

**BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN**

Joint Application of Wisconsin Public Service Corporation and
Madison Gas and Electric Company for a Certificate of
Authority to Purchase the Red Barn Wind Energy Center
Generation Facility in the Towns of Wingville and Clifton, Grant
County, Wisconsin

Docket No. 5-BS-256

COMMENTS OF THE CITIZENS UTILITY BOARD

I. INTRODUCTION

On May 6, 2021, Wisconsin Public Service Corporation (WPSC) and Madison Gas and Electric Company (MGE) (together, “Applicants”) filed an application under Wis. Stat. § 196.49 for a Certificate of Authority (CA) to purchase the 91.6 megawatt (MW) proposed Red Barn Wind Energy Center Generation Facility (“Red Barn Wind” or “the Project”) at a total cost of approximately \$162,000,000, with both cost and ownership to each be split 90 percent WPSC and 10 percent MGE. The Commission issued a Notice of Investigation on October 14, 2021 stating the Commission did not intend to hold a hearing on this matter.

Per Wis. Stat § 196.49(5r)(b), if a hearing is not held on an application, the Commission shall take final action on the application within 90 days after the Commission issues a notice opening a docket on the application, unless the chairperson of the Commission extends the time period for an additional 90 days for good cause. Thus the first time period for final action expires January 12, 2022, and in case of a 90-day extension the time period for final action expires April 12, 2022.

The Citizens Utility Board (CUB) intervened in the proceeding on October 28, 2021 and hereby submits comments in response to the Commission’s Memorandum for Comment

(“Memorandum”) of December 7, 2021. These comments are responsive to certain Docket No. 5-BS-256 issues. Specifically, CUB believes that the Application lacks analytical rigor and that the case for it being consistent with the public interest and meeting other statutory requirements for CA approval has not been made. Accordingly, CUB writes to respectfully recommend that the Commission require Applicants provide additional information in support of the Project, such that the Commission has an accurate and complete record on which to base its decision.

II. COMMENTS

A. Approval of Red Barn Wind is Partial Approval of WEC’s GRP

As stated in their Application of May 5, 2021 “Joint Applicants seek approval of Red Barn as part of a larger effort to transition their respective generation fleets” (Application, p. 1). Joint Applicant WPSC calls this fleet transition its Generation Reshaping Plan (GRP). Under the GRP, WPSC’s parent company, WEC Energy Group (WEC), plans to retire certain fossil fuel plants and replace them with new capacity. As of the time of its Red Barn Wind application, WEC planned to “invest more than \$2 billion in low-cost, highly efficient natural gas generation, renewable generation and storage resources in Wisconsin.” WEC’s portfolio of proposed projects includes, in part, Red Barn Wind as well as four other facilities for which applications are currently pending before the Commission:

- Docket No. 5-BS-254, a proposal to acquire and construct 200 MW of Paris Solar Farm generating capacity and 110 MW of Battery Energy Storage System (BESS), owned 90 percent WEC and 10 percent MGE (PSC REF#:404941);
- Docket No. 5-BS-255, a proposal to acquire the Darian Solar Energy Center, 250 MW of solar generating and 75 MW BESS, owned 90 percent WEC and 10 percent MGE (PSC REF#:411080);

- Docket No. 5-BS-258, a proposal to acquire the Koshkonong Solar Electric Generation Facility, 300 MW of solar generation and 165 MW of BESS, owned 90 percent WEC and 10 percent MGE (PSC REF#:410709); and
- Docket No. 5-CE-153, a proposal to construct a 128 MW reciprocating internal combustion engine at the Weston Generating Station (“Weston RICE”), wholly owned by WEC.

Since the time of this Project’s application, WEC announced to investors on November 2, 2021 that, as part of its commitment to producing carbon-neutral electrical generation by 2050, it will cease burning coal across all of its generating facilities by 2035 and will explore transitioning existing facilities such as the Elm Road Generating Station to natural gas (“November 2 announcement”). In addition, on December 6, 2021, WEC announced, in supplemental testimony in the Weston RICE docket,¹ WEC’s intention to seek approval to purchase the LSP Whitewater electric generating facility (“Whitewater”), a 280 MW combined cycle natural gas facility,² and to remove two battery electric storage (BESS) facilities from the GRP portfolio.

The GRP modeling analysis presented in support of WPSC’s acquisition of Red Barn Wind has not been updated in this proceeding to reflect either of these developments. Both the known portfolio changes associated with the now-proposed Whitewater acquisition and the unknown impacts of the November 2 announcement have the potential to significantly change the economics of WEC’s portfolio, over the useful lives of the resources and investments contemplated, beyond what is presented in the GRP. Despite that, no evidence related to these changes has been presented in this proceeding, and little has been provided in the above-listed proceedings that in part comprise the GRP.

¹ PSC REF#: 426895, refiled as supplemental direct in Weston RICE on December 15, 2021 (PSC REF#:427316).

² <https://www.naes.com/locations/lsp-whitewater/>, visited December 16, 2021.

B. WEC's Analytical Support for the GRP is Not Evident

Since Red Barn Wind, at 91.6 MW,³ does not meet the statutory 100 MW threshold beyond which a project is subject to the more rigorous Certificate of Public Convenience and Necessity (CPCN) approval (Wis. Stat. § 196.491(3)), it is not subject to CPCN review per se. However, insofar as Red Barn Wind “represents another significant step by WEC” (Application, p. 2) and “represents another step in MGE’s ongoing transition” (*id.*), the questions, analyses, and recommendations that CUB has in related WEC and MGE dockets requiring CPCNs mirror those that arise in this one.

The opacity of WEC’s modeling makes it difficult to determine the reasonableness of WEC’s analysis. For a consumer advocate, it is concerning that Commission staff is “unable to independently validate the results of the PLEXOS model runs” due to not having a license to use PLEXOS (Memorandum p. 11). In contrast, “Commission staff reviewed and independently reran the modeling and economic analysis submitted by MGE as part of the application in this docket” and “achieved perfect replicability” on a test run (Memorandum p. 12).

Since PLEXOS is a black box, it is critical that stakeholders and the Commission have a clear view of the economic assumptions and model inputs. It is equally important that any modeling analysis be robust and provide meaningful information upon which the Commission can evaluate the Applicants’ need case and the economics for the proposed project, including any future risks.

CUB has concerns with the lack of robustness in WEC’s economic modeling. CUB has noted in other GRP dockets the need to test a wider range of natural gas prices and discount

³ Applicants propose 28 turbines with a capacity of 91.6 MW. However, “(t)he project has been permitted for up to 29 turbines ranging in size up to 5.6 MW nameplate capacity, and a total project capacity of up to 99 MW” (Application, p. 3).

rates.^{4 5} In Direct Testimony in Paris Solar, Docket No. 5-BS-254, Dr. Kihm explains why a broad range of input assumptions is important in evaluating the cost-effectiveness and customer benefit of a renewable resource acquisition:

Since Wisconsin Electric and Wisconsin Public Service Corporation evaluate all of their individual resources as part of their Generation Reshaping Plan (GRP) rather than as stand-alone facilities, issues such as natural gas prices need to be addressed in a proceeding ostensibly about the purchase of solar and storage facilities because the price of natural gas has significant influence on the cost-effectiveness of the GRP. I reiterate the need to conduct sensitivity about future levels of natural gas prices and to apply a wide range of consumer discount rates rather than individual investor discount rates.⁶

So far WEC has declined to broaden these input assumptions.⁷

CUB is also concerned that WEC's economic analysis of the GRP is built solely on a sensitivity analysis that tests a small number of independent variables and a narrow range of values for those variables. CUB believes WEC's economic analysis of the GRP is incomplete as it does not include a properly constructed and meaningful scenario analysis, which would have required the Applicants to develop of a broad range of comprehensive futures scenarios for the modeled time period, each considering a broad range of independent variables and the effect that changes to multiple variables within each scenario has on net benefits or costs. To the extent that WEC's economic analysis considers various independent variables, the range of those variables is too narrowly cast and does not consider factors⁸ such as, but not limited to:

- Future load,
- Changes to generation capital costs across the portfolio,
- Supply chain effects,

⁴ PSC REF#: 423776; PSC REF#:426081.

⁵ Commission staff implies the importance of discount rate analysis for a threshold ownership size: "Due to the size and scale of MGE's ownership in this project, a discount rate stress test was not contemplated for MGE" (Application p. 16). CUB wonders if WEC ownership in this project, which is 9 times that of MGE's, exceeds the threshold.

⁶ PSC REF#:426081, pp. 2-3.

⁷ Rebuttal- WEPCO/WPSC- Gerlikowski-p in Docket No. 5-CE-153, PSC REF#:425974.

⁸ See Direct-CUB-Singletary-8 in Docket No. 5-BS-254, PSC REF#:426082.

- In-service date disruptions,
- Changes to energy market rules or requirements, such as distributed resource aggregation or reserve margin requirements, and
- Future public policies beyond carbon monetization.

Indeed, the only “scenarios” WEC has presented are a business-as-usual supply resource portfolio and the proposed GRP resource portfolio. WEC’s economic analysis, which compares the costs of these two portfolios, is inadequate and offers limited information relevant to the decision-maker, who is charged with determining whether or not an investment is prudent and reasonable in the real world, where economic conditions vary and interact across a broad range of future scenario possibilities, and whether or not an investment meets the applicable standards of consistency with the public interest.

This is in contrast to the analysis conducted as part of Wisconsin Power and Light Company’s (WPL) Clean Energy Blueprint, which WPL has presented in support of two large solar projects, Dockets Nos. 6680-CE-182 and 6680-CE-183. Under the Blueprint’s various combinations of assumptions, which model real-world scenarios, resource choices are not limited to resources that WPL owns or proposes to own in the future, and resource choices change as assumptions change. This is what would be expected under scenario analysis. Additionally, WPL’s scenario analysis within the Blueprint considers a wider range of independent variables and employs stochastic modeling to provide a more robust, probabilistic set of results.⁹

⁹ CUB analytical recommendations in Docket No. 6680-CE-183 apply to Red Barn Wind as well. In the former, CUB suggests WPL undertake “a greater and more explicit exploration in the company’s portfolio analysis of alternative or complementary investment paths in energy efficiency, as well as programs that encourage customer-owned load-modifying resources, such as distributed energy resources and demand response. As considered by WPL, these alternatives are largely buried within the overall load forecast in each planning scenario. As new resource technologies such as utility-owned PV can be scaled in a much more granular way than could be achieved with traditional resources, I believe it is critical that these alternatives be given greater and more explicit consideration as alternatives in these types of planning exercises. Doing so may reveal that new utility-owned capital investments could be reduced on the margins.” Direct-CUB-Singletary-4-5 in Docket No. 6680-CE-183.

Similarly, MGE’s economic modeling in this docket offers more transparency and robustness than WEC’s. MGE used the Electric Generation Expansion Analysis System (EGEAS) model to evaluate Red Barn Wind over a range of possible scenarios and futures, including locational marginal price differentials, carbon constraints, higher natural gas prices, higher energy market prices, and lower MISO assigned capacity credit values for solar resources as the penetration of solar capacity in MISO increases in the future. As noted earlier, Commission staff has access to EGEAS and independently verified the modeling and economic analysis MGE presented in this docket. That being said, MGE’s analysis would strongly benefit from a consideration of a broader range of natural gas prices and discount rates when considering net benefits or costs that will be passed on to MGE customers.

Finally, as noted previously, the November 2 announcement and the proposed Whitewater natural gas acquisition and reduction in BESS capacity have significant implications for WEC’s economic and environmental modeling. This Project’s application has not been updated to reflect these consequential changes. We reiterate our recommendation in the Weston RICE docket that:

. . . the Commission take the maximum amount of time allowable under Wisconsin statute to open a separate proceeding to take in evidence regarding the GRP, and now the Refreshed GRP, and determine the reasonableness of the GRP itself before proceeding with its decision regarding any of the facility-specific applications related to the GRP.¹⁰

This is needed to ensure that the Commission is basing its decision on a complete and accurate record.¹¹

¹⁰ Surebuttal-CUB-Singleton-9-10 in Docket No. 5-CE-153, PSC REF#:427091.

¹¹ The narrative in the May 6, 2021 Application may also require revision. For example, Applicants note that “Though energy is currently available in the market at relatively low cost, the project will provide a valuable hedge against the potential for higher energy costs in the future” (p. 7), “renewable resources provide a hedge against uncertainty in future deliverable fossil fuels costs while also serving to mitigate the potential risks and costs

C. Additional Customer and Public Interest Considerations

Applicants note that because they are purchasing a fully-constructed facility with certain seller guarantees, customers are protected from liabilities that might accompany a construction docket. While Applicants seek approval for up to 110 percent of the \$162 million cost of acquisition, as CUB has noted in other dockets, we believe that it is more appropriate that the Commission be made aware as soon as practicable, preferably in advance, if a construction or other capital investment project will exceed the project cost estimated in the application and authorized by the Commission. We therefore support Commission staff's proposed condition 1 as worded, which limits recoverability to \$162 million except in the case of *force majeure* event(s) for which Applicants have given 30-day notice to the Commission. Such a condition enables the Commission to monitor project costs and possible overruns so as to protect ratepayers, consistent with the public interest. CUB also supports the customer protections embodied in the remainder of the Memorandum's proposed conditions.

CUB recognizes the value in wind generation in diversifying utility generation portfolios and in complying with the Energy Priorities Law (EPL), Wis. Stat. §§ 1.12 and 196.025(1). However, the expedited review of this Project may raise due process concerns. A complete and accurate record of Red Barn Wind, alone and in the context of the GRP, including an economic analysis supporting the Project, is not available to WEC and MGE customers nor to other stakeholders and members of the public because (1) Applicants have not updated their proposal to reflect the November 2 announcement and the Whitewater acquisition and (2) 90 percent owner WEC's economic analysis is insufficient. Under the expedited CA review, this may go unnoticed by

attributable to possible future regulation of CO2 emission" (p. 9), and "permitting Joint Applicants to proceed with acquiring the project would allow them to hedge against an uncertain energy future." (p. 10). Given the proportional increase in fossil fuel generation that the Whitewater acquisition and the reduction in BESS represent in WEC's portfolio, these statements may no longer be accurate.

most. From CUB's perspective, however, when an authorization represents an irreversible "step" toward significant investments for which customers will bear the cost, it is of utmost importance that a complete and accurate record be available to the public.

Equally importantly, such a record must be available to the Commission. Without an accurate and complete record of the cost-effectiveness of Red Barn Wind in the context of the GRP, it may be difficult for the Commission to conclude that the Project neither "[p]rovide[s] facilities unreasonably in excess of the probable future requirements" nor "add[s] to the cost of service without proportionately increasing the value or available quantity of service." Wis. Stat. § 196.49(3)(b).

III. CONCLUSION

CUB appreciates the opportunity to comment in this proceeding. As set forth above, CUB believes that the Application in this project lacks analytical rigor and that the case for it being consistent with the public interest and meeting other statutory requirements for CA approval may be lacking. Accordingly, CUB recommends the following:

With respect to WEC, we recommend that before proceeding with decisions on any of the facility-specific applications related to the GRP the Commission authorize the maximum amount of time provided under statute to open a separate proceeding to promptly take in evidence regarding the GRP and determine the reasonableness of the GRP itself. Additionally or alternatively, we recommend that prior to moving forward with a decision regarding Red Barn Wind the Commission require WEC to provide updated GRP economic analysis results reflecting changes to the GRP portfolio discussed in other dockets. This updated analysis should include the results of sensitivities spanning:

- a range of discount rates from 2% (low discount rate) to 18% (high discount rate);¹² and
- a range of natural gas prices from \$2.00 per MMBtu to \$8.00 per MMBtu.¹³

With respect to MGE, CUB recommends the Commission require MGE to provide economic analysis results reflecting these same discount rate and natural gas sensitivities.

Dated this day, Friday, December 17, 2021.

Respectfully Submitted,

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¹² Direct-CUB-Kihm-13 in Docket No. 5-BS-254.

¹³ *Id.* at 17-18.