economic and policy analysis  
applicable to energy production, transportation, and consumption.

**Q. On whose behalf are you testifying in this proceeding?**

A. My testimony is being sponsored by The Kroger Co. (“Kroger”) and St.  
Elizabeth Medical Center (“St. Elizabeth”).

Kroger is one of the largest retail grocers in the United States, and  
operates 26 stores and other facilities that are served by Union Light, Heat and  
Power Company (“Duke Energy Kentucky”) on Rates DS and DT. All together,  
Kroger purchases more than 47 million kWh annually from Duke Energy  
Kentucky.

St. Elizabeth operates two medical campuses served by Duke Energy  
Kentucky and purchases more than 33 million kWh on Rate DT from the  
Company.

**Q. Please describe your professional experience and qualifications.**

1 A. My academic background is in economics, and I have completed all  
2 coursework and field examinations toward a Ph.D. in Economics at the University  
3 of Utah. In addition, I have served on the adjunct faculties of both the University  
4 of Utah and Westminster College, where I taught undergraduate and graduate  
5 courses in economics. I joined Energy Strategies in 1995, where I assist private  
6 and public sector clients in the areas of energy-related economic and policy  
7 analysis, including evaluation of electric and gas utility rate matters.

8 Prior to joining Energy Strategies, I held policy positions in state and local  
9 government. From 1983 to 1990, I was economist, then assistant director, for the  
10 Utah Energy Office, where I helped develop and implement state energy policy.  
11 From 1991 to 1994, I was chief of staff to the chairman of the Salt Lake County  
12 Commission, where I was responsible for development and implementation of a  
13 broad spectrum of public policy at the local government level.

14 **Q. Have you testified previously before any state utility regulatory**  
15 **commissions?**

16 A. Yes. I have testified in over sixty proceedings on the subjects of utility  
17 rates and regulatory policy before state utility regulators in Alaska, Arizona,  
18 Colorado, Georgia, Idaho, Illinois, Indiana, Kansas, Michigan, Minnesota,  
19 Nevada, New York, Ohio, Oregon, Pennsylvania, South Carolina, Utah, Virginia,  
20 Washington, West Virginia, and Wyoming.

21 A more detailed description of my qualifications is contained in  
22 Attachment KCH-1, appended to this direct testimony.

23

1 **Overview and conclusions**

2 **Q. What is the purpose of your testimony in this proceeding?**

3 A. My testimony addresses: (1) Rate spread; (2) Rate design for Rate DT; and  
4 (3) Duke Energy Kentucky's PowerShare CallOption program. As part of my  
5 testimony, I offer recommendations to the Commission on these issues in support  
6 of a just and reasonable outcome.

7 **Q. What conclusions and recommendations do you offer based on your**  
8 **analysis?**

9 A. I offer the following conclusions and recommendations:

10 (1) Duke Energy Kentucky proposes a rate spread that is intended to move  
11 customer classes closer to cost-based rates, while retaining significant subsidies,  
12 particularly to the Residential class. Given the magnitude of the increase being  
13 requested by the Company – 27.75 percent – the rate spread proposed by Duke  
14 Energy Kentucky is not unreasonable, as the Company attempts to mitigate rate  
15 impacts on the basis of gradualism. However, to the extent that the Company's  
16 proposed revenue requirement increase is reduced by the Commission, its  
17 proposed rate spread should be modified to bring rates closer to cost-of-service. I  
18 recommend that this be implemented by applying each percentage point reduction  
19 in the Company's requested revenue requirement increase as a uniform  
20 percentage reduction to the rate increase for each customer class.

21  
22 (2) The Company's proposed on-peak demand charge for Rate DT only recovers  
23 80 percent of demand-related costs in the summer and 70 percent of demand-  
24 related costs in the winter. To make up the difference, the Company proposes that  
25 the Rate DT energy charge be set above its energy-related costs. This  
26 misalignment of costs and charges sends improper price signals and forces an  
27 unwarranted subsidy from the higher-load-factor customers to the lower-load-  
28 factor customers within Rate DT. I recommend that the Rate DT demand charge  
29 be moved to 100 percent of demand-related cost, with a corresponding reduction  
30 in the Rate DT energy charge to achieve the Rate DT revenue requirement that is  
31 approved in this proceeding.

32  
33 (3) Rate DT provides for time-of-use (TOU) rates, but the TOU price-  
34 differentiation is applied only to demand charges, not to energy charges. I  
35 recommend that TOU pricing be extended to the energy component of the Rate  
36 DT to reflect the difference in system average cost between on-peak and off-peak  
37 periods. Such a change would send the proper signal to customers regarding the

1 relative costs to operate the system during peak and off-peak hours. Customers  
2 can then use this pricing information to alter their discretionary patterns of usage,  
3 increasing efficiency and lowering the overall cost of energy to the system.  
4 Specifically, I recommend that the summer on-peak energy charge be set 0.8  
5 cents/kWh above the off-peak charge, and the winter on-peak charge be set 0.6  
6 cents/kWh above the off-peak charge.

7  
8 (4) The Company's proposal to calculate the credits for the PowerShare  
9 CallOption based upon the value of avoiding investment in a combustion turbine  
10 is reasonable and I recommend its adoption. In addition, I support the Company's  
11 proposal to fund program expenses from the FAC. In the event the Commission  
12 determines that the FAC is not a preferred option for funding this program, then I  
13 recommend the expenses be recovered through Rider DSM.  
14

### 15 **Rate Spread**

16 **Q. What general guidelines should be employed in spreading any change in**  
17 **rates?**

18 A. In determining rate spread, it is important to align rates with cost  
19 causation, to the greatest extent practicable. Properly aligning rates with the costs  
20 caused by each customer class is essential for ensuring fairness, as it minimizes  
21 cross subsidies among customers. It also sends proper price signals, which  
22 improves efficiency in resource utilization.

23 At the same time, it can be appropriate to mitigate the impact of moving  
24 immediately to cost-based rates for classes that would experience significant rate  
25 increases from doing so. This principle of ratemaking is known as "gradualism."  
26 When employing this principle, it is important to adopt a long-term strategy of  
27 moving in the direction of cost causation, and to avoid policies that result in  
28 permanent cross-subsidies from other customers.

29 **Q. What rate spread does Duke Energy Kentucky propose and how does it**  
30 **relate to the Company's cost-of-service results?**

1 A. Duke Energy Kentucky is recommending a very significant overall rate  
 2 increase of 27.75 percent. Table KCH-1 provides a comparison of Duke Energy  
 3 Kentucky’s proposed rate spread, at the Company’s proposed revenue  
 4 requirement, and the rate increases that would apply to the major customer classes  
 5 if each class were charged cost-based rates, as determined by Duke Energy  
 6 Kentucky’s cost-of-service study.

7 **Table KCH-1**

8  
 9 **Comparison of Cost-of-Service Results to**  
 10 **Duke Energy Kentucky Proposed Rate Change**

11 <u>Class</u>	12 <u>Rate Change</u> 13 <u>Based on COS<sup>1</sup></u>	14 <u>DEK Proposed</u> 15 <u>Rate Change<sup>2</sup></u>
16 Residential (RS)	17 37.98%	18 33.42%
19 Distribution (DS)	20 16.90%	21 23.60%
22 DT – Secondary	23 24.46%	24 26.52%
25 DT – Primary	26 35.96%	27 26.68%
28 Primary Dist. (DP)	29 31.83%	30 28.26%
Transmission (TT)	12.67%	17.17%
Lighting	(9.20)%	17.91%
Total	27.98%	27.75%

25 As is evident in Table KCH-1, the Company’s proposed rate spread  
 26 mitigates the rate impact on customer classes that warrant the greatest increases  
 27 based on cost of service. As indicated in Duke Energy Kentucky’s Attachment  
 28 PFO-4, the largest subsidy is paid to the Residential class, much of which is  
 29 funded by customers on the DS rate schedule.

30 **Q. What approach to rate spread do you recommend?**

<sup>1</sup> Source: Duke Energy Kentucky Attachment PFO-3.

<sup>2</sup> Source: Duke Energy Kentucky Schedule M.



1 A. In this case, it is important to distinguish between rate spread at the  
2 Company's *requested* revenue requirement, and rate spread under a *final* revenue  
3 requirement approved by the Commission. If the Company's proposed revenue  
4 requirement were approved – i.e., a 27.75 percent overall increase were adopted –  
5 the rate spread proposed by Duke Energy Kentucky is not unreasonable, even  
6 though it deviates from cost-of-service results. This is because the magnitude of  
7 the increase being requested by the Company justifies some mitigation of rate  
8 impacts, based on the principle of gradualism.

9 However, to the extent that the revenue requirement requested by the  
10 Company is reduced as a result of the Commission's decision in this proceeding,  
11 then the rate spread should be adjusted to move rates further in line with cost-of-  
12 service. Specifically, I recommend that each percentage point reduction in the  
13 Company's revenue requirement increase be applied uniformly to the percentage  
14 rate increase that is applied to each customer class. This approach generally  
15 moves rates closer to cost-of-service as the overall rate increase for each customer  
16 class falls.

17 **Q. Can you provide a simple example of how this proposal would work?**

18 A. Yes. If, for example, the Company's overall rate increase were reduced 12  
19 percentage points from 27.75 percent to 15.75 percent, the rate increase for each  
20 customer class would be correspondingly reduced by 12 percentage points.  
21 Referring to Table KCH-1 above, the resulting rate increases for the respective  
22 customer classes would be 21.42 percent for Residential (i.e., 33.42% -12.00%),  
23 11.60 percent for DS, 14.52 percent for DT-Secondary, and so on.

1 **Rate DT Design**

2 **Q. Please describe Rate DT.**

3 A. Rate DT is applicable to customers with average billing demands of 500  
4 kW or greater, as measured over a 12-month period. The rate schedule is  
5 applicable to customers taking service either at secondary or primary voltage,  
6 with the latter receiving a discount on the on-peak demand charge. Rate DT has a  
7 Summer On-Peak demand charge and a Winter On-Peak demand charge. It also  
8 has a small Off-Peak demand charge that is applicable to off-peak demand that is  
9 in excess of the customer's maximum on-peak demand. Despite the TOU  
10 distinction made between on-peak demand and off-peak demand, Rate DT has  
11 just a single energy charge applied to all kilowatt-hours.

12 **Q. Do you have any concerns with respect to Duke Energy Kentucky's proposed**  
13 **rate design for Rate DT?**

14 A. Yes. There are two areas of DT rate design that I would like to address: (1)  
15 the relationship of the on-peak demand charges to demand-related costs, and (2)  
16 the current absence of TOU energy charges.

17 **Q. Please explain your concerns with respect to the relationship between the**  
18 **Rate DT demand-charges and demand-related costs for Rate DT.**

19 A. The Company's cost-of-service workpapers show that its proposed Rate  
20 DT on-peak demand charges are below the demand-related costs to serve this rate  
21 schedule, and the Company's proposed Rate DT energy charge is above Rate DT  
22 energy-related costs. Attachment KCH-2 summarizes the cost information that  
23 supports this conclusion. Key data points are shown in Table KCH-2, below.

1 **Table KCH-2**

2 **Relationship between Rate DT Cost Components and**  
3 **Rate DT Charges Proposed by Duke Energy Kentucky**

4

5 <u>Cost or Rate Component</u>	6 <u>Cost-of-Service Results for Rate DT<sup>3</sup></u>	7 <u>Company-proposed Rate DT Charges</u>
8 Secondary energy @ proposed rev.	\$ .033300/kWh	\$ .041927/kWh
9 Secondary demand @ proposed rev.	\$14.56/kW	\$ 11.56/kW – summer
		\$ 10.15/kW – winter

10

11

12 As shown in Table KCH-2, Duke Energy Kentucky's full, on-peak

13 demand cost-of-service for Rate DT-Secondary is \$14.56 per kW-month at

14 proposed revenues. In contrast, the proposed on-peak demand charge for Rate

15 DT-Secondary is \$11.56 per kW-month in Summer and \$10.15 per kW-month in

16 Winter. The Company's proposed Summer demand charge covers only 80 percent

17 of demand-related cost, while the proposed Winter charge covers only 70 percent

18 of demand-related cost.

19 On the other hand, Duke Energy Kentucky's unit *energy cost*, at the

20 Company's proposed revenue requirement, is 3.3300 cents/kWh. Yet the

21 Company's proposed Rate DT energy charge is 4.1927 cents/kWh – which is over

22 25 percent greater than the energy-related cost-of-service.

23 **Q. From a customer's perspective, why should it matter if Duke Energy**

24 **Kentucky proposes a demand charge that does not fully recover its demand-**

25 **related costs?**

26 A. If a utility proposes a demand charge that is below the cost of demand,

27 then invariably it is going to seek to recover its class revenue requirement by

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<sup>3</sup> Source: Attachment KCH-2

1 over-recovering its costs in another area, most typically through levying an energy  
2 charge that is above unit energy costs, which is the case here. For a given rate  
3 schedule such as Rate DT, when demand charges are set below cost, and energy  
4 charges are set above cost, those customers with relatively higher load factors are  
5 required to subsidize the costs of the lower-load-factor customers within the rate  
6 class.

7 **Q. Why is it important for rate design to be representative of underlying cost**  
8 **causation?**

9 A. Aligning rate design with underlying cost causation improves efficiency  
10 because it sends proper price signals. For example, setting a demand charge below  
11 the cost of demand understates the economic cost of demand-related assets, which  
12 in turn distorts consumption decisions, and calls forth a greater level of  
13 investment in fixed assets than is economically desirable.

14 At the same time, aligning rate design with underlying cost causation is  
15 important for ensuring equity among customers, because properly aligning with  
16 costs *minimizes cross-subsidies among customers*. As I stated above, if demand  
17 costs are understated in utility rates, the costs are made up elsewhere – typically  
18 in energy rates. When this happens, higher-load-factor customers (who use fixed  
19 assets relatively efficiently through relatively constant energy usage) are forced to  
20 pay the demand-related costs of lower-load-factor customers. This amounts to a  
21 cross-subsidy that is fundamentally inequitable.

22 **Q. What alternative rate design for Rate DT are you recommending?**

1 A. I am recommending that the demand charge for Rate DT be set at 100  
2 percent of demand-related cost. This would be accompanied by a revenue-neutral  
3 reduction in the Rate DT energy charge. Further, I am recommending that the  
4 Rate DT energy charge be differentiated on a TOU basis into a Summer on-peak  
5 charge, a Winter on-peak charge, and an Off-peak charge.

6 **Q. Why are you recommending that Rate DT energy charges be differentiated on**  
7 **a TOU basis?**

8 A. TOU energy rates allow customers to better respond to price signals, as  
9 well as pay rates that are more closely aligned with the costs they cause.

10 Energy costs vary across the hours of the day, with the most expensive  
11 hours typically occurring in the morning and on into the early evening. Designing  
12 the energy price for end-use customers to reflect these variations in energy costs  
13 sends the proper signal to customers regarding the relative costs to operate the  
14 system during peak and off-peak hours. Customers can then use this pricing  
15 information to alter their discretionary patterns of usage, increasing efficiency and  
16 lowering the overall cost of energy to the system.

17 **Q. To what extent do the energy costs of Duke Energy Kentucky vary across the**  
18 **hours of the day?**

19 A. According to data responses prepared by Duke Energy Kentucky, the  
20 Company's energy costs vary as shown in Table KCH-3, below.

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3  
4

**Table KCH-3**  
**Duke Energy Kentucky**  
**Marginal and Average Energy Costs by Period<sup>4</sup>**

Period	Marginal Energy Cost (cents/kWh)	Average Energy Cost (cents/kWh)
Summer On-Peak	12.5009	2.8923
Winter On-Peak	12.5227	2.6638
Off-Peak	5.4436	2.0063

5  
6

7                   As shown in the Company’s energy cost information above, there is a very  
8                   sizable difference in marginal energy costs between on-peak and off-peak periods  
9                   – over 7 cents per kWh. As expected, the differential between on-peak and off-  
10                  peak costs narrows quite a bit when expressed in terms of average energy costs.  
11                  However, even this differential is still significant: nearly 9 mills per kWh in  
12                  summer and over 6 mills per kWh in winter.

13 **Q.    How do you recommend this information be utilized in developing TOU**  
14 **energy pricing?**

15 A.           While it is appropriate to be guided by the differences in marginal costs,  
16           for the purpose of developing a TOU energy rate for Rate DT, I am  
17           recommending that the difference between on-peak and off-peak average energy  
18           prices provide the basis for the TOU rate design. Specifically, I recommend that  
19           the Summer On-Peak energy charge be set 8 mills per kWh higher than the Off-

<sup>4</sup> Sources: Responses of Duke Energy Kentucky to Kroger & St. Elizabeth DR 01-011 and DR 01-013.

1 Peak energy charge, and that the Winter On-Peak energy charge be set 6 mills per  
 2 kWh higher than the Off-Peak energy charge. The appropriate Rate DT billing  
 3 determinants for each TOU period are then used to design these TOU prices such  
 4 that they provide the same energy-charge revenue as the flat energy charge that  
 5 would otherwise apply.

6 **Q. What Rate DT charges would result from your rate design proposal?**

7 A. I have made this calculation at the Company's proposed Rate DT revenue  
 8 requirement. These calculations are presented in Attachment KCH-3, and are  
 9 summarized for Secondary voltage in Table KCH-4, below. I am not proposing  
 10 any changes with respect to the Company's proposed customer charges or other  
 11 aspects of its proposed DT rate design.

12 **Table KCH-4**

13 **Kroger/St. Elizabeth Proposed Rate Design for Rate DT-Secondary**  
 14 **at Duke Energy Kentucky Proposed Revenue Requirement**

15 <u>Rate Component</u>	16 <u>@ DEK Proposed Revenues</u>
17 On-Peak Demand	18 \$14.56/kW
19 Off-Peak Demand	20 \$ 1.19/kW
21 Summer On-Peak Energy	22 \$.039864/kWh
23 Winter On-Peak Energy	24 \$.037864/kWh
25 Off-Peak Energy	26 \$.031864/kWh

27 As shown in Table KCH-4, my rate design proposal would result in a Rate  
 28 DT-Secondary On-Peak demand charge of \$14.56 per kW-month. This charge is  
 29 designed to recover 100 percent of the rate schedule's peak-demand-related costs.  
 The corresponding flat energy charge that would recover the Company's proposed

1 Rate DT revenue requirement is 3.3864 cents per kWh. From this flat “baseline”  
2 energy charge, the respective On-Peak and Off-Peak energy charges were derived.

3 **Q. The Company’s current and proposed on-peak demand charges are higher**  
4 **in the summer than in the winter, whereas your proposed demand charge is**  
5 **the same for both seasons. Do you object to the Company’s summer / winter**  
6 **differential in the design of the demand charge?**

7 A. No. But, as I am proposing to set demand charges equal to 100 percent of  
8 demand-related cost, I wanted to be careful not to set the Summer On-Peak  
9 demand charge above the full-cost level. At the same time, if the Company or the  
10 Commission wishes to continue to have a summer / winter differential in the  
11 demand charge, I would offer no objections, so long as the resulting demand  
12 charge revenues are the same as those that result from my proposal.

13 **Q. How does your proposed rate design compare to that of Duke Energy**  
14 **Kentucky?**

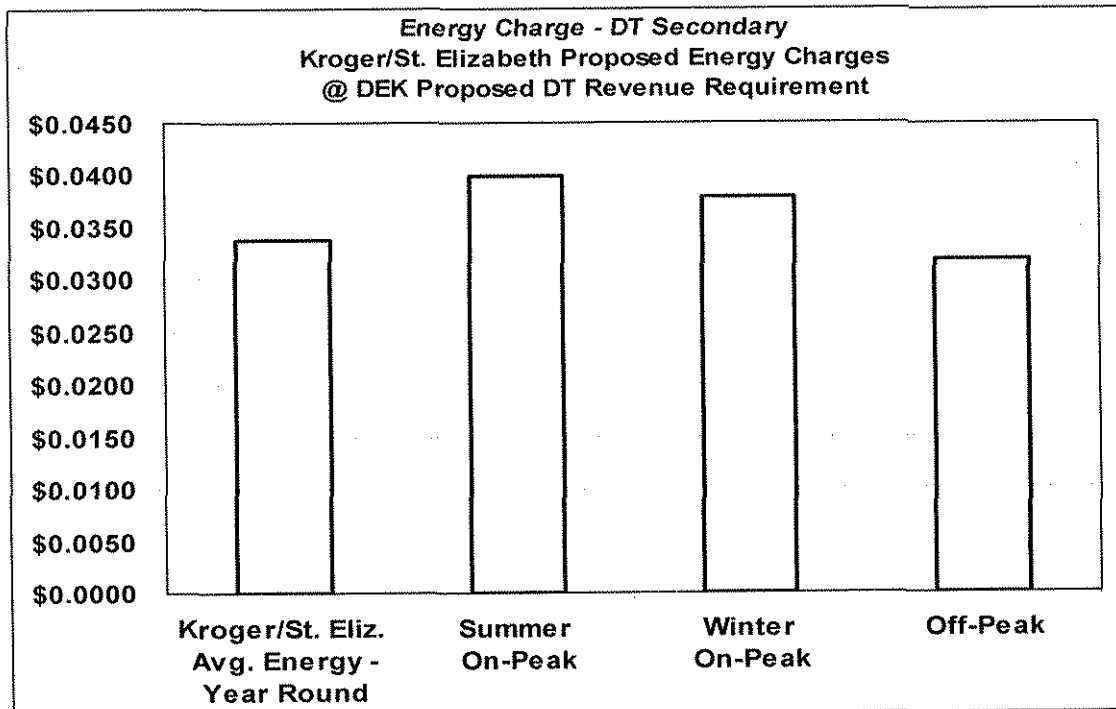
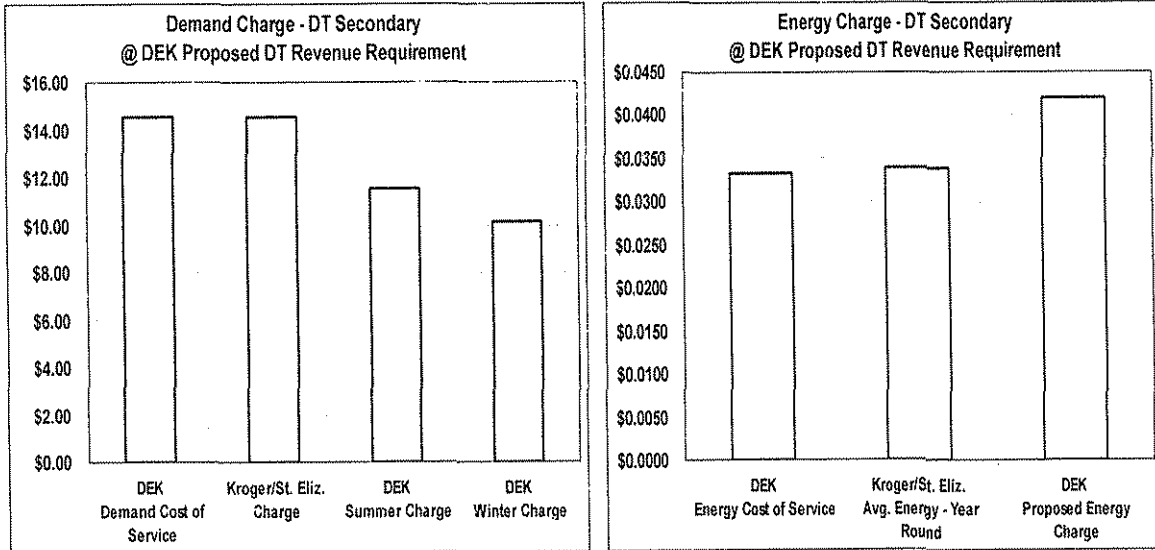
15 A. Figure KCH-1, below, shows graphically the relationship between Duke  
16 Energy Kentucky’s cost-of-service results, the Company’s rate design proposal,  
17 and my rate design proposal at the Company’s proposed revenue requirements for  
18 Rate DT-Secondary. Note that the upper right-hand panel comparing energy  
19 charges is expressed in terms of a flat kWh charge, so that an “apples-to-apples”  
20 comparison can be made between the Company’s proposal and my own. The flat  
21 energy charge is then further broken down into TOU components in the lower  
22 panel.



1 As shown in Figure KCH-1, the rate design I am proposing (“Kroger/St.  
 2 Elizabeth Proposed” charges) for Rate DT lines up more closely with DT demand  
 3 and energy costs than the Company’s proposed rate design.

4 **Figure KCH-1**

5  
 6 **Comparison between Cost-of-Service Results and Rate Design Proposals For DT-  
 7 Secondary at Duke Energy Kentucky’s Proposed DT Revenue Requirement**



1 **Q. What do you recommend if the Commission reduces the revenue**  
2 **requirement for Rate DT relative to the Company's request?**

3 A. I recommend retaining the Company's proposed customer charges and  
4 setting the demand charge equal to 100 percent of demand cost-of-service at the  
5 Commission-approved Rate DT revenue requirement, with the remaining  
6 reduction applied to the energy charge. Alternatively, the demand and energy  
7 charges in Table KCH-4 could be reduced in the same proportion to reach the  
8 approved Rate DT revenue requirement, while retaining the Company's proposed  
9 customer charges.

10 **Q. Would the Rate DT design changes you are recommending impact the**  
11 **revenue requirements for other rate schedules?**

12 A. No. The rate design changes I am recommending involve a tradeoff  
13 between the Rate DT demand charge and the Rate DT energy charge, while  
14 holding Rate DT revenues constant. No other rate schedule revenues would be  
15 affected.

16

17 **PowerShare CallOption Program**

18 **Q. What is the Company's PowerShare CallOption program?**

19 A. This program is described in the direct testimony of Company witness  
20 Jeffrey R. Bailey. The PowerShare CallOption program provides credits to  
21 customers who agree to load curtailments at times when the Company needs  
22 capacity.

23 **Q. What changes to the program are proposed by Mr. Bailey?**

1 A. Since its inception in 2000, the PowerShare program has paid participating  
2 customers for curtailments based on market prices. Mr. Bailey indicates that the  
3 volatility of market prices has resulted in large swings in customer participation:  
4 when market prices are low, few customers participate even though the Company  
5 needs the capacity.

6 Consequently, Duke Energy Kentucky is proposing to modify the payment  
7 mechanism for this program to make it capable of producing consistent capacity  
8 value. As described by Mr. Bailey, the Company is proposing to treat the  
9 PowerShare CallOption on a similar basis as its demand-side management  
10 (“DSM”) programs. As DSM programs are evaluated based on long-term avoided  
11 costs, Mr. Bailey proposes to calculate the credits for the PowerShare CallOption  
12 based upon the value of avoiding investment in a combustion turbine. The  
13 Company proposes that the costs for this program would be recovered through the  
14 Fuel Adjustment Clause (“Rider FAC”).

15 **Q. What is your assessment of this proposal?**

16 A. The concept being put forward by Mr. Bailey is reasonable and I  
17 recommend its adoption. It is economically sound for customers who provide  
18 capacity value to the Company to be credited based on long-term avoided costs. It  
19 also makes sense to design the program in a way that produces consistent capacity  
20 value.

21 The Company’s proposal to fund program expenses from the FAC is also  
22 reasonable in concept. In the event the Commission determines that the FAC is  
23 not a preferred option for funding this program, then I recommend the expenses

1 be recovered through Rider DSM. This alternative is appropriate given the load-  
2 reducing characteristics of the PowerShare CallOption program.

3 **Q. Does this conclude your direct testimony?**

4 A. Yes, it does.

**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

In The Matter Of Notice of ULH&P Company dba Duke Energy :  
Kentucky's Intent to File A General Electric Rate Case : Case No. 2006-00172

**AFFIDAVIT OF KEVIN C. HIGGINS**

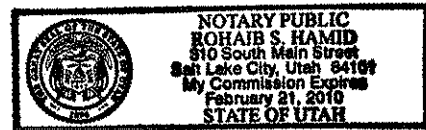
State of Utah            )  
                                  )  
County of Salt Lake    )

I, KEVIN HIGGINS, being duly sworn, deposes and states: that the attached are his sworn Testimony and Exhibits and that the statements contained are true and correct to the best of his knowledge, information and belief.

  
\_\_\_\_\_  
Kevin Higgins

Sworn to and subscribed before me on this  
11 day of September, 2006.

  
\_\_\_\_\_  
Notary Public



My commission expires: Feb 21st 2010

**KEVIN C. HIGGINS**  
**Principal, Energy Strategies, L.L.C.**  
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**Vitae**

**PROFESSIONAL EXPERIENCE**

Principal, Energy Strategies, L.L.C., Salt Lake City, Utah, January 2000 to present. Responsible for energy-related economic and policy analysis, regulatory intervention, and strategic negotiation on behalf of industrial, commercial, and public sector interests. Previously Senior Associate, February 1995 to December 1999.

Adjunct Instructor in Economics, Westminster College, Salt Lake City, Utah, September 1981 to May 1982; September 1987 to May 1995. Taught in the economics and M.B.A. programs. Awarded Adjunct Professor of the Year, Gore School of Business, 1990-91.

Chief of Staff to the Chairman, Salt Lake County Board of Commissioners, Salt Lake City, Utah, January 1991 to January 1995. Senior executive responsibility for all matters of county government, including formulation and execution of public policy, delivery of approximately 140 government services, budget adoption and fiscal management (over \$300 million), strategic planning, coordination with elected officials, and communication with consultants and media.

Assistant Director, Utah Energy Office, Utah Department of Natural Resources, Salt Lake City, Utah, August 1985 to January 1991. Directed the agency's resource development section, which provided energy policy analysis to the Governor, implemented state energy development policy, coordinated state energy data collection and dissemination, and managed energy technology demonstration programs. Position responsibilities included policy formulation and implementation, design and administration of energy technology demonstration programs, strategic management of the agency's interventions before the Utah Public Service Commission, budget preparation, and staff development. Supervised a staff of economists, engineers, and policy analysts, and served as lead economist on selected projects.

Utility Economist, Utah Energy Office, January 1985 to August 1985. Provided policy and economic analysis pertaining to energy conservation and resource development, with an emphasis on utility issues. Testified before the state Public Service Commission as an expert witness in cases related to the above.

Acting Assistant Director, Utah Energy Office, June 1984 to January 1985. Same responsibilities as Assistant Director identified above.

Research Economist, Utah Energy Office, October 1983 to June 1984. Provided economic analysis pertaining to renewable energy resource development and utility issues. Experience includes preparation of testimony, development of strategy, and appearance as an expert witness for the Energy Office before the Utah PSC.

Operations Research Assistant, Corporate Modeling and Operations Research Department, Utah Power and Light Company, Salt Lake City, Utah, May 1983 to September 1983. Primary area of responsibility: designing and conducting energy load forecasts.

Instructor in Economics, University of Utah, Salt Lake City, Utah, January 1982 to April 1983. Taught intermediate microeconomics, principles of macroeconomics, and economics as a social science.

Teacher, Vernon-Verona-Sherrill School District, Verona, New York, September 1976 to June 1978.

## **EDUCATION**

Ph.D. Candidate, Economics, University of Utah (coursework and field exams completed, 1981).

Fields of Specialization: Public Finance, Urban and Regional Economics, Economic Development, International Economics, History of Economic Doctrines.

Bachelor of Science, Education, State University of New York at Plattsburgh, 1976 (cum laude).

Danish International Studies Program, University of Copenhagen, 1975.

## **SCHOLARSHIPS AND FELLOWSHIPS**

University Research Fellow, University of Utah, Salt Lake City, Utah 1982 to 1983.

Research Fellow, Institute of Human Resources Management, University of Utah, 1980 to 1982.

Teaching Fellow, Economics Department, University of Utah, 1978 to 1980.

New York State Regents Scholar, 1972 to 1976.

## EXPERT TESTIMONY

“In the Matter of Appalachian Power Company’s Application for Increase in Electric Rates,” **Virginia** State Corporation Commission, Case No. PUE-2006-00065. Direct testimony submitted September 1, 2006.

“In the Matter of the Application of Arizona Public Service Company for a Hearing to Determine the Fair Value of the Utility Property for Ratemaking Purposes, to Fix a Just and Reasonable Rate of Return Thereon, To Approve Rate Schedules Designed to Develop Such Return, and to Amend Decision No. 67744, **Arizona** Corporation Commission,” Docket No. E-01345A-05-0816. Direct testimony submitted August 18, 2006 (Revenue Requirements) and September 1, 2006 (Cost-of-Service/Rate Design).

“Re: The Tariff Sheets Filed by Public Service Company of Colorado with Advice Letter No 1454 – Electric,” **Colorado** Public Utilities Commission, Docket No. 06S-234EG. Answer testimony submitted August 18, 2006.

“Portland General Electric General Rate Case Filing,” Public Utility Commission of **Oregon**, Docket No. UE-180. Direct testimony submitted August 9, 2006.

“2006 Puget Sound Energy General Rate Case,” **Washington** Utilities and Transportation Commission, Docket Nos. UE-060266 and UG-060267. Response testimony submitted July 19, 2006.

“In the Matter of PacifiCorp, dba Pacific Power & Light Company, Request for a General Rate Increase in the Company’s Oregon Annual Revenues,” Public Utility Commission of **Oregon**, Docket No. UE-179. Direct testimony submitted July 12, 2006.

“Petition of Metropolitan Edison Company for Approval of a Rate Transition Plan,” **Pennsylvania** Public Utilities Commission, Docket Nos. P-00062213 and R-00061366; “Petition of Pennsylvania Electric Company for Approval of a Rate Transition Plan,” Docket Nos. P-0062214 and R-00061367; Merger Savings Remand Proceeding, Docket Nos. A-110300F0095 and A-110400F0040. Direct testimony submitted July 10, 2006. Rebuttal testimony submitted August 8, 2006. Surrebuttal testimony submitted August 18, 2006. Cross examined August 30, 2006.

“In the Matter of the Application of PacifiCorp for approval of its Proposed Electric Rate Schedules & Electric Service Regulations,” **Utah** Public Service Commission, Docket No. 06-035-21. Direct testimony submitted June 9, 2006 (Test Period). Surrebuttal testimony submitted July 14, 2006.



“Joint Application of Questar Gas Company, the Division of Public Utilities, and Utah Clean Energy for the Approval of the Conservation Enabling Tariff Adjustment Option and Accounting Orders,” **Utah** Public Service Commission, Docket No. 05-057-T01. Direct testimony submitted May 15, 2006.

“Central Illinois Light Company d/b/a AmerenCILCO, Central Illinois Power Company d/b/a AmerenCIPS, Illinois Power Company d/b/a AmerenIP, Proposed General Increase in Rates for Delivery Service (Tariffs Filed December 27, 2005),” **Illinois** Commerce Commission, Docket Nos. 06-0070, 06-0071, 06-0072. Direct testimony submitted March 26, 2006. Rebuttal testimony submitted June 27, 2006.

“In the Matter of Appalachian Power Company and Wheeling Power Company, both dba American Electric Power,” Public Service Commission of **West Virginia**, Case No. 05-1278-E-PC-PW-42T. Direct testimony submitted March 8, 2006.

“In the Matter of Northern States Power Company d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in Minnesota,” **Minnesota** Public Utilities Commission, Docket No. G-002/GR-05-1428. Direct testimony submitted March 2, 2006. Rebuttal testimony submitted March 30, 2006. Cross examined April 25, 2006.

“In the Matter of the Application of Arizona Public Service Company for an Emergency Interim Rate Increase and for an Interim Amendment to Decision No. 67744,” **Arizona** Corporation Commission, Docket No. E-01345A-06-0009. Direct testimony submitted February 28, 2006. Cross examined March 23, 2006.

“In the Matter of the Applications of Westar Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes in Their Charges for Electric Service,” State Corporation Commission of **Kansas**, Case No. 05-WSEE-981-RTS. Direct testimony submitted September 9, 2005. Cross examined October 28, 2005.

“In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Recover Costs Associated with the Construction and Ultimate Operation of an Integrated Combined Cycle Electric Generating Facility,” Public Utilities Commission of **Ohio**,” Case No. 05-376-EL-UNC. Direct testimony submitted July 15, 2005. Cross examined August 12, 2005.

“In the Matter of the Filing of General Rate Case Information by Tucson Electric Power Company Pursuant to Decision No. 62103,” **Arizona** Corporation Commission, Docket No. E-01933A-04-0408. Direct testimony submitted June 24, 2005.

“In the Matter of Application of The Detroit Edison Company to Unbundle and Realign Its Rate

Schedules for Jurisdictional Retail Sales of Electricity,” **Michigan** Public Service Commission, Case No. U-14399. Direct testimony submitted June 9, 2005. Rebuttal testimony submitted July 1, 2005.

“In the Matter of the Application of Consumers Energy Company for Authority to Increase Its Rates for the Generation and Distribution of Electricity and Other Relief,” **Michigan** Public Service Commission, Case No. U-14347. Direct testimony submitted June 3, 2005. Rebuttal testimony submitted June 17, 2005.

“In the Matter of Pacific Power & Light, Request for a General Rate Increase in the Company’s Oregon Annual Revenues,” Public Utility Commission of **Oregon**, Docket No. UE 170. Direct testimony submitted May 9, 2005. Surrebuttal testimony submitted June 27, 2005. Joint testimony regarding partial stipulations submitted June 2005, July 2005, and August 2005.

“In the Matter of the Application of Trico Electric Cooperative, Inc. for a Rate Increase,” **Arizona** Corporation Commission, Docket No. E-01461A-04-0607. Direct testimony submitted April 13, 2005. Surrebuttal testimony submitted May 16, 2005. Cross examined May 26, 2005.

“In the Matter of the Application of PacifiCorp for Approval of its Proposed Electric Service Schedules and Electric Service Regulations,” **Utah** Public Service Commission, Docket No. 04-035-42. Direct testimony submitted January 7, 2005.

“In the Matter of the Application by Golden Valley Electric Association, Inc., for Authority to Implement Simplified Rate Filing Procedures and Adjust Rates,” Regulatory Commission of **Alaska**, Docket No. U-4-33. Direct testimony submitted November 5, 2004. Cross examined February 8, 2005.

“Advice Letter No. 1411 - Public Service Company of Colorado Electric Phase II General Rate Case,” **Colorado** Public Utilities Commission, Docket No. 04S-164E. Direct testimony submitted October 12, 2004. Cross-answer testimony submitted December 13, 2004. Testimony withdrawn January 18, 2005, following Applicant’s withdrawal of testimony pertaining to TOU rates.

“In the Matter of Georgia Power Company’s 2004 Rate Case,” **Georgia** Public Service Commission, Docket No. 18300-U. Direct testimony submitted October 8, 2004. Cross examined October 27, 2004.

“2004 Puget Sound Energy General Rate Case,” **Washington** Utilities and Transportation Commission, Docket Nos. UE-040641 and UG-040640. Response testimony submitted

September 23, 2004. Cross-answer testimony submitted November 3, 2004. Joint testimony regarding stipulation submitted December 6, 2004.

“In the Matter of the Application of PacifiCorp for an Investigation of Interjurisdictional Issues,” **Utah** Public Service Commission, Docket No. 02-035-04. Direct testimony submitted July 15, 2004. Cross examined July 19, 2004.

“In the Matter of an Adjustment of the Gas and Electric Rates, Terms and Conditions of Kentucky Utilities Company,” **Kentucky** Public Service Commission, Case No. 2003-00434. Direct testimony submitted March 23, 2004. Testimony withdrawn pursuant to stipulation entered May 2004.

“In the Matter of an Adjustment of the Gas and Electric Rates, Terms and Conditions of Louisville Gas and Electric Company,” **Kentucky** Public Service Commission, Case No. 2003-00433. Direct testimony submitted March 23, 2004. Testimony withdrawn pursuant to stipulation entered May 2004.

“In the Matter of the Application of Idaho Power Company for Authority to Increase Its Interim and Base Rates and Charges for Electric Service,” **Idaho** Public Utilities Commission, Case No. IPC-E-03-13. Direct testimony submitted February 20, 2004. Rebuttal testimony submitted March 19, 2004. Cross examined April 1, 2004.

“In the Matter of the Applications of the Ohio Edison Company, the Cleveland Electric Illuminating Company and the Toledo Edison Company for Authority to Continue and Modify Certain Regulatory Accounting Practices and Procedures, for Tariff Approvals and to Establish Rates and Other Charges, Including Regulatory Transition Charges Following the Market Development Period,” Public Utilities Commission of **Ohio**, Case No. 03-2144-EL-ATA. Direct testimony submitted February 6, 2004. Cross examined February 18, 2004.

“In the Matter of the Application of Arizona Public Service Company for a Hearing to Determine the Fair Value of the Utility Property of the Company for Ratemaking Purposes, To Fix a Just and Reasonable Rate of Return Thereon, To Approve Rate Schedules Designed to Develop Such Return, and For Approval of Purchased Power Contract,” **Arizona** Corporation Commission, Docket No. E-01345A-03-0437. Direct testimony submitted February 3, 2004. Rebuttal testimony submitted March 30, 2004. Direct testimony regarding stipulation submitted September 27, 2004. Responsive / Clarifying testimony regarding stipulation submitted October 25, 2004. Cross examined November 8-10, 2004 and November 29-December 3, 2004.

“In the Matter of Application of the Detroit Edison Company to Increase Rates, Amend Its Rate Schedules Governing the Distribution and Supply of Electric Energy, etc.,” **Michigan** Public Service Commission, Case No. U-13808. Direct testimony submitted December 12, 2003 (interim request) and March 5, 2004 (general rate case).

“In the Matter of PacifiCorp’s Filing of Revised Tariff Schedules,” Public Utility Commission of **Oregon**, Docket No. UE-147. Joint testimony regarding stipulation submitted August 21, 2003.

“Petition of PSI Energy, Inc. for Authority to Increase Its Rates and Charges for Electric Service, etc.,” **Indiana** Utility Regulatory Commission, Cause No. 42359. Direct testimony submitted August 19, 2003. Cross examined November 5, 2003.

“In the Matter of the Application of Consumers Energy Company for a Financing Order Approving the Securitization of Certain of its Qualified Cost,” **Michigan** Public Service Commission, Case No. U-13715. Direct testimony submitted April 8, 2003. Cross examined April 23, 2003.

“In the Matter of the Application of Arizona Public Service Company for Approval of Adjustment Mechanisms,” **Arizona** Corporation Commission, Docket No. E-01345A-02-0403. Direct testimony submitted February 13, 2003. Surrebuttal testimony submitted March 20, 2003. Cross examined April 8, 2003.

“Re: The Investigation and Suspension of Tariff Sheets Filed by Public Service Company of Colorado, Advice Letter No. 1373 – Electric, Advice Letter No. 593 – Gas, Advice Letter No. 80 – Steam,” **Colorado** Public Utilities Commission, Docket No. 02S-315 EG. Direct testimony submitted November 22, 2002. Cross-answer testimony submitted January 24, 2003.

“In the Matter of the Application of The Detroit Edison Company to Implement the Commission’s Stranded Cost Recovery Procedure and for Approval of Net Stranded Cost Recovery Charges,” **Michigan** Public Service Commission, Case No. U-13350. Direct testimony submitted November 12, 2002.

“Application of South Carolina Electric & Gas Company: Adjustments in the Company’s Electric Rate Schedules and Tariffs,” Public Service Commission of **South Carolina**, Docket No. 2002-223-E. Direct testimony submitted November 8, 2002. Surrebuttal testimony submitted November 18, 2002. Cross examined November 21, 2002.

“In the Matter of the Application of Questar Gas Company for a General Increase in Rates and Charges,” **Utah** Public Service Commission, Docket No. 02-057-02. Direct testimony submitted August 30, 2002. Rebuttal testimony submitted October 4, 2002.

“The Kroger Co. v. Dynegy Power Marketing, Inc.,” **Federal Energy Regulatory Commission**, EL02-119-000. Confidential affidavit filed August 13, 2002.

“In the matter of the application of Consumers Energy Company for determination of net stranded costs and for approval of net stranded cost recovery charges,” **Michigan** Public Service

Commission, Case No. U-13380. Direct testimony submitted August 9, 2002. Rebuttal testimony submitted August 30, 2002. Cross examined September 10, 2002.

“In the Matter of the Application of Public Service Company of Colorado for an Order to Revise Its Incentive Cost Adjustment,” **Colorado** Public Utilities Commission, Docket 02A-158E. Direct testimony submitted April 18, 2002.

“In the Matter of the Generic Proceedings Concerning Electric Restructuring Issues,” **Arizona** Corporation Commission, Docket No. E-00000A-02-0051, “In the Matter of Arizona Public Service Company’s Request for Variance of Certain Requirements of A.A.C. R14-2-1606,” Docket No. E-01345A-01-0822, “In the Matter of the Generic Proceeding Concerning the Arizona Independent Scheduling Administrator,” Docket No. E-00000A-01-0630, “In the Matter of Tucson Electric Power Company’s Application for a Variance of Certain Electric Competition Rules Compliance Dates,” Docket No. E-01933A-02-0069, “In the Matter of the Application of Tucson Electric Power Company for Approval of its Stranded Cost Recovery,” Docket No. E-01933A-98-0471. Direct testimony submitted March 29, 2002 (APS variance request); May 29, 2002 (APS Track A proceeding/market power issues); and July 28, 2003 (Arizona ISA). Rebuttal testimony submitted August 29, 2003 (Arizona ISA). Cross examined June 21, 2002 (APS Track A proceeding/market power issues) and September 12, 2003 (Arizona ISA).

“In the Matter of Savannah Electric & Power Company’s 2001 Rate Case,” **Georgia** Public Service Commission, Docket No. 14618-U. Direct testimony submitted March 15, 2002. Cross examined March 28, 2002.

“Nevada Power Company’s 2001 Deferred Energy Case,” Public Utilities Commission of **Nevada**, PUCN 01-11029. Direct testimony submitted February 7, 2002. Cross examined February 21, 2002.

“2001 Puget Sound Energy Interim Rate Case,” **Washington** Utilities and Transportation Commission, Docket Nos. UE-011570 and UE-011571. Direct testimony submitted January 30, 2002. Cross examined February 20, 2002.

“In the Matter of Georgia Power Company’s 2001 Rate Case,” **Georgia** Public Service Commission, Docket No. 14000-U. Direct testimony submitted October 12, 2001. Cross examined October 24, 2001.

“In the Matter of the Application of PacifiCorp for Approval of Its Proposed Electric Rate Schedules and Electric Service Regulations,” **Utah** Public Service Commission, Docket No. 01-35-01. Direct testimony submitted June 15, 2001. Rebuttal testimony submitted August 31, 2001.

“In the Matter of Portland General Electric Company’s Proposal to Restructure and Reprice Its Services in Accordance with the Provisions of SB 1149,” Public Utility Commission of **Oregon**, Docket No. UE-115. Direct testimony submitted February 20, 2001. Rebuttal testimony submitted May 4, 2001. Joint testimony regarding stipulation submitted July 27, 2001.

“In the Matter of the Application of APS Energy Services, Inc. for Declaratory Order or Waiver of the Electric Competition Rules,” **Arizona** Corporation Commission, Docket No.E-01933A-00-0486. Direct testimony submitted July 24, 2000.

“In the Matter of the Application of Questar Gas Company for an Increase in Rates and Charges,” **Utah** Public Service Commission, Docket No. 99-057-20. Direct testimony submitted April 19, 2000. Rebuttal testimony submitted May 24, 2000. Surrebuttal testimony submitted May 31, 2000. Cross examined June 6 & 8, 2000.

“In the Matter of the Application of Columbus Southern Power Company for Approval of Electric Transition Plan and Application for Receipt of Transition Revenues,” Public Utility Commission of **Ohio**, Case No. 99-1729-EL-ETP; “In the Matter of the Application of Ohio Power Company for Approval of Electric Transition Plan and Application for Receipt of Transition Revenues,” Public Utility Commission of **Ohio**, Case No. 99-1730-EL-ETP. Direct testimony prepared, but not submitted pursuant to settlement agreement effected May 2, 2000.

“In the Matter of the Application of FirstEnergy Corp. on Behalf of Ohio Edison Company, The Cleveland Electric Illuminating Company, and the Toledo Edison Company for Approval of Their Transition Plans and for Authorization to Collect Transition Revenues,” Public Utility Commission of **Ohio**, Case No. 99-1212-EL-ETP. Direct testimony prepared, but not submitted pursuant to settlement agreement effected April 11, 2000.

“2000 Pricing Process,” **Salt River Project** Board of Directors, oral comments provided March 6, 2000 and April 10, 2000.

“Tucson Electric Power Company vs. Cyprus Sierrita Corporation,” **Arizona** Corporation Commission, Docket No. E-000001-99-0243. Direct testimony submitted October 25, 1999. Cross examined November 4, 1999.

“Application of Hildale City and Intermountain Municipal Gas Association for an Order Granting Access for Transportation of Interstate Natural Gas over the Pipelines of Questar Gas Company for Hildale, Utah,” **Utah** Public Service Commission, Docket No. 98-057-01. Rebuttal testimony submitted August 30, 1999.

“In the Matter of the Application by Arizona Electric Power Cooperative, Inc. for Approval of Its Filing as to Regulatory Assets and Transition Revenues,” **Arizona** Corporation Commission,

Docket No. E-01773A-98-0470. Direct testimony submitted July 30, 1999. Cross examined February 28, 2000.

“In the Matter of the Application of Tucson Electric Power Company for Approval of its Plan for Stranded Cost Recovery,” **Arizona** Corporation Commission, Docket No. E-01933A-98-0471; “In the Matter of the Filing of Tucson Electric Power Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.,” Docket No. E-01933A-97-0772; “In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona,” Docket No. RE-00000C-94-0165. Direct testimony submitted June 30, 1999. Rebuttal testimony submitted August 6, 1999. Cross examined August 11-13, 1999.

“In the Matter of the Application of Arizona Public Service Company for Approval of its Plan for Stranded Cost Recovery,” **Arizona** Corporation Commission, Docket No. E-01345A-98-0473; “In the Matter of the Filing of Arizona Public Service Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.,” Docket No. E-01345A-97-0773; “In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona,” Docket No. RE-00000C-94-0165. Direct testimony submitted June 4, 1999. Rebuttal testimony submitted July 12, 1999. Cross examined July 14, 1999.

“In the Matter of the Application of Tucson Electric Power Company for Approval of its Plan for Stranded Cost Recovery,” **Arizona** Corporation Commission, Docket No. E-01933A-98-0471; “In the Matter of the Filing of Tucson Electric Power Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.,” Docket No. E-01933A-97-0772; “In the Matter of the Application of Arizona Public Service Company for Approval of its Plan for Stranded Cost Recovery,” Docket No. E-01345A-98-0473; “In the Matter of the Filing of Arizona Public Service Company of Unbundled Tariffs Pursuant to A.A.C. R14-2-1601 et seq.,” Docket No. E-01345A-97-0773; “In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona,” Docket No. RE-00000C-94-0165. Direct testimony submitted November 30, 1998.

“Hearings on Pricing,” **Salt River Project** Board of Directors, written and oral comments provided November 9, 1998.

“Hearings on Customer Choice,” **Salt River Project** Board of Directors, written and oral comments provided June 22, 1998; June 29, 1998; July 9, 1998; August 7, 1998; and August 14, 1998.

“In the Matter of the Competition in the Provision of Electric Service Throughout the State of Arizona,” **Arizona** Corporation Commission, Docket No. U-0000-94-165. Direct and rebuttal testimony filed January 21, 1998. Second rebuttal testimony filed February 4, 1998. Cross examined February 25, 1998.

"In the Matter of Consolidated Edison Company of New York, Inc.'s Plans for (1) Electric Rate/Restructuring Pursuant to Opinion No. 96-12; and (2) the Formation of a Holding Company Pursuant to PSL, Sections 70, 108, and 110, and Certain Related Transactions," **New York** Public Service Commission, Case 96-E-0897. Direct testimony filed April 9, 1997. Cross examined May 5, 1997.

"In the Matter of the Petition of Sunnyside Cogeneration Associates for Enforcement of Contract Provisions," **Utah** Public Service Commission, Docket No. 96-2018-01. Direct testimony submitted July 8, 1996.

"In the Matter of the Application of PacifiCorp, dba Pacific Power & Light Company, for Approval of Revised Tariff Schedules and an Alternative Form of Regulation Plan," **Wyoming** Public Service Commission, Docket No. 2000-ER-95-99. Direct testimony submitted April 8, 1996.

"In the Matter of the Application of Mountain Fuel Supply Company for an Increase in Rates and Charges," **Utah** Public Service Commission, Case No. 95-057-02. Direct testimony submitted June 19, 1995. Rebuttal testimony submitted July 25, 1995. Surrebuttal testimony submitted August 7, 1995.

"In the Matter of the Investigation of the Reasonableness of the Rates and Tariffs of Mountain Fuel Supply Company," **Utah** Public Service Commission, Case No. 89-057-15. Direct testimony submitted July 1990. Surrebuttal testimony submitted August 1990.

"In the Matter of the Review of the Rates of Utah Power and Light Company pursuant to The Order in Case No. 87-035-27," **Utah** Public Service Commission, Case No. 89-035-10. Rebuttal testimony submitted November 15, 1989. Cross examined December 1, 1989 (rate schedule changes for state facilities).

"In the Matter of the Application of Utah Power & Light Company and PC/UP&L Merging Corp. (to be renamed PacifiCorp) for an Order Authorizing the Merger of Utah Power & Light Company and PacifiCorp into PC/UP&L Merging Corp. and Authorizing the Issuance of Securities, Adoption of Tariffs, and Transfer of Certificates of Public Convenience and Necessity and Authorities in Connection Therewith," **Utah** Public Service Commission, Case No. 87-035-27; Direct testimony submitted April 11, 1988. Cross examined May 12, 1988 (economic impact of UP&L merger with PacifiCorp).

"In the Matter of the Application of Mountain Fuel Supply Company for Approval of Interruptible Industrial Transportation Rates," **Utah** Public Service Commission, Case No. 86-057-07. Direct testimony submitted January 15, 1988. Cross examined March 30, 1988.



“In the Matter of the Application of Utah Power and Light Company for an Order Approving a Power Purchase Agreement,” **Utah** Public Service Commission, Case No. 87-035-18. Oral testimony delivered July 8, 1987.

“Cogeneration: Small Power Production,” **Federal Energy Regulatory Commission**, Docket No. RM87-12-000. Statement on behalf of State of Utah delivered March 27, 1987, in San Francisco.

“In the Matter of the Investigation of Rates for Backup, Maintenance, Supplementary, and Standby Power for Utah Power and Light Company,” **Utah** Public Service Commission, Case No. 86-035-13. Direct testimony submitted January 5, 1987. Case settled by stipulation approved August 1987.

“In the Matter of the Application of Sunnyside Cogeneration Associates for Approval of the Cogeneration Power Purchase Agreement,” **Utah** Public Service Commission, Case No. 86-2018-01. Rebuttal testimony submitted July 16, 1986. Cross examined July 17, 1986.

“In the Matter of the Investigation of Demand-Side Alternatives to Capacity Expansion for Electric Utilities,” **Utah** Public Service Commission, Case No. 84-999-20. Direct testimony submitted June 17, 1985. Rebuttal testimony submitted July 29, 1985. Cross examined August 19, 1985.

“In the Matter of the Implementation of Rules Governing Cogeneration and Small Power Production in Utah,” **Utah** Public Service Commission, Case No. 80-999-06, pp. 1293-1318. Direct testimony submitted January 13, 1984 (avoided costs), May 9, 1986 (security for levelized contracts) and November 17, 1986 (avoided costs). Cross-examined February 29, 1984 (avoided costs), April 11, 1985 (standard form contracts), May 22-23, 1986 (security for levelized contracts) and December 16-17, 1986 (avoided costs).

#### **OTHER RELATED ACTIVITY**

Participant, Oregon Direct Access Task Force (UM 1081), May 2003 to November 2003.

Participant, Michigan Stranded Cost Collaborative, March 2003 to March 2004.

Member, Arizona Electric Competition Advisory Group, December 2002 to present.

Board of Directors, ex-officio, Desert STAR RTO, September 1999 to February 2002.

Member, Advisory Committee, Desert STAR RTO, September 1999 to February 2002. Acting Chairman, October 2000 to February 2002.

Board of Directors, Arizona Independent Scheduling Administrator Association, October 1998 to present.

Acting Chairman, Operating Committee, Arizona Independent Scheduling Administrator Association, October 1998 to June 1999.

Member, Desert Star ISO Investigation Working Groups: Operations, Pricing, and Governance, April 1997 to present. Legal & Negotiating Committee, April 1999 to December 1999.

Participant, Independent System Operator and Spot Market Working Group, Arizona Corporation Commission, April 1997 to September 1997.

Participant, Unbundled Services and Standard Offer Working Group, Arizona Corporation Commission, April 1997 to October 1997.

Participant, Customer Selection Working Group, Arizona Corporation Commission, March 1997 to September 1997.

Member, Stranded Cost Working Group, Arizona Corporation Commission, March 1997 to September 1997.

Member, Electric System Reliability & Safety Working Group, Arizona Corporation Commission, November 1996 to September 1998.

Chairman, Salt Palace Renovation and Expansion Committee, Salt Lake County/State of Utah/Salt Lake City, multi-government entity responsible for implementation of planning, design, finance, and construction of an \$85 million renovation of the Salt Palace Convention Center, Salt Lake City, Utah, May 1991 to December 1994.

State of Utah Representative, Committee on Regional Electric Power Cooperation, a joint effort of the Western Interstate Energy Board and the Western Conference of Public Service Commissioners, January 1987 to December 1990.

Member, Utah Governor's Economic Coordinating Committee, January 1987 to December 1990.

Chairman, Standard Contract Task Force, established by Utah Public Service Commission to address contractual problems relating to qualifying facility sales under PURPA, March 1986 to December 1990.

Chairman, Load Management and Energy Conservation Task Force, Utah Public Service Commission, August 1985 to December 1990.

Alternate Delegate for Utah, Western Interstate Energy Board, Denver, Colorado, August 1985 to December 1990.

Articles Editor, Economic Forum, September 1980 to August 1981.

### Derivation of DT Energy Cost of Service

Line No.	Description	Production Energy	Source
1	DT Secondary Energy Cost of Service	\$ 24,143,213	Cost of Service by Function Rate DT-SEC <sup>1</sup>
2	DT Secondary Total 2007 KWh	725,010,608	ULH&P Rate DT Workpaper
3	Energy COS (¢/KWh)	3.3300	= [Ln. 1 x 100] ÷ Ln. 2
4	DT Primary Energy Cost of Service	\$ 14,307,908	Cost of Service by Function Rate DT-PRI <sup>1</sup>
5	DT Primary Total 2007 KWh	432,484,392	ULH&P Rate DT Workpaper
6	Energy COS (¢/KWh)	3.3083	= [Ln. 4 x 100] ÷ Ln. 5
7	DT Total Energy Cost of Service	\$ 38,451,121	= Ln. 1 + Ln. 4
8	DT Total 2007 KWh	1,157,495,000	= Ln. 2 + Ln. 5
9	Energy COS (¢/KWh)	3.3219	= [Ln. 7 x 100] ÷ Ln. 8

**Note:**

1. ULH&P Filing Requirements Volume 9, Tab 47.

Derivation of DT Demand Cost of Service

Line No.	Description	Production Energy	Source
1	DT Secondary Demand Cost of Service	\$ 23,275,189	Cost of Service by Function Rate DT-SEC <sup>1</sup>
2	DT Primary Demand Cost of Service	\$ 11,172,783	Cost of Service by Function Rate DT-PRI <sup>1</sup>
3	Total DT Demand Cost of Service	\$ 34,447,972	= Ln. 1 + Ln. 2
4	Less:		
5	Off-Peak Demand Revenue @ \$1.19/kW	\$ 105,058	Section M "Forecast Period" Tab 2.3 <sup>2</sup>
6	Primary Discount Revenue:		
7	First 1000 kW @ (\$0.65) /kW	(\$194,553)	Section M "Forecast Period" Tab 2.3 <sup>2</sup>
8	Additional kW @ (\$0.50)/kW	(\$192,889)	Section M "Forecast Period" Tab 2.3 <sup>2</sup>
9	Total DT Demand Less Off-Peak and Primary Discount	\$ 34,730,356	= Ln. 3 - Ln. 5 - Ln. 7 - Ln. 8
10	DT Total 2007 On-Peak kW	2,384,921	Section M "Forecast Period" Tab 2.3 <sup>2</sup>
11	Energy COS (¢/KWh)	\$ 14.56	= Ln. 9 ÷ Ln. 10

Note:

1. ULH&P Filing Requirements Volume 9, Tab 47.

2. ULH&P Filing Requirements Volume 12, Section M "Revenue at Present and Proposed Rates".

**SCHEDULE DT ANNUALIZED TEST YEAR REVENUES AT KROGER/ST. ELIZABETH PROPOSED DEMAND AND TIME OF DAY ENERGY RATES  
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2007  
(ELECTRIC SERVICE)  
CASE NO. 2006-00172**

LINE NO.	RATE CODE (A)	CLASS / DESCRIPTION (B)	CUSTOMER BILLS(1) (C)	SALES (D)	PROPOSED RATES (E)	PROPOSED REVENUE LESS FUEL COST REVENUE (F)	% OF REV TO TOTAL LESS FUEL COST REVENUE (G)	FUEL COST REVENUE (2) (H)	PROPOSED TOTAL REVENUE (F + H) (I)
				(KW/KWH)	(\$/KWH)/ (\$/KW)	(\$)	(%)	(\$)	(\$)
1	DT-SEC	TIME OF DAY SECONDARY							
2		SUMMER:							
3		CUSTOMER CHARGE:							
4		SINGLE PHASE	0		\$7.50	0	0.0		0
5		THREE PHASE	753		\$15.00	11,295	0.0		11,295
6		PRIMARY VOLTAGE	142		\$100.00	14,200	0.1		14,200
7		TOTAL CUSTOMER CHARGE	895			25,495	0.1		25,495
8		DEMAND CHARGE:							
9		ON PEAK KW		840,120	\$14.56	12,232,147	46.8		12,232,147
10		OFF PEAK KW		27,477	\$1.19	32,698	0.1		32,698
11		SUB-TOTAL		867,597		12,264,845	46.9		12,264,845
12		PRIMARY SERV. DIS.							
13		FIRST 1000 KW		102,660	(\$0.65)	(66,729)	-0.3		(66,729)
14		ADDITIONAL KW		146,569	(\$0.50)	(73,285)	-0.3		(73,285)
15		TOTAL DEMAND		249,229		12,124,831	46.3		12,124,831
16		ENERGY CHARGE (3):							
17a		On-Peak kWh		123,986,780	\$0.039864	4,942,609	18.9	0	4,942,609
17b		Off-Peak kWh		283,791,362	\$0.031864	9,042,728	34.6	0	9,042,728
17		ALL KWH		407,778,142	\$0.034296	13,985,337	53.5	0	13,985,337
18		TOTAL SUMMER	895	407,778,142		26,135,663	100.0	0	26,135,663
19		WINTER:							
20		CUSTOMER CHARGE:							
21		SINGLE PHASE	0		\$7.50	0	0.0		0
22		THREE PHASE	1,505		\$15.00	22,575	0.0		22,575
23		PRIMARY VOLTAGE	285		\$100.00	28,500	0.1		28,500
24		TOTAL CUSTOMER CHARGE	1,790			51,075	0.1		51,075
25		DEMAND CHARGE:							
26		ON PEAK KW		1,544,801	\$14.56	22,492,303	47.3		22,492,303
27		OFF PEAK KW		60,807	\$1.19	72,360	0.2		72,360
28		SUB-TOTAL		1,605,608		22,564,663	47.5		22,564,663
29		PRIMARY SERV. DIS.							
30		FIRST 1000 KW		196,653	(\$0.65)	(127,824)	-0.3		(127,824)
31		ADDITIONAL KW		239,208	(\$0.50)	(119,604)	-0.3		(119,604)
32		TOTAL DEMAND		435,861		22,317,235	47.0		22,317,235
33		ENERGY CHARGE (3):							
33a		On-Peak kWh		220,429,621	\$0.037864	8,346,347	17.5	0	8,346,347
33b		Off-Peak kWh		529,287,237	\$0.031864	16,865,209	35.4	0	16,865,209
34		ALL KWH		749,716,858	\$0.033628	25,211,556	53.0	0	25,211,556
35		TOTAL WINTER	1,790	749,716,858		47,579,866	100.0	0	47,579,866
36		TOTAL RATE DT SECONDARY	2,685	1,157,495,000		73,715,529	100.0	0	73,715,529
37		KROGER/ST. ELIZABETH BASELINE ENERGY RATE (\$/kWh) =			\$0.033864				

(1) BILLS THAT TERMINATE IN RESPECTIVE RATE STEPS.  
(2) REFLECTS FUEL COMPONENT OF (\$0.002525) PER KWH.  
(3) REFLECTS FUEL COST RECOVERY INCLUDED IN BASE RATES OF \$0.021619 PER KWH.