

STATE OF IOWA
BEFORE THE IOWA UTILITIES BOARD

FILED WITH
Executive Secretary
June 15, 2015
IOWA UTILITIES BOARD

IN RE:)
)
DISTRIBUTED GENERATION) **DOCKET NO. NOI-2014-0001**
)
) **RESPONSE TO BOARD ORDER**
) **SOLICITING ADDITIONAL**
) **COMMENTS**
)

The Environmental Law & Policy Center, Iowa Environmental Council, Sierra Club, Iowa Solar Energy Trade Association (ISETA), Solar Energy Industries Association (SEIA), and Vote Solar, collectively the “Joint Commenters,” jointly file these comments pursuant to the Iowa Utilities Board Order Soliciting Additional Comments issued on April 30, 2015.

Description of the Parties

The Environmental Law & Policy Center (ELPC) is a non-profit corporation with an office in Des Moines, Iowa and members who reside in the State of Iowa. ELPC’s goals include promoting clean energy development and advocating for policies and practices that facilitate the use and development of clean energy such as solar and wind power.

The Iowa Environmental Council (IEC) is a broad-based environmental policy organization with over 70 diverse member organizations and a mission to create a safe, healthy environment and sustainable future for Iowa. IEC’s work focuses on clean water, clean air, conservation, and clean energy, including the promotion of policies that would facilitate the development of clean energy and clean energy jobs.

The Iowa Solar Energy Trade Association (ISETA) is a non-profit, professional organization for promoting solar photovoltaic and solar thermal industries in Iowa. ISETA promotes the interests of its members through education and public relations about the economic and environmental benefits of solar. ISETA advocates for policies that will facilitate and promote the development of solar photovoltaic and solar thermal energy in Iowa.

The Sierra Club, the nation's oldest grassroots environmental organization, has a mission to explore, enjoy, and protect the planet. The Sierra Club works state-wide and nationally to advocate for clean, renewable energy to reduce air pollution, water pollution, and the effects of climate disruption resulting from fossil fuel extraction and combustion.

Vote Solar is a non-profit grassroots organization working to foster economic opportunity, promote energy independence and fight climate change by making solar a mainstream energy resource across the United States. Since 2002 Vote Solar has engaged in state, local and federal advocacy campaigns to remove regulatory barriers and implement the key policies needed to bring solar to scale.

The Solar Energy Industries Association (SEIA)¹ is the national trade association of the United States solar industry. Through advocacy and education SEIA and its 1,100 member companies work to make solar energy a mainstream and significant energy source by expanding markets, removing market barriers, strengthening the industry and educating the public on the benefits of solar energy.

Together, the “Joint Commenters” represent a coalition of the leading national, regional and local policy organizations and businesses working on distributed generation policy in Iowa and across the nation. We are well positioned to offer the Board insights from our diverse

¹ The views represented in this filing are the views of the trade association and not necessarily any of its individual members.

experiences in states throughout the country, informed by our practical experiences on the ground in Iowa.

Introduction

The Joint Commenters greatly appreciate the continued discussion of the issues and the opportunity to respond to the Board's questions. As we have previously stated, we support an independent and inquisitive approach to this docket. Data and empirical evidence will best equip the Board and stakeholders to prioritize the relevant issues and how to approach them. The Board has already effectively used data in this docket to prioritize issues. The Board recognized that "based on the current penetration levels the impacts [of distributed generation on non-DG customers] will likely be minimal in the near future."² This data-based observation led the Board to focus on a policy goal that will allow distributed generation growth and solicit input on potential policy changes to facilitate additional growth and how to best plan for the future.

The data collected in this docket indicate that Iowa's net metered distributed generation levels are extremely low in comparison to other states and in an absolute sense. The immediate priority should be to remove barriers to the development of the distributed generation market. We support increasing the size cap for net metered eligible facilities. We recommend the Board initiate pilot projects to strategically deploy distributed energy resources and to allow virtual and aggregate net metering through a shared renewables program. These steps will complement the changes that we have previously recommended to the interconnection standards and help achieve the Board's goal of distributed generation growth in an equitable manner.

While this docket has collected important information, there are critical topics that this docket has yet to touch, and the distributed generation levels in the state will need to increase

² Iowa Utilities Board, NOI-2014-0001, Gold Memo Recommendation to Solicit Additional Responses for Net Metering, at 4 (April 8, 2015).

before there will be sufficient data available to help answer other critical questions. The Board's approach has acknowledged that there is time to thoughtfully and methodically take on these tasks. We recommend the Board continue this type of approach and prepare for the future by collecting data to understand the needs of the distribution grid and conducting studies to understand the impact of distributed generation.

We address these issues in greater detail as we turn to the Board's specific questions below.

1. The Board has offered the following proposed policy goal for comment:

To provide a regulatory framework that allows distributed generation to grow in an equitable manner that balances the interests of regulated utilities and all utility customers.

Comment on the advantages and disadvantages of the Board adopting such a policy goal.

The Board has taken a thoughtful approach to this docket from the outset by listening to diverse perspectives, collecting data and asking important questions. The Board's adoption of a policy that promotes distributed generation growth while balancing the interests of all regulated utility customers and the regulated utilities takes the lessons from this approach and provides a guiding principle for Iowa's regulatory framework to grow distributed generation in a fair manner that is capable of meeting the policy goals of the Iowa Code.

The public policy goals incorporated in the Iowa Public Utilities Act strongly support the development of renewable energy and distributed generation.³ Iowa Code Section 476.41 states: "It is the policy of this state to encourage the development of alternate energy production facilities and small hydro facilities in order to conserve our finite and expensive energy resources

³ Iowa Code § 476.41

and to provide for their most efficient use.”⁴ The Board’s adoption of a specific policy towards distributed generation that starts with an emphasis on the importance of distributed generation growth would be consistent with the policy adopted by the legislature.

It is important to note that the legislature’s policy to “encourage the development” of alternative energy production includes a stronger position on renewable growth than the Board’s proposed policy on distributed generation. The legislature’s policy is to “encourage the development” of renewable resources while the Board’s proposed policy focuses on a regulatory framework that “allows distributed generation to grow.” We think that changing “allow” to “encourage” would better align the proposed policy with existing legislative policy in statute.

The Board’s goal to balance interests while growing distributed generation suggests a data driven approach to distributed generation policy. A policy approach that balances the needs of all stakeholders including utilities and all utility customers recognizes the need for an accurate understanding of the costs to serve distributed generation customers based on real data from the utilities.⁵ On the other side of the equation, such a policy recognizes the corresponding benefits that distributed generation can provide to the grid and by extension to all utility customers.⁶ The

⁴ The policy goal in statute is not specifically limited to regulated utilities. It may make sense for the Board to remove the modifier “regulated” from the proposed policy.

⁵ See, e.g., Trabish, Herman K., Utah regulators turn down Rocky Mountain Power’s bid for solar bill charge, (Sept. 3, 2014) (Utah PSC rejecting utility claims of a DG “cross-subsidy” in the absence of a cost/benefit study), available at <http://www.utilitydive.com/news/utah-regulators-turn-down-rocky-mountain-powers-bid-for-solar-bill-charge/304455/>; Utah PSC, Docket No. 13-035-184, Report and Order (August 29, 2014) available at <http://psc.utah.gov/utilities/electric/ordersindx/documents/26006513035184rao.pdf>

⁶ See e.g., Nevada Net Energy Metering Impacts Evaluation, Prepared for : State of Nevada Public Utilities Commission (July 2014) (finding that the grid benefits of solar systems installed through 2016 will exceed costs by \$36 million) available at http://puc.nv.gov/uploadedFiles/pucnv.gov/Content/About/Media_Outreach/Announcements/Announcements/E3%20PUCN%20NEM%20Report%202014.pdf?pdf=Net-Metering-Study; Mississippi PSC Study, Net Metering in Mississippi: Costs, Benefits, and Policy Considerations (Sept. 19, 2014) (finding that solar net metering will provide a net benefit to

benefits are real and need to be studied and appropriately quantified and credited.⁷ This type of balancing based on real data is a worthwhile undertaking that will create opportunities for distributed generation growth.

We think that it is important to include utility interests as a consideration in the balancing as long as those interests are considered in the appropriate public interest context. As the Iowa Supreme Court recently explained, regulators should focus on the “public interest” when interpreting Iowa’s public utility laws. Utility regulation was never intended to protect the economic welfare of electric utilities *per se* or any one utility business model. Rather, the Court explained that utility regulation extends “only as necessary to address the public interest implicated.”⁸ As Steve Kihm and Elizabeth Graffy explain in the *Energy Law Journal*, the utility regulatory model “is designed to maintain institutional stability in order to uphold social welfare objectives ... not to uphold the welfare of utilities themselves.”⁹ This means that expectations and performance goals for utilities should be clear and transparent and that when utilities meet those goals in serving the public interest, they are fairly compensated for doing so. Scott

Mississippi in nearly every scenario analyzed) available at <http://votesolar.org/wp-content/uploads/2014/10/Synpase-MS.pdf>; Maine PUC Study, Maine Distributed Solar Valuation Study (March 1, 2015) (finding that the value of distributed solar significantly exceeds the retail rate) available at <http://www.nrcm.org/wp-content/uploads/2015/03/MPUCValueofSolarReport.pdf>.

⁷ The Interstate Renewable Energy Council’s *Regulator’s Guidebook* report highlights lessons learned from other states that have studied the benefits and costs of distributed generation, and the report provides a standardized valuation methodology that the Board could consider for future studies in Iowa. See Interstate Renewable Energy Council, *A Regulator’s Guidebook: Calculating the Benefits and Costs of Distributed Solar Generation* (October 2013) available at <http://www.irecusa.org/a-regulators-guidebook-calculating-the-benefits-and-costs-of-distributed-solar-generation/>.

⁸ *Eagle Point Solar v. IUB*, 850 N.W.2d 441, 456 (Iowa 2014) (citation omitted).

⁹ Graffy, Elizabeth and Kihm, Steve, *Does Disruptive Competition Mean a Death Spiral for Electric Utilities?*, *Energy Law Journal*, Vol. 35 No. 1 (May 13, 2014) available at <http://ecw.org/sites/default/files/graffy-kihm-elj-article-may-2014.pdf>.

Hempling in his essay “*What Regulatory Compact?*” described the balancing of utility interests and the public interest in the following way:

Government must compensate shareholders consistently with the legitimate shareholder expectations government creates. In creating those expectations, government is not bound by a "compact"; it is bound by the public interest. To promote the public interest, regulators set standards for performance, then compensate based on performance. And regulators can assign risk (including . . . the risk of lousy luck borne by all businesses), then compensate based on the risk thus assigned.¹⁰

If utility interests are interpreted in the manner highlighted above, it is possible to encourage the development of distributed generation in a fair and equitable manner. We think the Board’s proposed policy captures utility interests in this sense.

Finally, while we recognize that this docket is focused on distributed generation, when creating a policy goal, we think that it makes sense for the Board to be slightly broader. We encourage the Board to consider expanding the scope of the policy goal to include all distributed energy resources, not just distributed generation. Distributed energy resources (DER) may include generation (solar PV, micro wind, combined heat and power, fuel cells), energy storage, energy efficiency, and demand response or other load control.

Regulators and utilities in many jurisdictions are strategically deploying DER to cost-effectively defer or eliminate the need for traditional generation, transmission or distribution system investments, and thereby lowering overall costs to customers. Typically, different types of DER are combined to address the specific load characteristics of a local area or a specific location on a transmission or distribution circuit. These DER combinations have become viable alternatives to traditional transmission and distribution investment due to declining costs and increasing sophistication of the DER technologies. Some recent examples include the following:

¹⁰ Hempling, Scott, “What Regulatory Compact?” (March 2015) *available at* <http://www.scotthemplinglaw.com/essays/what-regulatory-compact>.

- In 2013, the Maine Public Utilities Commission established the Boothbay Smart Grid Reliability Pilot project to determine if DER could effectively avoid the need for rebuilding a transmission line. Specifically, the pilot sought to reduce 1.8 MW of demand to avoid an \$18 million rebuild of a 34.5 kV transmission line in Central Maine Power’s service territory. The DER deployed in the pilot included solar PV, energy efficiency, demand response, energy storage and back-up generation, and collectively have exceeded the demand reduction target. The total cost for the pilot and deployment of the DER is projected to be one-third the cost of rebuilding the transmission line and will save customers \$17.6 million over the 10-year project life.¹¹
- The State of Rhode Island requires electric utilities to consider DER or “non-wires alternatives” for certain types of transmission and distribution capital projects. In addition to deploying targeted energy efficiency and demand response measures, National Grid initiated a study to assess the ability of distributed solar to provide 250 kW of reliable load relief during periods of local peak demand in the Tiverton/Little Compton Region.¹² The study found that National Grid could deploy a mix of rooftop and medium-scale solar systems to help defer a multi-million dollar distribution investment. The company is now soliciting proposals for development of 140 kW “peak contribution” capacity of medium-scale solar systems for deployment within a specific, load-constrained area of the distribution grid.
- New York’s Consolidated Edison, under the Brooklyn-Queens Demand Management Program, will spend \$150 million deploying DER to reduce 41 MW of customer demand by 2018 and help defer building a \$1 billion substation. The program will include many types of DER including energy efficiency, demand response, solar PV, and distributed storage.¹³
- Southern California Edison (SCE) recently conducted a Local Capacity Requirement proceeding to procure 2,200 MW of capacity in the West Los Angeles and Moorpark areas, largely due to the closure of the San Onofre nuclear power plant. In addition to procuring traditional natural gas fired generation, SCE awarded contracts for a variety of energy efficiency, demand response, renewable

¹¹ GridSolar, LLC, “Interim Report Boothbay Sub-region Smart Grid Reliability Pilot Project,” March, 2014, available at http://www.scotthemplinglaw.com/files/attachments/maine_interim_report_boothbay_smart_grid_reliability_pilot_project.pdf

¹² <http://www.energy.ri.gov/reliability/>

¹³ Enerknol Research, “NY PSC Approves Con Edison BQDM Program,” December 2014, available at <http://breakingenergy.com/2014/12/22/ny-psc-approves-con-edison-bqdm-program/>

energy, and energy storage resources. The total capacity from these DER or “preferred resources” will exceed 500 MW.¹⁴

Although the Iowa Public Utilities Act does not specifically address DER, it does state that “the health, welfare, and prosperity of all Iowans require the provision of adequate efficient, reliable, environmentally safe, and least-cost energy.”¹⁵ We encourage the Board to expand the scope of the policy goal to include all distributed energy resources, setting the stage for utilities to begin considering DER as least-cost alternatives to traditional capital investment.

2. Would it constitute a "sale" if the Board were to determine that at the end of each year, unused kWh credits are to be diverted and used for a special cause?

PURPA defines net metering to be “service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period.”¹⁶ FERC has stated that “no sale occurs when an individual homeowner or farmer (or similar entity such as a business) installs generation and accounts for its dealings with the utility through the practice of

¹⁴ Eric Wesoff, Jeff St. John, “Breaking: SCE Announces Winners of Energy Storage Contracts Worth 250MW”, November, 2014, available at <http://www.greentechmedia.com/articles/read/breaking-sce-announces-winners-of-energy-storage-contracts>

¹⁵ Iowa Code § 473.2

¹⁶ 16 U.S.C. § 2621(d)(11).

netting.”¹⁷ The Board has described net metering by stating that “net metering does not involve separate purchase and sale transactions but is essentially a metering arrangement.”¹⁸

Allowing a customer that net meters the option of transferring net excess kWh credits to a special cause would be a billing arrangement, but it would be different than the existing netting of energy. As we have discussed in previous comments related to cash out of excess generation, this type of arrangement should recognize the full benefit that the distributed generation system has provided by crediting full value for the excess production.¹⁹ Instead of allowing the customer to cash out the additional benefit, the additional benefit would be transferred to another program. If this is done as a billing arrangement at the option of the customer, it would not have the hallmarks of a sale in that the customer is not receiving any compensation. It would be more like a donation of “credits” in that case.

If the Board pursues this option, we believe customers should retain the option to have their credits roll-over into the next year in order to provide maximum flexibility. In this way, customers would be able to participate in the net metering program in a way that makes the most sense for them and allow the customer the choice of how the benefits from their distributed generation system are allocated.

¹⁷ Federal Energy Regulatory Commission, MidAmerican Energy Company Docket No. EL99-3-000, Order Denying Request for Declaratory Order (March 28, 2001).

¹⁸ Iowa Utilities Board, Docket No. PURPA Standard 11, Order Regarding PURPA Standard 11 at 3 (August 8, 2006).

¹⁹ Iowa Utilities Board, Docket No. NOI-2014-0001, Environmental Coalition Response to Board Order Soliciting Additional Comments, at 11-12 (Oct. 24, 2014).

3. **Since the net-metering facility size cap and carry-over provisions were established through settlements between the investor-owned utilities and the Office of Consumer Advocate, a division of the Iowa Department of Justice, should any changes to those provisions be addressed via a rule-making docket, or through modification of the tariff provisions, or does the forum matter?**

Improvements to Iowa's net metering rule should be addressed through a rulemaking. Rulemaking is a transparent process that provides options for public participation and input. In addition, a rulemaking provides a record and an outcome that is transparent and easy for all stakeholders to reference and apply in the future. State policy should not be set in individual tariffs or on a case by case basis – developing policy in that way undermines certainty and creates problems for market development.

The practice established in settlements and implemented in tariffs of having a 500 kW net metering facility size cap modifies or amends Iowa's net metering rule. Iowa's net metering rule states: "Each utility shall offer to operate in parallel through net metering (with a single meter monitoring only the net amount of electricity sold or purchased) with an AEP facility, provided that the facility complies with any applicable standards established in accordance with these rules."²⁰ The rule is clear that a utility shall net meter all qualifying AEP facilities. There is no exception in the rule. However, the settlement with MidAmerican carved out an exception to that universal requirement to net meter for facilities of a certain size. This created an inconsistency between the settlement, the subsequent tariffs implementing the settlement, and the adopted administrative rules. To resolve the inconsistency, the Board provided a waiver to the Board rule

²⁰ 199 Iowa Administrative Code § 15.11(5).

199 15.11(5) to the extent necessary to accommodate the cap restriction.²¹ Subsequently, the Board approved a similar settlement with IPL and provided a similar waiver.²²

A waiver of a rule requirement is not the same as a permanent change or amendment of that rule, and the net metering rule was never amended after the settlement. It is also unclear if it was even appropriate to use a waiver in these circumstances. “[A]gencies cannot avoid using rulemaking procedures by issuing statements of General applicability and future effect in contested case proceedings.”²³ To effectively and fairly implement any size cap eligibility requirement that is intended to be permanent, the Board should have initiated a rulemaking process to consider net metering amendments rather than rely on periodic or assumed waivers. Similarly, a rulemaking is the best way to address any future changes to net metering such as an eligibility cap size that will apply to all net metered customers. Any rulemaking process should provide procedural safeguards to all participants including sufficient time to respond to any proposed rule, and an opportunity and sufficient time to respond to other stakeholder comments including filing expert testimony if needed. Even if the Board does not initiate broader changes to the net metering rule as a result of this docket, we think that the Board should initiate a rulemaking with the limited purpose of considering whether to formally update the net metering rule to reflect the 500 kW size cap that has been the practice in Iowa in order to make Iowa’s rule consistent with the practice.

²¹ In re MidAmerican Energy Company, Docket Nos. TF-01-293 and WRU-02-8-156, Order Granting Waiver and Approving with Clarifications Tariff, at p.14 (March 8, 2002).

²² Iowa Utilities Board, Docket Nos. TF-03-180, TF-03-181, WRU-03-30-150, Order Approving Tariffs with Modification and Granting Waiver (Jan. 20, 2004).

²³ Bonfield, Arthur. *The Iowa Administrative Procedure Act: Background, Construction Applicability, Public Access to Agency Law, The Rulemaking Process*, 60 Iowa Law Review 731, 837 (1975).

The importance of a transparent net metering policy established by rule is made clear by recent issues related to net metering and third-party power purchase agreements (PPAs). In the months after the Eagle Point Solar court case allowing third-party PPAs, both MidAmerican and Interstate Power and Light have started interpreting their net metering tariffs to prohibit net metering for systems with third-party PPA financing.²⁴ This has led to public reports of at least one customer reducing the size of its distributed solar system in order to avoid the system producing more energy than is being consumed at any given time.²⁵ In addition, we have heard of school districts, municipal wastewater treatment facilities and municipal buildings that have had projects delayed, downsized, or scrapped altogether as a result of MidAmerican and IPL's stance on net metering third-party PPA financed systems. These utilities' interpretations are inconsistent with Iowa's net metering rule that requires a utility to net meter all qualifying AEP facilities and are not supported by the Iowa Supreme Court's recent order in the *Eagle Point Solar* case.²⁶ When there is "a conflict between a tariff provision and the Board's rules, the rules are generally controlling."²⁷ Thus, if a tariff is more limiting than the Board's rules, then "the tariff provision is ineffective in that respect."²⁸ When the utilities explain their rationale to

²⁴ See "Iowa court ruling lets public sector tap into solar" Cedar Rapids Gazette (March 8, 2015) (quoting MidAmerican officials stating that net metering is "not permitted" for third party financed systems, and instead requiring customers to accept "avoided cost" payments at an amount that is "much lower than the rate that a net-metering arrangement provides") available at <http://thegazette.com/subject/news/iowa-court-ruling-lets-public-sector-tap-into-solar-20150308>.

²⁵ *Id.* (using the example of Johnson County which is expected to scale back a solar array to 84 kW from 140 kW).

²⁶ 199 Iowa Administrative Code § 15.11(5).

²⁷ Iowa Utilities Board, Docket No. RPU-99-3, Order Rejecting Tariff Pages Requiring Revisions and Approving Remainder of Tariff (June 12, 2000) (concluding that "if [the] tariff purports to limit the definition in a more restrictive manner than the Board's rules, the tariff provision is ineffective in that respect").

²⁸ *Id.*

customers, they make reference to their tariffs and settlements from over a decade ago. These customers have limited ability to access and understand those settlements, and furthermore, they were not participants in those proceedings. This leaves customers confused and frustrated. The Board should make clear that Iowa's net metering rule found in Iowa Administrative Code is Iowa's policy and that the utilities must follow it, regardless of the method of financing a customer chooses. The absence of a clear policy forces parties to resolve issues through litigation and, in the interim, discourages development of distributed generation.

- 4. If the Board decides to change the cap for eligible net-metered facilities, one option would be to allow customers to net meter 110 percent of their average annual electricity consumption up to 1 MW or 2MW. Comment on the short-term and long-term financial impact such a change would have on non-DG customers and the utilities. Would this have an impact on grid reliability? Would it impact the way utilities do their resource and system planning? Identify any other concerns associated with this change.**

Changing the cap for eligible net-metered facilities to allow customers to net meter 110 percent of their average annual electricity consumption up to 1 MW or 2 MW would be a policy improvement that would facilitate the growth of distributed generation and provide customers and the grid with significant benefits.

As we have mentioned in our previous comments, distributed generation provides significant benefits that extend far beyond the location of a project to non-DG customers and the grid. Distributed generation produces energy near where it is used, thereby reducing energy losses over transmission and distribution lines and making our energy production more efficient. Distributed generation diversifies our energy, helps with the reliability of the grid, and serves as a hedge against potential future fuel price increases and environmental costs. Distributed generation provides environmental and health benefits by reducing emissions, keeping our air and water clean, and conserving limited water resources. Customer-owned distributed generation

provides energy and capacity with private investment that offsets the costs we all would pay for new utility-owned generation and capacity. Distributed generation and other distributed energy resources can be strategically deployed to defer or avoid traditional utility investment in generation, transmission and distribution lowering overall costs to customers. Finally, distributed generation provides economic benefits by creating local jobs and investment opportunities. These benefits should be accounted for in any attempt to quantify the financial impact of increasing the size cap for net metered eligible facilities.

The Board memo recognized that “based on the current penetration levels the impacts [on non-DG customers] will likely be minimal in the near future.”²⁹ Similarly, the financial impact of raising the size cap is likely to be minimal in the near future. This is supported by a study by the Lawrence Berkeley National Laboratory (LBNL) released in September 2014 that looked at the financial impacts on utilities and ratepayers of net-metered PV.³⁰ The study looked at a vertically integrated utility in the southwest and a wires-only utility and default service supplier in the northeast.³¹ The study modeled impacts of PV over a 20-year period, estimating changes to utility costs, revenues, average rates, and utility shareholder earnings and return-on-equity.³² For the vertically integrated utility, like those in Iowa, the study found that at 2.5% PV penetration the impacts on revenues and costs are roughly equivalent.³³ At a 2.5% PV penetration scenario,

²⁹ NOI-2014-0001, Gold Memo (April 8, 2015).

³⁰ Satchwell, Andrew et al., Lawrence Berkeley National Laboratory, “Financial Impacts of Net-Metered PV on Utilities and Ratepayers: A scoping Study of Two Prototypical U.S. Utilities” (2014) (hereinafter “Financial Impacts of Net-Metered PV”) *available at* [http://emp.lbl.gov/sites/all/files/LBNL%20PV%20Business%20Models%20Report_no%20report%20number%20\(Sept%2025%20revision\).pdf](http://emp.lbl.gov/sites/all/files/LBNL%20PV%20Business%20Models%20Report_no%20report%20number%20(Sept%2025%20revision).pdf) .

³¹ *Id.* at viii.

³² *Id.*

³³ *Id.*

the study found a 0.1% (one-tenth of one percent) increase in average rates for the vertically integrated utility and 0.2% increase for the wires-only utility.³⁴ While we are optimistic that an increase in the cap size of net metered eligible facilities will increase penetration rates in Iowa, even with the change, we do not think that the penetration levels in Iowa will approach 2.5% in the near future. Even if 2.5% penetration rates are possible in the long term, the LNBL report suggests that the long term financial impacts on non-DG customers would be small, particularly in light of the significant DG benefits described above. The distributed generation valuation study that we have recommended in previous comments would help provide an accurate understanding of the impact of distributed generation and this policy change in the long term.

Increasing the cap for net-metered eligible facilities would not create any reliability issues because all distributed generation facilities would still be required to follow all of the existing interconnection standards that ensure the safety and reliability of the grid.³⁵ Raising the net metering cap would not give a facility an inherent right to interconnect to the grid. The particular system would need to go through the interconnection process including conducting any necessary interconnection studies and paying for any necessary system upgrades. While larger distributed generation systems can have a greater impact on the grid than smaller systems, Iowa's interconnection standards are explicitly designed to address these differences to ensure the continued safety and reliability of Iowa's electric distribution system. In addition, many other states have higher size caps for net-metered eligible facilities and have been able to accommodate those facilities without any reliability concerns.³⁶

³⁴ *Id.* at ix.

³⁵ 199 Iowa Administrative Code § 45.1 et seq.

³⁶ *See* Freeing the Grid available at <http://freeingthegrid.org/>

It is not clear that increasing the cap size for net-metered eligible facilities would affect the utility planning process. Currently, utility planning in Iowa is not transparent. Based on information publicly provided by Iowa utilities, customer-developed resources such as distributed generation and energy efficiency are incorporated into utility planning indirectly with low load growth planning scenarios. However, we believe that distributed generation should instead be treated as a valuable supply-side resource that can be harnessed and developed and not merely as an impact on load incorporated into various planning scenarios. The limited way that utilities currently plan for distributed generation makes it unclear whether increased distributed generation alone in the absence of changes that require more transparent and robust planning would alter the utilities' plans. The Board should look at implementing an Integrated Resource Planning (IRP) process that requires utilities to include distributed generation as a supply-side resource in their planning and to take into account future changes in the market.

In addition, the Board should consider requiring utilities to submit regular distribution system plans that will foster proactive planning to incorporate and maximize the benefits from distributed generation, rather than simply taking a passive approach to distribution system planning through the interconnection process. To the extent that increasing the size cap on net metering facilities promotes greater development of distributed generation resources, it would be prudent for the utilities to anticipate this growth and seek to capture its benefits through advance planning. A 2013 paper by the Interstate Renewable Energy Council and Sandia National Laboratories discusses proactive distribution system planning efforts that are being implemented

across the country and how such planning can increase the efficiency and cost-effectiveness of high levels of distributed generation.³⁷

- 5. Propose options to address long-term net-metering options as discussed in Option 3 in the staff memorandum, such as exploring the issue in the context of a rate case. These options should identify the associated advantages and disadvantages and also allow for the growth of DG while balancing the interests of the regulated utilities and all utility customers.**

As the Board recognized in its April 30, 2015 order in this docket and staff memo incorporated by reference into that order, any impacts from continued growth in distributed generation will likely be minimal in the near future.³⁸ This provides an opportunity to develop a data driven approach to future distributed generation policy that will allow for continued distributed generation growth while balancing the interests of regulated utilities and all utility customers. While the Board has time to develop its specific approach, the Board should begin the process now.

In our earlier comments, we noted that the New York Public Service Commission's "Reforming the Energy Vision" (REV) docket is a good example of this type of collaborative and goal-oriented process that will ultimately be necessary in all 50 states.³⁹ This NOI docket on distributed generation has laid the ground work for such a docket. The long term approach to

³⁷ Lindl, Tim et al., Integrated Distribution Planning Concept Paper: A Proactive Approach for Accommodating High Penetrations of Distributed Generation Resources (May 2013), available at <http://www.irecusa.org/wp-content/uploads/2013/05/Integrated-Distribution-Planning-May-2013.pdf>.

³⁸ Iowa Utilities Board, NOI-2014-0001, Gold Memo Recommendation to Solicit Additional Responses for Net Metering, at 4 (April 8, 2015).

³⁹ See NY PSC, Docket 14-M-0101 – Reforming the Energy Vision (REV) available at <http://www3.dps.ny.gov/W/PSCWeb.nsf/ArticlesByTitle/26BE8A93967E604785257CC40066B91A>.

address distributed generation policy in Iowa should include an Iowa specific docket⁴⁰ that collects data, collaboratively explores new approaches, develops specific consensus policy recommendations on net metering and distribution system planning with a goal of deploying distributed generation and other distributed energy resources to make Iowa's electric grid stronger and more efficient. We suggest that this docket be expressly guided by explicit policy goals to encourage reform in the public interest.⁴¹

As we have maintained throughout this docket, an effective long term approach to distributed generation, net metering and the energy grid of the future will require taking steps to ensure that policymakers have the necessary information about the future benefits of distributed generation and costs of a mature distributed generation market. Future decisions should be made based on the information collected, and it should not be assumed that current policies need to be replaced, changed, or eliminated. There are some steps towards collecting this information that can be started immediately. To fully understand the potential benefits of distributed generation as well as the potential costs for maintaining the current electric grid, a new docket can collect information and promote increased transparency about distribution grid constraints and future distribution grid investment needs. Minnesota recently launched an inquiry into Electric Utility Grid Modernization with a focus on Distribution Planning that will include workshops to collect

⁴⁰ This docket could be a continuation of the current docket with explicit guidelines and goals for next steps on the long term approach or the Board could choose to initiate a new NOI docket

⁴¹ For example, the New York REV docket established the following five explicit policy objectives: Customer knowledge and tools that support effective management of their total energy bill; Market animation and leverage of ratepayer contributions; System wide efficiency; Fuel and resource diversity; and System reliability and resiliency. NY REV Order, Case 14-M-0101 (4/24/2014).

information and engage stakeholders collaboratively.⁴² This information will be critical to designing effective pilot programs and engaging stakeholders to jointly and creatively solve the challenges of making the electric grid more efficient and seamlessly incorporating significant increases in distributed generation. The new docket can also be a place to explore the results of any pilot projects that come out of this docket. It will be important for results of any pilot projects to be independently evaluated and transparently vetted, and a collaborative docket would provide a good venue to accomplish this.

We have previously recommended an independent value of solar study be conducted prior to any changes in net metering policy or rate design. The independent valuation study will help make it possible to assess how utilities can recover actual costs for providing services while taking into account actual benefits provided by distributed generation. We recommended that the valuation study wait until Iowa's solar penetration levels reach 1% of total generation. This would provide a sufficiently broad solar experience in Iowa to generate good Iowa-specific information for the study while still leaving sufficient time to incorporate the results into policy decision making and rate designs prior to solar penetration levels having a significant impact on utilities and non-participating customers. A new docket would be an appropriate place to oversee a value of solar study when the timing is right and the distributed generation penetration level is significantly higher than today's level. Because we suggest waiting to conduct the value of solar study, any changes to rate design or restriction of net metering should also wait for the results of that study.

⁴² See Building a Minnesota Conversation on Grid Modernization with a Focus on Distribution Systems (May 12, 2015) available at http://mn.gov/puc/documents/pdf_files/grid_modernization_5-12-2015.pdf.

An approach that prepares for the future by collecting data to understand the needs of the distribution grid and conducting studies to understand the impact of distributed generation provides multiple benefits. An ongoing docket allows existing policies including net metering to continue and be expanded upon thereby facilitating the growth of the distributed generation market in Iowa. By the time policy decisions need to be made, there will be significant Iowa-specific data that can be collected and applied. There should also be significantly more data, solutions, and experience to draw from in a broad variety of states that are dealing with higher penetration rates than Iowa currently has. The proposed docket can explore what other states are doing to address distributed generation and prepare for the grid of the future. It will allow Iowa to conduct workshops and survey expert thinking in order to take the best from those approaches and apply lessons learned. This will make Iowa's policy stronger while not stifling potential distributed generation growth in the interim.

The Board should not change net metering policy through future rate cases. Net metering is a state policy that has been adopted in Board rules. The Board should not change a policy of general applicability in the rate case of a single utility. Rate cases are complex and lengthy contested case processes that are resource intensive, keep significant portions of the information confidential, require legal representation to be effective, and have limited public participation. There are many more members of the public who will be impacted by a change in net metering policy than have participated in past rate cases or would likely participate in future rate cases. In addition, while rate cases are public dockets available through the Board's Electronic Filing System, the Board's administrative rules are much easier to access and reference. It may be appropriate to implement aspects of the Board's distributed generation policy in a rate case, but

that should occur after the policy has been developed in an open and transparent process. It may also be appropriate to implement a limited pilot project in a rate case and take the results back to the docket that we recommend. In order for the Board to meet its policy goal of allowing the growth of distributed generation in a manner that balances the interests of utilities and all utility customers, it will be important for policy to be made in a transparent, collaborative process that involve all stakeholders, and a rate case is not the best way to do this.

- 6. Propose options that could be implemented as net-metering pilot projects as discussed in Option 4 of the staff memorandum. Identify the advantages and disadvantages associated with each potential project. For each potential pilot project provide detailed elements including, but not limited to, the goal of the project, timelines, eligible participants, responsibilities of the utility and participants, potential impacts on non-DG customers, an explanation of how the proposal meets the specific needs of the utility, how each option would meet the objectives expressed in the draft policy goal, and possible results.**

In Option 4 of the staff memo, the Board looks to “consider implementing pilot projects where significant changes . . . can be explored on a limited basis while maintaining the existing net-metering rules, policies, and tariffs for the bulk of the DG customers.”⁴³ We support the Board’s approach to explore pilot projects while maintaining existing net metering rules and policies for the bulk of DG customers. For any pilot project, we think that it is important that customers have the choice about whether or not they participate in the project. This customer choice will encourage pilot programs to be designed in a manner that attracts participation and meets the policy goal of encouraging distributed generation’s continued growth.

The staff memo elaborates that the goal for pilot projects is “to encourage DG in areas where it is needed, to encourage the types of generation that will provide energy at the times when it is needed, at pricing that is equitable to the utility and all utility customers. Presumably,

⁴³ NOI-2014-0001, Staff Memo, at 18 (April 8, 2015).

there would be more value to the utility and the utility customers associated with generation placed where it is needed and producing energy when it is needed.”⁴⁴ With this goal in mind, we offer pilot projects on the strategic deployment of distributed energy resources and shared renewables.

Pilot 1: Strategic Deployment of Distributed Energy Resources Pilot

As stated previously, we encourage the Board to expand the scope of the policy goal to include all distributed energy resources (DER), not just distributed generation. We also encourage the Board to investigate how utilities can strategically facilitate the deployment of solar DG or other DER to reduce peak demand, relieve constraints, and potentially avoid or defer distribution capital investment. Finally, we encourage the Board to increase the transparency of utility resource planning, particularly at the distribution level, and to more explicitly consider the full benefits of DER. With these recommendations in mind, we propose a strategic deployment pilot project that could be limited to just solar DG, but that we think would provide greater benefits, more opportunities for impact, and a greater likelihood of attaining the Board’s end goal as a broader DER pilot.⁴⁵

Board-mandated solar DG [or DER] local capacity pilot projects could help achieve the expanded policy goal and increase planning transparency by requiring the following:

- Utilities shall identify and publish descriptions of their planned capital projects above \$250,000 to address distribution system demand growth or capacity constraints.

⁴⁴ *Id.*

⁴⁵ To help the Board think about how the proposal would work as solar proposal and could be expanded to include DER, we have bracketed DER references in the proposal.

- Utilities shall publish details on load, system, and customer characteristics at the constrained distribution system locations (e.g., historical load patterns including the magnitude, duration, and timing of peak demand; projected demand growth rates; voltage and power factor profiles; types of customers served; etc).
- Utilities shall solicit proposals from third parties to demonstrate the feasibility, costs and benefits for solar DG [or other DER] to provide demand reduction in one or more constrained location and to potentially avoid or defer distribution capital investment. Successful bidders shall determine the most viable solar DG [or other DER] equipment; the most optimal locations, configurations, and orientations for the equipment; and the expected sustained, reliable load relief from the solar DG [or other DER]. Bidders shall be encouraged to consider a wide range of deployment, interconnection, and ownership alternatives.
- Utilities shall award contracts to bidders offering alternatives that provide sustained and reliable demand reductions.
- Utilities shall report to the Board on the selected alternatives, rationale for the selections, and expected savings (if any) from the selected alternatives.

The objectives of the local capacity pilot projects are to 1) begin to document the potential for solar DG [or other DER] to provide sustained, reliable peak demand reductions potentially leading to deferral or avoidance of distribution capital investment in specific and identified instances, and 2) better understand the costs, benefits and risks associated with deploying solar DG [or other DER] as a resource to address distribution system capacity

constraints in the short term. As part of the pilot, the Board would also gather information about the long-term benefits and risks of deploying solar DG [or other DER], which may or may not be different from the short-term benefits and risks. If the Board accepts our recommendation to expand the pilot to include all DER to achieve greater benefits and provide more opportunities for impact, eligible participants may include providers of renewable energy, load control, energy efficiency, and energy storage solutions.

We recommend that the Board form a working group as part of the docket recommended above to develop a framework for fair compensation to third party providers of solar DG or DER solutions, customers who participate and contribute to the avoidance or deferral of the capital additions, and utilities that demonstrate a commitment to adopting solar DG or DER as preferred alternatives. The working group shall also evaluate the impact of the pilot projects including the cost savings realized by each utility and its customers. We recommend that the Board convene the working group with a goal of initiating the pilot project and bid proposals by January 2016. The working group will receive status updates and evaluations annually from 2016-2018.

Pilot 2: Shared Renewable Pilot Program

We support the implementation of a shared renewables—sometimes referred to as virtual or community net metering, or community solar—pilot program. Shared renewable programs provide another outlet for the growth of distributed generation, expand distributed generation participation to a broader base of customers including renters and those whose property is unable to accommodate a distributed generation facility, and provide customers with another choice for pursuing renewable generation. The U.S. Department of Energy (DOE) and the National Renewable Energy Laboratory (NREL) estimate that nearly half of U.S. homes and business are

currently unable to host a PV system for various reasons.⁴⁶ A shared solar program would allow such customers to participate in a solar generation facility and receive direct benefits via bill credits on their utility bill, similar to on-site net-metering customers.

Shared renewable programs also provide an opportunity to locate distributed generation in strategic areas such as constrained areas, underutilized properties such as brownfields, and highly visible areas that can help promote distributed generation. We recommend that Iowa implement a shared renewable pilot program. While we welcome utility renewable energy programs and the utilities providing their customers options for renewable generation, those utility options should not come at the expense of a customers' freedom to choose how to pursue renewable energy. A shared renewable pilot program should provide an opportunity for third party development to maximize the benefits of the market and choices for customer participation. Subscribers to the shared renewable program should be able to get bill credits that fairly compensate them for the energy produced as a result of their participation in the program.

We recommend that the pilot program use the Interstate Renewable Energy Council and Vote Solar “guiding principles” for the design of shared renewable energy programs:

- First, shared renewable energy programs should expand renewable energy access to a broader group of energy consumers, including those who cannot install renewable energy on their own properties.
- Second, participants in a shared renewable energy program should receive tangible economic benefits on their utility bills
- Third, shared renewable energy programs should be flexible enough to account for energy consumers' preferences.
- Fourth, and finally, shared renewable energy programs should be additive to and supportive of existing renewable energy programs, and not undermine them.⁴⁷

⁴⁶ U.S. DOE & NREL, *Shared Solar: Current Landscape, Market Potential, and the Impact of Federal Securities Regulation*, at v (April 2015), available at www.nrel.gov/docs/fy15osti/63892.pdf.

⁴⁷ Interstate Renewable Energy Council and Vote Solar, *Model Rules for Shared Renewable Energy Programs*, (2013) available at <http://www.irecusa.org/wp->

Each of these principles is discussed in more detail in IREC and Vote Solar’s *Model Rules for Shared Renewable Energy Programs*.⁴⁸ In addition, the *Model Rules* address five foundational, practical issues associated with shared renewables program development—(1) program administration; (2) the method of allocating the benefits of participation; (3) valuation of the energy produced by the system; (4) shared renewable energy facility size and location; and (5) shared renewable energy facility ownership and its implications for financing—as well as a range of additional program considerations. The *Model Rules* also offer model provisions, which could be integrated into program rules or tariffs.

We recommend the Board develop and implement a shared renewable pilot program in Iowa and refer them to IREC and Vote Solar’s *Model Rules* as a starting point. Through a shared renewable pilot program, the Board could allow many more Iowans access to renewable energy and its many benefits, and further stimulate the market in the State.

- 7. Participants should indicate their preferences for addressing net metering going forward based on each of the options presented in the staff memorandum. Participants should also explain the basis for their preferred options and address how their preferred approach achieves the draft policy goal.**

Throughout this docket, our coalition has maintained that if distributed generation and other distributed energy resources are going to be significant resources in Iowa’s future, steps need to be taken to develop the market. The Board’s first focus should be consideration of policies that catalyze the market and remove barriers to the development of a distributed generation market. Along these lines, we specifically recommended that the Board update

<content/uploads/2013/06/IREC-Model-Rules-for-Shared-Renewable-Energy-Programs-2013.pdf>.

⁴⁸ *Id.*

interconnection standards to reflect current best practices and preserve and expand Iowa's existing net metering policies. Iowa's existing net metering policy is an important part of the policy framework that has allowed Iowa to develop its existing distributed generation market and will be necessary for Iowa's small market to become stronger and continue to grow. We support several options for expanding Iowa's net metering policies including increasing the eligibility size cap and allowing virtual net metering, community solar and aggregation techniques. These types of changes, included in the Board's option 2 of the Gold Memo, will stimulate innovation, exploit economies of scale (in size and numbers of installations), and expand solar participation to a broader base of customers. These approaches are key to overcoming perceptions and allegations of income-level bias and cross-subsidy, but these approaches are still modest in scope and could easily work as pilot projects.

While the Board takes steps to expand net metering, we recommend that the Board simultaneously take steps to make sure the state is well prepared to address the policy questions about the future benefits of distributed generation and costs of a mature distributed generation market. We specifically recommend that the Board initiate an Iowa-specific docket that collects data, collaboratively explores new approaches and develops specific consensus policy recommendations on net metering and distribution system planning with a goal of deploying distributed generation and other distributed resources to make Iowa's electric grid stronger and more efficient. The new docket should immediately begin collecting data that is necessary to effectively incorporate and value distributed resources including information on grid constraints and grid investment needs. The docket should also serve as a collaborative process to oversee and evaluate results on any pilot projects initiated as a result of this docket. The docket should also oversee any future value of solar study that is conducted. We outlined recommendations for

such a study in our initial comments, and we think a separate or continued docket as described herein can accomplish the goals for an independent valuation study. Collecting the data and conducting an independent valuation study would be a first step in that docket. The information collected could then be applied to explore rate design options informed by the data about actual benefits and costs of distributed resources and where deploying distributed resources could provide the most benefit to the grid. The order of this process is important. There is significant information that still remains to be collected before it makes sense to explore rate design. Without collecting the data, it is impossible to know what changes would lead to outcomes that would advance distributed generation and distributed energy resources while still balancing costs.

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Respectfully submitted,

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