

Exhibit No.:
Issue: LED Lighting
Witness: Martin O. Penning
Type of Exhibit: Direct Testimony
Sponsoring Party: Empire District Electric
Case No. ER-2012-0345
Date Testimony Prepared: July 2012

**Before the Public Service Commission
of the State of Missouri**

Direct Testimony

of

Martin O. Penning

July 2012



DIRECT TESTIMONY
OF
MARTIN O. PENNING
THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE
MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2012-0345

1 **INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND ADDRESS.**

3 A. My name is Martin O. Penning, and my business address is 602 South Joplin
4 Avenue, Joplin, Missouri.

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

6 A. I am presently employed by The Empire District Electric Company (“Empire” or
7 “Company”) as Vice President of Commercial Operations. I have held this position
8 since February of 2011.

9 **Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND**
10 **PROFESSIONAL EXPERIENCE.**

11 A. I graduated from Missouri University of Science & Technology (formerly University
12 of Missouri – Rolla) in 1980 with a Bachelor of Science degree in Electrical
13 Engineering. I began employment with Empire in May 1980. I have held numerous
14 engineering positions with Empire, including Director of Engineering. I have also
15 held the positions of Director of Strategic Planning, Director of Planning &
16 Regulatory, and Director of Commercial Operations for the Western and Eastern
17 Divisions of Empire prior to assuming my present position.

1 **PURPOSE**

2 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS**
3 **PROCEEDING BEFORE THE MISSOURI PUBLIC SERVICE**
4 **COMMISSION (“COMMISSION”)?**

5 A. I will provide an update on Empire’s Light Emitting Diode (“LED”) pilot study and
6 discuss Empire’s plans for possibly filing LED lighting tariff sheets in the future.

7 **Q. WHY ARE YOU PRESENTING TESTIMONY CONCERNING LED**
8 **LIGHTING?**

9 A. Pursuant to paragraph ten of the Global Agreement entered into in Case No. ER-
10 2011-0004, Empire agreed to “redesign a residential lighting program and present a
11 tariff to implement such redesigned program to the DSM advisory group.” The
12 Global Agreement was approved by the Commission by order issued in Case No.
13 ER-2011-0004 on June 1, 2011, effective June 6, 2011. As part of this Global
14 Agreement, Empire agreed to, within one year of the effective dates of rates resulting
15 from that case, file LED lighting tariff sheets or provide an update on an LED pilot
16 study and plans for filing tariffs sheets. New rates took effect as a result of Case No.
17 ER-2011-0004 on June 15, 2011.

18 **Q. WHAT ACTIONS WERE TAKEN BY JUNE 15, 2012, PURSUANT TO**
19 **EMPIRE’S AGREEMENT TO PROVIDE AN UPDATE ON THIS MATTER?**

20 A. Empire assembled a group of its engineers and customer service personnel to
21 research this technology and to provide Company management information
22 concerning the benefits these products may be able to provide to our customers.
23 Additionally, other Empire personnel and I met personally with Commission Staff in

1 Jefferson City on July 14, 2011 and August 25, 2011, to discuss our efforts
2 pertaining to the agreement. Specifically, we discussed the technology, the benefits
3 it may eventually offer our customers, and tariff considerations, and we discussed
4 our concerns regarding the immaturity of the products being offered. Staff provided
5 their input, as well as additional industry research information. Empire also informed
6 Staff of the interactions that we've had with Kansas City Power & Light Company
7 concerning its very large pilot study. Empire continues to monitor the advances
8 being made in this field and the results of the pilot studies at other companies.

9 **LED Lighting Pilot Study**

10 **Q. HAS EMPIRE IMPLEMENTED A PILOT STUDY TO EVALUATE THE**
11 **VARIOUS ASPECTS OF LED LIGHTING?**

12 A. Not at this time. However, we are following the progress of this technology very
13 closely.

14 **Q. WHY IS EMPIRE WAITING TO IMPLEMENT A STUDY?**

15 A. We have several concerns. First, the LED equipment itself is evolving and changing
16 very rapidly. From our discussions with utilities that have some of these devices
17 installed, we have learned that they cannot even buy the same LED equipment that
18 was available just months earlier because a newer version of the LED equipment is
19 now being produced. This is very problematic for a utility from a maintenance
20 standpoint. Until the LED equipment designs are mature and replacement parts
21 stabilize, Empire will not be able to make quick, low cost repairs. If the LED pilot
22 program were implemented now, Empire would be forced to change out the entire
23 LED fixture, which would not be cost-effective for the Company or its customers.

1 In addition to the rapidly changing LED fixture designs, LED fixture prices are also
2 rapidly changing. Not very long ago, the cost of an LED fixture was far more
3 expensive than that of traditional lighting fixtures. This pricing gap is getting much
4 smaller, but the LED fixtures are still significantly higher than that of traditional
5 lighting fixtures. Finally, because of our size, Empire's LED pilot study must
6 necessarily be done on a small scale. One of the municipalities in which we service
7 approached us concerning the possibility of installing LED street lights. The city
8 had been approached by a lighting product sales person who advised them that they
9 could greatly benefit by utilizing these LED products. The city, however, after
10 learning more about the rapid changes in the designs of the products, decided it was
11 not the right time to implement even a small LED pilot project.

12 **Q. HOW WILL EMPIRE DETERMINE WHEN IT IS APPROPRIATE TO**
13 **PROCEED WITH AN LED PILOT STUDY AND FILE LED LIGHTING**
14 **TARIFF SHEETS?**

15 A. We will continue to have frequent conversations with Kansas City Power & Light
16 ("KCPL") concerning its LED lighting program and will continue to meet with the
17 Staff of the Commission on this issue. In addition, KCPL and Westar Energy are
18 participants in a very large study funded by an LED MARC grant, and Empire will
19 continue to monitor this study. By following the results of this larger LED study,
20 Empire can gain far more knowledge (because of the scope of the KCPL/Westar
21 study) than we could via a small Empire LED pilot study. With the knowledge
22 gained from the larger LED study, Empire will be in a much better position to
23 implement and design an LED program that makes sense for Empire and its

1 customers.

2 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

3 A. Yes, it does.

