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STATE OF WISCONSIN

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates	)	**DOCKET NO. 6690-UR-128**

SURREBUTTAL TESTIMONY OF LUCY METZ

ON BEHALF OF

SIERRA CLUB

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1. INTRODUCTION AND PURPOSE OF TESTIMONY

Q Please state your name and occupation.

A My name is Lucy Metz. I am an Associate at Synapse Energy Economics, Inc. ("Synapse"). My business address is 485 Massachusetts Avenue, Suite 3, Cambridge, Massachusetts 02139.

Q Did you submit direct testimony in this docket?

A Yes.

Q Please provide additional details on your work experience and educational background that you described in your direct testimony.

A At Synapse, I support the development of comments and testimony in litigated dockets across the country. I recently co-sponsored testimony before the Georgia Public Service Commission critiquing Georgia Power Company's 2023 IRP Update and its plans to bring online new peaking capacity and continue relying on its existing fossil resources. I have experience in nearly a dozen utility jurisdictions analyzing topics related to power plant economics and integrated resource planning (IRP). I also perform analyses of electric power systems using industry-standard models such as EnCompass and spreadsheet tools. Most recently and relevantly, I assisted with the analysis and drafting of testimony for Duke Energy Indiana's 2024 rate case and Tampa Electric Company's 2024 rate case, evaluating the economics of the companies' solid-fuel power plants, their fuel procurement strategies, and their analysis and support for their rate case asks. I am currently engaged as an expert in Entergy Arkansas, Entergy New Orleans, and Southwestern Electric Power Company IRP processes, attending stakeholder

meetings and evaluating the reasonableness of the companies' resource planning assumptions. I was similarly engaged in PacifiCorp, CenterPoint Indiana, and AES Indiana's IRP processes. I also assisted with analysis and drafting of testimony for Dominion Virginia's rate adjustment clause docket for approval of its NPDES compliance projects and Appalachian Power Company's rate adjustment clause docket for approval of its Effluent Limitation Guidelines projects, and I worked on the EnCompass modeling team for Dominion Virginia's 2023 Integrated Resource Plan docket.

I graduated magna cum laude with highest honors from Smith College, where I received a Bachelor of Science in Engineering Science, having completed courses in Electric Power Systems, Photovoltaic and Fuel Cell System Design, Geothermal Engineering, Advanced Thermodynamics, Microeconomics, and Climate and Energy Policy.

Q What is the purpose of your testimony in this proceeding?

A My testimony responds to several points in the rebuttal testimony of Wisconsin Public Service Corporation ("WPSC" or "the Company") witness Tom Hawley, including (1) his critique of the economic analysis that I present in my direct testimony, (2) his claim that Weston 3 and 4 must be maintained for the reliability benefits they provide, (3) his concern that WPSC has no way to feasibly and cost-effectively replace the units if they retire early, and (4) his assertion that requiring WPSC to study the long-term economics of its existing resources, document concrete steps towards achieving planned resource retirements, and issuing All-Source Requests for Proposal (RFPs) are outside the scope of Commission oversight.

I also respond to several points in the rebuttal testimony of WPSC witness Jody Arendt, including (1) his critique of my economic analysis, (2) his concern that early retirement of the Weston units would lead to reliability issues, (3) his concern that replacement resources for Weston 3 and 4 are unavailable, (4) his comments about the role of sunk costs in unit retirement decisions, and (5) his objections to my recommendation that the Commission direct WPSC to include more robust long-term planning in its future rate case applications.

2. EVALUATING THE ECONOMICS OF EXISTING UNITS BASED ON FORWARD-GOING COSTS AND REVENUES IS A BASIC TENET OF UTILITY BEST PRACTICE THAT WPSC CHRONICALLY FAILS TO COMPLETE

Q How do you respond to Mr. Hawley's claim that your analysis "largely criticizes WPSC's decision-making in hindsight" [1]?

A Mr. Hawley's statement is incorrect. I am not looking back at a single year or isolated event and criticizing the Company for poor performance. I am criticizing WPSC's failure to take any steps toward evaluating the forward-looking economic benefits and possible replacement for Weston Unit 3 after the unit incurred several years of sustained net revenue losses (2018–2020).[2] In other words, my analysis considers what market signals were available to WPSC in the past to determine whether its current request to use ratepayer funds to operate Weston Unit 3 reflects prudent utility practice. WPSC was—or should have been—aware of those revenue losses and should have begun evaluating possible

[1] Rebuttal-WPSC-Hawley at 15–16.

[2] Ex.-SC-Metz-35 (Response-Data Request-Sierra Club-SC-6.15).

hreplacements for WPSC in 2020. Had WPSC done so, it might have avoided [redacted].[3]

Instead, WPSC failed to complete any analysis in the last decade (as part of any rate case) evaluating whether Weston Units 3 and 4 were the least-cost options for meeting its customers' energy needs and MISO capacity obligations.[4] This analysis could have helped WPSC identify the units' declining economics in advance and act differently, and WPSC's decision not to perform analysis demonstrates imprudent resource planning behavior. As a result of WPSC's failure to evaluate the economics of the Weston units, ratepayers face test-year costs for Weston 3 that are likely higher than they would face with alternative resource options.

Q **Mr. Hawley comments that "WPSC is not asking for permission to *build* the Weston 3 and 4 units."[5] Does this impact the Company's obligation to regularly assess the economics of the units that it requests to include in rates?**

A No. Again, the Company has an obligation to ensure it is serving customers reliably and at the lowest cost. Doing so requires it to regularly analyze the economics of its existing units to determine if alternative resources could provide equivalent capacity and energy at lower cost. Mr. Hawley's comment reveals the insufficiency of the Company's approach to resource planning. WPSC's position appears to be that once a unit is constructed, the Company is only responsible for analyzing economic commitment and dispatch of that unit and need not consider

[3] Direct-WPSC-Metz at 29–30.

[4] Ex.-SC-Metz-5 (Response-Data Request-Sierra Club-SC-2.21; Response-Data Request-Sierra Club-SC-2.27).

[5] Rebuttal-WPSC-Hawley at 10.

the unit's forward-going costs, and whether it is cost-effective to keep the unit online in the long term. This does not reflect prudent resource planning practices. It would not make any sense for the Commission's approval of Weston 3 more than four decades ago (or Weston 4 in 2008) to amount to approval for WPSC to continue operating the units indefinitely, without ever revisiting whether it is still in the public interest to do so. Even if WPSC did not have a continuing obligation to identify least-cost options for its customers, the declining economic performance of both units during the 2018–2020 timed period should have signaled to the Company that it was time to evaluate replacement generation resources.

Q Mr. Hawley refutes the results of your economic analysis by arguing that WPSC "is dispatching the Weston units economically." [6] How do you respond?

A Mr. Hawley appears to conflate economic commitment and dispatch practices with the overall cost-effectiveness of the units relative to the market. Based on my analysis of WPSC's hourly commitment data, I agree that WPSC is generally committing the units in a way that minimizes its losses at Weston 3 (i.e., keeping the unit offline a substantial portion of the time during which it would cost more to operate than it would receive in energy market revenue[7]). However, minimizing losses is not the same as earning profit. Even the best commitment and dispatch practices cannot turn an uneconomic unit into an economic one, and Weston 3 still lost money relative to the market on an annual basis in four out of

[6] *Id.* at 13.

[7] Ex.-SC-Metz-35 (Response-Data Request-Sierra Club-SC-6.01 (REDACTED COPY)).

the past six years (i.e., the cost of fuel, operations and maintenance, and ongoing capital additions exceeded the market value of its energy output and capacity).[8]

Q Do you agree with Witness Arendt's claim that utilities cannot "simply disregard prior investments when making generation planning decisions"? [9]

A No. In criticizing my analysis because it "ignores the capital costs of the plants themselves,"[10] Mr. Arendt appears to take issue with the foundational economic principle that decisions about the future should be based on forward-going costs only and not sunk costs. Specifically, if the forward-going, avoidable costs of an existing generating unit are greater than the all-in cost of replacement resources, the unit should be retired, regardless of its undepreciated balance. This is because the alternative generation source will save ratepayers money *even if* they must continue paying down the undepreciated balance of the older asset after its retirement. Mr. Arendt's concern that this approach could "lead to even higher undepreciated retired plant balances that WPSC must finance and customers must pay off over time"[11] is beside the point—ratepayers would save money even if this occurred. It is also worth clarifying that although the decision to retire a unit early increases the "retired plant" balance, it does *not* increase the overall magnitude of the undepreciated balance, but rather transfers the balance to a different category for retired plants.

Separately from the decision to retire a unit early, the Commission and WPSC must work together to determine appropriate treatment of the undepreciated

[8] Direct-WPSC-Metz at 27.

[9] Rebuttal-WPSC-Arendt at 10.

[10] *Id.* at 3.

[11] *Id.* at 11.

balance. It is best practice to recover the book life of a unit over its useful life only. However, if accelerated depreciation would cause excessive rate increases, there are alternate methods for addressing undepreciated balances (e.g., securitization or a regulatory asset with extended depreciation schedule).

3. WESTON 3 AND 4 HAVE HAD MARGINAL-TO-DECLINING ECONOMIC PERFORMANCE IN RECENT YEARS ON THE BASIS OF BOTH THEIR CAPACITY AND ENERGY VALUE RELATIVE TO THE MARKET

Q Witnesses Hawley and Arendt take issue with the methodology that you use to calculate the historical net revenue of Weston 3 and 4. How do you respond?

A Witnesses Hawley and Arendt purport to find several flaws in my methodology, but as I explain below, their claims either rest on mischaracterizations of my direct testimony or reflect WPSC's own failures to complete the analyses on which the Company's witnesses now insist. Mr. Hawley's language about "flawed"[12] analysis and Mr. Arendt's claims about "methodological errors"[13] are ultimately nothing more than rhetorical devices, since neither witness identifies actual problems with my methodology.

[12] Rebuttal-WPSC-Hawley at 3.

[13] Rebuttal-WPSC-Arendt at 3.

Q How do you respond to Mr. Hawley's criticism that your analysis considers the Weston units "only for their value in providing energy" [14]?

A Mr. Hawley's statement is incorrect. My net revenue analysis considers both the capacity and energy value of Weston 3 and 4, as my direct testimony clearly states beginning on page 26. Mr. Hawley acknowledges as much in a footnote to his rebuttal testimony. For the test years, I present results showing the units' energy margin because that is the only analysis that WPSC itself prepared.

Q Mr. Arendt suggests using Cost of New Entry (CONE) rather than Planning Resource Auction (PRA) prices to quantify the capacity value of Weston 3 and 4.[15] How do you respond?

A The PRA prices provide one reasonable benchmark for capacity value. These prices represent actual market conditions, whereas CONE provides a maximum limit on the PRA clearing price. CONE is a conservative alternative that can reasonably represent the value of capacity in a constrained market. MISO calculates CONE based on the current annualized capital cost of constructing a new combustion turbine power plant. Importantly, actual replacement resources for the Weston units would be a combination of resource types rather than solely gas combustion turbines.

[14] Rebuttal-WPSC-Hawley at 3.

[15] Rebuttal-WPSC-Arendt at 12.

Q Witnesses Hawley and Arendt both suggest that your recommendation is to retire a unit as soon as its annual net revenue drops below zero.[16, 17] Is this an accurate characterization of your position?

A No. Witnesses Hawley and Arendt are arguing against a recommendation that my testimony does not make. As I explain in my direct testimony, declining net revenues indicate that WPSC should assess the long-term value of the units and, if it determines that the units should be retired, establish a retirement date and begin procuring replacement resources. Weston Unit 3's declining net revenues during 2018–20 should have prompted WPSC to begin this process, but the Company did not take any steps to address the trend. I do not recommend that a unit retire based on a single year of uneconomic performance, or retire immediately before WPSC procures replacement resources.

Q Mr. Arendt implies that because you use PRA prices to value capacity, you are suggesting that WPSC purchase all replacement capacity for the Weston units from the market. [18] Is this accurate?

A No. Here again, Mr. Arendt is criticizing something I never recommended. WPSC will need to procure replacement resources for Weston 3 and 4 to ensure that it maintains enough accredited capacity to meet its MISO capacity obligation. In

[16] "Ms. Metz's recommendation would replace a coal unit whenever it may be projected to have a negative energy margin for a year." Rebuttal-WPSC-Hawley at 4.

[17] "Essentially, Ms. Metz argues that WPSC should be guided solely by the net-margin earned by Weston 3 and Weston 4 in the MISO energy and capacity markets and as soon as the net-margin for Weston 3 from these markets became negative, WPSC should have shut the unit down and relied on the market." Rebuttal-WPSC-Arendt at 4.

[18] *Id.* at 5–6.

fact, one of the recommendations in my direct testimony is that WPSC should proactively procure replacement resources for the units.[19] I never recommend that WPSC procure replacement capacity from the PRA; rather, I used the PRA as an estimate for the cost of replacement capacity during the 2018–2023 period. I had to do so because WPSC never issued an RFP or otherwise tested the market to determine what a replacement cost for longer-term capacity resources would have been.

Q Mr. Hawley criticizes your analysis for omitting the impact on locational marginal prices (LMP) of closing Weston.[20] How do you respond?

A Witness Hawley is correct that removing a unit will change LMPs. So will adding new resources. Without full resource planning analysis, which WPSC has not completed, it is impossible to know what the net impact would be of retiring and replacing the Weston units—or whether it would increase or decrease energy costs for customers. Expecting intervenors to perform this analysis for the Company is inappropriate, since only WPSC has full system data. This is not a flaw in my analysis, but rather an example of the analysis that WPSC should be performing.

Mr. Hawley appears to argue that when WPSC retires the Weston units, it will be forced to procure replacement resources located farther away, which would in turn cause LMPs within WPSC's service area to increase.[21] This chain of events is speculative at best. It is WPSC's responsibility to study the impact on LMPs of various replacement resource options and to minimize any cost impacts on its

[19] Direct-WPSC-Metz at 11.

[20] Rebuttal-WPSC-Hawley at 12.

[21] *Id.* at 5.

ratepayers. For example, WPSC should study whether it can locate replacement resources at the Weston site itself, which would both address LMP concerns and enable the Company to take advantage of the *Inflation Reduction Act* tax credit adder for energy communities. Any census tract (or directly adjoining census tract) in which a coal-fired generating unit closed after 2009 is eligible for the energy community adder, which provides a 10 percent bonus on top of the usual investment and production tax credits.[22]

As I explained above, trends in the economic performance of the units from 2018–2020 should have led WPSC to complete these studies. Its failure to do so means that ratepayers are now saddled with test-year costs that are likely higher than they would have been with alternative resource options, especially for Weston 3.

4. WPSC HAS NOT JUSTIFIED CONTINUED OPERATION OF WESTON 3 AND 4 ON THE BASIS OF THE RELIABILITY SERVICES THEY PROVIDE

Q What claims do Witnesses Arendt and Hawley make about the reliability benefits of Weston 3 and 4?

A Mr. Arendt uses the "capacity and resilience benefits" that Weston 3 and 4 provide as a reason that the units must remain online despite their "near-term monetary challenges."[23] Mr. Hawley similarly writes that the analysis in my direct testimony "is flawed because it fails to quantify the reliability and

[22] Ex.-SC-Metz-36 (Interagency Working Group on Coal & Power Plant Communities & Economic Revitalization, 2024, "Energy Community Tax Credit Bonus.").

[23] Rebuttal-WPSC-Arendt at 3.

resiliency benefits these resources provide."[24] By "reliability and resiliency benefits," he appears to be primarily referring to the dispatchability of the units, but he also mentions coal as a hedge against natural gas prices and the fuel security provided by an on-site coal pile.[25]

Notably, the Company has not conducted a formal analysis of the reliability benefits provided by Weston 3 and 4, [26] and thus lacks any basis for concluding that retiring and replacing either or both units would cause reliability issues. WPSC has also not taken any steps beyond "occasional view of the MISO generation queue" to determine whether there are projects that could "match the reliability benefits" of Weston Units 3 or 4.[27]

Q Would you recommend retiring a unit if doing so would cause reliability issues?

A No, I would never recommend retiring a unit if it would create a documented reliability problem. But WPSC is claiming that retiring Weston 3 and 4 will cause a reliability problem while also refusing to study which combinations of resources would provide the necessary capacity and energy to replace the units.

[24] Rebuttal-WPSC-Hawley at 13.

[25] *Id.* at 8.

[26] Ex.-SC-Metz-35 (Response-Data Request-Sierra Club-SC-6.04; Response-Data Request-Sierra Club-SC-6.07; Response-Data Request-Sierra Club-SC-6.11).

[27] Ex.-SC-Metz-35 (Response-Data Request-Sierra Club-SC-6.05).

Q How do you respond to Mr. Hawley's statement that it is "plainly wrong to conclude that a dispatchable resource is not reliable because it has a low capacity factor"[28]?

A This is not a claim my direct testimony makes. Just as all squares are rectangles but not all rectangles are squares, unreliable units (those that spend a large percentage of time in forced outages) tend to have low annual average capacity factors, because there are long stretches of time when they are completely offline. But not all units with low capacity factors are unreliable.

There is evidence besides its capacity factor that Weston 3 is an unreliable unit: namely, its forced outage rate was higher than the national average for coal units in every year except 2019 and rose as high as 26 percent in 2023.[29] These statistics undermine the Company's claims about the reliability benefits that Weston 3 offers.

Q Do you agree with Witnesses Hawley and Arendt that the reliability benefits of Weston 3 and 4 represent a reason to keep the units online, regardless of unit economics?

A No. Mr. Hawley and Mr. Arendt both make much of the fact that WPSC needs generation even when "the sun isn't shining, and the wind isn't blowing."[30] It is true that planning for and operating a system with high levels of variable renewable resources requires more complex analysis compared to what was necessary in the past, but WPSC will need to adapt to these new planning

[28] Rebuttal-WPSC-Hawley at 15.

[29] Direct-WPSC-Metz at 22.

[30] Rebuttal-WPSC-Hawley at 7 and 11; Rebuttal-WPSC-Arendt at 6.

methodologies or be left behind by the U.S. power sector. The output from wind and solar resources may be variable, but it is not unpredictable. With proper planning, high levels of wind and solar resources are entirely compatible with maintaining system reliability. MISO is actively improving its resource adequacy planning processes to better account for renewables, for example with its newly implemented seasonal accredited capacity (SAC) framework.

At a high level, Mr. Hawley and Mr. Arendt are correct that variable renewable resources will need to be paired with firming resources to provide sufficient capacity and energy during all hours of the year. However, Weston 3 and 4 are poorly suited to fill this role, for reasons that Mr. Hawley himself enumerates: the units are incapable of fast cycling,[31] were designed for baseload operation,[32] and will be damaged by more frequent cycling.[33] Other resources, for example battery storage, can complement renewable generation at lower cost and higher reliability than the Weston units.

During extreme weather events such as the "bitterly cold winter mornings or hot and humid summer evenings"[34] that Mr. Arendt is concerned about, alternate capacity resources—such as battery storage and gas peaking resources—are similarly available that could replace the capacity of Weston 3 and 4. Again, WPSC needs to complete a full resource planning analysis to determine a portfolio of resources that would reliably replace the Weston units.

[31] Rebuttal-WPSC-Hawley at 6.

[32] *Id.* at 7.

[33] *Id.* at 5.

[34] Rebuttal-WPSC-Arendt at 6.

Q What about Mr. Hawley's argument that the coal units are needed in the near term despite the fact that they "cannot be run like peaker plants"[35]?

A WPSC refused to study the value of the Weston units relative to alternatives over the past six years, even as the units earned marginal to negative net revenue and the forced outage rate of Weston 3 more than doubled. That the Company is relying on these units as dispatchable resources in the test years is a result of planning failures. It is indefensible for WPSC to continue delaying retirement of the units by failing to study alternatives while simultaneously claiming that it has no choice but to continue running the units at the expense of ratepayers because it has no alternatives.

WPSC should analyze whether an earlier retirement date for Weston 3 would be more economic than the one it has proposed (2031) and whether replacing Weston 4 with other resources would be more cost-effective than converting it to operate on gas. Without this analysis, WPSC cannot justify investing additional ratepayer funds in the units.

[35] Rebuttal-WPSC-Hawley at 8.

5. WPSC'S EXISTING LONG-TERM PLANNING IS INSUFFICIENT, AND THE COMMISSION SHOULD DIRECT THE COMPANY TO INCLUDE MORE ROBUST PLANNING ANALYSIS IN ITS RATE CASES GOING FORWARD

Q Witnesses Hawley[36] and Arendt[37] suggest that because no replacement resources are available prior to Test Year 2025, WPSC is powerless to address the poor economic performance of the units. How do you respond?

A Again, the Company witnesses mistake the chain of causality that would lead to WPSC obtaining replacement capacity for the Weston units. The availability of replacement resources is something that WPSC itself controls. WPSC needs to signal, for example by issuing RFPs, that it is interested in procuring replacement capacity for the units.

Mr. Hawley's implication that WPSC is justified in ignoring the economic performance of Weston 3 and 4 because replacement resources are not available "prior to or during test year 2025"[38] is indicative of WPSC's broad failure to address whether its expenditures at the Weston units during the test years are consistent with prudent utility planning *beyond* the test years in its rate case application. Commissions approve test-year costs to operate and maintain existing units based on whether the trajectory of costs over each unit's remaining life is prudent. By refusing to analyze the value of Weston 3 and 4 as compared to

[36] "At any rate, I am not aware of any projects that can match the reliability benefits and significant capacity of the Weston 3 and Weston 4 plants prior to or during test year 2025." *Id.* at 10.

[37] "[I]f WPSC had retired Weston 3 when Ms. Metz suggests it should have (between 2018 and 2020), then there would have been no plausible replacement resource." Rebuttal-WPSC-Arendt at 7.

[38] Rebuttal-WPSC-Hawley at 10.

alternatives, WPSC has denied the Commission the information that it needs to make this determination.

Q How do you respond to Mr. Hawley's complaint that if the Commission were to require WPSC to issue All-Source RFPs and demonstrate that it is taking concrete measures to retire Weston that would amount to "micromanaging"[39]?

A This is a turn of phrase that Mr. Hawley uses to make oversight sound undesirable. Regulation is necessary when a utility would otherwise fail to act in accordance with the public interest. WPSC has not issued any RFPs to identify replacement resources for Weston 3 or Weston 4,[40] and in fact has not issued any RFPs to acquire any generation resources in the past five years.[41] Without doing so, it has incomplete information about the cost and availability of the replacement resources available to it. Absent action from the Commission requiring WPSC to complete these steps, it is unlikely that the Company will provide information to the Commission or ratepayers on new resource costs.

[39] *Id.* at 3–4.

[40] Ex.-SC-Metz-35 (Response-Data Request-Sierra Club-SC-6.12).

[41] Ex.-SC-Metz-35 (Response-Data Request-Sierra Club-SC-5.12).

Q Witnesses Hawley and Arendt both point to the Generation Reshaping Plan (GRP) as evidence that WPSC already has a long-term plan for its generation fleet. How do you respond?

A The GRP does not provide adequate transparency into WPSC's long-term planning. Crucially, the GRP did not involve any long-term modeling that allowed for optimized retirement of existing resources.[42] Instead, WPSC arrived at a set of retirement dates for its coal units through internal deliberations completely divorced from any analysis of the units' forward-going economics and has offered no convincing evidence that the options it selected are truly the best choice for ratepayers.

In essence, the GRP is a corporate sustainability goal. While this type of goal can be valuable for internal company planning, it is not at all sufficient for Commission oversight of WPSC's resource planning decisions. Mr. Arendt illustrates this problem in his rebuttal testimony when he preambles a list of GRP goals by saying, "As the WEC utilities have repeatedly said in our applications for additional resources, WEC's GRP focuses on the following high-level goals…"[43] Again and again, WPSC presents the high-level goals of the GRP as if they are a substitute for the detailed long-term planning that regulated utilities are obligated to complete.

[42] Ex.-SC-Metz-35 (Response-Data Request-Sierra Club-SC-4.02).

[43] Rebuttal-WPSC-Arendt at 10. WEC Energy Group is the parent company of WPSC.

Q How do you respond to Mr. Arendt's argument that "robust economic modeling" WPSC completed for Docket 5-BS-276 provides the Commission with oversight over WPSC's long-term planning[44]?

A As I explain on page 45 of my direct testimony, there are a number of shortcomings with the PLEXOS modeling that the Company completed for Docket 5-BS-276. Most foundationally, the modeling yet again fails to assess the cost-effectiveness of existing units—WPSC did not provide the model with forward-going cost information for the Weston units and did not allow the model to endogenously select retirement dates for existing units or choose between options to convert Weston 4 to gas vs. retiring and replacing it. [45]

In addition, the mere existence of modeling results is not enough to prove that WPSC is engaged in rigorous long-term planning. WPSC needs to incorporate the results into its decision-making. In his rebuttal, Mr. Hawley makes it clear that this is not currently happening. He writes that WPSC has not evaluated whether operating Weston 3 and 4 is the least-cost option for meeting customer demand "because [this analysis] would not provide information relevant to our day-to-day operation of our system or even in our long-term generation planning."[46] Again, this statement reveals WPSC's failure to engage in prudent resource planning analysis and its position that only day-to-day operational decisions are relevant.

[44] *Id.* at 13.

[45] Ex.-SC-Metz-35 (Response-Data Request-Sierra Club-SC-5.16).

[46] Rebuttal-WPSC-Hawley at 14.

Q Do you have any updates to make to your prior testimony about the shortcomings with the Company's PLEXOS modeling from Docket 5-BS-276?

A Yes. In preparing my direct testimony, I relied on a report that WPSC provided describing the assumptions about resource retirements and gas conversions the Company included in its PLEXOS modeling. WPSC has since disclosed that it "mistakenly" omitted any mention of the gas conversion of Weston 4 in this report.[47] While the original modeling report does not even mention Weston 4 by name, WPSC later clarified in discovery that while the "gas upgrades to Weston 4 were mistakenly not mentioned" in the report, the Company hard-coded gas conversion of Weston 4 in 2027 in all of the scenarios it modeled.[48]

Based on this information from the Company, I would revise my testimony by striking out the statements on pages 21, 31, and 45 that the Company did not include gas conversion of Weston 4 in its PLEXOS modeling.

These updates do not change any of the substantive criticisms of the Company's PLEXOS modeling that I present in my testimony. As I explained above, WPSC did not allow the model to endogenously select retirement dates for existing units or choose between options to convert Weston 4 to gas vs. retiring and replacing it. It merely replaced one hard-coded assumption about Weston 4 (continued operation on coal) with another (gas conversion in 2027). The modeling still fails to assess the cost-effectiveness of the Company's existing units.

[47] Ex.-SC-Metz-35 (Response-Data Request-Sierra Club-SC-7.01 (REDACTED COPY)).
[48] *Id*.

Q How do you respond to Mr. Arendt's claim that you suggest "that the Commission mandate an IRP in every rate case"[49]?

A In my direct testimony, I recommend that the Commission direct WPSC to include more robust long-term planning in its future rate case applications. Specifically, WPSC should complete modeling analysis that demonstrates that the costs for each generating asset it seeks to include in rates are justified by the ongoing value the asset provides to ratepayers, relative to alternatives. Mr. Arendt attempts to equate this with inserting an IRP into every rate case, which is inaccurate.

Resource planning is an ongoing process, not a static exercise, and utilities create resource plans not for their own sake but to inform rate cases and procurement decisions. In states with formal IRP processes, the IRP helps utilities by providing a framework and stakeholder process for the planning they would need to be doing anyway. Even in states such as Wisconsin that do not require formal IRPs, utilities still need to perform resource planning—including detailed modeling—to justify that the test-year expenditures they include in their rate cases are reasonable. For WPSC, this means justifying the ongoing expenditures at Weston 3 and 4 by demonstrating that the units provide customer benefits relative to alternatives, or if they do not, that the Company is taking steps to retire and replace them.

Q Does this conclude your testimony?

A Yes.

[49] Rebuttal-WPSC-Arendt at 13.