DIRECT TESTIMONY OF
JOHN A. ROGNESS III, ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

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I. INTRODUCTION

Q: PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A: My name is John A. Rogness. My position is Director, Regulatory Services for Kentucky Power Company (Kentucky Power, KPCo or Company). My business address is 101 A Enterprise Drive, Frankfort, Kentucky 40602.

II. BACKGROUND

Q: PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A: I received a Bachelor of Science in Economics from the University of Chattanooga in 1980, a Master of Science in Economics from Vanderbilt University in 1984 and a Ph.D. in Economics from the University of Kentucky in 1991.

In January 1990, I began working in the Kentucky Office of Financial Management and Economic Analysis. From July 1991 – September 1998, I served as an Economist with the Kentucky Public Service Commission (KPSC). From September 1998 – July 2010 I served as Manager of the Management Audit Branch at the KPSC. From August 2010 – September 2012 I served as the Director of the Financial Analysis Division at the KPSC. From October 2012 – March 2014, I served as the Director, Energy Generation, Transmission and Distribution at the Department for Energy Development and Independence in

Kentucky's Energy and Environment Cabinet. On March 17, 2014, I began my duties as Director of Regulatory Services for Kentucky Power Company.

Q: WHAT ARE YOUR RESPONSIBILITIES AS DIRECTOR, REGULATORY SERVICES?

A: As Director of Kentucky Power's Regulatory Services, I am responsible for the rate and regulatory matters of Kentucky Power. This includes the preparation of and coordination of the Company's testimony and exhibits in rate cases and any other formal filings before this Commission. In addition, I am responsible for assuring the proper application of the Company's rates and tariffs in all classifications of business.

Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A: Yes. I filed testimony and testified in the previous six month fuel proceeding, Case No. 2014-00225. I also filed testimony in the Economic Development Rider proceeding, Case No. 2014-00336, in the Company's base rate filing, Case No. 2014-00396 and in the two year fuel review case, Case No. 2014-00450.

III. PURPOSE OF TESTIMONY

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A: I present and discuss the Applied Energy Group (AEG) Market Potential Assessment and the AEG Demand Side Management (DSM) Program Plan (Studies). These two studies form the basis of the Company's proposed DSM Design Program Plan (DSM Plan). As a part of the new DSM Plan the Company is proposing: (a) to discontinue six existing DSM programs, (b) to modify five

existing DSM programs, and (c) to begin six new DSM programs. These changes to the Company's current suite of DSM program offerings are discussed below. In addition, I support the new program cost (Schedule C) and the resulting DSM surcharge factors. Finally, I recommend that the Commission approve the changes to the Company's proposed DSM Plan, the corresponding tariffs, and the new surcharge factors.

IV. AEG MARKET POTENTIAL ASSESSMENT AND AEG DSM PROGRAM PLAN

Q: HAS THE COMPANY COMPLETED ITS MARKET POTENTIAL STUDY AND ITS DSM PROGRAM DESIGN STUDY?

A: Yes. Kentucky Power retained Applied Energy Group, Inc. ("AEG") to undertake both a Market Potential Assessment and a DSM Program Plan ("Studies"). The Market Potential Assessment was completed July 30, 2015 and was filed with the Commission on August 19, 2015 in accordance with the Commission's Order in Case No. 2014-00271 dated February 13, 2015. The DSM Program Plan was completed July 30, 2015 and received its final review by the Collaborative on July 30, 2015. The DSM Program Plan is attached as **EXHIBIT 6** to the Application.

Q: PLEASE DESCRIBE THE PURPOSE OF THE MARKET POTENTIAL ASSESSMENT.

A: The Market Potential Assessment was intended to assess energy efficiency and demand response potential, including technical, economic, and achievable potential, in the residential, commercial and industrial sectors. (I discuss the

meaning of technical, economic, and achievable potential later in my testimony.) The key objectives were to:

- Conduct primary market research within the Company's service territory to provide a representative foundation for the potential study estimates and program design
- Develop energy efficiency and demand response potential estimates for 2016-2035 for use in benchmarking and future analyses.
- Provide support for the development of an integrated DSM program plan for 2016-2025.

Q. PLEASE DESCRIBE THE MARKET POTENTIAL ASSESSMENT.

A. The Market Potential Assessment consists of three principal components: the Market Research Report, Energy Efficiency Analysis, and Demand Response Potential Analysis.

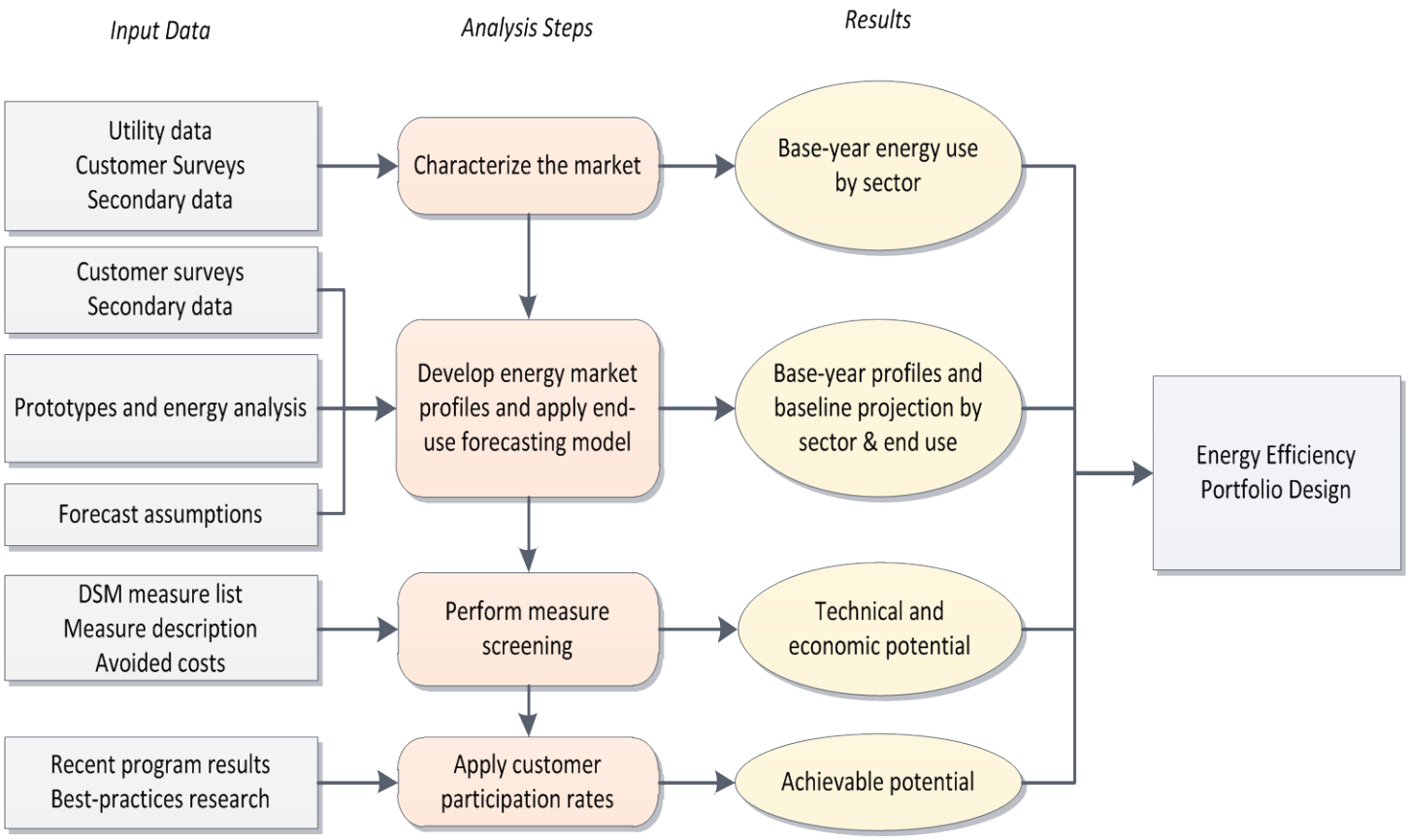
Q. PLEASE DESCRIBE THE MARKET RESEARCH REPORT.

A. The market research included collecting electricity end-use data, end-use saturation data and customer demographic data. This data provided insights into how the Company's customers use electricity and it served as the foundation for the energy efficiency and demand response potential studies and the DSM program designs.

Q. WHAT IS THE ENERGY EFFICIENCY POTENTIAL ANALYSIS AND HOW WAS IT CONDUCTED?

A. Figure 1 below illustrates the methodology used to conduct the Energy Efficiency Potential Analysis.

FIGURE 1



Utility data and customer survey data was collected to characterize the different market sectors. Electricity use for the residential, commercial and industrial sectors was recorded using 2013 as the baseline year. Each sector was further characterized by customer segmentation (e.g. residential low income), end use and technology. A baseline projection of energy consumption and peak demand by sector, segment, and end use was developed for 2013-2035. After potential DSM measures were screened and applied to the sectors, estimates of technical and economic potential levels of energy and demand savings were estimated. Data based upon recent DSM program performance and industry best practices was used to estimate customer participation rates. The estimated customer

participation rates were then used to estimate achievable potential levels (Low, Mid and High) at the DSM measure level in terms of energy and summer peak demand impacts from 2016-2035. Comparing projections of the achievable potential results to the baseline projection, results in a savings target that can be used with the design energy efficient, cost effective DSM program portfolio design.

Q. PLEASE PROVIDE THE COMMISSION WITH A DESCRIPTION OF THE DEMAND RESPONSE POTENTIAL ANALYSIS.

A. As with the Energy Efficiency Potential Analysis, the study approach began with the market characterizations to describe sector level peak demand electricity use and customer counts for the residential, commercial and industrial sectors using 2013 as the baseline year. Projections for each customer segment were developed for 2013-2035. After potential DR options were applied to each customer segment, the measures were evaluated for cost effectiveness and achievable potential levels (low and high) were calculated in terms of customer segment and impacts on peak demand from 2016-2035.

Potential Energy Efficiency Savings.

Q: PLEASE DESCRIBE THE CUSTOMER CLASS SEGMENTS EXAMINED AND THEIR PRIMARY CONSUMPTION USES AS PART OF THE ENERGY EFFICENCY POTENTIAL ANALYSIS.

A: The different customer class segments are as follows:

Residential

The residential sector was broken down by dwelling type, with seven separate subcategories being established for housing occupied by low-income residents Single Family, Multi Family, Mobile Home, Single Family Low Income, Multi Family Low Income and Mobile Home Low Income. In 2013, the Residential Sector consisted of 140,164 households with an annual consumption of 2,273 GWh and a summer peak of 764 MW. The four highest consumption uses were Heating (30%), Appliance use (19%) and Water Heating (15%) and cooling (12%).

Commercial

The Commercial Sector was broken down into 11 categories: Office, Restaurant, Government/Municipal, Retail, Grocery, College, School, Health / Hospital, Lodging, Warehouse and Miscellaneous. In 2013, the Commercial Sector consumed 1,337 GWh of electricity with a summer peak of 261 MW. The Retail (257 GWh) and Office (221 GWh) are the largest energy-consuming categories within the Commercial Sector, but not in terms of intensity of energy use. The top five categories within the Commercial Sector using electricity most intensively (kWh/SqFt) are Restaurants (55.3 kWh/ SqFt), Grocery (39.6 kWh/ SqFt), Health/ Hospital (16.9 kWh/ SqFt), Retail (15.5 kWh/ SqFt), and Lodging (12.2 kWh/SqFt). Overall, the two highest electricity usage categories across all Sectors are Lighting (30%) and Cooling (23%) these account for more than 50% of energy usage.

Industrial

The Industrial Sector was broken down into 5 categories: Mining, Petroleum, Primary and Fabricated Metals, Manufacturing and Other. The 2013 Industrial Sector peak demand was 362 MW. Total Industrial electricity usage by the Industrial Sector in 2013 was 2,970 GWh. The Petroleum Sector consumed the most energy, 1,200 GWh, followed by Mining with 689 GWh of energy use. The two highest types of usage categories within the Industrial Sector are Motors (67%) and Processes (22%). Note that the Motors category includes a wide range of equipment including air and refrigeration compressors, pumps, conveyor motors and fans. The Process sub-category includes heating, cooling, refrigeration, and electro-chemical processes.

Q: PLEASE DESCRIBE THE POTENTIAL ENERGY SAVINGS FROM EE OPTIONS.

A: Potential energy savings from implementing DSM measures are presented in 5 categories: Technical Potential, Economic Potential, Achievable High, Achievable Mid, and Achievable Potential Low. I define each type of potential below and present cumulative net savings for select years for each category. In order to measure the savings potential, a baseline projection is made which represents the energy consumption growth over time in the absence of any DSM programs and includes naturally occurring energy efficiency and savings from equipment standards and building codes that were active and on the books as of January 31, 2014. Energy savings are measured as the difference in the level of

energy consumption in the absence of the DSM program implementation and energy consumption with DSM program implementation.

Q. WHAT IS TECHNICAL POTENTIAL?

A. Technical Potential is the theoretical upper limit of DSM potential and assumes that customers adopt all feasible measures regardless of cost. When existing equipment is replaced and in new construction, customers and developers are assumed to install the most efficient equipment option available.

Q. WHAT ARE THE CUMULATIVE TECHNICAL POTENTIAL NET SAVINGS?

A. 2016-2018 cumulative technical potential net savings across all sectors are 378.9 GWh (representing 5.9% of baseline projection). Cumulative technical potential net savings grow to 1,842.6 GWh (representing 29.1% of baseline projection) by 2035.

Q. WHAT IS ECONOMIC POTENTIAL?

A. Economic Potential reflects DSM savings when all cost effective measures (measured by the TRC test) are implemented by all customers. If a measure passes the TRC test, customers are assumed to select the most cost-effective option available.

Q. WHAT ARE THE CUMULATIVE NET ECONOMIC POTENTIAL SAVINGS?

A. By 2018, cumulative economic potential net savings across all sectors are projected to be 242.3 GWh (3.8% of baseline projections). Through 2035 the

cumulative economic potential net savings increases to 1,291.3 GWh (representing 20.4% of Baseline projections).

Q. PLEASE DESCRIBE WHAT IS MEANT BY ACHIEVABLE POTENTIAL HIGH.

A. Achievable Potential High reflects customer adoption of economic measures when delivered through ideal market, implementation, and customer preference conditions. Information channels are assumed to be established and efficient for marketing, educating consumers and coordinating with trade allies and delivery partners. It establishes a benchmark reflecting the highest achievable savings possible through the Company's programs.

Q. PLEASE PROVIDE THE CUMULATIVE NET ACHIEVVABLE POTENTIAL HIGH SAVINGS.

A. By 2018, cumulative net achievable potential high savings are projected to reach 161.0 GWh (2.5% of baseline projections). Through 2025 the cumulative net achievable potential high savings are project to be 1,088 GWh (17.2% of baseline projections) by 2035.

Q. WHAT IS THE DEFINITION OF ACHIEVABLE MID SAVINGS?

A. Achievable Potential Mid savings reflect the savings from a moderate level of customer adoption of economic measures. The DSM measures are delivered under less than ideal market conditions with some barriers to customer acceptance and implementation.

Q. WHAT ARE THE ESTIMATED CUMULATIVE NET ACHIEVABLE POTENTIAL MID SAVINGS.

A. By 2018, cumulative net savings are 111.2 GWh (1.7% of baseline projections) and reach 777.3 GWh (12.3% of baseline projections) by 2035.

Q. WHAT ARE ACHIEVABLE POTENTIAL LOW SAVINGS?

A. Achievable Potential Low saving represent the savings from expected participation given barriers to customer acceptance, non-ideal implementation conditions and limited program budgets. This represents the lower bound of the achievable potential.

Q. WHAT ARE THE ESTIMATED CUMULATIVE NET ACHIEIVABLE POTENTIAL LOW SAVINGS?

A. By 2018, cumulative net savings are estimated to be 61.3 GWh (1.0% of baseline projections), increasing to 466.1GWh (7.4% of baseline projections) by 2035.

Demand Response Potential Analysis.

Q: WHAT IS THE DEMAND RESPONSE POTENTIAL ANALYSIS

A: AEG also performed a Demand Response Potential Study. The purpose of the Demand Response (DR) Potential Study was to assess DR options to realize demand reductions during the highest load hours of the summer and winter season. To perform the analysis, the Company's customers were segmented into Residential, Small Commercial and Industrial (C&I), Small/Medium C&I, Medium/Large C&I, Large C&I classes. There were 6 options evaluated for each of the five classes: Direct Load Control (DLC) Space heating, DLC Water Heating, DLC Central Air Conditioning, Firm Curtailment, Non-Firm Curtailment, and Time-of-Use (TOU) Rates. Five other DR options were considered but qualitatively eliminated.

Q: BRIEFLY DESCRIBE THE DEMAND RESPONSE POTENTIAL ANALYSIS RESULTS.

A: The principal finding is that there were no cost effective DR options prior to 2020. Also, there were no cost effective DR options through 2035 during the winter peak season. DR options become cost effective beginning in 2020 and by 2025 an estimated 5.75 MW summer peak demand reduction is possible in the Achievable Potential Low case. By 2035, 5.8 MW of demand reduction is achievable in the Achievable Potential Low case. For the Achievable Potential High case, DR options become cost effective in 2020. By 2025 an estimated 10.63 MW reduction in summer peak extending to 10.79 MW by 2035 is achievable. The achievable potential results set a lower and an upper bound on what may be expected from demand response programs in the Company's service territory.

Breaking the results down by customer class, there were no cost effective DR options for either the Residential or Small C&I classes. Under both the Achievable Potential Low case and the Achievable Potential High case, TOU rates are cost effective for the Small / Medium C&I, Medium / Large C&I and the Large C&I classes. Also, under the Achievable Potential High case, Non-Firm Curtailment Agreements become cost effective for the Large C&I class in 2021.

Q. IS KENTUCKY POWER RECOMMENDING THE ADOPTION OF ANY DR PROGRAMS?

A. No. Based on the lack of cost effectiveness as indicated by the Demand Response Potential Analysis results the Company is not proposing any DR programs in this

application. It will continue to monitor the appropriateness of such program for future filings.

DSM Program Plan Study ("Study").

Q. WHY DID THE COMPANY PERFORM THE DSM PROGRAM PLAN?

A. It is a natural outgrowth from the Market Potential Assessment and allows the Company to provide the most complete cost effective portfolio of energy efficiency programs. Please see Figure 1 on Page 6 above.

Q. PLEASE DESCRIBE THE PURPOSE OF THE STUDY.

A. The purpose of the study was to design an optimal DSM portfolio that builds upon the Company's current portfolio of DSM programs, the DSM potential assessment results, utility industry DSM programs and best practices, cost effectiveness, and stakeholder input.

Q. PLEASE DESCRIBE HOW THE STUDY WAS PERFORMED.

A. AEG adapted the Minnesota Office of Energy Security "BenCost" model software to evaluate DSM measure and portfolio cost effectiveness. The four standard measures of cost benefit testing (Total Resource Cost (TRC) Test, Participant Cost Test, Utility Cost Test, and Ratepayer Impact Measure (RIM) Test) were performed to evaluate specific DSM programs and program components. Measure level cost effectiveness was calculated using the TRC Test. Specific measures that were cost effective on a standalone basis were bundled into programs and re-screened for cost effectiveness. Each program and the whole portfolio was designed to be cost effective.

Q. CAN YOU PLEASE PROVIDE MORE DETAIL ON HOW THE STUDY WAS CARRIED OUT?

A: The BenCost model provides measure and program forecasts including proposed program budgets customer participation, net and gross energy savings, net and gross summer and winter peak demand savings, program budgets, levelized costs and benefits, and cost effectiveness estimates. Forecasts are made from 2016 through 2025.

As in the DSM Potential Assessment, AEG modeled three DSM portfolio program scenarios; High, Mid and Low to evaluate cost effectiveness, energy and demand savings. The High Scenario results assumed ideal conditions and industrial customer participation. Since industrial customers can opt out of DSM participation, the High Scenario does not provide a realistic basis for program design. The Low Scenario serves as a lower bound of achievable results for the Company. AEG recommended that the Company implement a DSM program that reflects the Mid Scenario program designs.

Q. WHICH PROGRAM DESIGN SCENARIO IS KENTUCKY POWER PROPOSING?

A. The Company's cost effective DSM Program Plan for 2016 – 2018 is based upon AEG's Mid Scenario study results. AEG estimates that the total DSM budget (recommended program portfolio - Mid Scenario) will range from approximately $6.2 million in 2016 to $6.5 million in 2018. AEG's recommended DSM program portfolio is cost effective, with a TRC score ranging from 1.24 in 2016 to 1.53 in 2018. To be clear, although the Kentucky Power's proposal is based upon

AEG's Mid Scenario, the Company's proposed DSM Plan differs from AEG's recommendation. The Company's proposed DSM Plan includes the Energy Education for Students program and the Community Outreach program and excludes the Bid for Efficiency program.

Q. IN ADDITION TO THE DIFFERENCES IN PROGRAMS, ARE THERE ANY OTHER DIFFERENCES BETWEEN THE COMPANY'S PROPOSED DSM PLAN AND AEG'S RECOMMENDATIONS?

A. Yes. Two primary factors are driving differences between AEG's and the Company's program budgets: select incentive levels and program evaluation schedules.

Q. PLEASE EXPLAIN HOW THE COMPANY'S PROPOSED INCENTIVES DIFFER FROM AEG'S RECOMMENDATIONS FOR THE 2015 BUDGET.

A. The primary difference is in the Commercial Incentive Prescriptive Custom program. For that program's budget, AEG allocated $392,932 for incentives in 2015 based upon Mid Scenario customer participation levels. The Company's proposed program budget includes $540,600 in incentives (which is based upon the High Scenario customer participation level). This additional amount is necessary to help ensure robust customer participation levels.

Q. PLEASE EXPLAIN THE DIFFERENCES BETWEEN AEG'S EVALUATION SCHEDULE AND THE COMPANY'S PROPOSED ALTERNATIVE.

A. The timing and extent of program evaluation is another factor contributing to differences in program budgets. AEG included approximately 5 percent of the program budget for annual program measurement, evaluation and verifications (EMV). The Company proposes an alternative approach which includes a process evaluation beginning during the second half of 2016. The 2015 process review will include both new and existing programs within the DSM portfolio. A final report would be filed in August 2017. Consistent with AEG's recommendation, the budget for a process evaluation is approximately 40 percent of the EMV budget included with AEG's DSM Program Plan. Thirty percent of this cost is allocated to 2016 with the remaining EMV expense allocated to 2017. The Company is proposing to conduct a full impact savings evaluation beginning in 2017 with a target completion date in 2018. Kentucky Power proposes to submit the final report with the August 2018 DSM Status Report. The impact savings evaluation would include program years 2016 and 2017 in the evaluation.

Q. IS THE COMPANY'S PROPOSED ALTERNATIVE PROGRAM EVALUATION SCHEDULE REASONABLE?

A. Yes. Delaying the full program EMV until two program years have elapsed is reasonable. Since the Company is proposing significant changes to program design, it makes sense to allow time for the programs to mature. The extra time will allow for fine tuning marketing efforts and finding the proper level of incentives that will promote increased customer participation. In addition, conducting a full program EMV as included in AEG's budget would increase costs. Delaying full program EMV will allow total program portfolio dollars to

be spent in other areas. The Company will be monitoring and reporting to the Commission on how the new programs are developing.

V. CHANGES TO KENTUCKY POWER'S EXISTING DSM/EE PROGRAMS

Q: DID THE DSM COLLABORATIVE REVIEW AND COMMENT ON PRELIMINARY DRAFTS OF THE STUDIES?

A: Yes. During the study process, Collaborative members were given the opportunity to review and comment on early drafts of the Market Study and Program Design. A total of three meetings and five webex style conference calls were scheduled with the Collaborative, Sierra Club, Kentucky Power, and AEG to review and discuss the Market Potential Study and the DSM Program Plan information. AEG took the Collaborative Member's comments and suggestions into account in formulating final program designs and recommendations.

Q: HAS THE COMPANY BASED ITS CURRENT DSM FILING ON THE RECOMMENDATIONS CONTAINED IN THE AEG STUDIES?

A: Yes, but with modifications. The Company's proposed changes to individual DSM programs, along with its deviation from AEG's recommendations, are discussed below.

Q. PLEASE DESCRIBE THE COMPANY'S RECOMMENDATIONS.

A. Kentucky Power currently has 10 authorized existing residential DSM/EE programs, three authorized existing commercial DSM/EE programs, and the School Energy Manager Program. In the company's recently completed rate case (2014-00396, Order dated June 22, 2015), the Company agreed to expand the

program to include schools in all of the company's service territory. In Case No. 2015-00189, the Company sought and was granted approval to extend the program to all counties in its service territory. Thus, it is not the subject of this proceeding. Of the remaining 12 programs, Kentucky Power is proposing to discontinue four residential programs (New Mobile Home Construction (Tariff Sheet 22-10), Modified Energy Fitness (Tariff Sheet 22-4), High Efficiency Heat Pump (Tariff Sheet 22-8), and Mobile Home High Efficiency Heat Pump (Tariff Sheet 22-9). In place of the four discontinued residential programs, the Company is proposing two new programs (New Manufactured Home and Whole House Efficiency) that reintroduce and expand the program services offered previously. In addition, the Company is proposing to modify five additional residential programs: Targeted Energy Efficiency (Tariff Sheet 22-3), Energy Education For Students (Tariff Sheet 22-5), Community Outreach CFL Tariff Sheet 22-6), Residential Efficient Products (Tariff Sheet 22-7) and Appliance Recycling Program (Tariff Sheet 22-15). Also, the Company proposes to discontinue the existing Commercial Incentive Program (Tariff Sheet 22-13) and to separate that program's services into three new separate expanded programs: Commercial Incentive Program, Commercial Express Install, and Commercial New Construction. In addition, the Company proposes to discontinue the Small Commercial HVAC program (Tariff Sheet 22-12) as a standalone program and to offer those program services through the New Commercial Incentive Prescriptive Custom program. Specific program changes are discussed further below. Finally, the Company is proposing a new Retro-Commissioning Program. The Company

is asking the Commission to reauthorize these program plan changes for a three-year period ending December 31, 2018.

Q: PLEASE SUMMARIZE THE PROGRAMS FOR WHICH THE COMPANY SEEKS AUTHORIZATION OR REAUTHORIZATION FOR THREE YEARS ENDING DECEMBER 31, 2018.

A: The Table illustrates the proposed status and cost effectiveness of each program.

Program	**Proposed Status**	**TRC Score 2016-2025**
Modified Energy Fitness	Discontinued - Program Services being offered through Whole House Efficiency program	N.A.
High Efficiency Heat Pump	Discontinued - Program Services being offered through Whole House Efficiency program	N.A.
Mobile Home High Efficiency Heat Pump	Discontinued - Program Services being offered through Whole House Efficiency program	N.A.
Commercial Incentive	Discontinued – Program Services separated into three programs	N.A.
Small Commercial HVAC	Discontinued – Program Services being offered through new Commercial Incentive Prescriptive Custom	N.A.
Mobile Home New Construction	Discontinued - Program Services being offered through New Manufactured Home program	N.A.
Targeted Energy Efficiency	Modified	1.06 - 1.16

Energy Education For Students	Modified	1.73*
Community Outreach CFL	Modified	1.56*
Residential Efficient Products	Modified	1.62 - 2.59
Appliance Recycling Program	Modified	1.04 - 1.23
New Manufactured Home	New – Combines and expands program services from Mobile Home New Construction	1.54 - 1.87
Whole House Efficiency	New – Combines and expands program services from three discontinued programs	1.35 - 1.61
Commercial Incentive Prescriptive Custom	New	1.55 - 1.95
Express Install	New	1.01 - 1.15
Commercial New Construction	New	1.24 - 1.55
Retro-Commissioning	New	1.28 - 1.53

*Please note that TRC scores for the Energy Education for Students and the Community Outreach programs are from the 2012-2013 Evaluation Report in Case No. 2014-00271.

I will first discuss the Company's recommendations for the residential program to be followed by the recommendations for the commercial programs.

Residential Programs.

Q. IS THE COMPANY PROPOSING TO DISCONTINUE ANY RESIDENTIAL PROGRAMS?

A. Yes. Based upon AEG's recommendations, the Company proposes discontinue the following programs: Modified Energy Fitness (Tariff Sheet 22-4), High Efficiency Heat Pump (Tariff Sheet 22-8), and Mobile Home High Efficiency Heat Pump (Tariff Sheet 22-9). The service offerings in these programs will be integrated into the Whole House Efficiency program. In addition, the Company is proposing to discontinue the Mobile Home New Construction (Tariff Sheet 22-10) and integrate those service offerings into the New Manufactured Home program. I discuss the new DSM programs below.

Q: HAS AEG RECOMMENDED THAT THE COMPANY DISCONTINUE ANY OTHER RESIDENTIAL PROGRAMS?

A: Yes. AEG recommended the Company discontinue both the Energy Education For Students (Tariff Sheet 22-5) and the Community Outreach CFL (Tariff Sheet 22-6) programs if the only option were for the programs to be administered by a third party contractor. AEG investigated the possibility of outsourcing staff program duties and determined neither program was cost effective when administered by a third party contractor. However, both programs are and will continue to be cost-effective if administered by Company personnel. Moreover, both programs are valuable in terms of education and providing customers and students longer term exposure to energy efficiency concepts and DSM issues. After examining the ability of its staff to continue to administer the programs as modified, Kentucky Power elected to continue both programs.

Q. WILL THE COMPANY'S STAFF HAVE TROUBLE ADMINISTERING THE ENERGY EDUCATION FOR STUDENTS AND COMMUNITY OUTREACH PROGRAMS GOING FORWARD?

A. No. The consolidation of programs and service offerings will provide additional time for Company personnel to devote to administering these two programs.

Q. WHAT CHANGES DOES THE COMPANY PROPOSE FOR THE ENERGY EDUCATION FOR STUDENTS AND COMMUNITY OUTREACH CFL PROGRAMS?

A. While continuing to work with Energy Education Service Providers (currently the National Energy Education Development (NEED) initiative) in schools, the Company is proposing to expand the focus of the Energy Education for Students program outside the 7th grade to include all students in Middle school as part of the schools' science curriculum. Expanding the number of grades participating in the program will introduce energy efficiency concepts sooner and provide a longer period over which to reinforce the concepts. Regarding the Community Outreach CFL program, the Company is proposing to drop CFL from the title and to modify the Community Outreach program to include energy efficiency conservation measures in addition to or in replacement of the existing energy efficiency kit (i.e., CFL bulbs). The Company intends to develop options for other EE measures during program year 2016 and may include impact savings changes which result from modified EE measures, with the program 2016 Status Report filing. The current EE educational demonstrations being performed at community events will continue to be supported through various resources including existing

program implementation contractors. It makes sense that when representatives are present at community events they should take the opportunity to hand out additional material to enhance the potential educational experience.

Q: PLEASE DESCRIBE THE CHANGES THE COMPANY SEEKS TO MAKE TO THE FIVE RESIDENTIAL PLANS TO BE MODIFIED.

A: As indicated in the Table above, the other three residential programs the Company seeks to modify are: Targeted Energy Efficiency (Tariff Sheet 22-3), Residential Efficient Products (Tariff Sheet 22-7, and Appliance Recycling Program (Tariff Sheet 22-15).

Targeted Energy Efficiency (Tariff Sheet 22-3). The Company proposes to expand this program by adding windows and doors to the list of eligible weatherization measures and to increase the eligible average cost per home to $2,000. Annual net incremental energy savings (Mid-level participation) for this program are projected to be 443 MWh in 2016 and are projected to grow to 437 MWh in 2025. The Modified program is cost effective based upon the AEG Program Design under all three participation Scenarios:

- Low TRC 1.05 (2016) – TRC 1.16 (2025)
- Mid TRC 1.06 (2016) – TRC 1.16 (2025)
- High TRC 1.06 (2016) – TRC 1.16 (2025)

Residential Efficient Products (Tariff Sheet 22-7). The Company proposes to remove Energy Star refrigerators, freezers and heat pump water heaters from the program. These items are no longer cost effective and are not recommended to be included by the AEG DSM Program Plan. The Company proposes to add Energy

Star air purifiers to the list of eligible products. The Company will continue to offer upstream incentives to qualifying dealers for CFL and LED lighting products and mail in rebates for qualifying efficient products. Annual net incremental energy savings (Mid-level participation) for this program are projected to be 7,484 MWh in 2016 to 749 MWh in 2025. The incremental energy savings gains from replacing incandescent bulbs with CFLs will decline as the market becomes saturated, and hence the decline in program incremental energy savings. The program is cost effective based upon the AEG Program Design Plan under all three performance Scenarios:

- Low TRC 1.62 (2016) – TRC 2.67 (2025)
- Mid TRC 1.62 (2016) – TRC 2.59 (2025)
- High TRC 1.62 (2016) – TRC 2.50 (2025)

Appliance Recycling Program (Tariff Sheet 22-15). The Company proposes to increase the program incentive range from $40 - $55 to $50 - $70. Annual net incremental energy savings (Mid-level participation) for this program are projected to be 322 MWh in 2016 increasing to 356 MWh in 2025. The modified program is cost effective based upon the AEG Program Design Plan under all three participation Scenarios:

- Low TRC 1.01 (2016) – TRC 1.22 (2025)
- Mid TRC 1.04 (2016) – TRC 1.23 (2025)
- High TRC 1.03 (2016) – TRC 1.21 (2025)

Q. IS THE COMPANY PROPOSING TO ADD ANY NEW RESIDENTIAL PROGRAMS?

A. Yes. The Company is proposing to add two new residential DSM programs; a New Manufactured Home and Whole House Efficiency.

Q. PLEASE DESCRIBE THE NEW MANUFACTURED HOME PROGRAM

A. As stated above, the Company proposes to discontinue the Mobile Home New Construction (Tariff Sheet 22-10) and to integrate the program services in the New Manufactured Home program. In addition, the Company is proposing to expand the program by adding a second tier incentive level. Level 1 provides a $450 incentive for customers purchasing a new mobile home with Zone 3 insulation and an efficient heat pump (SEER 15, HSPF 8.5). Level 2 provides a $1,200 incentive for customers purchasing an Energy Star qualifying mobile home. Annual net incremental energy savings (Mid-level participation) for this program are projected to be 272 MWh in 2016 increasing to 441 MWh in 2025. The modified program is cost effective based upon the AEG Program Design Plan under all three participation Scenarios:

- Low TRC 1.50 (2016) – TRC 1.86 (2025)
- Mid TRC 1.54 (2016) – TRC 1.87 (2025)
- High TRC 1.52 (2016) – TRC 1.81 (2025)

Q. PLEASE DESCRIBE THE NEW WHOLE HOUSE ENERGY EFFICIENCY PROGRAM

A. This is a new program that integrates the program services of three existing residential programs and expands the service offering through direct incentives provided to homeowners that install qualified EE measures (e.g. insulation and thermostats). The Company proposes to combine the program service attributes

of (Modified Energy Fitness (Tariff Sheet 22-4), High Efficiency Heat Pump (Tariff Sheet 22-8), and Mobile Home High Efficiency Heat Pump (Tariff Sheet 22-9)) into a single residential DSM program. Administratively, these three programs and the associated tariffs will be discontinued as separate programs.

Q: WHY IS IT REASONABLE FOR THE COMPANY TO COMBINE THREE DISTINCT PROGRAMS INTO THE WHOLE HOUSE EFFICIENCY PROGRAM.

A: Combining the three separate existing programs into a single program should provide cost-savings and enhance the Company's marketing efforts. Once an energy auditor has completed a home audit and discussed the audit results and possible remedies to the homeowner, it makes sense for the auditor to introduce and market the HVAC and weatherization components of the program while the auditor is still in the house. Currently, the stand-alone HVAC programs incur additional costs in time, marketing, transportation, etc. In addition, the weatherization component has expanded the types of weatherization measure offerings over the current existing measures.

Q. IS THE COMPANY SIMPLY PROPOSING TO COMBINE THE THREE FORMER RESIDENTIAL PROGRAMS INTO THE WHOLE HOUSE ENERGY EFFICIENCY PROGRAM WITHOUT FURTHER MODIFICATION?

A. No. The new program expands the service attributes of three former programs. First the Whole House Efficiency Program also provides a free Home Energy Audit and direct installation of identified energy conservation measures. Second,

customers may receive incentives for an expanded array of weatherization options. Customers will have the option to purchase and install air sealing, duct sealing and attic insulation provided that they have a central cooling system(i.e., central air conditioner or heat pump). The level of incentive offered to the customer will depend upon home type and type of installed insulation. Third, customers are eligible to receive incentives (up to $1000 per unit) for qualifying HVAC equipment including heat pump ductless mini-splits, heat pumps, and programmable thermostats which are installed by a participating dealer / contractor. Annual net incremental energy savings (Mid-level participation) for this program are projected to be 2,596 MWh in 2016 increasing to 3,670 MWh in 2025. This new program is cost effective based upon the AEG Program Design Plan under all three participation Scenarios:

- Low TRC 1.31 (2016) – TRC 1.62 (2025)
- Mid TRC 1.35 (2016) – TRC 1.61 (2025)
- High TRC 1.37 (2016) – TRC 1.62 (2025)

Commercial Programs.

Q: IS THE COMPANY PROPOSING TO MAKE CHANGES TO ITS COMMERCIAL PROGRAMS?

A: Yes. The Company seeks authority to discontinue the Small Commercial HVAC program (Tariff Sheet 22-12) and offer its program services through the Prescriptive Rebate service in the new Commercial Incentive Prescriptive Custom program. In addition, the Company proposes to discontinue the existing Commercial Incentive Program (Tariff Sheet 22-13) and to create three separate

programs: a Commercial Incentive Prescriptive Custom Program, Commercial Express Install, and Commercial New Construction.

Q. PLEASE EXPLAIN WHY THE SMALL COMMERCIAL HVAC PROGRAM SERVICES ARE BETTER OFFERED THROUGH THE NEW COMMERCIAL INCENTIVE PRESCRIPTIVE CUSTOM PROGRAM.

A. Integrating the program services is reasonable and will allow the program administrator to take advantage of economies in scale in marketing and program administration.

Q: PLEASE EXPLAIN WHY IT IS REASONABLE FOR THE COMPANY TO SPLIT THE CURRENT COMMERCIAL INCENTIVE PRESCRIPTIVE CUSTOM PROGRAM INTO THREE DISTINCT PROGRAMS.

A: The three program service offerings are sufficiently distinct that it makes sense to operate them separately. The programs operate differently and target different segments of the commercial sector. For example, the new Commercial Incentive Prescriptive Custom program is a mail in rebate program wherein customers can purchase energy efficient equipment from a pre-approved list, provide the requisite information, and receive a rebate. The Express Install program is more focused and targets specific customers. This program targets commercial customers consuming up to 100 kW peak demand and begins with a free energy audit of the customer's existing facilities. Then, following up on the audit results, customers may receive incentives toward the purchase of high efficiency lighting or refrigeration equipment. The Commercial New Construction program targets a different aspect of the commercial sector. This program provides incentives for

new construction designs or major renovations incorporating energy efficiency measures that achieve at least a 10 percent gain in energy efficiency over existing facilities.

Q: PLEASE DESCRIBE EACH OF THE THREE NEW COMMERCIAL PROGRAMS.

A: Commercial Incentive Prescriptive Custom Program. This incentive program will assist commercial customers' efforts to save energy through a broad range of energy efficiency options that address all major end uses and processes. There are two types of incentives available under the program: prescriptive and custom. A prescriptive rebate will be offered to participants who select energy efficient equipment including lighting, HVAC and motors from a pre-qualified list of equipment with proven technology and performance. A new custom rebate feature will be offered for equipment that does not qualify for a prescriptive rebate. Applications for the custom rebate must be pre-approved and the project must have a TRC of at least 1.0. In addition, as discussed previously, the Small Commercial HVAC program is proposed to be discontinued and its program services will continue to be offered through the Prescriptive Rebates sub-program in the Commercial Incentive Prescriptive Custom Program.

Annual net incremental energy savings (Mid level participation) for this program are projected to be 3,878 MWh in 2016 increasing to 5,169 MWh in 2025. The modified program is cost effective based upon the AEG Program Design Plan under all three participation Scenarios:

- Low TRC 1.56 (2016) – TRC 1.92 (2025)

- Mid TRC 1.55 (2016) – TRC 1.95 (2025)
- High TRC 1.58 (2016) – TRC 1.92 (2025)

Express Install. This program will provide qualifying small commercial customers with a free energy assessment and incentives for the installation of qualifying high efficient lighting and refrigeration equipment. The incentive (50% of incremental equipment cost) may cover up to 70% of the installed cost of the measures, up to $20,000 per customer. Annual net incremental energy savings (Mid level participation) for this program are projected to be 800 MWh in 2016 and increasing to 1,599 MWh in 2025. This program is cost effective based upon the AEG Program Design Plan under all three participation scenarios:

- Low TRC 1.00 (2016) – TRC 1.15 (2025)
- Mid TRC 1.01 (2016) – TRC 1.15 (2025)
- High TRC 1.01 (2016) – TRC 1.15 (2025)

New Construction. This program provides incentives to customers that are planning major renovations or building new facilities that are at least 10% more energy efficient than the then current building energy code (ASHRAE 90.1-2007 Standards, Appendix G). As is currently the case, two approaches will be offered. First, the whole building design approach will target projects with integrated design and high performance goals, as identified through energy simulation modeling. Second, the systems approach will target projects that seek to optimize individual systems to increase building efficiency. Annual net incremental energy savings (Mid-level participation) for this program are projected to be 217 MWh in

2016 and holding steady at 217 MWh in 2025. This program is cost effective based upon the AEG Program Design under all three participation scenarios:

- Low TRC 1.24 (2016) – TRC 1.55 (2025)
- Mid TRC 1.24 (2016) – TRC 1.55 (2025)
- High TRC 1.24 (2016) – TRC 1.55 (2025)

Q: IS THE COMPANY PROPOSING ANY OTHER NEW COMMERCIAL PROGRAMS?

A: Yes. Retro-Commissioning is a new AEG recommended program designed for commercial customers. The program provides a study designed to optimize a building's automation systems (e.g. lighting and HVAC). Customers receive incentives for approved projects based as described in the AEG DSM Program Design Plan. Two levels of service are open to eligible customers depending upon the building size.

- RCx Lite Open to customer buildings sized between 50,000 and 150,000 square feet and consuming between 150 and 500 kW peak demand. A program dealer will perform a targeted assessment of the building and recommend improvements. Participating customers agree to spend a minimum of $5,000 toward building efficiency improvements with a payback within no more than 18 months.
- RCx Standard Open to eligible customers with buildings larger than 150,000 square feet and consuming greater than 500 kW peak demand. A program dealer will perform a comprehensive assessment and provide a verification report with pre- and post-program results. Participating customers agree to spend a minimum

of $15,000 toward facility efficiency improvements with a payback period of 18 months or less.

Annual net incremental energy savings (High level participation Commercial class only) for this program are projected to be 1,783 MWh in 2016 increasing to 2,060 MWh in 2025. This program is cost effective under the Mid and High participation scenarios:

- Mid TRC 1.13 (2016) – TRC 1.37 (2025)
- High TRC 1.23 (2016) – TRC 1.45 (2025)

Q: ARE THERE ANY PROGRAMS AEG RECOMMENDED THAT THE COMPANY IS NOT IMPLEMENTING?

A: Yes. AEG recommended that the Company implement the Bid For Efficiency program. This program seeks to encourage high volume energy savings projects from customers and third party suppliers working on behalf of customers at a lower cost than traditional customers. Through the program, blocks of electricity savings (achieved through energy efficiency projects with a TRC score greater than 1.0) would be purchased through a real time competitive bidding process.

Q: EXPLAIN WHY THE COMPANY HAS CHOSEN NOT TO IMPLEMENT THE BID FOR EFFICIENCY PROGRAM AT THIS TIME.

A: The Company believes that this is an innovative program that has merit but requires further study. Certainly it would encourage customer and third party venders working with customers to explore and possibly implement innovative energy efficiency and conservation projects. The bidding process would also encourage cost effective solutions outside the Company's established DSM

program portfolio. However, the Company has not had sufficient time to fully evaluate the program. The Company will review vendor proposals to determine whether the program can be effectively administered for the Kentucky Power Service area.

Q: IN ADDITION TO BEING COST EFFECTIVE, DO THE COMPANY'S DSM PROGRAMS AS PROPOSED IN THIS FILING PROVIDE KENTUCKY POWER'S CUSTOMERS WITH OTHER BENEFITS?

A: Yes they do. The Company's DSM and energy efficiency programs help increase overall customer satisfaction. The programs help customers lower energy costs and reduce the need for future capacity additions and lower emissions. In addition, the programs described above are designed to help customers make specific changes to their consumption patterns. For example, the Company's proposed Whole House Efficiency program provides a free home energy audit and installation of select identified energy conservation measures. Then, based upon the results of that audit, the program is designed to assist customers with the purchase and installation of weatherization measures and qualifying high efficiency HVAC equipment. The Company's proposed Community Outreach program is designed to educate consumers regarding the advantages of energy efficiency and conservation with energy efficiency vendor demonstrations and by distributing energy efficiency kits which include compact fluorescent lights at community events.

Q: DO THE COMPANY'S DSM PROGRAMS DISADVANTAGE OR PREJUDICE ANY CLASS OF KENTUCKY POWER'S CUSTOMERS?

A: No. Although not every residential or commercial customer may be eligible to participate in all programs offered to their respective customer class, the Company's offerings are broad enough that all customers could participate in at least one DSM or energy efficiency program. In addition, as can be seen in in this filing, the Company is working to develop and implement expanded DSM and energy efficiency program services for its residential and commercial customers. Moreover, the Company's proposed residential and commercial DSM factors assign to the residential and commercial customer classes only the costs of those programs that benefit that particular class of customers.

Q: PLEASE EXPLAIN WHY THE COMPANY'S PROPOSALS SHOULD BE APPROVED BY THE COMMISSION.

A: Most importantly, each of the proposed programs are projected to be cost effective. This is even true with the Energy Education For Students and Community Outreach Programs. The Company will continue to administer these two programs with its own personnel. In addition, the Company's new DSM Plan will provide a more complete portfolio of program offerings to its customers. Finally, the proposed DSM program will not unreasonably prejudice or disadvantage any class of customers.

Q: HAS THE COMPANY MADE ANY CHANGES TO THE SCHOOL ENERGY MANAGER PROGRAM SINCE CASE NO. 2014-00271?

A: Yes. On June 11, 2015, the Company filed an application (Case No. 2015-00189) with the Commission seeking approval of its modified School Energy Manager program and a declaration that the modified program satisfied the terms and the

Company's obligations under paragraph 15 (regarding the School Energy Manager Program) of the non-unanimous Settlement Agreement filed in the Company's rate case (Case No. 2014-00396). In Paragraph 15 of the non-unanimous Settlement Agreement, the Company agreed to expand its current School Energy Manager program by an amount not to exceed $200,000 per year for two years to fund (1) up to an additional 6 school energy managers to the Company's entire service territory and (2) to the extent funds are available, to fund school energy efficiency projects. Unlike the original School Energy Manager Program approved by the Commission in Case No. 2014-00178, the additional $200,000 in funding will be provided through the Company's DSM charge and not Company shareholder funds.

On June 22, 2015, the Commission issued an Order approving the rate case non-unanimous Settlement Agreement with modifications not related to Paragraph 15. On June 26, 2015, the Company filed its acceptance of the Commission's modification of the Settlement Agreement. On August 3, 2015, the Commission issued its Order in Case No. 2015-00189 approving the Company's expanded School Energy Manager program and found that it fulfills the Company's obligations under Paragraph 15 of the Settlement Agreement.

Q. ARE THE PROPOSED PROGRAMS, BOTH EXISTING AND PROPOSED, AVAILABLE, AFFORDABLE, AND USEFUL FOR ALL OR A SIGNIFICANT PORTION OF THE COMPANY'S RESIDENTIAL AND COMMERCIAL CUSTOMERS?

A. Yes. The Company is aware that its service territory contains some of the poorest counties in the Commonwealth. However, the financial impact of the programs is reasonable. For the average residential customer who consumes 1,389 kWh each month will pay $4.33 (1,389 X 0.003116) monthly. The average commercial customer consuming 3,72000 kWh each month will pay $6.87 (3,720 X 0.001848) monthly. The programs provide significant benefits to their participants and all of the Company's customers have the opportunity to participate in at least one DSM or energy efficiency program.

Q. DO YOU HAVE A RECOMMENDATION AS TO WHETHER THE COMMISSION SHOULD APPROVE THE COMPANY'S PROPOSED ACTIONS WITH RESPECT TO MODIFIED AND NEW PROGRAMS?

A. Yes. Based on the facts above, as well as the matters set forth in the Application, including the exhibits thereto, it is my recommendation that the Commission approve the Company's proposals.

Q. HAS THE COMPANY PROVIDED FORM TARIFF SHEETS TO EFFECTUATE ITS PROPOSED DSM PROGRAMS?

A. Yes. They are attached as Exhibit 7 to the Application.

Q. WHAT SURCHARGE FACTORS IS THE COMPANY PROPOSING?

A. The Company is proposing that the DSM surcharge factor for residential customers be modified to $0.003116 per kWh. For Commercial customers the Company is proposing a DSM surcharge factor of $0.001848 per kWh.

Q. WILL THE PROPOSED FACTORS PERMIT THE COMPANY TO RECOVER THE FULL COSTS OF IMPLEMENTING THE PROGRAMS AS WELL AS ITS LOST REVENUES?

A. Yes. However, the Company is not seeking any incentives payable to Kentucky Power for implementing its programs.

Q. WHAT SUPPORT DOES THE COMPANY OFFER FOR ITS CALCULATION OF ITS SURCHARGE FACTORS?

A. "Schedule C," which is filed as Exhibit 3 of the Application, supports the Company's calculation of the surcharge factors being proposed.

Q: DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A: Yes.