

Public Service Commission of Wisconsin

Summer Strand, Chairperson Kristy Nieto, Commissioner 4822 Madison Yards Way P.O. Box 7854 Madison, WI 53707-7854

March 20, 2024

RE: Investigation of Parallel Generation Purchase Rates

5-EI-157

Issues Related to Net Metering

Comments Due:

Friday, April 19, 2024 – 1:30 p.m.

This docket uses the Electronic Records

Filing system (ERF).

Address Comments To:

Jennifer Heaton-Amrhein

Public Service Commission

P.O. Box 7854

Madison, WI 53707-7854

Analysis Due:

Friday, May 24, 2024 – 1:30 p.m.

This docket uses the Electronic Records Filing system (ERF).

Address Analysis To:

Jennifer Heaton-Amrhein

Public Service Commission

P.O. Box 7854

Madison, WI 53707-7854

To the Parties:

On March 14, 2024, the Public Service Commission of Wisconsin (Commission) issued a Notice of Investigation-Second (PSC REF#: 493957) to update the Notice of Investigation (PSC REF#: 391581) in docket 5-EI-157 by providing additional information as to the status of the investigation and providing an additional opportunity for public participation. In dockets 3270-UR-125 and 6680-UR-124, the Commission ordered additional investigation of net metering to proceed in this docket with a scope including, but not limited to, conducting a Cost-Benefit Analysis and Value of Solar Study. The scope may also include some or all of the following:

- The viability of a Cost-of-Service Study (COSS) that includes class results for parallel generation customer classes;
- The impacts of various net metering approaches on the benefits of distributed generation for low-wealth and marginalized customers;
- An analysis of how solar adoption rates may impact the viability and efficiency of traditional net metering; and
- An evaluation of various rate designs and incentive structures for parallel generation customers that would support non-discriminatory cost-of-service-based rates.

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To provide a starting point for the investigation, Commissions staff provides the enclosed memorandum and requests value of solar studies, along with a narrative descriptions of methods used. Value of solar studies must be received by 1:30 p.m. on Friday, May 24, 2024. If any party foresees difficulty meeting this timeframe, please make a written extension request in the docket. Analysis must be filed using the Commission's Electronic Records Filing (ERF) system. The ERF system can be accessed through the Public Service Commission's web site at https://psc.wi.gov.

Commission staff also solicits comments on the scope of this continuing investigation (beyond investigating the value of solar in Wisconsin). Comments must be received by 1:30 p.m. on Friday, April 19, 2024. Party comments must be filed using the Commission's Electronic Records Filing (ERF) system. The ERF system can be accessed through the Public Service Commission's web site at https://psc.wi.gov. Members of the public may file comments using the ERF system or by mail to the Public Service Commission, 4822 Madison Yards Way, P.O. Box 7854, Madison, WI 53707-7854.

Please direct questions about this docket or requests for additional accommodations for persons with a disability to the Commission's docket coordinator, Jennifer Heaton-Amrhein, at (608) 267-9766 or jennifer.heatonamrhein1@wisconsin.gov.

Sincerely,

Kate Christensen

Administrator

Division of Energy Regulation and Analysis

KC:JHA:jlt:DL: 01997582

Kate Christenson

Attachment

PUBLIC SERVICE COMMISSION OF WISCONSIN

Memorandum

March 20, 2024

FOR COMMISSION INFORMATION

TO: The Commission

FROM: Kate Christensen, Administrator

Tara Bachman, Deputy Administrator Jennifer Heaton-Amrhein, Policy Advisor Tyler Meulemans, Supervisor, Rates Unit Division of Energy Regulation and Analysis

RE: Investigation of Parallel Generation Purchase Rates 5-EI-157

Issues Related to Net Metering

Introduction

On March 14, 2024, the Commission issued a Notice of Investigation-Second to further consider its investigation into parallel generation purchase rates with a focus on net metering.

(PSC REF#: 493957.) Net metering, also known as net energy billing, is currently available in Wisconsin for all electric utility customers with small electric customer-owned generation systems (COGS). The COGS size threshold is utility-specific and listed in each utility's tariff. Under net metering, a customer who owns a COGS is billed on the difference between the energy they consume and the energy the COGS produces during a billing period.

This Commission staff memorandum summarizes the analysis and issues related to net metering identified in this investigation and in recent rate cases, and identifies issues that could be considered as the investigation into net metering proceeds. Commission staff requests comments on the scope and analysis of topics identified for this investigation and encourages using this memorandum as a resource for developing responses.

Additionally, Commission staff requests that utilities and intervenors provide value of solar studies that specifically determine the value of solar in Wisconsin and, to the extent possible, in a given utility's service area.

Analysis and Issues Identified Previously

On June 11, 2020, the Commission issued a Notice of Investigation to consider parallel generation purchase rates for customer-owned generation systems. (PSC REF#: 391581.) During the course of this investigation, the Commission solicited public comments and issued data requests multiple times. (Id., PSC REF#: 393351, PSC REF#: 401895.) In comments received in this docket and in two of the rate cases filed in 2023 for Test Year 2024, some utilities contended that net metering does not accurately reflect avoided costs, since retail rates incorporate fixed costs that COGS do not help the utility avoid. As a result, these utilities have asserted, net metering arrangements do not accurately allocate costs to customers, but instead subsidize COGS owners at the expense of other customers. These utilities have advocated for modifications to existing small COGS tariffs that would reduce existing purchase rates to more closely align with avoided costs.

In contrast, other stakeholders have expressed support for the continuation and expansion of net metering, referencing customer interest in pursuing deployment as well as discussing the environmental benefits provided by COGS. These stakeholders also emphasized support for more consistent net metering across the state, on terms supportive to expanded net metering such as lengthier netting periods and higher eligibility thresholds for net metering tariffs.

Since the Notice of Investigation in this docket, substantial development and discourse has occurred in this area. This continued investigation pursuant to the Notice Investigation—Second will draw from extensive analysis of avoided costs for larger COGS; an informational paper and comments submitted on net metering; and recent proposals to close net metering by

Madison Gas and Electric Company (MGE) and Wisconsin Power and Light Company (WP&L) and the respective testimony, comments, and discussion in those dockets.

Analysis of Avoided Costs for Larger COGS

In its Order of May 4, 2021, the Commission adopted a conceptual framework for the calculation of avoided electric energy, capacity, and transmission costs under which total system economic and engineering modeling of the incremental and decremental costs for that utility's resource mix and load shape to serve as a starting point for determining appropriate rates to compensate customers that owned larger COGS. (PSC REF#: 410850.) The Commission also ordered the state's five largest investor-owned utilities (IOU) to file tariff electric (TE) dockets by September 1, 2021, detailing how each would conform, respond, or make changes to its tariffs to implement the Commission's conceptual framework for calculating avoided costs. ¹ The Commission ultimately approved alterations to the parallel generation tariffs for each of the five largest IOUs. ²

While the previous analysis of avoided costs in this investigation docket focused on larger COGS as opposed to the smaller COGS currently subject to net metering in Wisconsin, that analysis is also relevant to net metering issues. As interested parties and the Commission continue to explore and evaluate net metering proposals, some participants may find the conceptual framework previously established in this docket useful for setting avoided energy, capacity, and transmission cost rates for excess generation delivered onto the grid by small

¹ Following the Commission's Order, and subsequent applications from the large IOUs, the following TE dockets were opened to consider the proposed changes from each utility: 3270-TE-114, 4220-TE-109, 6630-TE-107, 6680-TE-107, and 6690-TE-114.

² Final Decisions from the aforementioned TE dockets:

Final Decision in Docket 3270-TE-114: PSC REF#: 454581

Final Decision in Docket 4220-TE-109: PSC REF#: 449321

Final Decision in Docket 6630-TE-107: PSC REF#: 454567

Final Decision in Docket 6680-TE-107: PSC REF#: 454564

Final Decision in Docket 6690-TE-114: PSC REF#: 454565

COGS, as much as for generation by large COGS. Likewise, interested parties may find that the methodologies approved for setting parallel generation rates for larger COGS in the TE dockets may be useful in setting rates for smaller COGS currently subject to net metering.

Informational Net Metering Paper by the Regulatory Assistance Project

The Commission's Order of May 4, 2021, in this docket, directed the development of an informational paper on issues related to the determination of net metering rates to be issued for public comment. (PSC REF#: 410850.) At the request of Commission staff, the Regulatory Assistance Project (RAP) prepared a comprehensive informational paper reviewing net metering approaches in the context of general ratemaking principles and policy goals, and outlining recent net metering reforms that have been considered in other states. In its memorandum of February 25, 2022 (PSC REF#: 431687), Commission staff requested public comments on the RAP paper, and specifically asked that commenters weigh in on the following questions:

- 1. Do current net metering tariffs appropriately balance the ratemaking principles of efficient price signaling, maintaining customer understanding and acceptance, equitable cost allocation, and recovery of revenue requirements?
- 2. Do current net metering tariffs align with the Commission's mission and state energy policy goals?
- 3. How could net metering tariffs incorporate alternative rate design options to better align with ratemaking principles and policy goals?
- 4. What, if any, further action should the Commission take to review and/or reform net metering tariffs?

The Commission received 38 comments on this topic, including 30 comments from individuals and 8 from interest groups. Thirty-five comments supported revisions to net

metering policies and incentives that encourage solar adoption and more strongly favor consumers via annual bill credits and retail rates. They also commented that a larger capacity limit is needed and that rates and policies should be standardized across Wisconsin for clarity, consistency, and fairness. While none of the five largest IOUs individually provided comment on this set of questions, comments from three organizations representing utilities cautioned against a retail rate, stating that it does not reflect the true avoided costs of the utilities and is unfair to non-participating customers. They also expressed concern that net metering in its current form does not accurately value the costs and benefits of distributed generation resources. These commentors suggested Wisconsin utilities pilot new rate designs such as instantaneous net metering and inflow/outflow, and that the Commission study other states' approaches to net metering to see what is working.

The Commission did not take any additional action related to the net metering paper and public comment on it.

Proposals to Close Net Metering to New Customers in 2023 Rate Case Proceedings
In its 2023 rate case applications, MGE in docket 3270-UR-125 and WP&L in docket
6680-UR-124 submitted proposals to close its net metering programs to new customers.

MGE currently offers net metering to customers with COGS smaller than 100 kilowatts-alternating current (kW-AC) under Schedule Pg-2 of its tariff. In its rate case application in docket 3270-UR-125, MGE proposed closing net metering (Schedule Pg-2) to new customers. (PSC REF#: 466619 at 11, PSC REF#: 466624.) MGE originally proposed a deadline of April 1, 2024, for new customers to apply for service, and a deadline of December 31, 2024, for customers to interconnect in order to be served under net metering (Schedule Pg-2). Beyond those deadlines, new parallel generation customers who took service

under the Pg-1 tariff would receive a newly proposed Solar Incentive Provision (SIP) credit of \$200/kW of installed generation, capped at \$1,000.

MGE, Citizens Utility Board of Wisconsin (CUB), Wisconsin Industrial Energy Group (WIEG), Solar Energy Industries Association (SEIA), City of Middleton, City of Madison, International Brotherhood of Electrical Workers (IBEW), Dane County, RENEW Wisconsin (RENEW), 350 Wisconsin, Elevate, Blacks for Political and Social Action of Dane County (BPSA), Wisconsin Local Government Climate Coalition (WLGCC), Vote Solar/Sierra Club (VS/SC), and Commission staff provided testimony on this proposal. Party testimony and public comments overwhelmingly opposed MGE's proposal.

MGE revised its proposal in rebuttal testimony. MGE's revised proposal included:

- Extending the deadlines by which customers must apply for and interconnect their parallel generation system in order to be served under net metering (Schedule Pg-2) as legacy customers. Under the extended deadlines, customers would have until September 1, 2024, to submit applications and until December 31, 2025, to install and interconnect.
- Creating a Solar Incentive Program–2 (SIP-2) for qualified low-income customers taking service under the Parallel Generation (Pg-1) tariff. Customers eligible for the SIP-2 program would receive an additional credit of \$200/kW of installed generation (up to \$1,000) on top of the original SIP credit.
- Creating a Parallel Generation—Hourly Export (PG-HE) tariff. This tariff would net the inflow and outflow meter registers on an hourly basis prior to calculating inflow and outflow, effectively netting a customer's generation against their usage each hour, rather than on an instantaneous or monthly basis. The proposal

included a generation limit of 20 kW of capacity (the generation capacity limit under Pg-2 is 200 kW). MGE suggested this program could include a cost-per-kilowatt-hour (kWh) Outflow Transition Adder that would be applied to the lesser of monthly net imports and exports.

Several parties commented that MGE still had not provided adequate justification for closing net metering to new customers and opening a SIP pilot, and that the proposal would reduce adoption and accessibility of rooftop solar and hamper clean energy goals. Several parties made similar comments regarding the SIP-2 and PG-HE tariff proposals, stating that they lacked cost-based justification and that the 3 days parties were given to analyze the proposals was inadequate. Several parties commented that a comprehensive review of parallel generation should be performed, including cost-benefit analysis and Value of Solar methodology.

The Commission did not approve MGE's proposal to close net metering to new customers. The Commission stated that MGE's initial and revised proposal provided inadequate justification and time to evaluate the program; in particular, MGE proposed these programs in rebuttal, 3 days prior to the due date for surrebuttal, the final round of testimony. Additionally, MGE's proposal lacked cost-based analysis and justification. As noted above, several parties asked the Commission to further investigate the appropriate tariff structure for parallel generation customers. The Commission agreed and directed Commission staff to conduct an additional investigation of net metering in this docket. (PSC REF#: 487247.)

WP&L's Proposal to Close Net Metering to New Customers in Docket 6680-UR-124

WP&L currently offers net metering to customers with COGS smaller than 20 kW under Schedule NEM PgS-3 of its tariff. In docket 6680-UR-124, WP&L proposed to make several modifications to how it serves parallel generation customers with a system size under 75 kW.

(PSC REF#: 466564 confidential, PSC REF#: 466565 public; PSC REF#: 467162.) WP&L initially proposed to transition customers enrolled on the existing Schedule PgS-3 to the proposed PgS-2 Power Partnership tariff. WP&L stated that the intention of the Power Partnership tariff is to make all customers indifferent to the source of their energy, be that utility-owned or customer-sited generation. WP&L initially proposed to give currently enrolled customers an option to remain enrolled on this tariff until January 1, 2028 and to close the tariff to new customers as of January 1, 2024.

WP&L, CUB, WIEG, SEIA, Dane County, RENEW, 350 Wisconsin, VS/SC, Clean Wisconsin, and Commission staff provided testimony on various tariff structures for parallel generation customers. In response to the concerns of various parties and members of the public, WP&L updated the proposal to allow customers currently enrolled on the PgS-3 tariff until January 1, 2033 and to close the tariff to new customers as of December 31, 2025.

The proposed Power Partnership V2 tariff contained many novel approaches to parallel generation amongst Wisconsin utilities, including:

- Hourly netting of a customer's electric usage and exports to the grid for customers
 with a system size up to 75 kW;
- Providing distribution system upgrades for the purpose of interconnecting new facilities at no cost to the customer;
- Mandatory enrollment for the customer on an appropriate time-of-use based rate;
- The System Asset Value Credit; and
- A monthly credit limit where a customer's monthly bill cannot be reduced below \$10 or \$15 per month, depending on system size, but excess credits can be carried over monthly for up to 12 months.

The System Asset Value Credit is a per-kWh credit proposed by WP&L that was set at a level to make the costs paid by consuming customers equivalent to the embedded capital cost rate for the marginal generator in the applicant's most recent resource plan. The System Asset Value Credit was designed to recognize that distributed generation is a part of the overall generation portfolio that WP&L uses to meet its customers' energy and demand needs. WP&L proposed to establish a regulatory asset, with WP&L's authorized rate of return applied to it, for payments made out to customers under the System Asset Value Credit. WP&L stated this treatment of the System Asset Value Credit would allow it to receive compensation for the additional value provided to distributed generation customers who use the system to conduct energy transactions (consuming and generating). WP&L also proposed that the rate of return applied to this regulatory asset have conditional adders be established such that for every 5 percent that total interconnected systems exceed WP&L's forecast, the adder would increase by an amount equivalent to the effect of a 0.5 percent increase in the applicant's authorized return on equity. WP&L also proposed that the System Asset Value Credits be accounted for as purchased power expense, and to defer the System Asset Value Credits incurred and include the costs in a future proceeding as a component of fuel costs. As part of WP&L's proposal to defer System Asset Value Credits costs, WP&L proposed carrying costs be based on its short-term debt rate.

WP&L, CUB, WIEG, SEIA, Dane County, RENEW, 350 Wisconsin, VS/SC, Clean Wisconsin, and Commission staff all provided testimony on WP&L's revised proposal. Several parties, including 350 Wisconsin, Clean Wisconsin, Dane County, Vote Solar, Sierra Club, and WLGCC, suggested that the Commission reject the proposed modifications and further investigate the appropriate tariff structure for parallel generation customers, citing several concerns around WP&L's proposal to place an end date on traditional net metering. They also

opposed the approval of the proposed Power Partnership V2, with several of these parties stating that WP&L's proposal is unreasonable and unnecessary. RENEW and SEIA expressed support for the program, stating that it offered a reasonable transition away from traditional net metering. CUB expressed support for the program, if the Commission ordered that the program include payments offered for avoided transmission costs.

The Commission did not approve WP&L's proposal to close net metering to new customers. The Commission did not find there to be adequate justification for authorizing a rate of return to WP&L for payments made out to parallel generation customers and determined there was not sufficient evidence to set a closing date on net metering. Further, the Commission felt that the complexity and novelty of many of the concepts in the Power Partnership V2 tariff proposal required more analysis. The Commission agreed with several parties that further investigation of the appropriate tariff structure for parallel generation customers was needed and directed further investigation in this docket. (PSC REF#: 487254.)

Request for Analysis: Value of Solar

Several parties provided testimony in MGE and WP&L's 2023 rate case proceedings suggesting that the Commission investigate the value of solar in the form of a Cost-Benefit Analysis, and in its orders, the Commission directed Commission staff to investigate the value of solar and/or a Cost-Benefit Analysis as part of this investigation. (PSC REF#: 487247 and PSC REF#: 487254.)

A value of solar study analyzes the full range of benefits and costs associated with solar energy deployment and thus helps determine an appropriate net metering value. Many states

have already conducted Cost-Benefit Analyses/Value of Solar studies.³ Most of these analyses contain some common components, including:

- Avoided operation and maintenance costs (fixed and variable);
- Avoided fuel;
- Avoided generations capacity;
- Avoided reserve capacity;
- Avoided transmission capacity;
- Environmental and health liability benefits and costs associated with different forms of electric generation;
- Costs to purchase and install solar PV;
- Costs to purchase utility generated electricity.

A National Standard Practice Manual for Benefit Cost Analysis of Distributed Energy Resources was published in August 2020.⁴ Resources used by other states to conduct value of solar analyses are also available.

Commission staff is requesting value of solar studies, along with a narrative discussion of the methods used. The studies should address the value of solar particular to Wisconsin as

³ States with Value of Solar studies include: Arizona (2016 and 2013); Arkansas (2017); California (2016, 2013, 2012, 2011, 2010, 2005); Colorado (2013); Florida (2005); Hawaii (2014); Iowa (2016); Louisiana (2015); Massachusetts (2015); Maine (2015); Mississippi (2013); North Carolina (2013); Nevada (2017, 2014); New Jersey and Pennsylvania (2012); New York (2012 and 2008); South Carolina (2015); Texas (2014); Utah (2014); Vermont (2014); Virginia (2014); and Wisconsin (2016). Other states have conducted dockets and processes for establishing a Value of Solar methodology or framework, such as: Minnesota (2014); Rhode Island (2015); and New York (2016). Solar Energy Industries Association, Solar Cost-Benefit Studies. Available at: https://www.seia.org/initiatives/solar-cost-benefit-studies.

⁴ T. Woolf, *et al*, National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources, National Energy Screening Project (Aug. 2020). Available at: https://www.nationalenergyscreeningproject.org/national-standard-practice-manual

opposed to other states and, to the extent possible, incorporate information specific to the utility's service area.

Request for Comments: Potential Scope of Continuing Investigation

In addition to investigating the value of solar studies, the Commission invites interested parties and members of the public to comment as to the additional topics for this continuing investigation.

Testimony provided in dockets 3270-UR-125 and 6680-UR-124 identified several net metering issues that could be included in the scope of this investigation. A brief explanation of some of the most frequently raised issues follows. Commission staff is seeking comments related to:

- The scope of the investigation, including which of these issues should be included in the investigation and any other issues that should be included in the investigation;
- The priority of the issues recommended to include in the investigation; and
- How the Commission should address the issues in the investigation.

Cost of Service Study (COSS)

Several parties provided testimony during the 2023 MGE and WP&L rate case proceedings that the Commission should investigate the viability of a COSS that includes class results for parallel generation customer classes. COSS are typically used in rate case proceedings to inform how to assign individual rate class revenue changes and individual rate design components. Different COSS can use a range of assumptions and cost-allocation methodologies to assign the various operating expenses of a utility to its individual customer classes. A COSS related to parallel generation customers could gather data on the utilities'

expenses, assets, and customer base to determine the actual costs of providing retail service to this type of customer.

Commission staff is seeking comments on whether it would be appropriate to investigate the viability of a COSS that includes class results for parallel generation and net metering tariffs. Any comments in support of this investigation topic should include details as to how this topic may be further developed as part of this investigation.

Solar Adoption Rates

MGE and WP&L both provided testimony in their 2023 rate proceedings that the current net metering structures are not viable for the utilities to continue and that non-participating customers are being overcharged as a result of current programs. Other parties testified that the current low solar adoption rates in Wisconsin means that any net metering has a minimal impact on utilities' costs or revenues or on non-participating customers. Some parties suggested the Commission investigate how solar adoption rates impact the viability and efficiency of traditional net metering. Commission staff is seeking comments on whether it should include in this investigation an analysis of the impact net metering has on both solar adoption rates and non-participating customers, and if so, the priority of the issue, and how the Commission should address the issue.

Rate Design

MGE and WP&L in their 2023 rate proceedings provided testimony on new technology that can be used to support moving beyond net metering and to ensure the rates are non-discriminatory and cost-of-service-based. There was significant testimony from the parties and public comments questioning the appropriate kWh net metering rate for a parallel generation customer, including what would be an appropriate inflow-outflow incentive rate. There was also

significant testimony from parties related to the fairness of annual, monthly, or instantaneous net metering. Commission staff is seeking comments on whether net metering rate design and incentive structures should be included in the investigation, and if so, the priority of this issue and how the Commission should address it.

Access to Distributed Generation

A few parties provided testimony that the benefits of distributed generation and net metering are not as available to low-income and marginalized customers as they are to other customers. Commission staff is seeking comments related to including in the investigation the impacts of various net metering approaches on maintaining or improving energy equity and increasing access to the benefits of distributed generation to low-income and marginalized customers, and if so, the priority of this issue and how the Commission should address the issue.

Other

Commission staff is seeking comments related to other issues not addressed in this memorandum that it should include in the investigation of net metering, the priority of those issues, and how to address them.

Conclusion

The Commission has been investigating parallel generation in docket 5-EI-157 since June 2020. Since then, the Commission has approved new TE dockets related to parallel generation for large COGS and developed and accepted public comments on an information paper on net metering. In its Final Decisions in dockets 3270-UR-125 and 6680-UR-124, the Commission directed Commission staff to specifically investigate net metering within the existing 5-EI-157 docket.

Commission staff requests input from stakeholders and the public in defining the scope of this investigation into net metering. Commission staff welcomes information about ideas or options to consider, including comments about whether or not to investigate the proposed scope issues included in this memorandum, comments on additional issues that should be investigated, comments on the priority of investigation issues, and comments related to how the Commission should address investigation issues.

KEC:JHA:jlt:DL: 02000766

Key Background Documents

Notice of Investigation Signed and Served 6/11/2020 - PSC REF#: 391581

Initial Utility Data Request – PSC REF#: 393351

Cover Letter and Informational Memorandum for Comment - PSC REF#: 401895

Order Signed & Served 05/04/2021 – PSC REF#: 410850

Cover Letter and Commission Memo for Comment - PSC REF#: 417215

Cover Letter and Memorandum for Comment-Net Metering – PSC REF#: 431687

Final Decision Signed and Served 12/20/2023 – PSC REF#: 487247

Final Decision Signed and Served 12/20/2023 - PSC REF#: 487254

Notice of Investigation - Second, Signed and Served 3/14/2024 - PSC REF#: 493957