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Witness: Frank C. Graves
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Electric Company
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Date Testimony Prepared: January 2022

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

Surrebuttal Testimony

of

Frank C. Graves

on behalf of

The Empire District Electric Company

January 2022



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THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
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1 **I. INTRODUCTION AND SUMMARY**

2 **Q. Please state your name, position, and address.**

3 A. My name is Frank C. Graves. I am a Principal at the Brattle Group. My business address
4 is One Beacon Street, Suite 2600, Boston, MA, 02108.

5 **Q. Are you the same Frank C. Graves who provided Direct and Rebuttal Testimony in**
6 **this matter on behalf of The Empire District Electric Company (“Empire” or the**
7 **“Company”)?**

8 A. Yes.

9 **Q. What is the purpose of your Surrebuttal Testimony in this proceeding before the**
10 **Missouri Public Service Commission (“Commission”)?**

11 A. In this testimony, I respond to Commission Staff witness Mark L. Oligschlaeger and to the
12 Office of Public Counsel (OPC) witnesses Dr. Geoff Marke and John A. Robinett. With
13 his rebuttal testimony, witness Oligschlaeger continues to argue that “used and usefulness”
14 is the prevailing and proper standard in determining the treatment of Asbury’s
15 undepreciated investments, and that sharing of the unrecovered balance between Empire
16 shareholders and customers is the appropriate remedy.¹ He also argues that Empire’s
17 request to recover its Asbury investments is somehow unique and different from many of
18 the examples of how retired coal plants’ unrecovered investment costs are treated across
19 the country included in my Direct Testimony.²

¹ Oligschlaeger Rebuttal at p.2.

² *Id.*, at pp.7-14.

1 The OPC witnesses allege (with little evidence) that Asbury’s decreasing
2 performance in the years prior to its closure was somehow linked to Empire’s intentional
3 alleged mismanagement of the plant in order to somehow accommodate the Company’s
4 new wind generation assets.³ They further allege that the Company manipulated its
5 Integrated Resource Plan (“IRP”) in order to align the preferred portfolio with the
6 Company’s desired outcome.⁴ For these reasons, the OPC witnesses argue that the
7 Commission should only allow Empire to recover a return of its Asbury investments and
8 no return of the remaining balance of the Company’s air quality control system (“AQCS”).⁵

9 **Q. Please summarize your responses.**

10 A. I have previously addressed the bulk of these arguments in my direct and rebuttal
11 testimonies, at least insofar as they reflect a view of what regulation should accomplish
12 and how resource decisions are made in that context. All of the witnesses I respond to here
13 offer purely rhetorical types of arguments that might appeal on the surface but which are
14 not grounded in facts about how Asbury was developed or performed or in economic
15 principles that foster a sensible regulatory environment for Missouri utilities that make
16 prudent decisions on behalf of customers.

17 I do not agree with witness Oligschlaeger’s criticism of my survey review of the
18 typical regulatory treatment of retired coal plant costs in other jurisdictions. As I explain
19 further below, even though the circumstances and mechanisms involved are somewhat
20 different, in many cases I presented the owner utilities were allowed to recover the full

³ Marke Rebuttal at p.12, p.14; Robinett Rebuttal at p.9 and p.11.

⁴ Marke Rebuttal at p. 15.

⁵ *Id.*, at p. 11.

1 return of and return on the remaining investment balance at the retired coal plants. I am
2 not asserting that they all did, but rather that this is a common practice.

3 Regarding the arguments by witnesses Marke and Robbinett about the robustness
4 of the Company's estimated savings from retiring Asbury, they do not offer new empirical
5 evidence for flaws or omissions in the Company's modeling approach, which I continue to
6 find reasonable, and that its identified positive cost savings from retiring and replacing
7 Asbury are robust.

8 **Q. At this time, is the Company seeking traditional rate recovery of its remaining**
9 **investment in Asbury in this proceeding?**

10 A. No. As discussed in Company witness Timothy N. Wilson's surrebuttal testimony, while
11 it is appropriate that the remaining components of Asbury be recovered from customers,
12 the Company has now elected to seek recovery of these balances pursuant to
13 RSMo. §393.1700.

14 **II. RESPONSE TO STAFF WITNESS**

15 **Q. Staff Witness Oligschlaeger argues that "used and useful" is the only relevant**
16 **standard for determining how unrecovered investments in a retired coal plant should**
17 **be treated.⁶ How do you respond?**

18 A. I explained in my direct testimony and my rebuttal testimony why applying the "used and
19 useful" ("U&U") standard as proposed by the Staff witness is inappropriate for many
20 reasons spanning fairness and balancing of interests, past performance, savings from the
21 Asbury decisions, future incentives, and the sheer clumsiness of the U&U standard as a
22 metric.⁷ In particular, I noted: "Utility regulators and courts have long concluded that a

⁶ Oligschlaeger Rebuttal, at p.2.

⁷ Graves Direct Testimony, at pp.43-44; Graves Rebuttal Testimony, at pp. 6-16.

1 utility may include prudent investments no longer being used to provide service in its rate
2 base as long as the regulator reasonably balances consumers' interest in fair rates against
3 investors' interest in maintaining financial integrity and maintaining a reasonable
4 opportunity to recover a fair return on prudent utility investments.”⁸ I elaborated the
5 reasons why the proper balancing of interests between customers and shareholders is
6 achieved in the case of Asbury by allowing full cost recovery on and of the undepreciated
7 investment: customers receive savings even after paying for the plant's full cost recovery
8 balance, and customers have enjoyed past benefits in excess of costs, to which Asbury's
9 shareholders were not participants. The “balancing of interest test” fails if customers
10 receive significant savings while Empire is not permitted to fully recoup its outstanding
11 investments, especially because there has been no sharing of unexpected gains.⁹

12 Finally, the “used and useful” standard is silent on why and to what extent a certain asset
13 is no longer economically attractive in the first place or on whether replacing that asset
14 yields ensuing net positive benefits.¹⁰ Those important considerations as to what caused
15 the problem or shift in value, how large it is, and whether it is offset by net positive benefits
16 to customers can only be understood by taking a prudence perspective. The U&U standard
17 is very clumsy in relation to the important nuances of such matters, at best making it helpful
18 only for motivating those more careful reviews and policy responses.

19 **Q. Is it accurate to characterize a “balance risk/reward relationship” between utilities**
20 **and customers as one in which the utilities' shareholders shoulder part of the**
21 **undepreciated investments at Asbury, as Staff witness Oligschlaeger advocates?**¹¹

⁸ Graves Rebuttal Testimony, at p. 8.

⁹ *Ibid.*

¹⁰ *Id.*, at pp.10-11.

¹¹ Oligschlaeger Rebuttal, at pp.3-4.

1 A. No. The type of “balancing of interests” that Mr. Oligschlaeger describes is more
2 accurately characterized as “heads I break even, tails I lose”, which is to say that it is not a
3 balancing of interests at all. As explained in my direct and rebuttal testimony, expectation
4 of full cost recovery for prudently incurred investment is consistent with Empire’s
5 regulatory obligation to serve and its cost-based pricing constraints.¹² While it is not the
6 case here, “risk sharing” by disallowing some portion of past prudent costs that are no
7 longer needed would only be appropriate in a hypothetical situation if the utility investors
8 had earned in the past (or will earn in the future, with the replacement assets) more than its
9 allowed cost of capital (by significant amounts) whenever the involved assets are “in the
10 money” (i.e., saving money relative to the next best alternative). Absent that, there is no
11 fairness, symmetry or (as discussed later) beneficial incentives created by the
12 disallowances.

13 As stated in my direct testimony (pages 19-20), which has basically gone
14 unchallenged by any of the parties in their direct and rebuttal testimonies, Empire’s 2019
15 IRP analysis determined that retiring Asbury in 2019 and replacing it with a mix of solar and
16 storage would result in PVRR customer savings relative to operating the plant until 2035, of
17 \$93 million from the retirement on a 20-year expected value basis and \$76 million on a 20-
18 year deterministic basis. As also stated in my direct testimony (page 21), which has also
19 gone unchallenged, those customers savings are almost immediate and will occur with only
20 a slow annual decline over all of the next 15 years after the retirement of Asbury. This is
21 not a highly deferred future customer benefit and is not speculative as shown in Figure 10
22 of my direct testimony. These customer savings are even with the customers continuing to

¹² Graves Direct Testimony at p.43; Graves Rebuttal Testimony at pp.11-12.

1 pay full cost recovery of Asbury. There is no fairness or balancing of interests if the
2 customers receive all of the mentioned savings and then do not have to pay for the
3 undepreciated value of Asbury. If that were to occur, then the customers would receive
4 100% of the savings plus being relieved of having to pay for some or all of Asbury. This
5 would provide customers with an unfair windfall and the utility with an unfair loss due to it
6 not being allowed to recover its investment in Asbury. The proper balancing of interests
7 would be to allow Empire to recover its remaining investment in Asbury and for customers
8 to receive 100% of the net benefits associated with the retirement of that plant.

9 This need to sustain cost recovery for obsolete assets stands in sharp contrast with
10 unregulated (i.e., merchant) entities. This is not just a matter of fairness, though that
11 certainly applies. It is also a matter of consistency with the obligation to serve and the
12 respective cost of service pricing for risky assets, and for proper incentives. The Staff
13 Witness agrees that utilities should not be exposed to the same degree of financial gain or
14 loss as unregulated companies.¹³ At the same time, he observes, “A balanced risk/reward
15 relationship for utilities through operation of rate regulation does not require that the
16 companies be completely shielded from *any and all losses* [emphasis added] associated
17 with unforeseen events.”¹⁴ I agree with him, but that is not a fair characterization of my
18 testimony or of the situation surrounding Asbury’s replacement. Indeed, regulated
19 companies should not be categorically shielded from all losses due to unforeseen events,
20 but only because their cost recovery should be predicated on the prudence of the original
21 investment. It is not the case here that any imprudence has been found. To the contrary,

¹³ *Id.*, at p. 3.

¹⁴ Oligschlaeger Rebuttal, at p.3.

1 the Company has voluntarily brought forward an opportunity to substitute away from an
2 existing asset in a manner that is expected to save costs for its customers.

3 **Q. Witness Oligschlaeger avers that his proposed recommendation is consistent with**
4 **how the Commission treats costs related to unforeseen natural disasters.¹⁵ How do**
5 **you respond?**

6 A. First, the costs created by unforeseen natural disasters are not analogous to choosing to
7 retire an uneconomic asset for net savings. Whereas the former is entirely beyond the
8 utility's control and would increase costs, the latter is planned and implemented by a utility
9 in order to save costs for customers. The goal of disaster recovery is to bring the same (or
10 perhaps better, more resilient) level and quality of service back to customers as before the
11 event by incurring additional costs, not to find improvements and make savings with asset
12 replacements. The scope and types of activities needed for disaster recovery, as well as
13 their eligibility for cost recovery, involves a wholly different analysis and motivation than
14 plant retirements. On the other hand, customers are *better off* with the retirement of an
15 uneconomic plant than without, and the Company has voluntarily brought forward this
16 improvement.

17 I also disagree with Mr. Oligschlaeger that natural disasters often involve cost
18 recovery sharing between customers and investors. It may be true that in some instances
19 of unforeseen natural events where utilities are required to incur costs to repair damages to
20 their infrastructure, they are not allowed to recover the related expenditures in rate base,
21 but that does not have to be nor is it always the case. There are many examples in which
22 utilities are allowed full recovery of expenditures related to natural disasters. The degree

¹⁵ *Id.*, at pp.3-4.

1 of utility responsibility for unforeseen natural disasters should depend on how well those
2 risks were foreseen and prevented, and whether there were prior agreements on the risks
3 tradeoffs in prevention vs. response involved. In some cases, that may involve a finding
4 of some kind of negligence (or prior transfer of risk to the utility shareholders, e.g. by
5 allowing investment in insurance or in “rainy day” funding designed to handle such
6 events), where in other cases it will be found to be beyond control and expectation.

7 **Q. Please respond to Witness Oligschlaeger’s argument that at this point in time the**
8 **benefits of the wind generation assets that replace the Asbury plant are speculative,**
9 **and that there may be a risk that customers may not accrue all of these savings,**
10 **especially because customers are bearing the new costs of replacement power.¹⁶**

11 A. To start, I do not agree with the premise in Mr. Oligschlaeger’s argument that the new wind
12 generation assets are replacing the Asbury plant. In the Company’s 2019 IRP analysis, the
13 expected savings from retirement of Asbury were not dependent on the performance of or
14 revenues from the new wind plants. Instead, the new wind plants were already decided to
15 be built and were approved by the regulators. This is evident because these new wind
16 plants were included in both the resource portfolio that retains Asbury and the portfolio
17 that retires Asbury. The resources that will replace Asbury are solar and storage.

18 Regarding Mr. Oligschlaeger’s argument about uncertainty in cost savings from
19 Asbury retirement, there is indeed always some level of uncertainty about the future state
20 of the world and the associated future benefits of a resource plan. However, the benefits
21 of retiring Asbury and replacing it with new renewable assets are not speculative: the
22 Company’s probabilistic analysis in the 2019 IRP shows that retaining Asbury would more

¹⁶ *Id.*, at pp.4-5.

1 likely lead to higher customer costs. As I explained in Sections III and IV of my direct
2 testimony, the Company's 2019 IRP modeling approach was reasonable, and its findings
3 of positive cost savings from retiring and replacing Asbury are robust.¹⁷ The
4 comprehensive modeling techniques were consistent with industry best practice, and were
5 based on Empire's best knowledge of its system and key drivers. The modeling results
6 were further subject to robust sensitivity analysis to stress-test the economic performance
7 of the plant. In contrast, when alleging that the results should not be trusted, the intervenors
8 offer no empirical evidence or concrete criticism other than generally commenting on the
9 uncertainty that marks the future, colored by the vague innuendo of suspicion that
10 something is being overlooked or misrepresented because of the novelty of the deal-
11 structure supporting the wind assets (which again, are not even the Asbury replacements).

12 I also explained in my prior testimony that waiting for an asset to be completely
13 risk-free before selecting it runs counter to cost minimization for customers, because by
14 the time the asset is risk-free, a significant portion of the expected savings that would have
15 been possible with a more reasonable risk-taking are gone.¹⁸ Seeking this kind of certainty
16 also would not be feasible as a practical matter. Here, there is ample support for a strong
17 expectation that switching to the new renewable assets is going to be beneficial. It is
18 correct that customers are bearing the new costs of the new renewable generation
19 investments, but they stand to gain from them as well.

¹⁷ Graves Direct Testimony, at pp. 7-28.

¹⁸ Graves Rebuttal Testimony, at pp. 14-15.

1 **Q. Is it true that because utilities are obligated to serve customers at a just and**
2 **reasonable rate, they do not need to be incented to make prudent decisions, as witness**
3 **Oligschlaeger argues?**¹⁹

4 A. No. I agree with him that utilities do not need to be incented to make prudent decisions,
5 but the point here is that he and others encouraging disallowance are interfering with those
6 natural responsibilities that utilities should have by creating a strong disincentive for them
7 to make prudent decisions in the future. The approach he recommends would discourage
8 utilities from identifying and pursuing any similar future savings for customers (and this
9 adverse side-effect likely would spill over to other Missouri utilities and to credit rating
10 agencies who would understand and be wary of the biased policy).

11 **Q. Witness Oligschlaeger disagrees that the listed of coal retirement cases included in**
12 **your direct testimony supports the argument that the standard treatment of**
13 **unrecovered coal assets is to allow both the return on and of investments. How do you**
14 **respond?**

15 A. I disagree with him. Of the examples included in Appendix A of my direct testimony:
16

- In 12 cases, full return was allowed²⁰
- In 3 cases, securitization was allowed
- In 3 cases, specific accounting treatments were applied (as described in the Appendix

18

- and in Witness Oligschlaeger's rebuttal testimony)

19

¹⁹ Oligschlaeger Rebuttal, at pp.5-6.

²⁰ These include Kentucky Power's Big Sandy Unit 2, Duke Energy Progress's Asheville coal plant, MDU's Lewis & Clark plant, Allete's Boswell, Xcel Colorado's Comanche Units 1 and 2, PacifiCorp's Carbon, NV Energy's North Valmy coal plant, Otter Tail Power's Hoot Lake coal plant, WEC Energy's Pulliam Units 5 & 6, Presque Isle, and Weston 1 coal plants, Wisconsin Power & Light's Nelson Dewey and Edgewater Unit 4, and Gulf Power's Plant Smith Units 1 and 2. Mr. Oligschlaeger's description of Plant Smith in his Rebuttal Testimony is not based on the final order.

- 1 • In 4 cases, accelerated depreciation was allowed
- 2 • In just one case, only return of was allowed (Nevada Power’s Reid Gardner and its
- 3 share of the Navajo plant)²¹

4 Of the remaining cases, requests for regulatory asset treatment were allowed; the orders in
5 these cases do not explicitly prohibit recovering the undepreciated assets in rate base. Mr.
6 Oligschlaeger is correct that a full return may not have been included in some cases, but a
7 full return was allowed in many other examples.

8 Mr. Oligschlaeger makes the argument that Empire’s request for full recovery of
9 Asbury costs is unique because the plant was already retired, whereas in the examples of
10 full return, the utilities sought recovery prior to the plants’ closing. His distinction is
11 technically correct, but one without any meaningful difference or sensible policy
12 implications. Requests to recoup unrecovered investments of retired plants and of soon-to-
13 be-retired plants should be evaluated using the same set of criteria: whether the original
14 investments and the decision to retire were prudent. Further, the retirement of Asbury was
15 first proposed and examined long before the actual retirement of the plant: Empire found
16 substantial savings associated with the plant retirement as early as 2017 in its Generation
17 Fleet Savings Analysis, and again in its 2018 IRP Update.²² It is my understanding that
18 these documents and analysis were reviewed and vetted by the Commission and
19 stakeholders prior to Asbury’s retirement in 2019.

20 I also note that once approved, there is no practical difference in cost recovery. Suppose
21 a utility requests to recover costs of a plant (to be abandoned) while it is still online. Once

²¹ Upon further review, I understand that Nevada Power sought to treat the remaining investment balance for Reid Gardner as a separate regulatory asset, but with the investment balance not included in rate base (which is atypical of for “regulatory asset” treatment).
²² Graves Direct Testimony, at p.8.

1 approved, that utility will begin its cost recovery, a process that may go past the actual
2 retirement date of the plant. That is, at some point in the future, the utility will recover costs
3 even when the plant is no longer there.²³ Finally, in the case of Appalachian Power
4 Company, Virginia regulators in 2020 authorized the utility to include in rate base the
5 unamortized balance associated with the previously retired Clinch River, Glen Lyn,
6 Kanawha River, and Philip Sporn plants.²⁴

7 **III. RESPONSE TO OPC WITNESSES**

8 **Q. OPC witness Marke contends that the Asbury plant was extremely efficient, but that**
9 **its performance suffered in the years prior to its closure only as a consequence of**
10 **Company’s decision to make it “less efficient as Liberty decided efficiency no longer**
11 **mattered when trying to maximize profits from the unit in the SPP market.”²⁵ Mr.**
12 **Robinett, OPC’s other witness, adds that the plant was an efficient unit until Empire**
13 **operated it essentially as a peaker unit to accommodate more wind generation.²⁶ How**
14 **do you respond?**

15 A. The OPC witnesses allege (with little or no empirical evidence, just verbal criticisms) that
16 Asbury’s declining performance toward the end of its life was a result of the Company’s
17 mismanagement of its assets. These comments are silent as to the presence of any external
18 changing market drivers, and (once properly understood in that context) it becomes clear
19 that they would be encouraging operating practices for the plant that are antithetical to how
20 regulated utilities should operate: Empire is obligated to provide reliable service to

²³ This assumes that the utility does not accelerate the plant’s depreciation schedule. Mr. Oligschlaeger categorizes this scenario separately.

²⁴ See Federico et al., “A variety of stranded cost recovery, abatement strategies emerging in US energy transition”, S&P Global Market Intelligence, December 6, 2021. This case was not included in Appendix A of my Direct Testimony.

²⁵ Marke Rebuttal, at p.14.

²⁶ Robinett Rebuttal, at p. 11.

1 customers at a just and reasonable rate by optimizing its operations and resource planning
2 on several different timescales, given the shifting market conditions and system constraints
3 that it faces. If it becomes economical to meet demand by relying on a certain new resource
4 (either through adjusting Empire’s generation portfolio or through taking advantage of
5 conditions in the SPP market) to meet demand, then the Company should do just that.
6 Making these adjustments will necessarily and appropriately alter the way some other
7 assets (i.e. Asbury) are utilized.

8 As explained in my direct testimony, system marginal costs (including wholesale
9 power prices, as in SPP) have decreased in recent years in many regions, making operating
10 coal plants increasingly less economically viable.²⁷ That has caused them to be dispatched
11 less, for net economic savings and different kinds of use patterns (more peaking). What
12 the OPC witnesses seem to be arguing is that Empire should have dispatched Asbury more
13 frequently, even when doing so would be more expensive relative to the alternative. But
14 doing so of course would increase customer costs and ultimately violate basic economic
15 principles that Empire is expected to adhere to.

16 **Q. Witness Marke argues that the Commission should not treat the IRP process as “a**
17 **bright line test for prudent investment” because utilities then would be able to “game**
18 **the regulatory process more than they already can.”²⁸ Do you agree with his**
19 **characterizations?**

20 A. No. It is misleading to imply or allude to IRPs as if they were some sort of narrow technical
21 or legal paperwork filing that can be done solely according to the tastes and standards of
22 the utility. The IRP is an important, well-reviewed and documented process that serves as

²⁷ Graves Direct Testimony, at pp. 26-27.

²⁸ Marke Rebuttal Testimony, at p.15.

1 a way for utilities to demonstrate and vet their plans publicly to meet forecasted energy and
2 capacity needs in a least-cost and robust (low risk) manner. Utilities in many jurisdictions
3 across the country are required to file their IRPs on a regular basis. Both the
4 recommendations of integrated resource plan and the modeling and forecasting processes
5 underlying the integrated resource planning are generally reviewed carefully by regulators
6 and by stakeholders. In my experience, the IRP process is an interactive and iterative one,
7 where the utilities may revise certain assumptions or analysis based on feedback from
8 stakeholder groups. My understanding is that the Missouri process also follows this
9 industry pattern. In addition, the Asbury plant and its replacements were reviewed
10 extensively in the state regulatory examinations by the adjacent states where customers
11 share an interest in the resources.

12 Witness Marke does not elaborate on how exactly he believes utilities (in general,
13 or in past practice specifically, here in Missouri) going through their IRP filings may game
14 the regulatory process, or what alternative process or documents, if any, should replace the
15 IRP. Even if there were some process weaknesses, they should be fixable and should be
16 fixed, rather than just dismissing IRPs as if they are fatally tainted (with unstated flaws).
17 Without the IRP (as it is now or some other version of it), utilities would have difficulties
18 to present their long-term resource plans in a transparent manner for all involved. Finally,
19 analysis conducted in the IRP on the net benefit of pursuing or retiring a certain asset is an
20 important first step to evaluate the prudence of such action, but it is not (and should not
21 be) the only analysis required.

22 **Q. Does this conclude your Surrebuttal Testimony?**

23 **A.** Yes.

VERIFICATION

I, Frank C. Graves, under penalty of perjury, on this 20th day of January, 2022, declare
that the foregoing is true and correct to the best of my knowledge and belief.

/s/ Frank C. Graves