Exhibit No.:	___________
Issue(s)	Cost and Quality of Service/ Stranded Asset/ AMI/CIS Deployment
Witness/Type of Exhibit:	Marke/Direct
Sponsoring Party:	Public Counsel
Case No.:	ER-2019-0374

DIRECT TESTIMONY

OF

GEOFF MARKE

Submitted on Behalf of the Office of the Public Counsel

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2019-0374

** **

Denotes Highly Confidential and Confidential Information that has been Redacted

January 15, 2020

NON-PROPRIETARY

GM-4P

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF THE MISSOURI

In the Matter of The Empire District	)	
Electric Company's Request for Authority	)	
to File Tariffs Increasing Rates for Electric	)	Case No. ER-2019-0374
Service Provided to Customers in its	)	
Missouri Service Area	)	

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 direct 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
Chief Economist

Subscribed and sworn to me this 15th day of January 2020.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI
JERENE A. BUCKMAN
My Commission Expires
August 23, 2021
Cole County
Commission #13754037

Jerene A. Buckman
Notary Public

My commission expires August 23, 2021.

GM-4P

TABLE OF CONTENTS

DIRECT TESTIMONY

OF

GEOFF MARKE

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2019-0374

I. INTRODUCTION

Q. What is your name, title and business address?

A. Geoff Marke, PhD, Chief Economist, Office of the Public Counsel ("OPC" or "Public Counsel"), P.O. Box 2230, Jefferson City, Missouri 65102.

Q. What are your qualifications and experience?

A. I have been in my present position with OPC since 2014 where I am responsible for economic analysis and policy research in electric, gas, and water utility operations.

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

A. Yes. A listing of the Commission cases in which I have previously filed testimony and/or comments is in Schedule GM-1.

Q. What is the purpose of your direct testimony?

A. I provide the Commission an overview of the concerns I have with The Empire District Electric Company ("Empire") related to both cost and quality of service since Algonquin Power & Utilities Corporation ("APUC") acquired Empire through one of its subsidiaries, Liberty Utilities, in 2017. I do this primarily by crosschecking representations APUC made in its recent failed attempt to acquire Jacksonville Electric Authority ("JEA").

I also explain how those concerns are interdependent and compounded by Empire's recent announcement to strand its investment in its Asbury Power Plant on March 1, 2020. In this section, I provide an historical account of Empire's Asbury investment under its former management, Liberty Utilities' (the "new" Empire management or "LU") pre-investment analysis and post-investment actions that have created the self-imposed investment stranding, and how Liberty Utilities' actions depart from the principles of sound regulation and protecting the public interest.

I then articulate my concerns for Empire's customer base as it relates to the uncertainty surrounding Empire's planned near-term investments in merchant wind generation, automatic meter infrastructure ("AMI"), and other investments.

Finally, I provide recommendations to both the Commission and Empire moving forward as it relates to Empire's cost and quality of service.

I am addressing Empire's retirement of Asbury in this case fully aware that the Commission may choose to defer its decisions on the rate impacts of Empire retiring Asbury to Empire's next general electric rate case. However, I believe the information that I am providing is necessary for the Commission when it is considering just and reasonable rates today and also to preserve Public Counsel's record on the Asbury issues.

Q. Would you summarize your recommendations to the Commission regarding Empire?

A. My recommendations follow:

- Empire should not continue to receive "a return on" its investment in Asbury after Empire retires Asbury on March 1, 2020;
- Empire should not receive "a return of" the remaining balance of its 2015 capital investments of $124 million in Asbury that extended the useful life of the plant to 2035;
- Empire should not move forward with staggered deployment of Advanced Metering Infrastructure ("AMI") investment that needlessly increases its rate base without concurrently producing benefits to Empire's customers. Rather, Empire should have a coherent and actionable plan that synchronizes AMI hardware, software and customer education of Time-of-Use rates to ensure that its customers can actually realize benefits; and
- Empire needs to prioritize realizing what APUC represented to the City of Jacksonville, Florida, with its failed bid to acquire JEA, by focusing on reducing costs and improving its quality of service, as opposed to merely increasing its rate base and retail rates.

Empire's self-imposed stranding of its Asbury Power Plant by retiring it on March 1, 2020, is known and measurable. However, there is presently a degree of uncertainty as to how the

Asbury Power Plant will be treated for ratemaking purposes in this case. Empire has represented that it is retiring Asbury on March 1, 2020, which is before rebuttal testimony is to be prefiled in this case and less than 30 days beyond the Company-selected true-up cutoff date to its chosen test year. No party is in a better position than Empire to identify the categories of costs and revenues for which isolated adjustments should be made due to Empire's retirement of its Asbury power plant, the FERC accounts and subaccounts where they should be posted, and the amounts to post. Public Counsel has previously identified the following categories, which it continues to identify:

- Annualized, normalized fuel costs (coal, other fuels, and additives);
- Annualized, normalized SPP revenues;
- Annualized, normalized operations and maintenance expenses;
- Return of Empire's capital investment in Asbury(includes depreciation);
- Return on Empire's capital investment in Asbury;
- Property taxes;
- Cash working capital;
- Income tax gross-up; and
- accumulated deferred income taxes

Through the prefiled testimony of its witness Ms. Sheri Richard Empire stated that it was not opposed to the Commission issuing an order directing Empire to account for the changes in its operations and maintenance expenses attributable to its retirement of Asbury, but Empire did not identify or acknowledge in Ms. Richard's original or corrected direct testimony, or anywhere else, any of the other categories of expenses and revenues that would change due to it retiring Asbury on March 1, 2020.

OPC witness John Robinett presents the OPC's quantification of Empire's total investment in Asbury as of March 1, 2020, unrecovered through retail rates and the unrecovered amount of its $124 million investment in Asbury that extended the useful life of the plant to 2035.

II. JACKSONVILLE ELECTRIC AUTHORITY

Q. What is the Jacksonville Electric Authority?

A. JEA is the municipally run electric, water and sewer utility of Jacksonville, Florida, that has 466,000 electric customers, and 359,000 water customers. In October of 2019, the City of Jacksonville, Florida solicited bids to begin a five-month process to negotiate its sale. According to the *Florida Times-Union*:

> For entities that want to purchase JEA lock, stock and barrel, the threshold price to even get consideration would be in the range of $6.8 billion to $7.3 billion, according to information provided to interested buyers. . . .
>
> At a minimum, a deal would have to net at least $3 billion in cash for City Hall after covering some other big-dollar requirements.
>
> A purchaser of the entire utility would have to pay enough for JEA to wipe out all of its billions of dollars in debt along with some other financial liabilities and transaction costs from a deal.
>
> The sales price also would have to cover $400 million in one-time customer rebates if a deal ultimately goes through, plus $132 million for enhanced pension benefits for JEA employees and $165 million in employee retention bonuses.[1]

Q. What did APUC offer to acquire JEA?

A. APUC responded to the City of Jacksonville, Florida's public invitation to negotiate with the City regarding the sale of all or parts of JEA, but, since the City rejected pursuing negotiations with APUC, to my knowledge APUC has taken no further action to pursue acquiring any or all of JEA. However, I assume that APUC was prepared to bid at least the stated "threshold price for consideration" above or otherwise it would not have responded to the City of Jacksonville's public solicitation.

---

[1] Bauerlein, D. (2019) JEA for sale: bid price at least $6.8 billion. *Florida Times-Union.* https://www.jacksonville.com/news/20191005/jea-for-sale-bid-price-at-least-68-billion.

Q. How does what APUC stated in its response to the City of Jacksonville regarding APUC acquiring all or part of JEA compare to the terms upon which Liberty acquired Empire in 2017?

A. Ontario-based APUC, through its subsidiary Liberty Utilities Company, agreed to pay $2.4 billion for Empire and its affiliates, including the assumption of approximately $900 million of debt. Both shareholders and customers fared differently in the acquisition. Notably, Empire's shareholders received $34 per share of common stock in cash upon closing of the merger. This represented a 50 percent premium to the presale announcement closing stock price of $22.65 on December 10, 2015.[2]

In contrast, citing Missouri as a "no net detriment state," Liberty Utilities did not include any explicit customer benefits (like, the opening floor requirement of $400 million in one-time rebates that Jacksonville seeks[3]) in its acquisition. Instead, Liberty premised Commission approval of its application on the basis that the "status quo" would be maintained, that is: management would remain as is, customer service metrics would not degrade, affiliate transaction rules would be complied with, and scale economies would be found.

Q. Has Empire adhered to those 2017 "status quo" conditions?

A. I do not believe so, and I will explain why throughout my testimony.[4]

Q. What does APUC's attempt to buy JEA have to do with this Empire rate case?

A. On October 4, 2019 APUC responded to the City of Jacksonville's public solicitation of interest to acquire all or part of JEA with its letter titled, "Response to the city of Jacksonville's invitation to negotiate in respect of strategic alternative for the Jacksonville Electric

---

[2] Beecher, B. (2016) "Letter from the President" The Empire District Electric Company 2015 Annual Report http://www.annualreports.com/HostedData/AnnualReports/PDF/NYSE_EDE_2015.pdf.

[3] OPC had filed testimony recommending a bill credit of $100 per customer resulting in as much as $21 million total dollars as a result of the acquisition. However, Liberty rejected this proposal and OPC ultimately withdrew this request.

[4] As it pertains to affiliate transaction compliance, I would direct the Commission and interested readers to OPC witness Robert Schallenberg's direct testimony in this case regarding non-compliance with the Commission rules.

Authority."[5] The contents of APUC's proposal as well as those of sixteen other respondents were made public on JEA's website.[6]

Within its response, APUC made certain representations about its regulated utilities, including specific references to those in Missouri. I would like to take this opportunity to provide a fact-check to those representations for the Commission's consideration.[7]

Q. What representations did APUC make regarding customer commitment?

A. Algonquin stated:

> The Respondent measures and benchmarks its customer interaction performance with all the industry best practices and protocols and procedures including tracking customer calls, measuring call wait times, tracking disconnected or dropped calls, measuring average interaction times and tracking resolution success metrics. The Respondent tracks its overall performance in relation to its customer interactions with a number of third party evaluations including but not limited to bi-annual JD Power assessments. **<u>Respondent's respective utility operations consistently rank in the top quartile of its peer group in these third party assessments</u>**.[8] (Emphasis added).

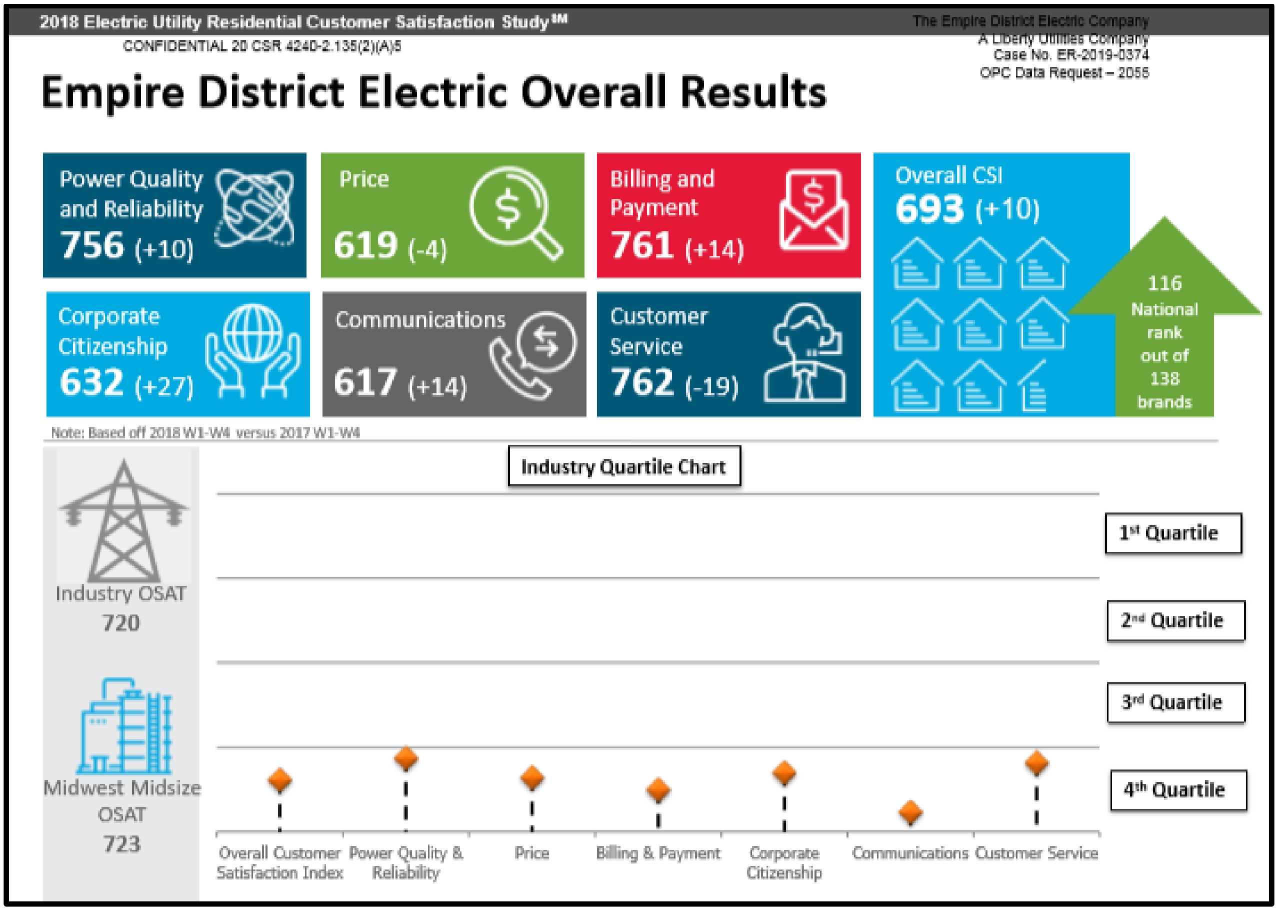
Q. Did APUC accurately portray Empire's electric operations?

A. No. According to the most recent J.D. Power scores Empire provided to the OPC through discovery, in 2018 JD Power & Associates ranked Empire *116* out of 138 electric utilities resulting in a *bottom* quartile placement. The results for Empire's electric operations are reprinted here in Figure 1.

---

[5] See Sch. GM-2 and/or https://www.jea.com/microsite/promise/pdf/blue-Algonquin_Power_Utilities_Corp-01-Respondent_Reply.pdf.
[6] JEA (2019) What's Next for JEA: Strategic Alternatives ITS Responses. https://www.jea.com/microsite/promise/promise.html.
[7] It is important to note that Missouri electric customers represent approximately 60% of Liberty Utilities regulated electric customers (or roughly 166,000 out of 266,000 customers) which also includes customers in its Calpeco Electric System (California), retail choice Granite State (New Hampshire) operations, and adjacent vertically-integrated Empire states (Kansas, Arkansas and Oklahoma). Therefore, the representations made within the JEA document need to be tempered with the fact that my conclusions omit the non-Missouri customers.
[8] Ibid.

<u>Figure 1: J.D. Power 2018 Electric Utility Residential Customer Satisfaction Study Results: Empire District Electric Overall Results*</u>



* Across the board Empire's third-party metrics are all in the *fourth, or last, quartile.* A further breakdown in perceived customer value can be seen in each category relative to the national average in Table 1. Additionally, for cross-reference, I have included the high, low, average and Missouri-specific JD Power overall scores for electric utilities in Table 2, as well as the national average.

Table 1: 2018 JD Power Scores of Empire compared to National Average **

**

Table 2: High, low, average and Missouri-specific utility scores within the 2018 JD Power results **

**

As seen in Table 1, Empire has scores in certain categories that are significantly ** ** than its scores in other categories. Specifically, the areas of ** ** are categories that are more than ** ** than the national averages. Table 2 illustrates a similar picture as there are more than a ** ** points separating Empire from the highest scoring utility, but only ** ** points separating it from the lowest scoring utility in the nation in terms of overall customer satisfaction.

Q. Are JD Power Scores the definitive statement on customer service?

A. No. I would caution the Commission with reading too much into JD Power scores, as timing of rate cases, weather events, and other confounding variables can have an impact in any given year.[9] That being said, the differences in the Empire-specific JD Power results relative to APUC's representations are vast and disconcerting.

Q. Did APUC make any representations about positive call center metrics for Empire?

A. No, not explicitly. APUC merely stated:

> The Respondent measures and benchmarks its customer interaction performance with all the industry best practices protocols and procedures including tracking customer calls, measuring call wait times, tracking disconnected or dropped calls, measuring average interaction times and tracking resolution success metrics.[10]

Q. Empirically, what are Empire's call center metrics pre- and post- APUC's 2017 acquisition of it?

A. Table 3 provides a breakdown of average select call center metrics from 2014 through Sept. of 2019. This provides roughly a three-year snapshot of Empire's call center metrics.[11]

Table 3: Select Empire District call center metrics pre- and post-2017 acquisition[12]

	Avg. Talk Time (hr.min.sec)	Avg. Agent Call Wait Time (hr.min.sec)	Avg. Not Ready Time (hr.min.sec)	% Abandoned	Avg. Speed of Answer (min.sec)	Calls Answered 30 Sec or less
Pre						
2014	0:02:58	0:01:59	0:28:05	4%	0:25	83%
2015	0:02:58	0:01:48	0:29:04	3%	0:22	83%
2016	0:03:19	0:01:44	0:36:23	3%	0:24	80%
Post						
2017	0:03:32	0:01:53	0:37:45	4%	0:30	78%
2018	0:03:19	0:01:18	1:00:31	5%	0:56	64%
2019	0:02:58	0:01:38	1:02:36	4%	0:39	72%

[9] This, however, should be tempered by the fact that Empire has not come in for a rate case since the acquisition.
[10] Ibid.
[11] The acquisition was completed in January of 2017.
[12] See also Sch. GM-3, Empire reply to OPC Data Request 2082.

At first blush, it appears as though the metrics have decreased over time in every category but "average agent call wait time." I defer to the Missouri Public Service Commission Staff on whether or not these call center metrics represent a statistically significant decline in Empire's quality of service. I welcome any insight and/or recommendations they have on this matter, preferably in rebuttal testimony.

Q. What representations has APUC made regarding how it treats its customers and the community it serves through its planned investments?

A. In its JEA bid Algonquin stated:

> History is strewn with examples of first movers and early technology adopters that in the fullness of hindsight turn out to be cost transient undertakings: AMR vs. AMI, CFB's [sic] vs LED technology, investing in IGCC, new nuclear, coal gasification, etc. There is certainly a place for technology pioneers and first movers, but this is a model that is rarely applicable to the utility industry that has an obligation to serve its customers reliably, to make prudent investment decisions and provide its services at an affordable cost. **Jumping in with some new bet on some costly nascent "disruptive" concept** (like cloud electric trading technology) **is not what companies who care about their customers can practically do. Utilities cannot be failure pioneers when working with other people's money and when impacting their community's everyday quality of life.**[13] (Emphasis added).

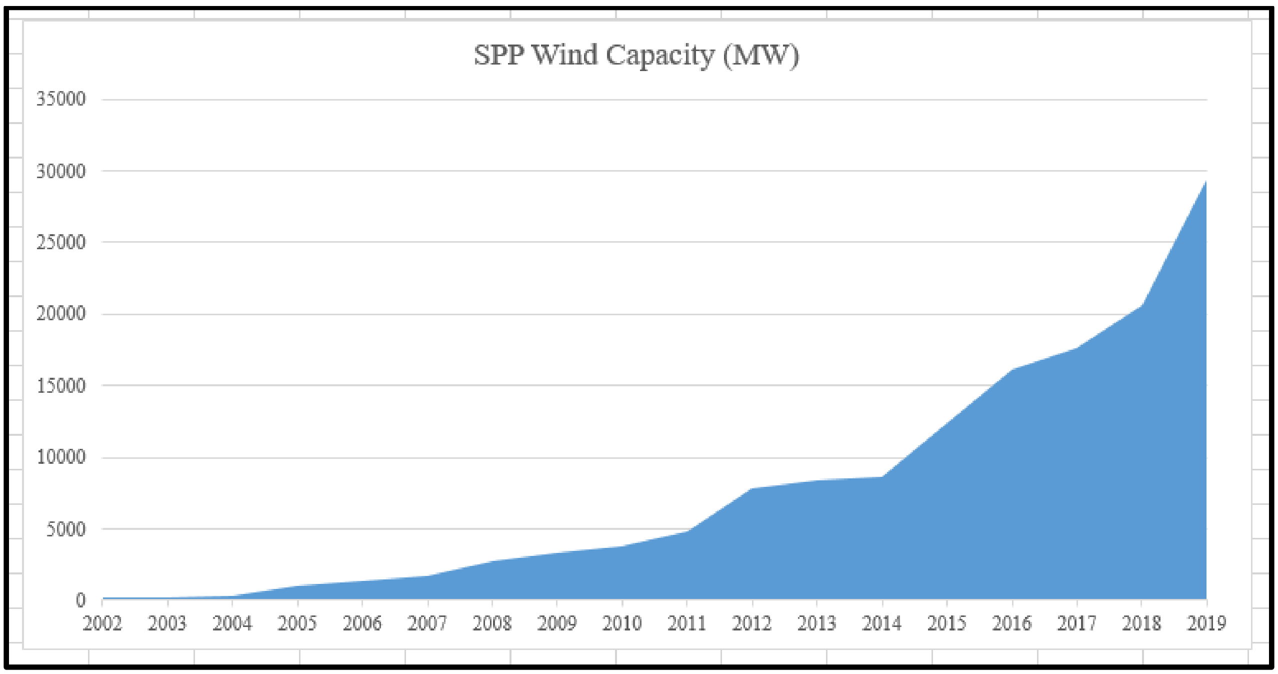
Q. Does Algonquin accurately portray your experience with Empire as a subsidiary of APUC and Liberty Utilities?

A. No. In multiple cases now, I have been a vocal critic of Empire's decision to depart from the traditional cost-of-service model to place a bet, "with other people's money," on a captive-retail customer-backed, merchant generation scheme by acquiring and adding an additional 600 MW or more of wind generation to its rate base. The lack of objective, empirical analysis, the needless 40% increase to Empire's rate base, and the shifting of risk to be borne by

[13] Ibid.

ratepayers is an enormous concern, and is a substantial cost moving forward. APUC/Liberty/Empire's actions to date look exactly like they have made Empire into a utility that has placed itself in a position to be a "failure pioneer" with other people's money. If Empire's "Customer Savings Plan" does not materialize as planned, then Empire's retail customers (not insulated shareholders or tax equity partners) will experience the negative impact on their everyday quality of life. I believe such an outcome is likely for a variety of reasons, including (but not limited to) Empire's refusal to update its models with accurate data, and its failure to account for the diminishing marginal utility of excessive wind generation coming onto the SPP market. Table 4 includes the year-over-year accredited wind capacity in the SPP market.

Table 4: Year-over-year SPP wind capacity per SPP Generation Interconnection Que



In considering how abundant supply suppresses demand, remember that Empire's 600 MW of wind farms are not being built to meet the electricity needs of Empire's customers, but rather as a means for Empire (and, ultimately, APUC) to profit from sales in the SPP energy market. For Empire's retail customers, a successful outcome is dependent on those 2020 (and beyond)

SPP sales profits to be as large as possible. For shareholders, their profits increase exponentially the moment Empire's rate base is enlarged with the excess generation, which Empire does not need to provide safe and reliable service to its customers.

Q. Did APUC make any representations about stranded costs in conjunction with its response to Jacksonville regarding its interest in acquiring JEA?

A. Yes, in passing, Algonquin stated:

> Load balancing and operating safety, effective cyber-security, least cost energy supply security, dynamic billing/metering, being socially responsible and helping out low income/special need customers, providing backstop safety-net supply, **and dealing with stranded costs are some of these issues that need holistic answers/approaches that are fair and responsible.** The "big thinkers" outside of the industry often underestimate these challenges and their importance in being a utility that actually benefits it's [sic] community. [14] (Emphasis added).

I have seen no evidence that APUC/Liberty/Empire intends to deal with the self-imposed stranding of the Asbury Power Plant (fifteen-years before the end of its planned life) in a manner that is fair and responsible to its customers. Instead, it appears as though APUC/Liberty/Empire would like to continue to earn a return on and of that investment in this rate case, despite having announced it is retiring Asbury on March 1, 2020, two days before prefiled rebuttal testimony is due on March 3, 2020. Again, this action favors investors and penalizes Empire's captive customers.

Q. Did APUC make any other representations regarding its operations in Missouri in conjunction with its response to Jacksonville regarding its interest in acquiring JEA?

A. Yes. Algonquin referenced its merchant wind generation investment bet and the premature retirement of Asbury as follows:

> One example of rhetoric made action is the Respondents Midwest "greening the fleet" initiative. This was one of the first such projects in the country that was not a

[14] See Sch. GM-2.

> simple "demo" project using tax dollars or rate surcharges to subsidize cost-inefficient technology applications. **<u>It was the real substitution of a perfectly usable mid-life 600mW[sic] coal plant and replacing that with 400mW [sic] of renewable (wind) generation</u>**. While such a substitution may on the surface seem commonplace, to do so at a cost that resulted in a net savings to the customer was highly innovative. The full levelized cost of the power generated from the new wind turbine fleet was proven to be lower than the incremental variable operating costs of the mid-life coal fired generation plant.[15] (Emphasis added).

Q. Is APUC's characterization of its "greening the fleet" initiative at Empire accurate?

A. No. First, <u>there is no "substitution" here</u>. If Empire had offered to substitute its "return on and of" its 198 MW Asbury Coal Plant in exchange for "a return on and of" 600 MW of wind there *might* be an equitable substitution. However, Empire has given every indication it wants to continue to reap profits on its investment in Asbury, regardless of whether this "perfectly usable mid-life coal plant" is "used and useful."

Next, I am not sure what "demo projects" Algonquin is referring to "that utilized tax dollars or rate surcharges to subsidize cost inefficient technology applications." The Customer Savings Plan will utilize tax credits (in part) and the FAC surcharge. I do agree that Asbury is a perfectly usable mid-life coal plant; however, Asbury's SPP accredited capacity is about 198 MW, not 400mW. Moreover, the "Customer Savings Plan" is for 600 MW of wind across three different locations not 400mW as APUC stated.

I also take issue with the assertion that such a substitution of generating resources is commonplace (even "on the surface"). Nothing about using captive ratepayer funding for a merchant generation business as designed in the "Greening the Fleet / Customer Savings Plan" is commonplace. Moreover, to date, the costs of the wind projects are still unknown and uncertain. That uncertainty includes, but is not limited to: ***

[15] Ibid.

***

Finally, I take issue with Algonquin's characterization that the "full levelized cost of power" (LCOE) of the new merchant generation is lower than the continued costs of the "perfectly usable, mid-life, coal-fired generation plant."

The *cost* of the energy, does not necessarily say anything about the *value* of that same energy over the lifetime of a generating plant. Value depends not solely on the cost of generating the energy being sold in a market; it also depends on the price for which that energy can be sold in that market. When prices vary continuously over time in increments as small as five minutes, and by location, it is not appropriate to look solely at the LCOE as the north star of supply-side generation economic feasibility metrics—at least not in the merchant generation business where revenue margins are the only thing that matters. Most price value derives from generating electricity when demand for electricity is highest, *i.e.*, when people most need electricity. That is, primarily during hot summer days when wind output is low or nonexistent.

Q. What representations did APUC make regarding managing and controlling its activities with regard to rate shock?

A. In its response to Jacksonville regarding its interest in acquiring JEA Algonquin stated:

> **<u>Respondent is always cognisant [sic] of stakeholder sensitivity to utility rates and tariffs and particularly to the rate shock that may be occasioned by unique events.</u>** The Respondent manages such concerns across its 40 individual utility operations. **<u>A utility owner has many tools at its disposal for the responsible management of customer tariffs including the timing and lumpiness of capital expenditures, maintaining or enhancing operating cost efficiency, effective use of debt and equity, etc.</u>** Such situations are always easier when a utility owner is free to manage

> all the various elements impacting rates and to engage in long term advance planning.[16] (Emphasis added)

Q. Does APUC accurately characterize Empire's actions since APUC acquired it in 2017?

A. No, it does not accurately characterize my experience with Empire post acquisition. A utility that "is <u>always cognizant</u> of stakeholder sensitivity to utility rates" would not have to be ordered by its Commission to adjust its rates to reflect the federal corporate tax reductions from the Tax Cuts and Jobs Act of 2017. No "a utility owner that is free to manage the various elements impacting its rates" for the benefit of its retail customers would not delay the rate reduction savings of that Act out over two separate contested cases and 240 days after the Act was enacted. It would be sure to flow those savings back to its customers immediately. Instead, Empire has, rather successfully, delayed flowing the benefits of the Tax Cuts and Jobs Act of 2017 to its Missouri customers, the lion's share of its electric customer base. APUC controlled Empire was the only utility in Missouri to fight to keep those customer savings.

I also take issue with APUC's representations that it always displays responsible management by minimizing the timing of the lumpiness of capital expenditures. The entirety of the eleven-month ordeal (10-5-2017 to 8-22-2018) of Case No: EO-2018-0092 (*In the Matter of the Application of the Empire District Electric Company for Approval of Its Customer Savings Plan*) was needlessly unnecessary and, in my opinion, imprudent.

Q. What do you mean?

A. As Commissioner Hall stated during the evidentiary hearing in Case No. EO-2018-0092 (where Empire sought Commission pre-approval of a plan to retire Asbury and build 800 MW of new wind generation):

> <u>Commissioner Hall:</u> And that actually segues right into my next question. Why isn't this a CCN proceeding? Why wouldn't that have been the most simple way to address

[16] Ibid.

NON-PROPRIETARY
GM-4P

> this, just file for a CCN, and then we could have made a decisional prudence decision and you guys could be off and running? Why—this seems unduly complicated.[17]

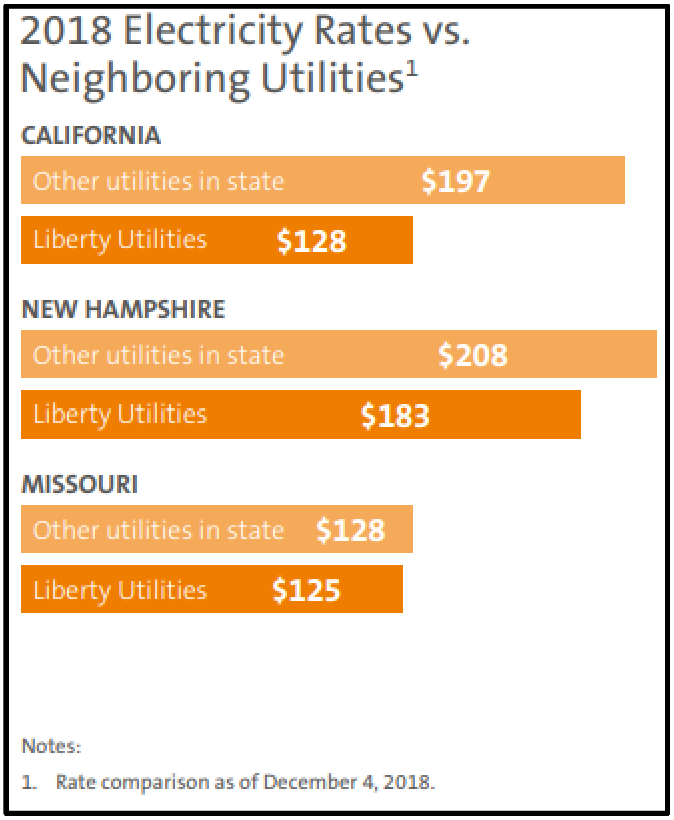
Commissioner Hall was correct. APUC/Liberty/Empire through Empire's management have made Empire's merchant generation investments unduly complicated by mismanaging Empire's capital investment timing. Empire should have filed for a CCN in October of 2017. Instead, it wasted a year securing "regulatory guidance"—the same guidance it could have obtained by seeking a certificate of convenience and necessity for its planned wind projects. As a result, all parties had to go through essentially the same exercise a second time in 2018. The net effect was not just an additional year of regulatory resources and opportunity costs expended in a second-round of Customer Savings Plan analysis, but one less year of certainty surrounding Commission approval of an investment—wind projects—with cost-dependent strings tied to an operational completion date before 2021—the last date for maximum production tax credits. Ratepayers will no doubt be asked to foot the bill for Empire's rate case expenses in consecutive general rate cases because of Empire's inability to properly manage the timing of its capital investments with the timing to continue its Fuel Adjustment Clause. Worst, the next rate case is set up to be the textbook definition of a "lumpy capital expenditure recovery," as it undoubtedly will include investments in 600 MW of wind, AMI, and solar generation, as well as Empire's attempt to recover through retail rates its stranded investment in Asbury (unless the Commission resolves that issue in this case), and, further, no doubt other costs of which I am presently unaware.

Q. Has APUC/Liberty/Empire made any representations about Empire's electric rates?

A. Not recently that I found, and not directly in the JEA response. The most recent public representation APUC has made about its Missouri electric utility rates is in its 2019 *Sustainability Report*. On page 27 of that report, under "Modernized and Affordable Energy" is a set of bar graphs that compare the 2018 electricity rates of regulated Liberty utilities with their neighboring utilities. Those bar graphs are reprinted in Figure 2 below.

[17] EO-2018-0092, Transcript-Volume 3 (Evidentiary Hearing 5-9-18) p. 61.

Figure 2: 2018 Liberty Electricity Rates vs. Neighboring Utilities as seen in Algonquin's 2019 Sustainability Report



Q. Is this rate comparison an accurate comparison of the cost of Empire's electric service in Missouri to those of other Missouri utilities?

A. No. Compared to its Missouri peers, Empire residential customers pay, on average, approximately $500 more annually and $40 more monthly than residential customers of Evergy Metro, Evergy West, or Ameren Missouri. This is because Empire's customers pay more for their service *and* use a lot more energy on average than the other Missouri utilities' electric customers.[18] I cross-referenced Empire's costs above with S&P Global Market Intelligence rankings of 2018 average price to residential customers in cents per kWh. Tables 5, 6, and 7 provide a breakdown of the 2018 average cents per kWh price, sales and revenue

[18] Empire's most recent appliance market saturation study (2015) estimates that approximately half of its electric customers utilize electric space heating for their homes.

percentage, and annual and monthly bill averages for each of the Missouri investor owned-utilities across customer type:

Table 5: Rankings of 2018 average price to commercial customers in Missouri per S&P Global Market Intelligence

	Price	**Sales %**	**Revenue %**
Empire	11.85	37	36
Evergy Metro	10.66	52	49
Evergy West	8.94	40	37
Ameren MO	8.66	44	41

Table 6: Rankings of 2018 average price to industrial customers in Missouri per S&P Global Market Intelligence

	Price	**Sales %**	**Revenue %**
Empire	8.77	22	16
Evergy Metro	7.96	17	12
Evergy West	6.72	15	11
Ameren MO	6.92	13	10

Table 7: Rankings of 2018 average price to residential customers in Missouri per S&P Global Market Intelligence

	Price	**Sales %**	**Revenue %**	**Annual Bill**	**Monthly Bill**
Empire	14.07	41	48	$1,936	$161.33
Evergy Metro	13.64	32	39	$1,459	$121.58
Evergy West	11.16	45	52	$1,464	$122.00
Ameren MO	10.89	42	49	$1,471	$122.58

For each of these three types of customers, Empire's cost of service is greater than that of its Missouri peers. S&P included an additional average annual bill amount for residential customers, which I further broke out into monthly bills. To provide further context, consider that out of the 161 utilities ranked in the 2018 S&P report only three utilities' residential customers pay a larger annual average bill than Empire's residential customers do. Table 8 provides that breakdown below.

Table 8: S&P Global Market Intelligence 2018 four largest average annual electric residential bills

US Rank	Utility	Largest Average Residential Annual Bill
1	Maui Electric	$2,141
2	Hawaii Electric Light	$2,096
3	Nantucket Electric Co.	$2,077
4	**Empire District Electric**	**$1,936**

According to S&P Global Market Intelligence, Empire's Missouri residential customers pay the fourth highest average annual bill in the continental United States. This remarkable distinction was not included in APUC's response to the City of Jacksonville solicitations to acquire all or part of JEA.

To be clear, those three utilities operate entirely on islands. In the ocean. Empire operates in southwest Missouri.

Q. How different are those four utilities' residential customers in terms of household incomes?

A. Very different.

Table 9 provides a breakdown of relevant county-level economic data in each of the counties where each of these four utilities operate. Please note that Maui Electric, Hawaii Electric Light and Nantucket Electric Company only operate in one county because they are located on islands. I have also included both Missouri-wide and US-wide average data for further reference.

Table 9: Select 2018 American Community Survey Economic Data of relevant service territory[19]

Area	Mean Household Income	Median Household Income	Below Poverty Rate % Below $24,600 family of four Missouri or $28,870 Hawaii	Child Poverty Rate % Under 18
Islands				
Maui (Maui Electric)	$99.3	$77.1	9.7	11.7%
Honolulu (Hawaii Electric Light)	$105.0	$82.9	8.7%	10.7%
Nantucket[20] (Nantucket Electric Co.)	$137.8	$105.2	X	X
Empire MO Counties				
Barry	$56.6	$41.5	21.0%	32.6%
Barton	$62.4	$41.6	21.6%	29.5%
Cedar	$53.4	$39.4	18.5%	24.4%
Christian	$70.8	$57.0	10.2%	13.1%
Dade	$51.7	$40.0	22.5%	36.3%
Dallas	$58.0	$41.6	15.0%	18.3%
Greene	$61.8	$44.8	17.9%	20.5%
Hickory	$44.6	$36.2	17.4%	20.2%
Jasper	$61.4	$47.0	17.4%	25.2%
Lawrence	$57.1	$43.4	16.9%	28.4%
McDonald	$54.7	$42.0	19.5%	28.5%
Newton	$69.0	$49.0	13.9%	18.2%
Polk	$59.5	$44.9	14.5%	16.3%
St. Clair	$51.6	$38.5	17.6%	25.4%
Stone	$62.8	$46.4	12.6%	18.9%
Taney	$53.1	$41.5	17.2%	24.6%
Other				
US	$84.9	$60.3	14.1%	19.5%
Missouri	$73.1	$53.6	14.2%	19.5%

[19] Missouri Census Data Center (2020) ACS Profiles (5-year period). https://census.missouri.edu/applinks/links.php?g=05000US25019.
[20] The Island of Nantucket poverty information was omitted because it includes a greater than 35% relative margin of error.

Q. What observations should the Commission note from your Table 9 data?

A. Households on these select islands earn approximately twice as much as households in Empire's service territory. These island communities also have significantly lower poverty rates than those in Empire's southwest Missouri service territory.

It is also important to note that Empire's customers have lower overall mean and median household incomes, and higher poverty rates relative to the United States and Missouri averages.[21]

Although insufficient time prevented me from performing the analysis, based on the aforementioned data, it would not be out of the realm of reasonableness to surmise that the Empire's southwest Missouri residential customers have one of, or possible the largest, energy burden of residential customers in the United States.

Q. Did the City of Jacksonville select Algonquin as one of its final candidates to explore further regarding the sale of part or all of JEA?

A. No. Algonquin was one of seven respondents whose responses were rejected. The City is still considering nine other competitive bids, and will presumably move onto the next level of negotiation for the sale of all or parts of JEA.

Jacksonville Electric Authority Summary

Q. What are the main points the Commission should note from this section of your testimony?

A. A non-exhaustive list of concerns raised by representations APUC made in its response to the City of Jacksonville's solicitation of interest in acquiring all or part of JEA are included in Table 10.

---

[21] Christian County median household income being the sole exception when compared to the Missouri average.

Table 10: Summary of Section II: Jacksonville Electric Authority

APUC/JEA	OPC observations of APUC/Liberty/Empire
JEA bid to include (a minimum of) $400 million in immediate customer benefits	Empire bid included no customer benefits—status quo.
Utility operations consistently rank in the top quartile of its peer group in third party assessments—J.D. Power	J.D. Power scores in the *bottom quartile of customer metrics (#116 out of 138 utilities). Lowest in Missouri. *
Measures and benchmarks its customer interaction performance with all the industry best practices protocols and procedures	True and the metrics have declined.
Don't make bets with other people's money	Made a bet with other people's money (shift risk) and will increase rate base by 40% (gain reward)
Cannot be failure pioneers	Placed customers at risk of being a failure pioneer by betting that excess wind generation will generate sustainable revenues to offset costs of an investment not needed
Stranded costs should be dealt with fair and responsibly	Created stranded costs where none existed, and wants to keep the profits regardless of the plant no longer being "used and useful."
"Greening of Midwest" was a "real substitution of a perfectly usable mid-life 600mW[sic] coal plant and replacing that with 400 mW [sic] renewable (wind) generation"	Put ratepayers in the position to have to back a merchant generation investment of 600 MW of wind at unknown costs, which then created a stranded asset of its newly retrofitted 198 MW coal plant that it wants to continue to earn profits on.
Cognizant of stakeholder sensitivity to utility rates and tariffs	Only electric utility to refuse to flow Tax Cuts and Jobs Act of 2017 tax savings back to customers
Cognizant of stakeholder sensitivity to rate shock	See next rate case (immediately after this one): with wind merchant generation investments, AMI, solar, Asbury and other…
Responsible management in inducing the timing and lumpiness of capital expenditures	Inappropriate filings and mismanagement of the timing of capital investments with its FAC
Missouri electric rates lower than other utilities in the state (2019 Sustainability Report)	Highest IOU rates in the State of Missouri and the fourth largest average annual residential bill in the United States (S&P Global)

III. ASBURY POWER PLANT

Stranded Assets[22]

Q. What is a stranded asset?

A. A "stranded asset" is a term that has different meanings depending on the context. Assets become stranded if their expected cash flow is less than their remaining book value—in other words, if the asset is expected to generate less revenues than it will cost from a point in time until the end of its useful life. Regulation-based stranded assets differ from market-based stranded assets. The latter simply compares the book value of an asset relative to some future market value of the asset. For example, if an oil reserve has $1 billion book value but sliding demand due to carbon taxes or other environmental regulations reduces its market value to $400 million, the result is $600 million in stranded assets. By contrast, regulation-based assets are assets that are subject to cost-of-service or other rate-of-return regulation. Government regulators have explicitly approved this type of asset to earn a return over a defined period at some point in the past if the asset is deemed "used" and "useful."[23] A regulated supply-side asset is meant to provide service throughout its life to the captive customers who are paying for its use. That is, absent government-sanctioned intervention or a categorical loss in load (*i.e.*, "a death spiral"), a regulated asset should not become stranded.

[22] Economist Robert Michaels made a compelling argument in a 1994 essay that, in "220 years of speculating on the nature of competition since Adam Smith, economists got along fine without ever developing such a concept as "stranded costs." The idea is a new invention. No other business has had such a "right" in its arsenal to shield itself from the effects of dynamic competition. See, Michaels, R. (1994), "Unused and Useless: The Strange Economics of Stranded Investment," *The Electricity Journal*, October, pp. 12-22.

[23] To ensure affordability and full utilization of the asset, the cost recovery generally is amortized throughout its expected "useful life." The asset costs are allocated to all customers on a pro-rata basis, and are generally recovered on a volumetric basis. As the number of customers change, the volumetric charge is adjusted so that the utility only recovers the value of the asset (including associated potential profit).

Q. What is an example of a government-sanctioned intervention that could cause a regulated asset to become stranded?

A. Deregulation is the most obvious recent historical example. At the turn of the century, many states passed laws to deregulate their vertically integrated electric utilities and create a competitive generation market. In theory, under deregulation, electricity prices would more closely align with economic, not accounting, costs. In vertically-integrated regulated states (like Missouri) electricity prices are based on utilities' actual expenditures, and utilities have little reason to control costs, because cost reductions ultimately are passed on to consumers. Additionally, regulators allow utilities to earn a specified rate of return on capital expenditures to "incentivize" investment in capital-intensive facilities. That is, utilities have a perverse incentive to increase a rate base. In contrast, in a competitive market, asset owners reap more benefits for lower costs and, thus, are incentivized to minimize their costs, as cost-recovery is not guaranteed. [24]

Another historical example of a stranded asset is the significant cost overruns associated with mismanaged nuclear power plants that never became "used" or "useful." Whether or not these stranded investment costs were recovered from captive ratepayers varied depending on the circumstances and the government regulator. Some utilities had to write off their uneconomic assets, while others did not.

A final example scenario where an asset may be a stranded investment is where there is an aggressive government-sanctioned compliance policy that makes the asset uneconomic. Examples of such policies are renewable portfolio standards ("RPS"), carbon pricing schemes (see Regional Greenhouse Gas Initiative "RGG" states), and carbon-emission reduction standards (see California and its historical natural gas distribution investment or the now defunct U.S. Clean Power Plan "CPP").

[24] Deregulation or "industry restructuring" is different from the wholesale markets, which each of our electric utilities in Missouri participate in. In a wholesale market, utilities buy and sell power among themselves or from independent merchant generators at prices that reflect conditions of supply and demand.

Q. Have Missouri electric utilities been subject to any of those events beyond a utility's control that could induce stranded investment?

A. No. Missouri did not deregulate its generation assets from its regulated utilities. It is a vertically integrated state (distribution, transmission, and generation are owned by the same entity).

Moreover, Section 393.135, RSMo, is in place. It prevents the cost recovery of investment in any existing or new facility of an electric corporation before it is fully operational and used for service. This voter-driven initiative was spurred, in part, from the large capital overruns of nuclear power plants across the United States in the 1970s, including Union Electric Company's Callaway nuclear plant.

Missouri does have a RPS, but a 1% retail rate impact cap tempers any excessive costs associated with this mandate, and that standard has not induced any stranded asset.

Finally, Missouri electric utilities do not experience any carbon pricing penalty and are not subject to any enforceable state-level emission reduction targets.

There are no events beyond its management's control that could be said to have induced Empire to strand its investment in the Asbury Power Plant.

Q. Then why is Asbury a stranded asset?

A. Current Empire management has chosen to retire Asbury fifteen years before the end of its useful life due to actions it has elected to take. There remains a significant remaining book value that Empire has not yet recovered for its environmental capital investments in Asbury that it made less than five years ago. Empire's management has chosen to retire Asbury on March 1, 2020, two days before prefiled rebuttal testimony is due in this case on March 3, 2020.

Q. Are the impacts of retiring Asbury live issues in this rate case?

A. It is my opinion that they are. If they are not addressed now, Empire's investment in Asbury will be included in its rate base, and Empire's Operations & Maintenance expense, and other costs and revenues associated with Asbury, will used for setting Empire's retail rates in this case and generate a profit for Empire despite Asbury not generating any power, *i.e.*, providing any benefit to Empire's customers. This will necessarily also impact Empire's Fuel Adjustment Clause ("FAC"), a topic which OPC witness Lena Mantle discusses in her direct testimony.

Q. Has the OPC filed comments with the Commission since Empire formally announced the premature retirement of Asbury?

A. No. This would be the OPC's first opportunity. That Empire was contemplating prematurely retiring Asbury was raised first by Empire witnesses in Case No. EO-2018-0047 as part of Empire's "Customer Savings Plan" where Empire sought regulatory guidance for building up to 800 MW of wind generation and retiring Asbury; however, the non-unanimous stipulation and agreement all parties except the City of Joplin and the OPC executed included Empire's agreement to defer deciding when it would retire Asbury.

The issue of Asbury's premature retirement was not part of any prefiled testimony in Case No. EA-2019-0010; howeverall parties, except OPC,[25] entered into a last-minute non-unanimous stipulation and agreement in that case which did include three separate provisions related to Asbury being retired.[26,27] However, the Commission ruled in its Report and Order that:

> In this case, the sale or retirement of Asbury is not certain. In fact, from the evidence presented, it is not known whether the removal of Asbury from Empire's generation fleet, if it occurs, will be accomplished through a sale or a closure. Thus, the effect on rates from the undepreciated plant value, the capital costs, depreciation expense, property taxes, operations and maintenance expense, fuel costs, SPP revenues and any deferred income tax effects are completely unknown. Further, there has not been

[25] The City of Joplin was not an intervening party in that case.
[26] Filed Friday, April 5th before the evidentiary hearing on Monday, April 8th.
[27] The regulatory asset contemplated in that non-unanimous stipulation and agreement included an undepreciated balance of the Asbury facility estimated at approximately $200 million.

> sufficient evidence provided to show that this sale or retirement would be "extraordinary" under the definition as set out in the USOA. Further, because these events have not yet occurred, when they do occur, the signatories could present this to the Commission as a formal request for an accounting authority order where the facts can be reviewed with more certainty, less speculation, and under the appropriate burden of proof.
>
> Empire and the other signatories to the *Non-Unanimous Stipulation and Agreement* have not shown that conditions related to possible Asbury closure or sale are reasonable or necessary. The Commission finds it would be premature to set out any conditions related to the possible sale or closure of Asbury. Additionally, the parties have not proven that this possible sale or closure will produce an extraordinary circumstance such that the Commission should take the unusual step of conditioning the grant of a certificate of convenience and necessity on this particular accounting treatment. The Commission will not impose the conditions set out in Paragraph 17 of the *Non-Unanimous Stipulation and Agreement*.[28]

Empire was required to file its new triennial IRP before the Commission took evidence in its main evidentiary hearing in Empire's Wind CCN case; however, Empire asked for and received an extension to file that IRP until the end of June, after the Commission decided Empire's Wind CCN case. On June 28th, 2019 Empire filed its triennial IRP which included the retirement of Asbury as part of its preferred modeled plan. However, no party has filed comments in that docket to date, as the Commission Staff has requested and received an indefinite extension of time to file the deficiencies and concerns it has found with Empire's IRP. Presently, Staff has committed to filing its deficiencies and concerns no later than February 28, 2020.

This rate case represents the first, and presumably, the last opportunity for the OPC to raise its concerns and preserve its record before and immediately after Empire retires Asbury.

[28] EA-2019-0010 Report and Order p. 48.

Pre-Acquisition Treatment of Asbury

Q. When was Asbury commissioned?

A. The Asbury Power Plant Unit 1 was originally commissioned in 1970 with an accredited capacity of 213 MW.

Q. What did Empire do in 2015 to extend its useful life?

A. To comply with federal air quality regulations in order to continue to run Asbury beyond 2015, in 2015 Empire installed a state-of-the-art Air Quality Control System ("AQCS") to remove sulfur dioxide, particulate, mercury, and other pollutants. Asbury was also retrofitted with a Selective Catalytic Reduction ("SCR") located upstream of the AQCS and a Distributed Control System ("DCS"). The facility *also* switched to Powder River Basin ("PBR") coal at a ratio of approximately 90% with approximately 10% local (Illinois) coal.[29] Asbury was also able to bend up to approximately 2% rubber tire derived fuel ("TDF") but let its contract expire in March of 2018. These collective upgrades extended the useful life of the plant more than twenty years and made the coal unit one of the cleanest in Missouri.

Q. Was that decision prudent?

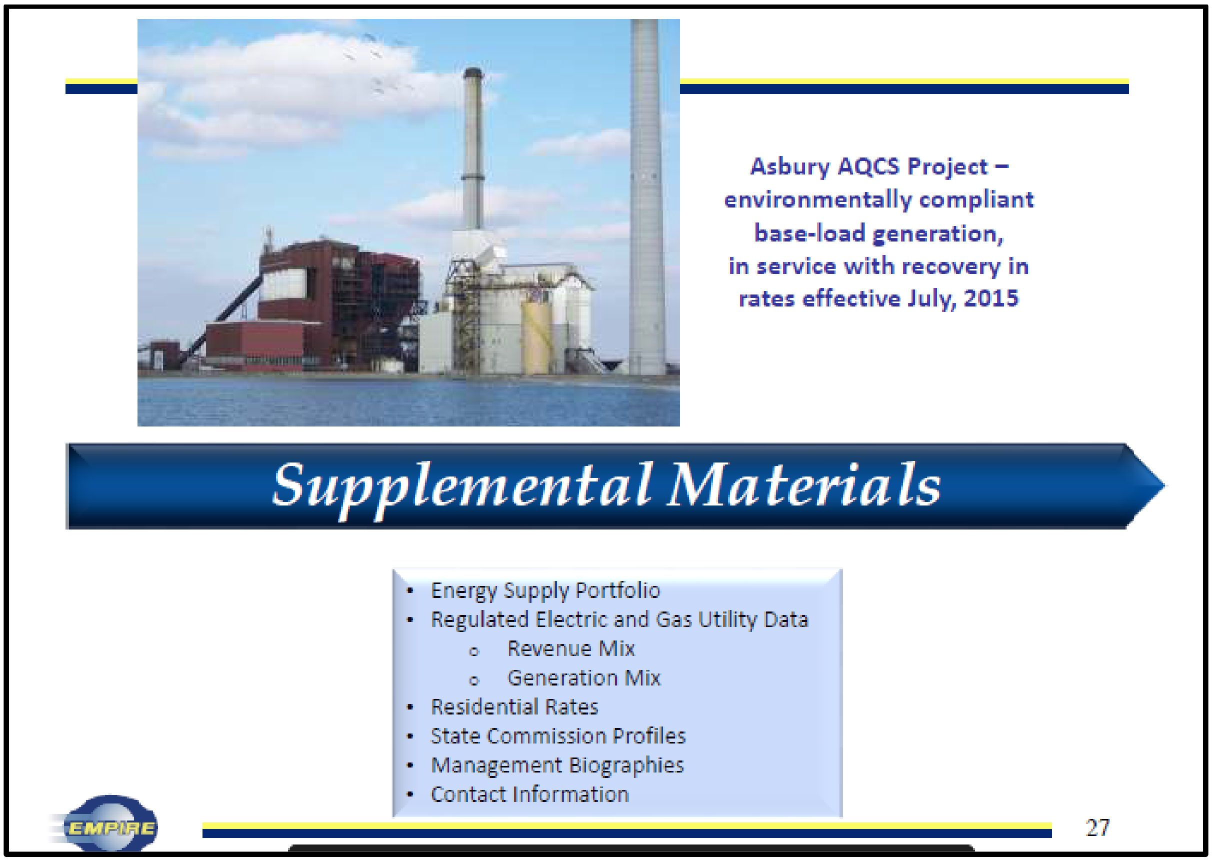
A. I believe so. No party challenged the cost recovery of these investments when they went into rates in Empire's last rate case, Case No. ER-2016-0023. Figure 3 includes a snippet from The Empire District Electric Company 2015 Annual Investor Update on February 26, 2016 highlighting the environmental compliance modification and recovery in rates.

---

[29] For reference, Ameren Missouri's Labadie and Rush Island Power Plants did not elect to invest in scrubbers but instead relied on PBR coal to meet environmental compliance standards.

<u>Figure 2: 2016 Empire Investor highlight Asbury AQCS Project</u>

[30]



Q. Did Empire's 2015 investments in Asbury cause its customers' rates to increase?

A. Yes. Ratepayers experienced a compounded increase in rates of <u>62.23% over a ten-year period</u> because of Empire's 2015 investment in Asbury, and the additional supply-side investments at Riverton, Plum Point, Iatan, Elk River and Meridan Way.

[30] The Empire District Electric Company: Annual 2015 Investor Update (2016). http://www.snl.com/Cache/1500083524.PDF?Y=&O=PDF&D=&fid=1500083524&T=&iid=3005475.

Table 11: Empire rate case history 2007-2016

Case Number	Dollar Value	Percent Increase
ER-2006-0315	$29,300,000	9.96%
ER-2008-0093	$22,040,395	6.70%
ER-2010-0130	$46,800,000	13.90%
ER-2011-0004	$18,685,000	4.70%
ER-2012-0345	$27,500,000	6.85%
ER-2014-0351	$17,125,000	3.88%
ER-2016-0023	$20,400,000	4.46%
Total Dollars	$181,850,395	
Total Compounded Increase		62.23%

Q. Have Empire's circumstances changed significantly following its last general electric rate case before this Commission?

A. Yes, APUC acquired Empire. Parties entered into a stipulation and agreement to resolve Empire's pending general electric rate case, Case No: ER-2016-0023, on June 20, 2016. The Commission approved Empire's compliance tariffs in that case on September 6, 2016. One day later, the Commission approved the stipulations and agreements various parties entered into in Case No: EM-2016-0213 and authorized APUC's acquisition of Empire through a merger of an APUC subsidiary with Empire. That is, Empire's ownership changed hands.

Empire Acquisition

Q. Were you involved in both Empire's last rate case and its acquisition case?

A. Yes.

Q. Did you object to APUC's acquisition of Empire?

A. Yes, initially. I initially recommended that the Commission reject APUC's acquisition of Empire. My rebuttal testimony opened with the following statements:

> As it stands, Empire ratepayers and regulators operate under the assurance of a known, stable local utility with over one-hundred years of operating experience. Approval of this acquisition would represent an increase in orders of magnitude at the level of organizational and affiliate complexity as well as a heightened risk of diluted managerial and fiduciary responsibility. There are no proposed standards from which to judge success, no cost-savings benchmarks to strive towards, and no proposed ring fence provisions to ensure captive ratepayers will not be exposed to increased harm. Instead, there are only aspirational, vague and often redundant claims of benefits generalized across four testimonies.[31]

Q. Did you file comments explicitly stating that Empire had no need for additional capacity post-acquisition due to the significant supply-side investments already made?

A. Yes. In my surrebuttal testimony I stated:

> For example, approval of the merger would not change the fact Empire has just added an additional 100MW in capacity in its Riverton 12 combined cycle unit. Moreover, according to Empire's recently filed triennial IRP, there will be no need for a MEEIA[32] and **<u>no need for future capacity until 2029</u>** as reprinted here in Figure 2:

[31] EM-2016-0213 Rebuttal Testimony of Geoff Marke p. 3, 12-20.
[32] EO-2016-0223. The Empire District Electric Company Triennial Compliance Filing. Volume 7 Resource Acquisition Strategy Selection 7-8: "Empire's decision makers have selected Plan 5 as the Preferred Plan. Plan 5 contains no Missouri DSM portfolio and supply-side resources are not added until the latter part of the study period."

Figure 2: Empire's Twenty-year Plan 5 (Preferred IRP Plan)[33]

Year	Common to All IRP Plans (Applies to Preferred Plan)	Plan 5 (Preferred Plan)
2016	By Mid-2016, Riverton 12 begins combined cycle operation (100 MW addition to the Empire system)	
2017		
2018		
2019		
2020		
2021		
2022		
2023	Energy Center Unit 1 assumed to retire for IRP purposes (82 MW loss)	
2024		
2025		
2026	Energy Center Unit 2 assumed to retire for IRP purposes (82 MW loss)	
2027		
2028	Meridian Way 105 MW Wind PPA expires (19 MW loss)	
2029		100 MW Combined Cycle, 100 MW Wind Resource
2030	Elk River 150 Wind PPA expires after 5-year extension (17 MW loss)	
2031		150 MW Wind Resource
2032		
2033	Riverton Units 10 and 11 assumed to retire for IRP purposes (33 MW loss)	
2034		
2035	Asbury Unit 1 assumed to retire for IRP purposes (194 MW loss)	200 MW Combined Cycle

Even if Empire needed to build additional capacity (which they do not), there is no guarantee that renewable capacity would be the preferred generation, the prudent choice, or the least cost option. **<u>It is OPC's position ratepayers should not have to pay for any additional capacity in the near future</u>**. This is especially true considering ratepayers have experienced a compounded increase in rates of 62.23% over the past ten years.[34] (Emphasis not in original cited testimony).

[33] EO-2016-0223. The Empire District Electric Company Triennial Compliance Filing. Volume 7 Resource Acquisition Strategy Selection 7-9.
[34] Case No. EM-2016-0213 Surrebuttal Testimony of Geoff Marke.

Q. Did other OPC witnesses express concerns?

A. Yes. OPC's consultants stated a variety of concerns including, but not limited to, the timing of capital investments, uncertainty-surrounding costs associated with a new Customer Information System ("CIS"), and diluted local managerial control. Liberty President, David Pasieka's surrebuttal testimony offered the following general observations regarding the OPC's rebuttal testimonies:

> A conceptual theme that runs throughout the testimony filed by the OPC witnesses is OPC's belief that Empire will be more risky within Algonquin's corporate structure because it will no longer be a pure-play, vertically integrated electric utility, but rather will become an operating subsidiary within Algonquin's corporate structure.[35]

Q. Did OPC sign into a stipulation and agreement with the recommendation that the Commission approve the transaction?

A. Yes.

Q. If OPC stipulated, then are not the raised concerns obviated?

A. I thought there were reasonable ring-fence provisions and appropriate regulatory oversight in place to mitigate my fears. I now believe I was wrong.

Q. Is there any circumstances of which the Commission should be aware during that timeframe?

A. Yes. Context is important. At the time, it seemed highly likely that US Environmental Protection Agency's ("EPA") Clean Power Plan would be enforced, and greater federal oversight on carbon emissions would occur. To be clear, Empire (that is, pre-acquisition Empire) was the utility best in position, in Missouri, to meet any new federal emissions standards because of its diverse fuel mix and significant environmental capital investments.

[35] Case No. EM-2016-0213 Surrebuttal Testimony of David Pasieka p. 6, 17-21.

Q. Did the State of Missouri oppose the Clean Power Plan?

A. Yes. Missouri and 20 others states sued the EPA for exceeding its authority in the Clean Power Plan.[36]

Q. Did the Missouri Public Service Commission file comments with the EPA expressing concerns with the Clean Power Plan?

A. Yes. The Missouri Public Service Commission filed comments on December 1, 2014, that included the following comments on stranded assets:

> To meet the EPA interim goal, Missouri would need to develop a state compliance plan taking into account the time needed to finance, permit, construct or commission new generation. The MoPSC notes that the interim goal does not adequately take into account potential delays in timing due to right-of-way obtainment or construction of new pipelines, transmission or generation facilities, which may be needed to achieve the interim goal. Additionally, **accelerated construction to meet aggressive goals may ultimately result in unintended stranded resources**. . . .

And

> The EPA notes that timing flexibility, such as that provided with the interim goals, allows states to develop plans that will help states achieve a number of goals including addressing concerns about stranded assets. Yet, in order to effectively meet a state's goals under the proposed timeline, it will be necessary to re-dispatch affected sources or add new generating capacity. **Accelerated construction to meet aggressive goals may ultimately result in unintended stranded resources**.[37] (Emphases added).

Q. Was it clear then how Missouri would comply with the Clean Power Plan?

A. No. There was a lot of uncertainty on the compliance end, but much less discussion on what would happen if the Clean Power Plan did not materialize. I did not believe that a utility would

---

[36] Herndon-Dunn, R. (2016) Clean Power Plan stayed by SCOTUS. *The Missouri Times.* https://themissouritimes.com/26920/clean-power-plan-stayed-by-scotus/.

[37] Kenny, R. et. al (2014) Re: Missouri Public Service Commission's Comments on the Clean Power Plan Proposed Rule under Section 111(d) of the Clean Air Act, Docket ID:EPA-HQ-OAR-2013-0602. https://www.ieca-us.com/wp-content/uploads/MO-Public-Service-Commission_12.01.14.pdf; see also Sch. GM-3.

voluntarily accelerate construction of assets (not needed to meet load) to strand existing serviceable assets in place. I certainly did not believe that a utility would continue to seek recovery of its investment in and an earnings profit off of that self-imposed stranded asset.

Project Red Balloon[38] ***

Q.

A.

Q.

A.

Q.

A.

[38] See Sch. GM-4.
[39] Ibid.

Q.

A.

[40] Ibid.

Q.

A.

Q.

A.

NON-PROPRIETARY

GM-4P

Q.

A.

Q.

A.

Q.

A.

Q.

A.

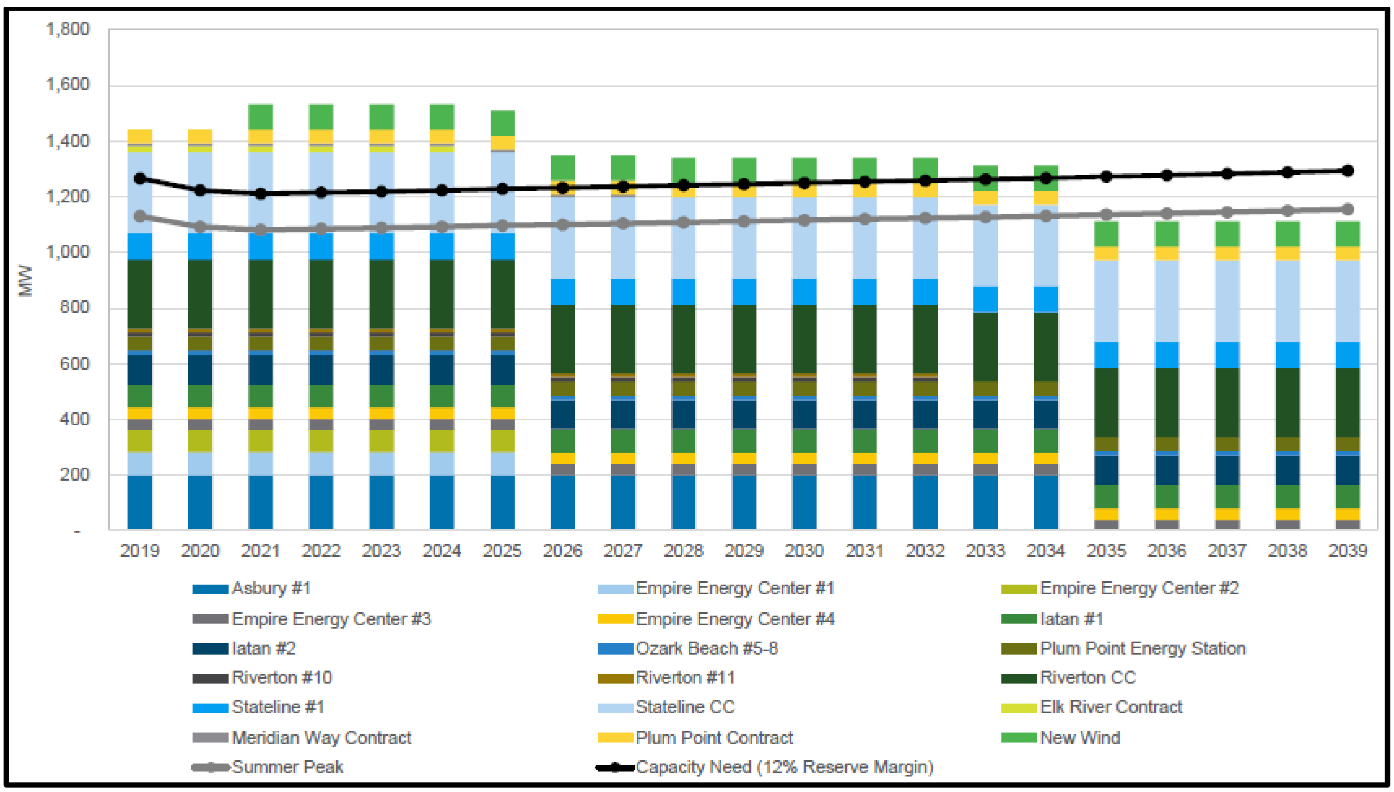
***

Retiring Asbury

Q. What does Empire's supply-demand balance look like today?

A. Today, Empire is long on capacity and will be much longer with the wind investment. Ratepayers have over-invested in supply-side generation as seen from Empire's most recently filed IRP in Figure 3.

Figure 3: 2019 IRP, Existing Empire Supply-Demand Balance[41]



[41] EO-2019-0049: The Empire District Electric Company—A Liberty Utilities Company volume 4: Supply-Side Resource Analysis p. 4-20.

Q. Is this a concern?

A. Yes. Remember, the pending wind investments are dependent on off-system sales revenues. If supply outstrips demand then those wind investments will have more difficulty covering their costs and ratepayer financial exposure will increase

Q. Do the pending wind investments make Asbury uneconomical?

A. I would say yes, with a qualification.

Q. What do you mean?

A. In Figure 3 above, Asbury is listed at the bottom with a 2034 retirement date. Assuming a SPP 12% reserve margin stays in place, Empire would have no need to make additional supply-side investment until then. The problem in Figure 3 is how to manage the years out until 2032, and especially out to the year 2026. During that timeframe, Empire will effectively have "too much" generation. The additional wind investment makes Empire's portfolio uneconomic. Asbury has been chosen as the sacrificial unit because it is the only coal unit that the Company owns outright.

Having too much supply is not a good thing if demand is stagnant or your customers are leaving. It is a financially questionable thing if in spite of that information you build more supply. Empire's management is banking on generating excessive revenues from its pending wind investment. To put those wind investments in the best position to succeed, there needs to be a demand for the energy. Removing Asbury makes the wind more economical and in a better position to generate more revenues, but it creates a stranded asset in Asbury because of Asbury's unpaid balance. In short, Asbury becomes uneconomical *because* of Empire's wind investments.

To be clear, no one compelled post-acquisition Empire management to invest in the 600 MW of wind that is cancelling out Asbury.

Q. Could Empire sell Asbury?

A. It could. That would certainly offset the financial penalty. Two problems quickly emerge. First, Asbury would then be an asset that would be directly competing with the wind investments. Second, the wind farm that is set to be placed at Asbury will incur additional investment costs for SPP interconnection. Presently, those SPP interconnection investments should be small or nonexistent because the infrastructure is already largely in place at Asbury. Keeping Asbury operational would mean additional costs for that wind farm, and might even delay SPP interconnection approval.

Q. Could Empire operate Asbury seasonably during months of high demand; thus mitigating market exposure to its customers?

A. It could. That is exactly the plan Xcel Energy has proposed in Minnesota.[42] However, Empire's SPP wind project interconnection challenge would remain.

Q. Could Empire mothball Asbury and wait to see if another solution presents itself in the future?

A. Yes. In that scenario, I would recommend that shareholders, not ratepayers, bear the financial responsibility of that unit not running. If the market, policy, or technology changes that would necessitate Asbury running again, then ratepayers would resume that cost burden. That is, in the mothball scenario, the principles of "used" and "useful" would continue to apply.

Q. Could there be other options?

A. I am sure there probably are. However, based on my discovery with the Company, Empire management has not even explored any of the options I identified above.

IV. PLANNED INVESTMENT

AMI and CIS investments

Q. Do you have any concerns with Empire's future deployment of AMI and CIS?

A. Yes. My concerns are three-fold. First, I am concerned about the timing of the deployment in relation to Empire's next general electric rate case. Namely, that Empire will seek recovery of their AMI investment along with their wind (and other) investments creating a "lumpy" scenario that can create a rate shock and exacerbate customer rates more than they already are.

---

[42] Morehouse, C. (2020) Xcel Minnesota: Running coal seasonally will save customers millions, reduce emissions. *Utilitydive*. https://www.utilitydive.com/news/xcel-minnesota-running-coal-seasonally-will-save-customers-millions-reduc/569971/.

Second, I have seen no indication that a new CIS software investment is planned in conjunction with the AMI hardware investment. The hardware will have limited benefits without the software.

Finally, I am equally (or more) concerned that Empire will seek recovery of these staggered investments without providing the necessary level of or any customer benefits.

Q. What do you mean?

A. As highlighted in a recent white paper from the American Council for an Energy-Efficient Economy ("ACEEE") titled "Leveraging Advanced Metering Infrastructure To Save Energy" the value-statement for AMI is questionable at best because utilities do not choose to maximize the benefits available from AMI.[43] In 2019, regulators in Virginia rejected Dominion Energy's proposed smart meter rollout, and utility commissions in New Mexico, Massachusetts and Kentucky all rejected utility proposals.[44]

Q. Have similar circumstances occurred in Missouri?

A. Yes. Every Metro and Every Missouri West ratepayers are currently paying a return on and return of extremely expensive AMI hardware and related CIS software without equivalent benefits. That is, Evergy has the ability to provide TOU rates, but no customers are utilizing it (outside of a handful of pilot participants).

Q. What do you recommend?

A. Empire should conduct an objective cost benefit analysis and/or build a business case proposal to justify that AMI deployment is beneficial to all of its customers. The Company also needs to further engage stakeholders more than what it currently has. Proper AMI deployment is not just replacing the physical meters. That is gold plating. To unlock the espoused benefits of AMI there also needs to be accompanying software investment in the form of interoperable

[43] York, D. (2020) Smart meters gain popularity, but most utilities don't optimize their potential to save energy. ACEEE https://aceee.org/blog/2020/01/smart-meters-gain-popularity-most.
[44] Walton R. (2020) Most utilities aren't getting full value from smart meters, report warns. *Utilitydive*. https://www.utilitydive.com/news/most-utilities-arent-getting-full-value-from-smart-meters-report-warns/570249/.

CIS interface and, perhaps most importantly, a plan to educate and compel customers to change their usage habits through Time-of-Use ("TOU") rates.[45]

All three of these parts: 1.) AMI hardware; 2.) CIS interface; and 3.) Educational buy-in of TOU pricing should be happening simultaneously. Evergy Metro/Missouri West only did parts 1 & 2, and neglected part 3. As a result, customers in those service territories do not experience the appropriate benefits.

My fear is that Empire will stagger deployment of these three parts to increase its rate base without having to realize benefits to its customers. Such a scenario could play out as follows: Empire completes part 1 (AMI hardware) in time for the test year in the next rate case. Part 2 (CIS interface); however, is not completed for another two years (or more). Part 3 is realized over the next 10 years in staggered opt-in pilot pricing programs.[46] That scenario is a slow bleed deployment that rewards the utility with profits without having to produce benefits (at least immediately) for customers.

To be clear, I am not sure AMI is a prudent investment by itself. I also cannot confidently say that even if all three parts are executed simultaneously it will prove to be a successful investment. However, I am confident that if the three parts are not executed simultaneously, customers will be overpaying for their cost of service and be made worse off.

Q. Do you have any final comments on this topic?

A. It will be telling if the Company comes in with request for variances from Commission rules on disconnections before it comes in with action plan for all three parts (hardware, software and education). I hope that is not the case and I encourage Empire to respond accordingly in rebuttal testimony on this topic.

---

[45] Admittedly there are "other" potential benefits from AMI. See also: York, D. (2020) Smart meters gain popularity, but most utilities don't optimize their potential to save energy. ACEEE https://aceee.org/blog/2020/01/smart-meters-gain-popularity-most.

[46] I have yet to see any Missouri utility execute part 3 to date.

V. RECOMMENDATIONS

Q. What are your recommendations to the Commission?

A. My recommendations are as follows:

- Empire should not continue to receive "a return on" its investment in Asbury after Empire retires Asbury on March 1, 2020;
- Empire should not receive "a return of" the remaining balance of its 2015 capital investments of $124 million in Asbury that extended the useful life of the plant to 2035;
- Empire should not move forward with staggered deployment of Advanced Metering Infrastructure ("AMI") investment that needlessly increases its rate base without concurrently producing benefits to Empire's customers. Rather, Empire should have a coherent and actionable plan that synchronizes AMI hardware, software and customer education of Time-of-Use rates to ensure that its customers can actually realize benefits; and
- Empire needs to prioritize realizing in Missouri APUC's representations to the City of Jacksonville, Florida, with its failed bid to acquire JEA, by focusing on reducing costs and improving its quality of service, as opposed to merely increasing its rate base and retail rates.

Regarding the first two bullet points, Empire should have the good sense to agree to those items. The Company's "Customer Savings Plan" will reap enormous profits for its shareholders, which will more than offset any costs from Asbury it does not recover. As to the third item, I would encourage Empire to respond with a substantive plan in rebuttal testimony. I will refrain from making any formal recommendations to the Commission on the Company's pending AMI deployment until I hear a response.

On the final point, it is clear from the empirical data provided in the first part of my testimony that Empire needs to prioritize its operational duties and provide a better product. The Company seeks a significant rate increase in this case and plans to file another case immediately after this one. I am genuinely concerned about the pending impact these cases will have on Empire's customers and the Southwest Missouri economy in the near future. Empire is about 1/10th the size of Ameren Missouri. Simply put, if rates continue to increase as I expect with the planned investments, customers that can, will seek an exit. If wholesale customers continue to exit and residential customers continue to invest in rooftop solar a negative feedback loop will occur that will only exaggerate the financial impact of customers not fortunate enough to be able to leave as well as the long-term sustainability of the utility.

Q. Does this conclude your testimony?

A. Yes.