

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

JOINT APPLICATION OF KENTUCKY)	
UTILITIES COMPANY AND LOUISVILLE)	
GAS AND ELECTRIC COMPANY FOR)	CASE NO. 2016-00274
APPROVAL OF AN OPTIONAL SOLAR)	
SHARE PROGRAM RIDER)	

DIRECT TESTIMONY OF JOHN P. MALLOY
VICE PRESIDENT, CUSTOMER SERVICES
KENTUCKY UTILITIES COMPANY AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Dated: August 2, 2016

1 **Q. Please state your name, position and business address.**

2 A. My name is John P. Malloy. I am Vice President of Customer Services for Kentucky
3 Utilities Company (“KU”) and Louisville Gas and Electric Company (“LG&E”), and I
4 am an employee of LG&E and KU Services Company, which provides services to LG&E
5 and KU (collectively “the Companies”). My business address is 220 West Main Street,
6 Louisville, Kentucky, 40202. A complete statement of my education and work experience
7 is attached to this testimony as Appendix A.

8 **Q. Have you previously testified before this Commission?**

9 A. Yes, I have testified before this Commission on numerous occasions involving various
10 regulatory matters, including the fuel adjustment clause, the environmental surcharge
11 clause and certificates of public convenience and necessity.¹

12 **Q. What are the purposes of your testimony?**

13 A. My testimony (1) summarizes the testimony of the Companies’ other witnesses, (2)
14 describes the significant public interest in having the Companies offer a renewable
15 energy program like the proposed Solar Share Program, (3) discusses how the Companies
16 designed the proposed program to meet customers’ expressed interest in such programs,
17 (4) describes the Companies’ plan to publicize the program and educate customers about
18 it, and (5) discusses the Companies’ proposed financing for the Solar Share Facilities.

¹ See *In the Matter of: An Examination of the Fuel Adjustment Clause of Kentucky Utilities Company from November 1, 2004 through October 31, 2006*, Case No. 2006-00510 Direct Testimony of John P. Malloy (Jan. 22, 2007); *In the Matter of: An Examination of the Fuel Adjustment Clause of Louisville Gas and Electric Company from November 1, 2004 through October 31, 2006*, Case No. 2006-00509 Direct Testimony of John P. Malloy (Jan. 22, 2007); *In the Matter of: The Application of Kentucky Utilities Company to Modify Certain Certificates of Public Convenience and Necessity to Construct Ductwork for Two Flue Gas Desulfurization Units at the Ghent Power Station*, Case No. 2006-00493, Direct Testimony of John P. Malloy (Nov. 16, 2006); *In the Matter of the Application of Kentucky Utilities Company for a Certificate of Public Convenience and Necessity to Construct a Selective Catalytic Reduction System and Approval of its 2006 Compliance Plan for Recovery by Environmental Surcharge*, Case 2006-00206, Direct Testimony of John P. Malloy (June 23, 2006); *In the Matter of the Application of Louisville Gas and Electric Company for Approval of Its 2006 Compliance Plan for Recovery by Environmental Surcharge*, Case No. 2006-00208 Direct Testimony of John P. Malloy (June 23, 2006).

1 **Q. Are you supporting any exhibits to your testimony?**

2 A. Yes, I am sponsoring the following exhibits:

- 3 • Exhibit JPM-1: Collection of letters supporting the Solar Share Program
- 4 concept
- 5 • Exhibit JPM-2: Letters of support for Solar Share Program concept from
- 6 past and present Consumer Advisory Panel members
- 7 • Exhibit JPM-3: Report on RE100 companies that have committed to go
- 8 “100% renewable”
- 9 • Exhibit JPM-4: Customer survey methodology and results from the
- 10 Companies’ spring 2016 online customer survey concerning potential solar
- 11 energy offerings
- 12 • Exhibit JPM-5: Customer education and marketing plan for the Solar Share
- 13 Program

14 **Testimony Summary**

15 **Q. Please identify the other witnesses offering direct testimony on behalf of the**

16 **Companies in this case, and generally describe the subject matter of each such**

17 **testimony.**

18 A. In addition to my testimony, the Companies are offering direct testimony of the following

19 witnesses:

- 20 • David E. Huff, Director of Customer Energy Efficiency & Smart Grid Strategy,
- 21 sponsors a number of the Companies’ exhibits and describes the Solar Share
- 22 Facilities, Rider SSP’s availability and limitations, and the annual cost of the
- 23 Solar Share Facilities.

- 1 • Rick E. Lovekamp, Manager of Regulatory Affairs/Tariff, provides an overview
2 of the Companies' proposed Rider SSP tariff sheets, requests approval for the
3 Companies' requested relief by November 1, 2016, demonstrates that the Solar
4 Share Facilities are extensions in the ordinary course of business, describes the
5 allocation of the facilities' cost between the Companies, and requests to use for
6 purposes of the Solar Share Facilities the Commission-approved Brown Solar
7 group depreciation rates.
- 8 • W. Steven Seelye, Managing Partner of The Prime Group, LLC, describes Rider
9 SSP's rates and their derivation.

10 **Strong Public Interest Drives the Solar Share Program**

11 **Q. Please briefly describe the proposed Solar Share Program and Solar Share**
12 **Facilities.**

13 A. As described in detail in Mr. Huff's testimony, the proposed Solar Share Facilities will be
14 solar photovoltaic facilities to be constructed in 500 kW increments up to a maximum
15 capacity of 4 MW, with each 500 kW Solar Share Facility to be built only when
16 customers have fully subscribed the new facility's capacity and all previously built Solar
17 Share Facilities are fully subscribed. The Solar Share Program will allow customers to
18 subscribe the capacity of the Solar Share Facilities under fees and rates prescribed in the
19 proposed Solar Share Program Standard Rate Rider (Rider SSP), which will involve a
20 modest upfront Subscription Fee to offset the Companies' administrative and customer
21 education costs and monthly charges to recover the Solar Share Facilities' capital and
22 fixed costs. Participating customers will receive per-kWh bill credits (Solar Energy
23 Credits) for the energy produced by their subscribed capacity as well as corresponding

1 adjustments to their Fuel Adjustment Clause charges or credits (the Solar FAC
2 Adjustment).

3 **Q. Why are the Companies proposing to construct the Solar Share Facilities and offer**
4 **the Solar Share Program?**

5 A. The Companies are proposing to construct the Solar Share Facilities and offer the Solar
6 Share Program in response to strong public interest in having the Companies offer such a
7 program. This includes interest concerning state-wide economic development efforts
8 related to attraction, retention, and expansion of businesses. It also includes meeting the
9 needs of businesses that have set corporate energy-supply targets to include some portion
10 of renewable energy. Lastly and perhaps most importantly, regional public authorities,
11 commercial, and residential customers have expressed and continue to express great
12 interest in alternative energy supply options. The Solar Share Program is directly
13 responsive to these public interests, and holds great promise for providing customers the
14 opportunity to specifically support photovoltaic generation and their overall renewable
15 energy goals. Based on current market trends and evaluated customer sentiment, the
16 Solar Share Program will be well received and meet the customer demand for renewable
17 energy options. In addition, the Companies will benefit from an additional opportunity to
18 increase their experience with renewable generation and specific customer engagement
19 using this alternative energy option.

20 **Q. Are renewable energy opportunities, including solar, important for the continued**
21 **economic development of the Commonwealth of Kentucky?**

22 A. Yes. In 2015, the Commission held a meeting with jurisdictional utilities, interested
23 industrial and commercial customers, and renewable energy experts in an effort to

1 advance renewable energy as an alternative energy option. On April 17, 2015, then-Vice
2 Chairman Gardner addressed participants at a meeting held at the Commission, asking
3 the utilities and industrial and commercial customers to open collaborative discussions
4 that would lead to eliminating the barriers of offering alternative energy supplies.
5 Representatives from Facebook, General Motors, and Wal-Mart spoke about their
6 corporate energy supply strategies, which included access to regional solar facilities. The
7 Facebook representative noted that Kentucky was often excluded from Facebook's
8 considerations for locations to expand (e.g., to place a data center) because of its overall
9 lack of renewable energy offerings. This view is supported by publicly available sources,
10 such as the World Resources Institute's "Corporate Renewable Strategy Map," which
11 shows companies where they can buy renewable energy through their utilities; notably,
12 the map indicates Kentucky does not have large-scale renewable energy available to
13 companies through Kentucky's utilities.² The representatives further indicated they were
14 interested in programs offering genuine renewable energy from nearby facilities, not
15 programs to purchase renewable energy certificates acquired from renewable energy
16 facilities already in existence elsewhere.

17 In addition, in conversations I and other representatives of the Companies have
18 had recently with economic development professionals and public authorities across the
19 Commonwealth, we have heard repeatedly expressed a desire to see Kentucky elevated in
20 site-selection publications and considerations, which usually discount the region for the
21 absence of utility-offered renewable energy programs. After following up with a number
22 of economic development professionals, public authorities, and individuals concerning
23 our intent to seek approval for the Solar Share Program, a number of them provided

² See <http://buyersprinciples.org/corporate-re-strategy-map/>.

1 letters of support for this filing, copies of which are included in Exhibits JPM-1 and JPM-
2 2.

3 In addition, there is broad-based and growing corporate interest in renewable
4 energy, and companies are increasingly setting their own renewable energy goals
5 irrespective of any legal requirement to do so. For example, RE100 is a collaborative,
6 global initiative of influential businesses committed to 100% renewable energy supplies
7 who are working to increase the availability of renewable energy supply options. This
8 program advances the opportunity to meet the renewable energy supplies of customers
9 like these who currently operate in Kentucky and those who are seeking locations where
10 renewable energy options meet their corporate energy supply targets/goals. A report on
11 65 RE100 companies and how they are proceeding toward a goal of being “100%
12 renewable” is provided as Exhibit JPM-3, which shows a broad-based interest among
13 significant companies across numerous industries in advancing toward increasing
14 amounts of renewable energy to supply their operations.

15 **Q. Have the Companies presented the Solar Share Program concept to any customer**
16 **groups, and what was their response?**

17 A. Yes. The Companies continue to convene a state-wide Consumer Advisory Panel
18 consistent with the Commission’s past recommendations.³ In the March 2015 Consumer
19 Advisory Panel meeting, Mr. Huff presented a shared solar concept as a potential energy
20 supply option for interested customers. This was the initial opportunity for the
21 Companies to obtain feedback on customer overall interest of subscribing to a renewable
22 energy program. The feedback from the initial presentation and discussion was positive.

³ See, e.g., *In the Matter of: Joint Application for Transfer of Louisville Gas and Electric and Kentucky Utilities Company in accordance with E.ON AG’s Planned Acquisition of PowerGen PLC*, Case No. 2001-00104, Order at 14 (Aug. 6, 2001).

1 From this initial interest, the Companies continued internal assessments of
2 offering this customer program. Then, in December 2015, the Companies again
3 presented to the Consumer Advisory Panel. In this meeting, the Companies expanded the
4 group to include both current and former members of the panel. Mr. Huff presented
5 potential large-commercial solar special contracts and community-oriented shared solar
6 concepts. The panel's robust discussion indicated full support for advancing these
7 concepts to offered customer programs. Additionally, letters of support from past and
8 present Consumer Advisory Panel members are attached as Exhibit JPM-2.

9 **Q. Have the Companies conducted any research to determine the interest of their**
10 **customers in the Solar Share Program?**

11 A. Yes. In addition to the feedback the Consumer Advisory Panel provided, the Companies
12 conducted market research in their own service territories to determine if the panel's
13 interest was representative of the Companies' overall residential customer base. Vision
14 Critical, a company that supplies software to help companies better engage and
15 understand their customers, provided the platform for the research. The Companies
16 conducted the survey using an online panel of the Companies' customers to garner
17 insights about interest in a potential solar offering. From May 24 to June 8, 2016, panel
18 members completed the online survey. The customer survey methodology and results are
19 attached as Exhibit JPM-4.

20 **Q. How were members of the online customer panel selected?**

21 A. The Companies developed an overall demographic profile for each utility (LG&E and
22 KU) and within each city the utility serves. Next, they performed calculations to
23 determine the needed number of participants for each city and the targeted demographic

1 profile. The list of customers was then further segmented by zip code. Then, a computer
2 program was used to select a random sample from each zip code. Once this sample was
3 selected, the randomly selected customers were mailed a letter to inquire about their
4 interest in participating. If interested, the customer went online and registered to
5 participate on the customer panel. The market research software determined through the
6 customers' answers to a questionnaire when each zip code or demographic profile had
7 enough customers enrolled to ensure the desired panel composition.

8 **Q. How was the potential solar offering explained to the customer panel?**

9 A. The survey included the following statement:

10 *“LG&E and KU are exploring options to build and own regional solar facilities that*
11 *would give all customers another way to have access to solar energy without having to*
12 *incur the entire upfront costs or maintenance requirements that come along with*
13 *installing private solar systems at their own property. It also would give customers, who*
14 *are unable to install solar systems at their own property, the opportunity to purchase*
15 *solar energy. This may include renters, or customers who have shaded properties, deed*
16 *restrictions or other reasons that would prohibit solar panels. Interested customers*
17 *would have to opportunity to subscribe to a service and purchase a portion of their*
18 *power needs from the solar facility.”*

19 **Q. How many customers completed the solar offering survey?**

20 A. One thousand thirty-five (1,035) LG&E and KU customers completed the online survey.
21 Broken down by utility, 517 LG&E customers and 518 KU customers responded.

22 **Q. What did the survey reveal about customer interest in a solar energy offering?**

1 A. The survey revealed significant customer interest in a solar energy offering. 513 of the
2 1,035 respondents—about 50% of the total respondents—answered they were either
3 somewhat or very likely to participate in a solar program if offered by LG&E or KU.
4 Thirteen percent (13%) answered they were either somewhat or very unlikely to
5 participate. The remaining customers answered they were neither likely nor unlikely to
6 participate.

7 **Q. Of the 1,035 respondents, do you know how many currently have solar panels or**
8 **participate in the Companies' Net Metering Service tariff offering?**

9 A. Yes, nine of them answered they currently have solar panels on their home. Of those, six
10 answered they currently participate in the Companies' Net Metering Service.

11 **Q. Of the customers who responded they do not currently have solar panels on their**
12 **home, did you ask them whether they would likely purchase solar panels to put on**
13 **their home?**

14 A. Yes. Of the 1,026 respondents who do not have solar panels on their home, 4%
15 responded they were likely to purchase solar panels in the next year.

16 **Q. Did the survey ask customers what they would be willing to pay to participate in a**
17 **shared solar program?**

18 A. Yes. The survey asked about pricing in two respects. First, customers were asked
19 whether they would be willing to pay a one-time enrollment fee to participate. Then
20 customers were asked if they would also be willing to pay an additional fee every month
21 to participate.

22 **Q. What was customer response to those questions?**

1 A. Of the 513 customers who answered they would be likely to participate in the program,
2 75% answered they would be willing to pay a one-time enrollment fee of \$50 or more.
3 Of those willing to pay a one-time enrollment fee, 97% answered they would also be
4 willing to pay a recurring monthly fee between \$1 and \$40 to participate, and more than
5 66% said they would be willing to pay a recurring monthly fee of \$11 or more. In other
6 words, about 35% of the total respondents expressed interest in a program like the Solar
7 Share Program the Companies are proposing.⁴

8 **The Proposed Solar Share Program Is Responsive to Customers' Input**

9 **Q. Please describe how the proposed Solar Share Program is responsive to customers'**
10 **input.**

11 A. As more fully described in the testimonies of Messrs. Huff and Lovekamp, the Solar
12 Share Program offering will be completely voluntary and will be available to all
13 residential and the vast majority of business and governmental customers who have
14 expressed interest in seeing a solar energy offering from the Companies. And as more
15 fully described in the testimonies of Messrs. Huff and Seelye, the rate structure for
16 participating customers will comprise an upfront, non-refundable \$40 per quarter-kW
17 Subscription Fee and a monthly, non-levelized Solar Capacity Charge of \$6.29 per
18 quarter-kW subscribed. These fee and charge levels are squarely within the amounts the
19 Companies' survey results indicate most residential customers who have interest in such
20 a program would be willing to pay. Participants will also receive a monthly bill credit
21 (Solar Energy Credit) for the energy produced by their subscribed capacity of the Solar

⁴ The conclusion of 35% of total respondents being potentially interested in a program like the Solar Share Program derives from multiplying 50% (total respondents interested in any solar program) times 75% (percentage of interested respondents willing to pay one-time enrollment fee) times 97% (percentage of interested respondents willing to pay one-time fee who were also willing to pay recurring monthly charge). The product of that multiplication (50% * 75% * 97%) is 36.4%, which is about 35%.

1 Share Facilities as well as a Solar FAC Adjustment to adjust their Fuel Adjustment
2 Clause credits or charges accordingly.

3 **Q. Will all customers receive benefits from the Solar Share Program?**

4 A. Yes, all customers will receive benefits from the Solar Share Program regardless of
5 whether they choose to participate in it.

6 First, the Solar Share Program will be available to all customers as a means of
7 obtaining credit for solar energy production to offset some or all of their energy
8 consumption, and to do so with no long-term capital investment (as would be required for
9 a customer to purchase and install solar panels on the customer's premises), low barriers
10 to entry and easy increases or decreases in subscribed capacity, and relative ease of exit
11 from the program after a customer's subscription commitment ends. Regardless of
12 whether a customer ultimately participates, having the opportunity to participate in such a
13 program is a valuable benefit.

14 Second, should there be any unsubscribed portions, all customers will benefit
15 from relatively lower fuel costs resulting from zero-variable-cost energy produced by
16 these unsubscribed portions of the Solar Share Facilities. The Companies' requirement
17 that a facility be fully subscribed before the Companies begin constructing it should
18 minimize the amount and duration of any unsubscribed capacity. In addition, costs of the
19 Solar Share Program will be offset in part by sales of RECs attributable to energy
20 produced by unsubscribed portions of the Solar Share Facilities.

21 Third and perhaps most importantly, all customers will benefit from the potential
22 for increased economic development in Kentucky, and particularly in the Companies'
23 service territories, resulting from having utility-run renewable energy programs like the

1 Solar Share Program available in the Commonwealth. As I noted above, Kentucky is
2 now overlooked in certain business-siting deliberations precisely because renewable
3 energy options are essentially absent from electric utility tariffs in Kentucky. This
4 offering will help get Kentucky back on the relevant business-siting maps, and should
5 assist in economic development for the Commonwealth as a whole.

6 **Providing Customer Education for the Solar Share Program**

7 **Q. How will the Companies provide customer education for the Solar Share Program?**

8 A. The Companies will make use of normal customer communication channels, such as a
9 press release, bill inserts and newsletters, email, corporate website, social media and
10 customer service representatives to communicate the availability of the Solar Share
11 Program. The Companies plan to coordinate their customer-education efforts with
12 community-solar supporters such as local and state clubs, associations, and organizations
13 to help ensure full and effective customer outreach. The Companies' proposed customer-
14 education and marketing plan is attached as Exhibit JPM-5.

15 **Financing the Solar Share Facilities**

16 **Q. How much will it cost to build the Solar Share Facilities?**

17 A. As more fully described in the testimony of Mr. Huff, the Solar Share Facilities require
18 an initial investment of approximately \$2.0 million and a total of up to \$9.8 million to
19 construct the entirety of the proposed 4 MW combined capacity of the Solar Share
20 Facilities. These capital investment figures do not reflect applicable tax credits, which
21 will significantly reduce the effective cost of the net investment the Companies will make
22 in the Solar Share Facilities.

23 **Q. How do the Companies plan to finance the Solar Share Facilities?**

1 A. The Companies expect to finance the costs of the Solar Share Facilities in the manner
2 they finance all their investments in plant, namely with a combination of new debt and
3 equity. The debt is expected to be a combination of short-term debt, in the form of
4 commercial paper notes, loans from affiliates via the money pool, bank loans or a
5 combination of these sources. The mix of debt and equity used to finance the projects will
6 be determined so as to allow the Companies to maintain their strong investment-grade
7 credit ratings.

8 **Q. How will the cost of the Solar Share Facilities be allocated between KU and LG&E?**

9 A. As more fully described in the testimony of Mr. Lovekamp, the Companies will allocate
10 the Solar Share Facilities 56% to KU and 44% to LG&E based on each utility's number
11 of electric customers.

12 **Keeping the Commission Informed about the Solar Share Facilities**

13 **Q. What actions do the Companies intend to take to keep the Commission apprised
14 concerning the Solar Share Facilities?**

15 A. As more fully explained in the testimony of Mr. Lovekamp, the Companies believe that
16 the Solar Share Facilities do not require a certificate of public convenience and necessity
17 because they will be extensions of the Companies' existing solar generation facilities in
18 the ordinary course of business, especially given the limited amount of capital investment
19 and proposed incremental expansion. Nevertheless, the Companies propose to notify the
20 Commission whenever an additional 500kW Solar Share Facility is fully subscribed.

21 **Why the Companies Are Requesting an Expedited Order**

22 **Q. Why are the Companies asking the Commission to issue a final order in this
23 proceeding by November 1, 2016?**

1 A. As I discussed above, there is a considerable amount of customer demand for an offering
2 from the Companies like the Solar Share Program. Also, the Commonwealth's economic
3 development efforts and visibility to site-selection professionals will be improved by
4 having a renewable energy offering like the Solar Share Program available as soon as
5 possible. In addition, as Mr. Huff notes in his testimony, the Companies currently
6 anticipate they will perform all necessary studies, meet all requisite conditions, and
7 obtain all necessary permits, permissions, and land rights necessary to begin construction
8 by early November 2016. Therefore, I respectfully ask the Commission to give this
9 application expedited consideration and to issue a final order approving the Solar Share
10 Program Standard Rate Rider by November 1, 2016, to allow the Companies to begin
11 offering subscriptions to their customers before the end of the year, and possibly to have
12 Solar Share Facility No. 1 under construction by the end of the year.

13 **Conclusion and Recommendation**

14 **Q. What is your recommendation to the Commission?**

15 A. It is clear that current and potential customers, including large businesses, are
16 increasingly interested in obtaining energy from renewable resources. The Solar Share
17 Program will meet that interest by providing the Companies' current and potential
18 customers with an option to receive credit for solar energy production from a Kentucky-
19 based solar resource. Therefore, I recommend that the Commission approve the Solar
20 Share Program Rider (Rider SSP) expeditiously to ensure customers receive the services
21 they desire and to encourage additional economic development in Kentucky.

22 **Q. Does this conclude your testimony?**

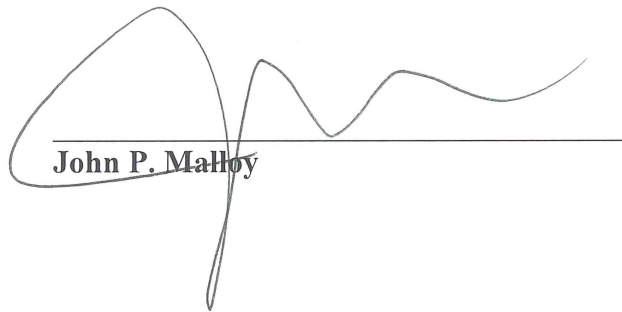
23 A. Yes.

24

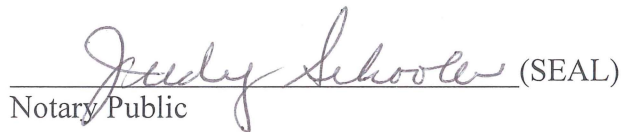
VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **John P. Malloy**, being duly sworn, deposes and says that he is Vice President, Customer Services for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the foregoing testimony, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.


John P. Malloy

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 2nd day of August 2016.

 (SEAL)
Notary Public

My Commission Expires:

JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

APPENDIX A

John P. Malloy

Vice President, Customer Services
Louisville Gas and Electric Company and Kentucky Utilities Company
220 West Main Street
Louisville, Kentucky 40202
Telephone: (502) 627-4836

Education

Indiana University, Master Business Administration – 2000

Indiana University, B.S. in Finance – 1998

Previous Positions

LG&E – KU Services Company

2013 – Current Vice President of Customer Services
2007 – 2013 Vice President of Energy Delivery – Retail Business
2003 – 2007 Director of Generation Services

Louisville Gas and Electric Company, Louisville, Kentucky

1998-2003 Maintenance Manager, Mill Creek
1996-1998 Manager Resource / Project Management, Louisville Gas and Electric - Fleet
1989-1996 Instrument and Electrical Supervisor, Mill Creek
1986-1989 Instrument and Electrical Technician, Mill Creek
1984- 1986 Production Operations, Mill Creek
1983- 1984 Coal Handling Operations, Cane Run
1980- 1983 Instrument and Electrical Technician, Cane Run

Other Professional Associations

Spalding University 2016 – current Board of Trustees

Louisville Orchestra 2016 – current President (elect) Board of Directors
2012 – 2016 Executive Committee – Board of Directors
2018 – 2012 Vice President of Development

LG&E Credit Union 2010 – current Chairman Emeritus
2001 - 2010 Chairman and CEO, Board of Directors
1998 - 2001 Treasurer, Board of Directors
1995 - 1998 Board of Directors

Leadership Kentucky Board of Directors

2016 – current Board of directors Executive Committee
2009 – 2016 Board of Directors

Catholic Education Foundation

2016 – current Board of Directors

Kentucky Association of Manufacturers

2016 – current Chairman – Board of Directors

2012 – 2016 Executive Committee – Board of Directors

2010 – 2012 Chairman of Energy / Natural Resources Policy Committee



BROWN-FORMAN

ALEX ALVAREZ
SENIOR VICE PRESIDENT
CHIEF PRODUCTION OFFICER

June 27, 2016

Mr. John Malloy
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

Dear Mr. Malloy,

Brown-Forman has long been committed to environmental sustainability which influences our reputation, enhances the strength of our brands, contributes to risk management, and creates significant opportunities for efficiency in our operations. As part of our commitment, we seek partnerships and opportunities to help us refine our goals and improve our environmental performance. We believe that our partnership with LG&E KU will be enhanced by the opportunity for customers, including Brown-Forman, to have their energy provided by local renewable resources.

Our stakeholders – from employees, to customers and investors – are increasingly interested in what we are doing to improve our environmental performance, including the sources of energy we use to make our brands. To adapt to a low carbon economy and regulatory changes, Brown-Forman has made a commitment to reduce our absolute GHG emissions by 15% from a 2012 baseline by 2023. In order to meet this commitment, Brown-Forman is focused on transitioning to lower-emission fuels and renewable sources of electricity. Directly subscribing to local renewable resources, including solar energy provides our Kentucky facilities the ability to meet their GHG targets and contribute to Brown-Forman's corporate target.

Preserving resources for future generations and addressing the reality of climate change is ingrained in our way of doing business, and we invite others to join us in investing in a renewable energy future. We encourage you to develop and make available renewable and solar energy options to support our ambitions.

Yours sincerely,

Alex Alvarez
SVP, Chief Production Officer

Rob Frederick
Director, Corporate Responsibility

Andy Battjes
Director, Environmental Health and Safety



June 20, 2016

Mr. John P. Malloy
Vice President Customer Services
LG&E, KU
220 W. Main St.
Louisville, KY 40202

Dear Mr. Malloy:

On behalf of the Board of Directors of Bluegrass Tomorrow, an 18-county, quality of life/economic development/partnership organization in central Kentucky, it is important to us that LG&E and KU provide opportunities for customers to have their energy provided by local renewable sources. Our organization, which also includes the “Bluegrass Forever Green” sustainability umbrella, is fully supportive of efforts to increase renewable energy options, and many of our members are looking for emerging renewable energy sources.

As we are actively working with many Bluegrass Communities to promote energy efficiency and renewable energy, we believe demand for renewable energy is increasing. Many local companies and organizations seek opportunities to directly subscribe to local renewable resources as they develop strategic plans to grow and prosper and create a more sustainable and resilient Bluegrass Region. More and more of our members are voting and putting their money into projects and programs that promote more diverse renewable energy programs.

An opportunity to directly subscribe to solar energy enhances Kentucky’s economic development and encourages others to invest in a renewable energy future. We appreciate, and fully endorse, LG&E and KU’s leadership and foresight with this new solar energy program.

Sincerely,

A handwritten signature in black ink that reads "Robert F. Rumpke". The signature is fluid and cursive, with a long horizontal stroke at the end.

Rob Rumpke
President CEO
Bluegrass Tomorrow Inc.



**Caveland
Environmental
Authority, Inc.**
www.ceawater.com

Exhibit JPM-1
Page 3 of 24
P.O. Box 426
508 S. Dixie Hwy
Cave City, KY 42127
(270) 773-2887 (p)
(270) 773-2287 (f)

Mr. John P. Malloy
Vice President Customer Services
220 West Main Street
Louisville, KY 40202

June 23, 2016

Subject: Community Solar Program

Dear Mr. Malloy:

It is important to me individually and to my company that LG&E and KU provide opportunities for customers to have their energy provided by local renewable sources. As you know, we are a competitive company, and our customers are increasingly interested in what source of energy is used to make our products or supply our services. Additionally, many of the individuals in my community are interested in renewable sources of energy. The opportunity to directly subscribe to local renewable resources is something my company and community would consider as an alternative to traditional forms of energy and would enable us to demonstrate our leadership in this endeavor.

Sincerely,

David J. Peterson: CEO



June 21, 2016

Mr. John P. Malloy
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

Dear Mr. Malloy,

It is important to us that LG&E and KU provide opportunities for customers to have their energy provided by local renewable sources. We compete in the international marketplace and businesses are increasingly interested in choosing to locate in areas that offer renewable energy options. Many existing customers in our area are also seeking renewable energy sources as part of their business model, with some even advertising that their products were manufactured in facilities powered by renewable energy.

Customers are voting with their dollars to buy products which are made from renewable resources. An opportunity to directly subscribe to local renewable resources is something many local companies require as they develop strategic plans to grow and prosper.

An opportunity to directly subscribe to solar energy enhances Kentucky's economic development offerings and hopefully encourages others to invest in a renewable energy future. We appreciate LG&E and KU's leadership and foresight.

Sincerely,

A handwritten signature in blue ink, appearing to read "Robert L. Quick".

Robert L. Quick, CCE
President & CEO



June 16, 2016

John P. Malloy
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

Re: Community Solar

Dear Mr. Malloy,

Commonwealth Commercial Real Estate supports the LG&E and KU's community solar project.

It is important to Kentucky's real estate market for LG&E and KU to provide programs and/or opportunities for customers to have their energy provided by local, renewable sources.

Today's businesses compete in the international marketplace and corporations are increasingly interested in alternative energy sources and this opportunity to directly subscribe to solar energy enhances Kentucky's economic development offerings and hopefully encourages others to invest in a renewable energy.

Regards,

A handwritten signature in dark ink that reads "David Davis". The signature is written in a cursive, slightly slanted style.

W. David Davis
President



June 20, 2016

John P. Malloy
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

Dear Mr. Malloy,

It is important to us that LG&E and KU provide opportunities for customers to have their energy provided by local renewable sources. We compete in the international marketplace and businesses are increasingly interested in choosing to locate in areas that offer renewable energy options. Many existing customers in our area are also seeking renewable energy sources as part of their business model, with some even advertising that their products were manufactured in facilities powered by renewable energy.

Customers are voting with their dollars to buy products which are made from renewable resources. An opportunity to directly subscribe to local renewable resources is something many local companies require as they develop strategic plans to grow and prosper.

An opportunity to directly subscribe to solar energy enhances Kentucky's economic development offerings and hopefully encourages others to invest in a renewable energy future. We appreciate LG&E and KU's leadership and foresight.

Sincerely,

A handwritten signature in blue ink, appearing to read "Darryl McGaha", is written over a faint, larger version of the signature.

Darryl McGaha,
Workforce Development Director



333 E. Main Street, Suite 510
Louisville, KY 40202
Tel +1 502 589 5150
Fax +1 502 589 9248
commercialkentucky.com

June 17, 2016

John P. Malloy
Vice President Customer Services
Louisville Gas & Electric
220 W. Main Street
Louisville, KY 40202

Dear Mr. Malloy,

It is important to Kentucky's real estate market for LG&E KU to provide opportunities for customers to have their energy provided by local renewable sources. Today's businesses compete in the international marketplace and corporations are increasingly interested in what source of energy is used to make products or supply the services. Customers are voting with their dollars to buy products that are made from renewable resources. An opportunity to directly subscribe to local renewable resources is something local companies require as they develop strategic plans to grow and prosper.

This opportunity to directly subscribe to solar energy enhances Kentucky's economic development offerings and hopefully encourages others to invest in a renewable energy future. Cushman and Wakefield supports the LG&E and KU's community solar project.

Sincerely,

A handwritten signature in black ink that reads "Phil Charmoli". The signature is written in a cursive, flowing style.

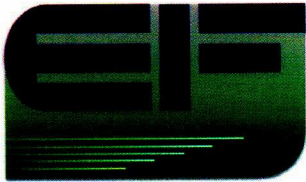
Phil Charmoli, SIOR, CCIM

233 Ring Road, Suite 150

Elizabethtown, KY 42701

P 270-737-0300 F 270-765-3986

www.eifky.org



ELIZABETHTOWN
HARDIN COUNTY
INDUSTRIAL FOUNDATION

July 5, 2016

Mr. John P. Malloy
Vice President Customer Services
LG&E and KU
220 West Main Street
Louisville, KY 40202

Subject: Community Solar Program

Dear Mr. Malloy:

It is important to me individually and to my organization that LG&E and KU provide opportunities for customers to meet their energy needs with local renewable sources. As an organization committed to economic development and job growth, Elizabethtown-Hardin County Industrial Foundation supports existing, expanding and relocating companies. Our clients are increasingly interested in the sources of energy available to manufacture their products, supply their services and help to maintain their companies' competitive advantage.

Additionally, there are members of my community interested in renewable sources of energy. My organization and community would consider the opportunity to directly subscribe to local renewable resources not only as an alternative to traditional forms of energy, but also as a means to demonstrate our leadership in this endeavor.

Sincerely,

Richard A. Games, President



Geothermal Supply Company, Inc.

106 Cherry Street - Horse Cave, KY 42749

Mr. John P. Malloy
Vice President Customer Services
220 West Main Street
Louisville, KY 40202

June 23, 2016

Subject: Community Solar Program

Dear Mr. Malloy:

It is important to me individually and to my company that LG&E and KU provide opportunities for customers to have their energy provided by local renewable sources. As you know, we are a competitive company, and our customers are increasingly interested in what source of energy is used to make our products or supply our services. Additionally, many of the individuals in my community are interested in renewable sources of energy. The opportunity to directly subscribe to local renewable resources is something my company and community would consider as an alternative to traditional forms of energy and would enable us to demonstrate our leadership in this endeavor.

Sincerely,

A handwritten signature in blue ink that reads "David J. Peterson". The signature is written in a cursive, flowing style.

David J. Peterson: President

Tel: 270-786-3010
Fax: 270-786-4136



June 17, 2016

John P. Malloy
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

Dear Mr. Malloy,

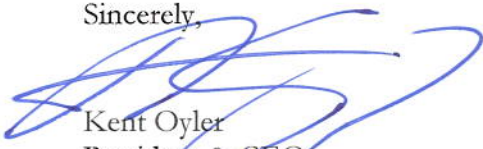
Today's businesses are more interested in utilizing clean, renewable energy than ever before. Power resource options are oftentimes a point of discussion during a company's consideration to expand in Greater Louisville. Oftentimes, clients' questions will focus on the source itself, the costs, and the reliability. Our business attraction strategies count on LG&E-KU to be resourceful and visionary in service delivery.

Supporting options around solar energy and renewable resources helps to show that our region is on the cutting edge of new technology and that we can deliver a variety of options to the customer. It also demonstrates that Kentucky cares about the environment and we are serious about making a difference.

This opportunity to directly subscribe to solar energy enhances Kentucky's overall economic development offerings. Hopefully it will also encourage others to invest in a renewable energy future.

GLI supports the LG&E and KU's community solar project.

Sincerely,



Kent Oyler
President & CEO
Greater Louisville Inc.



Mr. John P. Malloy
Vice President, Customer Services
LG&E and KU Energy LLC
220 West Main Street
Louisville, KY 40202

Dear Mr. Malloy:

Renewable energy sources are important to Kentucky. It is important for LG&E KU to provide opportunities for customers to have their energy provided by local renewable sources. Customers are voting with their dollars to buy products which are made from renewable resources.

This opportunity to directly subscribe to solar energy enhances Kentuckians clean, reliable energy source and hopefully encourages others to invest in a renewable energy future. The Housing Partnership is proud to support the LG&E and KU's community solar project.

Sincerely,

Mike Hynes
President

MH/lch



101 Burch Court
Frankfort, KY 40601
phone: 502-227-9653
fax: 502-227-2611
www.kaedonline.org

June 14, 2016

Mr. John P. Malloy
LG&E and KU
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

Dear John,

It is important to the Kentucky Association for Economic Development (KAED) that LG&E and KU provide opportunities for customers to have their energy provided by local renewable sources. KAED's membership competes in the international marketplace and businesses are increasingly interested in what source of energy is used to make products or supply services. Customers are voting with their dollars to buy products which are made from renewable resources. An opportunity to directly subscribe to local renewable resources is something local companies require as they develop strategic plans to grow and prosper.

This opportunity to directly subscribe to solar energy enhances Kentucky's economic development offerings and hopefully encourages others to invest in a renewable energy future. KAED appreciates LG&E and KU leadership and foresight. Thanks for your support to our economic development efforts in Kentucky.

Please contact me if I can be of any service.

Sincerely,

Hal B. Goode
President/CEO



CABINET FOR ECONOMIC DEVELOPMENT

Matthew G. Bevin
Governor

Old Capitol Annex
300 West Broadway
Frankfort, Kentucky 40601
ThinkKentucky.com

Erik Dunnigan
Acting Secretary

June 20, 2016

Mr. John P. Malloy
Vice President Customer Services
LG&E-KU Energy LLC
220 W Main Street
Louisville, Kentucky 40202

RE: Community Solar Letter of Support

Dear Mr. Malloy:

The Kentucky Cabinet for Economic Development recognizes the need to increase availability of locally sourced, renewable electric from providers.

Since our companies compete internationally, Kentucky manufacturers and service providers have a global perspective and want sustainable energy sources that correlate with the global economy. This helps companies promote themselves and their products based on sustainability, but also provides a way to support the environment.

An opportunity to directly subscribe to local renewable electric is something current Kentucky companies and prospects desire as they develop strategic plans to grow and prosper. The Community Solar project represents an opportunity to enhance Kentucky's economic development offerings and encourages others to invest in a renewable energy future. We applaud you in this effort and offer our support as you move forward.

Sincerely,

A handwritten signature in blue ink, appearing to read "Erik Dunnigan".

Erik Dunnigan
Acting Secretary



Dave Adkisson
President & CEO

June 20, 2016

Mr. John P. Malloy
Vice President Customer Services
LG&E and KU Energy LLC
220 W Main Street
Louisville, KY 40202

Dear Mr. Malloy:

The Kentucky Chamber of Commerce supports LG&E and KU in developing a community solar project. Such a project can allow Kentucky companies to voluntarily purchase locally produced renewable energy within the LG&E and KU service territory.

The Kentucky Chamber recognizes that there is an interest by some companies to use renewable energy. Certain facilities in Kentucky are working to achieve corporate sustainability goals or have identified an advantage to producing products with renewable energy. It is important to enable these facilities to achieve their goals while also protecting businesses that are dependent on Kentucky's low cost energy. The community solar project achieves a balance between supplying demand for renewable energy and protecting Kentucky's low cost energy advantage.

The Kentucky Chamber supports cost-effective strategies that encourage development of energy resources to foster energy independence and economic growth. We continue to recognize the vital importance that fossil energy resources including coal and natural gas have in Kentucky but also value the development of alternative energy resources to meet the demands of Kentucky business.

Sincerely,



Dave Adkisson
Kentucky Chamber of Commerce



June 16, 2016

John P. Malloy
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

Dear Mr. Malloy,

It is important to the Kentucky Network for Leadership, Development and Engagement (KYNDLE) that LG&E KU provide opportunities for customers to have their energy provided by local renewable sources. KYNDLE's membership competes in the international marketplace and businesses are increasingly interested in what source of energy is used to make products or supply services. Customers are voting with their dollars to buy products which are made from renewable resources. An opportunity to directly subscribe to local renewable resources is something local companies require as they develop strategic plans to grow and prosper.

An opportunity to directly subscribe to solar energy enhances Kentucky's economic development offerings and hopefully encourages others to invest in a renewable energy future. KYNDLE appreciates LG&E and KU leadership and foresight.

Sincerely,

Donna M Crooks, CEcD
Interim President and
Vice President of Economic Development



Lexington-Fayette Urban County Government
OFFICE OF THE MAYOR

Jim Gray
Mayor

June 28, 2016

John P. Malloy
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

Dear Mr. Malloy,

I support the LG&E /KU plan to build and operate a community solar project, and I urge the members of the Kentucky Public Service Commission to approve the plan.

It is essential that we explore renewable energy sources, and I applaud LG&E and KU for taking this step.

Lexington citizens place a premium on quality of life, and that includes environmental protection. The high quality of life we enjoy in Lexington is a foundation of our economy. Our quality of life attracts good jobs to our city. A community solar project would improve our ability to bring in and grow these jobs.

Sincerely,

A handwritten signature in black ink that reads "Jim Gray". The signature is fluid and cursive, with a large loop at the end of the last name.

Jim Gray
Mayor

FOLLOW MAYOR GRAY:

www.facebook.com/JimGrayLexKY www.twitter.com/JimGrayLexKY

LOUISVILLE

REGIONAL

June 20, 2016

AIRPORT

AUTHORITY*

Mr. John P. Malloy
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

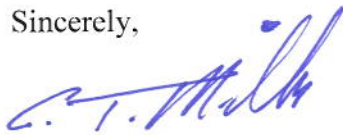


Dear Mr. Malloy:

Renewable energy sources are important to Kentucky and the growth of businesses. When businesses grow, the Louisville International Airport grows. It is important for I.G&E KU to provide opportunities for customers to have their energy provided by local renewable sources. Communities compete in the international marketplace and businesses are increasingly interested in the source of energy used to make products or supply services.

This opportunity to directly subscribe to solar energy enhances Kentucky's economic development offerings and hopefully encourages others to invest in a renewable future. We believe the solar energy project will help accomplish the goal of energy diversification.

Sincerely,



C. T. "Skip" Miller, A. A. E.
Executive Director

P.O. Box 9129

LOUISVILLE, KY

40209-0129

TEL 502/368-6524

FAX ADMINISTRATIVE
502/367-0199

FAX ENGINEERING
502/368-5895

FAX MAINTENANCE/
PURCHASING AND
PROCUREMENT
502/380-8270

LOUISVILLE
INTERNATIONAL
AIRPORT

BOWMAN FIELD

Bill Dieruf
Mayor



Where Community and Commerce Meet

John P. Malloy

Vice President Customer Services

220 W Main Street

Louisville, KY 40202

RE: Community Solar Letter of Support

Dear Mr. Malloy,

It is important to Jeffersontown's economic development for LG&E KU to provide opportunities for customers to have their energy provided by local renewable sources. Communities compete in the international marketplace and businesses are increasingly interested in what source of energy is used to make products or supply services. Customers are voting with their dollars to buy products which are made from renewable resources. An opportunity to directly subscribe to local renewable resources is something local companies require as they develop strategic plans to grow and prosper.

This opportunity to directly subscribe to solar energy enhances Kentucky's economic development offerings and hopefully encourages others to invest in a renewable energy future. Jeffersontown supports and agrees with the LG&E and KU's community solar project.

Sincerely,

A handwritten signature in blue ink that reads "Bill Dieruf". The signature is written in a cursive style.

Bill Dieruf, Mayor of the City of Jeffersontown



MIDWEST CLEAN ENERGY ENTERPRISE

PO Box 1, FRANKFORT KY 40602

WWW.MCEENTERPRISE.COM

June 21, 2016

John P. Malloy
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

Dear Mr. Malloy,

We are pleased to hear that LG&E and KU will be provided opportunities for customers to have their energy provided by local renewable sources. Our organization is fully supportive of efforts to increase renewable energy options. Many customers in our area are seeking renewable energy sources. In addition, we are actively working with communities to promote energy efficiency and renewable energy. We believe demand for renewable energy is increasing.

Customers are voting with their dollars to buy products which are made from renewable resources. An opportunity to directly subscribe to local renewable resources is something many local companies require as they develop strategic plans to grow and prosper.

An opportunity to directly subscribe to solar energy enhances Kentucky's economic development offerings and hopefully encourages others to invest in a renewable energy future. We appreciate LG&E and KU's leadership and foresight.

Sincerely,

A handwritten signature in black ink that reads "Robert G. Clark". The signature is written in a cursive, flowing style.

Robert G. Clark, Co-founder &
Director of Business Development



P: 270.338.4102 | 50 Career Way, Central City, KY 42330 | Mailing: P.O. Box 636, Greenville, KY 42345

Mr. John P. Malloy
Vice President Customer Services
220 West Main Street
Louisville, Kentucky 40202

June 23, 2016

Subject: Community Solar Program

Dear Mr. Malloy:

It is important to me individually and to the companies located in our area of Kentucky that Louisville Gas and Electric and Kentucky Utilities provide opportunities for customers to have their energy provided by local renewable sources. We, the Muhlenberg Alliance for Progress, are in the business of industrial recruitment and expanding existing businesses in our area. We are very interested in the sources of energy that is used to make our companies' products and supply their services.

We have individuals and companies in our communities that have inquired about renewable sources of energy. I know of one contractor, running a Job Corps facility in our area, that has been experimenting with solar and wind turbines for many years. I believe the opportunity to directly subscribe to local renewable resources is something our companies and residents would consider as an alternative to traditional forms of energy. This would enable us to demonstrate our leadership in this endeavor as the United States moves forward in developing cleaner and more energy efficient ways to produce electricity.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gary W. Jones', is written over a white background.

Gary W. Jones
Director of Business Expansion
Muhlenberg Alliance for Progress
Muhlenberg County, Kentucky



Mr. John P. Malloy
Vice President Customer Services
220 West Main Street
Louisville, KY 40202

June 23, 2016

Subject: Community Solar Program

Dear Mr. Malloy:

It is important to me individually and to my company that LG&E and KU provide opportunities for customers to have their energy provided by local renewable sources. As you know, we are a competitive company, and our customers are increasingly interested in what source of energy is used to make our products or supply our services. Additionally, many of the individuals in my community are interested in renewable sources of energy. The opportunity to directly subscribe to local renewable resources is something my company and community would consider as an alternative to traditional forms of energy and would enable us to demonstrate our leadership in this endeavor.

Sincerely,



Kevin J. Brever Jr.
Principal
St. Paul School
Louisville, Ky.

Stephen C. Gault Co.

Business Properties

June 15, 2016

John P. Malloy
Vice President Customer Services
LG&E KU
220 W. Main Street
Louisville KY 40202

Dear Mr. Malloy:

Renewable energy sources are important to Kentucky and the growth of businesses. It is important for LG&E KU to provide opportunities for its customers to have their energy needs met by local renewable sources. Kentucky's commercial businesses and manufacturers compete in the international marketplace, and businesses are increasingly interested in what sources of energy are used to make products or supply services. Customers are voting with their dollars to buy products which are made from renewable resources. An opportunity to directly subscribe to local renewable resources is something local companies require as they develop strategic plans to grow and prosper.

This opportunity to directly subscribe to solar energy enhances Kentucky's ability to compete, and hopefully encourages others to invest in a renewable energy future. The Stephen C. Gault Co. fully supports the LG&E KU's community project.

Sincerely,

Stephen C. Gault Co.

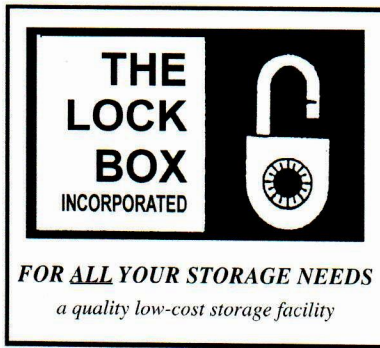
By: 
Stephen C. Gault, President



Member, Society of Industrial
and Office Realtors

Gardiner Point Office Building
4011 Gardiner Point Drive / Suite 200
Louisville, Kentucky 40213-1988

502/451-1122
FAX 451-0722
Home Page: www.scgault.com



387 Whirlaway • Danville, KY 40422 • 859-236-2611

You Store It - You Lock It - You Keep The Key
June 23, 2016

Mr. John P. Malloy
VP, Customer Services
LG&E/KU
220 West Main Street
Louisville, KY 40202

Re: Community Solar Program

Dear Mr. Malloy:

As someone who is interested in local renewable energy not only for me, but for my company, I am excited to hear about your Community Solar Program. Being able to take advantage of renewable energy resources is something we would definitely be interested in as an alternative to current forms of energy.

Please keep us informed as you go forward with this program.

Thank you.

Sincerely,

Adria Mahon
Vice President

Located Across From Boyle County Fairgrounds



June 14, 2016


John P. Malloy
Vice President Customer Services
220 W Main Street
Louisville, KY 40202

Dear Mr. Malloy,

Renewable energy sources are important to Kentucky and the growth of businesses. When businesses grow, Kentucky's foreign direct investment grows. It is important for LG&E KU to provide opportunities for customers to have their energy provided by local renewable sources. Communities compete in the international marketplace and businesses are increasingly interested in what source of energy is used to make products or supply services. Customers are voting with their dollars to buy products, which are made from renewable resources. An opportunity to directly subscribe to local renewable resources is something local companies require as they develop strategic plans to grow and prosper.

This opportunity to directly subscribe to solar energy enhances Kentucky's economic development offerings and hopefully encourages others to invest in a renewable energy future. I support the LG&E and KU's community solar project.

Sincerely,



J. Edwin Webb
President
World Trade Center Kentucky

Mr. John P. Malloy
Vice President Customer Services
220 West Main Street
Louisville, KY 40202

June 23, 2016

Subject: Community Solar Program

Dear Mr. Malloy:

It is important to me individually and to my company that LG&E and KU provide opportunities for customers to have their energy provided by local renewable sources. As you know, we are a competitive company, and our customers are increasingly interested in what source of energy is used to make our products or supply our services. Additionally, many of the individuals in my community are interested in renewable sources of energy. The opportunity to directly subscribe to local renewable resources is something my company and community would consider as an alternative to traditional forms of energy and would enable us to demonstrate our leadership in this endeavor.

Sincerely,

Connie Lawson
859 461-0285

June 23, 2016

Mr. John P. Malloy
Vice President Customer Services
220 West Main Street
Louisville, KY 40202

RE: Community Solar Program

Mr. Malloy:

I just learned that LG&E/KU is planning the construction and operation of a new solar farm available for customer participation through a new solar-field program. This is fantastic news! It is very important to provide opportunities for customers to have their energy provided by local renewable sources. I just wish all electric companies provided this option.

More and more folks are becoming interested in renewable sources of energy but we still have a long road ahead. Unfortunately there are many countries leading this effort and leaving the US in the dust. With the investment LG&E/KU is willing to make, you can help educate your customers on the available benefits.

I think the initial cost has been a major factor but I read somewhere that the cost of converting a home to solar is under \$30,000. That is still a lot of money but the cost is about a third per watt of power that it was 10 years ago. And that doesn't take into count available tax credits which can be as much as 30% on the federal level in addition to rebates available from some states.

The opportunity to directly subscribe to local renewable resources is a great alternative to traditional forms of energy – it is clean energy that is virtually endless. The opportunity would also allow your customers to demonstrate leadership in this endeavor. Congratulations on taking the initiative to blaze the trail for more power companies to follow.

Sincerely,

Tonita Goodwin

A KU Customer in Richmond, KY

RE 100

Companies

65 RE100 companies have made a commitment to go '100% renewable'. Read about the actions they are taking and why.



IKEA believes in taking care of people and the planet, and have integrated sustainability into everyday operations as part of their People and Planet Positive strategy.

[LEARN MORE](#)



The Swiss Re Group is a leading wholesale provider of reinsurance, insurance and other insurance-based forms of risk transfer. Its global client base consists of insurance companies, mid-to-large-sized corporations and public sector clients. Recognising the business risks associated with climate change, Swiss Re is motivated to drive a low carbon economy and has a goal to use 100% renewable electricity by 2020. Alongside IKEA Group, Swiss Re Group is a founding partner of the RE100 campaign.

[LEARN MORE](#)



Adobe is a multinational software company based in the US. The company is committed to powering its operations and the digital delivery of its products entirely with renewable electricity by 2035 as one of five ambitious goals that will contribute to a low-carbon, sustainable future.

[LEARN MORE](#)



alstria is one of the largest real estate companies in Germany. Having moved towards 100% fossil-free electricity in 2013, the company has a RE100 goal to roll out 100% renewable electricity across its entire portfolio by 2016.

[LEARN MORE](#)



AstraZeneca is a global, science-led biopharmaceutical business that focuses on the discovery, development and commercialisation of prescription medicines. The company is committed to doing its 'fair share' to protect the planet and to keeping employees safe and healthy. AstraZeneca has a goal to source 100% renewable electricity globally by 2025, with an interim target of 100% in Europe and the US by 2020.



Autodesk is an American multinational software corporation with a RE100 goal to source 100% of its power from renewable sources by 2020.

[LEARN MORE](#)



Aviva is a British multinational insurance company providing savings, retirement, insurance, health and asset management products and services. The business is working to increase the amount of renewable electricity it purchases for its operations globally, and has a RE100 goal to procure 100% of its electricity from renewable sources by 2025.

[LEARN MORE](#)



Biogen is an international biotechnology company based in the United States, developing and delivering innovative therapies for those living with serious neurological, autoimmune and rare diseases. The company has been working for years to drive operational efficiencies and currently buys renewable energy certificates equal to all of its electricity across its value chain. It is now also working to engage its supply chain and source renewable power more directly.

[LEARN MORE](#)

Bloomberg

Bloomberg LP, through its unique technology, delivers business and financial information, news and insight around the world. Based in the US, the company is committed to renewable energy and sustainable business practices, and has set a goal to become 100% renewable by 2025.

[LEARN MORE](#)

BMW GROUP

BMW Group is a German automobile, motorcycle and engine manufacturer with a global market. Aspiring to be the most sustainable company in the automotive industry, the business is intensifying its efforts to produce more electricity in-house and source locally generated renewable energy. BMW is committed to procuring 100% of electricity from renewable sources for its operations and has an interim target to source more than two thirds of its electricity from renewables by 2020.



BROAD Group is a Chinese developer of air conditioning units, combined cooling-heating-power projects, fresh air systems, and factory-made sustainable buildings, with products in more than 80 countries. The company has a RE100 commitment to source 100% of all its operations by 2025.



BT's purpose is to use the power of communications to make a better world. As one of the world's leading communications services companies, BT serves the needs of customers in the UK and in more than 170 countries worldwide. BT has put sustainability at the heart of its business, and its 2020 goals include ambitions to procure 100% renewable electricity globally.

[LEARN MORE](#)



Coca-Cola Enterprises manufactures, markets and distributes Coca-Cola products in Western Europe. The company has committed to power all of its operations with 100% renewable electricity by 2020.

[LEARN MORE](#)



Commerzbank see climate change as a global challenge and recognize that decisive action from the finance sector is required to address it. They have designed a climate changes strategy that aligns existing activities with their vision for a low carbon future.

[LEARN MORE](#)



CRÉDIT AGRICOLE

Crédit Agricole Group is one of the largest banking groups in Europe, and the biggest contributor of loans and advances to the French economy. It supports its 52 million customers' projects in France and around the world through its universal customer-focused retail banking model, based on cooperation between its retail banks and their related business lines. Crédit Agricole Group has set a goal to use 100% renewable electricity in its global operations by the end of 2016.

dentsu AEGIS
network

Dentsu Aegis Network is committed to sourcing 100% renewable electricity by 2020. The U.K.-based company recognises that de-coupling carbon from growth will allow it to become resilient to resource scarcity and price fluctuations.

[LEARN MORE](#)



Royal DSM is a global science-based company delivering innovative solutions across health, nutrition and materials. The business has an interim RE100 target to source 50% of its total electricity needs from renewables by 2025, increasing to 100% at the earliest subsequent opportunity.

[LEARN MORE](#)



Elion is one of China's top 100 private enterprises that puts managing natural sources at the heart of its business model.

[LEARN MORE](#)



Elopak is an international supplier of paper based packaging solutions for liquid food, and is the first packaging and first Norwegian company to join RE100. It has a target to use 100% renewable electricity by 2016.

[LEARN MORE](#)



Equinix is a global interconnection and data centre provider, committed to using 100% power across its global operations. The company has set an interim goal of sourcing 50% renewable electricity (against a 2015 baseline) by 2017.



FIA Formula E is the first electric single-seater championship, showcasing that electric vehicles can be fast, fun and safe. Its cars run on 100% renewable power. The success of the championship is helping to change the image of electric vehicles and demonstrate that they are the vehicles of the future.

[LEARN MORE](#)



Based in Switzerland, Givaudan is the global leader in the creation of fragrances and flavours, and the first company of its kind to join RE100. Givaudan already has a vision on how to make a positive difference in the way it sources, innovates, produces and partners. Now, it is exploring ways to source more of its electricity from renewable sources of energy.

[LEARN MORE](#)



The Goldman Sachs Group, Inc. is a leading global investment banking, securities and investment management firm that provides a wide range of financial services to corporations, financial institutions, governments and high-net-worth individuals. The company recognizes the key role it can play in addressing climate change by deploying capital to low-carbon solutions including renewable energy. It has set a RE100 target of being 100% renewable by 2020.

[LEARN MORE](#)



Google is a global technology leader focused on improving the ways people connect with information. Google's innovations in web search and advertising have made its website a top Internet property and its brand one of the most recognized in the world. Google is committed to sourcing 100% renewable electricity and has an interim target to triple its renewable energy purchasing by 2025.



H&M, the popular Swedish fashion retailer, has a commitment to reach 100% renewable wherever possible, with an interim target to achieve 80% in 2015.

[LEARN MORE](#)



HP Inc., a global leader in printing and personal systems, has made a RE100 commitment to use 100% renewable energy to power its electricity. The company has set an interim goal of sourcing 40% renewable electricity by 2020.

[LEARN MORE](#)



Headquartered in the US, International Flavors & Fragrances Inc. is a leading innovator of products that consumers taste, smell, or feel in fine fragrances and beauty, detergents and household goods, foods and beverages. The company is committed to procure 100% of its electricity from renewable sources in the shortest practical timescale possible and as financially feasible.



Infosys is an Indian multinational corporation that provides business consulting, information technology, software engineering and outsourcing services. It has set a RE100 goal to go 100% by 2018.

[LEARN MORE](#)



Based in the Netherlands, ING is a global financial institution meeting the needs of a broad customer base comprising individuals, families, small businesses, large corporations, institutions and governments. ING is currently among leaders in the Dow Jones Sustainability Index 'Banks industry' group and is committed to powering all of its operations 100% with renewable electricity by 2020.

Interface®

Interface, Inc. is a leading manufacturer of carpet tile and has committed to operating its factories on 100% renewable electricity by 2020. Based in the U.S., the company is already sourcing 84% renewable energy across its global operations – including both electricity and thermal energy.



Johnson & Johnson is the world's largest and most broadly-based health care company, and its mission is to help people live longer, healthier and happier lives. Recognising the intrinsic link between a healthy environment and human health, the company wants to play its part in addressing climate change and has set a RE100 target to power all of its facilities with renewable energy by 2050.

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Irish building materials company Kingspan aims to run its 80+ global manufacturing facilities on 100% renewable power on an aggregated basis over its estate by 2020. Having already achieved net zero energy at its head office in Ireland in 2012 through the use of solar panels, it is on target to achieve 50% renewable energy across the Group in 2016.

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KPN is a Dutch landline and mobile telecommunications company that believes switching to renewable energy consumption is one key way to address climate change. All of KPN's electricity

has come from renewable sources of energy since 2013.

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La Poste is the leading mail service operating in France, and is also involved in more than 40 countries. The company has the biggest fleet of electric vehicles in the world, and aims to power this and all other operations with 100% renewable energy by 2020.

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Land Securities is the largest commercial property development and investment company in the UK. The business is committed to purchasing 100% of its electricity from renewable sources as part of its ambition to be a sustainability leader, recognising the need to transition to a low carbon economy.



Marks and Spencer is a major British multinational retailer and an advocate of effective, proportionate and fair regulation on climate change issues. M&S is committed to sourcing 100% renewable electricity across its global operations and is already '100% renewable' in the U.K. and R.O.I..

[LEARN MORE](#)

MARS

Mars has made a commitment to conduct business in a way that is good for the company, good for people and good for the planet.

[LEARN MORE](#)



Microsoft, based in the U.S., is the leading platform and productivity company for the mobile-first, cloud-first world, and its mission is to empower every person and organization on the planet to achieve more. The company has been 100 percent powered by renewable energy since 2014.

[LEARN MORE](#)



Nestlé are committed to climate change leadership and have set targets to reduce direct greenhouse gas emissions per tonne of product by 35% since 2005, by 2015. Increasing renewable energy will be used to support this goal.

[LEARN MORE](#)



NIKE, Inc. is the world's leading designer, marketer and distributor of authentic athletic footwear, apparel, equipment and accessories for a wide variety of sports and fitness activities. NIKE, Inc. is committed to reaching 100% renewable energy.

[LEARN MORE](#)



Nordea is the largest financial services group in the Nordic and Baltic region, with a leading position in corporate and institutional banking as well as in retail banking and private banking. It is also the leading provider of life and pensions products in the Nordic countries. The company has a goal to become 100% powered by renewable electricity across all its operations and is working to set a pathway to achieve this.



Novo Nordisk is a global healthcare company with more than 90 years of innovation and leadership in diabetes care, and experience and capabilities to help people defeat other serious chronic conditions: haemophilia, growth disorders and obesity. Headquartered in Denmark, Novo Nordisk has set a RE100 target to source 100% renewable power at all production sites by 2020.

[LEARN MORE](#)

PEARSON

Pearson, the world's largest education company, provides a range of education products and services that help people everywhere aim higher and fulfil their true potential. The company has been 'climate neutral' since 2009, an approach it has renewed and refreshed every subsequent year. As part of that commitment it has a policy to only purchase the electricity it uses in its buildings from renewable sources, something it first achieved in 2012 and has maintained ever since - making it 100% renewable.

[LEARN MORE](#)

PHILIPS

Royal Philips is a diversified health and well-being company, operating in the areas of Healthcare, Consumer Lifestyle and Lighting. The company's philosophy is that "prevention is better than cure", and it sees renewable energy as an important step in curbing emissions and tackling climate change. Philips has made a commitment to powering 100% of its operations with renewable

electricity by 2020.

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P&G serves consumers around the world with one of the strongest portfolios of trusted, quality, leadership brands. The P&G community includes operations in approximately 70 countries worldwide. Based in the US, the company has a short-term goal to source 30% of its energy from renewable by 2020 with a long-term goal to power its plants with 100% renewable energy.

[LEARN MORE](#)



Belgian telecommunications company Proximus has already met its RE100 goal of sourcing 100% of its electricity from renewable energy – a decision that was taken to support its carbon emission reduction strategy. The switch to renewables is helping the company to work to substantially reduce its carbon emissions.



RELX Group is a publishing and information company, operating in the science, medical, legal, risk, marketing, financial, and business sectors. The company has set a RE100 goal to source 100% renewable energy by 2020, with an interim target of 50% by 2015.

[LEARN MORE](#)



Salesforce is a CRM software solutions and enterprise cloud computing company that believes the cloud should be powered by clean sources of energy. Salesforce is committed to increasing the percentage of renewable energy powering its global operations and reaching its goal of sourcing 100% of renewable electricity.

[LEARN MORE](#)



SAP is a multinational enterprise software corporation based in Germany that strives to 'help the world run better and improve people's lives through use of their services. The company has already reached its RE100 goal of powering all facilities and data centers by 100% renewable electricity in 2014.

[LEARN MORE](#)



Sarasin is committed to acting in a sustainable way in all areas of their business. This requires embedding sustainable thinking into the corporate culture. Increasing consumption of renewable energy is part of delivering their high level goals on the ground.

[LEARN MORE](#)



SGS is a multinational inspection, testing, verification and certification company that believes they must manage business growth in tandem with environmental, social and economic impacts on society. The company has set a RE100 goal to be 100% powered by renewable energy by 2020.

[LEARN MORE](#)



Sky plc is Europe's leading entertainment company, serving 21 million customers across Italy, Germany, Austria, the UK and Ireland. Sky offers a broad range of content and innovative new technology designed to give customers a better TV experience. Sky already sources most of its electricity from renewable energy, and aims to go '100% renewable' by 2020.

[LEARN MORE](#)



Starbucks is a global coffee company committed to ethically sourcing and roasting the highest quality Arabica coffee. As part of RE100, Starbucks is exploring ways to further increase its use of renewable electricity as part of its global energy mix.

Steelcase

Steelcase is a US based manufacturer and a global leader in its industry. It has a portfolio spanning architecture, furniture and technology products and services. For Steelcase investing in renewable energy means taking steps to recognize its own environmental impacts while helping grow an industry that will ultimately lead to a cleaner energy future. In 2014, the company expanded its renewable energy investments equivalent to 100% of its global electricity consumption.



Swiss Post operates in the communication, logistics, retail financial and passenger transport markets. Sustainability is a core value and a fixed component of the company's vision and strategy. Swiss Post is opting for technologies based on renewable energies and since 2008, it has obtained 100% of its electricity from renewable sources. Since 2013, Swiss Post covers 100% of its electricity requirements with "naturemade basic" certified renewable energy from Switzerland.

TATA MOTORS

Tata Motors Limited is India's largest automobile manufacturer, producing a range of commercial and passenger vehicles as well as defence and homeland security vehicles. The company has set itself the goal of using 100% renewable energy across all its own operations.

[LEARN MORE](#)



TD Bank Group, the first Canadian company to join RE100, has sourced renewable electricity equivalent to 100% of its global operations since 2015. The company is committed to leading on the environment and to being carbon neutral.

[LEARN MORE](#)



Tetra Pak is a Swedish food processing and packaging company committed to powering its operations with 100% renewable electricity by 2030, with an interim goal to reach 80% by 2020.

[LEARN MORE](#)



Switzerland-based UBS is a leading global financial services provider with a long track record of addressing environmental and energy challenges, determined to support its clients in preparing for success in an increasingly carbon-constricted world. The company's RE100 goal is to be 100% powered by renewable energy by 2020, which will reduce its greenhouse gas footprint by 75% by compared with 2004 levels.

[LEARN MORE](#)



Unilever is a British-Dutch multinational consumer goods company that believes sustainability and emission reduction must be achieved in tandem with its brand growth. Already 100% renewable in Europe and the US the company has set an interim target to source 100% of its electricity purchased from the grid from renewables by 2020, with a view to sourcing 100% of its energy from renewables by 2030.

[LEARN MORE](#)



Finnish company Vaisala is a global leader in environmental and industrial measurement, providing a comprehensive range of innovative observation and measurement products and services for chosen weather-related and industrial markets. Vaisala has a RE100 goal to become 100% powered by renewable electricity by 2020.



Voya Financial helps Americans plan, invest and protect their savings — to get ready to retire better. The company is committed to conducting business in a way that is environmentally and economically responsible, and as part of these efforts, Voya has purchased clean, emission-free wind energy credits equal to 100% of its electricity usage since 2007.



Wal-Mart Stores, Inc. (NYSE: WMT) is a global retailer operating 11,532 stores under 72 banners in 28 countries and e-commerce websites in 11 countries. Walmart continues to be a leader in sustainability, corporate philanthropy and employment opportunity. As part of RE100, Wal-Mart is committed to sourcing 100% of its electricity from renewable energy. The company aims to produce or procure 7,000 GWh of renewable energy globally by the end of 2020.



Workday, Inc. is a global provider of enterprise cloud applications. The company has purchased an amount of renewable electricity that is equivalent to 100% of its global consumption since 2008, and is now planning to supplement with on-site and off-site generation.

YOOX GROUP

YOOX Group S.p.A is an Italian internet mail order retailer of multibrand clothing and accessories. The group has set a RE100 goal to obtain 100% of its power from renewable sources by 2020.

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PPL companies

2016 Solar Study

Marketing Performance
June 13, 2016



Survey Methodology

- LG&E/KU Proprietary Customer Panel
 - *766 LG&E Customers*
 - *778 KU Customers*
- Online Survey
 - *Conducted May 24 - June 8, 2016*
 - *Approximately 3.5 minutes*
- 67% Response Rate
 - *1,035 completed surveys*
 - *32 incomplete surveys*



PPL companies

Current Solar Panel Market

Participation and Familiarity



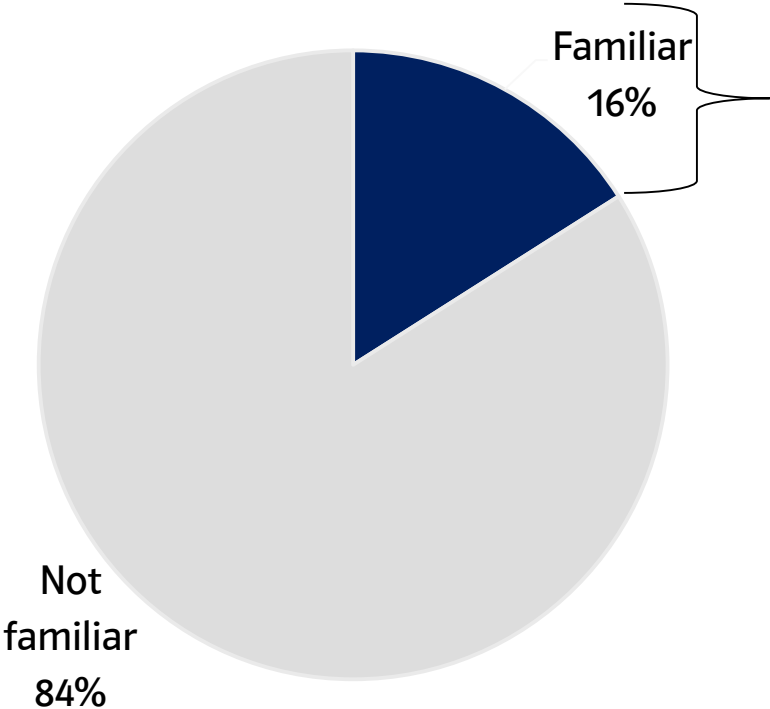
Survey Participants with Solar Panels

- Nine survey participants currently have solar panels on their home. Of those, six stated they are participating in the LG&E/KU Net Metering Program.
- Seven have had their panels for 5 years or less.
- Reasons for installing solar panels are:
 - *Lower energy bill (n=5)*
 - *Environmental impact (n=3)*
 - *Other: Emergency back-up with small battery (n=1)*

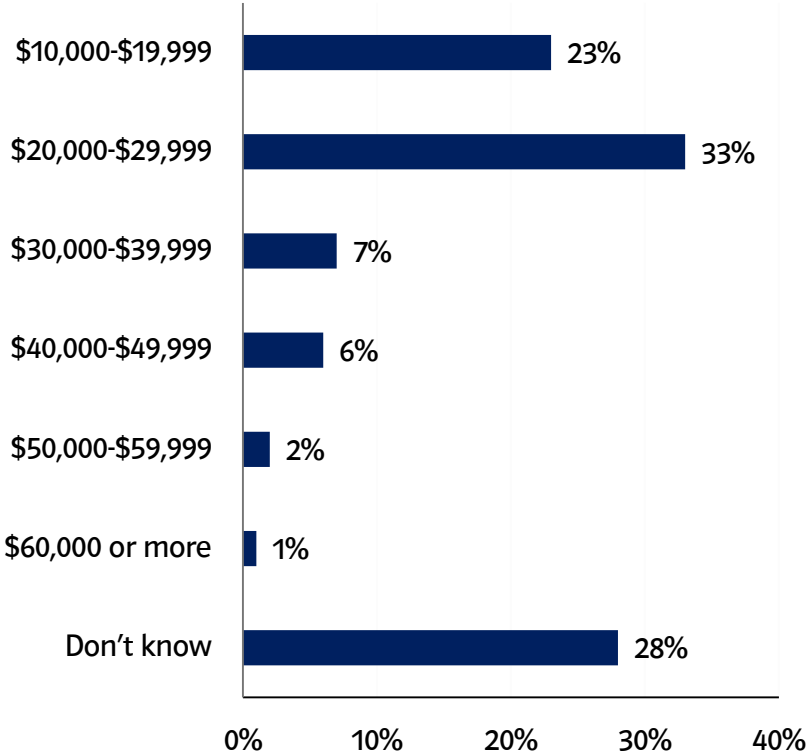
Familiarity with Solar Power Options

16% of customers were very/somewhat familiar with solar power options in their area. Among this group (n=165), 33% believe the cost to install solar for a typical residential home is \$20,000-\$29,999.

Familiarity with Solar Options



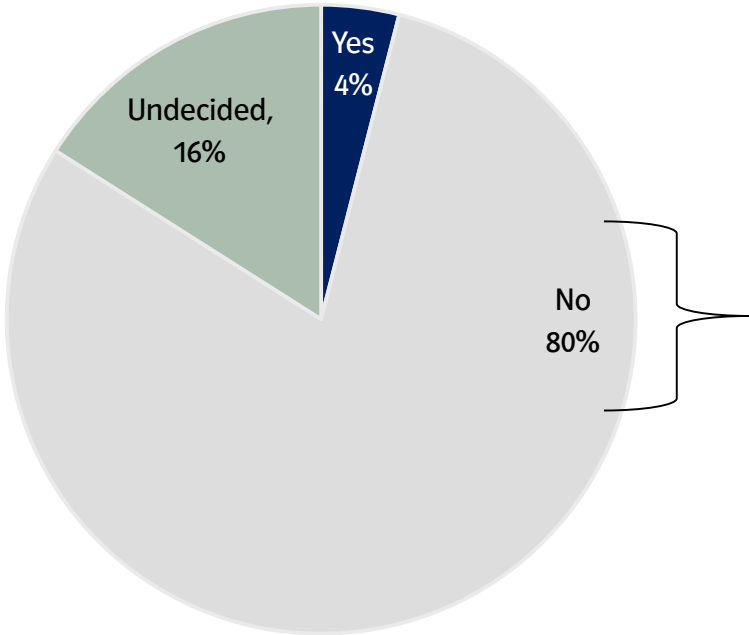
Perceived Cost of Solar



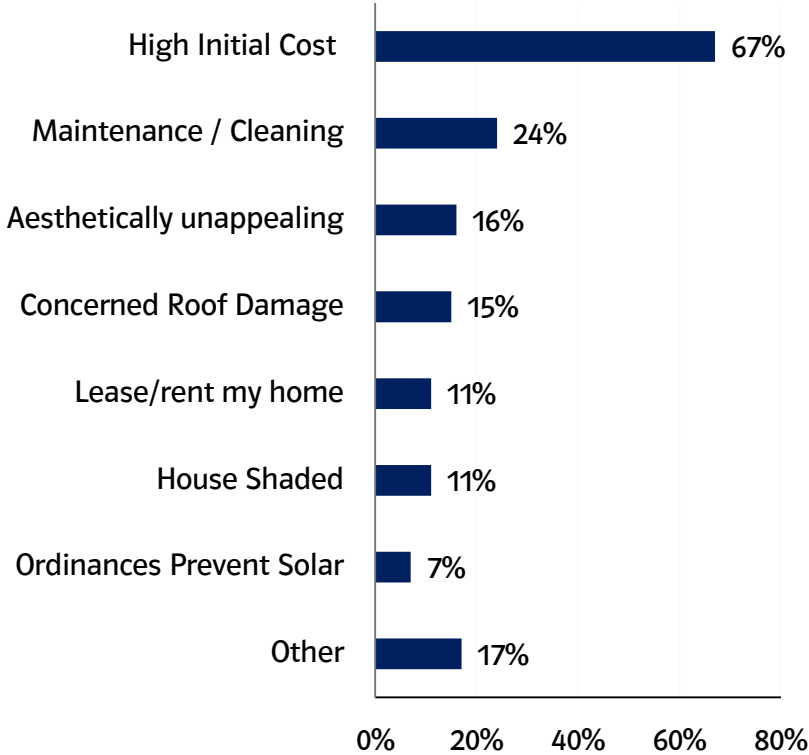
Likelihood to Purchase Solar Panels

80% of customers surveyed stated they would not likely purchase solar panels in the near future. The 4% who stated they were likely to purchase were motivated by lowering their energy costs (39%) and the perceived positive impact on the environment (25%).

Likelihood to Purchase Solar Panels



Objections to Solar Panels





PPL companies

Proposed Solar Program

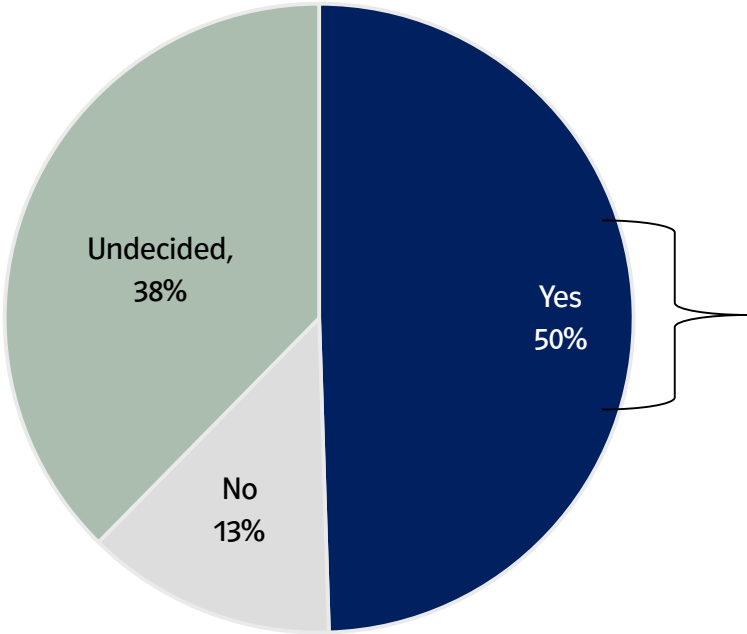
LG&E/KU Community Solar



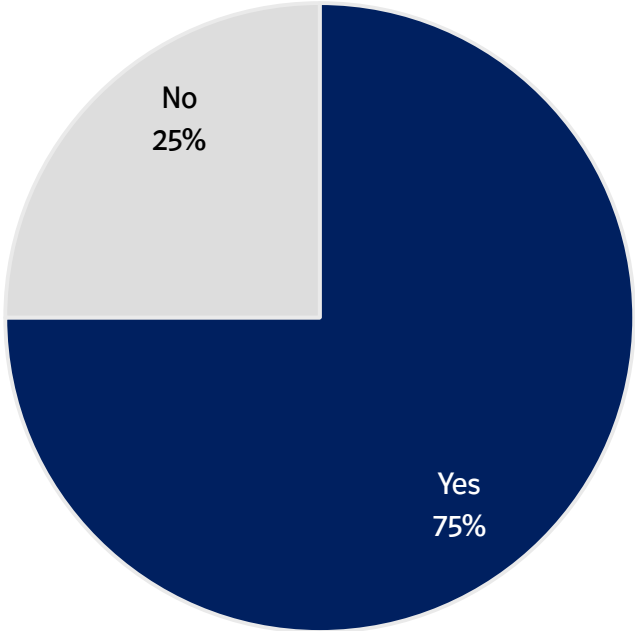
Likelihood to Participate in LG&E/KU Solar Offerings

50% (n=513) of customers stated they would likely participate in a solar program offered by LG&E/KU. 75% of those likely to participate (n=385) are willing to pay the one-time enrollment fee.

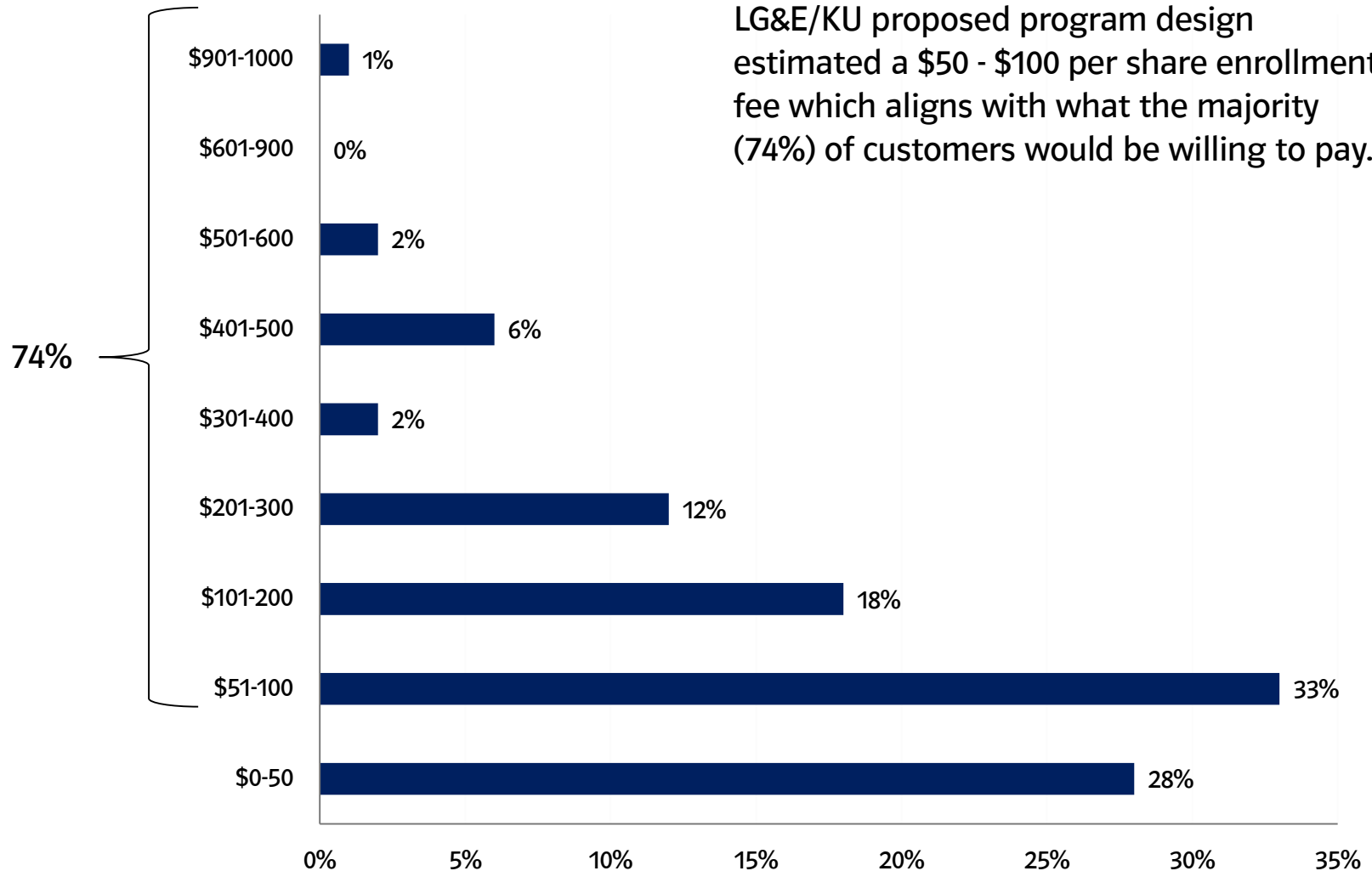
**Likelihood to Participate
LG&E/KU Solar Offering**



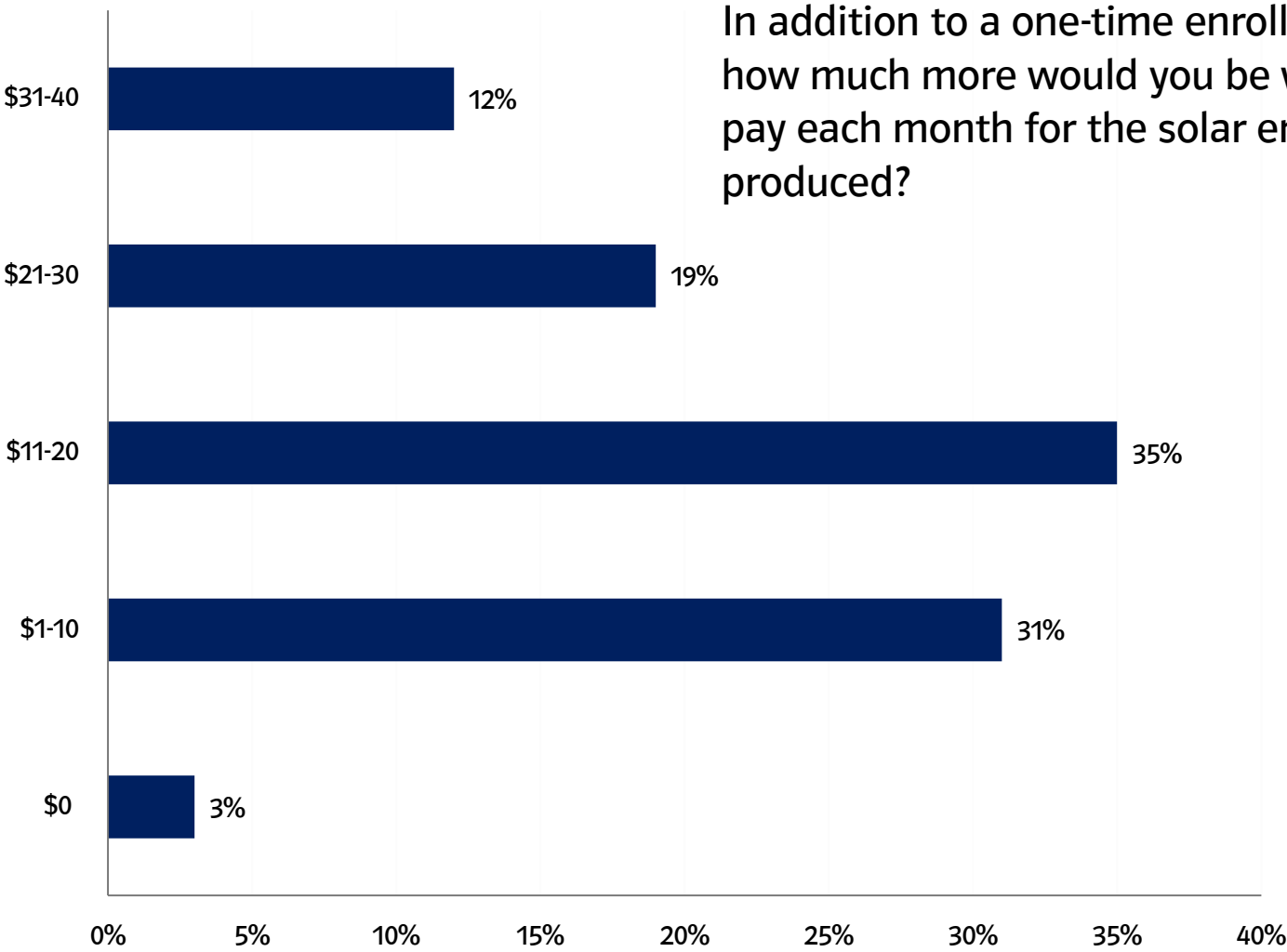
**Willingness to Pay
One-time Enrollment Fee**



Acceptable One-time Fee



Tolerance for additional monthly expense for LG&E/KU Solar Program



In addition to a one-time enrollment fee, how much more would you be willing to pay each month for the solar energy produced?

Purchasing LG&E/KU Solar Shares

Now that you know each share of the solar facility would represent roughly 27 kilowatt-hours and a typical residential household uses approximately 1,000 kilowatt-hours each month, how many shares of solar energy would you be willing to purchase through a subscription?

	LG&E/KU	KU	LG&E
1-2 shares ~5% monthly consumption	18%	21%	15%
3-4 shares ~10% monthly consumption	34%	31%	36%
8-10 shares ~25% monthly consumption	24%	26%	22%
15-20 shares ~50% monthly consumption	24%	22%	27%

Demographic profile of those saying they are likely to participate in the proposed LG&E/KU solar program, and are willing to pay a one-time fee and additional monthly charges.

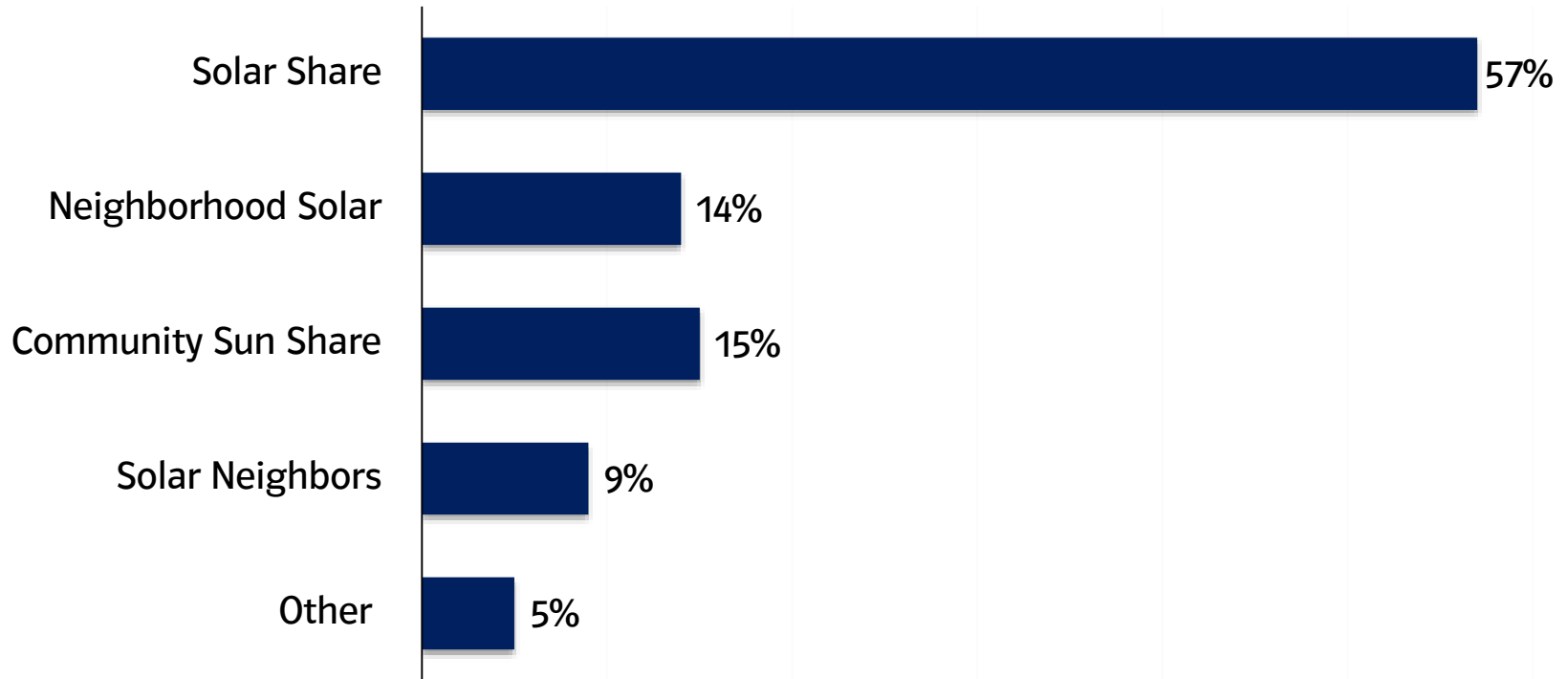
	Customers likely to participate
Own/Rent	
Own	87%
Rent	13%
Household Income	
Income <\$40k	19%
Income \$40K or more	81%
Age	
18-24	1%
25-34	16%
35-49	27%
50-64	37%
65+	19%

	Customers likely to participate
Education	
Some high school	0%
High school grad or equivalent	5%
Some college or technical school	18%
College graduate	38%
Graduate/post-graduate school	39%
Current Employment Situation	
Working full-time	63%
Working part-time	11%
Parent/Caregiver/Student	6%
Retired	20%



Branding

57% of all survey respondents preferred the name "Solar Share" for the program from this list of choices.



n=1035

Summary of Results

- 1,035 panel members participated the survey
- 50% (n= 513) were likely to participate in an LG&E/KU solar community program
 - *38% were undecided*
 - *13% unlikely to participate*
 - *Percentage adds to 101% due to rounding*
- 75% of the customers who were likely to participate would pay more for solar
 - *74% agreed to a one-time fee that fits within the proposed \$50-100 per share subscription fee.*
 - *Only 3% stated they would not pay the one-time fee plus a monthly charge for energy.*
- 57% of all survey participants preferred the name "Solar Share" for the program, from among a list of four names.

SOLAR SHARE MARKETING PLAN

I. MARKETING OBJECTIVES

- A. Launch the new Solar Share Program in the LG&E and KU service areas.
- B. Gain brand awareness of the Solar Share Program.
- C. Educate customers on the mechanics and cost of participation in Solar Share Program.

II. TARGET PROSPECTS AND PRODUCT OFFERS

- A. **Solar Share Program:** The option of solar energy and associated benefits should be available for everyone, but putting a solar system on your roof is not always an option. LG&E and KU's Solar Share Program gives everyone the opportunity to benefit from the sun's power, whether you rent or own your home. Plus, Solar Share is 100% local with the solar facility located in our service area, providing local environmental benefits in Kentucky.
- B. **Business Solar Program (alternative option to Solar Share for businesses)** LG&E and KU will build, own and operate the individual solar facilities for businesses and industrial customers. Each project's special contract is subject to approval by the Kentucky Public Service Commission. The facilities could be constructed on customers' property and may include ground or rooftop solar arrays that range in size from 30 kilowatts to 5 megawatts.
- C. **Green Energy Program (alternative to Solar Share):** For as little as \$5 a month, the Green Energy Program contribution will be used to purchase Renewable Energy Certificates (RECs). A REC represents the property rights to the environmental, social and other non-power benefits of 1,000 kilowatt-hours (kWh) of renewable electricity. The Green Energy Program provides a lower-cost option for customers to support the growth of renewable energy sources.

PRODUCT	PROSPECT	PROFILE
Solar Share Program	Business or Industrial Customers	Customers who do not own the property where their facilities are located or prefer an offsite solar solution.
Solar Share Program	Residential Customers	<ul style="list-style-type: none"> — Do not own the property where their home is located. — Home is not conducive to the installation of rooftop solar panels. — Prefer an offsite and maintenance-free solution.
Business Solar Program	Businesses and Industrial Customers	Customers who own the property where their facilities are located and prefer an onsite solar solution.
Green Energy Program	All Customers	Desire a lower-cost alternative for supporting the growth of renewable energy sources.

SOLAR SHARE MARKETING PLAN

III. STRATEGY

LG&E and KU want to make the option of solar energy and its associated benefits available for all customers. The Solar Share Program gives everyone the opportunity to benefit from the sun's power, whether they rent or own their home or business. The Business Solar Program expands the portfolio of product offerings to provide solutions for businesses and industrial customers who prefer an onsite installation. The Green Energy Program further expands the portfolio to allow all customers to participate in the development of renewable energy sources for as little as \$5 a month.

IV. RESEARCH

To ensure our product offering met customer expectations, we conducted primary research using the LG&E and KU proprietary online panel.

The LG&E and KU proprietary online panel consists of 1,500 customers. The panel is refreshed each year via a letter mailed to a random sample of LG&E and KU customers. Each customer begins the registration process by completing a questionnaire that is used to ensure the demographic profile of the panel matches the make-up of the customer base. The optimal make-up of the panel is developed from data for the LG&E and KU service areas.

Online panel participants agree to take one survey per month, and serve no more than a one-year term.

Summary of survey results

- 1,035 panel members participated the survey
- 50% (n= 513) were likely to participate in an LG&E and KU solar program
 - 38% were undecided
 - 13% unlikely to purchase
 - Percentage adds to 101% due to rounding
- 75% of the customers who were likely to participate would pay more for solar
 - 74% agreed to a one-time fee that fits within the proposed \$50-100 per capacity-increment subscription fee.
 - Only 3% stated they would not pay the one-time fee plus a monthly charge for energy.
 - Therefore, about 35% of all survey respondents indicated they would be interested in a solar offering like the Solar Share Program (50% likely participants * 75% who would pay more for solar * 97% willing to pay monthly charge = 36.4%, i.e., about 35%).
- 57% of all survey participants selected the name "Solar Share" for the program

SOLAR SHARE MARKETING PLAN

V. MARKETING TACTICS

- A. **Development of marketing/communication materials.** Primary research among LG&E and KU customers will be used to develop comprehensive marketing/communication materials. Initial drafts will be developed using the LG&E and KU proprietary online panel.
- a. Key content for residential customers:
 - i. How does Solar Share work?
 - ii. Why is the Subscription Fee non-refundable?
 - iii. How does Solar Share affect my bill?
 - iv. Who can participate in Solar Share?
 - v. What is the difference between Solar Share and Green Energy?
 - vi. Do I have to sign a contract?
 - vii. Can I sell my subscription?
 - viii. What happens if I move?
 - ix. Can I cancel at any time?
- B. **General awareness campaign.** The initial campaign will use the low-cost marketing/communication tactics:
- a. Power Source newsletter (include in residential billing statements)
 - b. Powerlines newsletter (available online for businesses, industrial customers and economic development groups)
 - c. Bill inserts (included in residential billing statements)
 - d. Bill messages (included on the residential billing statement)
 - e. Rack cards (available in walk-in centers)
 - f. LG&E and KU website
 - g. Social media (i.e. Twitter, Facebook, YouTube, Instagram)
 - h. Email blasts
 - i. Event promotions
- C. **Onboarding Solar Share Program Customers.** The initial sign-up process will include the following steps:
- a. Customer expresses interest in participating in the program by signing up on the LG&E and KU website or contacting Customer Service.
 - b. Customer will speak to an LG&E or KU representative to sign up for the Solar Share Program.
 - c. Prior to paying the non-refundable Subscription Fee, customers will receive a welcome package that outlines the mechanics and cost of the program.
 - d. Customer will pay the non-refundable Subscription Fee.

SOLAR SHARE MARKETING PLAN

- e. The billing statement will be accompanied by a brochure that will fully explain the production of the solar installation and the customers' individual contributions and credits.
 - f. Solar Share Program participants will receive ongoing communications (e.g. quarterly newsletters).
- D. **Future marketing** efforts will be determined as the program matures.

VI. METRICS

- A. Launch the new Solar Share Program in the LG&E and KU service areas.
 - a. Number of participants in the initial solar installation
 - b. Average capacity subscribed per customer
 - c. Launch-to-fully-subscribed timeframe (first installation)
- B. Gain brand awareness of the Solar Share Program.
 - a. Customer satisfaction studies
- C. Educate customers on the mechanics and cost of participation in Solar Share Program.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

JOINT APPLICATION OF KENTUCKY)	
UTILITIES COMPANY AND LOUISVILLE)	CASE NO. 2016-00274
GAS AND ELECTRIC COMPANY FOR)	
APPROVAL OF AN OPTIONAL SOLAR)	
SHARE PROGRAM RIDER)	

DIRECT TESTIMONY OF DAVID E. HUFF
DIRECTOR, CUSTOMER ENERGY EFFICIENCY & SMART GRID STRATEGY
KENTUCKY UTILITIES COMPANY AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Dated: August 2, 2016

1 **Q. Please state your name, position and business address.**

2 A. My name is David E. Huff. I am Director of Customer Energy Efficiency & Smart Grid
3 Strategy for Kentucky Utilities Company (“KU”) and Louisville Gas and Electric
4 Company (“LG&E”), and I am an employee of LG&E and KU Services Company, which
5 provides services to LG&E and KU (collectively “the Companies”). My business
6 address is 220 West Main Street, Louisville, Kentucky, 40202. A complete statement of
7 my education and work experience is attached to this testimony as Appendix A.

8 **Q. Have you previously testified before this Commission?**

9 A. Yes. I testified before this Commission most recently in Case No. 2015-000355,
10 *Application of Louisville Gas and Electric Company and Kentucky Utilities Company to*
11 *Install and Operate Electric Vehicle Charging Stations in their Certified Territories, for*
12 *Approval of an Electric Vehicle Supply Equipment Rider, an Electric Vehicle Supply*
13 *Equipment Rate, and an Electric Vehicle Charging Rate, for Approval of a Depreciation*
14 *Rate for Electric Vehicle Charging Stations, and for a Deviation from the Requirements*
15 *of Certain Commission Regulations.* I also testified in Case No. 2014-00003, *Joint*
16 *Application of Louisville Gas and Electric Company and Kentucky Utilities Company for*
17 *Review, Modification, and Continuation of Existing, and Addition of New, Demand-Side*
18 *Management and Energy Efficiency Programs.*

19 **Q. What is the purpose of your testimony?**

20 A. I will provide information about the Companies’ proposal to construct solar photovoltaic
21 facilities with a combined capacity of up to approximately 4 MW DC that will be built in
22 500 kW increments as customer interest supports each new increment (collectively “Solar

1 Share Facilities”);¹ a description of the entirely voluntary Solar Share Program and its
2 related tariff provision, the Solar Share Rider (“Rider SSP”), which allow customers to
3 subscribe portions of the Solar Share Facilities’ capacity and receive bill credits for the
4 energy it produces in return for a non-refundable Subscription Fee and monthly Solar
5 Capacity Charge; and an overview of the annual cost of Solar Share Facility No. 1, the
6 first 500 kW increment of solar photovoltaic capacity the Companies propose to build for
7 the Solar Share Program.

8 **Q. Are you sponsoring any exhibits to your testimony?**

9 A. Yes, I am sponsoring the following exhibits to the Application:

- 10 • Application Exhibit 1: a list of permits necessary for Solar Share Facility No. 1;
- 11 • Application Exhibit 2: maps showing the location of Solar Share Facility No. 1;
- 12 • Application Exhibit 3: preliminary specifications for Solar Share Facility No. 1;
- 13 • Application Exhibit 4: the Companies’ contract with Solar Energy Solutions LLC, the
14 vendor that will design, construct, and maintain the Solar Share Facilities;
- 15 • Application Exhibit 5: detailed cost information concerning the Solar Share Facilities;
- 16 • Application Exhibit 8: a sample bill for a customer participating in the Solar Share
17 Program under Rider SSP; and
- 18 • Application Exhibit 9: cost support for the Solar Share Program's Subscription Fee.

19 **Q. Briefly summarize the proposed Solar Share Program.**

20 A. The Companies propose to construct, own, and operate the Solar Share Facilities to
21 provide interested LG&E and KU customers with a long-term and completely voluntary
22 opportunity to subscribe capacity in solar photovoltaic generating facilities and receive

¹ Unless explicitly stated otherwise, all capacities given are for direct current (DC) rather than alternating current (AC). AC values are approximately 28% less than the DC values stated.

1 bill credits associated with the pro rata amount of energy produced by the facilities.
2 Participating customers will pay an upfront nonrefundable Subscription Fee (initially \$40
3 per quarter-kW subscribed) to offset the Companies' administrative and customer
4 education costs, as well as a monthly Solar Capacity Charge (initially \$6.29 per month
5 per quarter-kW subscribed). In return subscribers will receive bill credits based on the
6 Companies' variable cost of production for the energy output of their subscribed portions
7 of the Solar Share Facilities (the Solar Energy Credit, initially a credit for residential
8 customers of approximately \$0.04 per kWh of AC energy produced), as well as a
9 corresponding adjustment to their Fuel Adjustment Clause credits or charges (the Solar
10 FAC Adjustment).

11 **Q. Please describe the proposed Solar Share Facility No. 1.**

12 A. Solar Share Facility No. 1 and all of the Solar Share Facilities are planned to be located
13 on a 35-acre parcel in Simpsonville, Kentucky, directly abutting Interstate 64. (Maps
14 showing the location of Solar Share Facility No. 1 are attached to the Application as
15 Exhibit 2.) Each Solar Share Facility will have a DC capacity of about 500 kW; all eight
16 of the potential Solar Share Facilities will have a total capacity of up to approximately 4
17 MW. More precisely, the Companies presently expect each Solar Share Facility will
18 have a DC capacity of 498.96 kW, which will be equivalent to approximately 360 kW of
19 AC capacity on the 480 V side of the transformer delivering the power to the Companies'
20 distribution system; however, for ease of discussion the Companies refer to 500 kW as
21 the capacity of each Solar Share Facility and to each of the 2,000 capacity increments
22 available for subscription in each Solar Share Facility as nominal 250 W or quarter-kW
23 increments.

1 The Companies estimate the capital cost of the first Solar Share Facility (Solar
2 Share Facility No. 1) and site-related facilities and improvements will be \$2.0 million,
3 which comprises the cost of the 500 kW installation itself and the cost of common site-
4 related facilities that will be used for Solar Share Facility No. 1 and could be used for
5 other Solar Share Facilities built at the same site, e.g., distribution upgrades capable of
6 handling the output of multiple Solar Share Facilities. The total capital cost allocated to
7 Solar Share Facility No. 1 and included in the calculation of the initial Solar Capacity
8 Charge described in the testimony of W. Steven Seelye is \$1.06 million, which includes
9 the cost of the 500 kW array that is Solar Share Facility No. 1, as well as a ratable portion
10 of other site-related capital costs. (See Application Exhibit 5 for detailed cost
11 information, including the calculation of the \$1.06 million allocated cost of Solar Share
12 Facility No. 1.) Also, please note that the capital costs stated in this testimony and
13 Application Exhibit 5 do not include applicable tax credits, which will reduce the
14 effective cost of the Companies' net investment in the Solar Share Facilities.)

15 The Companies anticipate that each Solar Share Facility will produce about
16 700,000 kWh of AC energy per year on average, though actual energy production will
17 vary depending on weather conditions and other factors. Additional technical
18 information about Solar Share Facility No. 1 is in the preliminary design specifications in
19 Application Exhibit 3. The estimated capital cost of all of the Solar Share Facilities is
20 \$9.8 million, as shown in Application Exhibit 5 (again excluding applicable tax credits).

21 **Q. How will the Companies determine when to construct each Solar Share Facility?**

22 A. The Companies will authorize construction of each Solar Share Facility only when all
23 previously constructed Solar Share Facilities (if any) are fully subscribed and the next

1 facility to be constructed is fully subscribed. As noted above, a subscribing customer will
2 pay a \$40 Subscription Fee per quarter-kW subscribed to offset the Companies’
3 administrative and customer education costs. This will help ensure sufficient genuine
4 interest and commitment to support constructing each facility.

5 **Q. How do the Companies propose to construct the Solar Share Facilities?**

6 A. The Companies propose to use a competitively selected vendor to design, construct, and
7 maintain the Solar Share Facilities. The Companies issued requests for proposals in early
8 2016 to select a construction partner for this program. The Company received six
9 responses from local and national companies and ultimately selected Solar Energy
10 Solutions LLC (“SES”), a company based in Lexington, Kentucky, for the Solar Share
11 Facilities. A copy of the Companies’ contract with SES is Application Exhibit 4, and
12 Application Exhibit 5 contains detailed cost information for the Solar Share Facilities.

13 **Q. Have the Companies obtained all permits necessary for constructing and operating**
14 **the Solar Share Facilities?**

15 A. As shown in Application Exhibit 1, the Companies will perform the following studies and
16 have obtained or will obtain the following permits, permissions, and land rights prior to
17 construction:

- 18 • Railroad crossing permit from RJ Corman
- 19 • State highway crossing permit for US Highway 60
- 20 • Easement across Conner Station Rd.
- 21 • Shelby County electrical permit
- 22 • U.S. Army Corps of Engineers Wetlands Delineation Jurisdictional Determination
- 23 • U.S. Fish and Wildlife Service endangered species study
- 24 • Cumulative environmental assessment and fee required before construction of facility
- 25 for generating electricity (KRS 224-10-280)
- 26 • May need Historic Structures and Archaeological study submitted to the Kentucky
- 27 State Historic Preservation Office
- 28 • Conditions imposed by Kentucky’s Energy and Environment Cabinet

1 The Companies currently anticipate they will perform all necessary studies, meet all
2 requisite conditions, and obtain all necessary permits, permissions, and land rights
3 necessary to begin construction by early November 2016.

4 **Q. Have the Companies estimated the annual cost of operating Solar Share Facility No.**
5 **1?**

6 A. The Companies' current estimate of Solar Share Facility No. 1's annual operating cost is
7 about \$37,000 per year. As shown in Application Exhibit 5, this consists primarily of
8 mowing surrounding vegetation, annual recommissioning, data service, landscaping, and
9 service agreements for security equipment.

10 **Q. Which customers will be able to participate in the Solar Share Program under**
11 **Rider SSP?**

12 A. As further discussed in the testimony of Rick E. Lovekamp, Rider SSP will be available
13 to all non-lighting retail customers taking service at distribution voltages, including
14 customers taking net-metering service under Rider NMS. Customers will have the
15 opportunity to subscribe nominal quarter-kW (250 W) increments, but no single customer
16 may subscribe more than 50% of any Solar Share Facility's capacity, and no single
17 customer may subscribe more than 500 kW of total, aggregate capacity in all of the Solar
18 Share Facilities. Also, 25% of the Solar Share Facility No. 1's 500 kW capacity will be
19 reserved for residential customer subscriptions for the first 45 days customers are able to
20 subscribe. Otherwise, all of the Solar Share Facilities' capacity will be available for
21 subscription on a first-come, first-served basis.

22 **Q. Why do the Companies propose these limitations?**

1 A. These limitations ensure each customer can subscribe to ample capacity while also
2 promoting true community participation. The 2015 Solar Electric Power Association
3 (“SEPA”) Community Solar Program Design Model Report found that the average
4 residential customer subscribes to 1.5 kW of a community solar system (6 quarter-kW
5 shares) and the average business customer subscribes to 34 kW (136 quarter-kW shares).²
6 If 50% of Solar Share Facility No. 1 is subscribed by residential customers and 50% is
7 subscribed by business customers, approximately 170 residential customers and 7
8 businesses will participate in the program if the SEPA average subscription levels hold
9 true for the Companies’ customers. By extension, customer participation would be about
10 1,360 residential customers and 56 business customers for the full 4 MW combined
11 capacity of all of the Solar Share Facilities.

12 **Q. Will participating customers be required to sign a long-term contract as a**
13 **prerequisite to participating in Rider SSP?**

14 A. Only those customers subscribing 50 kW (200 quarter-kW portions) or more will be
15 required to sign a five-year contract. Requiring a contract only for such customers strikes
16 a balance between providing financial protections to the Companies and non-participating
17 customers and reducing barriers to participation for smaller customers.

18 Customers subscribing less than 50 kW will not be required to enter into a
19 contract concerning their subscriptions; however, a customer may not reduce or cancel a
20 subscription earlier than 12 months from the date of the customer’s most recent change to
21 the customer’s subscription level. Therefore, a customer subscribing less than 50 kW has
22 a 12-month commitment from the date of the customer’s initial subscription, and may
23 have a longer commitment if the customer subsequently increases subscribed capacity

² Available at https://www.solarelectricpower.org/media/422095/community-solar-design-plan_web.pdf, p. 19

1 (which a customer may do at any time upon paying a Subscription Fee for the additional
2 capacity) or if the customer chooses to decrease but not cancel the subscription after the
3 initial 12 months. For example, if a customer subscribes 1 kW on January 1, 2017, the
4 customer would have to maintain that subscription level through and including December
5 31, 2017, but could decrease or cancel the subscription beginning on January 1, 2018. But
6 if that same customer chose to increase subscribed capacity to 1.5 kW on April 1, 2017,
7 the customer would have to maintain the 1.5 kW subscription through and including
8 March 31, 2018. This approach strikes an appropriate balance between flexibility for
9 subscribing customers and ensuring that only those who are genuinely interested in the
10 program subscribe.

11 **Q. Please explain Rider SSP's rates and charges.**

12 A. Customers will have the opportunity to subscribe quarter-kW portions of the Solar Share
13 Facilities' capacity by paying an upfront \$40 Subscription Fee per quarter-kW subscribed
14 at the time of subscription. A subscribing customer will also pay a non-levelized
15 monthly Solar Capacity Charge of \$6.29 per quarter-kW beginning with the bill issued
16 for the first billing period in which the customer's subscribed capacity was in service for
17 the entire billing period; as Mr. Seelye explains in his testimony, this charge is designed
18 to recover all of the fixed costs of Solar Share Facility No.1, including a ratable portion
19 of site-related costs, over the life of the facility assuming it is fully subscribed.
20 Beginning with the same bill on which the Solar Capacity Charge first appears, a
21 subscribing customer will also receive a bill credit for the monthly pro-rata amount of
22 solar energy produced by the Solar Share Facilities. As Mr. Seelye describes, each rate
23 class for each of the Companies will have its own energy credit based on the variable cost

1 of production for the class; the credit for residential customers will initially be about
2 \$0.04 per kWh. The customer will also receive an adjustment to the amount of Fuel
3 Adjustment Clause charges or credits billed corresponding to the amount of solar energy
4 for which the customer receives credit. As more fully explained in the testimony of Mr.
5 Seelye, these fees and credits will be evaluated and updated when the Companies adjust
6 their base rates and the Solar Energy Credit will be updated as appropriate in the
7 Companies' two-year fuel adjustment clause review cases to account for base-rate roll-ins
8 of fuel costs.

9 For example, assume an eligible residential customer subscribes eight quarter-kW
10 portions (a total of 2 kW) of a Solar Share Facility's capacity. The customer would be
11 required to pay a total Subscription Fee of \$320 (\$40 per quarter-kW subscribed) at the
12 time of subscription, which could be months earlier than when the capacity will be built
13 and in service. In any event, a subscribing customer will not begin service under Rider
14 SSP until the first full billing period following the customer's payment of the
15 Subscription Fee and construction is completed on the Solar Share Facility related to their
16 subscription. For the purposes of this example, assume the customer subscribes and pays
17 the \$320 Subscription Fee in October 2016, prior to the construction of Solar Share
18 Facility No. 1. If Solar Share Facility No. 1 enters service on December 15, 2016, its first
19 full billing period of service would be the January 2017 billing period. The customer
20 would therefore begin paying a monthly Solar Capacity Charge of \$50.32 (\$6.29 per
21 quarter-kW subscribed) with the customer's bill for the January 2017 billing period,
22 which the customer would likely receive in early February 2017. On the same bill the
23 customer would receive a Solar Energy Credit of about \$0.04 per kWh for the pro rata

1 energy production of the customer's subscribed capacity, as well as an adjustment to the
2 customer's Fuel Adjustment Clause charges or credits for the same amount of energy for
3 which the customer received a Solar Energy Credit.

4 Continuing the same example, assume the pro rata energy production attributed to
5 each quarter-kW of capacity is 29 kWh during the June billing month.³ Therefore, the
6 customer's solar energy production would be 232 kWh (8 250 W x 29 kWh/quarter-kW =
7 232 kWh). A sample of this hypothetical residential customer's billing and credits are
8 shown in the sample bill attached to the Application as Exhibit 8.

9 **Q. Are there limits to the credits a customer may receive each month under Rider SSP?**

10 A. Yes. If the electricity generated by a customer's subscribed capacity exceeds the
11 electricity consumed by the customer during a billing period, the customer would receive
12 credits only for the customer's energy consumption that billing period. For example, if a
13 customer's subscribed capacity generated 1,100 kWh in a given billing period and the
14 customer consumed only 1,000 kWh that billing period, the customer would receive a bill
15 credit for 1,000 kWh of solar generation. This limit aligns with the purpose of the Solar
16 Share Program, namely to provide each interested customer the opportunity to receive
17 credit for solar energy production sufficient to meet some or all of the customer's own
18 consumption. In addition, this limit provides a helpful disincentive to over-subscribe
19 capacity relative to a customer's consumption, which should help ensure adequate
20 capacity is available for all customers who desire to participate.

21 **Q. May participating customers request refunds if they later decide to leave the**
22 **program?**

³ 29kWh per quarter-KW is calculated on a pro-rata basis by taking 58,655kWh of AC power generated from the 500kW solar array and dividing it by the total number of shares (500kW x 4 quarter-kW shares/kW) or (58,655kWh ÷ (500kW x 4 quarter-kW/kW) = 29kWh/quarter-kW).

1 A. No. The Subscription Fee a subscribing customer pays is to offset the Companies’
2 administrative and customer education costs. Therefore, it would not be appropriate to
3 refund any portion of the fees after the customer causes the Companies to incur such
4 costs. The derivation of the \$40 per quarter-kW Subscription Fee is shown in
5 Application Exhibit 9, which provides estimates of administrative costs to answer
6 customer questions about the Solar Share Program, track customer subscriptions, and
7 invoice and account for customer subscription payments.

8 **Q. How do the Companies plan to treat Renewable Energy Certificates attributable to**
9 **the Solar Share Facilities?**

10 A. The Renewable Energy Certificates (“RECs”) generated by the subscribed portion of the
11 Solar Share Facilities will be registered with a system such as the PJM-EIS' Generation
12 Attribute Tracking System (GATS) and retired in the Companies’ name. Any RECs
13 generated by unsubscribed portions of the Solar Share Facilities will be sold.

14 **Q. Please explain any other limitations on customer participation.**

15 A. Participating customers will not be allowed to transfer their subscriptions to another
16 customer; each new customer will be required to pay the upfront \$40 Subscription Fee
17 per quarter-kW. But customers will be able to continue participation when changing
18 premises within the Companies’ service territories without incurring new subscription
19 fees. In addition, customers subscribing less than 50 kW may increase their subscription
20 at any time, but may decrease or cancel their subscription no earlier than 12 months after
21 their most recent subscription change (initial subscription, increase, or decrease).
22 Customers requesting to increase their subscription will be required to pay the \$40
23 Subscription Fee per each new quarter-kW portion subscribed and will see their monthly

1 Solar Capacity Charge and bill credits increase accordingly; customers requesting to
2 decrease their subscription will see their monthly Solar Capacity Charge and bill credits
3 decrease accordingly. Any customer participating at a level of less than 50 kW may
4 terminate participation at any time after 12 months of the customer's last change to their
5 subscription level. If a customer decreases or terminates participation and later decides to
6 re-subscribe, previously subscribed capacity, the customer will pay again the \$40-per-
7 quarter-kW Subscription Fee. This approach is designed to encourage long-term
8 participation in the Solar Share Program while keeping barriers to entry reasonably low
9 and to offset administrative costs associated with customer changes.

10 **Q. What happens to customers who subscribe when some Solar Share Facilities are**
11 **already in service but the next facility to be constructed is not yet fully subscribed?**

12 A. The Companies have designed the Solar Share Program to provide solar capacity
13 subscriptions to customers as soon as possible consistent with a commitment to begin
14 construction of a new Solar Share Facility only when it and all previous Solar Share
15 Facilities are fully subscribed. Therefore, customers who subscribe after at least one
16 Solar Share Facility is in service but before the next Solar Share Facility is fully
17 subscribed will be placed in a queue for capacity on a first come, first served basis. The
18 Companies will then fill subscriptions as capacity in the Solar Share Facilities becomes
19 available. A subscriber whose subscription the Companies can fulfill only partially may
20 either accept the available capacity and await additional capacity, or decline the partial
21 fulfillment, allowing the next awaiting subscriber(s) to accept the available capacity.
22 Whether such a subscriber accepts or declines available capacity will not affect the
23 subscriber's place in the queue. Ultimately, when the customers still waiting in the queue

1 have subscribed 500 kW of capacity in addition to the existing capacity of the Solar
2 Share Facilities, the Companies will initiate construction of the next facility.

3 **Q. What position do the Companies take regarding publicity and promotion by Solar**
4 **Share Program participants?**

5 A. The Companies are supportive of participating customer's promotion of their investment
6 in renewable energy. However, as with other facilities the Companies reserve the right to
7 all photos and representations regarding the Solar Share Program and Facilities. The
8 Companies plan to provide participating customers with material they can use with their
9 own customers or to represent their participation in the Solar Share Program.

10 **Q. What is your recommendation to the Commission?**

11 A. I recommend the Commission approve all of the relief requested in the Companies'
12 application by November 1, 2016.

13 **Q. Does this conclude your testimony?**

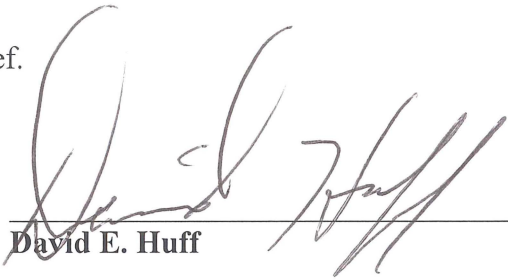
14 A. Yes it does.

15

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **David E. Huff**, being duly sworn, deposes and says that he is Director of Customer Energy Efficiency & Smart Grid Strategy for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the foregoing testimony, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.



David E. Huff

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 2nd day of August 2016.



Notary Public (SEAL)

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

APPENDIX A

David E. Huff

Director, Customer Energy Efficiency & Smart Grid Strategy
Louisville Gas and Electric Company and Kentucky Utilities Company
220 West Main Street
Louisville, Kentucky 40202
Telephone: (502) 627-4662

Education

MBA, Indiana University
BSME, Rose-Hulman Institute of Technology

Professional Experience

Louisville Gas and Electric and Kentucky Utilities

Director, Customer Energy Efficiency and Smart Grid Strategy March 2010 - Present
Director, Distribution Operations March 2003 – March 2010

LG&E Energy

Director, Revenue Collection Process January 2000 – March 2003

Louisville Gas and Electric

Director, Gas Operations Support & Interim Mktg Director June 1997 – January 2000
Wholesale Excellence Team Leader November 1995 – June 1997
Division Manager – Trimble County Station July 1994 – November 1995
Operations Manager – Mill Creek Station January 1992 – July 1994
Mechanical Engineer 1983 - 1992

Professional Memberships

Registered Professional Engineer – Kentucky
University of Louisville Conn Center for Renewable Energy Research -- Technical Advisory Board Member
University of Louisville Speed School of Engineering – Advisory Board Member of Electric & Computer Engineering Department
E-Source DSM Executive Council Member

Civic Activities

Boy Scouts of America Executive Committee Member and Volunteer – Lincoln Heritage Council
Past Project WARM Board Member
Eagle Scout

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

JOINT APPLICATION OF KENTUCKY)	
UTILITIES COMPANY AND LOUISVILLE)	CASE NO. 2016-00274
GAS AND ELECTRIC COMPANY FOR)	
APPROVAL OF AN OPTIONAL SOLAR)	
SHARE PROGRAM RIDER)	

DIRECT TESTIMONY OF RICK E. LOVEKAMP
MANAGER, REGULATORY AFFAIRS/TARIFFS
KENTUCKY UTILITIES COMPANY AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Dated: August 2, 2016

1 **Q. Please state your name, position and business address.**

2 A. My name is Rick E. Lovekamp. I am Manager of Regulatory Affairs/Tariffs for
3 Kentucky Utilities Company (“KU”) and Louisville Gas and Electric Company
4 (“LG&E”), and I am an employee of LG&E and KU Services Company, which provides
5 services to LG&E and KU (collectively “the Companies”). My business address is 220
6 West Main Street, Louisville, Kentucky, 40202. A complete statement of my education
7 and work experience is attached to this testimony as Appendix A.

8 **Q. Have you previously testified before this Commission?**

9 A. Yes. I testified before this Commission most recently in Case No. 2015-000355,
10 *Application of Louisville Gas and Electric Company and Kentucky Utilities Company to*
11 *Install and Operate Electric Vehicle Charging Stations in their Certified Territories, for*
12 *Approval of an Electric Vehicle Supply Equipment Rider, an Electric Vehicle Supply*
13 *Equipment Rate, and an Electric Vehicle Charging Rate, for Approval of a Depreciation*
14 *Rate for Electric Vehicle Charging Stations, and for a Deviation from the Requirements*
15 *of Certain Commission Regulations.*

16 **Q. What is the purpose of your testimony?**

17 A. I will provide an overview of the Companies’ proposed tariff sheets for the Solar Share
18 Program Standard Rate Rider (“Rider SSP”); request approval of the Companies’
19 application by November 1, 2016; demonstrate that the Companies’ proposed Solar Share
20 Facilities will be an extension in the ordinary course of business that does not require a
21 certificate of public convenience and necessity (“CPCN”); request to use for purposes of
22 the Solar Share Facilities the Commission-approved group depreciation rates applicable
23 to the solar array at the E.W. Brown Generating Station; discuss allocation of the Solar

1 Share Facilities' costs among the Companies; and request a deviation from the
2 Commission's notice requirements.

3 **Q. Are you sponsoring any exhibits to your testimony?**

4 A. Yes, I am sponsoring the following exhibits to the Companies' Application:

- 5 • Application Exhibit 6: proposed KU Rider SSP tariff sheets; and
- 6 • Application Exhibit 7: proposed LG&E Rider SSP tariff sheets.

7 **Q. Please describe the Companies' proposed Solar Share Program and its associated**
8 **tariff provision, Rider SSP.**

9 A. The Solar Share Program and Rider SSP will provide interested LG&E and KU
10 customers with a long-term, completely voluntary opportunity to subscribe capacity in
11 solar photovoltaic generating facilities and receive bill credits associated with the pro rata
12 amount of energy produced by dedicated solar photovoltaic facilities with a combined
13 capacity of up to 4 MW that will be built in 500 kW increments (collectively "Solar
14 Share Facilities"). Rider SSP will be available to all customers taking service at
15 distribution voltages under the following standard rates: Residential Service, Residential
16 Time-of-Day Energy Service, Residential Time-of-Day Demand Service, General
17 Service, Power Service, Time-of-Day Secondary Service, Time-of-Day Primary Service,
18 and All Electric Schools Service (KU only). Because nearly all of the people or entities
19 taking service from the Companies have at least one meter served under one of these
20 rates, making the Solar Share Program available to customers taking service under these
21 rates ensures nearly all customers will be able to participate in the program if they choose
22 to do so.

1 **Q. How will participating customers be billed under Rider SSP?**

2 A. Participating customers will continue to be billed for consumption under their standard
3 rate schedule, but as more fully described in the testimony of David E. Huff, these
4 customers will pay an upfront Subscription Fee and monthly Solar Capacity Charge per
5 quarter-kW subscribed, and will receive a per-kWh bill credit (the Solar Energy Credit)
6 for their pro-rata portion of the energy output of the Solar Share Facilities. As more fully
7 explained in the testimony of W. Steven Seelye, the monthly Solar Capacity Charges are
8 designed to recover the capital, operations and maintenance, and other costs of the Solar
9 Share Facilities; the per-kWh Solar Energy Credit for each of the Companies' rate classes
10 eligible for the Solar Share Program is based on the variable costs of production included
11 in the current energy charges as shown in the Companies' cost of service studies filed in
12 the 2014 rate cases. In addition to the Solar Energy Credit, the Solar FAC Adjustment
13 will adjust subscribers' credits or charges under the Companies' Fuel Adjustment Clause
14 mechanisms to account for subscribers' pro rata portion of the energy output of the Solar
15 Share Facilities. As noted above, the proposed KU and LG&E tariff sheets for Rider SSP
16 are Application Exhibits 6 and 7, respectively, and Application Exhibit 8 is a sample bill
17 for a customer taking service under Rider SSP.

18 **Q. With a limited exception for the operating convenience of the Companies requiring**
19 **the installation of more than one meter for a single service, the Companies tariffs**
20 **require each meter to be treated as a separate service billed under its own rate.¹**

21 **Does the same approach apply for the Solar Share Program, restricting a**
22 **subscription to a single meter?**

¹ See KU P.S.C. No. 17, Original Sheet Nos. 98 (Metering) and 101.1 (Reading of Separate Meters Not Combined); LG&E P.S.C. Electric No. 10, Original Sheet Nos. 98 (Metering) and 101.1 (Reading of Separate Meters Not Combined).

1 A. Yes. As the draft tariff sheets state, each subscription under the Solar Share Program is
2 tied to a single meter; no meter aggregation is permitted. This condition is necessary to
3 avoid inconsistency with other tariff provisions and increase ease of program
4 administration for the Companies. Moreover, this approach is necessary because the
5 Companies have proposed Solar Energy Credits that are distinct for each rate class; rather
6 than creating potential customer confusion and dissatisfaction about which meter (and
7 therefore rate) should receive credits based on a single subscription, the Companies have
8 proposed to eliminate any such potential difficulties by strictly tying each subscription to
9 a single meter for the life of the subscription with only two exceptions: (1) where the
10 Companies have installed more than one meter for a single service for the Companies'
11 own operating convenience, which multiple meters the Companies are already billing on
12 an aggregated basis consistent with the Companies' existing tariff provisions;² and (2)
13 when a customer moves to another premises in the Companies' combined electric service
14 territories, in which case the Companies will permit a customer to transfer one or more
15 subscriptions to meters at the customer's new premises.

16 **Q. Will customers already taking or who later take net-metering service under Rider**
17 **NMS be able to participate in the Solar Share Program?**

18 A. Yes. To ensure clarity in billing and to avoid potential conflict between the terms of
19 Riders NMS and SSP, for all customers taking service under both riders the Companies
20 will apply Rider NMS to their bills first, and will then apply charges and credits resulting
21 from Rider SSP, including applying the Solar Energy Credit and Solar FAC Adjustment
22 to such customers' net energy consumption. In months in which a customer takes service
23 under Riders SSP and NMS and has net zero energy consumption or net energy

² See *id.*

1 production under the terms of Rider NMS—including carryover net-energy credits from
2 previous months, if any—the customer will receive zero Solar Energy Credit and Solar
3 FAC Adjustment. This approach ensures that net-metering customers who are also Solar
4 Share Program participants will receive the full kWh credits for their own renewable
5 energy production while also ensuring they receive credits and adjustments from the
6 Solar Share Program associated with their net energy consumption.

7 **Q. When do the Companies plan to start constructing the first Solar Share Facility?**

8 A. As described in the testimony of John P. Malloy, state and local government officials,
9 economic development authorities, the Companies' customers, and potential customers of
10 the Companies have expressed significant interest in solar energy offerings, and the
11 Companies expect interest to increase as they begin publicizing the Solar Share Program.
12 Therefore, the Companies want to move forward as quickly as possible to ensure that
13 interested customers are able to obtain the services they desire. Because the Companies
14 will not begin construction until customers subscribe all of the capacity of the 500 kW
15 Solar Share Facility No. 1, it is important that the Companies receive approval to offer
16 Rider SSP as soon as possible. Therefore, the Companies respectfully request that the
17 Commission issue an order approving Rider SSP by November 1, 2016, as Mr. Malloy
18 further discusses in his testimony. This should allow the Companies to begin
19 constructing Solar Share Facility No. 1 before the end of this year.

20 **Because the Solar Share Facilities Will Be an Extension in the Ordinary Course of**
21 **Business, They Do Not Require a CPCN**

22 **Q. Please explain why the Companies are not requesting a certificate of public**
23 **convenience and necessity for the Solar Share Facilities.**

1 A. The Solar Share Facilities are an ordinary extension of the Companies' existing
2 generating system, including the Commission-approved 10 MW AC solar facility at the
3 E.W. Brown Generating Station, in the usual course of the Companies' business.
4 Construction of the Solar Share Facilities will not involve capital outlay sufficient to
5 materially affect the existing financial condition of either Company. Moreover, each of
6 the 500 kW Solar Share Facilities will be built only when customers have fully
7 subscribed all existing Solar Share Facilities and 100% of the next facility to be built.
8 And because the Solar Share Facilities will be built in the Companies' service territories
9 and will serve only the Companies' customers, it will not compete with any other
10 utilities' services. Therefore, neither KRS 278.020 nor 807 KAR 5:001 Section 8
11 requires the Companies to obtain a certificate of public convenience and necessity
12 ("CPCN") to construct the Solar Share Facilities.

13 **Q. Will the Solar Share Facilities materially affect the financial condition of either**
14 **Company?**

15 A. No, the total capital outlay involved with the Solar Share Facilities is not expected to
16 exceed \$9.8 million (excluding the effect of applicable tax credits) and will not materially
17 affect the financial condition of either Company. In comparison, KU's 2015 net utility
18 plant was \$6.2 billion and LG&E's 2015 net utility plant was \$4.5 billion. Thus, the total
19 estimated capital cost of the Solar Share Facilities represents approximately 0.16% of
20 KU's 2015 net utility plant and 0.22% of LG&E's 2015 net utility plant.

21 **Q. Will the Solar Share Facilities represent a wasteful duplication of plant, equipment,**
22 **property, or facilities?**

1 A. No, the Solar Share Facilities will not represent a wasteful duplication of plant,
2 equipment, property, or facilities because they will meet an expressed customer desire to
3 participate in a program of this kind and will be built only when customers have made a
4 real financial commitment to each facility: the Company will initiate construction of each
5 facility only when it is 100% subscribed and all previously constructed Solar Share
6 Facilities are fully subscribed. As described in the testimony of Mr. Malloy, state and
7 local government officials, economic development authorities, the Companies’
8 customers, and potential customers of the Companies have shown great interest in
9 renewable energy options, and the Companies fully expect the Solar Share Program to be
10 successful and well received.

11 Moreover, the Solar Share Facilities will be built in 500 kW increments, and the
12 first increment (Solar Share Facility No. 1) will be built only after it is fully subscribed
13 by customers who want to purchase this service. Additional increments will be built as
14 they become fully subscribed and the prior increments remain fully subscribed. This will
15 help prevent overbuilding the Solar Share Facilities, ensuring the facilities are
16 constructed only when customers demand them.

17 **Q. Will the Solar Share Facilities compete or conflict with the existing certificates or**
18 **services of any other jurisdictional utilities in the area?**

19 A. No, the Solar Share Facilities will not compete or conflict with the existing certificates or
20 services of any other jurisdictional utilities in the area. The Solar Share Facilities will be
21 located in the Companies’ service territories and will be jointly owned and operated to
22 serve both LG&E and KU customers.

1 **Q. Has the Commission previously determined that similar facilities did not require**
2 **certificates of public convenience and necessity?**

3 A. Yes, the Commission has on multiple occasions determined that similar facilities
4 resulting in comparable or higher effects on a utility’s financial condition did not require
5 certificates of public convenience and necessity. The most comparable cases appear to be
6 East Kentucky Power Company’s (“EKPC”) multiple requests for declaratory orders that
7 construction of small landfill-gas-to-energy projects are ordinary extensions of existing
8 systems in the usual course of business. In a series of orders issued between 2002 and
9 2015, the Commission consistently permitted EKPC to construct small electric generation
10 facilities without obtaining a CPCN.³

³ *Application of East Kentucky Power Cooperative, Inc. for an Order Declaring Landfill Gas to Energy Projects to Be Ordinary Extensions of Existing Systems in the Usual Course of Business*, Case No. 2002-00352 (Ky. PSC Dec. 18, 2002); *Application of East Kentucky Power Cooperative, Inc. for an Order Declaring the Green Valley and Laurel Ridge Landfill Gas to Energy Projects to Be Ordinary Extensions of Existing Systems in the Usual Course of Business*, Case No. 2002-00474 (Ky. PSC Mar. 3, 2003); *Application of East Kentucky Power Cooperative, Inc. for an Order Declaring the Hardin County Landfill Gas to Energy Project to Be an Ordinary Extension of Existing Systems in the Usual Course of Business*, Case No. 2005-00164 (Ky. PSC July 8, 2005); *Application of East Kentucky Power Cooperative, Inc. for an Order Declaring the Pendleton County Landfill Gas to Energy Project to Be an Ordinary Extension of Existing Systems in the Usual Course of Business*, Case No. 2006-00033 (Ky. PSC Mar. 10, 2006); *Application of East Kentucky Power Cooperative, Inc. for an Order Declaring the Maysville-Mason County Landfill Gas to Energy Project to Be an Ordinary Extension of Existing Systems in the Usual Course of Business*, Case No. 2007-00509 (Ky. PSC Mar. 26, 2008); *Application of East Kentucky Power Cooperative, Inc. For an Order Declaring the Glasgow Landfill Gas to Energy Project to Be an Ordinary Extension of Existing Systems in the Usual Course of Business and a Joint Application of Farmers Rural Electric Cooperative Corporation and East Kentucky Power Cooperative, Inc. for Approval to Enter Into a Ten Year Purchased Power Agreement and Approval of a Special Contract*, Case No. 2014-00292 (Ky. PSC Apr. 2, 2015); *Application of East Kentucky Power Cooperative, Inc. for an Order Declaring the Expansion of the Bavarian Landfill Gas to Energy Project to be an Ordinary Extension of Existing Systems in the Usual Course of Business*, Case No. 2015-00284 (Ky. PSC Nov. 20, 2015).

1 In each case, the utility plant addition at issue was very small relative to EKPC's net
2 utility plant. The plant additions ranged from 0.11 percent to 1.37 percent of EKPC's net
3 utility plant.⁴

4 **Q. How do the proposed Solar Share Facilities compare to the small generation**
5 **facilities at issue in the EKPC proceedings?**

6 A. As noted above, the total estimated \$9.8 million capital cost of the Solar Share Facilities
7 represents approximately 0.16% of KU's 2015 net utility plant and 0.22% of LG&E's
8 2015 net utility plant. These percentages are on the low end of the 0.11%-1.37% percent
9 range of EKPC's plant additions. But the more apt comparison is to the Companies'
10 combined 2015 net utility plant because the entire \$9.8 million investment will serve both
11 utilities' customers: the total estimated \$9.8 million capital cost of the Solar Share
12 Facilities is approximately 0.09% of the Companies' combined 2015 net utility plant,
13 below the 0.11%-1.37% percent range of EKPC's plant additions for which the
14 Commission determined a CPCN was not necessary. Moreover, these capital investment
15 figures do not reflect applicable tax credits, which, as Mr. Seelye explains, will
16 significantly reduce the effective net investment necessary for these facilities.

17 **Q. How will the Companies update the Commission concerning the Solar Share**
18 **Facilities?**

⁴ The table below reflects the utility plant addition to total utility plant for these generation units.

Case No.	Plant Addition	Net Utility Plant	Percent
2002-00352	\$ 4,700,000	\$ 726,062,955	0.65%
2002-00474	\$10,000,000	\$ 726,062,955	1.37%
2005-00164	\$ 4,700,000	\$1,298,456,347	0.36%
2006-00033	\$ 5,000,000	\$1,417,264,037	0.35%
2007-00509	\$ 2,500,000	\$1,683,785,749	0.15%
2014-00292	\$ 2,000,000	\$2,670,840,647	0.11%
2015-00284	\$ 2,261,946	\$2,642,901,910	0.86%

1 A. Although the Companies believe that the Solar Share Facilities do not require a CPCN
2 because they are extensions of the Companies' existing solar generation facilities in the
3 ordinary course of business, the Companies propose to notify the Commission whenever
4 an additional 500kW Solar Share Facility is fully subscribed. In addition, the Companies
5 will provide the Commission an annual report on Rider SSP for the first three years
6 following Commission approval. The annual report will include the number of Solar
7 Share Facilities constructed, current participation levels, and other relevant information.

8 **Group Depreciation Rates for the Solar Share Facilities**

9 **Q. Please explain the group depreciation rates the Companies plan to use for the Solar**
10 **Share Facilities.**

11 A. The Companies propose to use for the Solar Share Facilities the group depreciation rates
12 the Commission has already approved for the Companies' 10 MW AC Brown Solar
13 Facility, which were approved by the Commission by order dated April 8, 2016 in Case
14 No. 2016-00063.⁵ The depreciation rates are: Account 341 - Structures and
15 Improvements - 4.24%; Account 344 - Generators - 4.61 %; Account 345 - Accessory
16 Electric Equipment - 4.36%; Account 346 - Miscellaneous Power Plant Equipment -
17 4.25%. The group depreciation rates are consistent with the Average Service Life
18 methodology the Companies proposed and the Commission accepted in the Companies'
19 2012 base rate proceedings. The recommended group depreciation rates for each
20 production plant account are based on an interim survivor curve, net salvage percentage,
21 and the facilities' probable retirement date. Each parameter is established with the

⁵ *In the Matter of: Joint Application of Kentucky Utilities Company and Louisville Gas and Electric Company for Approval of Depreciation Rates for Brown Solar, Case No. 2016-00063, Order (April 8, 2016).*

1 understanding of the Solar Share Facilities and the estimates of other comparable
2 facilities across the United States. The overall life span of the facilities is 25 years.

3 **Allocating Costs of the Solar Share Facilities between the Companies**

4 **Q. How will the costs of the Solar Share Facilities be allocated between KU and**
5 **LG&E?**

6 A. The Companies will initially allocate the costs of the Solar Share Facilities 44% to LG&E
7 and 56% to KU based on each Company's number of electric customers. As shown in
8 the market research Mr. Malloy sponsors, this allocation is reasonable because the
9 Companies' customers appear on average to be equally interested in a solar offering,
10 making a cost allocation according to each utility's number of electric customers a
11 sensible approach.

12 **Request to Deviate from Notice-Publication Requirements**

13 **Q. Do the Companies plan to provide notice to all customers of Rider SSP?**

14 A. As described in the testimony of Mr. Malloy, the Companies plan to coordinate with
15 renewable energy supporters such as local and state clubs, associations, and organizations
16 to inform their members about the Solar Share Program, and the Companies will
17 publicize the program by other means as Mr. Malloy describes.

18 But as noted in the Application, the Companies have not published notice of this
19 Application under 807 KAR 5:011 Section 8, which requires notice to be published
20 concerning proposed rate schedules. The Companies are requesting a deviation from this
21 requirement because service under the proposed schedule is purely voluntary and cannot
22 commence without Commission approval. In addition, the estimated cost of publication
23 of notice is \$250,000, and any benefits from publication are relatively small, if any, in
24 comparison to the costs of publication. Granting the Companies' requested deviation

1 would be consistent with the Commission’s order granting the Companies a deviation on
2 the same grounds in Case No. 2015-00355 concerning voluntary electric-vehicle-related
3 rates.⁶

4 **Q. What is your recommendation to the Commission?**

5 A. It is my recommendation that the Commission approve (1) Rider SSP, (2) applying to the
6 Solar Share Facilities the depreciation rates Commission approved for application to the
7 Companies’ Brown Solar Facility, and (3) the Companies’ request to deviate from the
8 notice-publication requirements of 807 KAR 5:011 Section 8. I further respectfully ask
9 the Commission to issue the Companies’ requested order by November 1, 2016.

10 **Q. Does this conclude your testimony?**


11 A. Yes.

⁶ *In the Matter of: Application of Louisville Gas and Electric Company and Kentucky Utilities Company to Install and Operate Electric Charging Stations in their Certified Territories, for Approval of an Electric Vehicle Supply Equipment Rate, an Electric Vehicle Charging Rate, Depreciation Rate, and for a Deviation from the Requirements of Certain Commission Regulations*, Case No. 2015-00355, Order at 10-11 (April 16, 2016) (“However, the Commission finds that LG&E/KU have shown good cause to deviate from the notice requirements, as the cost of providing public notice would outweigh the benefit derived from such notice.”).

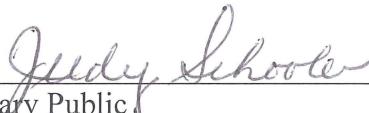
VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Rick E. Lovekamp**, being duly sworn, deposes and says that he is Manager Regulatory Affairs/Tariffs for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the foregoing testimony, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.


Rick E. Lovekamp

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 2nd day of August 2016.


Notary Public (SEAL)

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

APPENDIX A

Rick E. Lovekamp

Manager Regulatory Affairs/Tariffs
LG&E and KU Services Company
220 West Main Street
Louisville, Kentucky 40202
(502) 627-3780

Professional Experience

LG&E and KU Services Company and Louisville Gas and Electric Company

Manager Regulatory Affairs/Tariffs	2015 – Present
Manager Regulatory Affairs	2006 – 2015
Manager Financial Systems	1998 – 2006
Manager Payroll	1997 – 1998
Acting Manager Payroll	1996 – 1997
Accounting Analyst III	1995 – 1996
Accounting Analyst II	1992 – 1995

S.B.S. Packaging Films, Inc.

Founding Partner	1991 – 1992
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Illinois Power Company

Accounting Analyst	1989 – 1991
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Education

Indiana University, Masters of Business Administration
Eastern Illinois University, B.S.B./Accounting

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In Re the Matter of:

**JOINT APPLICATION OF KENTUCKY)
UTILITIES COMPANY AND LOUISVILLE)
GAS AND ELECTRIC COMPANY FOR AN)
OPTIONAL SOLAR SHARE PROGRAM)
RIDER)**

CASE NO. 2016-00274

**DIRECT TESTIMONY OF
WILLIAM STEVEN SEELYE
MANAGING PARTNER
THE PRIME GROUP, LLC**

Filed: August 2, 2016

1 **I. INTRODUCTION AND QUALIFICATIONS**

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

3 A. My name is William Steven Seelye. My business address is 6001 Claymont Village
4 Drive, Suite 8, Crestwood, Kentucky 40014.

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

6 A. I am the managing partner for The Prime Group, LLC, a firm located in Crestwood,
7 Kentucky, providing consulting and educational services in the areas of utility
8 regulatory analysis, revenue requirement support, cost of service, rate design and
9 economic analysis.

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

11 A. I am testifying for Kentucky Utilities (“KU”) and Louisville Gas and Electric
12 Company (“LG&E”), which provide electric service in Kentucky and, in the case of
13 LG&E, both electric and natural gas sales and delivery services in Kentucky.

14 **Q. Please describe your educational and professional background.**

15 A. I received a Bachelor of Science degree in Mathematics from the University of
16 Louisville in 1979. I have also completed 54 hours of graduate level course work in
17 Industrial Engineering and Physics. From 2014 through 2015 I completed 12 hours
18 of Electrical Engineering coursework at the University of Louisville’s Speed School
19 of Engineering (courses in computer design, microcontroller programming, digital
20 signal processing, and computer communication). In addition, from 2012 through
21 2015 I was an instructor at Louisville’s Walden School and a private tutor in
22 advanced placement calculus, linear algebra, pre-calculus, college algebra and

1 differential equations.

2 Concerning my professional background, from May 1979 until July 1996, I
3 was employed by Louisville Gas and Electric Company (“LG&E”). From May 1979
4 until December, 1990, I held various positions within the Rate Department of LG&E.
5 In December 1990, I became Manager of Rates and Regulatory Analysis. In May
6 1994, I was given additional responsibilities in the marketing area and was promoted
7 to Manager of Market Management and Rates. I left LG&E in July 1996 to form The
8 Prime Group, LLC, with two other former employees of LG&E. Since leaving
9 LG&E, I have performed or supervised the preparation of cost of service and rate
10 studies for over 150 investor-owned utilities, rural electric distribution cooperatives,
11 generation and transmission cooperatives, and municipal utilities. Therefore,
12 including my time at LG&E, I have more than 35 years of experience in the utility
13 industry. A more detailed description of my qualifications is included in Exhibit
14 WSS-1.

15 **Q. Have you ever testified before any state or federal regulatory commissions?**

16 A. Yes. I have testified in over 50 regulatory proceedings in 12 different jurisdictions
17 including the Kentucky Public Service Commission ("Commission"). A listing of my
18 testimony in other proceedings is included in Exhibit WSS-1.

19 **Q. What is the purpose of your testimony?**

20 A. The purpose of my testimony is to support the proposed charges for KU and LG&E’s
21 Solar Share Program Standard Rate Rider (Rider SSP).

22 **Q. Please provide an overview of the Companies’ Solar Share Program.**

1 A. As explained in greater detail in Direct Testimony of David Huff, the Companies are
2 planning to construct new solar photovoltaic facilities with a combined capacity of up
3 to approximately 4 MW DC (collectively “Solar Share Facilities”) within their
4 service territories, with each Solar Share Facility to have a capacity of approximately
5 500 kW DC. Under Rider SSP, customers will be able to voluntarily subscribe
6 capacity in the Solar Share Facilities in nominal 250W (quarter-kW) increments.
7 Participating customers will pay an upfront, non-refundable subscription fee of
8 \$40.00 for each quarter kW subscribed. Additionally, participating customers will
9 pay a monthly Solar Capacity Charge of \$6.29 per subscribed quarter-kW. The
10 charge will be the same for both KU and LG&E customers. This monthly charge is
11 designed to recover the fixed costs of the Solar Share Facilities. Customers taking
12 service under Rider SSP will receive a monthly bill credit for their pro-rata share of
13 the AC energy generated from the facilities. This credit is based on the variable cost
14 of production multiplied by the customer's monthly allocated solar generation. The
15 Solar Energy Credit (credit per kWh) will vary depending on which standard rate
16 schedule the customer takes service. Service under Rider SSP will be strictly optional
17 and voluntary.

18 **Q. What is the purpose of the \$40/quarter-kW non-refundable subscription fee?**

19 A. The non-refundable subscription fee is designed to create a financial commitment on
20 the part of customers to remain in the program and to offset the Companies’
21 administrative and customer-education costs. Although the Companies will not
22 require customers subscribing less than 50 kW to sign long-term contracts for service

1 under Rider SSP, the non-refundable Subscription Fee also provides a financial
2 incentive to encourage customers to continue their subscription once they've signed
3 up for the service. Mr. Huff supports the calculation of the Subscription Fee, which is
4 shown in Application Exhibit 9.

5 **Q. Please explain how the proposed Solar Capacity Charge was determined.**

6 A. The \$6.29 Solar Capacity Charge represents the monthly fixed carrying costs
7 (monthly revenue requirements) for a quarter-kW increment of the Solar Share
8 Facilities. It is calculated using standard revenue requirement (cost of service)
9 methodologies that have been accepted by the Kentucky Public Service Commission
10 ("Commission") for both KU and LG&E for years. The carrying charge calculation
11 is based on a projected installed cost of \$1,055,417 for Solar Share Facility No. 1, the
12 first 500kW Solar Share Facility, as described in Mr. Huff's testimony.

13 **Q. What costs are included in the carrying charge calculation?**

14 A. The fixed carrying charges for the Solar Share Facilities include the following
15 standard cost-of-service components: (1) return on net investment (rate base), (2)
16 income taxes, (3) depreciation expenses, (4) operation and maintenance expenses, and
17 (5) property taxes. These are the standard items included in a utility's revenue
18 requirements.

19 **Q. What do you mean by the term "fixed costs" or "fixed charges"?**

20 A. *Fixed costs* or *fixed charges* are costs that do not vary with output. Plant costs are an
21 example of fixed costs because they do not vary with customer usage. Once a piece of
22 equipment is installed to serve a customer then the costs do not vary when a customer

1 uses less energy (or more energy). Fixed costs are generally contrasted with *variable*
2 *costs* (or energy-related costs), which do vary with customer usage. Fuel expenses
3 and variable operation and maintenance expenses are examples of variable costs.

4 **Q. Are all of the costs associated with the Solar Share Facilities fixed?**

5 A. Yes. The costs associated with the Solar Share Facilities consist of plant costs and
6 fixed operation and maintenance expenses. These costs do not vary with the amount
7 of power generated from the solar array. Specifically, the return, depreciation
8 expenses, income taxes, property taxes, and operation and maintenance expenses do
9 not vary with the amount of power that is generated. Therefore, all components of
10 revenue requirements associated with the Solar Share Facilities are *fixed*.

11 **Q. Is this the reason that the Companies are proposing to recover the carrying costs**
12 **as a fixed monthly charge (the Solar Capacity Charge)?**

13 A. Yes. Because all of the costs of the Solar Share Facilities are fixed costs, it is
14 appropriate to recover the costs as a fixed monthly charge. The \$6.29 monthly Solar
15 Capacity Charge is designed to recover the fixed revenue requirements of the Solar
16 Share Facilities.

17 **Q. Have you prepared an exhibit that supports the proposed \$6.29 monthly Solar**
18 **Capacity Charge?**

19 A. Yes. Exhibit WSS-2 shows the calculation of the \$6.29 monthly fixed charge.

20 **Q. Please walk us through the Solar Capacity Charge calculations shown in Exhibit**
21 **WSS-2.**

22 A. Page 1 of the exhibit shows the calculation of the proposed Solar Capacity Charge.

1 The exhibit first calculates the annual fixed revenue requirements for the Solar Share
2 Facilities individually for both KU and LG&E. The reason that the revenue
3 requirements must first be calculated individually for KU and LG&E is that
4 investment tax credits (or “ITC”) are applied differently for the two utilities, as will
5 be discussed below. In calculating the overall revenue requirement, the original cost
6 investment for the Solar Share Facilities is allocated to the Companies on the basis of
7 the average number of each utility’s retail electric customers, resulting in 56%
8 allocated to KU and 44% to LG&E. Therefore, 56% of the original cost investment
9 of \$1,055,417 is allocated to KU and 44% is allocated to LG&E, resulting in an
10 original cost investment of \$591,034 for KU and \$464,383 for LG&E. These
11 amounts are shown on line 5 of page 1 of the exhibit.

12 **Q. You stated earlier that revenue requirements include the following components:
13 return on rate base, income taxes, depreciation expenses, operation and
14 maintenance expenses, and property taxes. How is rate base calculated?**

15 A. Rate base is equal to the original cost investment less the sum of accumulated
16 depreciation, accumulated deferred income taxes, and *for KU only* the unamortized
17 investment tax credits for the project. In the early 1970s, the IRS gave companies
18 two different options for ITC (Internal Revenue Code Section 46(f)(1) or 46(f)(2)).
19 KU and LG&E each selected different options. Once the options were designated,
20 the Companies could not depart from the selected option. Under the ITC option
21 selected by KU, a rate base reduction is made to reflect the unamortized investment
22 tax credits; however, the amortization of the ITC is not deducted from revenue

1 requirements. Under the ITC option selected by LG&E, there is no reduction in rate
2 base for the ITC, but the amortization of the ITC is deducted from revenue
3 requirements. The Commission has long recognized this difference in ITC treatment
4 between the two Companies. The deferred income taxes and investment tax credits
5 for the two utilities are shown on page 2 of Exhibit WSS-2. It should be noted that
6 the deferred tax basis is reduced to reflect the 30% investment tax credit for the solar
7 project. It should also be noted that federal deferred taxes include a 50% bonus
8 depreciation deduction.

9 **Q. How is the return component of revenue requirements determined?**

10 A. The return component of revenue requirements is calculated by multiplying rate base
11 by the Companies' weighted cost of capital. The Companies' weighted costs of
12 capital are shown on page 3 of Exhibit WSS-2. The weighted cost of capital for KU
13 is 7.16%, and for LG&E the weighted cost of capital is 7.08%, both of which assume
14 a 10.00% return on equity.

15 **Q. How are income taxes calculated?**

16 A. Income taxes represent both current and deferred income taxes. Income taxes are
17 calculated by "grossing up" the return on equity by the composite state and federal
18 income tax rate and multiplying the "grossed-up" amount by the composite tax rate.
19 An adjustment is made to reflect the deferred income tax effect of the ITC.

20 **Q. Do investment tax credits and bonus depreciation significantly impact revenue**
21 **requirements?**

22 A. Yes. The federal and state tax codes allow for a 30% ITC on solar projects. The

1 federal tax codes also provide for a 50% bonus depreciation deduction on property
2 placed in service during 2015 through 2017. Both of these tax benefits will result in
3 significantly lower revenue requirements over the useful life of the project than what
4 they would have otherwise been had these substantial tax benefits not been offered.

5 **Q. What operation and maintenance expenses were included for the Solar Share**
6 **Facilities?**

7 A. As discussed in Mr. Huff's testimony, the estimated annual operation and
8 maintenance expenses are projected to be \$36,634 for Solar Share Facility No. 1. As
9 with all other costs, these expenses were allocated to KU and LG&E on a 56%-44%
10 basis.

11 **Q. How were property taxes determined?**

12 A. Property taxes were determined by multiplying the net investment for the project by a
13 property tax rate of 0.15%.

14 **Q. Please describe how total revenue requirements are then used to calculate the**
15 **fixed monthly charge.**

16 A. The total revenue requirements for KU and LG&E were calculated as described
17 earlier, and then the annual revenue requirements for the two utilities are added
18 together for a total revenue requirement of \$151,076. These fixed costs were then
19 divided by 2,000 quarter-kW capacity increments (500 kW x 4 quarter-kW/kW =
20 2,000 quarter-kW), resulting in a monthly fixed charge of \$6.29/quarter-kW/month.
21 This is shown on Exhibit WSS-2, Page 1 of 2, line 20.

22 **Q. Will expected trends in the cost of solar equipment affect the monthly Solar**

1 **Capacity Charge in the future?**

2 A. The trend in the industry is for the installed cost of photovoltaic equipment to come
3 down. If this trend continues, as currently projected in the industry, and as the KU
4 and LG&E construct additional Solar Share Facilities to fulfill customers'
5 subscriptions, the cost of installing additional solar arrays will have the effect of
6 lowering the cost of the Solar Share Facilities per capacity increment subscribed. The
7 lower expected cost of adding new solar panels and the normal effect of increased
8 accumulated depreciation (and other tax effects such as deferred income taxes and
9 ITC) should *over time* create downward pressure on the monthly Solar Capacity
10 Charge barring unexpected and unforeseen cost increases.

11 **Q. Earlier you mentioned that customers taking service under Rider SSP will**
12 **receive a credit for energy generated by the Solar Share Facilities (Solar Energy**
13 **Credits). How were the Solar Energy Credits determined?**

14 A. The Solar Energy Credits are based on KU and LG&E's variable production costs
15 and will be applied to the monthly energy (on an alternating-current or AC basis) per
16 quarter-kW generated by the Solar Share Facilities. For the residential rates, All
17 Electric Schools (AES) (KU only), and Generation Service (GS), the credits were
18 calculated from the results of the Companies' class cost of service studies filed in
19 their most recent general rate cases, as adjusted for the class revenue requirements
20 found reasonable and approved by the Commission's Orders in those proceedings.
21 For Power Service Secondary, Power Service Primary, Time-of-Day Secondary
22 Service, and Time-of-Day Primary Service, which are three-part rates consisting of a

1 customer, charge, energy charge, and demand charge(s), the energy charge set forth in
 2 the rate schedule will be used to determine the credit. Setting the Solar Energy Credit
 3 equal to the energy charge for those rates is appropriate because essentially no
 4 demand costs are recovered through the energy charges for those rates. The
 5 following table shows the credits per kWh for each KU and LG&E rate schedule:

RATE SCHEDULE	RATE	KU	LG&E
Residential Volunteer Fire Department	RS VFD	\$0.03477	\$0.04020
Residential Time-of-Day Energy	RTOD-E		
Residential Time-of-Day Demand	RTOD-D		
All Electric Schools (KU Only)	AES	\$0.03497	N/A
General Service	GS	\$0.03504	\$0.04021
Power Service Secondary	PS	\$0.03572	\$0.04071
Power Service Primary	PS	\$0.03446	\$0.03925
Time-of-Day Secondary Service	TODS	\$0.03527	\$0.04049
Time-of-Day Primary Service	TODP	\$0.03432	\$0.03824

6
 7 For the residential rates, All Electric Schools (AES), and Generation Service (GS),
 8 the energy credits are calculated in Exhibit WSS-3. For the other rates schedules, the
 9 credits reflect the energy charges set forth in the Companies' current tariffs. Like the
 10 Subscription Fee and Solar Capacity Charge, the Solar Energy Credits will be subject
 11 to change in future base-rate cases. The Solar Energy Credits will also be subject to
 12 change in the Companies' two-year Fuel Adjustment Clause review proceedings to
 13 account for fuel costs rolled into base rates.

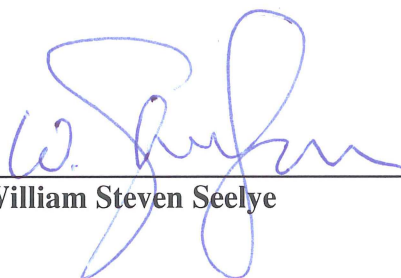
14 **Q. Does this conclude your testimony?**

15 A. Yes, it does.

VERIFICATION

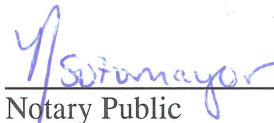
STATE OF FLORIDA)
) SS:
COUNTY OF MARTIN)

The undersigned, **William Steven Seelye**, being duly sworn, deposes and states that he is the Managing Partner with The Prime Group, LLC, and that he has personal knowledge of the matters set forth in the foregoing testimony and exhibits, and the answers contained therein are true and correct to the best of his information, knowledge and belief.



William Steven Seelye

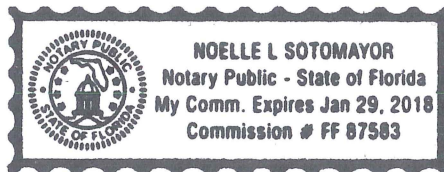
Subscribed and sworn to before me, a Notary Public in and before said County and State, this 16 day of July 2016.



Notary Public (SEAL)

My Commission Expires:

Jan. 29, 2018



WILLIAM STEVEN SEELYE

Summary of Qualifications

Provides consulting services to numerous investor-owned utilities, rural electric cooperatives, and municipal utilities regarding utility rate and regulatory filings, cost of service and wholesale and retail rate designs; and develops revenue requirements for utilities in general rate cases, including the preparation of analyses supporting pro-forma adjustments and the development of rate base.

Employment

Principal and Managing Partner
The Prime Group, LLC
(1996 to 2012) (2015-Present)
(Associate Member 2012-2015)

Provides consulting services in the areas of tariff development, regulatory analysis revenue requirements, cost of service studies, rate design, fuel and power procurement, depreciation studies, lead-lag studies, and mathematical modeling.

Assists utilities with developing strategic marketing plans and implementation of those plans. Provides utility clients assistance regarding regulatory policy and strategy; project management support for utilities involved in complex regulatory proceedings; process audits; state and federal regulatory filing development; cost of service development and support; the development of innovative rates to achieve strategic objectives; unbundling of rates and the development of menus of rate alternatives for use with customers; performance-based rate development.

Prepared retail and wholesale rate schedules and filings submitted to the Federal Energy Regulatory Commission (FERC) and state regulatory commissions for numerous of electric and gas utilities. Performed cost of service or rate studies for over 150 utilities throughout North America. Prepared market power analyses in support of market-based rate filings submitted to the FERC for utilities and their marketing affiliates. Performed business practice audits for electric utilities, gas utilities, and independent transmission

organizations (ISOs), including audits of production cost modeling, retail utility tariffs, retail utility billing practices, and ISO billing processes and procedures.

Instructor in Mathematics
Walden School and Private Instruction
(2012-2015)

Taught advanced placement calculus, linear algebra, pre-calculus, college algebra and differential equations.

Manager of Rates and Other Positions
Louisville Gas & Electric Co.
(May 1979 to July 1996)

Held various positions in the Rate Department of LG&E. In December 1990, promoted to Manager of Rates and Regulatory Analysis. In May 1994, given additional responsibilities in the marketing area and promoted to Manager of Market Management and Rates.

Education

Bachelor of Science Degree in Mathematics, University of Louisville, 1979
66 Hours of Graduate Level Course Work in Electrical and Industrial Engineering and Physics.

Associations

Member of the Society for Industrial and Applied Mathematics

Expert Witness Testimony

Alabama: Testified in Docket 28101 on behalf of Mobile Gas Service Corporation concerning rate design and pro-forma revenue adjustments.

Colorado: Testified in Consolidated Docket Nos. 01F-530E and 01A-531E on behalf of Intermountain Rural Electric Association in a territory dispute case.

FERC: Submitted direct and rebuttal testimony in Docket No. EL02-25-000 et al. concerning Public Service of Colorado's fuel cost adjustment.

Submitted direct and responsive testimony in Docket No. ER05-522-001 concerning a rate filing by Bluegrass Generation Company, LLC to charge reactive power service to LG&E Energy, LLC.

Submitted testimony in Docket Nos. ER07-1383-000 and ER08-05-000 concerning Duke Energy Shared Services, Inc.'s charges for reactive power service.

Submitted testimony in Docket No. ER08-1468-000 concerning changes to Vectren Energy's transmission formula rate.

Submitted testimony in Docket No. ER08-1588-000 concerning a generation formula rate for Kentucky Utilities Company.

Submitted testimony in Docket No. ER09-180-000 concerning changes to Vectren Energy's transmission formula rate.

Submitted testimony in Docket No. ER11-2127-000 concerning transmission rates proposed by Terra-Gen Dixie Valley, LLC.

Submitted testimony in Docket No. ER11-2779 on behalf of Southern Illinois Power Cooperative concerning wholesale distribution service charges proposed by Ameren Services Company.

Submitted testimony in Docket No. ER11-2786 on behalf of Norris Electric Cooperative concerning wholesale distribution service charges proposed by Ameren Services Company.

Florida: Testified in Docket No. 981827 on behalf of Lee County Electric Cooperative, Inc. concerning Seminole Electric Cooperative Inc.'s wholesale rates and cost of service.

Illinois: Submitted direct, rebuttal, and surrebuttal testimony in Docket No. 01-0637 on behalf of Central Illinois Light Company ("CILCO") concerning the modification of interim supply service and the implementation of black start service in connection with providing unbundled electric service.

Indiana: Submitted direct testimony and testimony in support of a settlement agreement in Cause No. 42713 on behalf of Richmond Power & Light regarding revenue requirements, class cost of service studies, fuel adjustment clause and rate design.

Submitted direct and rebuttal testimony in Cause No. 43111 on behalf of Vectren Energy in support of a transmission cost recovery adjustment.

Submitted direct testimony in Cause No. 43773 on behalf of Crawfordsville Electric Light & Power regarding revenue requirements, class cost of service studies, fuel adjustment clause and rate design.

Kansas: Submitted direct and rebuttal testimony in Docket No. 05-WSEE-981-RTS on behalf of Westar Energy, Inc. and Kansas Gas and Electric Company regarding transmission delivery revenue requirements, energy cost adjustment clauses, fuel normalization, and class cost of service studies.

Kentucky: Testified in Administrative Case No. 244 regarding rates for cogenerators and small power producers, Case No. 8924 regarding marginal cost of service, and in numerous 6-month and 2-year fuel adjustment clause proceedings.

Submitted direct and rebuttal testimony in Case No. 96-161 and Case No. 96-362 regarding Prestonsburg Utilities' rates.

Submitted direct and rebuttal testimony in Case No. 99-046 on behalf of Delta Natural Gas Company, Inc. concerning its rate stabilization plan.

Submitted direct and rebuttal testimony in Case No. 99-176 on behalf of Delta Natural Gas Company, Inc. concerning cost of service, rate design and expense adjustments in connection with Delta's rate case.

Submitted direct and rebuttal testimony in Case No. 2000-080, testified on behalf of Louisville Gas and Electric Company concerning cost of service, rate design, and pro-forma adjustments to revenues and expenses.

Submitted rebuttal testimony in Case No. 2000-548 on behalf of Louisville Gas and Electric Company regarding the company's prepaid metering program.

Testified on behalf of Louisville Gas and Electric Company in Case No. 2002-00430 and on behalf of Kentucky Utilities Company in Case No. 2002-00429 regarding the calculation of merger savings.

Submitted direct and rebuttal testimony in Case No. 2003-00433 on behalf of Louisville Gas and Electric Company and in Case No. 2003-00434 on behalf of Kentucky Utilities Company regarding pro-forma revenue, expense and plant adjustments, class cost of service studies, and rate design.

Submitted direct and rebuttal testimony in Case No. 2004-00067 on behalf of Delta Natural Gas Company regarding pro-forma adjustments, depreciation rates, class cost of service studies, and rate design.

Testified on behalf of Kentucky Utilities Company in Case No. 2006-00129 and on behalf of Louisville Gas and electric Company in Case No. 2006-00130 concerning methodologies for recovering environmental costs through base electric rates.

Testified on behalf of Delta Natural Gas Company in Case No. 2007-00089 concerning cost of service, temperature normalization, year-end normalization, depreciation expenses, allocation of the rate increase, and rate design.

Submitted testimony on behalf of Big Rivers Electric Corporation and E.ON U.S. LLC in Case No 2007-00455 and Case No. 2007-00460 regarding the design and implementation of a Fuel Adjustment Clause, Environmental Surcharge, Unwind Surcredit, Rebate Adjustment, and Member Rate Stability Mechanism for Big Rivers Electric Corporation in connection with the unwind of a lease and purchase power transaction with E.ON U.S. LLC.

Submitted testimony in Case No. 2008-00251 on behalf of Kentucky Utilities Company and in Case No. 2008-00252 on behalf of Louisville Gas and Electric Company regarding pro-forma revenue and expense adjustments, electric and gas temperature normalization, jurisdictional separation, class cost of service studies, and rate design.

Submitted testimony in Case No. 2008-00409 on behalf of East Kentucky Power Cooperative, Inc., concerning revenue requirements, pro-forma adjustments, cost of service, and rate design.

Submitted testimony in Case No. 2009-00040 on behalf of Big Rivers Electric Corporation regarding revenue requirements and rate design.

Submitted testimony on behalf of Columbia Gas Company of Kentucky in Case No. 2009-00141 regarding the demand side management program costs and cost recovery mechanism.

Submitted testimony in Case No. 2009-00548 on behalf of Kentucky Utilities Company and in Case No. 2009-00549 on behalf of Louisville Gas and Electric Company regarding pro-forma revenue and expense adjustments, electric and gas temperature normalization, jurisdictional separation, class cost of service studies, and rate design.

Submitted testimony in Case No. 2010-00116 on behalf of Delta Natural Gas Company concerning cost of service, temperature normalization, year-end normalization, depreciation expenses, allocation of the rate increase, and rate design.

Submitted testimony in Case No. 2011-00036 on behalf of Big Rivers Electric Cooperative concerning cost of service, rate design, pro-forma TIER adjustments, temperature normalization, and support of MISO Attachment O.

Submitted testimony on behalf of Columbia Gas Company of Kentucky in Case No. 2016-00107 regarding a tariff application to the continue its energy efficiency and conservation rider and programs.

Maryland Submitted direct testimony in PSC Case No. 9234 on behalf of Southern Maryland Electric Cooperative regarding a class cost of service study.

- Nevada: Submitted direct and rebuttal testimony in Case No. 03-10001 on behalf of Nevada Power Company regarding cash working capital and rate base adjustments.
- Submitted direct and rebuttal testimony in Case No. 03-12002 on behalf of Sierra Pacific Power Company regarding cash working capital.
- Submitted direct and rebuttal testimony in Case No. 05-10003 on behalf of Nevada Power Company regarding cash working capital for an electric general rate case.
- Submitted direct and rebuttal testimony in Case No. 05-10005 on behalf of Sierra Pacific Power Company regarding cash working capital for a gas general rate case.
- Submitted direct and rebuttal testimony in Case Nos. 06-11022 and 06-11023 on behalf of Nevada Power Company regarding cash working capital for a gas general rate case.
- Submitted direct and rebuttal testimony in Case No. 07-12001 on behalf of Sierra Pacific Power Company regarding cash working capital for an electric general rate case.
- Submitted direct testimony in Case No. Docket No. 08-12002 on behalf of Nevada Power Company regarding cash working capital for an electric general rate case.
- Submitted direct testimony in Case No. Docket No. 10-06001 on behalf of Sierra Pacific Power Company regarding cash working capital for an electric general rate cases.
- Submitted direct testimony in Case No. Docket No. 11-06006 on behalf of Nevada Power Company regarding cash working capital for an electric general rate case.
- New Mexico Submitted testimony in support of filing of Advice Notice No. 60 on behalf of Kit Carson Electric Cooperative, Inc.
- Submitted direct testimony in Case No. 15-00375-UT on behalf of Kit Carson Electric Cooperative, Inc. regarding revenue requirements, the need for a rate increase, class cost of service study, apportionment of the revenue increase to the classes of service, and rate design.

Submitted testimony in Advice Notices in Case No. 15-00087-UT on behalf of Jemez Mountain Electric Cooperative in support of tribal right of way cost recovery surcharge mechanisms.

Submitted direct testimony in Case. No. 16-00065-UT on behalf of Kit Carson Electric Cooperative in support of an application for continuation of its fuel and purchased power cost adjustment clause.

Nova Scotia: Testified on behalf of Nova Scotia Power Company in NSUARB – NSPI – P-887 regarding the development and implementation of a fuel adjustment mechanism.

Submitted testimony in NSUARB – NSPI – P-884 regarding Nova Scotia Power Company’s application to approve a demand-side management plan and cost recovery mechanism.

Submitted testimony in NSUARB – NSPI – P-888 regarding a general rate application filed by Nova Scotia Power Company.

Submitted testimony on behalf of Nova Scotia Power Company in the matter of the approval of backup, top-up and spill service for use in the Wholesale Open Access Market in Nova Scotia.

Submitted testimony in NSUARB – NSPI – P-884 (2) on behalf of Nova Scotia Power Company’s regarding a demand-side management cost recovery mechanism.

Virginia: Submitted testimony in Case No. PUE-2008-00076 on behalf of Northern Neck Electric Cooperative regarding revenue requirements, class cost of service, jurisdictional separation and an excess facilities charge rider.

Submitted testimony in Case No. PUE-2009-00029 on behalf of Old Dominion Power Company regarding class cost of service, jurisdictional separation, allocation of the revenue increase, general rate design, time of use rates, and excess facilities charge rider.

Submitted testimony in Case No. PUE-2009-00065 on behalf of Craig-Botetourt Electric Cooperative regarding revenue requirements, class cost of service, jurisdictional separation and an excess facilities charge rider.

Submitted testimony in Case No. PUE-2011-00013 on behalf of Old Dominion Power Company regarding class cost of service, jurisdictional separation, allocation of the revenue increase, and rate design.

Kentucky Utilities Company and Louisville Gas & Electric Company
Monthly Fixed Charge

	<u>KU</u>	<u>LG&E</u>
1 Cost of Solar Facilities	\$ 987,292	
2 Land Cost	\$ 68,125	
3 Company Percentage	56%	44%
Rate Base		
4 Land Cost	\$ 38,150	\$ 29,975
5 Original Cost Investment in Solar	\$ 552,884	\$ 434,409
6 Accumulated Depreciation	22,115	17,376
7 Accumulated Deferred Income Taxes (See Page 2)	95,035	74,670
8 Unamortized Investment Tax Credit (KU Only)	127,163	
9 Net Cost Rate Base (Line 4+ 5 less Sum of Lines 6 thru 8)	<u>\$ 346,720</u>	<u>\$ 372,337</u>
Carrying Charges		
10 Weighted Average Cost of Capital (See Page 3)	7.15%	7.08%
11 Return (Line 9 x Line 10)	\$ 24,805	\$ 26,357
12 Income Taxes (See Page 3)	13,646	13,831
13 Amortization of ITC	-	(5,213)
14 Depreciation Expenses (Line 5 ÷ 25 Years)	22,115	17,376
15 Operation & Maintenance Expenses	20,516	16,119
16 Property Taxes (0.15% x [Line 4 + 5 - Line 6])	853	671
17 Total Revenue Requirements (Carrying Costs) (Sum of Lines 11 thru 16)	<u>\$ 81,936</u>	<u>\$ 69,141</u>
18 Total for LG&E and KU		\$ 151,076
19 Quarter-kW Shares (500 kW x 4 Qtr-kW/kW)		2,000
20 Monthly Fixed Charge		\$ 6.29

Kentucky Utilities Company and Louisville Gas & Electric Company
Income Taxes

	KU	LG&E	
Assumptions			
1	Federal Income Tax Rate	35.0%	35.0%
2	State Income Tax Rate	6.0%	6.0%
3	199 Deduction (KY Only)	6.0%	6.0%
4	Composite	38.7%	38.7%
5	Investment	\$ 552,884	\$ 434,409
6	Investment Tax Credit (%)	30.00%	30.00%
7	Investment Tax Credit (\$)	\$ 165,865	\$ 130,323
8	Deferred Tax Basis Reduction (%)	50.00%	50.00%
9	Deferred Tax Basis Reduction (\$)	\$ 82,933	\$ 65,161
10	Deferred Tax Basis	\$ 469,951	\$ 369,247
Federal Deferred Income Taxes			
11	Bonus Depreciation	\$ 234,976	\$ 184,624
12	Basis for MACRS Depreciation	\$ 234,976	\$ 184,624
13	MACRS Depreciation Rate	20%	20%
14	MACRS Depreciation	\$ 46,995	\$ 36,925
15	Total Tax Depreciation	\$ 281,971	\$ 221,548
16	Book Depreciation	\$ 22,115	\$ 17,376
17	Federal Deferred Income Tax	\$ 89,440	\$ 70,274
State Deferred Income Taxes			
18	Basis for MACRS Depreciation	\$ 469,951	\$ 369,247
19	MACRS Depreciation Rate	20%	20%
20	Total Tax Depreciation	\$ 93,990	\$ 73,849
21	Book Depreciation	\$ 22,115	\$ 17,376
22	State Deferred Income Taxes	\$ 4,312	\$ 3,388
ITC Deferred Income Tax Effect			
23	Investment Tax Credit Basis	\$ 165,865	
24	Life of Investment	25	
25	Amortization of ITC	\$ 6,635	
26	ITC Effect of Basis Reduction		\$ 130,323
27	Depreciation		4.00%
28	Deferred Income Tax Effect	\$ 1,283	\$ 1,008
29	Total Accumulated Deferred Income Taxes	\$ 95,035	\$ 74,670
Rate Base Adjustment For ITC Amortization (KU Only)			
30	ITC Effect of Basis Reduction	\$ 32,067.5	\$ 25,195.9
31	Investment Tax Credit Net	\$ 133,797.6	\$ 105,126.7
32	Amortization of Net ITC	\$ 6,634.6	
33	Unamortized ITC (for KU)	\$ 127,163	
Income Taxes			
34	Return on Equity	\$ 18,328	\$ 19,332
35	ITC Deferred Income Tax Effect	\$ 1,283	\$ 1,008
36	Income Taxes	\$ 13,646	\$ 13,831

Kentucky Utilities Company and Louisville Gas & Electric Company
Weighted Cost of Capital

Kentucky Utilities Company			
Component of Capital	Percent	Rate	Weighted Cost of Capital
Debt	47.14%	3.96%	1.87%
Preferred Equity	0.00%	0.00%	0.00%
Common Equity	52.86%	10.00%	5.29%
			7.15%

Louisville Gas & Electric Company			
Component of Capital	Percent	Rate	Weighted Cost of Capital
Debt	48.08%	3.92%	1.89%
Preferred Equity	0.00%	0.00%	0.00%
Common Equity	51.92%	10.00%	5.19%
			7.08%

Component of Revenue Requirement	Kentucky Utilities Company			Louisville Gas and Electric Company	
	Residential	All Electric Schools	General Service	Residential	General Service
	RS, VFD, RTOD-E, RTOD-D	AES	GS	RS, VFD, RTOD-E, RTOD-D	GS
(1) Rate Base	\$ 27,090,858	\$ 663,202	\$ 8,329,430	\$ 19,485,352	\$ 6,323,848
(2) Rate Base Adjustments	-	-	-	-	-
(3) Rate Base as Adjusted	\$ 27,090,858	\$ 663,202	\$ 8,329,430	\$ 19,485,352	\$ 6,323,848
(4) Rate of Return	6.69%	6.69%	6.69%	6.18%	6.18%
(5) Return	\$ 1,813,682	\$ 44,400	\$ 557,640	\$ 1,203,833	\$ 390,696
(6) Interest Expenses	\$ 618,466	\$ 15,114	\$ 188,812	\$ 476,795	\$ 153,242
(7) Net Income	\$ 1,195,217	\$ 29,286	\$ 368,827	\$ 727,038	\$ 237,454
(8) Income Taxes	\$ 805,926	\$ 19,747	\$ 248,698	\$ 490,236	\$ 160,114
(9) Operation and Maintenance Expenses	\$ 222,480,404	\$ 5,446,465	\$ 68,404,438	\$ 169,971,473	\$ 55,163,170
(10) Expense Adjustments	\$ 12,854	\$ 972	\$ 39,968	\$ 15,112	\$ 16,383
(11) Expense Adjustments - Total	\$ 12,854	\$ 972	\$ 39,968	\$ 15,112	\$ 16,383
(12) Total Cost of Service	\$ 225,112,866	\$ 5,511,585	\$ 69,250,744	\$ 171,680,655	\$ 55,730,363
(13) Less: Misc Revenue - Energy	\$ (9,539,699)	\$ (205,173)	\$ (2,459,015)	\$ -	\$ -
(14) Less: Misc Revenue - Other	(107,048)	(697)	(20,248)	(157,799)	(46,272)
(15) Less: Misc Revenue - Total	\$ (9,646,747)	\$ (205,871)	\$ (2,479,263)	\$ (157,799)	\$ (46,272)
(16) Net Cost of Service	\$ 215,466,119	\$ 5,305,714	\$ 66,771,480	\$ 171,522,857	\$ 55,684,091
(17) Billing Units	6,197,488,349	151,718,556	1,905,496,852	4,267,045,465	1,384,842,707
(18) Unit Costs	\$ 0.03477	\$ 0.03497	\$ 0.03504	\$ 0.04020	\$ 0.04021

Source: Cost of Service studies filed in Case No. 2014-00371 and 2014-00372, adjusted for revenue requirement authorized in Commission Orders.