# **COMMONWEALTH OF KENTUCKY**

# **BEFORE THE PUBLIC SERVICE COMMISSION**

## In the Matter of:

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) CASE NO. 2015-00355
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## APPLICATION

Pursuant to 807 KAR 5:001, Section 14, and 807 KAR 5:011, Section 6(2)(b), Louisville Gas and Electric Company ("LG&E") and Kentucky Utilities Company ("KU") (collectively "the Companies") jointly apply to the Kentucky Public Service Commission ("Commission") for authorization to install, serve, and operate electric vehicle charging stations in their respective certified territories, approval of their proposed Electric Vehicle Supply Equipment Rider, Electric Vehicle Supply Equipment Rate, and Electric Vehicle Charging Rate, approval of a depreciation rate for electric vehicle charging stations, and for deviations from the requirements of certain Commission regulations.

In support of this Application, the Companies respectfully state:

1. <u>Addresses:</u> Applicant LG&E's full name and post office address is: Louisville Gas and Electric Company, 220 West Main Street, Post Office Box 32010, Louisville, Kentucky 40202.

Applicant KU's full name and business address is: Kentucky Utilities Company, One Quality Street, Lexington, Kentucky 40507. KU's mailing address is Kentucky Utilities Company c/o Louisville Gas and Electric Company, 220 West Main Street, Post Office Box 32010, Louisville, Kentucky 40202.

The Companies may be reached by electronic mail at the electronic mail addresses of their counsel set forth below.

2. LG&E is incorporated in the Commonwealth of Kentucky and LG&E attests that it is in good corporate standing. LG&E was incorporated in Kentucky on July 2, 1913.

3. KU is incorporated in the Commonwealth of Kentucky and the Commonwealth of Virginia and KU attests that it is in good corporate standing in both states. KU was incorporated in Kentucky on August 17, 1912, and in Virginia on November 26, 1991.

4. KU is a public utility, as defined in KRS 278.010(3)(a), engaged in the electric business. KU generates and purchases electricity, and distributes and sells electricity at retail in the following counties in Central, Northern, Southeastern, and Western Kentucky:

Edmonson	Jessamine	Ohio
Estill	Knox	Oldham
Fayette	Larue	Owen
Fleming	Laurel	Pendleton
Franklin	Lee	Pulaski
Fulton	Lincoln	Robertson
Gallatin	Livingston	Rockcastle
Garrard	Lyon	Rowan
Grant	Madison	Russell
Grayson	Marion	Scott
Green	Mason	Shelby
Hardin	McCracken	Spencer
Harlan	McCreary	Taylor
Harrison	McLean	Trimble
Hart	Mercer	Union
Henderson	Montgomery	Washington
Henry	Muhlenberg	Webster
Hickman	Nelson	Whitley
Hopkins	Nicholas	Woodford
-		
	Estill Fayette Fleming Franklin Fulton Gallatin Garrard Grant Grayson Green Hardin Harlan Harrison Hart Henderson Henry Hickman	EstillKnoxFayetteLarueFlemingLaurelFranklinLeeFultonLincolnGallatinLivingstonGarrardLyonGrantMadisonGrapsonMarionGreenMasonHardinMcCrackenHarlanMcCrearyHartMercerHendersonMontgomeryHenryMuhlenbergHickmanNelson

5. LG&E is a public utility, as defined in KRS 278.010(3)(a), engaged in the electric and gas business. LG&E generates and purchases electricity, and distributes and sells electricity at retail in Jefferson County and portions of Bullitt, Hardin, Henry, Meade, Oldham, Shelby, Spencer, and Trimble Counties. LG&E also purchases, stores and transports natural gas and distributes and sells natural gas at retail in Jefferson County and portions of Barren, Bullitt, Green, Hardin, Hart, Henry, Larue, Marion, Meade, Metcalfe, Nelson, Oldham, Shelby, Spencer, Trimble, and Washington Counties.

6. Pursuant to KRS 278.380, the Companies waive any right to service of Commission orders by mail for purposes of this proceeding only.<sup>1</sup> Copies of all orders, pleadings and other communications related to this proceeding should be directed to:

Edwin "Ed" R. Staton Vice President, State Regulation and Rates LG&E and KU Services Company 220 West Main Street Louisville, Kentucky 40202 ed.staton@lge-ku.com

Allyson K. Sturgeon Senior Corporate Attorney LG&E and KU Services Company 220 West Main Street Louisville, Kentucky 40202 allyson.sturgeon@lge-ku.com

Kendrick R. Riggs Gerald E. Wuetcher Stoll Keenon Ogden PLLC 2000 PNC Plaza 500 West Jefferson Street Louisville, Kentucky 40202 kendrick.riggs@skofirm.com gerald.wuetcher@skofirm.com

<sup>&</sup>lt;sup>1</sup> On October 27, 2015, the Companies gave notice to the Commission pursuant to 807 KAR 5:001, Section 8, of their intent to file this application and their use of electronic filing procedures.

7. According to the Electric Power Research Institute, over 15,000 electric vehicles have been registered in the state of Kentucky since 2010. Though they represent only 2.4 percent of the total number of registered vehicles in Kentucky, the purchase and use of electric vehicles in Kentucky is increasing. The U.S. Department of Energy's Alternative Fuels Data Center states that "[t]o widely accept the use of plug-in hybrid electric vehicles (PHEVs) and all electric vehicles (EVs), consumers and fleets need a developed infrastructure of charging stations."<sup>2</sup> It reports that there are currently only 30 public charging stations within Kentucky. Twenty-one of these stations are located within the Companies' certified territories. Of the 21 stations, 12 stations are located at automotive dealerships.<sup>3</sup> News media within the Companies' certified territories have reported on the demand for and limited number of public charging stations.<sup>4</sup> In recent years, the Companies have been informally approached by customers and local governments about offering electric vehicle charging stations.

8. To meet these and future customer inquiries, the Companies propose to make available electric vehicle charging stations at locations that will permit the charging of electric vehicles via street parking, parking lots, and other outdoor areas. The Companies will offer their non-residential customers the opportunity to host such stations. Station site hosts will be required to commit to hosting a station for a five-year period. The Companies will own and maintain each station. The station site host will pay for the station's installation cost and a monthly fee. The station site host will have the option of assessing a fee to station users. The Companies further seek the option of installing and operating charging stations and providing charging services directly to the public for a tariffed fee.

<sup>&</sup>lt;sup>2</sup> U.S. Department of Energy Alternative Fuels Data Center, *Developing Infrastructure to Charge Plug-In Electric Vehicles*, http://www.afdc.energy.gov/fuels/electricity\_infrastructure.html (last visited Nov. 8, 2015).

<sup>&</sup>lt;sup>3</sup> U.S. Department of Energy Alternative Fuels Data Center, *Electric Vehicle Charging Station Locations*, http://www.afdc.energy.gov/fuels/electricity\_locations.html (last visited Nov. 8, 2015)

<sup>&</sup>lt;sup>4</sup> See, e.g., Grace Schneider, *Electric Vehicle Owners Look to Plug into Renewables*, Courier-Journal, May 25, 2015 at A4, *available at* http://search.proquest.com/docview/1682875549?accountid=3730.

9. The Companies propose to provide electric vehicle charging stations under one of the following: Rate Electric Vehicle Supply Equipment Rider ("EVSE-R"), Rate Electric Vehicle Supply Equipment ("EVSE"), and Rate Electric Vehicle Charging ("EVC"). The proposed tariff sheets for these rates are found at Exhibit 1 of this Application.

a. Rate Rider EVSE-R applies if a charging station is installed and connected to facilities that are located on the station site host's side of the point of delivery. Because the charging station is located on the site host's side of the point of deliver, electricity provided to the charging station will be reflected in the site host's meter reading. Schedule EVSE-R imposes a monthly fee that recovers the charging unit's cost, maintenance expenses, taxes, and a return on the Companies' investment. The site host will pay the charging station's installation costs at the time of installation. These costs will vary depending upon the site location.

b. Rate EVSE applies if a charging station is installed and directly connected to the Companies' facilities. It provides for a monthly fee for the Companies to recover the charging station's cost, maintenance expenses, taxes, a return on the Companies' investment, and the cost of electricity that charging station is expected to use. The site host will pay the charging station's installation costs at the time of installation. These costs will vary depending upon the site location.

c. Rate EVC will apply if the Companies provide charging services through a public charging station directly to the public. It sets forth an hourly fee for charging services that is designed to recover the charging station's cost, maintenance expenses, taxes, a return on the Companies' investment, and the cost of electricity (including fuel adjustment and environmental charges).

10. These services will not be part of the Companies' Demand-Side Management Programs. No customer incentives will be offered. The full cost of charging stations, including

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maintenance, installation, and energy usage, will be borne by those who request the stations or who use the charging service and will be recovered through the proposed rate schedules.

11. Given the nature of the proposed services and the method of their delivery, the Companies request deviations from the following Commission regulations for the proposed services:

a. 807 KAR 5:006, Section 14(4), which generally requires a new service to be connected within 72 hours or close of the next business day. Due to the difficulty in properly procuring, locating and installing charging stations, more than 72 hours will be necessary to provide service under Rider EVSE-R or Rate EVSE. Moreover, because the proposed services are voluntary in nature and the lack of such service will not have an immediate effect on the health, safety, well-being or financial welfare of the applicant, permitting a longer time period to make the service connection is appropriate and reasonable.

b. 807 KAR 5:006, Section 7, which establishes certain requirements regarding the content and issuance of bills for utility service. Persons receiving service under Rate EVC will be billed at the time of service, but will not receive a printed bill. Instead charging station users will be able to view billing information on the charging station's video display. Examples of the LCD display are found in David Huff's Direct Testimony. Billing information will include the rate, the duration of the charging session, the total amount of the bill, and the total taxes and fees. It will not include an itemization of the taxes and fees assessed on the service. The LCD display will show a message that states the rate of each applicable tax or fee, and the amount of such tax or fee assessed for a one-hour charging session. This information will enable an EVC customer to determine the amount of each specific tax.

c. 807 KAR 5:011, Section 8, which requires publication of notice of a rate adjustment three times in a newspaper of general circulation when proposing an adjustment of an

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existing rate. The Companies propose to annually adjust Rate EVC to reflect changes in the fuel adjustment clause charges and environmental cost recovery surcharges. As the amount of such adjustments will be very small and as the cost of publication will be significant, the Companies proposed to use alternative means to notify users of Rate EVC service of any rate adjustment.

12. The proposed services are expected to produce several benefits. They will likely increase the number of charging stations within LG&E's service area and thus benefit those who reside, work or travel through that area and drive an electric vehicle and are in need of a place to charge their vehicles. They will enable non-residential customers who wish to host a charging station but lack the technical or operational expertise to install or operate such stations to do so. They will enable the Companies to collect information on the electric vehicle charging market within its service area, to better understand customer preferences and acceptance, such as optimal site selection, driver charging habits, and station installation and maintenance costs, and to assess the potential market for charging stations. The Companies propose to file an annual report on these services with the Commission for the first three years in which the services are provided. At a minimum, this report will cover the number of stations installed under each tariff, their location, and average usage.

13. Neither KRS 278.020 nor 807 KAR 5:001, Section 15 requires the Companies to obtain a Certificate of Public Convenience and Necessity to provide the proposed services or to install the charging stations. Each Company will install in its certified territory no more than ten charging stations to provide service under Rate EVC. The total capital outlay involved with such installations is not expected to exceed \$500,000 and will neither materially affect the financial condition of either Company nor result in increased charges to their customers. Moreover, as to charging stations operating under Rider EVSE-R or Rate EVSE, station site hosts will pay all

station installation costs when charging station is installed and will pay at least one-half of the cost of the charging station over the term of the service agreement.

14. The Companies further request the Commission's approval of the depreciation rates set forth in Application Exhibit 2, which the Companies will use to depreciate a charging station upon the charging station's installation. If the Commission approves them, the Companies will use such depreciation rates until the Commission approves new depreciation rates for the Companies.

15. The Companies requested John J. Spanos of Gannett Fleming, Inc., the depreciation expert who testified on the Companies' behalf in their most recent base rate and depreciation proceedings, to develop depreciation rates for the charging stations. These rates are the rates set forth in Application Exhibit 2 and are consistent with the depreciation methodologies that the Commission has previously approved. The Companies proposed the use of these rates for ratemaking and accounting purposes.

16. The Companies are supporting this application with the following testimony:

- Testimony of David Huff, Director, Customer Energy Efficiency and Smart Grid Strategy for LG&E and KU Services Company. In his testimony, Mr. Huff describes services and addresses the reasons the Companies are proposing the EVSE-R, EVSE, and EVC schedules. Mr. Huff's Testimony is attached as Exhibit 3.
- Testimony of Rick E. Lovekamp, Manager, Regulatory Affairs/Tariffs for LG&E and KU Services Company. Mr. Lovekamp sponsors the proposed tariff sheets, explains terms of the proposed tariff sheets and describes how the rates set forth in those sheets were derived. Mr. Lovekamp's Testimony is attached as Exhibit 4.

17. Pursuant to KRS 278.180 and 807 KAR 5:006, Section 9, the Companies have provided statutory notice of the proposed rate schedules to the Commission by the filing of this

Application with the Commission at least 30 days prior to the proposed rate schedules' effective date.

18. As the proposed service is voluntary and, if approved, will not affect the amount that any customer pays for electric service or the quality, delivery, or rendering of a customer's service until that customer expressly requests such service, 807 KAR 5:006, Section 8 does not required notice to the public of the proposed rate schedules. While no notice to the public is required, the Companies will, within five business days of the filing of this Application, post on their websites a copy of such notice and a hyperlink to the location on the Commission's Web site where this Application is available.

19. Should the Commission determine that 807 KAR 5:011, Section 8 requires notice to the public of the proposed rate schedules, the Companies request a deviation from the requirements of that regulation. Given that service under the proposed schedules is purely voluntary and cannot commence without Commission approval, that the estimated cost of publication of notice is \$250,000, and that any benefits from publication are relatively small in comparison to the costs of publication, good cause exists for such deviation.

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WHEREFORE, the Companies respectfully request the Commission to enter an order that:

1. Authorizes the Companies to install and operate electric charging stations in their respective certified territories;

2. Approves the proposed Rider EVSE-R and Schedules EVSE and EVC;

3. Approves the proposed depreciation rate for electric vehicle charging stations;

4. Authorizes a deviation from 807 KAR 5:006, Section 7, 807 KAR 5:006, Section 14(4), and 807 KAR 5:011, Section 11, as those regulations apply to services that are provided under the proposed Rider EVSE-R and Schedules EVSE and EVC and to the extent that a deviation is necessary; and,

5. If the Commission determines that 807 KAR 5:011, Section 8 is applicable to this Application, authorizes a deviation from the requirements of that regulation.

Dated: November 13, 2015

Respectfully submitted,

Kendrick R. Riggs Gerald E. Wuetcher Stoll Keenon Ogden PLLC 2000 PNC Plaza 500 West Jefferson Street Louisville, Kentucky 40202 Telephone: (502) 333-6000 Fax: (502) 627-8722 kendrick.riggs@skofirm.com

Allyson K. Sturgeon Senior Corporate Attorney LG&E and KU Services Company 220 West Main Street Louisville, KY 40202 Telephone: (502) 627-2088 Fax: (502) 627-3367 allyson.sturgeon@lge-ku.com

Counsel for Louisville Gas and Electric Company and Kentucky Utilities Company

## **CERTIFICATE OF SERVICE**

In accordance with 807 KAR 5:001, Section 8, I certify that the November 13, 2015 electronic filing of this Application is a true and accurate copy of the same document being filed in paper medium; that the electronic filing was transmitted to the Commission on November 13, 2015; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that an original paper medium of this Application will be delivered to the Commission on or before November 17, 2015. I further certify that a true and correct copy of this Application was served on the following persons on November 13, 2015, by electronic mail:

Gregory Dutton Gregory.Dutton@ky.gov Lawrence W. Cook Larry.Cook@ky.gov Assistant Attorneys General Office of the Attorney General Office of Rate Intervention 1024 Capital Center Drive, Suite 200 Frankfort, KY 40601-8204 Michael L. Kurtz Mkurtz@BKLlawfirm.com Boehm, Kurtz & Lowry 36 East Seventh Street, Suite 1510 Cincinnati, OH 45202

Counsel for Louisville Gas and Electric Company and Kentucky Utilities Company

# PROPOSED TARIFFS LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY

Exhibit 1

# Louisville Gas and Electric Company

#### GENERAL INDEX Standard Electric Rate Schedules – Terms and Conditions

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DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Louisville, Kentucky

# GENERAL INDEX Standard Electric Rate Schedules – Terms and Conditions

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DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Louisville, Kentucky

#### P.S.C. Electric No. 10, Original Sheet No. 41

#### **Standard Rate**

#### EVSE Electric Vehicle Supply Equipment

#### APPLICABLE

In all territory served.

#### **AVAILABILITY OF SERVICE**

Available to customers to be served or currently being served under Company's Standard Rate Schedules GS (with energy usage of 500 kWh or higher per month), PS, TODS, TODP, RTS, and FLS, for the purpose of charging electrical vehicles.

Charging station is offered under the conditions set out hereinafter for electric vehicle supply equipment such as, but not limited to, the charging of electric vehicles via street parking, parking lots, and other outdoor areas.

A basic underground service includes the charging station, existing transformer (or secondary pedestal) and 208/240 volt single-phase service, and necessary conductor and equipment typical of an underground service drop. Said service drop can originate from underground or overhead equipment. Company will furnish, own, install, and maintain the charging unit and cable. Customer will furnish, own and install all duct systems and associated equipment.

Where the location of existing facilities is not suitable, and Customer requests service under these conditions, Company may furnish the requested facilities at an additional charge to be determined under the Excess Facilities Rider.

Company will coordinate charging station installation with the Company's current charging station supplier and the Customer. Customer shall be responsible for the charging equipment installation costs.

Service will be provided under written contract, signed by Customer prior to service commencing.

RATE	Single Charger	Dual Charger
Monthly Charging Unit Fee:	\$176.13	\$293.10

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Louisville, Kentucky

# Louisville Gas and Electric Company

#### P.S.C. Electric No. 10, Original Sheet No. 41.1

#### EVSE Electric Vehicle Supply Equipment

#### ADJUSTMENT CLAUSES

Standard Rate

The bill amount computed at the charges specified above shall be increased or decreased in accordance with the following:

Fuel Adjustment Clause	Sheet No. 85
Off-System Sales Adjustment Clause	Sheet No. 88
Environmental Cost Recovery Surcharge	Sheet No. 87
Franchise Fee	Sheet No. 90
School Tax	Sheet No. 91

#### **ENERGY CONSUMPTION**

Determination of energy applies to the non-metered charging station. The applicable fuel clause charge or credit will be based on an annual 5,852 kilowatt-hours.

#### PAYMENT

The EVSE charges shall be incorporated with the bill for electric service and will be subject to the same payment provisions.

#### **TERM OF CONTRACT**

For a fixed term of not less than five (5) years and for such time thereafter until terminated by either party giving thirty (30) days prior written notice. Cancellation by Customer prior to the expiration of the initial term will require Customer to pay to Company a lump sum equal to the monthly charge times the number of months remaining on the initial term of the contract.

### **TERMS AND CONDITIONS**

- 1. Service shall be furnished under Company's Terms and Conditions in this Tariff Book, except as set out herein.
- Company may decline to install equipment and provide service thereto in locations deemed by Company as unsuitable for installation.
- 3. The location of each point of delivery of energy supplied hereunder shall be mutually agreed upon by Company and the Customer. Where attachment of Customer's devices and/or equipment is made to Company facilities, Customer must have an attachment agreement with Company.
- 4. All service and maintenance will be performed only during regular scheduled working hours of Company. Customer will be responsible for reporting outages and other operating faults.

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Louisville, Kentucky

Issued by Authority of an Order of the Public Service Commission in Case No. 2015-00355 dated \_\_\_\_\_ Ν

# Louisville Gas and Electric Company

#### P.S.C. Electric No. 10, Original Sheet No. 41.2

Standard Rate	EVSE
	Electric Vehicle Supply Equipment

- 5. Customer shall be responsible for the cost of charging station replacement or repairs where such replacement or repairs are caused from willful damage, vandalism, or causes other than normal wear and tear. Company may decline to provide or to continue service in locations where, in Company's judgment, such facilities will be subject to unusual hazards or risk of damage.
- 6. If Customer requests the removal of an existing charging station, including, but not limited to, poles, or other supporting facilities that were in service less than twenty (20) years, and requests installation of replacement facilities within five (5) years of removal, Customer agrees to pay to Company its cost of labor to install the replacement facilities.
- 7. Temporary suspension of charging station is not permitted. Upon permanent discontinuance of service, charging station and other supporting facilities solely associated with providing service under this tariff, except underground facilities and pedestals, will be removed.
- 8. Electric energy furnished under Company's standard application or contract is for the use of Customer only and Customer shall not resell such energy to any other person, firm, or corporation on Customer's premises or for use on any other premises. This does not preclude Customer from allocating Company's billing to Customer to any other person, firm, or corporation provided the sum of such allocations does not exceed Company's billing.
- 9. Notwithstanding the provisions of 807 KAR 5:006, Section 14(4), a reasonable time shall be allowed subsequent to Customer's service application to enable Company to construct or install the facilities required for such service. In order that Company may make suitable provision for enlargement, extension or alteration of its facilities, each applicant for service shall furnish Company with realistic estimates of prospective electricity requirements.
- 10. Customer shall agree to permit Company to obtain specific charging station usage data directly from the Charging Station Supplier.

### **MINIMUM CHARGE**

The Monthly Charging Unit Fee shall be the minimum charge.

### DUE DATE OF BILL

Customer's payment will be due within sixteen (16) business days (no less than twenty-two (22) calendar days) from the date of the bill.

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Louisville, Kentucky

Issued by Authority of an Order of the Public Service Commission in Case No. 2015-00355 dated \_\_\_\_\_ N

#### P.S.C. Electric No. 10, Original Sheet No. 42

#### **Standard Rate**

#### EVC Electric Vehicle Charging

#### APPLICABLE

In all territory served.

### AVAILABILITY OF SERVICE

Available to operators of licensed electric vehicles (EV). EV Customer is defined as the party who owns/operates a licensed electric vehicle, connects that vehicle for the purpose of receiving vehicle charging service to a Company-owned charging station providing service under this schedule, and willingly accepts the Company's fee structure for the vehicle charging service. EVC is offered under the conditions set out hereinafter for the purpose of charging EVs via street parking, parking lots, and other outdoor areas. EV Customers' charging systems must meet applicable charging standards.

Company assumes no liability or responsibility for any potential automotive-related incidents that occur at specific charging locations. EV Customer accepts all restrictions related to the temporary parking space.

#### RATE

Fee Per Hour: \$2.85

Charging Unit Fee includes an Energy Charge and Adjustment Clauses

Fee Per Hour is assessed at the start of charging, and at the beginning of each subsequent hour.

#### **ADJUSTMENT CLAUSES**

The bill amount computed at the charges specified above includes the following:

Fuel Adjustment Clause	Sheet No. 85
Off-System Sales Adjustment Clause	Sheet No. 88
Environmental Cost Recovery Surcharge	Sheet No. 87

The bill amount specified above will be increased in accordance with the following:

Franchise Fee School Tax Sheet No. 90 Sheet No. 91

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Louisville, Kentucky

Issued by Authority of an Order of the Public Service Commission in Case No. 2015-00355 dated \_\_\_\_\_ N

# Louisville Gas and Electric Company

#### P.S.C. Electric No. 10, Original Sheet No. 42.1

Ν

#### **Standard Rate**

#### EVC Electric Vehicle Charging

#### TERMS AND CONDITIONS

- 1. Service shall be furnished under the following Terms and Conditions and excludes the Company's Terms and Conditions set out in this Tariff Book.
- EV Customer is required to pay by means of credit card or Charging Station Supplier account.
  a. Credit Card must be chip enabled (if card is not chip enabled, Customer must call the Charging Station Supplier at toll-free number provided at station), or
  b. EV Customer is required to open a Charging Station Supplier account and accepts all terms and conditions of Charging Station Supplier.
- 3. Company will exercise reasonable care and diligence in an endeavor to supply service continuously and without interruption but does not guarantee continuous service and shall not be liable for any loss or damage resulting from interruption, reduction, delay, or failure of electric service not caused by the willful negligence of Company, or resulting from any cause or circumstance beyond the reasonable control of Company.
- 4. Company is merely a supplier of electricity delivered to the point of connection of Company's and charging station facilities, and shall not be liable for and shall be protected and held harmless for any injury or damage to persons or property of EV Customer or of third persons resulting from the presence, use or abuse of electricity or resulting from defects in or accidents to any of EV Customer's wiring, equipment, or vehicle, or resulting from any cause whatsoever other than the negligence of Company.
- 5. In no event shall Company have any liability to EV Customer, the owner of a vehicle receiving charging service, or any other party affected by the electrical service to EV Customer for any consequential, indirect, incidental, special, or punitive damages, and such limitation of liability shall apply regardless of claim or theory. In addition, to the extent that Company acts within its rights as set forth herein and/or any applicable law or regulation, Company shall have no liability of any kind to EV Customer, the owner of a vehicle receiving charging service, or any other party. In the event that EV Customer's use of Company's service causes damage to Company's property or injuries to persons, EV Customer shall be responsible for such damage or injury and shall indemnify, defend, and hold Company harmless from any and all suits, claims, losses, and expenses associated therewith.
- 6. By connecting a vehicle to the Charging Station, the EV Customer represents that the EV Customer is authorized to operate that vehicle and to connect it to the Charging Station for the purpose of receiving vehicle charging service.
- 7. All service and maintenance will be performed only during regular scheduled working hours of Company.

DATE OF ISSUE:

DATE EFFECTIVE: \_\_\_\_\_

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Louisville, Kentucky

Ν

# Standard Rate Rider

EVSE-R Electric Vehicle Supply Equipment

#### APPLICABLE

In all territory served.

#### **AVAILABILITY OF SERVICE**

Available as a rider to customers to be served or currently being served under Company's Standard Rate Schedules GS (with energy usage of 500 kWh or higher per month), PS, TODS, TODP, RTS, and FLS, for the purpose of charging electrical vehicles, whereby the Customer installs and owns facilities on its side of the point of delivery of the energy supplied hereunder necessary to serve Company-provided charging station.

Charging station under this rider is offered under the conditions set out hereinafter for electric vehicle supply equipment such as, but not limited to, the charging of electric vehicles via street parking, parking lots, and other outdoor areas. Customer is responsible for providing the appropriate voltage levels and connections necessary to operate Company-provided charger.

Company will coordinate charging station installation with the Company's current charging station supplier and the Customer. Customer shall be responsible for the charging equipment installation costs.

Service will be provided under written contract, signed by customer prior to service commencing.

RATE	Single Charger	Dual Charger
Monthly Charging Unit Fee:	\$132.49	\$205.83

#### ADJUSTMENT CLAUSES

The bill amount computed at the charges specified above shall be increased or decreased in accordance with the following:

Franchise Fee	Sheet No. 90
School Tax	Sheet No. 91

#### PAYMENT

The EVSE-R charges shall be incorporated with the bill for electric service and will be subject to the same payment provisions.

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Louisville, Kentucky

Issued by Authority of an Order of the Public Service Commission in Case No. 2015-00355 dated \_\_\_\_\_

# Louisville Gas and Electric Company

## **Standard Rate Rider**

#### EVSE-R Electric Vehicle Supply Equipment

#### **TERM OF CONTRACT**

For a fixed term of not less than five (5) years and for such time thereafter until terminated by either party giving thirty (30) days prior written notice. Cancellation by Customer prior to the expiration of the initial term will require Customer to pay to Company a lump sum equal to the monthly charge times the number of months remaining on the initial term of the contract.

#### **TERMS AND CONDITIONS**

- 1. Service shall be furnished under Company's Terms and Conditions set out in this Tariff Book, except as set out herein.
- 2. Company may decline to install equipment and provide service thereto in locations deemed by Company as unsuitable for installation.
- 3. The location of each point of delivery of energy supplied hereunder shall be mutually agreed upon by Company and the customer. Where attachment of Customer's devices and/or equipment is made to Company facilities, Customer must have an attachment agreement with Company.
- 4. All service and maintenance will be performed only during regular scheduled working hours of Company. Customer will be responsible for reporting outages and other operating faults.
- 5. Customer shall be responsible for the cost of charging station replacement or repairs where such replacement or repairs are caused from willful damage, vandalism, or causes other than normal wear and tear. Company may decline to provide or to continue service in locations where, in Company's judgment, such facilities will be subject to unusual hazards or risk of damage.
- 6. If Customer requests the removal of an existing charging station, including, but not limited to, poles, or other supporting facilities that were in service less than twenty years, and requests installation of replacement facilities within 5 years of removal, Customer agrees to pay to Company its cost of labor to install the replacement facilities.
- 7. Temporary suspension of charging station is not permitted. Upon permanent discontinuance of service, charging station and other supporting facilities solely associated with providing service under this tariff, except underground facilities and pedestals, will be removed.

#### DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Louisville, Kentucky

#### EVSE-R Electric Vehicle Supply Equipment

- 8. Electric energy furnished under Company's standard application or contract is for the use of Customer only and Customer shall not resell such energy to any other person, firm, or corporation on Customer's premises or for use on any other premises. This does not preclude Customer from allocating Company's billing to Customer to any other person, firm, or corporation provided the sum of such allocations does not exceed Company's billing.
- 9. Notwithstanding the provisions of 807 KAR 5:006, Section 14(4), a reasonable time shall be allowed subsequent to Customer's service application to enable Company to construct or install the facilities required for such service. In order that Company may make suitable provision for enlargement, extension or alteration of its facilities, each applicant for service shall furnish Company with realistic estimates of prospective electricity requirements.
- 10. Customer shall agree to permit Company to obtain specific charging station usage data directly from the Charging Station Supplier.

#### MINIMUM CHARGE

**Standard Rate Rider** 

As determined by this Rider and the Rate Schedule to which it is attached.

#### DUE DATE OF BILL

Customer's payment will be due within sixteen (16) business days (no less than twenty-two (22) calendar days) from the date of the bill.

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Louisville, Kentucky

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ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

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## GENERAL INDEX Standard Electric Rate Schedules – Terms and Conditions

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DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

Ν

Standard Rate

#### EVSE Electric Vehicle Supply Equipment

#### APPLICABLE

In all territory served.

## AVAILABILITY OF SERVICE

Available to customers to be served or currently being served under Company's Standard Rate Schedules GS (with energy usage of 500 kWh or higher per month), AES, PS, TODS, TODP, RTS, and FLS, for the purpose of charging electrical vehicles.

Charging station is offered under the conditions set out hereinafter for electric vehicle supply equipment such as, but not limited to, the charging of electric vehicles via street parking, parking lots, and other outdoor areas.

A basic underground service includes the charging station, existing transformer (or secondary pedestal) and 208/240 volt single-phase service, and necessary conductor and equipment typical of an underground service drop. Said service drop can originate from underground or overhead equipment. Company will furnish, own, install, and maintain the charging unit and cable. Customer will furnish, own and install all duct systems and associated equipment.

Where the location of existing facilities is not suitable, and Customer requests service under these conditions, Company may furnish the requested facilities at an additional charge to be determined under the Excess Facilities Rider.

Company will coordinate charging station installation with the Company's current charging station supplier and the Customer. Customer shall be responsible for the charging equipment installation costs.

Service will be provided under written contract, signed by Customer prior to service commencing.

RATE	Single Charger	Dual Charger
Monthly Charging Unit Fee:	\$180.83	\$302.41

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ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

#### Standard Rate

#### EVSE Electric Vehicle Supply Equipment

#### ADJUSTMENT CLAUSES

The bill amount computed at the charges specified above shall be increased or decreased in accordance with the following:

Fuel Adjustment Clause Off-System Sales Adjustment Clause Environmental Cost Recovery Surcharge Franchise Fee School Tax Sheet No. 85 Sheet No. 88 Sheet No. 87 Sheet No. 90 Sheet No. 91

### **ENERGY CONSUMPTION**

Determination of energy applies to the non-metered charging station. The applicable fuel clause charge or credit will be based on an annual 5,852 kilowatt-hours.

#### PAYMENT

The EVSE charges shall be incorporated with the bill for electric service and will be subject to the same payment provisions.

## **TERM OF CONTRACT**

For a fixed term of not less than five (5) years and for such time thereafter until terminated by either party giving thirty (30) days prior written notice. Cancellation by Customer prior to the expiration of the initial term will require Customer to pay to Company a lump sum equal to the monthly charge times the number of months remaining on the initial term of the contract.

#### **TERMS AND CONDITIONS**

- 1. Service shall be furnished under Company's Terms and Conditions set out in this Tariff Book, except as set out herein.
- 2. Company may decline to install equipment and provide service thereto in locations deemed by Company as unsuitable for installation.
- 3. The location of each point of delivery of energy supplied hereunder shall be mutually agreed upon by Company and the Customer. Where attachment of Customer's devices and/or equipment is made to Company facilities, Customer must have an attachment agreement with Company.
- 4. All service and maintenance will be performed only during regular scheduled working hours of Company. Customer will be responsible for reporting outages and other operating faults.

DATE OF ISSUE: November 13, 2015

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ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

Issued by Authority of an Order of the Public Service Commission in Case No. 2015-00355 dated \_\_\_\_\_ N

Standard Rate

#### P.S.C. No. 17, Original Sheet No. 41.2

Ν

### EVSE Electric Vehicle Supply Equipment

- 5. Customer shall be responsible for the cost of charging station replacement or repairs where such replacement or repairs are caused from willful damage, vandalism, or causes other than normal wear and tear. Company may decline to provide or to continue service in locations where, in Company's judgment, such facilities will be subject to unusual hazards or risk of damage.
- 6. If Customer requests the removal of an existing charging station, including, but not limited to, poles, or other supporting facilities that were in service less than twenty (20) years, and requests installation of replacement facilities within five (5) years of removal, Customer agrees to pay to Company its cost of labor to install the replacement facilities.
- 7. Temporary suspension of charging station is not permitted. Upon permanent discontinuance of service, charging station and other supporting facilities solely associated with providing service under this tariff, except underground facilities and pedestals, will be removed.
- 8. Electric energy furnished under Company's standard application or contract is for the use of Customer only and Customer shall not resell such energy to any other person, firm, or corporation on Customer's premises or for use on any other premises. This does not preclude Customer from allocating Company's billing to Customer to any other person, firm, or corporation provided the sum of such allocations does not exceed Company's billing.
- 9. Notwithstanding the provisions of 807 KAR 5:006, Section 14(4), a reasonable time shall be allowed subsequent to Customer's service application to enable Company to construct or install the facilities required for such service. In order that Company may make suitable provision for enlargement, extension or alteration of its facilities, each applicant for service shall furnish Company with realistic estimates of prospective electricity requirements.
- 10. Customer shall agree to permit Company to obtain specific charging station usage data directly from the Charging Station Supplier.

#### **MINIMUM CHARGE**

The Monthly Charging Unit Fee shall be the minimum charge.

### DUE DATE OF BILL

Customer's payment will be due within sixteen (16) business days (no less than twenty-two (22) calendar days) from the date of the bill.

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

P.S.C. No. 17, Original Sheet No. 42

Ν

**Standard Rate** 

EVC Electric Vehicle Charging

#### APPLICABLE

In all territory served.

### AVAILABILITY OF SERVICE

Available to operators of licensed electric vehicles (EV). EV Customer is defined as the party who owns/operates a licensed electric vehicle, connects that vehicle for the purpose of receiving vehicle charging service to a Company-owned charging station providing service under this schedule, and willingly accepts the Company's fee structure for the vehicle charging service. EVC is offered under the conditions set out hereinafter for the purpose of charging EVs via street parking, parking lots, and other outdoor areas. EV Customers' charging systems must meet applicable charging standards.

Company assumes no liability or responsibility for any potential automotive-related incidents that occur at specific charging locations. EV Customer accepts all restrictions related to the temporary parking space.

#### RATE

Fee Per Hour: \$2.88

Charging Unit Fee includes an Energy Charge and Adjustment Clauses

Fee Per Hour is assessed at the start of charging, and at the beginning of each subsequent hour.

### **ADJUSTMENT CLAUSES**

The bill amount computed at the charges specified above includes the following:

Fuel Adjustment Clause	Sheet No. 85
Off-System Sales Adjustment Clause	Sheet No. 88
Environmental Cost Recovery Surcharge	Sheet No. 87

The bill amount specified above will be increased in accordance with the following:

Franchise Fee	Sheet No. 90
School Tax	Sheet No. 91

#### DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

Ν

Standard Rate

EVC Electric Vehicle Charging

#### TERMS AND CONDITIONS

- 1. Service shall be furnished under the following Terms and Conditions and excludes the Company's Terms and Conditions set out in this Tariff Book.
- 2. EV Customer is required to pay by means of credit card or Charging Station Supplier account.
  - a. Credit Card must be chip enabled (if card is not chip enabled, Customer must call the Charging Station Supplier at toll-free number provided at station), or
  - b. EV Customer is required to open a Charging Station Supplier account and accepts all terms and conditions of Charging Station Supplier.
- 3. Company will exercise reasonable care and diligence in an endeavor to supply service continuously and without interruption but does not guarantee continuous service and shall not be liable for any loss or damage resulting from interruption, reduction, delay, or failure of electric service not caused by the willful negligence of Company, or resulting from any cause or circumstance beyond the reasonable control of Company.
- 4. Company is merely a supplier of electricity delivered to the point of connection of Company's and charging station facilities, and shall not be liable for and shall be protected and held harmless for any injury or damage to persons or property of EV Customer or of third persons resulting from the presence, use or abuse of electricity or resulting from defects in or accidents to any of EV Customer's wiring, equipment, or vehicle, or resulting from any cause whatsoever other than the negligence of Company.
- 5. In no event shall Company have any liability to EV Customer, the owner of a vehicle receiving charging service, or any other party affected by the electrical service to EV Customer for any consequential, indirect, incidental, special, or punitive damages, and such limitation of liability shall apply regardless of claim or theory. In addition, to the extent that Company acts within its rights as set forth herein and/or any applicable law or regulation, Company shall have no liability of any kind to EV Customer, the owner of a vehicle receiving charging service, or any other party. In the event that EV Customer's use of Company's service causes damage to Company's property or injuries to persons, EV Customer shall be responsible for such damage or injury and shall indemnify, defend, and hold Company harmless from any and all suits, claims, losses, and expenses associated therewith.
- 6. By connecting a vehicle to the Charging Station, the EV Customer represents that the EV Customer is authorized to operate that vehicle and to connect it to the Charging Station for the purpose of receiving vehicle charging service.
- 7. All service and maintenance will be performed only during regular scheduled working hours of Company.

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

#### EVSE-R Electric Vehicle Supply Equipment

#### APPLICABLE

Standard Rate Rider

In all territory served.

## AVAILABILITY OF SERVICE

Available as a rider to customers to be served or currently being served under Company's Standard Rate Schedules, GS (with energy usage of 500 kWh or higher per month), AES, PS, TODS, TODP, RTS, and FLS for the purpose of charging electrical vehicles, whereby the Customer installs and owns facilities on its side of the point of delivery of the energy supplied hereunder necessary to serve Company-provided charging station.

Charging station under this rider is offered under the conditions set out hereinafter for electric vehicle supply equipment such as, but not limited to, the charging of electric vehicles via street parking, parking lots, and other outdoor areas. Customer is responsible for providing the appropriate voltage levels and connections necessary to operate Company-provided charger.

Company will coordinate charging station installation with the Company's current charging station supplier and the Customer. Customer shall be responsible for the charging equipment installation costs.

Service will be provided under written contract, signed by customer prior to service commencing.

RATE	Single Charger	Dual Charger
Monthly Charging Unit Fee:	\$132.68	\$206.11

#### ADJUSTMENT CLAUSES

The bill amount computed at the charges specified above shall be increased or decreased in accordance with the following:

Franchise Fee	Sheet No. 90
School Tax	Sheet No. 91

#### PAYMENT

The EVSE-R charges shall be incorporated with the bill for electric service and will be subject to the same payment provisions.

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

Ν

#### EVSE-R Electric Vehicle Supply Equipment

#### **TERM OF CONTRACT**

Standard Rate Rider

For a fixed term of not less than five (5) years and for such time thereafter until terminated by either party giving thirty (30) days prior written notice. Cancellation by Customer prior to the expiration of the initial term will require Customer to pay to Company a lump sum equal to the monthly charge times the number of months remaining on the initial term of the contract.

## TERMS AND CONDITIONS

- 1. Service shall be furnished under Company's Terms and Conditions set out in this Tariff Book, except as set out herein.
- 2. Company may decline to install equipment and provide service thereto in locations deemed by Company as unsuitable for installation.
- 3. The location of each point of delivery of energy supplied hereunder shall be mutually agreed upon by Company and the customer. Where attachment of Customer's devices and/or equipment is made to Company facilities, Customer must have an attachment agreement with Company.
- 4. All service and maintenance will be performed only during regular scheduled working hours of Company. Customer will be responsible for reporting outages and other operating faults.
- 5. Customer shall be responsible for the cost of charging station replacement or repairs where such replacement or repairs are caused from willful damage, vandalism, or causes other than normal wear and tear. Company may decline to provide or to continue service in locations where, in Company's judgment, such facilities will be subject to unusual hazards or risk of damage.
- 6. If Customer requests the removal of an existing charging station, including, but not limited to, poles, or other supporting facilities that were in service less than twenty years, and requests installation of replacement facilities within 5 years of removal, Customer agrees to pay to Company its cost of labor to install the replacement facilities.
- 7. Temporary suspension of charging station is not permitted. Upon permanent discontinuance of service, charging station and other supporting facilities solely associated with providing service under this tariff, except underground facilities and pedestals, will be removed.

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

Standard Rate Rider

#### EVSE-R Electric Vehicle Supply Equipment

- 8. Electric energy furnished under Company's standard application or contract is for the use of Customer only and Customer shall not resell such energy to any other person, firm, or corporation on Customer's premises or for use on any other premises. This does not preclude Customer from allocating Company's billing to Customer to any other person, firm, or corporation provided the sum of such allocations does not exceed Company's billing.
- 9. Notwithstanding the provisions of 807 KAR 5:006, Section 14(4), a reasonable time shall be allowed subsequent to Customer's service application to enable Company to construct or install the facilities required for such service. In order that Company may make suitable provision for enlargement, extension or alteration of its facilities, each applicant for service shall furnish Company with realistic estimates of prospective electricity requirements.
- 10. Customer shall agree to permit Company to obtain specific charging station usage data directly from the Charging Station Supplier.

#### MINIMUM CHARGE

As determined by this Rider and the Rate Schedule to which it is attached.

#### DUE DATE OF BILL

Customer's payment will be due within sixteen (16) business days (no less than twenty-two (22) calendar days) from the date of the bill.

DATE OF ISSUE: November 13, 2015

DATE EFFECTIVE: December 13, 2015

ISSUED BY: /s/ Edwin R. Staton, Vice President State Regulation and Rates Lexington, Kentucky

# DEPRECIATION RATES LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY

Exhibit 2



Excellence Delivered As Promised

November 5, 2015

VIA EMAIL

Mr. Rick Lovekamp LG&E and KU Service Company 230 W. Main Street Louisville, KY 40202

Dear Rick:

# Electric Vehicle Charging Stations

Per your request, we have determined recommended depreciation rates for the soon to be installed Electric Vehicle (EV) Charging Stations. These recommended rates should be applied to a newly created subaccount in distribution plant of Account 371. The rate is based on a 10-year average service life, L2.5 dispersion curve and 0 percent net salvage.

Each of these parameters are established with the general understanding of the new assets and the estimates of comparable facilities within the industry. The initial depreciation accrual rate is 10.0 percent.

Very truly yours,

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

John J. Aparos

JOHN J. SPANOS Sr. Vice President



# DIRECT TESTIMONY OF DAVID E. HUFF LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY

Exhibit 3

# **COMMONWEALTH OF KENTUCKY**

# **BEFORE THE PUBLIC SERVICE COMMISSION**

# 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 RIDER, AN ELECTRIC VEHICLE SUPPLY EQUIPMENT RATE, AND AN ELECTRIC VEHICLE CHARGING RATE, FOR APPROVAL OF A DEPRECIATION RATE FOR ELECTRIC VEHICLE CHARGING STATIONS, AND FOR A DEVIATION FROM	) CASE NO. 2015-00355 ) ) ) )
THE REQUIREMENTS OF CERTAIN COMMISSION REGULATIONS	) )

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

FILED: NOVEMBER 13, 2015
1

## Q. Please state your name, position, and business address.

A. My name is David E. Huff. I am the Director of Customer Energy Efficiency and Smart
Grid Strategy for LG&E and KU Services Company, which provides services to
Louisville Gas and Electric Company ("LG&E") and Kentucky Utilities Company
("KU") (collectively, "Companies"). My business address is 220 West Main Street,
Louisville, Kentucky. A statement of my qualifications is attached as Appendix A.

#### 7 Q. Have you previously testified before the Commission?

- 8 A. Yes. I testified most recently in Case No. 2014-00003, *Joint Application of Louisville*9 *Gas and Electric Company and Kentucky Utilities Company For Review, Modification,*10 *and Continuation of Existing, and Addition of New, Demand-Side Management and*11 *Energy Efficiency Programs.*
- 12 **Q.** What is the purpose of your testimony?

# A. The purpose of my testimony is to support the Companies' request for authorization to install, serve, and operate electric vehicle charging stations in their respective certified territories.

16 Q. Briefly summarize the proposed service.

A. The Companies propose to install, serve, and operate electric vehicle charging stations
in their respective certified territories. The stations would be located to permit the
charging of electric vehicles via street parking, parking lots, and other outdoor areas.
The stations would be offered to the Companies' non-residential customers. Station
site hosts would be required to commit to hosting a station for a five-year period. The
Companies would own and maintain each station. The station site host would pay for
the station's installation cost and a monthly fee that covers the entire cost of the station.

1 The site host would have the option of assessing a fee to station users. The Companies 2 would also have the option of installing and operating charging stations and providing 3 charging services directly to the public for a tariffed fee.

4

**O**.

### Why is the proposed service needed?

A. According to the Electric Power Research Institute, over 15,000 electric vehicles have
been registered in the state of Kentucky since 2010. Though they represent only 2.4
percent of the total number of registered vehicles in Kentucky, the purchase and use of
electric vehicles in Kentucky is increasing. The U.S. Department of Energy's
Alternative Fuels Data Center states that "[t]o widely accept the use of plug-in hybrid
electric vehicles (PHEVs) and all electric vehicles (EVs), consumers and fleets need a
developed infrastructure of charging stations."<sup>1</sup>

In its 2013 study *Plugged In: The Last Mile*, Deloitte noted that "the build-out of public charging stations is . . . crucial to consumer adoption of EVs. This build-out is important not so much because typical EV drivers will rely on public charging stations for daily use, but rather to help allay 'range anxiety' - the EV drivers' fear that the range supported by their battery's charge is inadequate to support their driving patterns."<sup>2</sup> Public charging infrastructure is critical "because until battery capacities are significantly enhanced, consumers will require it for 'peace of mind.""<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> U.S. Department of Energy Alternative Fuels Data Center, *Developing Infrastructure to Charge Plug-In Electric Vehicles*, http://www.afdc.energy.gov/fuels/electricity\_infrastructure.html (last visited Sept. 20, 2015). <sup>2</sup> Deloitte Center for Energy Solutions, *Plugged In: The Last Mile - Who will build out and pay for electric vehicle public charging infrastructure*? 3 (2013), http://www2.deloitte.com/content/dam/Deloitte/us/Documents /energy-resources/us-er-plugged-in-the-last-mile.pdf (last visited Oct. 6, 2015).

<sup>&</sup>lt;sup>3</sup> *Id.* at 4.

U.S. Department of Energy's Alternative Fuels Data Center reports that there
are currently 30 public charging stations within Kentucky.<sup>4</sup> A listing of these stations
is attached as Exhibit DEH-1. Twenty-one of these stations are located within the
Companies' certified territories. Of the 21 stations, 12 stations are located at
automotive dealerships. News media within the Companies' certified territories have
reported on the demand for and limited number of charging stations.<sup>5</sup>

In recent years, the Companies have been informally approached by customers
and local governments about offering electric vehicle charging stations.<sup>6</sup> The proposed
service and rate schedules will enable the Companies to meet these requests, to learn
about charging technology and network infrastructure, to collect information on the
electric vehicle charging market, to better gauge and understand customer preferences,
and to assess the potential market for a broader deployment of charging stations.

#### 13 Q. How do the Companies envision the proposed service?

A. The Companies have retained ChargePoint, Inc. of Campbell, California, to procure
and assist in the installation of charging stations. It will also provide maintenance and
ongoing technology support for the charging stations, provide network capability for
the charging stations and provide the Companies with reports regarding the use of the
charging stations.

<sup>&</sup>lt;sup>4</sup> U.S. Department of Energy Alternative Fuels Data Center, *Electric Vehicle Charging Station Locations*, http://www.afdc.energy.gov/fuels/electricity\_locations.html (last visited Nov. 8, 2015). The Department of Energy's website reports 32 charging stations. Two of these stations, however, appear to be duplicates.

<sup>&</sup>lt;sup>5</sup> See, e.g., Grace Schneider, *Electric Vehicle Owners Look to Plug into Renewables*, Courier-Journal, May 25, 2015 at A4, *available at* http://search.proquest.com/docview/1682875549?accountid=3730.

<sup>&</sup>lt;sup>6</sup> The Companies have rate schedules to address electric vehicle charging stations at single family residences. *See* KU Tariff, P.S.C. No. 17, Original Sheet No. 6.1 (effective July 1, 2015); LG&E Tariff, P.S.C. Electric No. 10, Sheet 6 (effective July 1, 2015).

1 Upon Commission approval of the proposed rate schedules, the Companies will 2 begin providing the service. Once a customer has requested to host a charging station, 3 the Companies will coordinate with the prospective station site host and ChargePoint 4 to obtain the charging station and determine its location. Station site hosts will have 5 the choice of installing a single charger station or a dual charging station. (Dual charging stations can simultaneously charge two electric vehicles.) While the station 6 7 site host's preference will carry the greatest weight in determining the charging 8 station's location, the Companies will retain the right to decline service if the location 9 is deem unsuitable for installation or otherwise subject the facilities to unusual hazards 10 or risks.

11 The station site host has a choice of two installation methods. A charging 12 station may be installed and connected to facilities that are located on the customer's 13 side of the point of delivery. Under this method, the charging station's electricity is 14 provided under the station host's existing rate schedule and its energy usage is 15 measured by the station site host's existing meter. A charging station may also be 16 directly connected to the Companies' facilities. Under this second method, the energy 17 used by the charging station is not metered, but an expected amount of energy usage is 18 included in a monthly fee.

19 The charging station site host bears responsibility for the installation costs. 20 Installation costs will vary as the charging station's location primarily determines these 21 costs. The station site host will also be required to execute a written contract for service 22 prior to the commencement of service.

1 The Companies will own the charging station and will be responsible for its 2 maintenance and service. The station site host will be responsible for the cost of 3 replacing or repairing a charging station when the replacement or repair is the result of 4 willful damage, vandalism, or causes other than normal wear and tear. The charging 5 stations have an estimated useful life of ten years and are expected to require 6 maintenance and service only once annually.

7 The station site host may assess a fee for the charging service. The written 8 contract between the Companies and the station site host will permit the station site 9 host to allocate the cost of the charging service among those who use the charging 10 station. This arrangement allows the station site host to recover the monthly cost of the 11 service plus its installation costs and any other costs related to hosting the charging 12 station, but does not permit the customer to profit from the resale of electricity.

13 Given the wide variety of reasons for requesting the installation of a charging 14 station, the Companies are unable to estimate the number of charging station hosts. A 15 station site host may request a charging station for an employee parking lot to benefit 16 its employees. A station site host who is a retailer may request a charging station to 17 attract potential shoppers who are electric vehicle owners or to increase the time that those shoppers spend in the host's establishment.<sup>7</sup> In some instances, a station site host 18 19 may wish to provide for charging services, but impose a charge to encourage turnover 20 on the space.

<sup>&</sup>lt;sup>7</sup> See, e.g., ChargePoint, "Leading Retailer Partners with ChargePoint to Attract and Retain Loyal Customers" (April 2015), available at http://www.chargepoint.com/files/casestudies/73-001053-01-2-CS-Retail-Retail-01.pdf (last visited Oct. 5, 2015).

1		Charging stations will be equipped to accept radio frequency identification chip
2		(RFID) enabled credit cards. End-users can also establish an account with ChargePoint
3		and use that account to obtain service when a fee is required. The contract between the
4		Companies and the host will require station site hosts to post any fees for charging
5		services and the site host's contact information.
6	Q.	Describe the charging stations that the Companies intend to offer.
7	A.	The Companies currently intend to offer Level 2 charging stations. These stations offer
8		charging through 240-volt or 208-volt electric service. Based upon the electric vehicle
9		and the circuit capacity, a Level 2 station typically adds about 10 to 20 miles of range
10		per hour of charging time. A typical Level 2 charging station is shown at Exhibit DEH-
11		2.
12	Q.	Describe the process that the Companies used to select a charging station
13		provider.
14	A.	In November 2014, LG&E and KU Services Company issued a request for proposals
15		to 13 suppliers for a contractor to provide and assist in the installation of electric vehicle
16		charging equipment, network solution, customer interfaces and maintenance of electric
17		vehicle charging stations within LG&E's and KU's certified territories. Ten vendors
18		responded. After careful evaluation of the bids, ChargePoint, Inc. of Campbell,
19		California was selected. ChargePoint currently operates a network of more than 22,300
20		total charging locations worldwide. <sup>8</sup>

<sup>&</sup>lt;sup>8</sup> See http://www.chargepoint.com/files/ChargePointFacts.pdf (last visited Oct. 6, 2015).

# 1 Q. How will the Companies charge its customers for providing charging stations?

2 A. The Companies are proposing Rider Electric Vehicle Supply Equipment ("EVSE-R") 3 and Rate Electric Vehicle Supply Equipment ("EVSE") to recover their costs to provide 4 electric vehicle charging stations. Rider EVSE-R imposes a monthly fee that recovers 5 the charging unit's cost, maintenance expenses, taxes, and a return on the Companies' 6 investment. It will be assessed to station site hosts who located a charging station on 7 their side of the delivery point. Schedule EVSE will apply in those instances where a 8 charging station is installed and directly connected to the Companies' facilities. It 9 provides for a monthly fee for the charging station to recover the charging station's 10 cost, maintenance expenses, taxes, a return on the Companies' investment, and the cost 11 of electricity that charging station is expected to use. In his testimony, Mr. Lovekamp 12 discusses the terms of each rate schedule and how the rate contained in each schedule 13 was developed.

# 14

15

Q.

# charging stations?

A. No. The Companies are not offering any incentives. Those requesting a charging
station will bear the full cost of the charging stations, including installation,
maintenance, and energy costs.

Do the proposed rates contain any incentives to encourage or promote the use of

# 19 Q. Is the proposed service part of the Companies' Demand Side Management 20 Programs?

21 A. No.

# Q. Which customers are eligible for service under the proposed Rider EVSE-R or Schedule EVSE?

3 Service under Rate Rider EVSE-R and Schedule EVSE will be limited to non-A. 4 residential customers. Any LG&E customer who is served under Rate Schedules PS 5 (Power Service), TODS (Time-of-Day Secondary Service), TODP (Time-of-Day 6 Primary Service), RTS (Retail Transmission Service), or FLS (Fluctuating Load 7 Service) is eligible for service under Rider EVSE-R or Schedule EVSE. A KU 8 customer will be eligible to receive service under Rider EVSE-R or Schedule EVSE if 9 served under Rate Schedules AES (All Electric School), PS (Power Service), TODS 10 (Time-of-Day Secondary Service), TODP (Time-of-Day Primary Service), RTS (Retail 11 Transmission Service), or FLS (Fluctuating Load Service). A KU or LG&E customer 12 receiving service under Schedule GS (General Service) is also eligible to receive 13 service if it has a monthly energy usage of 500 kWh or higher.

# 14 Q. Do the Companies plan to operate their own charging stations to directly serve 15 the public?

16 A. The Companies desire the option to provide charging services directly to the public for 17 a tariffed fee. The Companies' decision to provide such service will depend on several 18 factors, including non-residential customer demand for the charging stations and the 19 availability of public places to install a charging station. If the Companies provide 20 direct charging services, those services will be provided under Rate Electric Vehicle 21 Charging ("EVC"), which sets forth an hourly fee for charging services that is designed 22 to recover the charging station's cost, installation, maintenance expenses, taxes, a return on the Companies' investment, and the cost of electricity (including fuel 23

adjustment and environmental charges). In his testimony, Mr. Lovekamp discusses the
 methodology used to develop this rate.

# 3 Q. How many electric vehicle charging stations do the Companies expect to install 4 and operate under Rate EVC?

5 A. Each Company expects to operate in its certified territory no more than ten charging
6 stations under the Rate EVC.

### 7 Q. Describe how a customer under Schedule EVC will receive service.

A. The Companies expect to place electric charging stations that provide service under
Schedule EVC in publicly accessible areas, primarily public parking lots, parking
garages, and public streets. The Companies will list these locations on their websites.
Additionally, the public will also be able to locate these stations through ChargePoint's
website or through ChargePoint's mobile device application. The mobile device
application will also indicate whether a charging station is currently in use.

14 The parking area for the electric vehicle will be clearly marked. The charging 15 station will be located adjacent to the designated area. The charging station's LCD 16 display will show the tariffed fee for charging services. The charging station is 17 equipped with a mobile communications device that enables the station to communicate 18 with ChargePoint's computer network and to transmit and receive data. A typical 19 ChargePoint charging station is shown at Exhibit DEH-1. The charging stations will 20 carry the Company's logo. (If a charging station has been installed under Rider EVSE-21 R or Schedule EVSE, it will carry the logos of the Company and the site host.)

22 Persons having a ChargePoint Membership Card can access service by waving
23 it in front of the station's card reader. Persons with a ChargePoint membership can

also access service using ChargePoint's mobile device application. Those without a
 ChargePoint membership can access service using any credit card via a 1-800 telephone
 number with 24-hour per day access or by using a contactless credit card that contains
 an RFID chip.

5 Once the charging station has acknowledged the membership card or credit card 6 or had been contacted through the mobile device application, it will display a message 7 indicating that charging can begin and unlock the holster on the charging station that 8 holds the charging connector. The user then removes the connector and plugs it into 9 his or her electric vehicle and charging begins. The user can view a video tutorial on 10 the charging station's LCD display if assistance is required. At the start of the charging 11 session, the LCD display will also display the EVC hourly rate and total applicable tax 12 rate. A prototype of this display is shown at Exhibit DEH-2.

When the user wishes to end his charging session, he taps his user card on to the charging station. The station will then request confirmation that the charging session should be terminated. Once the user confirms the session's termination by touching the designated area on the charging station, he disconnects the connector and returns it to the charging station. The user can also terminate the session through the mobile device application or by removing the charging connector.<sup>9</sup>

No paper bill will be issued for charging services provided under Rate EVC.
Each charging station has a LCD display. Prior to the start of the charging session, the
station will display a message that states the EVC hourly rate, the rate of each
applicable tax, and the amount of such tax for a one-hour charging session. When the

<sup>&</sup>lt;sup>9</sup> For a video demonstration of a charging session, see https://www.youtube.com/watch?v=7lKjZzj E8Rs&feature=player\_embedded (last visited Oct. 29, 2015).

1 charging session has ended, the station will display the energy provided, the duration 2 of the charging session, the total amount of the bill, which includes total taxes and fees. 3 It will not itemize the taxes and fees assessed on the service. A prototype of the station 4 displays is shown at Exhibit DEH-3. ChargePoint charging stations are not currently 5 capable of listing individual tax amounts for a charging session. ChargePoint has 6 represented to the Companies that it plans to modify the LCD displays in the future to 7 list individual taxes and fees. The information provided at the start of the charging 8 session, however, will enable the EVC customer to determine the amount of assessed 9 taxes.

10If the user has a ChargePoint account, an electronic mail message containing11information about the charging session will be sent to him or her. Such user can also12access information about the charging session through ChargePoint's mobile13application or ChargePoint's website. A person using a credit card via a 1-80014telephone number may request an e-mail receipt. Representative samples of these15electronic receipts are shown at Exhibit DEH-4.

16 The fee assessed to a user is an hourly fee. It will be assessed at the beginning 17 of charging session. An additional hourly fee will be assessed at the beginning of each 18 subsequent hour. If a user terminates a charging session before an hour has elapsed, 19 the user will still be assessed the entire fee for the hour.

Q. Assuming the Commission approves the proposed service, how will the
Companies promote electric vehicle charging services?

A. Once approval is granted, the Companies will begin marketing and outreach to gauge
 customer interest in electric vehicle charging stations. They will respond to inquiries,

educate potential customers, and install charging stations for those requesting such
 service.

# Q. What actions do the Companies intend to take to keep the Commission apprised of their electric vehicle charging services?

A. The Companies propose to submit an annual report on its electric vehicle charging
services for the first three years that charging services are provided. The annual report
will include the number of charging stations installed under each rate schedule, their
location, average usage, and energy usage by time of day, the utilization (i.e., the
number of unique charging events) of each station, and the average duration of the
charging event.

### 11 Q. What benefits do the Companies expect to achieve from providing the service?

12 A. The proposed service will likely increase the number of charging stations within the 13 Companies' certified territories and thus benefit those who reside, work or travel 14 through that area and drive an electric vehicle and are in need of a place to charge their 15 vehicles. It will enable non-residential customers who wish to host a charging station 16 but lack the technical or operational expertise to install or operate such stations to do 17 so. It will enable the Companies to collect information on the electric vehicle charging 18 market within their certified territories, and to share this information with the 19 Commission and other interested stakeholders.

#### 20 **Q.**

# What is your closing recommendation to the Commission?

A. I recommend that the Commission approve the proposed Rider EVSC-R, Rate EVSC,
and Rate EVC and authorize the Companies to install, serve, and operate electric
vehicle charging stations in their respective certified territories.

- 1 Q. Does this conclude your testimony?
- 2 A. Yes.

#### VERIFICATION

## COMMONWEALTH OF KENTUCKY ) ) SS: COUNTY OF JEFFERSON )

The undersigned, **David E. Huff**, being duly sworn, deposes and says he is the Director of Customer Energy Efficiency and Smart Grid Strategy for LG&E and KU Services Company, that he has personal knowledge of the matters set forth in the foregoing testimony, and 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 134 day of November, 2015.

(SEAL)

My Commission Expires:

SHERI L. GARDNER Notary Public, State et Large, KY My Commission expires Dec. 24, 2017 Notary ID # 501600

# **APPENDIX A**

#### **David E. Huff**

LG&E and KU Energy LLC 220 West Main Street Louisville, Kentucky 40202

#### Education

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

### **Professional Experience**

<b>Louisville Gas and Electric and Kentucky Utilities</b> Director, Customer Energy Efficiency and Smart Grid Strategy Director, Distribution Operations	March 2010 - Present 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 Wholesale Excellence Team Leader Division Manager – Trimble County Station Operations Manager – Mill Creek Station Mechanical Engineer	June 1997 – January 2000 November 1995 – June 1997 July 1994 – November 1995 January 1992 – July 1994 1983 - 1992

#### **Professional Memberships**

Registered Professional Engineer - Kentucky Kentucky Clean Fuels Coalition – Board Member 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 Committee Member of Boy Scout Troop 15 Eagle Scout

# ELECTRIC VEHICLE CHARGING STATION LOCATIONS IN KENTUCKY

Station Name	Street Address	City	State	ZIP	Access Days Time
Gay Brewer Jr Golf Course	469 Parkway Dr	Lexington	КҮ	40504	Dawn to dusk daily
Paul Miller Ford	975 E New Circle Rd	Lexington	KY	40505	Dealership business hours
University of Louisville - Belknap Parking Garage	2205 S Floyd St	Louisville	КҮ	40208	24 hours daily; RFID access card required - call ahead to arrange for card
Cincinnati Northern Kentucky International Airport	2939 Terminal Dr	Hebron	кү	41048	24 hours daily
Louisville International Airport	600 Terminal Dr	Louisville	KY	40209	24 hours daily; see valet
Gates Nissan	4098 Atwood Dr	Richmond	KY	40475	Dealership business hours
Glenn Nissan	3360 Richmond Rd	Lexington	КҮ	40509	Dealership business hours
Bill Collins Ford	4220 Bardstown Rd	Louisville	КҮ	40218	Dealership business hours
Byerly Ford Nissan	4027 Dixie Hwy	Louisville	KY	40216	Dealership business hours
Bill Cole Nissan	2701 Winchester Ave	Ashland	КҮ	41101	Dealership business hours
Kerry Nissan	8053 Burlington Pike	Florence	KY	41042	Dealership business hours
The Green Building	732 E Market St	Louisville	KY	40202	24 hours daily
Collins Nissan	4142 Bardstown Rd	Louisville	KY	40218	Dealership business hours
Bob Allen Nissan	725 N Maple Ave	Danville	KY	40422	Dealership business hours
21c Hotel Louisville	700 W Main St	Louisville	кү	40202	24 hours daily; for hotel guest use only
Garland Nissan	2507 Fort Campbell Blvd	Hopkinsville	KY	42240	Dealership business hours
Tri County Ford	4032 Commerce Pkwy	Buckner	KY	40010	Dealership business hours
HAMPTON INN, KY	401 W 2nd St	Owensboro	KY	42301	24 hours daily
Don Marshall Nissan	1147 S Highway 27	Somerset	KY	42501	Dealership business hours
Tourist Information Center - Tesla	140 Faith Assembly Church Rd	London	КҮ	40741	24 hours daily; for Tesla use only
SAM SWOPE BMW	4 Swope Autocenter Dr	Louisville	KY	40299	24 hours daily
Meijer Store #161 - Tesla	2155 Paul Jones Way	Lexington	KY	40509	24 hours daily; for Tesla use only
AAA	476 Orphanage Rd	Fort Wright	KY	41017	24 hours daily
Neil Huffman Nissan	4136 Shelbyville Rd	Louisville	KY	40207	Dealership business hours
Capitol Nissan of Frankfort	1220 Versailles Rd	Frankfort	KY	40601	Dealership business hours
McDonald's - Ashland KY	150 Russell Road	Ashland	КҮ	41101	24 hours daily
Legacy Nissan	395 W Highway 192	London	KY	40741	Dealership business hours
Parker Ford Lincoln	701 Main St	Murray	KY	42071	24 hours daily
The Springs	950 Breckenridge Lane	Louisville	KY	40205	24 hours daily
The Springs	6400 Dutchmans Pkwy	Louisville	KY	40205	24 hours daily

Source: Alternative Fuels Data Center, U.S. Dept. of Energy (http://www.afdc.energy.gov/fuels/electricity\_locations.html)

# PROTOTYPE CHARGING STATIONS

The charging station on the left bears a Company logo and the station host's logo. Its appearance is representative of the charging stations that will be installed under Rider EVSE-R or Schedule EVSE. The charging station on the right bears only the Company logo and is representative of that station that the Companies will directly operate.



# CHARGING STATION DISPLAY NOTICES (REPRESENTATIVE SAMPLE)

# **Prior To Start Of Charging Session**

	MILLER NORTHEAST DEMO	Unrestricted SPay per use 6.6 kW per port	
A A	LG&E KU SESSION COSTS ARE SO. LOCAL TAX	95 PER HOUR + 5%	

**At Close Of Charging Session** 



# SAMPLES OF CHARGEPOINT ELECTRONIC RECEIPTS

264620120 <sub>Card</sub>	<b>1</b> Total Sessions	<b>\$0.99</b> Gross Fee	01:58:55 (HH:MM:SS) s Total Charging Duration		Hic	le Details
Transaction Date (Pacific Time)	Session End Date	Station Name	Station Address	Duration (HH:MM:SS)	Session Fees ( <b>\$</b> )	Port#
2015-10-26 15:33:06	2015-10-26 18:31:42 (EDT)	STOP & SHOP / 406 HYANNIS #1	425 Attucks Ln, Hyannis, Massachusetts, 02601. United States	01:58:55	0.99	2

# **Receipt for Web Portal**

<b>442996025</b> Card	<b>3</b> Total Sessions	\$36.86 Gross Fees	29:16:38 (HH:MM:SS) Total Charging Duration		Hid	le Details
Transaction Date (Pacific Time)	Session End Date	Station Name	Station Address	Duration (HH:MM:SS)	Session Fees ( <b>\$</b> )	Port#
2015-10-15 18:52:11	2015-10-15 18:51:49 (PDT)	CHARGEPOINT / OCPP	250 E Hacienda Ave, Campbell, California, 95008, United States	08:58:48	0.43	1
2015-10-14 20:08:01	2015-10-14 20:07:24 (PDT)	CHARGEPOINT / HQ 25	254 E Hacienda Ave, Campbell, California, 95008, United States	10:15:46	1.26	2
2015-10-11 00:36:01	2015-10-11 00:34:09 (PDT)	TOWN LOS GATOS / SOUTHSIDE LOT	133 S Santa Cruz Ave, Los Gatos, California, 95030, United States	10:02:04	35.17	1

# **<u>Receipt from Mobile Application Device</u>**

AT&T M-Cell	হু 1:44 PM arging Activi	
200 Clifton Street, I	Belmont	Yesterday
15 Estimated miles added	8h 10m	Free
200 Clifton Street, I	Belmont	Oct 27
24 Estimated miles added	9h 39m	Free
200 Clifton Street, I	Belmont	Oct 27
<b>11</b> Estimated miles added	1h 14m	Free
200 Clifton Street, I	Belmont	Oct 26
74 Estimated miles added	11h 20m	Free
425 Attucks Ln, Hy	annis	Oct 26
42 Estimated miles added	1h 58m	\$0.99
200 Clifton Street, I	Belmont	Oct 26
O Estimated miles added	1 min	Free

# Session Fees

# **Mobile Application Reporting Credit Card Transaction**



# **Electronic Mail Receipt**

Name: Email: Phone: Credit Carc Last Four E						
Session Start	Session	are given bel Station Name	ow: Station Address	Duration	Currency	Fees
Time 2015-10- 28 14:50:40	2015-10- 28 19:00:51	BELLEVUE SQUARE / BELL SQ WEST 5	600 100th PI NE, Bellevue, Washington, 98004, United States	04:10:11	US Dollars (USD)	8.340

# DIRECT TESTIMONY OF RICK E. LOVEKAMP LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY

Exhibit 4

# **COMMONWEALTH OF KENTUCKY**

# **BEFORE THE PUBLIC SERVICE COMMISSION**

### In the Matter of:

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

FILED: NOVEMBER 13, 2015

1 Q. Please state your name, position and business address. 2 A. My name is Rick E. Lovekamp. I am the Manager of Regulatory Affairs/Tariffs for 3 LG&E and KU Services Company, which provides services to Louisville Gas and 4 Electric Company ("LG&E") and Kentucky Utilities Company ("KU") (collectively 5 "the Companies"). My business address is 220 West Main Street, Louisville, Kentucky 6 40202. A statement of my education and work experience is attached to this testimony 7 as Appendix A. 8 Have you previously testified before this Commission? **Q**. 9 A. No. 10 **O**. What is the purpose of your testimony? 11 I am sponsoring the proposed tariff sheets for Rate Rider Electric Vehicle Supply A. 12 Equipment ("EVSE-R"), Rate Electric Vehicle Supply Equipment ("EVSE"), and Rate 13 Electric Vehicle Charging ("EVC"). I will explain the provisions in each proposed rate 14 schedule and how the rates set forth in those sheets were derived. 15 Why are the Companies proposing three new rate schedules? Q. 16 The Companies are proposing to install, serve and operate electric vehicle charging 17 stations in their respective certified territories. David Huff in his testimony will explain 18 the reasons for the Companies' proposed service. The proposed rate schedules are 19 necessary to implement the proposed service. 20 The proposed service involves three possible scenarios. Under the first 21 scenario, a non-residential customer requests the installation of an electric vehicle 22 charging station on its property on its side of the point of delivery. Under the second 23 scenario, a non-residential customer requests the installation of an electric vehicle

charging station on its property that is directly connected to Companies' distribution
 facilities. Under the third scenario, the Companies operate the electric vehicle charging
 station and directly charge users for the electric charging service. Each of the proposed
 rate schedules addresses a different scenario.

5

**O**.

#### Describe Rate Rider EVSE-R.

6 A. This rider applies to customers who request to host an electric vehicle charging station 7 that will be connected to electric distribution facilities on the customer's side of the point of delivery. Because the connection is on the customer's side of the point of 8 9 delivery, the energy that charging station uses will pass through the meter located at 10 the delivery point and is measured. As a result, Rider EVSE-R makes no provision for 11 an energy charge. The customer - charging station site host - will be billed for any 12 energy usage at its present tariffed rate. Rider EVSE-R, therefore, recovers the 13 charging unit's cost, maintenance expenses, taxes, and a return on investment.

14 Service under Rider EVSE-R is limited to non-residential customers. Any 15 LG&E customer who is served under Rate Schedules PS (Power Service), TODS 16 (Time-of-Day Secondary Service), TODP (Time-of-Day Primary Service), RTS (Retail 17 Transmission Service), or FLS (Fluctuating Load Service) is eligible for service under 18 Rider EVSE-R. A KU customer is eligible to receive service under Rider EVSE-R if 19 served under Rate Schedules AES (All Electric School), PS (Power Service), TODS 20 (Time-of-Day Secondary Service), TODP (Time-of-Day Primary Service), RTS (Retail 21 Transmission Service), or FLS (Fluctuating Load Service). A KU or LG&E 22 customer receiving service under Schedule GS (General Service) is also eligible to 23 receive service if it has a monthly energy usage of 500 kWh or higher.

1 Once the customer requests the service, the Companies will coordinate the 2 installation of the charging station with the customer and the Companies charging 3 station supplier. A customer is limited to the Level 2 charging station models that the 4 Companies' have negotiated with their charging station supplier. A customer may 5 select a single charger unit or a dual charging unit (a unit capable of charging two 6 vehicles simultaneously). While the customer selects the location, the Companies 7 retain the right to decline to provide service to the selected location if the Companies 8 deem the location unsuitable or will subject charging station to unusual hazards or risk 9 of damage. The customer is responsible for the costs of installation.

Under Rider EVSE-R, the Companies retain ownership of the charging station
and are responsible for the charging station's service and maintenance. A customer,
however, will be responsible for the cost of replacing or repairing a charging station or
repairs if the replacement or repairs are due causes other than normal wear and tear,
willful damage, or vandalism.

Under Rider EVSE-R, LG&E will assess a charging station site host a monthly
rate of \$132.49 for a Level 2 single charger unit and \$205.83 for a Level 2 dual charger
unit. KU will assess a charging station site host a monthly rate of \$132.68 and \$206.11
respectively.

19 **Q.** 

#### How was the monthly rate determined?

A. The calculations for the monthly rate for LG&E and KU are shown at Exhibits REL-1 and REL-2 respectively. These calculations assume that a charging station has a tenyear useful life. They further assume that the fee for a Level 2 single charger unit must generate total annual revenue of \$1,589.84 for LG&E and of \$1,592.15 for KU and that

### **CONFIDENTIAL INFORMATION REDACTED**

fee for a Level 2 dual charger unit must generate annual total revenue of \$2,469.97 for
 LG&E and \$2,473.26 for KU.

The revenue requirement calculations are based upon a total capital investment of for a Level 2 single charger unit station and a total capital investment of for a Level 2 dual charger unit station. The total investment amount includes the cost of the charging station (including sales tax and shipping cost), plus an energy management fee and a networking service plan.

8 The annual revenue requirements were determined by applying a levelized 9 fixed charge of either 22.09 percent for LG&E or 22.14 percent for KU to total capital 10 investment and then adding for a single charger unit or for a dual 11 charger unit to reflect estimated annual operation and maintenance expense, energy 12 management fee, and network service plan fee. The fixed charge was determined using 13 the utility's overall rate of return, a straight-line depreciation rate, and the utility's 14 income and property tax rates. The annual operation and maintenance expense was 15 based upon the assumption that a two-person service crew would make a 2-hour service 16 call on each charging station annually and that the hourly wage rate for the service crew 17 members was . The energy management fee and networking service plan fee 18 are service fees that the charging station supplier assesses to the Companies.

19 Q. How did the Companies determine the depreciation rate for the charging stations?
20 A. The Companies retained John J. Spanos of Gannett Fleming, Inc., to develop
21 depreciation accrual rates for the charging stations. Mr. Spanos, a depreciation expert
22 who testified on the Companies' behalf in their most recent base rate and depreciation

1		proceedings, <sup>1</sup> recommended that a 10-year useful service life for the charging stations
2		and a depreciation rate of 10 percent. A copy of Mr. Spanos' recommendation is set
3		forth at Exhibit 2 of the Companies' Application. The Companies have requested in
4		their Application that the Commission approve this depreciation rate.
5	Q.	How would the monthly rate be reflected on the customer's bill?
6	A.	It would be listed as a separate line item on the customer's bill.
7	Q.	Describe Rate EVSE.
8	A.	This rate applies to customers who request to host an electric vehicle charging station
9		directly connected to the Companies' electric distribution facilities. Electric service to
10		the electric vehicle charging station under this rate is not metered. In this respect, it is
11		similar to service provided under non-metered lighting schedules in which the monthly
12		rate assumes an estimated number of hours of energy consumption. Rate EVSE,
13		therefore, not only recovers the charging unit's cost, maintenance expenses, taxes, and
14		a return on LG&E's investment, but also recovers the cost of the charging station's
15		expected energy use.
16		Eligibility standards to receive service under Rate EVSE are the same as those

17 for Rider EVSE-R. Once a customer requests to host a charging station, the Companies

<sup>&</sup>lt;sup>1</sup> See, e.g., Case No. 2007-00564, Application of Louisville Gas and Electric Company to File A Depreciation Study (Ky. PSC filed Dec. 28, 2007); Case No. 2007-00565, Application of Kentucky Utilities Company to File A Depreciation Study (Ky. PSC filed Dec. 28, 2007); Case No. 2008-00251, Application of Kentucky Utilities Company for An Adjustment of Its Electric Rates (Ky. PSC filed Aug. 7, 2008); Case No. 2008-00252, Application of Louisville Gas and Electric Company for An Adjustment of Its Electric and Gas Rates (Ky. PSC filed Aug. 7, 2008); Case No. 2012-00221, Application of Kentucky Utilities Company for An Adjustment of Its Electric Rates (Ky. PSC filed July 10, 2012); Case No. 2012-00222, Application of Louisville Gas and Electric Company for An Adjustment of Its Electric and Gas Rates, A Certificate of Public Convenience and Necessity, Approval of Ownership of Gas Service Lines and Risers, and a Gas Line Surcharge (Ky. PSC July 10, 2012); Case No. 2014-00371, Application of Kentucky Utilities Company for An Adjustment of Its Electric Rates (Ky. PSC filed Nov. 26, 2014); Case No. 2014-00372, Application of Louisville Gas and Electric Company for An Adjustment of Its Electric Rates (Ky. PSC filed Nov. 26, 2014); Case No. 2014-00372, Application of Louisville Gas and Electric Company for An Adjustment of Its Electric Rates (Ky. PSC filed Nov. 26, 2014); Case No. 2014-00372, Application of Louisville Gas and Electric Company for An Adjustment of Its Electric and Gas Rates (Ky. PSC filed Nov. 26, 2014).

1 will coordinate the installation of the charging station with the customer and the 2 Companies' charging station supplier. The customer is limited to Level 2 charging 3 station models that the Companies have negotiated with their charging station supplier. 4 It may select a single charger unit or a dual charging unit. While the customer selects 5 the location for the charging station, the Companies retain the right to decline service 6 to the selected location if they deem the location unsuitable or will subject charging 7 station to unusual hazards or risk of damage. The customer is responsible for the costs 8 of installation.

9 The Companies retain ownership of the charging station and are responsible for 10 the charging station's service and maintenance. A customer, however, will be 11 responsible for the cost of replacing or repairing a charging station or repairs if the 12 replacement or repairs are due causes other than normal wear and tear, willful damage, 13 or vandalism.

14 Under Rate EVSE, LG&E will assess a charging station site host a monthly rate 15 of \$176.13 for a Level 2 single charger unit and \$293.10 for a Level 2 dual charger 16 unit. KU will assess a charging station site host a monthly rate of \$180.83 and \$302.41 17 respectively.

18 0.

# How was the monthly rate determined?

19 The calculations for the monthly rate for LG&E and KU each utility are shown at A. 20 Exhibits REL-1 and REL-2 respectively. The calculations are exactly the same as those 21 used to develop Rider EVSE-R except that energy costs are considered. In calculating 22 energy costs, the Companies assumed that a Level 2 single charger unit will consume 23 5,852 kWh annually.

1		Applying LG&E's current Rate Schedule GS energy charge of \$0.08948 per
2		kWh to 5,852 kWh produces an annual energy cost of \$523.64, or a monthly energy
3		cost of \$43.64. Adding this amount to the Rider EVSE-R monthly rate of \$132.49 for
4		a Level 2 single charger unit results in a monthly rate of \$176.13.
5		Applying KU's current Rate Schedule GS energy charge of \$0.09874 per kWh
6		to 5,852 kWh produces an annual energy cost of \$577.83, or a monthly energy cost of
7		\$48.15. Adding this amount to the Rider EVSE-R monthly rate of \$132.68 for a Level
8		2 single charger unit results in a monthly rate of \$180.83.
9		The Companies made the same calculations to determine the monthly rates for
10		a Level 2 dual charger unit, except the energy cost is twice that of a single charger unit.
11	Q.	What effect, if any, does a charging unit's energy usage have on a customer's fuel
12		clause charges?
13	A.	The charging station's assumed kWh usage will be included in the customer's total
14		monthly kWh usage to determine the customer's applicable fuel clause charge.
15	Q.	How will the monthly rate be reflected on the customer's bill?
16	A.	It will be listed as a separate line item on the customer's bill.
17	Q.	What other conditions will be imposed upon customers taking service under Rider
18		EVSE-R or Schedule EVSE?
19	A.	Both Rider EVSE-R and Rate EVSE require a customer to execute a contract for
20		service for a term of five years.
21		Both Rider EVSE-R and Rate EVSE also permit the Companies a reasonable
22		time following receipt of a customer's service application to construct or install the
23		necessary facilities to provide service notwithstanding 807 KAR 5:006, Section 14(4),

which generally requires a new service to be connected within seventy-two (72) hours
or close of the next business day, whichever is later. The proposed deviation from 807
KAR 5:006, Section 14(4), is reasonable because of the time necessary to properly
locate and install a charging station. Moreover, the proposed service is voluntary in
nature and the lack of such service will not have an immediate effect on the health,
safety, well-being or financial welfare of the applicant.

Rider EVSE-R and Rate EVSE also provide that any service and maintenance
to the charging units will be performed only during regular scheduled working hours.
The Companies will not be required to service the charging unit during non-regular
working hours.

# 11 Q. May customers obtaining charging units under Rider EVSE-R or Rate EVSE 12 charge the public for using the units?

A. Yes. Both Rider EVSE-R and Rate EVSE prohibit the resale of energy but permit a charging station site host to allocate the cost of the charging service among those who use the charging station. This arrangement allows a customer to recover the monthly cost of the service plus its installation costs and any other costs related to hosting the charging station, but does not permit the customer to profit from the sale of electricity. It is similar to the approach that the Companies apply to landlord-tenant transactions in which a landlord bills a customer for electric service.

20 Q. Describe Rate EVC.

A. The Companies request the option of directly providing electric vehicle charging
 services to the public. For example, they may enter an agreement with a local
 governmental unit to locate a charging station on public property. Under this

agreement, the local governmental unit provides one of the Companies a license to
 locate and operate the charging station, but has no direct responsibility for the charging
 station. The Companies would install and operate the charging station at their expense
 and assess each user an hourly fee for the service. Schedule EVC provides the terms
 and conditions of this service.

6 Under Schedule EVC, a LG&E user will be assessed a fee per hour of \$2.85 7 and a KU user will be assessed a fee per hour of \$2.88. The fee is assessed at the start 8 of the charging process and at the beginning of every subsequent hour of connection. 9 Payment is made at the time the fee is assessed and is made by either a credit card or 10 through an account with the charging station supplier. The customer is responsible for 11 establishing a payment account with the charging station supplier.

12

#### Q. How was the hourly fee determined?

13 A. The calculations for the monthly rate for LG&E and KU are shown at Exhibits REL-1 14 and REL-2 respectively. As previously noted, the annual revenue requirement to 15 recover the cost of the charging station equipment for LG&E is \$1,589.84 for a Level 2 single charger unit and \$2,469.97 for a Level 2 dual charger unit. When the average 16 17 installation cost is included, the annual revenue requirement increases to \$4,489.63 and 18 \$5,369.77 respectively. On a daily basis, this cost is \$12.31 for a single charger unit 19 and \$14.72 for a dual charger unit. The weighted average of these costs is \$9.84. 20 Assuming that each charging unit is used four hours per day, the hourly equipment cost 21 is \$2.46. LG&E determined an hourly energy charge of \$0.36 by assuming that 4 kWh 22 would be consumed for each hour that a vehicle is connected to a charging station and 23 applying the Rate GS energy charge of \$0.08948 per kWh. In addition to the equipment 1

2

and energy costs, LG&E made provisions for fuel adjustment clause charge and environmental cost recovery surcharge using a 12-month average of these charges.

3 KU determined its EVC charge using the same methodology and assumptions. 4 The annual revenue requirement to recover the cost of the charging station equipment 5 for KU is \$1,592.15 for a single charger unit and \$2,473.26 for a dual charger unit. The 6 annual revenue requirement increases to \$4,498.57 and \$5,379.69, respectively, when 7 the average installation cost is added. On a daily basis, this cost is \$12.34 for a single charger unit and \$14.75 for a dual charger unit. The weighted average of these costs is 8 9 \$9.86 and the hourly equipment cost is \$2.46. KU determined an hourly energy charge 10 of \$0.40 by assuming that 4 kWh would be consumed for each hour that a vehicle is 11 connected to a charging station and applying the Rate GS energy charge of \$0.09874 12 per kWh. In addition to the equipment and energy costs, KU made provisions for fuel 13 adjustment clause charge and environmental cost recovery surcharge using a 12-month 14 average of these charges.

#### 15 Q. How will the Companies issue bills for service provided under Rate EVC?

16 A. No paper bill will be issued for charging services provided under Rate EVC. Each 17 charging station has a LCD display. Prior to the start of the charging session, the station 18 will display a message that states the EVC hourly rate, the rate of each applicable tax, 19 and the amount of such tax for a one-hour charging session. When the charging session 20 has ended, the station will display the energy provided, the duration of the charging 21 session, the total amount of the bill, which includes total taxes and fees. It will not 22 itemize the taxes and fees assessed on the service. The charging stations are not 23 currently capable of listing individual tax amounts for a charging session. The charging station's manufacture has represented to the Companies that it plans to modify the LCD
displays in the future to list individual taxes and fees. The information provided at the
start of the charging session, however, will enable the EVC customer to determine the
total amount of assessed taxes.

5 **Q.** 

# Is the provision of billing information in this format consistent with Commission Regulations?

A. The Companies believe that this practice will comply with 807 KAR 5:006, Section 7.
This regulation does not require the issuance of a paper bill.<sup>2</sup> Section 7(3) refers to ebill forms, which strongly suggests that a paper bill is not required. There is no express
requirement in the Commission's regulations for a paper bill. The information
provided on the charging station display screen will provide the user with all of the
applicable information that 807 KAR 5:006, Section 7(1) requires a utility to provide
on a printed bill.

14 Should the Commission find that the Companies' proposed practice is not 15 consistent with 807 KAR 5:006, Section 7, the Companies request a deviation from the 16 requirements of that regulation. The Commission has permitted such deviations when 17 it was found that the use of printed bills was not practical<sup>3</sup> or when the user prepaid for 18 services.<sup>4</sup> The Commission has permitted several utilities to issue electronic bills in

<sup>&</sup>lt;sup>2</sup> But see Case No. 2012-00260, Application of Blue Grass Energy Cooperative For Approval of a Prepaid Metering Program (Ky. PSC Aug. 10, 2012); Case No. 2012-00437, Application of Farmers Rural Electric Cooperative Corporation For Approval of a Prepaid Metering Program (Ky. PSC Jan. 23, 2013).

<sup>&</sup>lt;sup>3</sup> See, e.g., Case No. 93-325, World Telecom Group, Inc. Application For Certification of Public Convenience and Necessity To Provide Intrastate Telecommunications Services In the State of Kentucky (Ky. PSC Jan. 10, 1994).

<sup>&</sup>lt;sup>4</sup> Supra Note 1. In several Commission proceedings involving prepaid services, electric utilities seeking to implement prepaid services were permitted to provide such service without providing a written bill and without requesting or being granted a deviation from 807 KAR 5:006, Section 7. See, e.g., Case No. 2012-00141, *Application of Salt River Electric Cooperative Corporation For Approval of a Prepaid Metering Pilot Program* (Ky. PSC July 11, 2012).

1

2

- lieu of a paper bill.<sup>5</sup> The Companies' proposed practice is the most effective means of providing the required information given the nature of vehicle charging service
- 3

### Q. How often will the Companies update Rate EVC?

A. The Companies plan to update Rate EVC annually. They will use the same
methodology to revise the rate that they used to determine the initial EVC rate. The
adjustment will, at a minimum, reflect changes in the 12-month average of the fuel
adjustment and environmental cost recovery surcharge. It would also reflect any
changes in the average use of the charging stations.

# 9 Q. Do the Companies propose to publish notice of their annual revisions to the EVC 10 rate?

11 At present, any annual adjustment of Rate EVC is likely to be very small. The A. 12 Companies estimate that the total cost of publishing notice of any annual adjustment in 13 accordance with 807 KAR 5:011, Section 8, is approximately \$250,000. The 14 Companies are of the opinion that the cost of publication of the annual adjustment far 15 outweighs any benefit from publication. They request that the Commission authorize 16 the Companies to deviate from the requirements of 807 KAR 5:011. In lieu of newspaper publication, the Companies propose to post notice of any annual adjustment 17 18 on their websites and to provide electronic notice at all Company-hosted charging 19 stations.

# 20

# Q. Do the Companies propose to annually adjust Rider EVSE-R or Rate EVSE?

A. No. No reason exists for the annual adjustment of the Rider EVSE-R charge. The
 charging station host's meter will capture any change in energy usage. Current fuel

<sup>&</sup>lt;sup>5</sup> See, e.g., Case No. 2006-00500, Application of Meade County Rural Electric Cooperative Corporation for an Adjustment of Rates (Ky. PSC Dec. 19, 2007).

adjustment charges and environmental cost recovery surcharges are reflected on the
 charging station host's bill when they are calculated and billed.

The Companies do not currently propose to annually adjust Rate EVSE's charge. However, if actual use of charging stations indicates unexpected usage patterns, the Companies will consider requesting authority to adjust the rate annually.

# 6 Q. What is your closing recommendation to the Commission?

7 A. I recommend the Commission approve the Companies' proposed Rider EVSE-R, Rate 8 EVSE, and Rate EVC and authorize the Companies to install, serve, and operate 9 electric vehicle charging stations in their respective certified territories. I also 10 recommend that the Commission approve the depreciation rates that the Companies 11 intend to use to depreciate the charging stations. Finally, I recommend that the 12 Commission authorize the Companies, with respect to the operation of electric vehicle 13 charging stations, to deviate from 807 KAR 5:006, Section 7; 807 KAR 5:006, Section 14 14; and 807 KAR 5:011, Section 8.

- 15 **Q.** Does this conclude your testimony?
- 16 A. Yes.

#### 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 13th day of \_\_\_\_\_ November 2015.

Goldanseal) Notar

My Commission Expires:

SHERI L. GARDNER Notary Public, State at Large, KY My Commission cropires Dec. 24, 2017 Notary ID # 501600
#### 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
Illinois Power Company	
Accounting Analyst	1989 – 1991

#### **Education**

Indiana University, Masters of Business Administration	2002
Eastern Illinois University, B.S.B./Accounting	1989

Exhibit REL-1 Page 1 of 6

#### LOUISVILLE GAS AND ELECTRIC COMPANY

**DERIVATION OF RATES FOR EVSE** 

**NEW EVSE / EVC TARIFF** 

.EVEL 2 LEVEL 2 LEVEL 2 Je Charger Single Charger Dual Charger				
le Charger Single Charger Dual Charger		LEVEL 2	LEVEL 2	LEVEL 2
	Single (	Charger	Single Charger	Dual Charger

Estimated Investment per Unit				
Fixed Charges @ *	22.09%			
O&M (scheduled/trouble)				
Energy Management Fee (5 years)				
Networking Service Plan (5 years)				
		\$1,589.84	\$4,489.63	\$2,469.97
EVSE Monthly Rate for Equipment Only	EVSE (R)	\$132.49		\$205.83
EVC Monthly Rate for Equipment Only		\$374.14		\$447.48
EVSE Rate per Hour for Equipment Only			\$2.46	
Distribution Energy per kWh per year (Calculated with GS Rate)	0.08948	\$523.64		\$1,047.27
Distribution Energy per kwh per month		\$43.64		\$87.27
Distribution Energy per kwh per hour			\$0.3587	
Basic Service Charge		\$0.00	\$0.00	\$0.00
Fuel Adjustment Clause		\$0.00	\$0.00261	\$0.00
Environmental Surcharge (Level 2)		\$0.00	\$0.03	\$0.00
Franchise Fee		\$0.00	\$0.00	\$0.00
School Tax		\$0.00	\$0.00	\$0.00
State Sales Tax		\$0.00	\$0.00	\$0.00
EVSE Monthly Rate for Equipment, Energy & Factors	EVSE	\$176.13		\$293.10
EVC Fee per Hour for Equipment, Energy & Factors	EVC		\$2.85	

Louisville Gas and Electric Company Support for EVSE, EVC and EVSE-R Rates Case No. 2015-00355

Exhibit REL - 1 Page 2 of 6

LG&E		EVC Capital							
	MONTH	MONTH DAYS / MONTH							
			Single Charger		Dual Charger				
			Daily Capital	Monthly Capital	Daily Capital	Monthly Capital			

				)	
		Daily Average		Daily Average	
	365	\$12.31	\$4,489.63	\$14.72	\$5,369.77
DEC	31	\$12.07	\$374.14	\$14.43	\$447.48
NOV	30	\$12.47	\$374.14	\$14.92	\$447.48
ОСТ	31	\$12.07	\$374.14	\$14.43	\$447.48
SEP	30	\$12.47	\$374.14	\$14.92	\$447.48
AUG	31	\$12.07	\$374.14	\$14.43	\$447.48
JUL	31	\$12.07	\$374.14	\$14.43	\$447.48
JUN	30	\$12.47	\$374.14	\$14.92	\$447.48
MAY	31	\$12.07	\$374.14	\$14.43	\$447.48
APR	30	\$12.47	\$374.14	\$14.92	\$447.48
MAR	31	\$12.07	\$374.14	\$14.43	\$447.48
EB	28	\$13.36	\$374.14	\$15.98	\$447.48
IAN	31				

Capital:

9.84 Daily Weighted Average

		\$	2.46 Rate per Hour	
Energy Calculation:				
\$0.3587	kWh charge per hour =	(kWh per year x energy rate)	/ 365 days per year / 4 hours per day	

\$

# Louisville Gas and Electric Company Support for EVSE, EVC and EVSE-R Rates Case No. 2015-00355

LG&E Fuel Adjustment Clause Fuel Base: 0.02725 kWh Per Hour 2015 4.01 November -0.00022 -0.00012 October September -0.0002 August -0.00064 July 0.00058 0.00221 June

Exhibit REL - 1 Page 3 of 6



&E Environmental Surcharge				
	2015	Group 1	Group 2	
November		9.47%	14.90%	
October		9.08%	14.29%	
September		9.08%	14.29%	

		Average	7.24%	11.39%
D	ecember	'2014	5.46%	8.63%
Ja	anuary		5.71%	8.99%
Fe	ebruary		5.80%	9.14%
Μ	arch		5.82%	9.17%
A	oril		5.86%	9.22%
Μ	ау		6.74%	10.61%
Ju	ine		7.43%	11.71%
Ju	lly		8.19%	12.90%
A	ugust		8.19%	12.88%

#### Weighted Average Cost of Capital (WACC)

	Capitalization	Annual
	Ratio	R.O.E.
Common	52.75%	10.00%
Total Equity	52.75%	
Short Term	4.47%	
Long Term	42.78%	
Total Debt	47.25%	
Total WACC	100.00%	

#### **Calculation of Annual Carrying Charge**

Overall Rate of Return

Straight Line Depreciation

10 year useful life

Income Taxes

Property Tax

TOTAL LEVELIZED FIXED CHARGE

# Louisville Gas and Electric Company Support for EVSE, EVC and EVSE-R Rates Case No. 2015-00355



### Exhibit REL - 1 Page 4 of 6

38.90%

#### (Weighted Cost of Equity / (1- CORPORATE TAX RATE)) x CORPORATE TAX RATE

**38.90%** )) x **38.9000%** 

3.358%

### LG&E

- JAN
- FEB
- MAF
- APR MAY
- /IAN JUJN
- JUN
- JUL AUG
- AUG SEP
- OCT
- NOV
- DEC

# Louisville Gas and Electric Company Support for EVSE, EVC and EVSE-R Rates Case No. 2015-00355

		kWh / DAY	(HRS/MO. X KW)	
MONTH	DAYS / MONTH	16	kWh / MONTH	
Ν	31		496	
В	28		448	
R	31		496	
R	30		480	
Υ	31		496	
N	30		480	
L	31		496	
G	31		496	
Ρ	30		480	
т	31		496	
<b>)</b> ∨	30		480	
C	31		496	
	365	_=HRS/YEAR	5,852	=kWh / YEAR

### Charging Station Consumption

\* Includes additional 1 kWh / month for display & security lighting

\*

Exhibit REL - 1 Page 5 of 6

Exhibit REL-1 Page 6 of 6

#### LG&E

#### **CAPITAL INVESTMENT**

Installed Cost for	Level 2 Charger Single	Level 2 Charger Dual
Electric Vehicle Charging Station	Material Labor	Material Labor
Charging Station (Bollard Charger) Sales Tax		



Kentucky Utilities Company Support for EVSE, EVC and EVSE-R Rates Case No. 2015-00355

Exhibit REL-2 Page 1 of 6

**KENTUCKY UTILITIES COMPANY** 

**DERIVATION OF RATES FOR EVSE** 

**NEW EVSE / EVC TARIFF** 

LEVEL 2	LEVEL 2	LEVEL 2
Single Charger	Single Charger	Dual Charger
Single Charger	Single Charger	Dual Charger
EVSE(R) & EVSE	EVC	EVSE(R) & EVSE

Estimated Investment per Unit				
Fixed Charges @	22.14%			
O&M (scheduled/trouble)				
Energy Management Fee (5 years)				
Networking Service Plan (5 years)				
		\$1,592.15	\$4,498.57	\$2,473.26
EVSE Monthly Rate for Equipment Only	EVSE (R)	\$132.68		\$206.11
EVC Monthly Rate for Equipment Only		\$374.88		\$448.31
EVSE Rate per Hour for Equipment Only			\$2.46	
Distribution Energy per kWh per year (Calculated with GS Rate)	0.09874	\$577.83		\$1,155.65
Distribution Energy per kWh per month		\$48.15		\$96.30
Distribution Energy per kWh per hour			\$0.3958	
Basic Service Charge		\$0.00	\$0.00	\$0.00
Fuel Adjustment Clause		\$0.00	-\$0.00518	\$0.00
Environmental Surcharge (Level 2)		\$0.00	\$0.02	\$0.00
Franchise Fee		\$0.00	\$0.00	\$0.00
School Tax		\$0.00	\$0.00	\$0.00
State Sales Tax		\$0.00	\$0.00	\$0.00
EVSE Monthly Rate for Equipment, Energy & Factors	EVSE	\$180.83		\$302.41
EVC Fee per Hour for Equipment, Energy & Factors	EVC		\$2.88	

Kentucky Utilities Company Support for EVSE, EVC and EVSE-R Rates Case No. 2015-00355 Exhibit REL-2

Page 2 of 6

 KU
 EVC Capital

 MONTH
 DAYS / MONTH

 Single Charger
 Dual Charger

 Daily Capital
 Monthly Capital
 Monthly Capital

			$\gamma$		
		Daily Average		Daily Average	
	365	\$12.34	\$4,498.57	\$14.75	\$5,379.69
DEC	31	\$12.09	\$374.88	\$14.46	\$448.31
NOV	30	\$12.50	\$374.88	\$14.94	\$448.31
ОСТ	31	\$12.09	\$374.88	\$14.46	\$448.31
SEP	30	\$12.50	\$374.88	\$14.94	\$448.31
AUG	31	\$12.09	\$374.88	\$14.46	\$448.31
UL	31	\$12.09	\$374.88	\$14.46	\$448.31
JUN	30	\$12.50	\$374.88	\$14.94	\$448.31
MAY	31	\$12.09	\$374.88	\$14.46	\$448.31
\PR	30	\$12.50	\$374.88	\$14.94	\$448.31
ИAR	31	\$12.09	\$374.88	\$14.46	\$448.31
EB	28	\$13.39	\$374.88	\$16.01	\$448.31
AN	31	\$12.09	\$374.88	\$14.46	\$448.31

Capital:

\$

		\$	2.46 Rate per Hour
Energy Calculation:			
\$0.3958	kWh charge per hour =	(kWh per year x energy rate) /	/ 365 days per year / 4 hours per day

### Kentucky Utilities Company Support for EVSE, EVC and EVSE-R Rates Case No. 2015-00355

KU Fuel Adjustment Clause Fuel Base: 0.02892 kWh Per hour 2015 4.01 November -0.00375 -0.0029 October September -0.00288 -0.00233 August July -0.00064 -0.00013 June

Exhibit REL-2 Page 3 of 6



KU Environmental Surcharge				
	2015	Group 1	Group 2	
November		5.47%	9.16%	
October		5.46%	9.24%	
September		4.65%	7.92%	

	Average	4.67%	8.01%	
December	'2014	4.39%	7.62%	
January		4.65%	8.04%	
February		3.92%	6.76%	
March		3.98%	6.91%	
April		3.95%	6.86%	
Мау		3.67%	6.37%	
June		5.40%	9.34%	
July		5.66%	9.75%	
August		4.78%	8.19%	

					KU	
Weighted Average Cost of	Weighted Average Cost of Capital (WACC)				Carrying Charge I	ncome Tax Calculation
	Capitalization	Annual	Annual	Weighted	Corporate Tax Rate	9:
	Ratio	R.O.E.	Cost	Cost	Carrying Charge:	(Weighted Cost of Equity / (1- CORF
Common	53.02%	10.00%		5.302%		(  5.302% /(1 -
Total Equity	53.02%					
Short Term	2.98%		0.90%	0.027%	_	
Long Term	44.00%		4.07%	1.791%		
Total Debt	46.98%					
Total WACC	100.00%			7.120%	Overall Cost of Capital	

### Calculation of Annual Carrying Charge

Overall Rate of Return

Straight Line Depreciation

10 year useful life

Income Taxes

Property Tax

TOTAL LEVELIZED FIXED CHARGE

# Kentucky Utilities Company Support for EVSE, EVC and EVSE-R Rates Case No. 2015-00355

### **Exhibit REL-2** Page 4 of 6

38.90%

#### RPORATE TAX RATE)) x CORPORATE TAX RATE

**38.90%** )) 38.90% Х

3.376%

MOI

KU

FEB MAR APR JUN JUL AUG SEP OCT NOV DEC

JAN

# Kentucky Utilities Company Support for EVSE, EVC and EVSE-R Rates Case No. 2015-00355

#### **Charging Station Consumption**

		kWh / DAY	(HRS/MO. X KW)		
ONTH	DAYS / MONTH	16	kWh / MONTH		
	31		496		
	28		448		
	31		496		
	30		480		
	31		496		
	30		480		
	31		496		
	31		496		
	30		480		
	31		496		
	30		480		
	31		496		- <b>h</b>
	365	=HRS/YEAR	5,852	_=kWh / YEAR	*

\* Includes additional 1 kWh / month for display & security lighting

Exhibit REL-2 Page 5 of 6

Kentucky Utilities Company Support for EVSE, EVC and EVSE-R Rates Case No. 2015-00355 Exhibit REL - 2 Page 6 of 6

#### KU CAPITAL INVESTMENT

	Level 2 Charger		Level 2 Charger	
Installed Cost for	Single		Dual	
Electric Vehicle Charging Station	Material Labor		Material	Labor
Charging Station (Bollard Charger)				
Sales Tax				
Shipping cost				

