EXHIBIT

Exhibit No.:
Issue(s Issue(s): Rate Design / Energy Efficiency and Low-Income Considerations /
Witness/Type of Exhibit: Marke/Rebuttal
Sponsoring Party: Public Counsel
Case No.: ER-2014-0351

REBUTTAL TESTIMONY

OF

GEOFF MARKE

Submitted on Behalf of the Office of the Public Counsel

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2014-0351

** **

Denotes Highly Confidential Information that has been redacted

Marc 9, 2015

OPC Exhibit No. 306
Date 4-14-15 Reporter KF
File No. ER-2014-0351

NP

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of The Empire District Electric Company for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Company's Missouri Service Area.	))))	Case No. ER-2014-0351

AFFIDAVIT OF GEOFF MARKE

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Geoff Marke, of lawful age and being first duly sworn, deposes and states:

1. My name is Geoff Marke. I am a Regulatory Economist for the Office of the Public Counsel.

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

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

Geoff Marke

Subscribed and sworn to me this 9th day of March 2015.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

JERENE A. BUCKMAN
My Commission Expires
August 23, 2017
Cole County
Commission #13754037

Jerene A. Buckman
Notary Public

My Commission expires August 23, 2017.

TABLE OF CONTENTS

REBUTTAL TESTIMONY

OF

GEOFF MARKE

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2014-0351

I. INTRODUCTION

Q. Please state your name, title and business address.

A. Dr. Geoffrey Marke, Economist, Office of the Public Counsel (OPC or Public Counsel), P.O. Box 2230, Jefferson City, Missouri 65102.

Q. Please describe your education and employment background.

A. I received a Bachelor of Arts Degree in English from The Citadel, a Masters of Arts Degree in English from The University of Missouri, St. Louis, and a Doctorate of Philosophy in Public Policy Analysis from Saint Louis University (SLU). At SLU, I served as a graduate assistant where I taught undergraduate and graduate course work in urban policy and public finance. I also conducted mixed-method research in transportation policy, economic development and emergency management.

I have been in my present position with OPC since April of 2014 where I have been responsible for economic analysis and policy research in electric and gas utility operations. Prior to joining OPC, I was employed by the Missouri Public Service Commission as a Utility Policy Analyst II in the Energy Resource Analysis Section, Energy Unit, Utility Operations Department, Regulatory Review Division. My primary duties in that role involved reviewing, analyzing and writing recommendations concerning electric integrated resource planning, renewable energy standards, and demand-side management programs for all investor-owned electric utilities in Missouri. I have also been employed by the Missouri Department of Natural Resources (later transferred to the Department of Economic Development), Energy Division where I served as a Planner III and functioned as the lead policy analyst on electric cases. I have worked in the private sector, most notably serving as the Lead Researcher for Funston Advisory based out of Detroit, Michigan. My experience with Funston involved a variety of specialized consulting engagements with both private and public entities.

Q. Have you testified previously before the Missouri Public Service Commission?

A. Yes, prior to this case I submitted written testimony in EO-2012-0142, EO-2014-0189, ER-2014-0258, GR-2014-0086 and GR-2014-0152.

Q. Have you been a member of, or participate in, any work groups, committees, or other groups that have addressed electric utility regulation and policy issues?

A. Yes. I am currently a member of the National Association of State Consumer Advocates (NASUCA) Distributed Energy Resource Committee which shares information and establishes policies regarding energy efficiency, renewable generation, and distributed generation, and considers best practices for the development of cost-effective programs that promote fairness and value for all consumers. I am also a member of NASUCA's Electricity Committee that discusses current issues affecting residential electric consumers. Additionally, I have been selected to participate as a "consumer" voice on several working committees toward the development of a Missouri's Comprehensive State Energy Plan currently being undertaken by the Missouri Division of Energy.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of this testimony is to respond to:

- Rate Design:
    - From the direct testimony of Empire District Electric Company's (Empire) witness Edwin Overcast regarding rate design
- Energy Efficiency and Low Income Considerations:

- o From the direct testimony of Empire witness Scott Keith

Q. Please summarize your primary positions and conclusions.

A. Public Counsel recommends that the Commission reject Empire's proposal to increase residential customer fixed charges by 50%.

Additionally, in this case, Public Counsel recommends that the Commission reject Empire's proposal to discontinue their energy efficiency programs and low-income weatherization funding.

II. RATE DESIGN

Q. What is Empire's argument for proposing a 50% increase in fixed costs towards the customer charge for residential customers?

A. Empire gives three general arguments for the increase in fixed charges. They include the following:

1) The increased threat of net metering.

> Net metering allows customers to effectively avoid the full volumetric rate even when all of the costs underlying service to a net metered customer are avoided.[1]

2) The existing and upcoming federal appliance energy efficiency standards and utility energy efficiency efforts minimize volumetric recovery.

> DSM programs encourage customers to use more efficient appliances. Federal law restricts energy consumption through banning the interstate sale of certain light bulbs, setting minimum standards for appliance efficiency

[1] ER-2014-0351 Direct Testimony of H. Edwin Overcast, p. 24, 14-16.

and other issues. State policy provides rebates for thermal envelope efficiency improvements.[2]

3) And an overall argument that an increase in fixed charges prevents cross-subsidization between customer classes and promotes efficient price signals.

I will respond to each issue in turn.

Q. Is net metering a valid concern for Empire to date?

A. No.

Q. Do we have any idea how many net metered ratepayers are in Empire's service territory?

A. Yes, we do. In fact, we know what the numbers are for each of the investor-owned utilities (IOUs). Table 1 includes the most recent filing of the total number of net metered customers by each IOU. Table 2 includes the most recent filing of total net metered generator capacity (kW) by each Missouri IOU.

[2] ER-2014-0351 Direct Testimony of H. Edwin Overcast, p. 24, 11-14.

**

**

NP

Q. Are energy efficiency efforts and federal appliance standards a concern to date?

A. No. Similar to the net metering argument, energy efficiency efforts have been minimal in Empire's service territory, and the existing and anticipated federal efficiency appliance standards hardly provide a valid justification for a 50% customer charge increase in residential ratepayers' bills.

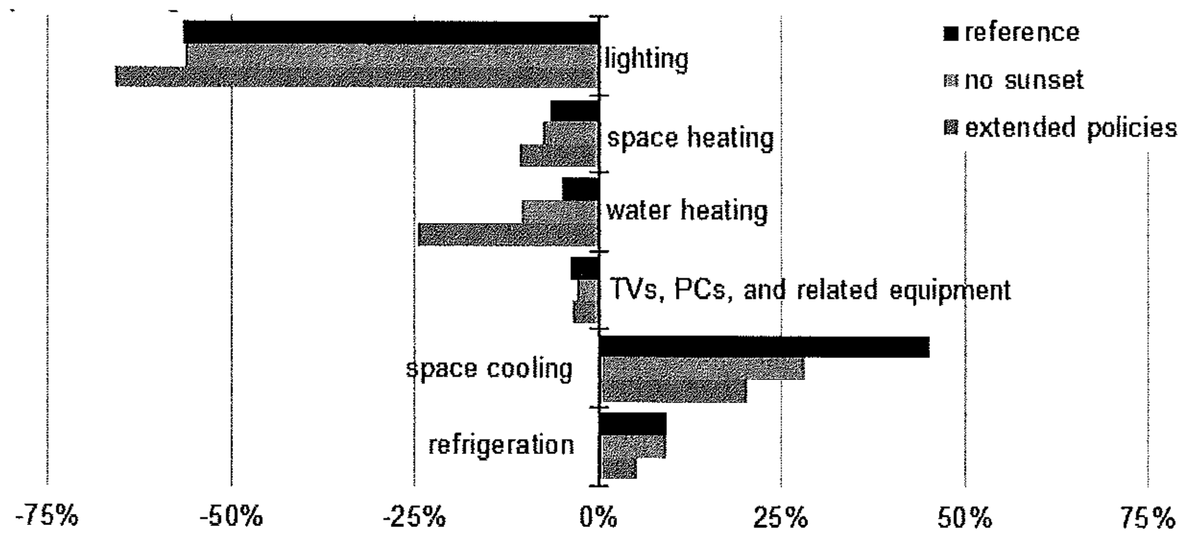
Q. Please comment on the federal efficiency standards.

Federal appliance efficiency standards set minimum energy efficiency levels. They remove the most inefficient products from the market while retaining consumer choice. Moreover, the enactment[3] and enforcement[4] of those standards has been inconsistent and has played out unevenly over multiple years. Even then, according to the U.S. Energy Information's Administration's (EIA) 2014 Annual Energy Outlook the current federal efficiency appliance standards are expected to impact certain end uses more than others.

Table 3 reprints data presented by the EIA's 2014 Annual Energy Outlook which looked at changes in the residential delivered energy consumption for selected end uses projected out to 2040 based on three different modeling scenarios. The EIA scenarios included: the reference case (current laws and regulations), no sunset (reference + federal tax credits are extended) and extended policies (increase in appliance standards and a national building energy code enforced). [5]

[3] Tomich, J. (2013) Feds withdraw new furnace efficiency standards. http://www.stltoday.com/business/local/feds-withdraw-new-furnace-efficiency-standards/article_7ccf47e4-2e7b-55a4-a1fc-6c301b7eec7f.html
[4] Dawson, K. (2013) US House Blocks Enforcement of Energy Standards Again. http://www.alliedlighting.com/author.asp?section_id=560&doc_id=560523
[5] Boedecer, E. et. al. (2014) Issues in Focus: No Sunset and Extended Policies Cases. EIA. 2014 Annual Energy Outlook. http://www.eia.gov/forecasts/aeo/section_issues.cfm#updated_nosunset

Table 3: Change in residential delivered energy consumption for selected end uses, 2012-2040



Source: U.S. Energy Information Administration, *Annual Energy Outlook 2014*, Issues in Focus

Table 3 shows that federal appliance standards impact certain end uses more than others. For example, energy consumption by residential space cooling equipment (air conditioners) is projected to increase by about 45% from 2012 to 2040 due mainly to the projected growth in the number and size of homes.[6]

To date, the most cited federal standard that has impacted utility-run energy efficiency programs has been the phase-out of the incandescent light bulb. This is less of an issue for Empire in the near future, because their energy efficiency programs have not deployed any point-of-sale CFL/LED lighting campaigns as seen in the other Missouri IOUs.

Q. Are there other factors to consider with respect to Empire's stated efficiency concerns as justification for the 50% increase in customer charges?

A. Yes. By itself, Empire neither has been subject to nor deployed many of the most commonly utilized mechanisms to minimize consumption either through efficiency or conservation.

[6] Ibid.

Table 4 provides a non-exhaustive list of mechanisms that can minimize energy consumption either through efficiency or conservation and the extent to which they have been utilized in Empire's service territory.

Table 4: Non-Exhaustive list of possible mechanisms to encourage energy efficiency and conservationism and their usage in Empire to date

Mechanism	**Applicability or utilization to date in Empire**
AMI deployment (dynamic pricing)	No
Approved MEEIA Portfolio	No
Behavioral Modification (Conservation)	No
Building/Home Energy Disclosure	No
Energy Efficiency Resource Standards	No
Energy Efficiency Home Audits	No
Inclining Block Rates	No
On-Bill Financing for Energy Efficiency	No
Past/Current Point-of-Sale Lighting Program	No
Subject to State Appliance Standards	No
Subject to State Building Codes	No

Table 4 suggests that Empire has not implemented or been subject to complying with any of the most commonly cited mechanisms that encourage energy efficiency and conservation across the country.

This is to say nothing of the fact that Empire's residential ratepayers already experience the largest customer charge today of all the Missouri IOUs as shown in Table 5.

Table 5: Current customer charge and % differences by Missouri IOU

Missouri IOU	Customer Charge	% difference Low to High
Ameren Missouri	$8.00	--
KCP&L-MO	$9.00	12.50%
KCP&L GMO (L&P)	$9.54	19.25%
KCP&L GMO (MPS)	$10.43	30.37%
Current Empire	$12.52	56.50%
Proposed Empire Increase	$18.75	**134.38%**

A high customer charge effectively prolongs the payback period for any energy efficiency investment. At $12.52, Empire's current customer charge is among the highest in the Midwest. Table 6 provides an amended breakdown of Dr. Dismukes attached Schedule DED-11 of current residential customer charges for Midwest utilities.[7]

Table 6: Survey of Current Residential Customer Charges in the Midwest

[7] ER-2014-0351 Direct Testimony of David E. Dismukes Schedule DED-11 pages 1 and 2.

State	Company	Customer Charge Residential	State	Company	Customer Charge Residential
IA	Interstate Power & Light Co.	$ 10.50	OH	Ohio Edison Co.	4.00
IA	MidAmerican Energy Co.	8.50	OH	Ohio Power Co.	8.40
IL	Ameren Illinois Company	10.57	OH	The Toledo Edison Co.	4.00
IL	Commonwealth Edison Co.	10.96	SD	Black Hills Power Inc.	10.00
IL	MidAmerican Energy Co.	7.25	SD	MidAmerican Energy Co.	7.00
IL	Mt. Carmel Public Utility	8.00	SD	Montana-Dakota Utilities Co.	6.00
IN	Duke Energy Indiana Inc.	9.40	SD	NorthWestern Energy Co. (SD.)	5.00
IN	Indiana Michigan Power Co.	7.30	SD	Northern States Power Co. (SD.)	8.25
IN	Indianapolis Power & Light Co.	6.70	SD	Otter Tail Power Co.	8.00
IN	Northern Indiana Pub Service Co.	11.00	WI	Consolidated Water Power Co.	6.00
IN	Southern Indiana Pub Service Co.	11.00	WI	Dahlberg Light & Power Co.	8.50
KS	Empire District Co.	14.00	WI	Madison Gas & Electric Co.	19.00
KS	Kansas City Power & Light Co. (KS.)	10.71	WI	North Central Power Co. Inc.	11.25
KS	Westar Energy Inc.	12.00	WI	Northern States Power Co.	8.00
MI	Alpena Power Co.	5.00	WI	Northwestern Wisconsin Electric Co.	7.50
MI	Consumers Energy Co.	7.00	WI	Pioneer Power & Light Co.	6.00
MI	Indiana Michigan Power Co.	7.25	WI	Superior Water & Light Co.	7.00
MI	Northern States Power Co.	8.25	WI	Westfield Electric Co.	7.00
MI	The DTE Electric Co.	6.00	WI	Wisconsin Electric Power Co.	16.00
MI	Upper Peninsula Power Co.	12.00	WI	Wisconsin Power & Light Co.	7.67
MI	Wisconsin Electric Power Co.	9.61	WI	Wisconsin Public Service Corp.	19.00
MI	Wisconsin Public Service Corp.	9.00			
MN	Interstate Power & Light Co.	8.50			
MN	Minnesota Power Co.	8.00			
MN	Northern States Power Co.—Minnesota	8.00			
MN	Northwestern Wisconsin Electric Co.	7.50			
MN	Otter Tail Power Co.	8.50			
MO	**Empire District Electric Co.**	**12.52**			
MO	KCP&L Greater Missouri Operations Co.	10.43			
MO	Kansas City Power & Light Co. (MO.)	9.00			
MO	Union Electric Co. (Ameren MO.)	8.00			
ND	Montana-Dakota Utilities Co.	10.65			
ND	Northern States Power Co.—North Dakota	14.50			
ND	Otter Tail Power Co.	8.00			
ND	Cleveland Electric Illum. Co.	4.00			
OH	Dayton Power & Light Co.	4.25			
OH	Duke Energy Ohio Inc.	6.00			

Empire Current Customer Charge Rank:
6th highest out of 58

Empire Proposed Customer Charge Rank:
3rd highest out of 58

Average Residential Customer Charge:
$8.85

Proposed Residential Customer Charge:
$18.75

Raising that charge by 50% would run counter to Commission rulings and policy efforts to date at the state level.

Q. Please continue.

A. According to the most recent U.S. Energy Information Administration (EIA) state profile data:

Missouri represents 1.9% of the total U.S. population
2.5% of total U.S. energy consumption (excluding transportation)[8]

Further, according to the American Council for Energy-Efficient Economy (ACEEE), Missouri is ranked 44th out of 50 states in ACEEE's energy efficiency ranking (with a score of 9 out of a possible 50 points).[9] The fact that Empire is now the lone IOU in the state not to have a fully deployed energy efficiency program under the MEEIA mechanism only further undermines Empire's proposal for a 50% increase in fixed costs to the customer charge.

According to a recent study commissioned by the Kansas Corporation Commission, increasing fixed charges can increase electricity use by 1.1 to 6.8%, varying by utility and season.[10] An increase in electricity at that level would more than cancel out all of Empire's energy efficiency efforts to date and run counter to public policy set forth and codified into law by the people of Missouri and the General Assembly.

---

[8] EIA (2015) Missouri State Profile and Energy Estimates http://www.eia.gov/state/data.cfm?sid=MO#ConsumptionExpenditures.
[9] ACEEE (2015) Missouri State Scorecard Rank. http://database.aceee.org/state/missouri
[10] Hansen, D.G. & M.T. O'Sheasy (2012) Residential Rate Study for the Kansas Corporation Commission Final Report. Christensen Associates Energy Consulting. http://www.kcc.state.ks.us/electric/residential_rate_study_final_20120411.pdf/AcroJS_DesignerJS.pdf#page=39

Q. Please describe Empire's current energy efficiency efforts.

A. The current Demand-Side Management (DSM) Advisory Group was part of the Global Agreement in ER-2012-0004 and replaced the former Customer Programs Collaborative. Empire's portfolio can be described as a general suite of programs for both residential and C&I customers. The current DSM program is designed to be a bridge program into a full-scale energy efficiency portfolio wherein Empire would collect lost revenues and be eligible for a performance incentive under the Missouri Energy Efficiency Investment Act (MEEIA).

Q. Has Empire submitted an application under MEEIA?

A. Yes, they have submitted two applications to date. Empire filed its first MEEIA application on February 28, 2012, in EO-2012-0206 and withdrew that application on July 5, 2012. The Company filed its second application on October 29, 2013, in EO-2014-0030 but has since had the procedural schedule suspended since January 14, 2014, to allow stakeholders to work towards a resolution.

Table 7 provides a breakdown of Empire's expenditures by residential, C&I, low-income, and general[11] from 2011 – 2013, as well as the first three quarters of 2014 (or the most recent available data).

[11] "General" would be assigned to all applicable customer classes for related marketing materials as well as an online energy calculator. http://c03.apogee.net/clients/?hostheader=empiredistrict&utilityid=empiredistrict

**

**

Q. Please explain why you provided total estimates with and without the Low-Income Weatherization Program (LIWP) expenditures.

A. LIWP is designed to produce cost-effective energy efficiency savings for low-income residents in the form of improved building shell and insulation measures, as well as direct install appliances. However, saving kWh is not the only benefit that LIWP provides, as research[12] has shown that LIWP benefits include:

- Participating customer bill savings
- Savings to other ratepayers (arrears, shut-offs)
- Increased earnings of children (from staying in school w/out being homeless)
- Avoided fire damage
- Saved moving expenses

[12] Oppenheim, J. & T. MacGregor. "The Economics of Low-Income Electricity Efficiency Investment." Prepared for the Entergy Corp., New Orleans. Gloucester, MA. Oppenheim and MacGregror (2001). http://www.democracyandregulation.com/detail.cfm?artid=14

- Saved uninsured medical costs and lost work
- Increased property values
- Net GDP gain
- Net wage and salary gain
- Families saved from homelessness
- Net new jobs
- CO_2 saved

For these reasons, LIWP funding is supported by ratepayers across all IOU electric and gas utilities in Missouri. Stakeholders in turn routinely have looked at LIWP funding as a complementary piece to a utilities' energy efficiency portfolio of programs, but not necessarily a piece that includes collection of the throughput disincentive (or lost revenues).

Ameren Missouri is an example of a utility that funds LIWP ($1.2 million annually), but does not include that funding in their MEEIA recovery. There are a variety of reasons for this arrangement, but it is primarily centered on the inputs utilized for calculating different cost-effective tests. In short, LIWP funding would continue even if an energy efficiency program was not in place for a given utility. Therefore, it is important to look at LIWP as a similar but separate and distinct program from the utility's energy efficiency efforts.

Q. Are there any examples of a utility that has LIWP funding, but not an energy efficiency program?

A. Yes. Summit Natural Gas currently funds LIWP but does not have an active energy efficiency program for its customers.

Q. Is Empire proposing to eliminate their LIWP funding?

A. Yes, they are. Empire is proposing to eliminate LIWP funding along with their current energy efficiency programs until the Commission has approved their MEEIA application. Public Counsel believes that LIWP should be considered separate and apart from MEEIA programs, as LIWP funding produces measurable benefits beyond energy efficiency savings that benefit all ratepayers (e.g., reductions in bad debt, customer arrears, etc...).

I will discuss Empire's proposal to eliminate LIWP funding as well as their MEEIA application in greater detail later in this testimony.

Q. Please respond to Mr. Overcast's argument that an increase in fixed charges would prevent cross-subsidization and promote efficient price signals?

A. One of the theories in the academic economic literature is Ramsey pricing, or the "inverse elasticity" rule which Mr. Overcast references. Ramsey pricing suggests that certain types of customers (those whose demand is said to be more inelastic) will pay a higher mark-up above marginal cost than a customer with more price elasticity. This promotes efficient pricing in an aggregate sense, but it raises issues in terms of potential price discrimination and fairness.

Q. Please explain.

A. Low-income, low-usage customers, customers on fixed incomes, and small general service customers that are seasonal in nature can all be seen as customer groups with inelastic demands (which often means without substitutes), and would all be subject to paying a higher mark-up above marginal cost than another type of customer under Empire's proposal. This can be viewed as a form of price discrimination. On average, low-income households in Missouri spend 14% of their annual income just on energy costs, whereas middle and higher income families usually pay 3-6%.[13] This means low-income families will often have to make difficult choices over necessities such as food, medication, housing, and utility bills.

An additional argument also can be made that customer charges should not be mistaken for demand charges. They are not the same thing. Empire's proposal is essentially to treat three different cost components (energy, demand and customer) as two (variable and fixed). This

[13]Missourians to end poverty coalition (2014) State of the State Poverty Report. http://mediad.publicbroadcasting.net/p/kwmu/files/201401/PovertyInMissouri.pdf

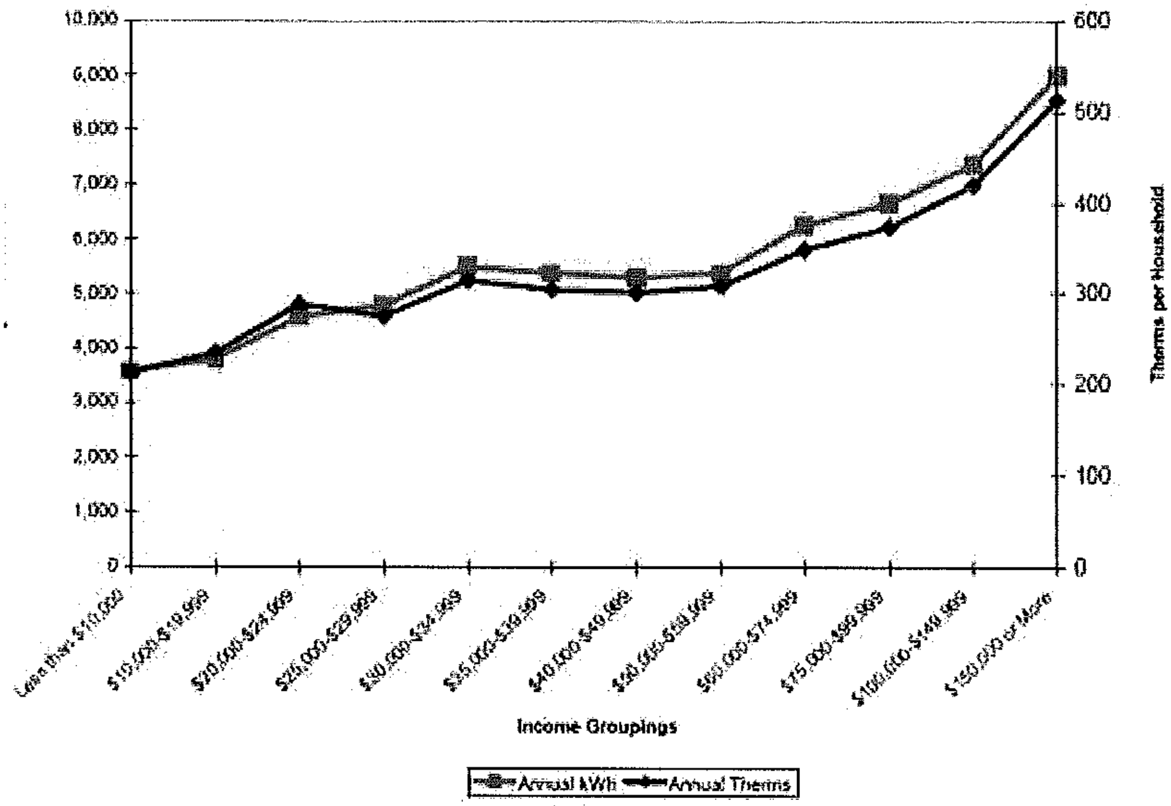
distorts the price signal and forces high-demand and low-demand customers to pay the same amount of "fixed" costs, even though the demand characteristics of these customers are different.

Q. Could you provide an illustrative example of how demand characteristics may differ?

A. Low-income customers, and in particular, low-income multi-family customers are likely to use proportionally less peak energy than larger customers.[14, 15] This is because low-income multi-family customers typically live in smaller dwellings, have fewer discretionary appliances and are much more likely to have non-peak appliances—refrigerators, lights, and electronic equipment—than peak appliances—clothes washer and dryer.[16] Differences in demand characteristics also extend to differences in electricity consumption. This can be seen in Figure 1 which includes a 2010 KEMA study on California electricity use by income.

[14] Brockway, N. (2008) Advanced Metering Infrastructure: What regulators need to know about its value to residential customers. National Regulatory Research Institute. xi. http://nrri.org/pubs/multiutility/advanced_metering_08-03.pdf
[15] Faruqu, A., Sergici, S. & J. Palmer (2010) The Impact of Dynamic Pricing on Low Income Customers IEE Whitepaper. http://www.edisonfoundation.net/IEE/Documents/IEE_LowIncomeDynamicPricing_0910.pdf
[16] Marcus, W.B. & G. Ruszovan (2007). "Know Your Customers": A Review of Load Research Data and Economic Demographic, and Appliance Saturation Characteristics of California Utility Residential Customers. http://www.jbsenergy.com/downloads/Know_Your_Customers_Paper.pdf

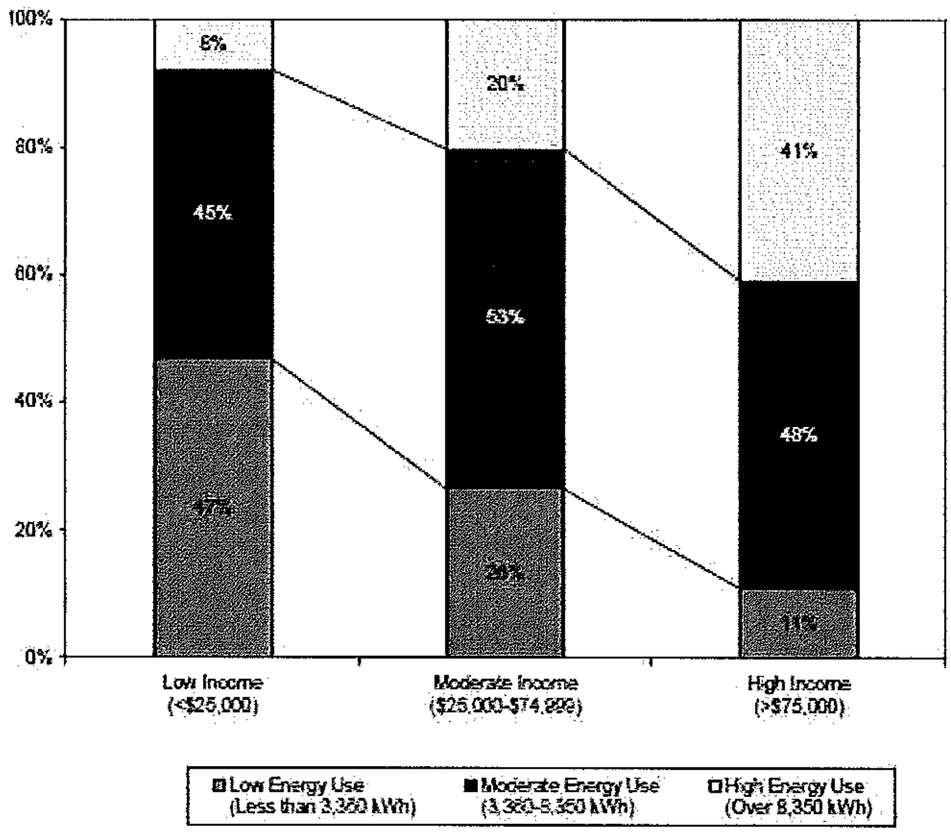
Figure 1: Average Electricity and Natural Gas Consumption by Income in California (2010)[17]



And in figure 2 which provides a more finite breakdown of electricity consumption by income grouping that suggests that roughly half of low income residents (<$25,000) are low energy users.

[17] Atamturk, N. Zafar, M. & P. Clanon (2012) Electricity Use and Income: A Review. California Public Utilities Commission. http://www.cpuc.ca.gov/nr/rdonlyres/609bc107-ef3c-4864-ad56-e964884d51ac/0/ppdelectricityuseincome.pdf

Figure 2: California residential electricity consumption by income grouping (2010)[18]



Q. What should readers conclude from the KEMA study cited above?

A. The KEMA study suggests that low-income users are likely to be low-usage consumers. This again, should not be surprising given the difficult choices low-income customers have to make on a daily basis. However, it would be wise not to extrapolate too much from one study, as variations in geography and time could create price and usage differences. Ideally, data specific to Empire's service territory should be utilized to inform this discussion. Currently, no data exists on Empire's residential customer's electricity usage broken down by

[18] Ibid.

income. However, there is substantial economic data currently available on Empire's service territory that can provide a sense of the potential impact.

Q. Do we have an idea of the current percentage of residents living in poverty in Empire's service territory?

A. Yes, we do. The U.S. Census Bureau's 5-Year Estimates from the American Community Survey define poverty:

> by comparing annual income to a set of dollar values called poverty thresholds that vary by family size, number of children and age of householder. If a family's before tax money income is less than the dollar value of the threshold, then that family and every individual in it are considered to be in poverty. For people not living in families, poverty status is determined by comparing the individual's income to his or her poverty threshold.[19]

In December, 2014, the U.S. Census Bureau released their latest data set on Small Area Income and Poverty Estimates (SAIPE) for 2013. SAIPE estimated that 15.8% of Missouri citizens of all ages were living in poverty.[20] Further analysis shows that there was only one county that Empire services that had a lower percentage of its overall population living in poverty than the Missouri average, as seen in table 8.

[19] U.S. Census Bureau (2015) State & County QuickFacts: People of all ages in poverty. http://quickfacts.census.gov/qfd/meta/long_PVY020210.htm
[20] U.S. Census Bureau (2014) Small Area Income and Poverty Estimates (2013) http://www.census.gov/did/www/saipe/data/index.html

Table 8: Percentage of people of all ages in poverty in counties Empire operates in[21]

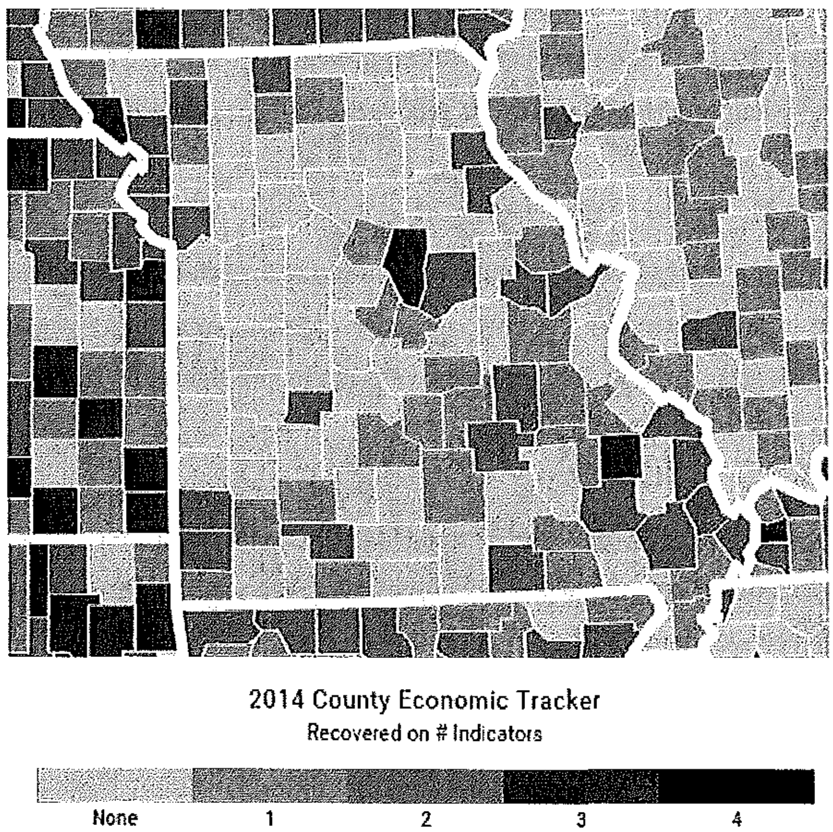
Barry County	Dade County	Jasper County	Polk County
20.2%	18.4%	18.3%	20.0%
Barton County	Dallas County	Lawrence County	St. Clair County
18.5%	21.7%	18.6%	26.4%
Cedar County	Greene County	McDonald County	Stone County
25.5%	20.2%	20.7%	16.1%
Christian County	Hickory County	Newton County	Taney County
11.4%	24.7%	16.1%	19.7%

Q. Please describe the current economic climate for Empire residential ratepayers.

A. On January 12th, 2015 The National Association of Counties (NACo) issued the following press release: *Economic recovery remains sluggish across counties despite signs of national boom.*[22] This press release was accompanied by a link to the 2014 County Economic Tracker which utilizes data from Moody's Analytics, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis and the U.S. Census Bureau to give a sense of the unevenness in economic growth in Missouri relative to some of the national trends. Figure 3 shows that breakdown in Missouri.

[21] Ibid.
[22] NACo (2015) Economic recovery remains sluggish across counties despite signs of national boom. http://www.naco.org/newsroom/Documents/Press%20Release%20Documents/CountyEconTracker011215RELEASE.pdf

Figure 3: 2014 County Economic Tracker for Missouri



Q. Please continue.

A. Figure 1 shows each county within Missouri and color codes them based on four "recovery" indicators which include:

> **<u>Jobs Recovered:</u>** Jobs recovered represents the total wage and salary jobs, whether full or part-time, temporary or permanent in a county economy and whether or not those jobs were recovered to the prerecession amount by 2014. It counts the number of "jobs," not "employed people" for all employers in a county economy.

Unemployment Rate Recovered: Unemployment rate represents the percentage of total workforce who are unemployed and are looking for a paid job (under the U-3 classification utilized by the Department of Labor) and whether or not that rate has recovered to its pre-recession low level (2007) by 2014.

GDP Recovered: County economic output is the total value of goods and services produced by a county economy, also known as GDP, and then whether or not the county has recovered to its pre-recession levels of GDP by 2014.

Home Prices Recovered: Median Home Sales Prices are median sales prices of existing single-family homes, and then whether or not the county has recovered to its pre-recession levels of median home sales by 2014.[23]

Table 9 has adapted information utilized by the County Economic Tracker to highlight each county in which Empire operates to give a sense of what residential ratepayers currently are experiencing.

[23] NACo County Explorer: Mapping County Data State Search http://explorer.naco.org/

Table 9: Empire economic tracker of serviced counties

County	Population	Jobs Recovered	Unemployment Rate Recovered	GDP Recovered	Home Prices Recovered
Barry	35,572	No	No	No	No
Barton	12,275	No	No	No	No
Cedar	13,913	No	No	No	No
Christian	80,899	Yes	No	Yes	No
Dade	7,578	No	No	No	No
Dallas	16,535	No	No	No	No
Greene	283,870	No	No	No Recession	No
Hickory	9,305	Yes	No	Yes	No
Jasper	116,398	No	No	No Recession	Yes
Lawrence	38,185	No	No	Yes	No
McDonald	22,558	No	No	Yes	No
Newton	58,845	Yes	No	No	Yes
Polk	30,974	No	No	No	No
St. Clair	9,487	No	No	No	No
Stone	31,297	No	No	No	No
Taney	12,581	Yes	No	No	No

These results suggest that the majority of Empire's counties still are recovering by important economic indicators. It is important to note that much of the recovery that is indicated is concentrated in essentially three counties: Christian, Greene and Jasper. Further, ten counties have yet to return to their prerecession level of GDP recovered. Other economic indicators faired even more poorly.

Staff expert/witness Michael Stahlman presented similar results in the Staff Cost of Service Report, but with a comparative evaluation of Empire's rates during that same period (2007-2013). Mr. Stahlman's figure and table are reprinted here in Figure 4 and Table 10 below:

Figure 4: Comparison of Weekly Wages, CPI, PPI and Electric Rates[24]

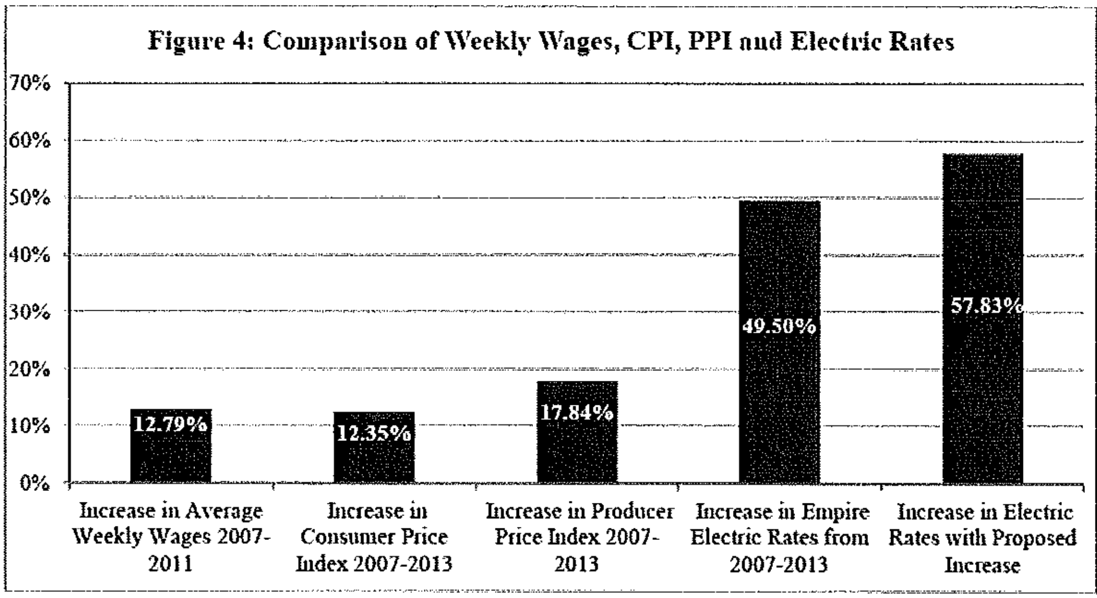


Table 10: Empire Rate Case History 2007 - 2014[25]

Table 1: Empire Rate Case History 2007 - 2014

Case Number	Effective Date	Dollar Value	Percent Increase
ER-2006-0315	14-Dec-07	$29,300,000	9.96%
ER-2008-0093	23-Aug-08	$22,040,395	6.70%
ER-2010-0130	10-Sep-10	$46,800,000	13.90%
ER-2011-0004	15-Jun-11	$18,685,000	4.70%
ER-2012-0345	1-Apr-13	$27,500,000	6.85%
Total Dollars		$144,325,395	
Total Compounded Increase			49.50%
ER-2014-0351	(Proposed)	$24,319,353	5.57%
Total with Proposed		*$168,644,748*	*57.83%*

Empire's residential ratepayers' wages are not keeping up with Empire's rate increases. This is especially troubling in this case because Empire is proposing a volumetric increase, a 50%

[24] ER-2014-0351 Michael Stahlman, Missouri Public Service Commission Staff Report Revenue Requirement Cost of Service p. 10.
[25] Ibid.

increase on their fixed customer charge, and to discontinue all LIWP and energy efficiency efforts until they have an approved MEEIA application.

III. ENERGY EFFICIENCY AND LOW-INCOME CONSIDERATIONS

Q. Why is Empire proposing to terminate their existing energy efficiency tariff?

A. According to Empire witness Scott Keith:

> Under current Commission rules, all electric energy efficiency programs should be approved under the Commission's MEEIA rules. Empire's existing energy efficiency programs have not been approved under MEEIA. In addition, Empire has a MEEIA filing in front of the Commission (case No. EO-2014-0030) with a portfolio of energy efficiency programs that would replace the existing programs. Empire's MEEIA filing also has an improved cost recovery mechanism that enables Empire to continue to offer energy efficiency alternatives to our customers without the financial disincentive associated with the existing pre-MEEIA cost recovery methodology.[26]

Q. Do you agree that the Commission rules prohibit utilities from offering energy efficiency outside of MEEIA?

A. No. Though not a lawyer, I can find nothing in Missouri law that would lead to this conclusion.

[26] ER-2014-0351 Direct Testimony of Scott Keith, p. 22, 4 - 12.

Q. It will now be 15 months since Empire's procedural schedule was suspended for their MEEIA application. What is the problem?

A. There are a number of issues that are preventing stakeholders from agreeing on program targets, design, implementation and lost revenue recovery. Presently, the parties appear to be stalled over already accrued sunk costs and the assurance that the proposed lost revenue mechanism is in the best interest for ratepayers. Many of Empire's issues are the result of their scale and the considerable up-front capital costs (both in terms of money, time and experience) that are required to effectively deploy an appropriate MEEIA program. Similar issues are present with the gas utilities in Missouri.

Q. Could you give an example?

A. One issue Public Counsel has reservations with is the reliability of Empire's data. For example, Empire relies on primary data collected from 2008, which includes customer saturation information on a population from pre-tornado Joplin. Empire then supplements this with the deemed measure-level savings from Ameren Missouri's 2010 technical resource manual, which are calibrated to building stock and weather-specific characteristics for the Ameren Missouri service territory pre-2010. Empire then projects that data out to a three-year portfolio delivery (under a best-case scenario) of 2015-2018. The final evaluation, measurement and verification results would then be confirmed at the close of 2018. Again, in a best-case scenario, this approach results in a ten-year gap in assumptions that are largely populated with another utilities' building stock.

Q. How have other states dealt with these issues?

A. The regulatory structure, savings targets, lost revenue recovery, and performance incentives (to the extent that they exist) vary considerably across the country. However, one successful design incorporated in high achieving states includes state-wide delivered programs as seen in Wisconsin (Focus on Energy) and Massachusetts (MassSave). Under a state-wide delivered program all utilities benefit from economies of scale in both advertising and program delivery.

Q. Is Public Counsel recommending rejection of Empire's proposal to discontinue their bridge program because they have a MEEIA application in place?

A. Yes. Consistent with OPC's argument against raising fixed customer charges by 50%, Public Counsel believes that Empire's proposals in this rate case run counter to existing state and federal policy and results in a regressive rate design that penalizes conservation and rewards consumption. Discontinuing the bridge program on the grounds that a MEEIA application has been filed does not take into consideration the likelihood of said application being approved. It has been almost five months since stakeholders last met collectively to discuss Empire's MEEIA application and presently there been no indication from Empire that talks are ready to resume.

A generous incentive exists for Empire to promote efficiency in the form of MEEIA which permits Empire to recover the revenues otherwise lost by customer conservation. It also includes a performance incentive component which makes the use of high fixed customer charges even more suspect.

If the Commission elects to discontinue Empire's energy efficiency bridge programs, Public Counsel strongly suggests that Empire's funding of LIWP be continued. As stated earlier, LIWP funding likely would exist absent any energy efficiency programs and will more than likely not be included in Empire's final MEEIA portfolio for the same reasons it was not included in Ameren Missouri's. Additionally, similar to specialized commercial and industrial load-retention programs, low-income assistance programs are investments to secure long-term shareholder value, and both their energy and non-energy benefits are well documented.[27]

IV. CONCLUSION

Q. Could you please summarize your testimony?

A. Public Counsel believes that raising fixed charges would be a huge shift in energy policy for this Commission as it would effectively take away customers' ability to control their electricity bills and would cancel out any energy efficiency efforts to date. It would also impact low income, renters, and ratepayers on fixed incomes disproportionately raising issues of price discrimination and fairness.

Public Counsel strongly suggests that the Commission consider all relevant facts at hand as they move forward with investigating this case. These facts, as discussed at length in this testimony include Empire as:

- Only having minimal rooftop solar in place to date.
- The only Missouri IOU to not have a MEEIA approved energy efficiency program in place.
- A service territory that includes only one county with a poverty level below the state average.
- A service territory that has not recovered to prerecession levels on important economic factors.
- Administering a rate design (declining block rate) that encourages consumption.
- Already administering the largest customer charge of all IOUs in Missouri.

[27] Oppenheim, J. & T. MacGregor. "The Economics of Low-Income Electricity Efficiency Investment." Prepared for the Entergy Corp., New Orleans. Gloucester, MA. Oppenheim and MacGregror (2001). http://www.democracyandregulation.com/detail.cfm?artid=14

Public Counsel recommends that the Commission reject Empire's proposal to increase residential customers fixed customer charges by 50%.

Additionally, in this case, Public Counsel recommends that the Commission reject Empire's proposal to discontinue their energy efficiency programs and low-income weatherization funding.

Q. Does this conclude your testimony?

A. Yes.