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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: EO-2012-0009

DIRECT TESTIMONY

OF

ALLEN D. DENNIS

ON BEHALF OF

KCP&L GREATER MISSOURI OPERATIONS COMPANY

**Kansas City, Missouri
December 2011**

**Certain Schedules Attached To This Testimony
Contain Highly Confidential Information.
All Such Information Should Be Treated Confidentially
Pursuant To 4 CSR 240-2.135.**

DIRECT TESTIMONY

OF

ALLEN D. DENNIS

Case No. EO-2012-0009

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

2 A: My name is Allen D. Dennis. My business address is 1200 Main St., Kansas City,
3 Missouri 64105.

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

5 A: I am employed by Kansas City Power & Light Company (“KCP&L”) as Director, Energy
6 Solutions.

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

8 A: My responsibilities include providing leadership and direction to the Customer Solutions,
9 Products and Services, Economic Development, and Market Intelligence Teams. My
10 duties include initiating and bringing to market new products, as well as improvements
11 and innovations to existing affordability, energy efficiency, and demand response
12 products and services.

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

14 A: I graduated from Colorado State University with a Bachelor of Science degree in
15 Mechanical Engineering in 1981. I began my utility career at Public Service Company of
16 Colorado and, over the course of 14 years, held various positions including marketing
17 engineer, marketing project specialist, manager of electric wholesale and cogeneration
18 markets, and manager of bulk power business development.

1 Following my career at Public Service Company of Colorado, I served as
2 Director, Power Marketing for KN Energy, where I formed the electric trading and
3 marketing area. I then became Executive Vice President and co-founder of Enserco
4 Energy, an energy trading, marketing, and services company, and co-founder and board
5 member of Hometown Connections, a company focused on offering products and
6 services to public power utilities.

7 In 2003, I served as a Director in the Enterprise Consulting Division for Black &
8 Veatch and was responsible for the energy practice and consulting with clients on
9 integrated resource plans, risk management, and operational improvements.

10 In 2004, I began my employment at KCP&L as the Manager, Market
11 Management. In this capacity, I managed KCP&L's Energy Consultants and
12 Commercial and Residential Sales functions. I assumed the position of Director,
13 Products and Services in 2007 and my current position in 2011.

14 **Q: Have you previously testified in a proceeding at the Missouri Public Service**
15 **Commission ("MPSC" or "Commission") or before any other utility regulatory**
16 **agency?**

17 A: Yes. I have previously filed testimony before the Kansas Corporation Commission in
18 Docket Nos. 09-KCPE-246-RTS and 10-KCPE-795-TAR, and in KCP&L and KCP&L
19 Greater Missouri Operations Company's ("GMO") 2009 rate cases before the MPSC.

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

21 A: The purpose of my testimony is fourfold:

22 (1) Outline GMO's existing portfolio of demand-side management ("DSM")
23 programs and the filing of new tariffs to extend these programs;

- 1 (2) Outline five new programs to GMO's DSM portfolio;
- 2 (3) Demonstrate the cost effectiveness of each existing and new program tariff filing;
- 3 and
- 4 (4) Address how GMO's portfolio of DSM programs will be modified if the
- 5 Commission elects to deny GMO's cost recovery request.

6 **Q: Do you sponsor any schedules with your direct testimony?**

7 A: Yes, I sponsor the following schedules:

- 8 ▪ Schedule ADD-1: Affordability, Energy Efficiency, and Demand Response,
- 9 GMO Program Summary of Budget to Actual as of September 30, 2011;
- 10 ▪ Schedules ADD-2: Program information for the proposed new programs in the
- 11 DSM portfolio;
- 12 ▪ Schedules ADD-3 through ADD-10: Completed Evaluation, Measurement, and
- 13 Verification ("EM&V") Reports for GMO's existing DSM programs and
- 14 associated benefit-cost test results for each evaluation report.
- 15 ▪ Schedule ADD-11: Potential Studies for both the residential and commercial
- 16 sectors as follows:
- 17 ○ 2010 Multifamily Study. KCP&L and GMO commissioned KEMA, Inc.
- 18 to study the multi-family market sector. The study was aimed at providing
- 19 technical, economic and market potential analyses specific to both
- 20 KCP&L and GMO, with the goal of identifying energy efficiency
- 21 opportunities throughout the multi-family customer sector.
- 22 ○ 2006 KEMA Demand Response Study. KCP&L retained the team of
- 23 KEMA Services Inc. and UtiliPoint International to develop a robust

1 portfolio of demand price response programs directed to all customer
2 classes.

- 3 ○ 2006 Statewide Saturation Study. KCP&L participated in the Utility
4 Collaborative Study, “2006 Missouri Statewide Residential Lighting and
5 Appliance Efficiency Saturation Study,” conducted by RLW Analytics.
6 The study was designed to serve the Missouri investor-owned and
7 municipal utilities to provide baseline information on residential
8 appliance, building, equipment and lighting saturations and efficiencies.

- 9 ○ 2007 Residential Potential Analysis. KCP&L engaged RLW Analytics to
10 conduct additional residential market research aimed at providing
11 technical, market and economic analyses that would be specific to the
12 KCP&L service area, with the goal of identifying key characteristics for
13 energy efficiency opportunities.

- 14 ○ 2007 Commercial and Industrial Potential Study. KCP&L hired Summit
15 Blue Consulting and Energy Insights in January 2007 to conduct a C&I
16 energy efficiency potential study. This study was requested to assist in
17 fulfilling the goals of the DSM aspects of KCP&L’s Comprehensive
18 Energy Plan.

- 19 ○ 2008 Commercial and Industrial Program Study. Morgan Marketing
20 Partners and its subcontractors Architectural Energy Corporation and
21 Franklin Energy Services were retained by KCP&L to determine cost
22 effective C&I programs and measures for its energy efficiency programs.

1 ▪ Schedule ADD-12: Program analyses and savings metrics based upon the EM&V
2 report for each program.

3 ▪ Schedule ADD-13: New tariffs for GMO's existing and new DSM programs.

4 **GMO'S EXISTING DSM PORTFOLIO AND PROGRAM RESULTS**

5 **Q: Please describe GMO's current DSM program portfolio.**

6 A: GMO's current portfolio was put in place over a period of time beginning in early 2008
7 as a result of the continuation of existing Aquila customer programs and also the Report
8 and Order rendered by the Commission in Case No. EM-2007-0374 ("Aquila merger
9 order"). Specifically, the Aquila merger order identified thirteen DSM programs that
10 KCP&L was in the process of evaluating or implementing in Missouri. Thirteen of the
11 DSM programs have been approved by the Commission. This portfolio of programs
12 represents a significant commitment on the part of GMO to promote energy efficiency
13 and demand response and to ensure that all classes of customers have programs in which
14 they can participate.

15 The following table presents GMO's existing DSM portfolio of programs split
16 into three categories: Demand Response, Energy Efficiency, and Affordability. The
17 table also shows whether each program serves residential or commercial & industrial
18 ("C&I") customers. The Affordability programs are specifically targeted to low income
19 residential customers.

GMO DEMAND-SIDE MANAGEMENT PROGRAM PORTFOLIO (Current)		
PROGRAM TYPE	CLASS OF CUSTOMER SERVED	
	Residential	C&I
Demand Response	Air Conditioning Cycling (Energy Optimizer)	Air Conditioning Cycling (Energy Optimizer) MPower
Energy Efficiency	ENERGY STAR® New Homes Cool Homes Home Energy Analyzer Home Performance with ENERGY STAR®	Energy Audit Energy Savings Measures (Retrofit) Energy Savings Measures (New Construction) Business Energy Analyzer Building Operator Certification
Affordability	Low Income Weatherization Affordable New Homes	

3 **Q: How much has GMO invested in these Missouri programs so far?**

4 A: As of September 30, 2011, GMO had invested over \$18 million in these Missouri
5 programs. Schedule ADD-1 presents a summary of budget to actual results for each
6 existing DSM program through September 30, 2011. Individual program investment
7 differences are largely related to the timing of introduction, approval and implementation
8 of each program as well as the general success of each program to date.

9 **Q: Have GMO's demand response programs been successful?**

10 A: Yes, both the primarily residential program, Energy Optimizer, and the C&I program,
11 MPower, have been well received by GMO's customers. Optimizer has exceeded the
12 goals that GMO set for the program. As of September 30, 2011, GMO had installed
13 approximately 11,000 thermostats under the Energy Optimizer program. This represents
14 11 MWs of curtailable load. There were 24 participants in the GMO MPower program as
15 of September 30, 2011. This represents 12.6 MWs of curtailable load.

1 **Q: What about GMO's energy efficiency programs; have they also been successful?**

2 A: Yes, they have. GMO estimates that over 47,600 MWh have been saved through
3 September 30, 2011.

4 **Q: What level of participation have you seen in your energy efficiency programs?**

5 A: As of September 30, 2011, we had approximately 8,000 GMO customers using our Home
6 Energy Analyzer program (44,384 total Missouri customers), 312 GMO customers using
7 our Business Energy Analyzer program (1,614 total Missouri customers), 8,796 GMO
8 customers participating in our Cool Homes program (16,464 total Missouri customers),
9 1,046 GMO customers participating in our Cool Homes program (2,584 total Missouri
10 customers) 306 GMO homes that were built through participation in our ENERGY
11 STAR[®] New Homes program (1,673 total Missouri customers), and 41 GMO participants
12 in our Building Operator Certification program (190 total Missouri customers).
13 Additionally, GMO has provided 450 rebates to customers under the Energy Audit,
14 Energy Savings Measures – Retrofit and Energy Savings Measures – New Construction
15 programs (1,143 rebates total Missouri customers).

16 **Q: Have your Affordability programs met with the same success as your Demand**
17 **Response and Energy Efficiency programs?**

18 A: The Affordability programs have had mixed success; the Low Income Weatherization
19 program has been moderately successful, but the Low Income Affordable New Homes
20 program has been a challenge with respect to participation.

1 **Q: What level of participation and savings have you achieved with the Affordability**
2 **programs?**

3 A: Overall, GMO estimates that these programs have added an additional 808 MWh of
4 energy savings as of September 30, 2011. Over 300 homes have been weatherized under
5 GMO's Low Income Weatherization program.

6 GMO's Low Income Affordable New Homes program has had five program
7 participants as of September 30, 2011. As I will discuss later in my testimony, this
8 program has not met the expected success and GMO is requesting to discontinue this
9 program as part of this filing.

10 **Q: Please provide a summary of each of the programs within GMO's current DSM**
11 **portfolio.**

12 A: Certainly. The following provides a brief summary of each program within GMO's
13 current portfolio as well as the progress achieved with each program.

14 **DEMAND RESPONSE PROGRAMS**

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

21 **MPower:** MPower is a contracted load curtailment program for large C&I customers
22 that provides a capacity and energy payment to participating customers to curtail their
23 usage during summer months when high electric demand occurs. Customers are eligible

for participation in the program by providing a minimum load reduction of 25 kW during
GMO's high usage/high cost periods.

ENERGY EFFICIENCY PROGRAMS

Home Energy Analyzer: The Home Energy Analyzer provides information to
customers on how they use energy based on their specific usage data. It also provides
information on ways customers can save energy and what their payback might be based
upon the improvements made.

Cool Homes: This program is designed as a re-commissioning/early replacement
program. Early replacement will target replacement of electric cooling equipment that
has a seasonal energy efficiency ratio ("SEER") of eight and below with SEER 14 or
higher equipment. All installations utilize CheckMe!®, a software program that ensures
quality installation through proper charging of the refrigerant and airflow over evaporator
coils, using accurate instruments, while the contractor is at the premise. Those who
request and receive a cooling system evaluation also receive complimentary compact
fluorescent lamps ("CFLs"), which are anticipated to add to the savings achieved through
this program.

Home Performance with ENERGY STAR®:

Home Performance with ENERGY STAR® (HPwES) is a national program from the
U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE). It
is an innovative program that strives to produce an economically sustainable model that
captures significant energy savings by encouraging a whole-house approach to energy
efficiency improvements in existing homes. The program begins with a whole-house
energy assessment performed by Building Performance Institute (BPI) trained and

1 certified contractors or consultants. The infrastructure is then provided for homeowners
2 to follow through and complete energy improvements to their homes.

3 **ENERGY STAR® New Homes:** ENERGY STAR® New Homes requires that new
4 homes be constructed to a standard at least 15 percent more energy efficient than the
5 2004 International Residential Code. These standards are based on heating, cooling, and
6 hot water energy use; and are typically achieved through a combination of building
7 envelope upgrades, high performance windows, controlled air infiltration, upgraded
8 heating and air conditioning systems, tight duct systems, and upgraded water-heating
9 equipment. Homes can be qualified as an ENERGY STAR® new home through two
10 different paths. The prescriptive path uses Building Option Packages which represent a
11 set of construction specifications for a specific climate zone. The performance path
12 qualifies the home based on a home energy rating. This program was designed in a
13 coordinated effort between the Metropolitan Energy Center (“MEC”) and the Kansas
14 City Home Builders Association--Build Green Committee. The program is currently
15 designed to offer builders an \$800 rebate for each home that is built to the ENERGY
16 STAR® requirements. GMO will also pay up to \$750 for the third-party inspection
17 and/or rating required to qualify the home as ENERGY STAR® label.

18 **Building Operator Certification:** Building Operator Certification is a market
19 transformation effort to train facility operators in efficient building operations and
20 management, establish recognition of and value for certified operators, support the
21 adoption of resource-efficient O&M as the standard in building operations and create a
22 self-sustaining entity for administering and marketing the training.

1 **Business Energy Analyzer:** The Business Energy Analyzer provides information to
2 business customers on how they use energy based on their specific usage data. It
3 provides information on ways they can save energy and what their payback might be
4 based on the improvements made. It also allows businesses to benchmark themselves
5 against like businesses. In preparation of this filing, it came to our attention that there is
6 not a current tariff in place for the Business Energy Analyzer program. This was an
7 oversight that will be remedied with the MEEIA filing.

8 **Energy Audit and Energy Savings Measures Program:** This C&I program includes
9 three components: audit, custom rebates for retrofit projects, and custom rebates for new
10 construction projects. For the C&I Energy Audit Rebate, GMO offers rebates to
11 customers to cover 50 percent of the cost of an energy audit, up to \$300 for customers
12 with facilities less than 25,000 square feet and up to \$500 for customers with facilities
13 over 25,000 square feet. Customers with multiple facilities may apply for multiple audit
14 rebates. In order to receive the rebate, the customer must implement at least one of the
15 audit recommendations that qualify for a GMO C&I Energy Savings Measures Custom
16 Rebate. No GMO customers have applied for an audit rebate. Most equipment installing
17 contractors absorb the cost of the audit for customers who purchase equipment.
18 Expenditures associated with this program to date are based on administrative expense
19 and the cost of certifying auditors for the program.

20 Within the retrofit and new construction components of the Energy Audit and
21 Energy Saving Measures Program, a small general service customer may also apply for
22 rebates from a prescriptive list of energy-efficiency measures. These measures include
23 lighting and lighting controls, air conditioning, and motors.

1 **AFFORDABILITY PROGRAMS**

2 **Low Income Weatherization:** GMO partners with Community Action Plan (“CAP”)
3 agencies within the state of Missouri that provide weatherization assistance to low
4 income individuals and families. Qualified lower income customers can get help
5 managing their energy use and bills through GMO’s Low Income Weatherization
6 program. The program works directly with local CAP agencies that already provide
7 weatherization services to low income customers. GMO provides supplemental funds to
8 the CAPs to cover the cost of additional cost-effective weatherization measures.

9 GMO owner-occupied residential customers in one to four-unit structures with
10 income up to 200 percent of the federal poverty guidelines may participate. Renters are
11 also allowed to participate if the landlord pays 50 percent of the weatherization cost and
12 agrees not to raise the rent for a pre-agreed period of time.

13 **Low Income Affordable New Homes:** The Low Income Affordable New Homes
14 program is designed to be a partnership between GMO and organizations to achieve
15 energy efficient affordable new housing for the low income community. Financial
16 incentives are available at the full incremental cost for high efficiency central air
17 conditioners and heat pumps. An incentive is available toward the purchase of an
18 ENERGY STAR[®] rated refrigerator, toward the purchase of ENERGY STAR[®] rated
19 lighting fixtures, and toward installing higher than standard levels of insulation in the
20 attic, floor, or crawlspace.

21 I will address later in my testimony GMO’s proposal to discontinue the Low
22 Income Affordable New Homes program.

PROPOSED PORTFOLIO CHANGES

Q: What changes to its DSM portfolio is GMO requesting?

A: GMO is requesting three types of changes to its existing DSM portfolio of programs: discontinuance of one program, modification of several existing programs, and the addition of five new programs.

Q: What program is GMO proposing to discontinue?

A: As mentioned earlier in my testimony, GMO is proposing to discontinue its Low Income Affordable New Homes tariff.

Q: Why is GMO proposing to discontinue the Low Income Affordable New Homes program?

A: Since the Low Income Affordable New Homes program launched in GMO in March 2008, minimal participation has occurred. This is largely because the economic downturn has caused a decrease in new construction. Typically construction in new homes for low income is in the form of multi-family units, which is not eligible under this program.

Q: Is GMO proposing to discontinue any other existing DSM programs?

A: No, it is not.

Q: Which of its current DSM programs has GMO identified for modification?

A: GMO is proposing specific modifications to its ENERGY STAR[®] New Homes program, Building Operator Certification program, MPower program, Energy Optimizer program and Energy Audit and Energy Saving Measures Rebate program.

1 **Q: What specific changes to these programs are being requested?**

2 A: The following summary provides the proposed modifications to each of the program
3 tariffs.

4 **▪ ENERGY STAR® New Homes**

- 5 ○ Consistent with ENERGY STAR® guidelines for multi-family units, add
6 tariff language to include multi-family units greater than three stories if
7 (1) the structure is permitted as residential by the local building
8 department; and (2) each individual residential unit has its own heating,
9 cooling, and hot water systems, separate from the other units.
- 10 ○ Include an annual maximum rebate cap per builder per development of
11 \$150,000 in order to prevent exhaustion of the program budget due to
12 large multi-family projects.

13 **▪ MPower Program**

- 14 ○ Delete Energy Purchase Option. This option has not been used by
15 customers.
- 16 ○ Delete Curtailment Excess of Customer Load section. Payments made
17 under this provision are negligible. The deletion of this provision is
18 expected to reduce customer confusion and increase efficiency in program
19 administration.

20 **▪ Energy Audit and Energy Saving Measures Rebate Program**

- 21 ○ Rename tariff to C&I Rebate program.
- 22 ○ Expand the Prescriptive Energy Efficiency Measures Rebate component.
- 23 ○ Eliminate the rebate for a completed audit. This portion of the program

1 has not been successful and has not had any participants.

- 2 ○ Increase annual customer maximum rebate levels such that the maximum
- 3 is limited up to \$150,000 per site per program year and up to \$250,000 per
- 4 customer per program year. This change is expected to incent larger
- 5 energy efficiency projects and will allow a customer to submit more
- 6 applications for multiple sites up to these maximums.

7 ▪ **Energy Optimizer**

- 8 ○ Change the name of the tariff schedule to Schedule EO (Energy
- 9 Optimizer) from Schedule ACC (Air Conditioner Cycling).

10 New tariffs for the current DSM programs that GMO wishes to make part of its MEEIA
11 DSM portfolio are attached to my testimony as Schedule ADD-15.

12 **Q: Is GMO proposing to add any new programs to its DSM portfolio?**

13 A: Yes. GMO is proposing to add five new DSM programs: Residential Energy Reports
14 program, Appliance Turn-in program, C&I Prescriptive Rebate program, Multi-family
15 Rebate program, and Residential Lighting and Appliance. The following summary
16 outlines each of the programs.

17 **Residential Energy Reports Program:**

18 The Residential Energy Reports program provides residential customers with an Energy
19 Report that provides a comparison of the household energy usage information with
20 similar type customers or “neighbors.” The intention of the Energy Report is to provide
21 information that will influence customers’ behavior in such a way that they lower their
22 energy usage. This is a behavioral modification program.

1 **Appliance Turn-in Program:**

2 The Appliance Turn-in program is designed to incent residential customers to remove
3 improperly operating, inefficient, secondary appliances. The secondary purpose is to
4 raise awareness of the energy benefits of ENERGY STAR® appliances.

5 Older vintage room air conditioners, refrigerators, freezers and humidifiers can be
6 some of the least efficient electrical appliances in the home. Often these old units are
7 used when they are not functioning properly and as a result use electricity very
8 inefficiently. To encourage customers to dispose of their old appliances and purchase
9 efficient ENERGY STAR® models, GMO proposes an appliance turn-in program.
10 Located at retailer sites during special promotions, participants would receive coupons
11 toward more efficient units if they turn in an old unit or arrange to have the old unit
12 picked up. Units received will be recycled through a certified recycling agency.

13 **C&I Prescriptive Rebate Program:**

14 The C&I Prescriptive Rebate program is designed to encourage C&I customers to install
15 energy efficient measures in existing facilities. More specifically, the program is
16 designed to:

- 17 • Provide incentives to facility owners and operators for the installation of high
18 efficiency equipment and controls; and
- 19 • Provide a marketing mechanism for electrical contractors, mechanical
20 contractors, and their distributors to promote energy efficient equipment to
21 end users.

22 **Multi-family Rebate Program:**

23 The Multi-family Rebate program advances comprehensive energy efficiency measures,

1 including: whole house solutions, plug load efficiency, visual monitoring and displays,
2 performance standards, local government opportunities and DSM integration.

3 Multi-family property owners and managers have been historically less
4 responsive to energy efficiency efforts than have residential customers. This unique
5 customer segment warrants additional attention and effort to motivate property owners
6 and managers to actively participate in energy efficiency programs. The Multi-family
7 Rebate program proposes a series of comprehensive measures designed to address
8 systems within multi-family housing establishments.

9 The Multi-family Rebate program offers prescribed rebates for energy efficient
10 products to motivate the multi-family property owners/managers to install energy
11 efficient products in both common and dwelling areas of multi-family complexes and
12 common areas of mobile home parks and condominiums. An additional objective is to
13 heighten property owners/managers and tenants awareness and knowledge of energy
14 efficiency.

15 **Residential Lighting and Appliance Program:**

16 The Residential Lighting and Appliance program promotes ENERGY STAR®
17 appliances, lighting and home electronics. The program also promotes several products
18 that are energy efficient, for which there are not yet ENERGY STAR® labels, such as
19 solid state lighting and light emitting diode technologies. The program uses a two-
20 pronged approach:

21 (1) increasing supply of qualifying products through partnerships with
22 retailers, manufacturers and distributors, and

(2) creating demand through consumer awareness and understanding of the ENERGY STAR® label and the benefits of energy efficiency.

Q: Has GMO included information in this filing for each new program tariff as required by the Commission?

A: Yes, GMO has included a proposed tariff, clean and redline versions where appropriate, and program supporting information for each existing and new program. The program supporting information for each proposed program is attached to my testimony as Schedule ADD-2; the proposed tariffs are attached as Schedule ADD-13.

Q: Is GMO proposing any education programs in this filing?

A: Yes, the following three existing programs should be considered as education programs:

- Building Operator Certification;
- Home Energy Analyzer; and
- Business Energy Analyzer.

Q: Please summarize the composition of GMO's DSM program portfolio following these changes.

A: The following table updates the one included earlier in my testimony to incorporate the changes I discussed.

GMO DEMAND-SIDE MANAGEMENT PROGRAM PORTFOLIO (Proposed)		
PROGRAM TYPE	CLASS OF CUSTOMER SERVED	
	Residential	C&I
Demand Response	Energy Optimizer	Energy Optimizer MPower
Energy Efficiency	ENERGY STAR® New Homes Cool Homes Residential Lighting and Appliances Appliance Turn-in Residential Energy Reports Home Performance with ENERGY STAR®	C&I Rebate Program <ul style="list-style-type: none"> ▪ Prescriptive Energy Efficiency Measures ▪ Custom Energy Efficiency Measures Multi-family Rebate
Affordability	Low Income Weatherization	
Educational	Home Energy Analyzer	Business Energy Analyzer Building Operator Certification

1

2 **Q: How does GMO’s proposed portfolio of DSM programs meet requirements that all**
3 **cost effective DSM should be considered a resource, along with traditional supply-**
4 **side resources, to meet present and future demands?**

5 A: GMO agrees with the Commission that DSM programs should be considered a resource
6 equivalent to traditional supply-side resources for meeting demand growth. In fact, GMO
7 introduced its current portfolio of DSM programs in 2008 for that very reason. GMO
8 models its DSM programs as a supply-side resource in its resource planning process.
9 This analysis has repeatedly shown that DSM programs are a cost-effective, long-term
10 resource to meet customer demand.

11 **Q: What analyses has GMO performed to justify its current level of DSM programs?**

12 A: GMO has performed one market assessment for the multi-family sector and relies on the

1 other five market assessments performed on behalf of KCP&L for both the residential
2 and commercial sectors. These assessments are attached to my testimony as Schedule
3 ADD-11.

4 **Q: What analysis has GMO performed to justify its proposed level of DSM programs**
5 **and to meet demand and energy savings goals, as outlined in MEEIA rules?**

6 A: GMO reviewed the participation and historical performance of all existing demand-side
7 management programs (“DSM”) developed and included in KCP&L’s comprehensive
8 energy plan (“CEP”). Evaluation, measurement and verification (“EM&V”) has been
9 completed for all of these programs. DSM program managers have been tracking
10 participation, program spending, energy savings in kWh, and demand savings in kW on a
11 monthly basis since program implementation. GMO analyzed the annual energy and
12 demand savings achieved from these programs and used this information in establishing
13 energy efficiency and demand savings goals.

14 GMO also reviewed the AmerenUE potential study conducted by Global Energy
15 Partners (“GEP”). This study indentified a suite of programs that were very similar to
16 GMO’s existing programs and also identified the potential several new programs. This
17 study also estimated the realistic achievable potential that might be obtained from these
18 programs. In addition to the AmerenUE potential study, GMO used information from
19 DSM energy efficiency potential studies that it conducted in the residential, commercial
20 and multi-family sectors and information from several major program implementers to
21 estimate the participation in two new proposed programs; the appliance recycling and the
22 residential reports programs.

1 GMO used this information along with KCP&L's actual 2010 program
2 performance and the level of KCP&L's DSM program management experience to
3 establish a framework for estimating GMO's existing program performance. GMO's
4 goal is a 0.5% annual energy savings, and a 1.0% annual demand savings.

5 **Q: Does GMO have plans for any future analysis of its DSM potential?**

6 A: Yes. GMO has recently issued a request for proposals from DSM industry analytic firms
7 to conduct a detailed primary market research potential study.

8 **Q: When does GMO expect to have the results of this potential market study?**

9 A: GMO currently expects to have the results of this study in late-2012.

10 **Q: How will GMO use the results of this potential market study?**

11 A: The Company continually looks to gain industry and customer specific information to
12 enhance its DSM offerings. GMO will further refine its DSM portfolio based on the
13 results of this study. Each study the Company has conducted, and the reviewing of
14 regional and national market studies, provides additional insight into the DSM market.

15 **Q: Please describe how GMO's portfolio will be used as a resource to moderate bill**
16 **increases that are likely to be caused as utilities promote DSM programs, build new**
17 **generation, implement environmental requirements and invest in additional**
18 **transmission assets.**

19 A: GMO has chosen a combination of new generation, renewable resources and DSM
20 programs to meet its resource requirements. As GMO has been able to successfully
21 reduce both the energy and demand growth of its customer base as a result of these
22 programs, the need for future baseload and peaking resources will be mitigated. To the
23 extent that implementation of these DSM resources is less expensive than traditional

1 supply-side resources, as shown by the initial program benefit-cost analysis and
2 evaluation of the programs following implementation, then they will serve to moderate
3 the impact on customer bills from traditional resources over the long-term. As GMO has
4 often stated, it believes that these DSM programs should be considered by the
5 Commission on a level playing field with traditional generation resources.

6 **Q: How does GMO propose to show that its DSM programs produce cost-effective,**
7 **firm energy savings?**

8 A: DSM programs should be used to achieve both energy and demand growth reductions.
9 GMO currently estimates energy and demand savings on its existing DSM programs
10 based upon rigorous modeling assumptions. These savings are verified through the
11 EM&V process with a third-party evaluator two and a half years following the program
12 tariff approval dates for each program. Once energy and demand savings are verified,
13 GMO re-runs all benefit-cost tests to ensure programs are cost-effective and operating
14 accordingly. In addition to the periodic EM&V analysis, participation, energy savings,
15 demand savings, and program spending are reported monthly and compared to budget.

16 **Q: Programs should implement the most cost-effective measures in a logical sequence**
17 **to maximize the energy savings per dollar spent. How do GMO's DSM programs**
18 **meet this goal?**

19 A: GMO's proposed program portfolio offers customers a comprehensive total home or
20 building solution. Residential customers may elect to take advantage of multiple
21 programs that, when taken together offer customers multiple choices to implement energy
22 efficiency which can be taken in combination or individually over time as the customer's
23 resources allow.

1 For example, the Home Energy Analyzer, the online program, may often be the
2 first step that a residential customer may take to learn more about energy efficiency. The
3 Home Energy Analyzer will provide a customer with energy efficient recommendations
4 for their home based on specific information that a customer provides with respect to type
5 of appliances and mechanical systems, lighting, windows, insulation, behaviors, etc. The
6 Analyzer provides energy savings opportunities for the customer to consider, which may
7 include suggesting that a customer caulk and seal windows in order to minimize air
8 leakage into and from the home, replace incandescent bulbs with CFLs, or replace
9 heating and/or cooling systems. The Home Energy Analyzer may then direct the
10 customer to participate in the Energy Optimizer program by installing a programmable
11 thermostat. It also provides a direct link to the Cool Homes program, which provides
12 information to the customer on replacing their inefficient air conditioner with a more
13 efficient unit. Thus, in this example, the Home Energy Analyzer, when utilized in
14 combination with the Cool Homes and Energy Optimizer programs, offer the customer
15 the opportunity to implement measures for a total home energy efficiency solution by
16 taking advantage of our existing programs.

17 **Q: Does GMO's portfolio provide programs for all classes of customers?**

18 A: Yes. As shown by the tables earlier in my testimony, GMO has sought to provide a
19 comprehensive portfolio of programs that provides options for all classes of customers,
20 including low income customers. GMO is proposing to continue to offer the Low
21 Income Weatherization program as part of this filing.

22 **Q: What educational programs are included in GMO's portfolio?**

23 A: As discussed earlier in my testimony, GMO is proposing to continue to offer the Home

1 Energy Analyzer, Business Energy Analyzer, and Building Operator Certification
2 programs as part of this filing. These programs are educational in nature and should be
3 classified as such.

4 The Home and Business Energy Analyzers are online tools designed to educate
5 residential and commercial customers, respectively, about their energy usage and offer
6 energy efficiency solutions to lower their bills. In addition to the Home and Business
7 Energy Analyzers, GMO offers paperless billing to all customers. Paperless billing is
8 accessible to customers through the AccountLink web application on KCP&L's website.
9 The website is another informational and educational resource. Online billing provides
10 enhanced monthly billing data such as the cost per unit of energy used, meter readings,
11 usage comparisons with prior periods dating back to 24 months, and weather effects. The
12 Home and Business Energy Analyzers provide customers examples of how energy saving
13 devices can change usage and costs, as well as examples of how changing temperature
14 settings impact usage and costs.

15 In addition, GMO offers the Building Operator Certification ("BOC") program to
16 its C&I customers. BOC is a national educational program to train facility managers to
17 more efficiently utilize energy in their facilities.

18 All of these educational programs are designed to increase customer knowledge
19 regarding both their usage of electricity and available programs to manage that usage.
20 GMO also participates in events where they can provide demand-side management
21 information to the public. In addition, educational material is provided to customers
22 through periodic bill inserts and on KCP&L's website.

1 **Q: Has GMO implemented EM&V on its programs to determine program**
2 **effectiveness?**

3 A: Yes. GMO has an evaluation process in place for its programs. GMO contracts with a
4 third-party evaluator to perform both process and impact evaluations for its existing DSM
5 programs. The third-party evaluator is used to avoid conflicts of interest and to ensure
6 creditability of evaluation results. Evaluations are completed two years and six months
7 following program tariff approval dates. Evaluation plans are developed by GMO's
8 evaluation contractor(s) and describe all necessary data collection, process evaluation
9 tasks, and impact evaluation tasks by program.

10 The evaluation plans include study methodology by program, data collection
11 strategies, data requests by program, and a detailed work plan and schedule. GMO
12 supports the International Performance Measurement and Verification Protocol for all
13 programs where this standard is applicable.

14 **Q: What is the purpose of GMO's process evaluation?**

15 A: GMO's goal of the process evaluation component is to confirm program effectiveness,
16 help improve program design and implementation processes in order to improve their
17 effectiveness or operational efficiencies. Through the process evaluations, the evaluation
18 contractor documents program accomplishments, administrative processes, participant
19 experiences, customer satisfaction and successes, and failures. Process evaluation is
20 meant to inform the program implementers, provide corrective guidance regarding
21 program implementation and help to assess whether there is a continuing need for the
22 programs.

1 **Q: What is the purpose of GMO's impact evaluation?**

2 A: GMO's goal of impact evaluation is to calculate gross program energy and demand
3 savings. Gross program impacts are the estimated site level demand and energy savings
4 caused by the measures installed through the program and do not account for factors such
5 as free ridership, which may influence attribution of savings to the program. Depending
6 on the level of rigor demanded, a variety of technical issues can be addressed to
7 determine gross program impacts, including determination of the pre-installation
8 technology performance baseline, determining the standard energy efficiency baseline,
9 verifying that the DSM measures listed for projects were actually installed, developing an
10 accurate count of the installed measures, determining the demand and energy savings
11 performance of the DSM measures installed, estimating the load shapes for the DSM
12 program measures installed through the programs, including the coincidence of each
13 DSM measure with seasonal and day type peak demand periods, and estimating the long-
14 term persistence of the program's impacts.

15 Other technical issues associated with determining gross program impacts include
16 assessing the quality of the data that is available to work with from program files and
17 databases, and determining what data manipulation systems and supplemental analyses
18 are required to produce reliable estimates of program impacts.

19 **Q: Have any evaluations been completed on GMO's existing programs?**

20 A: Yes. Process and impact evaluations have been completed on all of GMO's DSM
21 programs (with the exception of Home Energy Analyzer and Business Energy Analyzer):

- 22 ▪ MPower;
- 23 ▪ Energy Optimizer (twice);

- 1 ▪ Energy Audit and Energy Saving Measures Rebate program;
- 2 ▪ Building Operator Certification;
- 3 ▪ Cool Homes;
- 4 ▪ Low Income Weatherization;
- 5 ▪ ENERGY STAR® New Homes; and
- 6 ▪ Home Performance with ENERGY STAR®.

7 I have attached the EM&V reports for each of these programs as Schedules ADD-3
8 through ADD-10.

9 **Q: What have been the results of the EM&V's performed on GMO's programs?**

10 A: In general, the results have been favorable. As discussed earlier in my testimony, GMO
11 has used the results of the process portion of the evaluation to help improve program
12 design and implementation processes. GMO considers the recommendations by the
13 third-party evaluator and makes adjustments to program design that it considers to be
14 appropriate. GMO considers all of the process recommendations to be learning tools to
15 enhance our programs.

16 With respect to the impact evaluation, GMO has adjusted its initial assumed
17 program savings to reflect the results of the EM&V, which is based on an independent
18 analysis performed by the third-party administrator. In some cases, GMO's initial
19 demand and energy savings assumptions were adjusted upward and in others, they were
20 adjusted downward. Benefit-cost tests of each EM&V report have been calculated and
21 are attached to my testimony as the top sheet of each evaluation report marked Schedules
22 ADD-3 through ADD-10.

1 **Q: Did all of the programs that were evaluated pass the Total Resource Cost (“TRC”)**
2 **test?**

3 A: No. The Low Income Weatherization program, Low Income Affordable New Homes
4 program, Home Performance with ENERGY STAR® program and ENERGY STAR®
5 New Homes program had a TRC lower than one.

6 **Q: Please explain why these programs did not pass the TRC test.**

7 A: The Affordability programs—Low Income Weatherization and Affordable New
8 Homes—are structured as social benefit programs to assure that a suitable set of effective
9 programs are available to this group of customers. Second, the costs to reach and
10 influence these customers are often higher than they would be to reach other customers.
11 Cost-effectiveness is not generally a requirement for these types of programs. The Low
12 Income Affordable New Homes program has seen minimal participation; therefore, no
13 significant savings were achieved. The Low Income Weatherization program requires no
14 out-of-pocket expenditures by the participant. The program is administered by CAP
15 agencies and GMO supplements this funding. Therefore, GMO does not claim all of the
16 energy savings of the program, which contributes to the lower TRC result.

17 **Q: What about the Home Performance with ENERGY STAR® program?**

18 A: Home Performance with ENERGY STAR® was evaluated for program years 2009 and
19 2010. During those years, it came to our attention that the projects being submitted for
20 reimbursement were costly compared to GMO’s rebate and the measures being
21 implemented were not always the best energy savings measures. GMO instituted
22 program changes to correct these issues by placing caps on certain measures. I believe
23 these program changes have corrected the issues that led to the program failing the TRC.

1 **Q: Why would savings assumptions need to be adjusted upward or downward?**

2 A: When GMO first proposed its DSM portfolio in 2008, there was a period of time that we
3 were on a learning curve. However since then, GMO has implemented thirteen DSM
4 programs and has gained significant experience in program design, implementation, and
5 evaluation of our programs. All of these programs have been evaluated.

6 When GMO proposed its programs, it relied upon KCP&L's experiences and also
7 external expertise to help develop the initial estimates of the demand and energy savings
8 for the programs; it can only be expected that actual results from customer participation
9 in its programs will yield more accurate estimates. Thus GMO has made adjustments to
10 its programs.

11 **Q: Will there be a true-up mechanism to account for differences in projected verses
12 actual program kW and kWh?**

13 A: Yes.

14 **Q: Please describe the true-up mechanism.**

15 A: GMO established program savings based upon the EM&V report for each program, as
16 outlined in Schedules ADD-3 through ADD-10. At the end of each calendar year, GMO
17 will compare the actual results of each program with the savings goal. Variances to each
18 program will be calculated and the result either added or subtracted to the annual savings
19 goal for the current year. Program analysis outlining estimated participants data and
20 projected benefits by program is attached to my testimony as Schedule ADD-12.

21 **Q: How often will this true-up occur?**

22 A: The true-up will occur annually on a calendar basis, and any variances will be determined
23 by January 31 of the following year.

1 **Q: What are GMO's program plans if the Company does not receive the requested**
2 **Demand-side Investment Mechanism?**

3 A: GMO plans to reduce its DSM program portfolio offerings if adequate cost recovery is
4 not received.

5 **Q: Which programs will GMO continue in its DSM program portfolio?**

6 A: The following table outlines the programs for which continuation will be requested:

7

GMO	
PROPOSED DEMAND-SIDE MANAGEMENT PROGRAM PORTFOLIO	
CLASS OF CUSTOMER SERVED	
Residential	C&I
Energy Optimizer	Energy Optimizer MPower
Home Energy Analyzer	Business Energy Analyzer Building Operator Certification
Low Income Weatherization	

14

15 **Q: Is GMO proposing any modifications to the DSM programs it wants to continue?**

16 A: Yes. As stated previously in this testimony, GMO is proposing minor modifications to its
17 Energy Optimizer program, MPower program, Building Operator Certification program
18 and Low Income Weatherization program.

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

20 A: Yes, it does.

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of KCP&L Greater Missouri Operations)
Company's Application for Approval of Demand-Side)
Programs and For Authority to Establish a Demand-Side)
Programs Investment Mechanism) Case No. EO-2012-0009

AFFIDAVIT OF ALLEN D. DENNIS


STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

Allen D. Dennis, being first duly sworn on his oath, states:

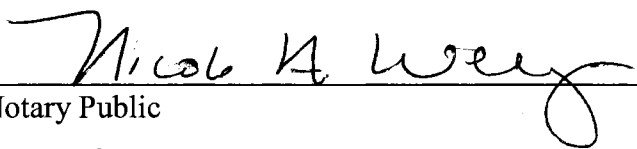
1. My name is Allen D. Dennis. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Director, Energy Solutions.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of KCP&L Greater Missouri Operations Company consisting of thirty (30) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.


Allen D. Dennis

Subscribed and sworn before me this 22nd day of December, 2011.


Notary Public

My commission expires: Feb 4, 2015

