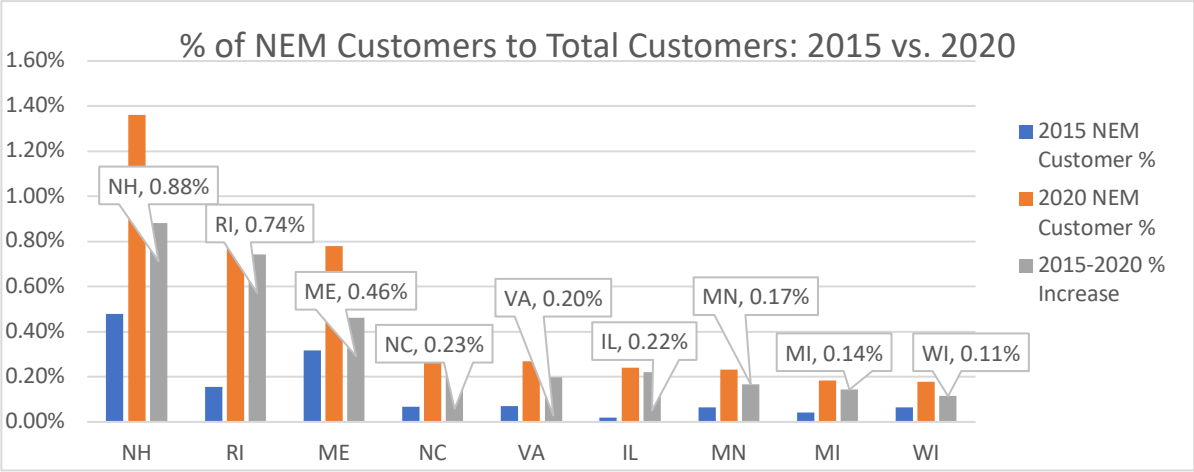
BEFORE THE PUBLIC SERVICE COMMISSION OF WISCONSIN

Investigation of Parallel Generation Purchase Rates	5-EI-157

COMMENTS OF THE CLEAN ENERGY ADVOCATES

The below-signed Clean Energy Advocates are pleased the Commission initiated this long-overdue investigation into distributed generation ("DG") and parallel generation tariffs in Wisconsin, and appreciate the opportunity to provide these comments. The current patchwork of policies and programs in Wisconsin has created artificial market barriers that make the State an unnecessarily difficult place for DG developers to do business and grow Wisconsin's clean energy workforce. These barriers contribute to the slow growth of DG systems in the State over the past five years compared to other states:[1]



Overcoming three key barriers, including improving net metering programs, will foster successful DG policies to accelerate progress toward the State's goal of 100% carbon-free electricity by 2050.

- **Inconsistency**: Current parallel generation tariffs are a patchwork of differing practices, terms and conditions from utility to utility. In addition, statewide interconnection procedures are outdated and ambiguous, resulting in differing standards and rules among different utilities.
- **Market Uncertainty**: Significant regulatory and investment uncertainty exists in many aspects of policy, tariffs, terms, and compensation mechanisms, frustrating the ability of DG providers and customers to pursue long-term investment and obtain financing.
- **Uneven Playing Field**: Wisconsin's utilities are able to take advantage of both the lack of consistent statewide standards and competitive market uncertainties to frustrate competitive DG deployment and develop their own projects unencumbered by those limitations.

[1] The eight states shown here were the states closest to Wisconsin in terms of cumulative NEM capacity at the end of 2015, *i.e.*, the four states immediately above and below Wisconsin in EIA data listing NEM capacity by state. The 2020 data is based on NEM capacity through April 2020. The percentage of total customers uses 2018 total state customer counts for both calculations. Note that Wisconsin has fallen behind states it had previously led.

This investigation is a key first step in reducing these barriers, cultivating competition and invigorating the health of the State's energy economy. These comments provide brief discussions of how these barriers operate in the context of the specific questions the Commission has posed.

1. *What factors or methods should inform the determination of appropriate avoided costs from distributed generation facilities? How are those factors and methods considered in current utility purchase rates?*

The principle of avoided-cost pricing and compensation is based on a premise that properly designed, long-term avoided-cost rates render ratepayers indifferent to whether energy, capacity or other services are secured via utility investment or a purchase agreement with customers or other non-utility producers. Giving effect to the ratepayer indifference principle requires parity between the factors considered when evaluating utility investments and the methodology used to determine the avoided costs due to qualifying facilities ("QFs"). Current parallel generation tariffs lack this parity in at least two ways.

First, parallel-generation tariffs are inconsistent with respect to providing net export compensation for the capacity value of DG resources. For instance, Madison Gas and Electric's ("MGE") Parallel Generation Buy-Back Rate includes a miniscule capacity adder,[2] while comparable Wisconsin Electric Power Company's ("WEPCO's") Customer Generating System ("CGS") tariffs mostly exclude capacity compensation.[3] While the lack of fair compensation for avoided capacity is a problem with both sets of tariffs, the inconsistencies themselves exhibit a lack of unified policy that stymies investments.

Second, none of the current suite of parallel generation rates contain options for participants to lock in compensation rates under long-term contracts. This framework contrasts with how utilities recover the costs of their own rate-based investments, which are not subject to a reduction in revenue recovery if, for instance, prevailing energy prices change, investments are retired earlier than expected, or projects do not perform as intended—all of which are risks ratepayers bear for utility-owned generation but not third-party owned generation (where developers bear those risks). In recognition of these characteristics, and because the Federal Energy Regulatory Commission's ("FERC's") Public Utility Regulatory Policies Act ("PURPA") regulations stress the need for reasonable financing opportunities,[4] a number of states offer both fixed and variable compensation rate options for small to moderate-sized QFs.

In addition to these "level the playing field" issues, there are several other components of avoided cost rate determinations that the Commission should consider going forward, the evaluation of which should be *identical* between utility-owned and non-utility-owned DG.

[2] *See, e.g.,* MGE Parallel Generation Buyback Rates (Effective January 1, 2020).
[3] *See, e.g.,* WEPCO Schedule CGS DS-FP (Effective January 1, 2015).
[4] *See* Order No. 69, FERC Stats. & Regs. ¶ 30,128 at 30,880 (agreeing with commenters stressing "the need for certainty with regard to return on investment in new technologies").

- **Energy Storage Capacity Value**: While battery storage capacity value may be determined in the same manner as non-storage capacity value (*i.e.*, as a capacity value enhancer), alternative methods can reflect unique storage characteristics (*e.g.*, battery duration, grid-charging capability, paired or standalone).
- **Environmental Value**: The proper benchmark for comparing non-utility-owned renewable generation is utility-owned *renewable generation*, including the environmental benefits (*e.g.*, avoided carbon emissions) relative to fossil-fueled generation.
- **Local Distribution Value**: DG systems decrease line losses and avoid the need for upstream transmission and distribution investments, and should be valued as such.
- **Incremental Services**: Battery storage and smart inverters can provide valuable ancillary services such as frequency and voltage regulation. Those services should be considered as part of parallel generation compensation to the extent that a facility can provide them and opts to do so.

The Clean Energy Advocates are not recommending a specific methodology for calculating avoided costs at this juncture given the complex and technical nature of the issue. We urge the Commission to allow further work on this issue to take place over the course of the investigation.

2. *What ongoing or anticipated market or regulatory changes related to distributed generation and avoided-cost calculations are relevant to this investigation?*

Technological changes are driving the DG industry towards a future focused on the provision of grid services and the creation of a more decentralized electricity system that values those services. The pace of this evolution is much faster in many other states than it is in Wisconsin but remains intentionally measured overall. Ongoing market shifts typically take the form of gradual, new opportunities for DG to provide incremental services while allowing developers time to create and market products that respond to modified tariffs and compensation.

The avoided-cost values listed in response to Question (1) relate to these broader market changes and are all relevant to this investigation. Notably, virtually every state has maintained the historical distinction between market and tariff structures for small behind-the-meter ("BTM") DG systems, which target supplying on-site energy needs, and wholesale facilities, due to the different locational and operational characteristics. That distinction should remain present in Wisconsin DG policy.

Finally, while proceedings at FERC may result in revised PURPA implementation rules, current proposals would not significantly impact this Commission's authority and discretion with respect to establishing parallel-generation tariffs and setting avoided-cost rates.[5] Consequently, such considerations are not currently relevant to this investigation.

[5] *See Qualifying Facility Rates and Requirements Implementation Issues under the Public Utility Regulatory Policies Act of 1978*, 168 FERC ¶ 61,184 (2019).

3. *What ongoing or anticipated changes to distributed generation technology and operations are relevant to this investigation?*

The most prominent technological changes in the DG landscape today are the increased deployment of energy storage and smart inverters. Both technologies enhance the value DG resources provide to the electric system on their own, but the truly game-changing implications are associated with DG systems that deploy and fully utilize both. Most new DG systems are equipped with smart inverters with enhanced control and communication capabilities, although such functions are currently under-utilized in most states. Battery storage deployment is far less common, but it is growing in both the BTM and wholesale DG market. Further, Distributed Energy Resource Management Systems ("DERMs") provide utilities enhanced visibility into the real-time operations of DG fleets and provide a platform for utilizing the full capabilities of DG to provide grid services. The proliferation of electric vehicles and sophisticated demand response tools can also contribute to grid management via beneficial load shifting.

Collectively, these technological developments foreshadow a fundamental change in both DG markets and grid operations. On the one hand, utilization of both smart inverters and battery storage not only significantly reduces the impacts of a DG system on safety, reliability and power quality; it also has the potential to provide grid services that enhance these qualities. Coupled with the development of national standards such as IEEE 1547 to verify inverters can meet updated settings and standards, enhanced functions should allow interconnection timelines to plummet, improving customer experiences.

On the other hand, DG customers must be allowed to both serve onsite load and export for fair compensation (at least one Wisconsin utility's current tariffs prohibit this), as well as provide and be compensated for grid services—whether from the utilization of smart inverters alone, pairing with battery storage, from aggregating DG via DERMs platforms, or participating directly in FERC-administered wholesale markets. We urge the Commission to explore the many ways in which DG systems equipped with advanced technologies can provide value and seek ways to realize that value. It is our strong view that a decentralized grid platform should use an approach that relies on standard terms and performance compensation mechanisms (or penalties) to secure grid services, rather than direct utility dispatch and control, which undermines customers' warranties and investment certainty.

4. *How do purchase rates under current parallel generation tariffs affect customer decisions to invest in distributed generation? What barriers to installing and operating distributed generation are relevant to this investigation?*

Rate simplicity and stability are the founding principles of electricity regulation—harkening back to the long-serving Bonbright principles—that enable customers to make informed long-term investments that spur economic growth.[6] These same principles apply to DG programs, where the ability to understand

[6] James C. Bonbright, *Principles of Public Utility Rates*, Columbia Univ. Press (1961).

in advance the $/kWh or $/kW costs and compensation for installing DG over the lifetime of the system is a touchstone of a successful DG program. Parallel generation rates must be predictable and readily understandable, while also minimizing administrative complexity and burdens in their implementation. The mechanics of net metering respond to these needs, form a key reason DG has grown in Wisconsin despite the significant obstacles outlined in these comments, and must be maintained within the State.

However, net metering alone cannot overcome the inconsistency, uncertainty, and lack of a level playing field between monopoly utility and competitive market segments in Wisconsin. One or more of these characteristics is present in each of the more specific barriers listed below:

Variability Between Utilities: DG rate options vary from utility to utility both in terms of their availability to customers and their service provisions. Furthermore, existing statewide interconnection rules are outdated and lack detail, resulting in the imposition of different rules in different service territories. This patchwork of regulations makes it difficult for providers to scale their businesses across multiple service territories because each territory is akin to a new market with different rules and standards, some of which may change at the sole discretion of utilities.

Future Rate & Tariff Uncertainty: Tariffs for utility-supplied service impact DG's viability, including the level of the relevant customer charge and the nature of any applicable demand charges. Wisconsin lacks consistent policy regarding rate design and terms of service for DG customers, and residential customers in particular, making it difficult for customers and providers to understand the DG value proposition and plan their investments. Grid-supply projects suffer from similar uncertainty because they lack options to secure fixed pricing for multi-year terms for both energy and capacity, disadvantaging them relative to utility-owned projects that can lock-in fixed revenue requirements counting these values.

Encroachment of Utility-Owned DG: Programs such as WEPCO's Solar Now program intrude on the otherwise competitive DG market and lack guardrails for preventing utilities from using market power to steer customers to their own programs. Competition on a level playing field is not possible if utilities have ratepayer-backed financing, legal review, engineering and marketing, essentially unlimited access to customers, and complete control of an opaque interconnection process with no outside visibility into local DG "hosting capacity." WEPCO has leveraged these advantages to push customers away from non-utility providers towards its own program.[7] Furthermore, while Wisconsin utilities possess the ability to develop and market community-based solar programs, no such mechanism exists for non-utility providers to produce similar options that use off-site DG to serve multiple customers.

Third-Party Ownership: The lack of clarity surrounding various third-party ownership financing structures is an enormous barrier to a healthy DG market in Wisconsin. This regulatory uncertainty extends to leases, service agreements (combining BTM generation, energy efficiency and load shifting capabilities) and retail power purchase agreements and affects all market segments (*e.g.*, residential, commercial, government, school, non-profit, etc.). Beyond depriving customers of access to greater financing options, this uncertainty contributes to the non-level playing field between utility-owned DG and competitive DG systems because utilities can offer arrangements that competitive providers cannot.

[7] *See, e.g.,* Docket No. 6630-TE-102, *Comments on Wisconsin Electric Power Company's Renewable Energy Pilot Programs of The Environmental Law & Policy Center and Vote Solar*, pp. 9-10 (describing how "WEPCO recently refused to interconnect seven DG facilities as part of the City of Milwaukee's ReFresh plan while at the same time steering the City to WEPCO's Solar Now Program.").

The Clean Energy Advocates appreciate the opportunity to provide these initial comments and look forward to additional opportunities to elaborate on the key issues and solutions presented herein.

Respectfully submitted this 14th day of July, 2020, by:

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