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Jane E. Epperson

Sponsoring Party:

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Division of Energy

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Case No.:

GR-2019-0077

MISSOURI PUBLIC SERVICE COMMISSION

UNION ELECTRIC COMPANY d/b/a/ AMEREN MISSOURI CASE NO. GR-2019-0077

DIRECT TESTIMONY

OF

JANE E. EPPERSON

ON

BEHALF OF

MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT DVISION OF ENERGY

Jefferson City, Missouri May 3, 2019

Date 8-15-19 Reporter COT.
File No. GR-2-19-0007



BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Union Electric Company)	File No. GR-2019-0077
d/b/a Ameren Missouri's Tariffs to Increase)	Tracking Nos. YG-2019-0112
Its Revenues for Natural Gas Service)	YG-2019-0113

AFFIDAVIT OF JANE E. EPPERSON

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Jane E. Epperson, of lawful age, being duly sworn on her oath, deposes and states:

- My name is Jane E. Epperson. I work in the City of Jefferson, Missouri, and I am employed by the Missouri Department of Economic Development as the Senior Energy Policy Analyst, Division of Energy.
- 2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of the Missouri Department of Economic Development Division of Energy.
- 3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge.

Jane E. Epperson

Subscribed and sworn to before me this 3rd day of May, 2019.

LAURIE ANN ARNOLD
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: April 26, 2020
Commission Number, 16808714

My commission expires: 4/26/20

Notary Public

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I. INTRODUCTION

A.

- Q. Please state your name and business address.
- A. My name is Jane E. Epperson. My business address is 301 W. High Street, Suite 720, PO Box 1766, Jefferson City, Missouri 65102.
 - Q. By whom and in what capacity are you employed?
- A. I am employed by the Missouri Department of Economic Development Division
 of Energy ("DE") as a Senior Energy Policy Analyst.
 - Q. Please describe your educational background and employment experience.
 - I received my Masters of Science in Geology from the University of Missouri-Columbia and my Bachelor of Arts degree in Geology from Stephens College, Columbia, Missouri. Since joining DE, I filed CHP testimony before the Missouri Public Service Commission ("Commission") in Case Nos. ER-2014-0370, ER-2014-0351, ER-2014-0258, WR-2015-0301, SR-2015-0302, ER-2016-0179, GR-2017-0215, EO-2018-0211, and ER-2018-0145/0146. In addition to providing expert testimony for DE, I contributed to the development of the 2015 Missouri Comprehensive State Energy Plan, served as project manager for development of Missouri's first statewide Technical Reference Manual, and participated in Missouri Energy Efficiency Investment Act rule revision proceedings, and electric and natural gas utility collaboratives. I currently chair the statewide natural gas collaborative. Prior to my current position with DE, I served the Missouri Department of Conservation for 15 years in various positions, including Supervisor of the Policy Coordination Unit, which was responsible for statewide, regional, and area planning and policy, statewide compliance with environmental and cultural

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resource laws, Missouri River, Mississippi River and White River basin interstate coordination, and human dimensions (surveys) research. Prior to my employment by the Department of Conservation, I served as a hydrologist for five years for the Missouri Department of Natural Resources, where I focused on interstate water law, policy, and management issues.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your Direct Testimony in this proceeding?

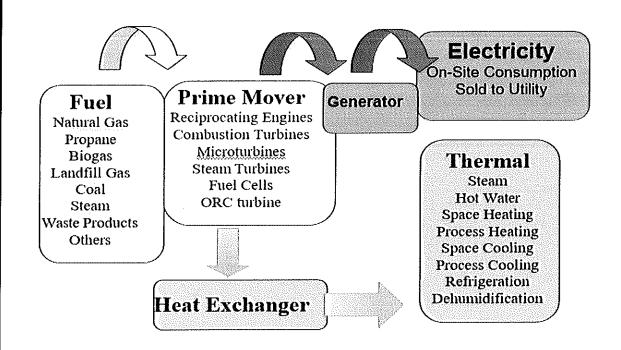
A. The purpose of my testimony is to a) describe combined heat and power ("CHP") technology and associated energy efficiency, economic, and resiliency benefits to customers, b) summarize Commission case history on the issues of CHP, as well as related efforts to support customer utilization of CHP, and c) recommend implementation of a CHP outreach effort by Ameren Gas Company.

III. COMBINED HEAT AND POWER

Q. What is CHP?

A. CHP is an array of proven, commercially available technologies that concurrently generate electricity and useful thermal energy from the same fuel source. CHP results in a significant increase in energy efficiency over separate heat and power systems because the thermal energy that is normally wasted is utilized. Figure 1 is a schematic that summarizes the basic elements of a CHP system. The figure illustrates the diversity of fuel sources, prime movers, and thermal applications that are available with CHP.

Figure 1. CHP System Schematic.¹



¹ Miller, Graeme. 2018. Understanding Standby Rates and their impact on Customer-Sited Combined Heat and Power Resources. U.S. Department of Energy Midwest CHP Technical Assistance Partnerships. Slide 9, presentation to the Midwest Cogeneration Associations May 17, 2018.

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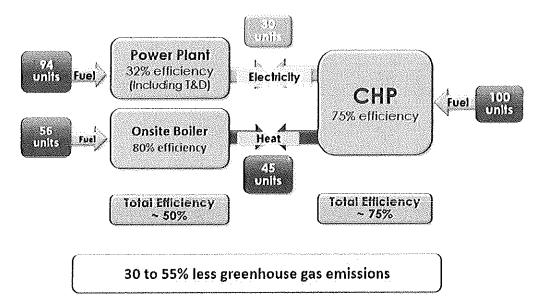
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- 1 Q. How much energy does a CHP system save?
 - A. Figure 2 illustrates the efficiency achieved through the use of CHP.

Figure 2. Energy Efficiency Comparison of CHP versus Separate Heat and Power Production.²

CHP Recaptures Heat of Generation, Increasing Energy Efficiency, and Reducing GHGs



The left half of Figure 2 depicts separate heat and power production using two fuel inputs, resulting in an overall efficiency of 50 percent. An example of separate heat and power production would be a business owner who buys electricity from a utility and has a boiler in the basement that provides hot water and space heating for

² Haefke, Cliff, 2018. Combined Heat and Power (CHP) for Missouri Institutional Facilities: Reducing Energy Costs, Lowering Emissions, and Increasing Resiliency. U.S. Department of Energy Central CHP Technical Assistance Partnerships. Slide 9, presentation to CHP for Resiliency of Critical Facilities Summit, April 10, 2018. https://energy.mo.gov/chp-summit

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- their facility. The right half of Figure 2 depicts CHP with the use of a single fuel input, resulting in an overall efficiency of 75 percent. The CHP system produces both electricity and heat from a single-fuel source, increasing energy efficiency by 25 percent.
 - Q. What type of Ameren Missouri Gas customers might benefit from consideration of a CHP system?
 - A. Customers with a steady demand for both thermal and electrical energy are prime candidates for utilization of CHP generation. Commercial sector candidates include hospitals and nursing homes, public water and wastewater treatment facilities, data centers, hotels, government facilities (federal, state, county, and city) and universities and colleges. Industrial sector candidates include food and beverage distributors as well as manufacturers of chemical, wood, agricultural, and furniture products.
 - Q. Is CHP a proven technology for which there is significant technical potential for application in Missouri?
 - A. Yes. CHP is a proven technology nationally.³ There are 19 CHP installations in Missouri with a total capacity of 235 megawatts.⁴ The technical potential of CHP in Missouri is 3,290 megawatts.⁵

³ U.S. Department of Energy CHP Installation Database, 2019. https://doe.icfwebservices.com/chpdb/.

⁴ Combined Heat and Power Installations in Missouri. 2019.

https://doe.icfwebservices.com/chpdb/state/MO.

⁵ U.S. Department of Energy Combined Heat and Power (CHP) Technical Potential in the United States, March 2016.

- Q. Why is there such a gap between the number of CHP customers and the technical potential of CHP in Missouri?
- A. Lack of CHP deployment in Missouri is because of numerous factors including, but not limited to: a lack of awareness of the energy efficiency, resiliency and economic benefits that CHP can provide to businesses and communities; longer project lead times compared to other energy efficiency measures; additional regulatory complexity and cost, such as the impacts of standby service tariffs; lack of Commission or legislative public policy support; lack of utility administered CHP rebates or incentives; lack of favorable energy efficiency financing options; and relatively few businesses that sell and service CHP equipment in Missouri.^{6,7}
- Q. What specific energy efficiency, resiliency and economic benefits can CHP provide to businesses and communities?
- A. Utilization of CHP can provide numerous benefits, including: 1) reduced energy consumption and associated fuel cost savings; 2) increased business and community competitiveness, which can contribute to economic growth or deter economic losses; and 3) increased system reliability and the reduction of unplanned outages. Specifically, the significant (estimated 25 percent) total process efficiencies CHP can provide compared to separate heat and power systems correlate directly to reduced energy consumption and fuel costs.

⁶ Friedman, Julia and Garth Otto 2013 Combined Heat and Power: A Resource Guide for State Energy Officials. National Association of State Energy Officials.

https://www.naseo.org/data/sites/1/documents/publications/CHP-for-State-Energy-Officials.pdf.

⁷ Chittum, Anna and Nate Kaufman. 2011. Challenges Facing Combined Heat and Power Today: A State-by-State Assessment. pages 6-22, 51

https://aceee.org/sites/default/files/publications/researchreports/ie111.pdf.

Depending upon the facility, energy fuel costs may constitute a significant and 1 2 ongoing business expense. The real capital resulting from reduced fuel costs can 3 be reinvested or otherwise applied by a business or community to improve its 4 competitiveness and contribute to local and state economic vitality. A business or community can save additional real capital by becoming more resilient - reducing 5 the frequency and duration of grid outages - through CHP application. A 6 7 Department of Defense national study reported approximately 127 utility outages that lasted eight hours or longer in 2015, with a financial impact estimated to be 8 \$179,087 per day.8 A Ponemon Institute research report estimated the average 9 10 cost of unplanned outages for 67 data centers to be \$690,204 per incident. 9 The U.S. Department of Energy ("U.S. DOE")'s Energy Sector Risk Profile for the state 11 12 of Missouri states that: a) Missouri electric transmission outages affect 1,660,305 customers 45 hours per year on average (2008-2013), b) electric distribution 13 14 outages caused by weather and falling trees affect 214,783 customers 45 hours 15 per year annually, and c) severe weather causes average property loss of \$58.9 million per year (1996-2014). 10 CHP technologies are proven to be highly reliable 16 17 - not prone to outages - because of their on-site location (which eliminates 18 transmission and distribution outages) and high performance, as measured by their "availability" parameter, which is the percent of time in a year that a CHP 19 20 system runs without an unplanned outage. Depending upon the specific prime

⁸ Department of Defense Annual Energy Management Report Fiscal Year 2015, 2016. Office of the Assistant Secretary of Defense. Pages 45-47.

⁹ 2013 Cost of Data Center Outages, 2013. Ponemon Institute. Pages 7-9.

¹⁰ https://energy.gov/sites/prod/files/2016/09/f33/MO Energy%20Sector%20Risk%20Profile 2.pdf.

A.

mover of the CHP, systems provide reliable and available service 72-99 percent of the time.¹¹ CHP systems can be designed to provide continuous power, peak load shaving, and back-up functions (ex: through the use of two, single-megawatt systems instead of one, two-megawatt system).

Q. Do other investor-owned utilities ("IOUs") administer CHP programs?

Yes. A recent national review of IOUs documented 20 CHP programs, 16 of which were part of an energy efficiency portfolio in support of state energy efficiency standards. The review reported five natural gas utilities with CHP programs: Philadelphia Gas Works, Nicor Gas, SoCalGas, Southwest Gas, and UGI. About half the utility-led CHP programs are offered as part of business-custom energy efficiency programs, while the other half are standalone programs, which may more fully address the specifics of CHP systems. The various IOU CHP programs offer a wide range and combination of incentives, including: capacity incentives from \$75-\$1,800/kW; production incentives from 2-30 cents/kWh for 12-18 months; up to 50-70 percent of total project cost; and 25-50 percent of feasibility assessment costs. 12 For example, in Illinois, ComEd and Nicor Gas jointly offer 75 percent of the feasibility assessment cost (up to \$37,000) for a CHP system. In addition, ComEd provides 7 cents per kWh without a cap, while Nicor Gas provides \$1 per therm savings (capped at \$500,000). 13

¹¹ U.S. Environmental Protection Agency Combined Heat and Power Partnership, 2017. Catalog of CHP Technologies, p.1-6.

¹² Kelly, M. and A. Hampson. 2018. 'A National Review of Combines Heat and Power Programs in Utility Energy Efficiency Portfolios." Proceedings of the 2016 ACEEE Summer Study on Energy Efficiency in Buildings. Washington, DC: ACEEE. https://aceee.org/files/proceedings/2018/#/paper/event-data/p113. ¹³ ibid

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IV. SUMMARY OF CASE HISTORY TO SUPPORT CUSTOMERS WHO WOULD BENEFIT FROM CHP

Q. Please summarize the case history specific to the CHP issue.

Ameren Missouri's 2014 electric rate case (Case No. ER-2014-0258) resulted in a Nonunanimous Stipulation and Agreement Regarding Supplemental Services Issues in which Ameren Missouri committed to develop and file, in collaboration with the signatories, a Standby Service Tariff by December 31, 2015 (Attachment 1). While the Company worked collaboratively, and the effort was productive with regard to definitions, the signatories did not reach agreement regarding tariff charges. The tariff elements that needed to be addressed for DE to agree to the specific rates in the proposed Ameren Standby Service Rider ("SSR") were detailed in the November 10, 2015 Position Paper (Attachment 2). The impasse regarding the specific tariff charges remained. The Company filed a proposed SSR, materially the same as the one resulting from the collaborative workshop (except for the forced outage profile), in its next rate case (Case No. ER-2016-0179). In that rate case, DE pursued the tariff rate elements detailed in the November 10, 2015 Position Paper and testified that the rates proposed by Ameren Missouri in the draft SSR were not based on accurate data and consistent system-wide costing principles, In response to Data Request No. DED-DE 009, Ameren Missouri stated that no studies had been done or existed to quantify the difference in the cost of providing service to a CHP customer and a non-CHP customer with similar load or other cost characteristics. Nonetheless, the Commission approved the Company's proposed SSR, which is currently in effect

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(Attachment 3). The Company provides a contact on its website through which 1 2 assistance is provided for using Excel-based tools to estimate the impact of the 3 Standby Service Rider tariff on a customer's bill, based upon inputted projected load profiles and generation assumptions. 14 In the recent Kansas City Power & 4 Light Company and KCP&L Greater Missouri Operations ("KC&PL and GMO") rate 5 6 cases (Case Nos. ER-2018-0145 and ER-2018-0146) Division of Energy filed 7 testimony by Ms. Barbara Meyer and myself regarding CHP and the need for a 8 cost-based SSR. An alternate Standby Service Rider was included in the Non-Unanimous Partial Stipulation and Agreement Concerning Rate Design Issues 9 10 filed in those cases (Attachment 4). However, the SSRs that were filed and 11 approved at the conclusion of the case inadvertently had not been adjusted to 12 reflect the final revenue requirement. To address the oversight, KCP&L and GMO 13 filed corrected SSR tariffs for Commission approval (Attachment 5). The corrected 14 SSR tariffs are pending review by the Commission Staff at the time of this writing. 15 The Empire District Electric and Liberty Utilities merger Case No. EM-2016-0213 16 Amended Stipulation and Agreement as to Division of Energy and Renew Missouri 17 included a commitment by Empire to assist DE and the U.S. Department of Energy 18 Midwest CHP Technical Assistance Partnership ("CHP TAP") in completing an 19 outreach effort for screening potential CHP customers within the Empire District 20 Gas Company's ("Empire Gas") service territory in Missouri (Attachment 6). At no 21 cost to the customers or the Company, the resulting outreach effort created a

¹⁴https://www.ameren.com/missouri/business/rates/electric-rates/rider-ssr.

replicable process model, lessons learned, and positive response from those customers contacted (see Table 1).

Table 1. CHP Technical Assistance Outreach to Empire Gas Utility Contacts

Facility Type	Sites Contacted	Completed Questionnaire	Good Candidates	Calls Completed	Screening Completed
Colleges/ Universities	2	2	2	1	1
Correctional	1	1	1		
Healthcare	3	3	3	1	1
Manufacturing	5	4	4	2	2
Total	11	10	10	4	4

Outreach included calls from Empire Gas account managers to large volume customers inviting them to discuss CHP with CHP TAP and inclusion of a bill insert (trifold 8" X 10" flyer) referring customers to the Empire Gas website. The website includes a pre-recorded, 10-minute webinar introduction to CHP, an invitation to a live webinar, and CHP TAP contact information regarding the no-cost screening service.

- Q. Has progress been made toward increasing the awareness of CHP solutions to Missouri businesses who could benefit from them?
- A. Yes. In 2015, DE updated its public website with additional information about CHP technologies and hyperlinks to reference resources¹⁵.

In 2018, DE and Spire Missouri Inc. co-hosted two CHP summits focused on energy resiliency for critical facilities. Attendees affiliated with, and providing services to, hospitals, universities and colleges, correctional facilities, and nursing

¹⁵ https://energy.mo.gov/clean-energy/combined-heat-power.

homes spent a day learning about the benefits of CHP. The participation of sponsors and exhibitors with direct experience in CHP systems brought a breadth of resources to the summits, benefiting all participants. SSM Health shared experiences with resiliency and working with the CHP TAP on a CHP qualification screening for DePaul Hospital. Each summit provided a program of speakers coupled with an exhibit area and time for networking. A presentation entitled "Valuing Energy Resiliency" by Jonathan Flannery, Senior Associate Director of Advocacy for the American Society for Healthcare Engineering, was a particular highlight of the western summit. Presentations and materials from both CHP Summits are publically available through DE's website. 16

- Q. Are any efforts applicable to Ameren Gas customers underway to address the perception of risk associated with capital investment in CHP?
- A. Yes. In recognition of the significant energy efficiency and resiliency benefits of CHP, the U.S. DOE Packaged CHP Accelerator program was created to a) develop a national web-based catalog of U.S. DOE-recognized packaged CHP suppliers and b) validate that packaged system installations save 20 percent or more of project costs and 30 percent of project time when compared to individually engineered CHP applications. ¹⁷ Many CHP applications require design and engineering tailored to the specific facility and are assembled onsite. As CHP deployment increases, it has become apparent that different facilities might share similarities in size, operations, configurations, and energy usage. In response,

¹⁶ https://energy.mo.gov/chp-summit.

¹⁷ https://betterbuildingsinitiative.energy.gov/accelerators/packaged-chp.

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manufacturers have started offering "factory-built" CHP systems that eliminate 1 2 many of the site-specific engineering requirements and associated costs. The 3 packaged CHP systems reduce customer uncertainty regarding performance, 4 shorten installation time, streamline permitting, reduce design errors, and reduce 5 the overall cost. Because of the economic development potential of CHP to benefit Missouri businesses, DE is participating in the Packaged CHP Accelerator 6 7 Program as an engagement partner. DE is encouraging packaged CHP suppliers 8 to expand their service territories to include Missouri and will promote utilization of the newly created national eCatalog of recognized packaged CHP suppliers 18 9 10 through information on DE's website.

Q. Are any federal incentives available to Ameren Missouri Gas customers for CHP?

- A. Yes. The Federal Business Energy Investment Tax Credit was extended to 2021 and provides a 10 percent tax credit for the purchase of CHP projects with no maximum limit on total cost.¹⁹
- Q. Does CHP qualify for financing through the state's Energy Loan Program?
- A. Yes. The Energy Loan Program is administered by DE and provides low-interest loans for energy efficiency projects, including CHP.²⁰

¹⁸ https://chp.ecatalog.industrialenergytools.com/.

¹⁹ http://programs.dsireusa.org/system/program/detail/658.

https://energy.mo.gov/assistance-programs/energy-loan-program. https://energy.mo.gov/sites/energy/files/emlp-fact-sheet.pdf.

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- Q. Is CHP an eligible measure in Ameren Electric's Business Custom Energy
 Efficiency Program?
- 3 A. Yes.

- V. RECOMMENDATION
- Q. What is your recommendation in this case regarding CHP?
 - A. DE recommends that the Company complete a CHP outreach effort similar to that which was approved by the Commission in Case No. EM-2016-0213. Specifically, within one year of the conclusion of this rate case, DE recommends that Ameren Missouri Gas complete a CHP outreach effort supported by DE and the CHP TAP²¹ at little to no monetary cost to the Company or the customers. The proposed process includes the following:
 - (i) Ameren Missouri Gas will identify non-residential customers that receive both gas and electric service from Ameren Missouri, as well as municipalities served by Ameren Gas where the municipality's electrical system may be constrained. From this subset of Ameren Gas customers, the Company will develop a list of customers with a steady demand for both thermal and electrical energy throughout the year. Examples of customers that are good candidates for CHP include hospitals, large residential facilities, such as nursing homes or correctional facilities, universities and colleges, government emergency facilities, and industrial manufacturers.

²¹ http://www.midwestchptap.org/.

- (ii) Ameren Missouri Gas will review CHP outreach products previously created by the CHP TAP and publish selected products on the Company's website in a location that is easily accessible by customers. Products include an informational flyer, CHP Screening Survey, Project Profiles, pre-recorded Introduction to CHP video, announcement of a live webinar, example bill insert, and additional resource hyperlinks.
- (iii) Ameren Missouri will contact customers identified in step (i) to alert them to new information on its website that may be of particular interest to them and offer to facilitate a complimentary, confidential CHP screening survey by the CHP TAP. Initial contact may be by email or postal mail, followed by a personal conversation. With the customer's agreement, Ameren Missouri will authorize CHP TAP to contact the customers and complete a complimentary, confidential CHP Screening Survey.
- (iv) Ameren Missouri and CHP TAP will coordinate to obtain load data for those customers interested in a CHP Screening Survey.
- (v) CHP TAP will perform the complimentary, confidential CHP Screening Surveys.
- (vi) CHP TAP will provide survey reports to the customers and offer a follow-up conversation to discuss potential next steps and additional CHP TAP services.
- (vii) CHP TAP will provide Ameren Missouri with a final report of all survey results, with information aggregated to a level that does not disclose customer-specific information. Ameren Missouri will share the final report with interested stakeholders, including DE, staff, and the Office of Public Counsel.

Direct Testimony of Jane E. Epperson Case No. GR-2019-0077

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

ATTACHMENTS GR-2019-0077 Epperson Direct Testimony

- Attachment 1: Case No. ER-2014-0258 Nonunanimous Stipulation and Agreement Regarding Supplemental Service Issues
- Attachment 2: Missouri Division of Energy Position Paper November 10, 2015 Ameren Standby Service Tariff
- Attachment 3: Case No. ER-2016-0179 Union Electric Company Electric Service,
 Missouri Service Area, Rider SSR Standby Service Rider
- Attachment 4: Case No. Case Nos. ER-2018-0145 and ER-2018-0146 Non-Unanimous

 Partial Stipulation and Agreement Conserving Rate Design Issues

 (related excerpts only)
- Attachment 5: Case No. ER-2018-0145 and ER-2018-0146 KCPL/GMO, Standby Service Riders, corrected and refiled February 12, 2019 for Commission approval
- Attachment 6: Case No. EM-2016-0213 Amended Stipulation and Agreement as to Division of Energy and Renew Missouri

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of the Empire District Electric Company,)	
Liberty Utilities (Central) Co. and Liberty Sub Corp.)	Case No. EM-2016-0213
Concerning an Agreement and Plan of Merger and)	
Certain Related Transactions.)	

AMENDED STIPULATION AND AGREEMENT AS TO DIVISION OF ENERGY AND RENEW MISSOURI

COME NOW The Empire District Electric Company ("Empire"), Liberty Utilities (Central) Co. ("LU Central"), and Liberty Sub Corp. (sometimes collectively hereinafter "Joint Applicants"), and the Missouri Division of Energy ("DE") and Earth Island Institute d/b/a Renew Missouri ("Renew Missouri"), by and through their undersigned counsel and, pursuant to Missouri Public Service Commission ("Commission") rule 4 CSR 240-2.115, request that the Commission approve this agreement as a settlement of DE and Renew Missouri's issues relevant to the Joint Application filed by Empire, LU Central and Liberty Sub Corp.

The Signatories hereto agree as follows:

The Signatories hereto recommend that the Commission approve the proposed Transaction subject to the following conditions:

(1) Demand-side management ("DSM") programs. Empire will work with DE, the Staff of the Commission ("Staff"), the Office of the Public Counsel ("OPC") and other parties through the existing DSM Advisory Group to review and consider the viability of adopting additional energy efficiency programs for its customers. Within one year of the Commission's finding of substantial compliance of the Empire Integrated Resource Plan that follows Commission approval of a Statewide Technical Reference Manual (TRM), Empire will develop and submit an application for approval of a portfolio of DSM programs under the Missouri Energy Efficiency

Investment Act (MEEIA), so long as any such portfolio is a part of Empire's adopted preferred resource plan in its Integrated Resource Plan, or has been analyzed through the integration process required by 4 CSR 240-22.060, and the portfolio and any DSIM submitted in the application is fully compliant with the MEEIA statute and applicable regulations.

- (2) Combined Heat and Power ("CHP"). Within one year of the completion of the merger transaction, Empire will assist DE and the US DOE Midwest CHP Technical Assistance Partnership ("CHP TAP") in completing an outreach effort for screening potential CHP customers within The Empire District Gas Company's ("EDG," a wholly owned subsidiary of Empire) service territory in Missouri. The screening tool to be provided by the CHP TAP is a survey to help determine if CHP is a good fit for the customers from a financial and technical perspective. Target sectors will include public, commercial, institutional and industrial facilities with consistent gas consumption throughout the year, indicative of consistent thermal load requirements. Example customers that may generally fit this profile include hospitals, large residential facilities such as nursing homes and correctional facilities, universities, and food manufacturers. Those surveyed customers with favorable evaluations will be encouraged to take the next step of contacting the CHP TAP for follow-up technical assistance services, which could include a more detailed CHP feasibility study. Detailed process/roles are as follows:
 - (i) Empire will utilize its knowledge of the EDG service territory and customers to develop a list of customers in the target sectors territory—wide, with outreach occurring beyond the form of a bill insert. Empire will review the types of customers and number of customers of each type in the target sectors with the EDG Demand Side Management

- Advisory Group ("DSMAG"). The DSMAG will be able to provide feedback regarding the types and number of customer's identified, as well as how to optimize outreach efforts.
- (ii) CHP TAP/DE will provide Empire with an educational packet explaining CHP and a tailored CHP Screening Survey tool, to include explanation of the use that will be made of the customer data.
- (iii) Empire will email or mail and personally follow up by phone with customers to encourage completion of the survey, and, if requested, will assist customers with obtaining past billing information.
- (iv) Interested customers will complete the CHP Screening Survey tool and email or mail them to CHP TAP.
- (v) CHP TAP will score the surveys and share the results with surveyed customers, and offer those who "scored well" a follow-up conversation to discuss next steps and other available CHP TAP services, which could include a more detailed CHP feasibility study.
- (vi) CHP TAP will provide Empire with a survey report, with information aggregated to a level that does not disclose customer-specific information.
- (vii) Empire will share the report with interested stakeholders, including Staff, the Office of the Public Counsel and DE.
- (viii) If Empire determines that the requirements of this provision cannot be reasonably completed without additional CHP TAP assistance, Empire will ensure CHP TAP has complied with all statutes and Commission

rules regarding the handling of confidential information prior to releasing any customer specific information to CHP TAP.

- (3) Any recovery of third party or non-reoccurring costs associated with the Combined Heat and Power survey will not exceed five-thousand dollars (\$5,000).
- (4) Microgrid Industrial Consortium. Within six (6) months following the completion of the Transaction and the publication of best practices recommendations for microgrid interconnection by the Missouri University of Science and Technology's Microgrid Industrial Consortium, Empire will meet with DE to consider a microgrid interconnection strategy consistent with the best practices recommendations of the Microgrid Industrial Consortium.
- (5) Empire will review and consider the viability of offering a community solar or solar subscription program that provides its customers with the option of purchasing blocks of electricity generated from solar installations constructed and/or owned by Empire within the state of Missouri. Empire will solicit input and feedback on proposals and will work with Staff, OPC, DE, Renew Missouri, and other interested stakeholders to design a successful customer solar program, with the goal of submitting a formal proposal to the Commission within one year of the completion of the Transaction.

General Provisions

A. This Stipulation has resulted from negotiations among the Signatories and the terms hereof are interdependent. In the event the Commission does not adopt this Stipulation in total, then this Stipulation shall be void and no Signatory shall be bound by any of the agreements or provisions hereof. The stipulations herein are specific to the resolution of this proceeding, and all stipulations are made without

- prejudice to the rights of the Signatories to take other positions in other proceedings except as otherwise provided herein. The Signatories agree that any and all discussions related hereto shall be privileged and shall not be subject to discovery, admissible in evidence, or in any way used, described or discussed.
- B. This Stipulation is being entered into for the purpose of disposing of DE and Renew Missouri's issues in this case. The Signatories represent that the terms of this Stipulation constitute a fair and reasonable resolution of the issues addressed herein, in a manner which is not detrimental to the public interest. Except as otherwise addressed herein, none of the Signatories to this Stipulation shall be deemed to have approved, accepted, agreed, consented or acquiesced to any accounting principle, ratemaking principle or cost of service determination underlying, or supposed to underlie any of the issues provided for herein.
- C. The Signatories further understand and agree that the provisions of this Stipulation relate only to the specific matters referred to in the Stipulation, and no Signatory or person waives any claim or right which it otherwise may have with respect to any matter not expressly provided for in this Stipulation. The Signatories further reserve the right to withdraw their support for the settlement in the event that the Commission modifies the Stipulation in a manner which is adverse to the Signatory, and further, the Signatories reserve the right to contest any such Commission order modifying the settlement in a manner which is adverse to the Signatory contesting such Commission order. The Signatories agree that the details of this Stipulation have no precedential value in any future proceeding not related to enforcement of this agreement.

- D. The non-utility Signatory Parties enter into this Stipulation in reliance upon information provided to them by the Joint Applicants and this Stipulation is explicitly predicated upon the truth of representations made by the Joint Applicants.
- E. In the event the Commission accepts the specific terms of this Stipulation without modification, the Signatories waive, with respect to the issues resolved herein: their respective rights pursuant to Section 536.070(2), RSMo 2000 to call, examine and cross-examine witnesses; their respective rights to present oral argument or written briefs pursuant to Section 536.080.1, RSMo 2000; their respective rights to the reading of the transcript by the Commission pursuant to Section 536.080.2, RSMo 2000; their respective rights to seek rehearing pursuant to Section 386.500, RSMo 2000; and their respective rights to judicial review pursuant to Section 386.510, RSMo 2000. Furthermore, in the event the Commission accepts the specific terms of this Stipulation without modification, the Signatories agree that the pre-filed testimony of all witnesses who have pre-filed testimony in this case shall be included in the record of this proceeding without the necessity of such witnesses taking the stand.
- F. Except as otherwise addressed in this Stipulation, Commission approval of the acquisition by LU Central and Liberty Sub Corp. of the stock of Empire, and for the Joint Applicants to execute and perform in accordance with the terms of the Agreement, does not in any way, limit, form a basis for determination, or constitute a defense against any Signatory proposing, or the Commission ordering, the disallowance and/or imputation of account balances, expenses,

- revenues and/or other ratemaking findings, regarding Empire's operations in a future rate proceeding.
- G. To assist the Commission in its review of this Stipulation, the Signatories also request that the Commission advise them of any additional information that the Commission may desire from the Signatories relating to the matters addressed in this Stipulation, including any procedures for furnishing such information to the Commission.

WHEREFORE, the Signatories hereto recommend that the acquisition by LU Central and Liberty Sub Corp. of the stock of Empire as contemplated by the Agreement and Plan of Merger is reasonable and not detrimental to the public interest and respectfully request that the Commission approve this Amended Stipulation and Agreement subject to the conditions

contained herein.

Respectfully submitted,

BRYDON, SWEARENGEN & ENGLAND P.C.

By:

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ATTORNEY FOR MISSOURI DIVISION OF ENERGY

CERTIFICATE OF SERVICE

The undersigned certifies that a true and correct copy of the foregoing document was sent via electronic mail, this 23rd day of August, 2016, to the following:

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Missouri Division of Energy Position Paper November 10, 2015 Ameren Standby Service Tariff

On March 5, 2015, Union Electric Company d/b/a Ameren Missouri, the Missouri Department of Economic Development – Division of Energy, the Missouri Industrial Energy Consumers (MIEC), and the Staff of the Commission filed a non-unanimous stipulation and agreement that would resolve all issues relating to Supplemental Service in Case ER-2014-0258. As part of the agreement, Ameren Missouri was directed to consult with interested stakeholders to draft and file a Standby Tariff by December 31, 2015, that will apply prospectively to all new customer generators.

Since the first stakeholder meeting on October 20, 2015 to develop a proposed Ameren Standby Service Rider (SSR) tariff, the Division of Energy has interfaced with Ameren's staff with the intent to substantively contribute to the clarity and transparency of the tariff. Consistent with this intent, DE offered specific suggestions for definitions as well as alternative rates, while staying within the Company's draft rate structure. We feel that great progress has been made in the tariff definitions and we thank Ameren for their specific efforts in this regard. With footnoted exception, we are generally comfortable with the overall structure of the proposed tariff¹. We also acknowledge and support the Company's effort to be inclusive by the addition of the LTS class to the tariff.

Now it's time to drill down in determining specific rates. Standby rates are necessary to recover the fully allocated embedded costs that the utility incurs to provide backup and maintenance service. We have reviewed the data related to Ameren's class cost of service (CCOS) and how it may apply to the tariff rates. It is important to note that there is currently no cost basis directly applicable to standby service provided to self-generators in the CCOS evaluation on which to formulate the tariff rates. A combination of both subjective and objective analysis is required to achieve rates that will meet essential needs of both Ameren and potential SSR tariff customers. The Division of Energy, in its role as part of the Missouri Department of Economic Development, desires to ensure that the tariff will preferably incent, or at the least not penalize, SSR customers. The Regulatory Assistance Project (RAP) recommends rates that are designed to give customers a strong incentive to use electric service most efficiently, to minimize the costs they impose on the system, and to avoid charges when service is not taken². This means that

¹ DE supports allowing a standby service customer to aggregate service under reasonable conditions. DE reserves the opportunity to recommend service aggregation in a future proceeding.

² http://raponline.org/document/download/id/7020

they reward customers for maintaining and operating their onsite generation. To this end, we are guided by the concept of achieving a minimum avoided cost percentage rate (with no standby service taken in a month) of not less than 93% for all classes of service as a metric for achieving this goal. In developing specific rates, we concur with the Midwest Cogeneration Association's fair standby rate principles and embody them here as well as offer specific opportunities to move the draft tariff to success. Consistent with these principles, the following elements must be addressed in determining specific rates for the proposed Ameren Standby Service Rider tariff:

- 1. A standby service customer should not pay fixed monthly charges for generation, transmission, and distribution that are higher than the demand charge on the otherwise applicable tariff. Generation reservation demand charges should be based on the utility's cost and the forced outage rate, as identified in RAP³.
- 2. To support the concept of the 93% of avoided cost, and to avoid customer use of backup service on-peak, we prefer to see fixed monthly charges on the order of the winter demand rate and variable demand charges for usage of backup on-peak. Ameren is applying this concept to the LPS class. It should be applied to all classes applicable to the SSR.
- 3. Forced outage rates should be considered in the calculation of reservation fees for standby fixed charges. There are a number of utilities from other states using forced outage rate as a component of their standby tariff ^{4,5} that can be used as examples.
- 4. The applicability of the MISO related charge should be evaluated within the context of the benefits provided by SSR customers as distributed generation sources that are supporting the grid. These benefits have been recognized but have not been quantified.
- 5. No additional demand charges or higher energy rates should apply to standby customers in conjunction with <u>scheduled</u> maintenance service (on- or off-peak) unless actual demand, including scheduled maintenance, exceeds the supplementary contract capacity. It is our understanding that this is consistent with Ameren's draft tariff language. This stresses the importance of setting an appropriate supplementary contract capacity.
- 6. No additional demand charges or higher energy rates should apply to standby customers in conjunction with <u>backup</u> service (on- or off-peak) unless actual demand, including backup service, exceeds the supplementary contract capacity. It is our understanding that this is consistent with Ameren's draft tariff language. We also suggest that backup service taken off-peak should incur no demand charges, similar to maintenance service. This stresses the importance of setting an appropriate supplementary contract capacity. The largest cost impact should be reflected for backup service taken during summer, on-peak periods.
- 7. It is our understanding that Ameren's intent is that, forced outage or not, any demand, including maintenance and backup, less than the supplemental contract capacity will

http://raponline.org/document/download/id/7020 (Standby Generation Reservation Charge, p 13)

⁴ http://www.midamericanenergy.com/include/pdf/rates/elecrates/iaelectric/ia-elec.pdf

⁵ https://www.nvenergy.com/company/rates/nnv/electric/schedules/images/LSR_Electric_North.pdf

- have no additional maintenance or backup demand or energy charges, although monthly fixed charges will still apply. DE supports this intention, which is not currently clear in the proposed tariff and needs to be made explicit. This stresses the importance of setting an appropriate supplementary contract capacity.
- 8. It is appropriate to design rates in a manner that provides an incentive to avoid unscheduled outages on-peak. This concept is illustrated by the use of daily-as-used charges when backup service is taken. This methodology is used in Ameren's draft tariff for the LPS customer. This concept should also be applied to the other applicable classes to similarly encourage equipment reliably and the avoidance of daily-as-used charges.
- 9. There should be a reasonable balance between fixed and variable charges. As an example, with lower fixed costs, higher variable costs may be justified. Conversely, with the higher fixed costs in Ameren's proposed tariff, variable costs should only apply to summer on-peak periods.
- 10. The highest block rate of the applicable tariff should apply to on-peak backup energy usage when actual usage exceeds the supplementary contract capacity. For LGS and SPS, the declining block rate structure provides the means of addressing time-of-day usage by virtue of allocating all on-peak usage to the highest cost block. For non-declining block rate structure, as for LPS, applying an appropriate multiplier would create a disincentive for on-peak usage.
- 11. To our knowledge, LGS billing examples have not been analyzed by the Company. It's logical to conclude that these customers are negatively impacted by the higher rates embedded within that class. We believe the Company should develop an average load profile for this class, as they did for the other classes, and provide billing examples necessary to analyze tariff impact.

The Missouri Division of Energy will support the Company's Standby Service Rider when these substantive issues have been resolved. We believe the task is eminently feasible, with tariffs, best practices, and technical experience from other states to draw upon.

UNION ELECTRIC COMPANY

ELECTRIC SERVICE

MO.P.:	S.C. SCHEDULE NO. 6		1st Revised	SHEET NO	92
CANCELLING MO.P.	S.C. SCHEDULE NO. 6		Original	SHEET NO.	92
APPLYING TO	MISSOURI	SERVICE AREA			

RIDER SSR

STANDBY SERVICE RIDER

APPLICABILITY

Applicable to each customer not currently served by Rider E, at a single premises with behind the meter on-site parallel distributed generation and/or storage system(s) with a capacity over 100 kilowatts (kW), as a modification to standard electric service supplied under either the tariffed rate schedules of Large General Service 3(M), Small Primary Service 4(M), or Large Primary Service 11(M). Customers with emergency backup, solar or wind generation that is not integrated with a storage system are excluded from this Rider.

DEFINITIONS

DISTRIBUTED GENERATION AND/OR STORAGE - Customer's private on-site generation and/or storage that:

- 1. is located behind the meter on the customer's premises,
- 2. has a rated capacity of 100 kW or more,
- 3. operates in parallel with the Company's system, and
- 4. adheres to applicable interconnection agreement entered into with the Company.

SUPPLEMENTAL SERVICE - Electric service provided by the Company to customer to supplement normal operation of the customer's on-site parallel distributed generation and/or storage in order to meet the customer's full service requirements.

STANDBY SERVICE - Service supplied to the premises by the Company in the event of the customer exceeding its Supplemental Contract Capacity. Standby Service may be needed on either a scheduled or unscheduled basis. Standby Service comprises capacity and associated energy during the time it is used.

- 1. BACKUP SERVICE Unscheduled Standby Service.
- 2. MAINTENANCE SERVICE Scheduled Standby Service.

BACK-UP SERVICE - The portion of Standby Contract Capacity and associated energy used without advance permission from the Company. The customer must notify the Company within thirty (30) minutes of taking Back-up Service for amounts over five (5) megawatts (MW). For Back-up Service billed, the customer shall be charged the daily standby demand charge for back-up service and back-up energy charges associated with Standby Service. The rates for these charges as well as the monthly fixed charges are stated in this Rider. Back-up Service charges will be shown and calculated separately on the customer bill.

MAINTENANCE SERVICE - The portion of Standby Contract Capacity used with advance permission from the Company. The customer must schedule Maintenance Service with the Company not less than six (6) days prior to its use. Unless otherwise agreed to by the Company, Maintenance Service shall be limited to not more than six (6) occurrences and not more than sixty (60) total and partial days during twelve (12) consecutive billing periods (based on billing dates). Maintenance Service may be available during all months and shall not be greater than the seasonal Standby Contract Capacity. The scheduling of Maintenance Service may be restricted by the Company during times associated with system peaking conditions or other times as necessary. For Maintenance Service billed, the customer shall be charged the daily standby demand charge for maintenance service associated with Standby Service Demand.

` Issued	pursuant to the Order of	the Mo.P.S.C. in Case No. ER	-2016-0179.
DATE OF ISSUE	March 8, 201	.7 DATE EFFECTIVE	April 1, 2017
ISSUED BY	Michael Moehn	President	St. Louis, Missouri
	NAME OF OFFICER	TITLE Atta	achment 3 - JE ADDRESS

UNION ELECTRIC COMPANY

ELECTRIC SERVICE

MO.P.S.C. SCHEDU	JLE NO6			Original	SHEET NO.	92.1
CANCELLING MO.P.S.C. SCHEDU	ILE NO.				SHEET NO.	
APPLYING TO	MISSOURI	SERVICE	AREA			

RIDER SSR

STANDBY SERVICE RIDER (Cont'd.)

DEFINITIONS (Cont'd.)

MAINTENANCE SERVICE (Cont'd.) - The rates for these daily demand charges as well as the monthly fixed charges are stated in this Rider. Energy charges for Maintenance Service associated with the Standby Service will be billed as standard energy charges per the applicable tariffed rate schedule. Maintenance Service charges will be shown and calculated separately on the customer bill.

SUPPLEMENTAL CONTRACT CAPACITY - The customer must designate and contract by season the maximum amount of demand, in kW, taken at the premises through the billing meter that may be billed on the applicable standard tariffed rate and shall be mutually agreeable to customer and Company. The Supplemental Contract Capacity shall insofar as possible estimate ninety percent (90%) of the historic or probable loads of the facility as adjusted for customer generation.

STANDBY CONTRACT CAPACITY - The higher of:

- 1. The number of kilowatts mutually agreed upon by Company with customer as representing the customer's maximum service requirements under all conditions of use less Supplemental Contract Capacity, and such demand shall be specified in customer's Electric Service Agreement. Such amount shall be seasonally designated and shall not exceed the nameplate rating(s) of the customer's own generation. The amount of Standby Contract Capacity will generally consider the seasonal (summer or winter billing periods) capacity ratings and use of the generator(s), or may be selected based on a Company approved load shedding plan.
- The maximum demand established by customer in use of Company's service less the product of Supplemental Contract Capacity and 110%.

Fixed monthly charges for generation and transmission access and facilities shall be levied upon a capacity not to exceed the nameplate rating(s) of the customer's generating unit(s).

SUPPLEMENTAL DEMAND - The lesser of:

- 1. Supplemental Contract Capacity or
- 2. The Total Billing Demand in this Rider.

STANDBY SERVICE DEMAND - The Total Billing Demand as determined in this Rider in excess of the Supplemental Contract Capacity.

TOTAL BILLING DEMAND - Total Billing Demand for purposes of this Rider shall be the maximum 15 minute demand established during peak hours or 50% of the maximum 15 minute demand established during off-peak hours, whichever is greater, but in no event less than 100 kW for Large General Service or Small Primary Service, nor less than 5,000 kW for Large Primary Service.

Peak and off-peak hours are defined as follows:

Peak hours:

10:00 A.M. to 10:00 P.M., Monday through Friday

Off-peak hours: All other hours including the entire 24 hours of the tariffed holidays as defined in the base tariff. All times stated above apply to the local effective time.

Issue	d pursuant to the Order	of the Mo.P.S.C. in Case No. ER-	2016-0179.
DATE OF ISSU	E March 8,	2017 DATE EFFECTIVE	April 1, 2017
ISSUED BY	Michael Moehn	President	St. Louis, Missouri
_	NAME OF OFFICER	TITLE	ADDRESS

UNION ELECTRIC COMPANY

ELECTRIC SERVICE

	MO.P.S.C. SCHEDULE NO6	******	Original	_SHEET NO.	92.2
CANCELLIN	G MO.P.S.C. SCHEDULE NO.			SHEET NO.	
APPLYING TO	MISSOURI SE	RVICE AREA			

RIDER SSR STANDBY SERVICE RIDER (Cont'd.)

GENERAL PROVISIONS

The contract term shall be one (1) year, automatically renewable, unless usage, plant modifications or additional generation requires a change to Supplemental Contract Capacity or Standby Contract Capacity.

The Company will install and maintain the necessary suitable meters for measurement of service rendered hereunder. The Company may inspect generation logs or other evidence that the customer's generator is being used in accordance with the provisions this Rider.

Power production equipment at the customer site shall not commence parallel operation until after inspection by the Company and a written interconnection agreement is executed. The sale of excess energy to the Company may be included in the interconnection or other agreement.

If at any time customer desires to increase demand above the capacity of Company's facilities used in supplying said service due to plant modifications, customer will sign a new agreement for the full capacity of service required and in accordance with applicable rules governing extension of its distribution system.

In addition to the charges in the applicable rate schedule, customers taking service under this Rider will be subject to the applicable Administrative Charge, Generation and Transmission Access Charges, and the Facilities Charge each month contained herein. If customer chooses the Time-Of-Day (TOD) option under the applicable rate schedule such option will apply to this Rider SSR as well.

Those customers choosing to install more than one (1) generating unit on the same premises will have a twenty five percent (25%) discount applied to the monthly Generation and Transmission Access Charges and Facilities Charges applicable to each additional generator on the same premises.

In addition to the above specific rules and regulations, all of Company's General Rules and Regulations shall apply to the supply of service under this Rider.

In the event a customer adds distributed generation and/or storage after investments are made by the Company in accordance with the net revenue test described in the Company's line extension policy, the Company may require reimbursement by the customer. Such reimbursement shall be limited to that investment which was incurred within the previous five years and shall be based upon the change in load requirements on the Company's electric system.

Fuel and Purchased Power Adjustment (Rider FAC). Applicable to all billed kilowatthours (kWh) of energy under this Rider.

Energy Efficiency Investment Charge (Rider EEIC) and Energy Efficiency Program Charge. Applicable to all billed kilowatt-hours (kWh) of energy under this Rider excluding kWh of energy supplied to customers that have satisfied the opt-out provisions of Section 393.1075, RSMo.

Issued	pursuant to the Order	of the Mo.P.S.C. in Case No. ER	-2016-0179.
DATE OF ISSUE	March 8,	2017 DATE EFFECTIVE	April 1, 2017
•			
ISSUED BY	Michael Moehn	President	St. Louis, Missouri
	NAME OF OFFICER	TITLE	ADDRESS

ELECTRIC SERVICE

	MO.P.S.C. SCHEDULE NO. 6	_		1st Revised	SHEET NO.	92.3
	CANCELLING MO.P.S.C. SCHEDULE NO. 6	_		Original	SHEET NO.	92.3
APPLYING TO	MISSOUR	I SERVICE	AREA			

RIDER SSR STANDBY SERVICE RIDER (Cont'd.)

*STANDBY RATE Large General Service **Small Primary Service** Large Primary Service Standby Fixed Charges Administrative Charge \$187.00/month \$187.00/month \$187.00/month Generation and Transmission \$0.63/kW \$0.63/kW \$0.79/kW Access Charge per month per kW of Contracted Standby Demand Facilities Charge per month per kW of Contracted Standby Demand: \$3.18/kW Summer \$3.88/kW \$3.18/kW \$0.68/kW \$0.97/kW \$0.68/kW Winter Daily Standby Demand Rate - Summer Per kW of Daily Standby Service Demand: \$0.04/kW \$0.04/kW \$1.05/kW Back-Up \$0.02/kW \$0.02/kW \$0.53/kW Maintenance Daily Standby Demand Rate - Winter Per kW of Daily Standby Service Demand: \$0.51/kW Back-Up \$0.02/kW \$0.02/kW \$0.25/kW Maintenance \$0.01/kW \$0.01/kW Back-Up Energy Charges - Summer kWh in excess of Supplemental Contract Capacity Energy(1) 9.94¢/kWh 9.61¢/kWh 3.32¢/kWh On-Peak Energy(2) 11,11¢/kWh 10.46¢/kWh 3.97¢/kWh Off-Peak Energy(2) 9.27¢/kWh 9.13¢/kWh 2.97¢/kWh Back-Up Energy Charges - Winter kWh in excess of Supplemental Contract Capacity Energy(1) 6.25¢/kWh 6.05¢/kWh 2.95¢/kWh On-Peak Energy(2) 6.60¢/kWh 6.37¢/kWh 3.24¢/kWh Off-Peak Energy(2) 6.05¢/kWh 5.88¢/kWh 2.78¢/kWh **High Voltage Facilities Charge Discount** Facilities Charge Credit per month per kW of Contracted Standby Demand @ 34.5 or 69kV N/A \$1.23/kW \$1.23/kW @ 115kV or higher N/A \$1.46/kW \$1.46/kW

* Indicates Change.

DATE OF ISSUE	July 16, 2018	DATE EFFECTIVE	August 1, 2018
ISSUED BY	Michael Moehn	President	St. Louis, Missouri
	NAME OF OFFICER	TITLE	ADDRESS

⁽¹⁾ Applicable to customers not on TOD rates.

⁽²⁾ Applicable to customers on TOD rates for its non-back-up energy charges.

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Kansas City Power & Light Company's Request for Authority to Implement A General Rate Increase for Electric Service)))	Case No. ER-2018-0145
In the Matter of KCP&L Greater Missouri Operations Company's Request for Authorization t Implement A General Rate Increase for Electric Service) o))	Case No. ER-2018-0146

NON-UNANIMOUS PARTIAL STIPULATION AND AGREEMENT CONCERNING RATE DESIGN ISSUES

COME NOW Kansas City Power & Light Company ("KCP&L"), KCP&L Greater Missouri Operations Company ("GMO") (collectively the "Company"), the Staff of the Missouri Public Service Commission ("Staff"), the Office of the Public Counsel ("OPC"), Advanced Energy Management Alliance ("AEMA"), Missouri Division of Energy ("DE"), Missouri Joint Municipal Electric Utility Commission ("MJMEUC"), and Renew Missouri Advocates ("Renew MO") (collectively, "Signatories") by and through their respective counsel, and for their Non-Unanimous Partial Stipulation and Agreement concerning rate design issues ("Rate Design Stipulation"), respectfully state as follows to the Missouri Public Service Commission ("Commission"):

AGREEMENTS

1. SETTLEMENT OF SPECIFIC ISSUES

This settlement resolves the following issues on the September 18, 2018 Corrected List of Issues filed in this case: Load Research (II); the following issues in Rate Design/Class Cost of Service (III) (Time of Use Residential Rate Design); Tariffs (IV); Riders (V); Indiana Model (VI); Third Party Charging Stations (VII); and Distributed Energy (VIII). As such, the parties do not believe that it is necessary to hear these issues as beginning on September 24, 2018.

- How long will the community solar be in service?
- What panels, inverters and racking systems are being used in the array?
- How do I enroll?
- k. The Signatories agree that the specimen Solar Subscription Rider tariffs, attached as Exhibit C, should be approved by the Commission.

12. STANDBY SERVICE RIDER ("SSR")

- a. The Signatories agree that the SSR should include SGS Class with a minimum of 50 kW generation capacity, should exclude net metered customers, should have no minimum supplemental contract capacity, and should have no fixed charge other than administrative charge.
- b. The Signatories agree that the SSR should apply facility charge assessed against supplemental contract capacity.
- c. The Signatories agree that the SSR should be applicable to battery storage.
- d. The Signatories agree that the scheduling of maintenance service may be restricted by the Company. The Company shall receive and consider requests for maintenance service during all months and make reasonable accommodation of such requests (factors e.g., size of generator, time, duration, load forecast). The Signatories agree that maintenance service may be available during all months and shall not be greater than the seasonal standby contract capacity.
- e. The Signatories agree that supplemental contract capacity will be calculated as 90% of probable load adjusted for customer generation, i.e.,
 - = (Seasonal Peak x .9) Standby Contract Capacity

- f. The Signatories agree that the SSR's on- and off-peak hours are consistent with hours in LPS-1 rate class.
- g. The Company agrees to inform DE of new CHP customers.
- h. The Signatories agree that the specimen Standby Service Rider tariffs, attached as Exhibit D, should be approved by the Commission.

Respectfully submitted,

|s| Nicole Mers

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ATTORNEYS FOR MISSOURI JOINT MUNICIPAL ELECTRIC UTILITY COMMISSION

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ATTORNEY FOR RENEW MISSOURI

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing have been mailed, hand-delivered, transmitted by facsimile or electronically mailed to all counsel of record this 25th day of September, 2018.

Roger W. Steiner

Roger W. Steiner

P.S.C. MO. No	7	Second	Revised Sheet No. 28
Canceling P.S.C. MO. No.	7	First	Revised Sheet No28
			For Missouri Retail Service Area
		BY SERVICE RIDER	₹

APPLICABILITY

Applicable to each customer with behind the meter on-site parallel distributed generation and/or storage system(s) with a capacity over 100 kilowatts (kW), as a modification to standard electric service supplied under either the tariffed rate schedules of Medium General Service (MGS), Large General Service (LGS), or Large Power Service (LPS). Applicable to Small General Service (SGS) customers with a rated capacity of 50 kilowatts (kW) or more who do not have a net metering interconnection agreement in place. SGS customers are not subject to minimum supplemental contract capacity requirements or fixed reservation or access charges for standby service other than the administrative charge. Customers with emergency backup, solar or wind generation that is not integrated with a storage system are exempt from this Rider.

DEFINITIONS

DISTRIBUTED GENERATION AND/OR STORAGE - Customer's private on-site generation and/or storage that:

- 1. is located behind the meter on the customer's premises,
- has a rated capacity of 50 kW or more applicable to SGS customers, or 100 kW or more applicable to MGS, LGS and LPS customers.
- 3. operates in parallel with the Company's system, and
- 4. adheres to applicable interconnection agreement entered into with the Company.

SUPPLEMENTAL SERVICE - Electric service provided by the Company to customer to supplement normal operation of the customer's on-site parallel distributed generation and/or storage in order to meet the customer's full-service requirements.

STANDBY SERVICE - Service supplied to the premises by the Company in the event of the customer exceeding its Supplemental Contract Capacity. Standby Service may be needed on either a scheduled or unscheduled basis. Standby Service comprises capacity and associated energy during the time it is used.

BACKUP SERVICE - Unscheduled Standby Service.

MAINTENANCE SERVICE - Scheduled Standby Service.

BACK-UP SERVICE - The portion of Standby Contract Capacity and associated energy used without advance permission from the Company. The customer must notify the Company within thirty (30) minutes of taking Back-up Service for amounts over five (5) megawatts (MW). For Back-up Service billed, the customer shall be charged the daily standby demand charge for back-up service and back-up energy charges associated with Standby Service. The rates for these charges as well as the monthly fixed charges are stated in this Rider. Back-up Service Charges will be shown and calculated separately on the customer bill.

MAINTENANCE SERVICE - The portion of Standby Contract Capacity used with advance permission from the Company. The customer must schedule Maintenance Service with the Company not less than six (6) days prior to its use. Maintenance Service may be available during all months and shall not be greater than the seasonal Standby Contract Capacity. The scheduling of Maintenance Service may be restricted by the Company during times associated with system peaking conditions or other times as necessary. For Maintenance Service billed, the customer shall be charged the daily standby demand charge for maintenance service associated with Standby Service Demand. The rates for these daily demand charges as well as the monthly fixed charges are stated in this Rider. Energy charges for Maintenance Service associated with the Standby Service will be billed as standard energy charges per the applicable tariffed rate schedule. Maintenance Service charges will be shown and calculated separately on the customer bill.

Issued: January 30, 2018

Issued by: Darrin R. Ives, Vice President

P.S.C. MC). No7		Second	Revised Sheet No	
Canceling P.S.C. MC). No7		First	Revised Sheet No	28A
				For Missouri Retail Serv	rice Area
		STANDBY SE	RVICE RIDER		
		Sched	ule SSR		

DEFINITIONS (continued)

SUPPLEMENTAL CONTRACT CAPACITY - The customer must designate and contract by season the maximum amount of demand, in kW, taken at the premises through the billing meter that may be billed on the applicable standard tariffed rate and shall be mutually agreeable to customer and Company. The Supplemental Contract Capacity shall insofar as possible estimate ninety percent (90%) of the historic or probable loads of the facility as adjusted for customer generation.

STANDBY CONTRACT CAPACITY - The higher of:

- 1. The number of kilowatts mutually agreed upon by Company with customer as representing the customer's maximum service requirements under all conditions of use less Supplemental Contract Capacity, and such demand shall be specified in customer's Electric Service Agreement. Such amount shall be seasonally designated and shall not exceed the nameplate rating(s) of the customer's own generation. The amount of Standby Contract Capacity will generally consider the seasonal (summer or winter billing periods) capacity ratings and use of the generator(s), or may be selected based on a Company approved load shedding plan.
- 2. The maximum demand established by customer in use of Company's service less the product of Supplemental Contract Capacity and 110%.

Fixed monthly charges for generation and transmission access and facilities shall be levied upon a capacity not to exceed the nameplate rating(s) of the customer's generating unit(s).

SUPPLEMENTAL DEMAND - The lesser of:

- 1. Supplemental Contract Capacity or
- 2. The Total Billing Demand in this Rider.

STANDBY SERVICE DEMAND - The Total Billing Demand as determined in this Rider in excess of the Supplemental Contract Capacity.

TOTAL BILLING DEMAND - Total Billing Demand for purposes of this Rider shall be the maximum 30-minute demand established during peak hours or 50% of the maximum 30 minute demand established during off-peak hours, whichever is greater, but in no event less than 25 kW for Medium General Service, 200 kW for Large General Service, nor less than 1,000 kW for Large Power Service.

FACILITIES CHARGE FOR SUPPLEMENTAL SERVICE – The monthly facilities charge for supplemental service shall equal the facilities charge of the tariffed rate schedule multiplied by the Supplemental Contract Capacity.

OFF-PEAK PERIOD - Off-Peak Hours shall be as defined in Rider LPS-1.

ON-PEAK PERIOD - On-Peak Hours are all hours other than Off-Peak Hours.

Issued: January 30, 2018
Issued by: Darrin R. Ives, Vice President

KANSAS CITY POWER AND LIGHT COMPANY P.S.C. MO. No. 7 Ninth Revised Sheet No. 28B Canceling P.S.C. MO. No. 7 Eighth Revised Sheet No. 28B For Missouri Retail Service Area

STANDBY SERVICE RIDER	
Schedule SSR	

GENERAL PROVISIONS

The contract term shall be one (1) year, automatically renewable, unless usage, plant modifications or additional generation requires a change to Supplemental Contract Capacity or Standby Contract Capacity.

The Company will install and maintain the necessary suitable meters for measurement of service rendered hereunder. The Company may inspect generation logs or other evidence that the customer's generator is being used in accordance with the provisions this Rider.

Power production equipment at the customer site shall not commence parallel operation until after inspection by the Company and a written interconnection agreement is executed. The sale of excess energy to the Company may be included in the interconnection or other agreement.

If at any time customer desires to increase demand above the capacity of Company's facilities used in supplying said service due to plant modifications, customer will sign a new agreement for the full capacity of service required and in accordance with applicable rules governing extension of its distribution system.

Those customers choosing to install more than one (1) generating unit on the same premises will have a seventy five percent (75%) discount applied to the monthly Generation and Transmission Access Charges and Facilities Charges applicable to each additional generator on the same premises.

In addition to the above specific rules and regulations, all of Company's General Rules and Regulations shall apply to the supply of service under this Rider.

Issued: January 30, 2018

Issued by: Darrin R. Ives, Vice President

P.S.C. MO. No.	7	First Revised Sheet No. 28C
Canceling P.S.C. MO. No.	7	Revised Sheet No. 28C
		For Missouri Retail Service Area
		BY SERVICE RIDER Schedule SSR

<u>RATE</u>

	SGS Primary Voltage	SGS Secondary Voltage
Stand -	by Fixed Charges	
Administrative Charge	\$110.00	\$110.00
Facilities Charge per month per kW	of Contracted Standby (Capacity
Summer	\$0.000	\$0.000
Winter	\$0.000	\$0.000
Generation and Transmission Access Charge per month per kW of Contracted Standby Capacity	\$0.000	\$0.000
Daily Standby	/ Demand Rate - Summ	er
Back-Up	\$0.202	\$0.207
Maintenance	\$0.101	\$0.103
Daily Standb	y Demand Rate - Winte	r
Back-Up	\$0.202	\$0.207
Maintenance	\$0.101	\$0.103
Back-Up En	ergy Charges - Summer	
kWh in excess of Supplemental Contract Capacity	\$0.16804	\$0.17197
Back-Up Er	nergy Charges - Winter	
kWh in excess of Supplemental Contract Capacity	\$0.13058	\$0.13361

Issued: January 30, 2018 Issued by: Darrin R. Ives, Vice President

P.S.C. MO. No	7	Third	Revised Sheet No28D
Canceling P.S.C. MO. No.	7	Second	Revised Sheet No. 28D
			For Missouri Retail Service Area
		/ SERVICE RIDER	R

RATE (Continued)

	MGS Secondary Voltage	MGS Primary Voltage	LGS Secondary Voltage	LGS Primary Voltage
	Stan	dby Fixed Charges		
Administrative Charge	\$110	\$110	\$130	\$130
G & T Access Charge per month per kW of Contracted Standby Demand	\$0.530	\$0.518	\$0.858	\$0.838
Facilities Charge (per mont	h per kW of Contracted	d Standby Demand)		
Summer	\$0.530	\$0.518	\$0.858	\$0.838
Winter	\$0.270	\$0.263	\$0.462	\$0.451
		Demand Rate - Sun andby Service Dema		
Maintenance	\$0.214	\$0.193	\$0.286	\$0.263
Back-Up	\$0.428	\$0.386	\$0.572	\$0.525
		y <mark>Demand Rate - Wi</mark> andby Service Dema		
Maintenance	\$0.171	\$0.151	\$0.222	\$0.200
Back-Up	\$0.342	\$0.302	\$0.444	\$0.400
	Back-Up Ene (kWh in excess of Su	rgy Charges - Sumi ipplemental Contract		
	\$0.11090	\$0.10825	\$0.10077	\$0.09851
	Back-Up En (kWh in excess of St	ergy Charges - Wint opplemental Contract		
	\$0.09584	\$0.09358	\$0.09259	\$0.09048

Issued: January 30, 2018 Issued by: Darrin R. Ives, Vice President

P.S.C. MO. No	7	Original Sheet No. 28E
Canceling P.S.C. MO. No.	7	Sheet No28E
		For Missouri Retail Service Area
		BY SERVICE RIDER chedule SSR

RATE (Continued)

	LPS Secondary Voltage	LPS Primary Voltage	LPS Substation Voltage	LPS Transmission Voltage
	Stan	dby Fixed Charges		
Administrative Charge	\$430	\$430	\$430	\$430
G & T Access Charge per month per kW of Contracted Standby Demand	\$0.922	\$0.901	\$0.890	\$0.882
Facilities Charge (per mon	th per kW of Contracted	d Standby Demand)		I
Summer	\$0.922	\$0.901	\$0.890	\$0.882
Winter	\$0.679	\$0.664	\$0.656	\$0.650
		Demand Rate - Sur andby Service Dema		
Maintenance	\$0.314	\$0.288	\$0.210	\$0.176
Back-Up	\$0.628	\$0.575	\$0.421	\$0.353
		y Demand Rate - Wi andby Service Dema		
Maintenance	\$0.288	\$0.262	\$0.185	\$0.152
Back-Up	\$0.576	\$0.524	\$0.371	\$0.303
	Back-Up Ene (kWh in excess of Su	rgy Charges - Sum ipplemental Contrac		
	\$0.09442	\$0.09226	\$0.09118	\$0.09037
	Back-Up En (kWh in excess of Su	ergy Charges - Win ipplemental Contrac		
	\$0.08004	\$0.07821	\$0.07731	\$0.07660

Issued: January 30, 2018 Issued by: Darrin R. Ives, Vice President

P.S.C. MO. No	1	2nd	_ Revised Sheet No	128
Canceling P.S.C. MO. No	1	1st	_ Revised Sheet No	128
			For Missouri Retail Ser	vice Area
		SERVICE RIDER dule SSR		

APPLICABILITY

Applicable to each customer with behind the meter on-site parallel distributed generation and/or storage system(s) with a capacity over 100 kilowatts (kW), as a modification to standard electric service supplied under either the tariffed rate schedules of Large General Service (LGS), or Large Power Service (LPS).

Applicable to Small General Service (SGS) customers with a rated capacity of 50 kilowatts (kW) or more who do not have a net metering interconnection agreement.in place. SGS customers are not subject to minimum supplemental contract capacity requirements or fixed reservation or access charges for standby service other than the administrative charge.

Customers with emergency backup, solar or wind generation that is not integrated with a storage system are exempt from this Rider.

DEFINITIONS

DISTRIBUTED GENERATION AND/OR STORAGE - Customer's private on-site generation and/or storage that:

- 1. is located behind the meter on the customer's premises,
- has a rated capacity of 50 kW or more applicable to SGS customers, or 100 kW or more applicable to MGS, LGS and LPS customers.
- 3. operates in parallel with the Company's system, and
- 4. adheres to applicable interconnection agreement entered into with the Company.

SUPPLEMENTAL SERVICE - Electric service provided by the Company to customer to supplement normal operation of the customer's on-site parallel distributed generation and/or storage in order to meet the customer's full-service requirements.

STANDBY SERVICE - Service supplied to the premises by the Company in the event of the customer exceeding its Supplemental Contract Capacity. Standby Service may be needed on either a scheduled or unscheduled basis. Standby Service comprises capacity and associated energy during the time it is used.

BACKUP SERVICE - Unscheduled Standby Service.

MAINTENANCE SERVICE - Scheduled Standby Service.

BACK-UP SERVICE - The portion of Standby Contract Capacity and associated energy used without advance permission from the Company. The customer must notify the Company within thirty (30) minutes of taking Back-up Service for amounts over five (5) megawatts (MW). For Back-up Service billed, the customer shall be charged the daily standby demand charge for back-up service and back-up energy charges associated with Standby Service. The rates for these charges as well as the monthly fixed charges are stated in this Rider. Back-up Service Charges will be shown and calculated separately on the customer bill.

MAINTENANCE SERVICE - The portion of Standby Contract Capacity used with advance permission from the Company. The customer must schedule Maintenance Service with the Company not less than six (6) days prior to its use. Maintenance Service may be available during all months and shall not be greater than the seasonal Standby Contract Capacity. The scheduling of Maintenance Service may be restricted by the Company during times associated with system peaking conditions or other times as necessary. For Maintenance Service billed, the customer shall be charged the daily standby demand charge for maintenance service associated with Standby Service Demand. The rates for these daily demand charges as well as the monthly fixed charges are stated in this Rider. Energy charges for Maintenance Service associated with the Standby Service will be billed as standard energy charges per the applicable tariffed rate schedule. Maintenance Service charges will be shown and calculated separately on the customer bill.

Issued: January 30, 2018
Issued by: Darrin R. Ives, Vice President

P.S.C. MO. No. 1 Original Sheet No. 128.1 Revised Sheet No. For Missouri Retail Service Area

STANDBY SERVICE RIDER Schedule SSR

DEFINITIONS (continued)

SUPPLEMENTAL CONTRACT CAPACITY - The customer must designate and contract by season the maximum amount of demand, in kW, taken at the premises through the billing meter that may be billed on the applicable standard tariffed rate and shall be mutually agreeable to customer and Company. The Supplemental Contract Capacity shall insofar as possible estimate ninety percent (90%) of the historic or probable loads of the facility as adjusted for customer generation.

STANDBY CONTRACT CAPACITY - The higher of:

- 1. The number of kilowatts mutually agreed upon by Company with customer as representing the customer's maximum service requirements under all conditions of use less Supplemental Contract Capacity, and such demand shall be specified in customer's Electric Service Agreement. Such amount shall be seasonally designated and shall not exceed the nameplate rating(s) of the customer's own generation. The amount of Standby Contract Capacity will generally consider the seasonal (summer or winter billing periods) capacity ratings and use of the generator(s), or may be selected based on a Company approved load shedding plan.
- 2. The maximum demand established by customer in use of Company's service less the product of Supplemental Contract Capacity and 110%.

Fixed monthly charges for generation and transmission access and facilities shall be levied upon a capacity not to exceed the nameplate rating(s) of the customer's generating unit(s).

SUPPLEMENTAL DEMAND - The lesser of:

- 1. Supplemental Contract Capacity or
- 2. The Total Billing Demand in this Rider.

STANDBY SERVICE DEMAND - The Total Billing Demand as determined in this Rider in excess of the Supplemental Contract Capacity.

TOTAL BILLING DEMAND - Total Billing Demand for purposes of this Rider shall be the maximum 30-minute demand established during peak hours or 50% of the maximum 30 minute demand established during off-peak hours, whichever is greater, but in no event less than 25 kW for Medium General Service, 200 kW for Large General Service, nor less than 1,000 kW for Large Power Service.

FACILITIES CHARGE FOR SUPPLEMENTAL SERVICE – The monthly facilities charge for supplemental service shall equal the facilities charge of the tariffed rate schedule multiplied by the Supplemental Contract Capacity.

OFF-PEAK PERIOD - Off-Peak Hours shall be as defined in Rider LPS-1.

ON-PEAK PERIOD - On-Peak Hours are all hours other than Off-Peak Hours.

Issued: January 30, 2018 Effective: March 1, 2018
Issued by: Darrin R. Ives, Vice President 1200 Main, Kansas City, MO 64105

P.S.C. MO. No. 1 Original Sheet No. 128.2 Canceling P.S.C. MO. No. Revised Sheet No. For Missouri Retail Service Area STANDBY SERVICE RIDER Schedule SSR

GENERAL PROVISIONS

KCP&L GREATER MISSOURI OPERATIONS COMPANY

The contract term shall be one (1) year, automatically renewable, unless usage, plant modifications or additional generation requires a change to Supplemental Contract Capacity or Standby Contract Capacity.

The Company will install and maintain the necessary suitable meters for measurement of service rendered hereunder. The Company may inspect generation logs or other evidence that the customer's generator is being used in accordance with the provisions this Rider.

Power production equipment at the customer site shall not commence parallel operation until after inspection by the Company and a written interconnection agreement is executed. The sale of excess energy to the Company may be included in the interconnection or other agreement.

If at any time customer desires to increase demand above the capacity of Company's facilities used in supplying said service due to plant modifications, customer will sign a new agreement for the full capacity of service required and in accordance with applicable rules governing extension of its distribution system.

Those customers choosing to install more than one (1) generating unit on the same premises will have a seventy five percent (75%) discount applied to the monthly Generation and Transmission Access Charges and Facilities Charges applicable to each additional generator on the same premises.

In addition to the above specific rules and regulations, all of Company's General Rules and Regulations shall apply to the supply of service under this Rider.

Issued: January 30, 2018

Issued by: Darrin R. Ives, Vice President

P.S.C. MO. No1	Original Sheet No. 128.3
Canceling P.S.C. MO. No	Revised Sheet No
	For Missouri Retail Service Area
STANDBY SERVICE RIDE Schedule SSR	R

RATE

	SGS Secondary Voltage	SGS Primary Voltage	LGS Secondary Voltage	LGS Primary Voltage
	Standby Fi	xed Charges		
Administrative Charge	\$110.00	\$110.00	\$130.00	\$130.00
Facilities Charge per month	per kW of Cont	racted Standb	y Capacity	
Summer	\$0.161	\$0.156	\$0.111	\$0.107
Winter	\$0.157	\$0.152	\$0.075	\$0.072
Generation and Transmission Access Charge per month per kW of Contracted Standby Capacity	\$0.161	\$0.156	\$0.111	\$0.107
Dal	ly Standby Dem	nand Rate - Sui	nmer	
Back-Up	\$0.162	\$0.160	\$0.193	\$0.139
Maintenance	\$0.081	\$0.080	\$0.097	\$0.070
Da	illy Standby Dei	mand Rate - Wi	inter	
Back-Up	\$0.171	\$0.169	\$0.184	\$0.130
Maintenance	\$0.086	\$0.084	\$0.092	\$0.065
Ві	ack-Up Energy (Charges - Sum	mer	
kWh in excess of Supplemental Contract Capacity	\$0.09952	\$0.09337	\$0.09174	\$0.08897
- E	ack-Up Energy	Charges - Win	ter	
kWh in excess of Supplemental Contract Capacity	\$0.07228	\$0.07100	\$0.06990	\$0.06736

Issued: January 30, 2018
Issued by: Darrin R. Ives, Vice President

KCP&L GREATER MISSOURI OPERATIONS COMPANY P.S.C. MO. No. 1 Original Sheet No. 128.4 Canceling P.S.C. MO. No. Revised Sheet No. For Missouri Retail Service Area STANDBY SERVICE RIDER

Schedule SSR

RATE (Continued)

	LPS Secondary Voltage	LPS Primary Voltage	LPS Substation Voltage	LPS Transmission Voltage
	Standby F	Ixed Charges	Constitution (Section 1981)	
Administrative Charge	\$430.00	\$430.00	\$430.00	\$430.00
Facilities Charge per month	per kW of Con	tracted Standby	Capacity	
Summer	\$1.332	\$1.292	\$1.264	\$1.255
Winter	\$0.693	\$0.673	\$0.658	\$0.654
Generation and Transmission Access Charge per month per kW of Contracted Standby Capacity	\$1.332	\$1.292	\$1.264	\$1.255
Da	lly Standby Dei	mand Rate - Sun	nmer	
Back-Up	\$0.745	\$0.702	\$0.506	\$0.502
Maintenance	\$0.372	\$0.351	\$0.253	\$0.251
D	ally Standby De	emand Rate - Wi	nter	
Back-Up	\$0.536	\$0.499	\$0.307	\$0.305
Maintenance	\$0.268	\$0.250	\$0.154	\$0.153
В	ack-Up Energy	Charges - Sumr	ner	
kWh in excess of Supplemental Contract Capacity	\$0.05678	\$0.05505	\$0.05353	\$0.05458
	Back-Up Energy	y Charges - Wint	er	
kWh in excess of Supplemental Contract Capacity	\$0.05300	\$0.05142	\$0.05058	\$0.04929

Issued: January 30, 2018

Issued by: Darrin R. Ives, Vice President

	P.S.C. MO. No	7	Second	Revised Sheet No	28C
Canceling	P.S.C. MO. No	7	First	Revised Sheet No	28C
				For Missouri Retail Sei	rvice Area

STANDBY SERVICE RIDER	
Schedule SSR	

RATES:

_			SGS Secondary Voltage	SGS Primary Voltage
1.	STAN A.	DBY FIXED CHARGES Administrative Charge	\$110.00	\$110.00
	В.	Facilities Charge (per month per KW of Contracted Standby Capacity)		
		a) Summer b) Winter	\$0.000 \$0.000	\$0.000 \$0.000
	C.	Generation and Transmission Access Charge (per month per KW of Contracted Standby Capacity)	\$0.000	\$0.000
2.	DAILY A.	STANDBY DEMAND RATE – SUMMER Back-Up (per KW)	\$0.195	\$0.191
	В.	Maintenance (per KW)	\$0.098	\$0.095
3.	DAILY A.	STANDBY DEMAND RATE – WINTER Back-Up (per KW)	\$0.195	\$0.191
	B.	Maintenance (per KW)	\$0.098	\$0.095
4.	BACK A.	-UP ENERGY CHARGES – SUMMER Per kWh in excess of Supplemental Contract Capacity	\$0.16225	\$0.15855
5.	BACK A.	UP ENERGY CHARGES - WINTER Per kWh in excess of Supplemental Contract Capacity	\$0.12607	\$0.12320

Issued:

Issued by: Darrin R. Ives, Vice President

Effective:

	P.S.C. MO. No.	7	Fourth	_ Revised Sheet No	28D
Canceling	P.S.C. MO. No	7	Third	Revised Sheet No	28D
				For Missouri Retail Ser	vice Area
STANDBY SERVICE RIDER					

STANDBY SERVICE RIDER Schedule SSR

TES: (Co	intinued)			MGS	MGS
1.	STANI	DBY F	XED CHARGES	Secondary V	oltage Primary Voltage
	A.	Admir	nistrative Charge	\$110.00	\$110.00
	B.		ies Charge (per month per KW ntracted Standby Capacity)		
		a) b)	Summer Winter	\$0.513 \$0.261	\$0.501 \$0.255
	C.	Charg	ration and Transmission Access ge (per month per KW of acted Standby Capacity)	\$0.513	\$0.501
2.	DAILY A.		DBY DEMAND RATE – SUMMER Up (per KW)	\$0.414	\$0.374
	B.	Mainte	enance (per KW)	\$0.207	\$0.187
3.	DAILY A.		DBY DEMAND RATE – WINTER Up (per KW)	\$0.297	\$0.259
	B.	Mainte	enance (per KW)	\$0.148	\$0.129
4.	BACK- A.	Per kV	IERGY CHARGES – SUMMER Wh in excess of Supplemental act Capacity	\$0.10721	\$0.10465
5.	BACK- A.	Per kV	IERGY CHARGES - WINTER Wh in excess of Supplemental act Capacity	\$0.09264	\$0.09046

Issued:

Issued by: Darrin R. Ives, Vice President

Effective:

P.S.C. MO. No	7	<u>First</u>	_ Revised Sheet No. 28E
Canceling P.S.C. MO. No	7		Original Sheet No. 28E
			For Missouri Retail Service Area
		DBY SERVICE RIDER Schedule SSR	

RATES: (Continued)

LS . (CO	nanaea)			LGS <u>Secondary Vo</u> l	LGS tage Primary Voltage
1.	STAN	DBY F	XED CHARGES		
	A.	Admii	nistrative Charge	\$130.00	\$130.00
	B.		ties Charge (per month per KW ntracted Standby Capacity)		
		a) b)	Summer Winter	\$0.849 \$0.457	\$0.829 \$0.446
	C.	Charg	ration and Transmission Access ge (per month per KW of acted Standby Capacity)	\$0.849	\$0.829
2.	DAILY A.		DBY DEMAND RATE – SUMMER Up (per KW)	\$0.566	\$0.520
	В.	Maint	enance (per KW)	\$0.283	\$0.260
3.	DAILY A.		DBY DEMAND RATE – WINTER Up (per KW)	\$0.383	\$0.341
	В.	Mainte	enance (per KW)	\$0.192	\$0.170
4.	BACK A.	Per kV	IERGY CHARGES – SUMMER Wh in excess of Supplemental act Capacity	\$0.09569	\$0.09355
5.	BACK A.	Per kV	IERGY CHARGES - WINTER Wh in excess of Supplemental act Capacity	\$0.08793	\$0.08592

Issued:

Issued by: Darrin R. Ives, Vice President

Effective:

1200 Main, Kansas City, MO 64105

	P.S.C. MO. No	7	First	_ Revised Sheet No	<u> 28F</u>
Canceling	P.S.C. MO. No	7		_ Original Sheet No	28F
				For Missouri Retail Ser	vice Area
		STANDBY	SERVICE RIDER		

Schedule SSR

RATES: (Cor	ntinued)		LPS	LPS
1.	STAN	DBY FIXED CHARGES	Secondary Voltage	Primary Voltage
	A.	Administrative Charge	\$430.00	\$430.00
	В.	Facilities Charge (per month per KW of Contracted Standby Capacity)		
		a) Summer b) Winter	\$0.913 \$0.672	\$0.892 \$0.657
	C.	Generation and Transmission Access Charge (per month per KW of Contracted Standby Capacity)	\$0.913	\$0.892
2.	DAILY A.	' STANDBY DEMAND RATE – SUMMER Back-Up (per KW)	\$0.622	\$0.570
	В.	Maintenance (per KW)	\$0.311	\$0.285
3.	DAILY A.	STANDBY DEMAND RATE – WINTER Back-Up (per KW)	\$0.510	\$0.460
	В.	Maintenance (per KW)	\$0.255	\$0.230
4.	BACK A.	-UP ENERGY CHARGES – SUMMER Per kWh in excess of Supplemental Contract Capacity	\$0.08949	\$0.08744
5.	BACK A.	-UP ENERGY CHARGES - WINTER Per kWh in excess of Supplemental Contract Capacity	\$0.07586	\$0.07412

Issued:

Issued by: Darrin R. Ives, Vice President

Effective:

	P.S.C. MO. No	7	First	Revised Sheet No	28G
Canceling	P.S.C. MO. No	7		Original Sheet No	28G
				For Missouri Retail Ser	vice Area

STANDBY SERVICE RIDER Schedule SSR

RATES: (Continued)					
			LPS Substation <u>Voltage</u>	LPS Transmission <u>Voltage</u>	
1.	STAN A.	IDBY FIXED CHARGES Administrative Charge	\$430.00	\$430.00	
	В.	Facilities Charge (per month per KW of Contracted Standby Capacity)			
		a) Summer b) Winter	\$0.882 \$0.649	\$0.874 \$0.644	
	C.	Generation and Transmission Access Charge (per month per KW of Contracted Standby Capacity)	\$0.882	\$0.874	
2.	DAILY A.	STANDBY DEMAND RATE – SUMMER Back-Up (per KW)	\$0.417	\$0.350	
	В.	Maintenance (per KW)	\$0.208	\$0.175	
3.	DAILY A.	' STANDBY DEMAND RATE - WINTER Back-Up (per KW)	\$0.308	\$0.242	
	В.	Maintenance (per KW)	\$0.154	\$0.121	
4.	BACK A.	-UP ENERGY CHARGES – SUMMER Per kWh in excess of Supplemental Contract Capacity	\$0.08642	\$0.08565	
5.	BACK A.	-UP ENERGY CHARGES - WINTER Per kWh in excess of Supplemental Contract Capacity	\$0.07328	\$0.07259	

Issued: Issued by: Darrin R. Ives, Vice President

P.S.C. MO. No	1	2nd	Revised Sheet No	128.3
Canceling P.S.C. MO. No	1	1st	Revised Sheet No	128.3
			For Missouri Retail Ser	rvice Area

STANDBY SERVICE	RIDER
Schedule SSR	

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LO.			SGS Secondary Voltage	SGS e Primary Voltage
1.	STAN	IDBY FIXED CHARGES		
	A.	Administrative Charge	\$110.00	\$110.00
	В.	Facilities Charge (per month per KW of Contracted Standby Capacity)		
		a) Summer b) Winter	\$0.153 \$0.150	\$0.149 \$0.145
	C.	Generation and Transmission Access Charge (per month per KW of Contracted Standby Capacity)	\$0.153	\$0.149
2.	DAILY A.	/ STANDBY DEMAND RATE – SUMMER Back-Up (per KW)	\$0.155	\$0.153
	B.	Maintenance (per KW)	\$0.077	\$0.076
3.	DAILY A.	STANDBY DEMAND RATE – WINTER Back-Up (per KW)	\$0.153	\$0.151
	B.	Maintenance (per KW)	\$0.076	\$0.076
4.	BACK A.	-UP ENERGY CHARGES – SUMMER Per kWh in excess of Supplemental Contract Capacity	\$0.09494	\$0.08907
5.	BACK A.	-UP ENERGY CHARGES - WINTER Per kWh in excess of Supplemental Contract Capacity	\$0.06896	\$0.06773

Issued:

	P.S.C. MO. No	1	2nd	Revised Sheet No	128.4
Canceling	P.S.C. MO. No	1	1st	Revised Sheet No.	128.4
				For Missouri Retail Se	rvice Area

STANDBY SERVICE RIDER	
Schedule SSR	

RATES: (Continued)
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E S : (Con	(Continued)			LGS Secondary Voltage	LGS Primary Voltage
1.	STAN	OBY FIXED CHA	ARGES	Occondary voltage	Timary Voltage
	A.	Administrative	Charge	\$130.00	\$130.00
	B.		ge (per month per KW Standby Capacity)		
		a) Summe b) Winter	r	\$0.109 \$0.074	\$0.106 \$0.072
	C.	Generation and Charge (per mo Contracted Sta		\$0.109	\$0.106
2.	DAILY A.	STANDBY DEN Back-Up (per K	MAND RATE – SUMMER (W)	\$0.191	\$0.138
	B.	Maintenance (p	er KW)	\$0.096	\$0.069
3.	DAILY A.	STANDBY DEN Back-Up (per K	MAND RATE – WINTER W)	\$0.175	\$0.122
	В.	Maintenance (p	er KW)	\$0.087	\$0.061
4.	BACK A.		HARGES – SUMMER ess of Supplemental sity	\$0.08736	\$0.08471
5.	BACK- A.		HARGES - WINTER ess of Supplemental city	\$0.06655	\$0.06414

Issued:

	P.S.C. MO. No.	1	2nd	Revised Sheet No	128.5
Canceling	P.S.C. MO. No.	1	1st	Revised Sheet No.	128.5
				For Missouri Retail Se	rvice Area

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STANDBY SERVICE RIDER	ŀ
Schedule SSR	

RATES: (Con	tinued)		LPS	LPS	
1.	STAN	IDBY FIXED CHARGES	Secondary Voltage	Primary Voltage	
	A.	Administrative Charge	\$430.00	\$430.00	
	B.	Facilities Charge (per month per KW of Contracted Standby Capacity)			
		a) Summer b) Winter	\$1.317 \$0.686	\$1.278 \$0.666	
	C.	Generation and Transmission Access Charge (per month per KW of Contracted Standby Capacity)	\$1.317	\$1.278	
2.	DAILY A.	STANDBY DEMAND RATE – SUMMER Back-Up (per KW)	\$0.737	\$0.695	
	В.	Maintenance (per KW)	\$0.368	\$0.347	
3.	DAILY A.	′ STANDBY DEMAND RATE – WINTER Back-Up (per KW)	\$0.442	\$0.409	
	В.	Maintenance (per KW)	\$0.221	\$0.204	
4.	BACK A.	-UP ENERGY CHARGES – SUMMER Per kWh in excess of Supplemental Contract Capacity	\$0.05359	\$0.05195	
5.	BACK A.	-UP ENERGY CHARGES - WINTER Per kWh in excess of Supplemental Contract Capacity	\$0.05002	\$0.04852	

Issued:

Issued by: Darrin R. Ives, Vice President

Effective:

P.S.C. MO. No	1	2nd	_ Revised Sheet No	128.6
Canceling P.S.C. MO. No	1	1st	_ Revised Sheet No.	128.6
			For Missouri Retail Se	rvice Area
	STANDB	Y SERVICE RIDER	, , , , , , , , , , , , , , , , , , , ,	

		STANDBY SERVICE RIDE	ER	
		Schedule SSR		
RATES: (Con	tinued)		LPS Substation <u>Voltage</u>	LPS Transmission <u>Voltage</u>
1. ST		IDBY FIXED CHARGES		
	A.	Administrative Charge	\$430.00	\$430.00
	В.	Facilities Charge (per month per KW of Contracted Standby Capacity)		
		a) Summer	\$1.251	\$1.242
		b) Winter	\$0.651	\$0.647
	C.	Generation and Transmission Access Charge (per month per KW of Contracted Standby Capacity)	\$1.251	\$1.242
2.	DAILY A.	/ STANDBY DEMAND RATE – SUMMER Back-Up (per KW)	\$0.500	\$0.497
	B.	Maintenance (per KW)	\$0.250	\$0.248
3.	DAILY A.	/ STANDBY DEMAND RATE – WINTER Back-Up (per KW)	\$0.221	\$0.219
	B.	Maintenance (per KW)	\$0.110	\$0.109
4.	BACK A.	-UP ENERGY CHARGES – SUMMER Per kWh in excess of Supplemental Contract Capacity	\$0.05051	\$0.05151
5.	BACK A.	-UP ENERGY CHARGES - WINTER Per kWh in excess of Supplemental Contract Capacity	\$0.04773	\$0.04652

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of the Empire District Electric Company,)	
Liberty Utilities (Central) Co., and Liberty Sub Corp.)	Case No. EM-2016-0213
Concerning an Agreement and Plan of Merger and)	
Certain Related Transactions)	

STAFF'S OBJECTION TO NON-UNANIMOUS STIPULATION AND AGREEMENT

COMES NOW the Staff of the Missouri Public Service Commission, by and through counsel, and, pursuant to Commission Rule 4 CSR 240-2.115(2), and files its objection to the *Stipulation and Agreement As To Division of Energy and Renew Missouri* ("Stipulation") filed on July 19, 2016, by the Empire District Electric Company, Empire District Gas Company, Liberty Utilities (Central) Co., Liberty Sub Corp. (collectively "Applicants"), Renew Missouri, and the Missouri Division of Energy ("DE"). In support of its objection, Staff states:

- 1. Commission Rule 4 CSR 240-2.115(2)(D) requires that "A non-unanimous stipulation and agreement to which a timely objection has been filed shall be considered to be merely a position of the signatory parties to the stipulated position, except that no party shall be bound by it. All issues shall remain for determination after hearing."
- 2. Staff now objects to the Stipulation and Agreement As To Division of Energy and Renew Missouri for these reasons:
 - a. The Stipulation requires Empire to develop and submit an application for approval of a portfolio of Demand Side Management ("DSM") programs under the Missouri Energy Efficiency Act ("MEEIA"). Staff has concerns with this condition as any MEEIA programs and Demand Side Investment

Mechanism ("DSIM") must comply with the MEEIA rules and statute, and must be part of the adopted preferred resource plan. (Chapter 22). Any portfolio of DSM programs and DSIM must be cost-effective and must provide benefits to all customers in the customer class in which the programs are proposed when considering all costs including the cost of throughput disincentive and earnings opportunity.

- b. Based on Empire's 2016 Annual Renewable Energy Standard ("RES") Compliance Plan filed in Case No. EO-2016-0279, the rate impact of the use of the Ozark Beach facility for compliance with the RES is generally known. Staff believes an additional study assessing the rate impact of eliminating or phasing-out reliance on Empire's Ozark Beach facility for compliance with the RES is not necessary.
- c. Staff believes the scope of the outreach survey report of potential Combined Heat and Power ("CHP") for customers within Empire's gas service territory is unclear. It appears to require that a list of possible CHP facilities be developed but the level of outreach and surveying of these potential CHP customers is not clear.
- d. The provision authorizing Empire to "defer and record on its books, consistent with the terms of its existing demand side management deferral mechanism, any third party costs associated with the Hydroelectric Rate Impact assessment and the Combined Heat and Power survey" raises several concerns.

3. Staff will provide further explanation of its concerns in its surrebuttal testimony.

WHEREFORE, Staff respectfully files its objection to the Stipulation As To Division of Energy and Renew Missouri filed on July 19, 2016, as provided by Commission Rule.

Respectfully Submitted,

Isl Mark Johnson

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CERTIFICATE OF SERVICE

I hereby certify that true and correct copies of the foregoing were served electronically to all counsel of record this 26th day of July, 2016.

/s/ Mark Johnson