Exhibit No.:	_____
Issue:	Quality of Service Municipal Water Service
Witness:	Michael H. Klender
Sponsoring Party:	City of Kansas City, Missouri
Case No.:	Case No. ER-2012-0174

CITY OF KANSAS CITY, MISSOURI

Case No. ER-2012-0174

DIRECT TESTIMONY

OF

MICHAEL H. KLENDER

Kansas City, Missouri
August 2012

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-2012-0174 Tracking No. YE-2012-0404

AFFIDAVIT OF MICHAEL H. KLENDER

STATE OF MISSOURI)
) ss.
COUNTY OF Clay)

I, Michael H. Klender, of lawful age, and being duly sworn, do hereby depose and state:

1. My name is Michael H. Klender. I am presently Plant Manager for the Kansas City Water Services Department with the City of Kansas City, Missouri, intervener in the referenced matter.

2. Attached hereto and made a part hereof for all purposes is my direct testimony.

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 personal knowledge, information and belief.

Michael H. Klender

Subscribed and sworn to before me, a Notary Public, this 2nd day of August, 2012.

Notary Public for Clay County, MO

My Commission expires:
Oct 24, 2015

AMANDA DITTMER
Notary Public - Notary Seal
State of Missouri
Commissioned for Clay County
My Commission Expires: Oct. 24, 2015
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DIRECT TESTIMONY OF MICHAEL H. KLENDER

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Michael H. Klender. My business address is in care of the Water Services Department, 1 N.W. Briarcliff Road, Kansas City, Missouri 64116.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the City of Kansas City (the City) as Plant Manager of the Water Services Department for the City.

Q. BRIEFLY DESCRIBE YOUR DUTIES AS PLANT MANAGER.

A. I am responsible for managing a 240 million gallon a day water treatment plant as well as several pumping and storage facilities and the 89 staff who maintain and operate the equipment. I am responsible for planning and meeting Divisional budgets as well as complying with all Federal and State regulations.

Q. PLEASE DESCRIBE YOUR EDUCATION, EXPERIENCE AND EMPLOYMENT HISTORY.

A. I graduated with a Bachelor of Science in Engineering Mechanics from the University of Missouri --- Rolla (now known as the Missouri University of Science and Technology) in 1986. I am licensed as a professional engineer in the states of South Carolina and Missouri. I hold an "A" and "DS III" certification in Missouri for water treatment and distribution, and I completed the 40 hour course through OSHA to obtain HAZWOPER certification (Hazardous Waste Operations and Emergency Response Standard). I spent

three years as a construction and testing consulting engineer for PSI, Inc. Then for over six years I was employed by the South Carolina Department of Health and Control as a staff engineer in its Drinking Water Program and then a staff engineer with the Hazardous Waste Superfund program. I have been employed by the City for nearly fifteen years. For one of those years I worked with City Codes Administration as Special Inspector. I have been involved with the City's water supply for approximately thirteen years in various capacities. I was the Assistant Plant Manager of Operations for ten years. I served as Acting Plant Manager for two and a half years and have been Plant Manager for one year.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I describe the City water services facilities that are served with power from Kansas City Power & Light Company (KCPL), and discuss KCPL's service history including recent power outages and issues related to fluctuations in voltage and current. I also present several recommendations for improving KCPL service quality to water services facilities.

Q. PLEASE DESCRIBE THE FACILITIES OVER WHICH KCPL DELIVERS ENERGY TO WATER SERVICES DEPARTMENT FACILITIES.

A. KCPL supplies power to approximately twenty two (22) water supply facility sites. At some water supply facility sites, KCPL delivers energy over four incoming feed lines. The facilities where four incoming feed lines are used are Turkey Creek Pumping Station and the Water Treatment Plant. There are some facilities where energy is delivered over one feed line. Most of the feed lines are underground although some facilities are served

by overhead. Voltages delivered vary by facility. Some require as little as 110 volts. The largest of the facilities, which is the East Bottoms Pumping Station, requires 13,200 volts.

Q. COULD YOU IDENTIFY FOR THE COMMISSION THE WATER SERVICE FACILITIES THAT CONSUME THE MOST POWER.

A. There are three such facilities and as would be expected, they are critical pieces of equipment in supplying water to city residents. They are the Water Plant, the Turkey Creek Pumping Station and the East Bottoms Pumping Station. Electricity powers high service pumps at these facilities which pump raw water to treatment basins or pump water through the miles of transmission and distribution lines. For example, the pumps which move raw water to the treatment basins at the Water Plant are rated at 41,667 to 55,555 gallons per minute. The motors for these pumps are 700 to 1,000 horsepower and are powered by 2,400 volts of electricity. There is also a set of pumps which pump water from the clearwell to the transmission and distribution lines. These pumps are rated between 2,083 to 52,083 gallons per minute and have 300 to 1,500 horsepower motors. They are powered by 2,400 volts of electricity. Another example is the pumps at the Turkey Creek Pumping Station. Those pumps are rated at 25,000 gallons per minute. The motors for the pumps have 2,500 horsepower and require 4,160 volts of electricity. These pumps are important to supply reliable water service for city residents. If power is interrupted or if the voltage delivered is below the rating for the equipment, water service and the equipment used to provide that service are compromised.

Q. HAS THE CITY EXPERIENCED POWER OUTAGES AT WATER SERVICES FACILITIES.

A. Yes, there is a history of power outages at Water Services facilities. The most recent outages experienced were on May 25, 2012 and July 23, 2012. The outage on May 25 affected three pumping facilities: East Bottoms, Turkey Creek and the Blue Ridge Pumping Stations. The outage on July 23 affected the Blue Ridge Pumping Station.

Q. HAS THE CITY EXPERIENCED VOLTAGE OR CURRENT FLUCTUATIONS AT WATER SERVICES FACILITIES.

A. Yes.

Q. PLEASE EXPLAIN HOW YOU MONITOR THE VOLTAGE DELIVERED TO THE FACILITIES

A. Most facilities have monitoring devices which record at our SCADA (Supervisory Control and Data Acquisition) system. We have position remote event recorders to log the quality of power supplied to three locations.

Q. FOR THE LAST SIX MONTHS, TELL THE COMMISSION THE NUMBER OF INSTANCES WHEN VOLTAGE FLUCTUATED AT YOUR FACILITIES AND IDENTIFY THE FACILITIES AFFECTED.

A. Very briefly, there have been three incidents at the Blue Ridge Pumping Station, two at Turkey Creek Pumping Station, one at the East Bottom Pumping Station, and three at the Water Treatment Plant.

Q. WHAT ARE THE CONSEQUENCES TO YOUR DEPARTMENT AND THE EQUIPMENT USED WHEN POWER IS INTERRUPTED OR VOLTAGE IS BELOW REQUIREMENTS.

A. First and foremost, water service to City residents is adversely affected. Depending on the length of the interruption in electric service, water pumping operations could be stopped to the point that pressure is lost in lines and water service halted resulting in issuance of Boil Advisory to the affected areas. With respect to voltage or current fluctuations, there are motor control devices which are highly sensitive pieces of equipment and if the voltage or current to the motors is not at the appropriate level, the motors will drop offline. Starting electric motors from uncontrolled stops places excessive wear on the electrical equipment which in turn shortens its useful life, or the motor degrades and must be replaced. The City incurs unnecessary maintenance or replacement costs as a consequence of these voltage and current fluctuations.

Q. HAVE YOU OR MEMBERS OF YOUR DEPARTMENT RAISED THESE SERVICE CONCERNS WITH KCPL REPRESENTATIVES.

A. We are engaged in continuing dialogue with our KCPL representatives about these power supply issues. Our last meeting was July 27, 2012 during which we addressed the following issues of immediate importance: Power reliability; incoming power monitoring devices at four locations; the hiring of an energy consultant (P3) by KCPL, and correlation between the power disruptions experienced by the City and reporting by KCPL equipment.

Q. HAVE YOU OR KCPL INITIATED ANY FORMAL STUDY(IES) TO RESOLVE THE CONCERNS YOU HAVE MENTIONED IN YOUR TESTIMONY.

A. KCP&L has hired a consultant, P3, to look at the electrical supply to various pumping facilities and what can be done to improve reliability, consistency, and improvements for KCPL or the City.

Q. WHILE THE ENGINEERING STUDY IS UNDERWAY, DO YOU HAVE ANY RECOMMENDATIONS ON IMPROVING KCPL'S QUALITY OF SERVICE TO THE WATER SERVICES DEPARTMENT.

A. I believe that KCPL should dedicate more feed lines to at least the largest of the water services facilities and KCPL should not use those lines for service to any other customers. More of KCPL's overhead lines should be moved to underground. Additionally, KCPL should have contingent power supplies, such as optional feeder lines that could be switched over, available for water services when an outage on KCPL's regular facilities occurs. At the same time, KCPL should install what devices are necessary to reduce or eliminate any fluctuations in the voltage or current supplied to the water services pumps and other sensitive equipment.

Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

A. Yes, it does.