



ENVIRONMENTAL LAW & POLICY CENTER
Protecting the Midwest's Environment and Natural Heritage

February 7, 2014

VIA E-FILING

Burl W. Haar
Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

**Re: In the Matter of a Commission Inquiry into Ownership of Renewable Energy Credits
used to Meet Minnesota Requirements, PUC Docket Number/s: E999/CI-13-720**

Dear Dr. Haar,

Enclosed herewith in connection with the above matter please find the *Initial Comments of Environmental Law and Policy Center (ELPC), Fresh Energy, Izaak Walton League of America Midwest Office, SunEdison, and Vote Solar Initiative*. Please do not hesitate to contact me with any questions.

Sincerely,

s/ Allen Gleckner
Allen Gleckner
Staff Attorney

Enclosure

Cc: Attached Service List

35 East Wacker Drive, Suite 1600 • Chicago, Illinois 60601
(312) 673-6500 • www.ELPC.org

Nancy Loeb, Chairperson • Howard A. Learner, Executive Director

Columbus, OH • Des Moines, IA • Jamestown, ND • Madison, WI • St. Paul, MN • Sioux Falls, SD • Washington, D.C.

**STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION**

Beverly Jones Heydinger	Chair
David Boyd	Commissioner
Nancy Lange	Commissioner
Dan Lipschultz	Commissioner
Betsy Wergin	Commissioner

**In the Matter of a Commission Inquiry into Ownership
of Renewable Energy Credits used to Meet Minnesota
Requirements**

Docket No. E999/CI-13-720

**INITIAL COMMENTS OF ENVIRONMENTAL LAW
AND POLICY CENTER (ELPC), FRESH ENERGY, IZAAK WALTON LEAGUE OF AMERICA
MIDWEST OFFICE, SUNEDISON AND VOTE SOLAR INITIATIVE**

ELPC is a 501(c)(3) non-profit regional public interest environmental organization with staff located in eight Midwest states, including Minnesota, and is also a member of the Clean Energy and Jobs Campaign. ELPC's goals include promoting clean energy development and advocating for policies and practices that facilitate the use and development of clean energy.

Fresh Energy is a 501(c)(3) non-profit organization based in St. Paul working for a clean, fair and efficient energy system through good public policy. Fresh Energy was an active participant in the development and passage of both the 2007 Renewable Energy Standard and the 2013 Solar Energy Standard. Fresh Energy works closely with the Clean Energy and Jobs Campaign, a coalition comprised of sixty citizen, outdoor recreation, rural, conservation, labor, faith, student, and business groups.

Izaak Walton League of America is a national nonprofit (501c3) conservation organization committed to protecting fish and wildlife, critical habitat, air, and water resources. IWLA has membership and local chapters throughout the Midwest, including Minnesota. The Midwest Office of the IWLA, located in St. Paul, works on energy and air quality issues in an effort to conserve, restore, and promote the sustainable use and enjoyment of our natural resources.

SunEdison is a 55-year old company headquartered in Belmont, California that specializes in global manufacturing of polysilicon and silicon wafers used in the application of the SunEdison Solar modules as well as semiconductors for the electronics industry. Further, SunEdison is the second largest solar developer in the world, with over 1.2 GW of solar under management worldwide and another 2.3 GW under development. SunEdison designs, builds, manufactures, develops, finances, installs, operates and manages solar plants ranging from residential and commercial rooftop systems to 300 MW utility scale facilities.

Vote Solar is a national non-profit grassroots organization working to foster economic opportunity, promote energy independence and address climate change by making solar a mainstream energy resource across the United States. Since 2002, Vote Solar has engaged at the state, local and federal levels to remove regulatory barriers and implement the key policies needed to bring solar to scale. Vote Solar has over 300 members in Minnesota.

COMMENTS

We appreciate the Commission for initiating this docket (along with its companion docket, 13-542), as a way to gather stakeholder input into these important questions. Addressing implementation of the Solar Energy Standard (SES), including treatment of Solar Renewable Energy Credit (SREC) and Renewable Energy Credit (REC) issues in a common docket, will help ensure that uniform standards apply across all relevant utilities.

1. What Categories of Renewable Energy Credits (RECs) Need Clarity on Ownership?

There needs to be clarity as to the initial ownership of all categories of RECs (regardless of project size, project structure, or generator type).

Minnesota law and previous Commission orders do not provide sufficient clarity as to the rules around the vesting of initial REC ownership for parties that install new generation in the future. The Commission's previous orders, including those in the "Silent REC Docket," have addressed REC ownership as to the parties in a specific contractual dispute; but they did not address RECs from new or post-contract generation.¹

There is one caveat to the above call for clarity as to the initial ownership of all categories of RECs. As a practical matter, initial ownership may be a moot point in cases where REC ownership has already been expressly allocated to an actual party by a contract or past Commission order. (For example in the Silent REC Docket, the Commission expressly awarded REC ownership to two large renewable energy generators.²) Basic notions of repose counsel against attempting to revisit or alter settled contracts.

That said, many if not all current REC contracts are limited to a term of years. Which party initially owns the RECs that are generated after contract expiration? The Commission should be able to clarify the answer to that question without altering current REC contracts, and clarifying the answer would be in the public interest.

Finally, Xcel Energy argued in its 2013 net metering tariff filing that the September 9, 2010 Order in the Silent REC docket should establish a rule for allocating REC ownership for net-metering.³ But that argument is not compelling.

The Commission's Silent REC Docket was not a rule making, such that the general issue of REC ownership rights was not before the PUC for resolution. The docket concerned a

¹ Docket No. E002/M-08-440.

² Docket No. E002/M-08-440, June 2, 2011 Order.

³ Docket No. E002/M-13-642, Oct. 31, 2013 Xcel Energy Reply Comments at 3-4, Attachment A.

contractual dispute between Xcel Energy and four renewable energy generators under Minnesota's 1994 Wind and Biomass Mandates. Indeed, the assumption by the Commission at the close of that docket was that this would not be an issue in the future and that parties would clarify REC ownership in all power purchase agreement (PPA) negotiations - thus avoiding (for a time) the need for a clear rule to assign initial REC ownership in the absence of a negotiated PPA.

Today, however, it has become important to establish a clear rule. That is because, in addition to utility PPAs, the current docket implicates additional new forms of REC transactions - including transactions related to expanded net-energy metering, community solar, and a potential value-of-solar tariff. (Note that, on each of those topics, the current uncertainty around initial solar-REC ownership has served to complicate and undermine efforts to develop contracts that are fair to all parties - in part because there's a lack of shared clarity around what justice demands regarding REC ownership.)

Moreover, new analysis has recently become available underscoring the importance of establishing clear initial REC ownership and creating a level playing field for non-utility participants in the voluntary REC market. This market consists of those who buy, resell, and/or retire RECs for business or personal reasons, rather than utility compliance reasons.⁴ By establishing a market structure that better allows for the participation of non-utility REC buyers and resellers on fair and equivalent terms, the Commission can enable the further development and growth of the state's voluntary REC market that can help drive renewable energy deployment above and beyond the compliance obligation. This voluntary market also helps stabilize the state's overall REC market value by creating demand beyond just compliance.

2. Who Owns the RECs from Net Metered Customers? Does it Matter Whether the QF is Being Paid the Average Retail Rate or Avoided Cost Rate?

Who owns the RECs from net metered customers?

To date, the general Minnesota practice has been that initial REC ownership vests with the net metered generator and only transfers voluntarily with compensation. For example, in Minnesota, Xcel Energy has never taken ownership of RECs through net metering. Instead, when Xcel has secured net metering RECs it has been through a separate contract, such as the Solar*Rewards contract. (Under the 2013 contract, Xcel provided customer-generators a payment of \$1.50 per watt of system capacity, and received participants' RECs for a period of 20 years). Indeed, at least one other commenter in this docket note they forewent solar rebate incentives specifically to avoid the RECs from their project transferring to the utility.⁵

⁴ Heeter and Nicholas, National Renewable Energy Laboratory, Status and Trends in the U.S. Voluntary Green Power Market (October 2013) at 17. (Voluntary purchases of unbundled RECs "represent 65% of total green power megawatt-hour sales . . . and have grown dramatically in recent years.")

⁵ Docket CI-13-720, public comments of Liz Oppenheimer, submitted Friday, Jan. 31, 2014. <https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=viewDocument&documentId={BEA1E9A5-7173-4AB6-A56A-C94BAB7DC24B}&documentTitle=20142-96120-01&userType=public>.

This current Minnesota practice (*i.e.*, REC vests with the net energy metering (NEM) generator) aligns with practices adopted by the vast majority of states that have explicitly addressed the issue. Out of the 27 states and Washington, DC that have addressed the issue, 23 assign initial ownership to the customer-generator, while only four (Kansas, New Mexico, North Carolina and South Carolina) automatically transfer RECs to the utility through a net-metering contract.⁶

Based on the weight of current practices, the Interstate Renewable Energy Council (IREC) has identified the following net-metering best practice for REC ownership and compensation states: “[a] customer-generator owns the [RECs] associated with the electricity it generates, unless such RECs were explicitly contracted for through a separate transaction independent of any Net Metering or interconnection tariff or contract.”⁷

There is no good reason for Minnesota to diverge from best practices.

Instead, the Commission should explicitly affirm that Minnesota follows best practices by clarifying that initial REC ownership vests with the net-metered generation owner.⁸ By default, REC ownership would remain with the generation owner unless explicitly conveyed to someone else by contract.⁹

Such a ruling would signal that Minnesota is friendly to privately capitalized, customer-sited renewable energy systems. It would also further the public interest expressed in the 2013 Solar Energy Jobs Act – namely, to accelerate the deployment and adoption of solar photovoltaics. It would also align with RES compliance mechanisms that recognize that RECs – the renewable attribute of a unit of energy – can be unbundled from their associated units

⁶ DSIRE Rules, Regulations & Policies For Renewable Energy. The following states follow best practices for net-metering REC ownership and compensation: Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Washington, D.C., Florida, Illinois, Kentucky, Maryland, Massachusetts, Michigan, Nebraska, Nevada, New Hampshire, North Dakota, Ohio, Oregon, Pennsylvania, Utah, Virginia and Washington. (<http://www.dsireusa.org/summarytables/rrpre.cfm>). The following states do not follow best practices: Kansas, New Mexico, North Carolina and South Carolina. (*Id.*). North Dakota is considered to follow best practices because “[c]ustomers retain ownership of renewable-energy credits (RECs) associated with the customer’s load, while RECs associated with NEG convey to the utility (with compensation to the customer-generator).” (Database of State Incentives for Renewables and Efficiency, North Dakota, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=ND01R&re=0&ee=0). Ohio (Case No. 08-888-EL-ORD, Opinion and Order). South Carolina is not as “Customer owns RECs until REC market emerges, at which point utilities will own RECs.” (Database of State Incentives for Renewables and Efficiency, South Carolina, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=SC12R&re=0&ee=0 (same for all SC utilities with NEM via PUC order).

⁷ IREC Model Net-Metering Rules 2009, para. 11.

⁸ Docket E002/M-13-642, Sept. 30, 2013, Distributed Renewables Advocates Comments (Attachment 1).

⁹ Outside of the net metering context, RECs (like other forms of private property) may also in some cases be transferred by statute, court ruling, or Commission order. We believe that any non-voluntary transfer of RECs from an owner must, however, be fairly compensated.

of energy.¹⁰

Clarifying that REC ownership initially vests with the generation owner would not prevent REC transfer to other parties, such as utilities. In general, clear property rights serve to support contract (and market) formation. This particular clarification would also create a strong incentive for renewable-energy buyers to clearly state whether the associated RECs have also been transferred (and, if so, the terms of the REC sale).

Further, assignment of REC ownership to the generation owner provides a clear financial incentive for new project construction, and it also encourages proper facility maintenance and reconstruction so that the generation owner will generate RECs after existing contractual rights terminate.

Does it matter whether the QF is being paid the average retail rate or avoided cost rate?

No, we do not believe the distinction between whether a generator is paid (1) the average retail rate versus (2) the avoided cost rate is relevant to the question of initial REC ownership in the net metering context. RECs have a clear and distinct value that cannot be assumed to be a component of the average retail rate or the avoided cost rate without a detailed study of all values and avoided costs provided by net-metered generation.

The fact that the average retail rate is the effective bill credit rate net-metered customers receive does not warrant automatically transferring RECs to the utility, as Xcel argued in its fall 2013 Net-Metering Tariff filing.¹¹ Xcel's argument is based on the Commission's Order in the "Silent REC Docket" that, in that case, RECs should be assigned to utility-purchasers for non-PURPA PPAs where the utility was paying more than avoided-cost. As described above, the Commission's decision in that case was limited to a specific subset of PPAs and is not applicable to net-metered system RECs. Moreover, it's finding that the PPAs that paid above avoided-costs rates should own the RECs is not analogous to the net-metering context and should not apply.

In its Order, the Commission granted REC ownership to Xcel where the PPAs "were entered into in order to satisfy the Wind and Biomass Mandates" because "both buyers and seller [sic] knew that the only reason Xcel was paying a premium for renewable energy, as opposed to paying less for fossil-fuel energy, was so that it could claim this energy as fulfilling statutory renewable energy obligations."¹² That logic is inapplicable to net-metering both because (1) net-metering does not exist solely to meet statutory renewable requirements and (2) because Xcel is not "paying a premium" (i.e. more than avoided costs) for renewable energy under net-metering.

First, unlike the PPAs at issue in the Order, net-metering does not exist solely to meet renewable energy requirements. Indeed, Minnesota passed its net-metering statute in 1981, long before any state renewable requirements. It was primarily established to meet the objectives of PURPA and to promote cogeneration and small power production.¹³

¹⁰ Minn. Stat. 216B.1691, Subd. 4.

¹¹ Docket E002/M-13-642.

¹² Docket E-002/M-08-440, Sept. 9, 2010 Order at 8.

¹³ Minn. Stat. 216B.164, Subd. 1.

Second, the average retail rate effectively paid for energy from net-metered systems is not a “premium” or an incentive. Rather, net-metering is a legislatively-determined structure that is deemed fair compensation for the benefits provided by distributed generation. As the Department of Commerce states in its Value or Solar Tariff (“VOST”) Methodology approval filing: “Net Energy Metering effectively values Photovoltaic (PV)-generated electricity at the customer retail rate.”¹⁴ Because net-metering is intended to be a fair rate that “values” the electricity from net-metered systems, it is not an incentive, or a premium paid above what the legislature has determined is a fair “value” for DG-generated electricity. Moreover, no Minnesota utility has demonstrated in Commission filings or elsewhere that net-metering is a net cost to the system and therefore constitutes an incentive or “premium.”

Finally, it is also worth noting, that unlike in the PPA situation where REC ownership and compensation can be negotiated as part of the PPA, net-metered customers cannot negotiate the terms of their contracts or compensation.

3. Who Owns the RECs if a Third Party Owns the PV Equipment and Leases to the Homeowner/Business?

As in other cases, the REC ownership should initially vest with whoever originally owns the energy produced from the PV system. The original energy owner could vary depending on the structure of the third-party arrangement, but the initial REC ownership should vest in whoever owns the energy that also created the REC. In other words, the REC is created at the same time as the energy and initially vests in the same owner. This is a simple rule that applies equally well to solar leasing, community solar, and other emerging solar-ownership arrangements.

Of course, under freedom to contract, the initial owner could transfer the REC to whoever else they choose. Because a customer is not required to contract with any given third-party owner, however, the customer has the ultimate choice over ownership structure.

4. Are There Special Considerations on REC Ownership Related to REC Aggregators/Marketers?

The participation of many buyers and sellers is a general prerequisite for the development of efficient markets. REC aggregators and marketers (*i.e.*, non-utility resellers and/or REC retiring entities) serve as both buyers and sellers, contributing to a robust REC market that supports both value creation and cost-reducing price competition.

For these reasons and others, the Commission should enable a REC market structure that allows REC aggregators/marketers to participate in buying and selling. At a minimum, this would mean establishing market rules that vest initial REC ownership in renewable energy generators, and that allow generators to sell their RECs to aggregators/marketers if they so choose.

¹⁴ Docket No. E999/M-14-65, Jan. 31, 2014 filing.

The magnitude of fees assessed for REC registration (or transfer, retirement, etc.) can also limit or undermine the ability of individual REC aggregators/marketers to participate in the market – leading to a less robust and efficient market for all sellers. For this reason, the Commission should be wary of imposing or allowing the imposition of unreasonable REC transaction fees.

5. What Factors Should the Commission Take Into Account When Determining REC Ownership?

As stated above, we believe the Commission should tie initial REC ownership to the original energy owner. Of course, the Commission should also take account of any relevant existing contracts (*i.e.*, when determining current, as opposed to initial, REC ownership).

More broadly, in clarifying the rules around initial REC ownership in this docket, the Commission should acknowledge and consider the public interest in favor of the development of relatively more RECs (*i.e.*, by enabling a voluntary REC market), and thus relatively more clean renewable energy, relatively more clean energy jobs and local economic activity, and relatively fewer negative health and climate impacts.

6. Should the Commission Make Decisions on REC Ownership?

Yes. Absent Commission action, there will likely remain significant uncertainty as to initial REC ownership across multiple project categories, creating a "cloud on title" that hinders REC contract formation, leading to the under-valuation of RECs and private investments in renewable energy in general. Additionally, several dockets, including the community solar and net metering tariff revision dockets, will rely on the precedent set by this decision. In particular, the net metering tariff revision order, issued Jan. 27, 2014 for investor-owned utilities (M-13-642, et al.) specifically refers to this docket to clarify issues of REC ownership.¹⁵

The value of any property right depends on how the property is defined, and the clearer this definition is the more clear the value of the right becomes. Where a property right's value is uncertain, those with the capacity to create the property through their effort and/or capital have a disincentive to create the property in the first place. This disincentive also extends to potential buyers of these rights. By clearly defining the original owner of a REC, future ambiguity can be cut short thereby decreasing uncertainty and increasing the value of RECs to all current and future owners.

Further, Commission action is necessary to help establish a level playing field, in which all legally eligible buyers and sellers are expected to play by the same rules. For example, without action in the form of clear REC ownership rules (in favor of the REC generator), utilities may be able to leverage their unique contracting position to effectively deny generators the ability to sell to non-utility REC buyers. There is public interest in having a level playing field here, and the PUC should use its market structure tools to help establish that level field.

¹⁵ Docket M-13-609, M-13-642, M-13-667 and M-13-770, Jan. 27, 2014 Order at 3.

7. If the Commission Should Issue Decisions on REC Ownership, for Which Utilities or Parties to a Transaction Should the Commission's Decisions Apply?

Consistent with the principles and positions stated above, we believe it is appropriate for the Commission to establish REC ownership rules for all categories of REC generators. That is, the rules should cover the broadest possible set of parties and market participants, absent a compelling and specific reason to exclude a given party or set of parties.

One justification for this approach flows from the fundamental nature of property ownership. At its most basic, property ownership implies the right to exclude non-owners from the use of the property (albeit with exceptions for public necessity). Non-owners, for their part, have a right to expect reasonable marking and notice of property claims. In order to create secure property ownership conditions, the Commission must thus establish rules that apply to the broadest set of players (*i.e.*, all REC buyers and sellers as category types).

We appreciate the opportunity to provide these initial comments to the Commission.

Very truly yours,

/s/ Ross Abbey
Ross Abbey

Policy Associate
Fresh Energy
408 St. Peter Street, Suite 220
St. Paul, MN 55102
(651) 294-7144
abbey@fresh-energy.org

s/ Allen Gleckner
Allen Gleckner

Staff Attorney
Environmental Law & Policy Center
2356 University Ave W, Suite 403
St. Paul, MN 55114
(651) 789-1407

*On Behalf of the Izaak Walton League of
America Midwest, SunEdison and the Vote
Solar Initiative.*



ENVIRONMENTAL LAW & POLICY CENTER
Protecting the Midwest's Environment and Natural Heritage

September 30, 2013

Dr. Burl Haar
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

VIA ELECTRONIC SERVICE

*Re: In In the Matter of the Petition of Northern States Power Company for Approval of Tariff Modifications Implementing Net Metered Facility Provisions, Standby Service Exemptions, and Meter Aggregation Pursuant to the 2013 Omnibus Energy Bill
PUC Docket No. E002/M-13-642*

Dear Dr. Haar:

Enclosed herewith in connection with the above matter please find the Comments of the Alliance for Solar Choice, Environmental Law & Policy Center, Fresh Energy, Institute for Local Self Reliance, Interstate Renewable Energy Council, Inc. and Vote Solar Initiative.

Sincerely,

Allen Gleckner
Staff Attorney

Enclosure

cc: Attached Service list

35 East Wacker Drive, Suite 1600 • Chicago, Illinois 60601

(312) 673-6500 • www.ELPC.org

Nancy Loeb, Chairperson • Howard A. Learner, Executive Director

Columbus, OH • Des Moines, IA • Jamestown, ND • Madison, WI • Minneapolis, MN • Sioux Falls, SD • Washington, D.C.



STATE OF MINNESOTA

PUBLIC UTILITIES COMMISSION

Beverly J. Heydinger	Chair
David Boyd	Commissioner
Nancy Lange	Commissioner
J. Dennis O'Brien	Commissioner
Betsy Wergin	Commissioner

In the Matter of the Petition of Northern States Power Company for Approval of Tariff Modifications Implementing Net Metered Facility Provisions, Standby Service Exemptions, and Meter Aggregation Pursuant to the 2013 Omnibus Energy Bill	Docket No.: E002/M-13-642
--	---------------------------

COMMENTS OF THE ALLIANCE FOR SOLAR CHOICE, ENVIRONMENTAL LAW & POLICY CENTER, FRESH ENERGY, INSTITUTE FOR LOCAL SELF RELIANCE, INTERSTATE RENEWABLE ENERGY COUNCIL, INC. AND VOTE SOLAR INITIATIVE

The Alliance for Solar Choice, Environmental Law & Policy Center, Fresh Energy, Institute for Local Self Reliance, Interstate Renewable Energy Council, Inc. (“IREC”) and Vote Solar Initiative (“Distributed Renewables Advocates”), hereby submit comments on Northern States Power Company’s (“Xcel”) proposed Net Metered Facility tariff modifications to comply with the 2013 Solar Energy Jobs Act.

Background and Context

Minnesota first implemented its net metering policy in 1981, making it one of the first states to adopt net energy metering (“NEM”). NEM is a state-level policy that creates consistent regulatory standards and predictable financial parameters for self-generation at the retail level. It does this by creating a standard NEM tariff that establishes a fair and predictable ongoing relationship between utilities and customer-generators.

As set forth in Minn. Stat. 216B.164 Subd. 1, the statutory intent of Minnesota’s NEM policy is:

“...to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public.”

Minnesota’s evident legislative intent in expanding the availability of the NEM tariff to systems up to 1,000 kilowatts (“kW”) was to make NEM more broadly available to Minnesota property owners and energy consumers across the IOU service territories. The other changes to NEM in the Solar Energy Jobs

Act are also based on the premise that NEM is a beneficial policy and, therefore, that more customers should have effective access to NEM.

Xcel's proposed amendments to its NEM tariff include technical amendments called for by the statute:

- Increasing the NEM system size limit to 1,000 kW.
- Adding a provision for net-excess generation bill credit and year-end "Energy Payment" for NEM systems between 40 kW and 1,000 kW.
- Removing mandatory standby charges for systems up to 100 kW.
- Adding provisions to allow for meter aggregation.

The proposed amendments also include changes to the tariff and the standard Contract for Net-Metered Facilities that were not called for by the statute:

- Adding a provision to the tariff and contract language that grants full ownership of all Renewable Energy Credits ("RECs") from all electricity generated by customer-sited NEM systems without compensation.
- Increasing the Metering Charge for customer's NEM systems larger than 40kW.
- Allowing NEM customer-generators to opt into Xcel's standby service tariff (*e.g.*, in order to receive a capacity-value credit for the system, which is not otherwise available through NEM).
- Adding tariff language that excludes third-party owned distributed-generation systems.

Distributed Renewables Advocates respectfully submit that the Commission should not approve Xcel's proposed modifications that do not relate to required changes stemming from the 2013 Solar Energy Jobs Act. The following sections of the tariff should either be rejected or more thoroughly reviewed:

1. The Commission should reject Xcel's proposed change to REC ownership and assignment, under which the ownership of RECs created by NEM generators would automatically vest in Xcel without any direct compensation to the generator as a part of the standard NEM contract.
2. The Commission should order Xcel to provide information about the calculation of its "Energy Payment" and require Xcel to update the rate after the Value of Solar Tariff ("VOST") process is complete
3. The Commission should reject Xcel's discriminatory new meter charge.
4. The Commission should reject Xcel's attempts to explicitly or implicitly exclude third-party owners from NEM eligibility.
5. The Commission should reject Xcel's proposed approach for allowing net-metered customers to receive credit for the capacity value they provide to the utility.
6. The Commission should require Xcel to adopt project size determination practices consistent with statutory language in the Solar Energy Jobs Act.

7. As part of its NEM tariff, the Commission should require Xcel to also revise and clarify its Standby Service tariff.
8. The Commission should clarify that Xcel must show that any future meter aggregation charge is reasonable and cost-justified, and must receive Commission approval prior to charging customers.
9. Finally, either in this docket or the up-coming VOST docket, the Commission should clarify the relationship between NEM and a potential VOST.

The common theme with the above concerns is to remove elements of the proposed NEM tariff that unnecessarily increase customer-side cost, complexity, uncertainty or risk. Minimizing these regulatory barriers to the adoption of distributed solar is key to realizing the intent behind the NEM changes in the Solar Energy and Jobs Bill – to enable more access to distributed renewable NEM.

1. The Commission Should Reject Xcel’s Proposed Change To Net-Metering REC Ownership and Assignment.

The Commission should reject Xcel’s proposed change to net-metering REC ownership because the change is not required by the 2013 energy legislation or Commission Order, would result in Minnesota ignoring the best practice followed in most states and could constrain other 2013 energy legislation implementation processes. To the contrary, the legislature did explicitly allow for the transfer of solar RECs (“sRECs”) under the VOST, raising a negative inference as to transfer of the sRECs under NEM since the legislation is silent on the subject. Adopting Xcel’s proposed change that ignores best practices would signal that Minnesota is unfriendly to privately financed, customer-sited rooftop solar, which is contrary to the legislature’s intent in passing the 2013 Solar Energy Jobs Act. Instead, the Commission should affirm that Minnesota follows best practices by ordering that RECs are owned by the renewable generator unless the generator receives fair compensation.

As a starting point, it is worth noting that Xcel's filing inherently acknowledges that the initial ownership of RECs vests with the owner of the generation equipment that generated said RECs. First, in section 12.C., Xcel characterizes the vesting of REC ownership with the utility as an assignment from the generator: “By participating as a Customer under this Contract” (should read 'generator' or 'generation owner'), “the Customer hereby *assigns* to the Company all right title and interest to all the RECs arising . . .” (emphasis added). Second, the same section invokes agency theory in justifying the REC transfer from generator to utility. This implies that the generator has a direct economic interest in the RECs generated, otherwise there would be no obvious basis for agency. Therefore, Xcel is not claiming that it initially owns the RECs generated from a NEM system, but is proposing that these RECs should automatically transfer to Xcel without compensation to the NEM generator. There is no compelling reason why changes to net-metering REC ownership should be made now in this filing. Xcel’s proposed change is not a basic tariff amendment required by the Solar Energy Jobs Act, as that legislation did not address REC ownership for NEM facilities. Further, public record does not indicate this proposed change was requested by the Commission. Instead, Xcel is attempting to make this significant change in a proceeding with limited public participation.

In addition, Xcel’s proposed change to REC ownership is contrary to net-metering best practices followed by the vast majority of other states that have addressed the issue. IREC’s net-metering best

practice for REC ownership and compensation states that “[a] customer-generator owns the [RECs] associated with the electricity it generates, unless such RECs were explicitly contracted for through a separate transaction independent of any Net Metering or interconnection tariff or contract.”¹ The vast majority of states that have explicitly addressed the issue have adopted the best practices embodied in IREC’s model net metering rules. Out of the 25 states and Washington, DC that have addressed the issue, 21 follow the best practice and only four (Kansas, New Mexico, North Carolina and South Carolina) automatically transfer RECs to the utility through a net-metering contract.² There is no reason for Minnesota to differ from best practices. Doing so would send a negative signal to customers seeking to install distributed renewable generation and to the renewables industry hoping to expand in Minnesota as a result of the new energy legislation.

The concept underlying the best practice is that RECs should transfer to the utility only when it compensates the initial REC owner for the RECs generated by his/her system, either through an incentive or specific compensation for the REC in a contract, because the renewable energy attributes are a valuable component of the total value created by the customer’s investment in a renewable energy system. Accordingly, a utility should not be allowed to transfer this value absent compensation. On the other hand, when the utility offers a solar rebate program or similar incentive, the incentive serves as compensation to the generator for the RECs. Indeed, many states transfer RECs to utilities in order to comply with Renewable Energy Standards (“RES”) as part of utility incentive programs for solar and other renewables that are offered to help the utility meet RES requirements.

In this case, RECs should not transfer automatically as part of a net-metering contract because net-metering alone is not an incentive. No study has been done in Minnesota to determine the full costs and benefits of net-metering, and Xcel has not demonstrated in this filing or elsewhere that net-metering is a net cost to the system and therefore constitutes an incentive.³ Minnesota will be explicitly examining the costs and benefit of distributed solar in the VOST process. REC ownership and compensation will very likely be a direct component of the value being considered by parties. Therefore, the VOST process

¹ IREC Model Net-Metering Rules 2009, para. 11.

² IREC Net Metering Policy Comparison, updated 8-23-13. The following states follow best practices for net-metering REC ownership and compensation: Arizona, California, Delaware, Washington, D.C., Florida, Idaho, Illinois, Kentucky, Maryland, Massachusetts, Michigan, Nebraska, Nevada, New Hampshire, North Dakota, Oregon, Pennsylvania, Utah, Virginia and Washington. (IREC, Policy Comparison: State and Utility Net Metering Rules for Distributed Generation, updated 8-23-13, www.irecusa.org/regulatory-reform/net-metering/policy-comparison/). The following states do not follow best practices: Kansas, New Mexico, North Carolina and South Carolina. (*Id.*). North Dakota is considered to follow best practices because “[c]ustomers retain ownership of renewable-energy credits (RECs) associated with the customer’s load, while RECs associated with NEG convey to the utility (with compensation to the customer-generator).” (Database of State Incentives for Renewables and Efficiency, *North Dakota*, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=ND01R&re=0&ee=0). South Carolina is not as “Customer owns RECs until REC market emerges, at which point utilities will own RECs.” (Database of State Incentives for Renewables and Efficiency, *South Carolina*, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=SC12R&re=0&ee=0 (same for all SC utilities with NEM via PUC order).

³ In fact, a number of cost/benefit studies from other states have shown net-metered solar to be a net-benefit to utility systems. (*A Review of Solar PV Benefit & Cost Studies*, Rocky Mountain Institute, April 2013). While a few studies have found net-metered solar to be a net cost, at the very least, the analysis so far shows that one cannot simply assume that net-metering is an incentive. Indeed, Rocky Mountain Institute’s review of the major cost/benefit studies to date found that “There is a significant range of estimated value across studies, driven primarily by differences in local context, input assumptions, and methodological approaches.” (*Id.* at 22).

will not only inform a decision on this issue, but could be unnecessarily constrained by a decision limiting the value of RECs to customers and small generators in this proceeding.

In addition, REC ownership and compensation has significant economic implications for other 2013 Energy Legislation implementation processes that are on-going, or will be taking place in the near future:

- *Community Solar Gardens.* REC ownership and compensation is also at issue as part of Xcel's Community Solar Gardens ("CSGs") program. The statute is similarly silent on the issue for CSGs and stakeholders are in the process of determining the proper REC flow and compensation in the CSG context.
- *Value of Solar Tariff.* REC value to Xcel and the proper REC compensation is a component of the Value of Solar Tariff ("VOST"), which the Department of Commerce and stakeholder will be fleshing out in this Fall's methodology process. This process and the Department's work with Clean Power Research to evaluate costs and benefits of distributed solar to Xcel's system will lead to a better understanding of how RECs should flow and how customers should be compensated for their RECs.
- *Production Incentive.* The statutory language for the Solar Energy Incentive Program for systems 20 kW and smaller is similarly silent on REC ownership and will have to be determined as part of the program's design and Commission approval.

The connections with other implementation processes demonstrate the importance and potentially far-reaching effects of a decision on REC ownership and compensation. If Xcel's proposed REC ownership structure is adopted and applied in these programs, it would seriously damage the economics for privately-financed customer-sited solar systems, which could not have been what the legislature intended when it created these new programs to expand solar in the state and make solar *more* economically viable. At the very least, these other stakeholder processes should not be constrained by a potentially precedential Miscellaneous Tariff filing in which there has been only a limited opportunity for public participation. Moreover, treatment of RECs is an issue affecting all Minnesota NEM contracts, not just those in Xcel's service territory. NEM REC treatment should be consistent across utilities.

Finally, another consequence of Xcel's REC ownership proposal is that it would prevent businesses and other parties from using their RECs for non-RPS compliance purposes. As the Vote Solar Initiative testified to the Arizona Corporation Commission this year:

There are two markets for RECs. The first is the compliance market, in which RECs are used by a utility or other energy provider to comply with a state renewable requirement. The second market is a non-compliance (sometimes known as voluntary) market in which individuals, businesses or local governments acquire RECs to achieve certain sustainability or climate change goals. There are many companies⁴ operating at the national, regional and state level that acquire and aggregate RECs from individual projects for resale to individuals and organizations. One of the largest, Bonneville Environmental Foundation (BEF), defines RECs as follows:

⁴ See http://www.green-e.org/base/re_products#res

A Renewable Energy Certificate, or REC, is a tradable, legal mechanism that represents the environmental benefits associated with one megawatt-hour of electricity generated from a renewable energy resource. These certificates may be sold and traded and the owner of the REC can legally claim to have purchased renewable energy. RECs incentivize the production of renewable energy by providing a source of revenue to electricity generated from renewable sources.⁵

In some cases, the ability for a company or individual to use their RECs for a non-compliance purposes can be a significant factor driving a distributed solar (or other renewable) project. Xcel's proposed REC ownership would completely foreclose this option.

The Commission should reject Xcel's proposed change to NEM REC ownership because the change is not required by the 2013 energy legislation or Commission Order, would constrain other 2013 legislative requirements and would result in Minnesota ignoring the best practice followed in most states, hampering the progress of distributed renewables in Minnesota. In so doing, the Commission should reaffirm that RECs are owned by the customer-generator unless the generator is fairly compensated. If the Commission is not prepared to officially adopt best practices, it should still reject Xcel's proposal and take the issue up in a separate docket that will allow for more public participation and holistic analysis.

2. Xcel Should Provide More Information About Its Net-Excess Generation Payment And Update The Rate Based On The VOST Process.

Xcel's proposed tariff filing also includes an updated rate for its "Energy Payment" that will be paid to net-metering customers for year-end "remaining kilowatt-hour credits reflecting net input supplied by the customer."⁶ This energy payment rate for net-excess generation is presumably based on the avoided-cost of that energy to Xcel's system. However, Xcel provides no explanation for how this rate was calculated or the value factors included in the calculation. Distributed Renewables Advocates are concerned that the rate seems low, but are unable to make this determination without more information. The VOST process will address the avoided costs of distributed solar for Xcel's system, so this detailed analysis could be used to inform the avoided-cost rate paid under the net-metering tariff as well. Therefore, we respectfully request that the Commission require Xcel to provide information about how it calculated this rate and require Xcel to update the rate once the VOST process has been completed.

3. The Commission Should Reject Xcel's Discriminatory Increased Meter Charge.

Xcel proposes to increase meter charges for net-metered systems in the 40kW to 1000kW range (the range explicitly expanded in the Omnibus Energy Bill) from \$3.15 (single phase) and \$6.40 (three phase) to \$5.50 and \$8.00, respectively.⁷ The Commission should reject this increase as there is no legal requirement under the new Energy Bill to increase metering charges and no indication that increasing the net-metering size limit would increase meter charges. Moreover, the proposed increased meter charges are discriminatory, which is contrary to Minnesota law, FERC regulations and recognized best practices.

⁵ Testimony of Rick Gilliam on Behalf of the Vote Solar Initiative, Arizona Corporation Commission Dockets E-013458-10-0394, E-01345A-12-0290, E-O1933A-12-0296, E-04204A-12-0297 (April 24, 2013) included as Attachment 1.

⁶ Xcel Filing, Attachment B, p. 8.

⁷ Xcel Filing, Attachment B, p. 5, 8.

As there is no direction in the Energy Bill for increased meter charges, the Commission should not allow Xcel to increase these charges with no explanation and no cost justification. Such justification is necessary because based on current production meter costs, it is very likely that Xcel will collect far more than the cost of installation and O&M from net-metered customer-generators over the life of the solar energy systems, assuming a net metered customer would pay this monthly meter charge for 20 to 25 years. For example, a single-phase meter would cost \$66 per year, or approximately \$1,300 over 20 years (assuming no increase in metering charge over time). That amount seems out-of-scale with installation and O&M charges. In the unlikely event that Xcel provides reasonable cost justifications for the increased and different rates, these costs should be addressed in the context of a rate case, not in a Miscellaneous Filing for technical updates to the net-metering tariff.

As proposed, the increased metering charges for systems between 40 kW and 1000 kW are also discriminatory because these charges are greater than the charges for systems below 40 kW. Xcel offers no explanation why larger systems' meters that are presumably the same will cost it more to install and maintain. Without explanation, these charges are discriminatory on their face, which is contrary to Minnesota law, FERC regulations, best practices and the intent of the new Solar Energy Jobs Act.

Minn. Stat. 216B.164(3)(c) requires that “[i]n setting rates, the commission shall consider the fixed distribution costs to the utility not otherwise accounted for in the basic monthly charge and shall ensure that the costs charged to the qualifying facility are not discriminatory in relation to the costs charged to other customers of the utility.” Similarly, “FERC regulations provide that sales rates “shall not discriminate against any qualifying facility in comparison to rates for sales to other customers served by the electric utility.”⁸ Accordingly, in 2005 FERC struck down Pacific Gas & Electric’s (PG&E’s) standby retail rate design, finding it was unjust, unreasonable, and unduly discriminatory.⁹ The Commission ordered PG&E to change its rates, terms and conditions and to make refunds as appropriate.¹⁰ Therefore, the Commission should reject Xcel’s proposed increased and discriminatory charge as contrary to Federal and state law. Moreover, increasing the meter charges on systems that are within the new Energy Bill’s net-metering size limits undermines the legislation’s clear intent to grow net-metered systems in this size range by increasing soft-costs on those systems. Finally, allowing discriminatory charges would, like the REC issue, set Minnesota apart from best practices, sending negative market signal.¹¹

4. The Commission Should Reject Xcel’s Attempts To Explicitly Or Implicitly Exclude Third-Party Owners From NEM Eligibility.

Xcel proposes to embed this NEM tariff within its Distributed Generation Standard Interconnection and Power Purchase Tariff. That is a different location than Xcel’s existing (under 40 kW) NEM tariff, which is recorded under Xcel’s Net Energy Billing Service rate code A50. A problem arises because the “availability” of Xcel’s current Distributed Generation Standard Interconnection and

⁸ 18 CFR § 292.305(a)(1)(ii).

⁹ *Pacific Gas and Electric Company*, 110 FERC ¶ 63026, (February 9, 2005).

¹⁰ *Id.*

¹¹ IREC Net-Metering Model Rules 2009, paras. 10, 12.

Power Purchase Tariff, as written, is limited to "retail electric customers."¹² As opposed to the existing NEM contract, which is available "to any small qualifying facility of less than 40 kW capacity."

Further, the proposed "Contract for Net-Metered Facilities" is structured as a contract between Xcel and "Customer."¹³ As opposed to Xcel's existing NEM contract, under which Xcel consistently refers the generator as the "qualifying facility" or "QF", Xcel's present tariff consistently refers to "Customer". When it comes to tariffs, individual word choice can make a significant difference. The Commission should reject Xcel's proposed narrowing of entity types eligible for the new NEM contract as neither required under the new NEM statute, nor allowed under the pre-existing NEM statute. Minnesota's NEM law allows customers to generate electrical power and this right is not limited to customer-owned generation systems. Minn. Stat. § 216B.164 authorizes a "qualifying facility" to connect to utility facilities. Minnesota law does not define the term "qualifying facility," but as regards solar power systems, this term is defined by federal law in 18 C.F.R. §§ 292.203(a) and 292.204, which are incorporated into Minnesota law by reference.¹⁴ This federal definition is not based on facility ownership, but rather relates strictly to facility size and generation type.¹⁵ Minnesota law, in accordance with federal law, does not include facility ownership as a factor for determining eligibility for net metering.¹⁶ Instead, the right to net meter accrues to a "qualifying facility" itself, and not to the owner of the facility.

If a facility qualifies under Minn. Stat. § 216B.164, then the utility customer who receives power from the qualifying facility is granted the right to non-discriminatory rates for energy supplied to it by the utility, as well as the right to be paid by the utility for net generation.¹⁷ Nothing in the law requires that the "customer" own the facility that generates the power.

The statute's distinction between "qualifying facilities" and "customers" is important because it is evidence of an intent by the legislature to allow third-party ownership. If a facility qualifies for under Minn. Stat. § 216B.164 based solely on its size and type, then the rights to nondiscriminatory rates and payment for net generation accrue to the "customer" regardless of ownership. The state's net metering law simply does not include ownership as a factor to be used when determining whether a customer may self-generate and sell excess power to the grid. If the legislature intended to benefit only customer-owned facilities, it could have imposed this limitation, but it did not. Therefore, the PUC may not add such limitation into law.

Moreover, the state's net metering law also requires that it "shall at all times be construed in accordance with its intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the ratepayers and the public."¹⁸ Therefore, the PUC must interpret this law so as to allow development approaches that increase the use of solar power without threatening ratepayers or the public interest.

¹² Proposed amendment to Minnesota Electric Rate Book, Sect.10, 2nd Revised Sheet No. 73 (date filed 07-13-13).

¹³ *Id.* at Sect.10, Original Sheet No. 163.

¹⁴ Minn. Stat. § 216B.164, Subd. 2.

¹⁵ *Id.*

¹⁶ Minn. Stat. § 216B.164.

¹⁷ Minn. Stat. § 216B.164, Subd. 3.

¹⁸ Minn. Stat. § 216B.164, Subd. 1.

In addition, Minnesota's distributed generation interconnection law recognizes the right of customers to self-generate electrical power and is not limited to customer-owned generation systems. Minnesota's distributed generation interconnection law allows customers to interconnect solar power systems.¹⁹ Nothing in this law limits eligible facilities to only those owned by customers. Instead, the law's applicability is limited only by fuel type and generator capacity.²⁰ Although the law also requires approval of tariffs that establish standard interconnection agreements,²¹ this language does not require that customers own the interconnected generation systems that serve them.

If ownership were important to accomplishing the goals of Minn. Stat. § 216.1611, the legislature would have included such restriction, but it did not do so. Moreover, the fact that the law states that one of its purposes is to "promote the use of distributed resources [including solar generation systems] in order to provide electric system benefits during periods of capacity constraints," indicates that the legislature seeks to promote solar power systems. Since third-party ownership in fact does "promote the use of distributed resources," it is in accordance with the overall legislative goal embodied in this law.

For these reasons, the Commission should prevent Xcel from limiting its proposed NEM tariff solely to "Customers," as this change is not required by the Solar Energy Jobs Act, and indeed is contrary to other statutes, and could prevent other solar and distributed renewable financing options where the system owner is not technically a retail customer.

5. The Commission Should Explore Alternatives To Xcel's Proposed Approach For Allowing NEM Customers To Receive Credit For The Capacity Value They Provide To The Utility.

Xcel's proposed tariff allows NEM customers to opt into Xcel's Standby Service tariff, thus allowing them to access the solar capacity credit component of its standby tariff. This may be an acceptable near-term approach for allowing distributed solar generators to receive fair compensation for the capacity value they provide to the utility, but it is not an optimal long-term approach. A fair capacity credit should be available to all energy technologies and system sizes eligible for NEM - including systems under 100 kW, which the Solar Energy Jobs Act specifically shelters from utility standby service fees. The most straightforward way to do this would be through a crediting mechanism in the NEM contract itself.

6. The Commission Should Require Xcel To Clarify Its NEM Contract Standby Charge Capacity Rating Language.

Under Xcel's proposed NEM contract, "Standby charges apply if the Net-Metered Facility System has an *AC nameplate capacity* of more than 100 kW. No standby charges apply if the Net-Metered Facility System has an *AC nameplate capacity* of 100 kW or less."²² The Solar Energy Jobs Act statutory language states: "'Capacity' means the number of megawatts alternating current (AC) at the

¹⁹ Minn. Stat. § 216B.1611.

²⁰ Minn. Stat. § 216B.1611, Subd. 2.

²¹ *Id.*

²² Xcel Filing, Attachment B, p. 14 (emphasis added).

point of interconnection between a distributed generation facility and a utility's electric system."²³ "AC Nameplate" is an unclear designation, as solar panel capacity is expressed in direct current. The Commission should require that Xcel clarify the nameplate capacity threshold over which standby charges will be applied.

7. As Part Of Its NEM Tariff, The Commission Should Require Xcel To Also Revise And Clarify Its Standby Service Tariff.

Xcel's proposed tariff proposes to begin applying a Standby Service tariff to all new NEM customer-generators sized between 100 kW and 1,000 kW in size and suggests that Xcel intends to use its current Standby Service tariff *without* amendment. The current Standby Service tariff is hard to understand, and the bill impact is very difficult to estimate in advance. Explicitly tying the NEM and Standby Service tariffs would thus frustrate the legislative intent behind NEM expansion, namely to make the NEM contract more broadly available to all Minnesota property owners and energy consumers across all IOU service territories.

As described in *Market Transformation Pathways for Grid-Connected Rooftop Solar PV in Minnesota*, a recently published policy report produced by Fresh Energy and CR Planning on behalf of the Minnesota Solar Challenge Program (funded primarily through a SunShot grant from the U.S. Department of Energy), "[o]n-site solar generation systems larger than 60 kilowatts are sometimes subject to 'standby' charges. The effect of such charges on a commercial customer's utility bill can be highly unpredictable, making it more difficult to develop project pro formas for on-site solar systems larger than 60 kilowatts."²⁴ The report, which is current as of April 2013, notes that (up until now) no Minnesota NEM customer-generators have ever been exposed to the complex, unpredictable standby tariff: "Net metered systems are not currently charged standby charges because the NEM capacity limit is below the 60-kilowatt standby threshold. (See June 2013 Addendum for legislative update)."²⁵

For these reasons, if Xcel plans to apply the Standby Service tariff to NEM customer-generators, then the Commission should require Xcel to amend its Standby Service tariff to clarify, simplify, and rationalize the tariff, in line with both the 2013 changes to the NEM statute and Xcel's proposed NEM tariff.

8. The Commission Should Clarify That Xcel Must Show That Any Future Meter Aggregation Charge Is Reasonable And Receive Commission Approval Prior To Charging Customers.

Xcel's proposed tariff includes a provision to allow a meter aggregation charge limited to administrative costs: "The Company may charge the Customer requesting to aggregate meters a reasonable fee to cover the administrative costs incurred in implementing the costs of this subdivision, pursuant to a tariff amendment approved by the commission for the Company."²⁶ Such a fee is allowed in the statute, but only after "the commission's prior approval" and "pursuant to a tariff approved by the

²³ MN Session Law, Chapter 85, HF 729, Article 9, Section 2, *available at*

<https://www.revisor.leg.state.mn.us/laws/?id=85&doctype=Chapter&year=2013&type=0>

²⁴ Fresh Energy, *Market Transformation Pathways for Grid-Connected Rooftop Solar PV in Minnesota*, at 15-16 (2013).

²⁵ *Id.* at 28.

²⁶ Xcel Filing, Attachment B, p. 13.

commission for a public utility.”²⁷ Since this proposed tariff does not include an actual fee, the Commission should clarify that any future meter aggregation charge must first be approved by the Commission and shown to be reasonably related to administrative costs.

9. The Commission Should Clarify The Relationship Between NEM And A Potential VOST, Now Or In Up-Coming VOST Proceedings.

Distributed Renewables Advocates also wish to bring the Commission’s attention to a potential issue that will likely need clarification if Xcel continues to pursue a VOST. The Solar Energy Jobs Act provides that if Xcel offers a PUC-approved VOST, then it no longer required to offer the NEM tariff to solar customers (the proposed tariff improperly implies that NEM will be unavailable for all customers). Xcel includes this change in its proposed NEM tariff: "The provisions pertaining to [NEM] . . . will not apply to interconnections occurring after the Commission approves" a VOST.²⁸ However, the statute leaves the issue of what happens to existing NEM customers once a VOST is offered somewhat ambiguous. The most natural read of the statute is that existing NEM customers will be allowed to continue with the NEM contract, but will have the option of switching to the VOST. However, Xcel’s proposed tariff is similarly vague on the status of exiting NEM contracts. While this issue does not need to be resolved immediately, we wanted to flag the issue for the Commission, as the relationship between NEM and VOST will need to be clarified before the VOST is in place, with the NEM tariff updated accordingly.

The Distributed Renewables Advocates believe the above suggestions will allow Xcel to meet the Solar Energy Jobs Act’s requirements without creating new regulatory and/or administrative barriers to distributed generation NEM and will result in more expansive and cost-effective distributed solar and other renewables.

Dated: September 30, 2013

Respectfully submitted,

²⁷ Minn. Stat. § 216B.164, Subd. 4a(e).

²⁸ Xcel Filing, Attachment B, p. 8.

/s/ Allen Gleckner

Allen Gleckner
Staff Attorney
Environmental Law & Policy Center
2356 University Ave W, Suite 403
St. Paul, MN 55114
(651) 789-1407

*On behalf of The Alliance for Solar
Choice, Fresh Energy, Institute for
Local Self Reliance, and Interstate
Renewable Energy Council, Inc. and
Vote Solar Initiative*

ATTACHMENT 1

**DIRECT TESTIMONY OF RICK GILLIAM
ON BEHALF OF THE VOTE SOLAR INITIATIVE**

**Docket No. E-013458-10-0394
Docket No. E-01345A-12-0290
Docket No. E-OI933A-12-0296
Docket No. E-04204A-12-0297**

April 24, 2013

Table of Contents

Direct Testimony of Rick Gilliam The Vote Solar Initiative

Contents

Introduction and Overview	1
Background	4
Renewable Energy Credits and REST Compliance	8
The Utility Proposals	12
The Vote Solar Proposal	15
Recommendation	17

**DIRECT TESTIMONY OF
RICK GILLIAM**

1 **Introduction and Overview**

2 **Q. Please state your name and business address.**

3 A. My name is Rick Gilliam. My business address is 1120 Pearl Street, Suite 200 in
4 Boulder, Colorado.

5
6 **Q. On whose behalf are you submitting this rebuttal testimony?**

7 A. This testimony is submitted on behalf of The Vote Solar Initiative (“Vote Solar”).

8
9 **Q. By whom are you employed and in what capacity?**

10 A. I serve as Director of Research and Analysis for Vote Solar, and oversee policy
11 initiatives, development, and implementation.

12
13 Vote Solar is a non-profit grassroots organization working to foster economic
14 opportunity, promote energy independence and fight climate change by making
15 solar a mainstream energy resource across the United States. Since 2002 Vote
16 Solar has engaged in state, local and federal advocacy campaigns to remove
17 regulatory barriers and implement key policies needed to bring solar to
18 scale. We have nearly 2,500 Arizona members.

19
20 **Q. Please describe your experience in utility regulatory matters.**

1 A. Prior to joining Vote Solar in January of 2012, my regulatory experience included
2 five years in the Government Affairs group at Sun Edison, one of the world's
3 largest solar developers, twelve years at Public Service Company of Colorado as
4 Director of Revenue Requirements and twelve years with Western Resource
5 Advocates (WRA – formerly known as the Land and Water Fund of the Rockies)
6 as Senior Policy Advisor. Prior to that, I spent six years with the Federal Energy
7 Regulatory Commission. All told, I have in excess of 30 years of experience in
8 utility regulatory matters. A summary of my background is attached as Appendix
9 A.

10

11 **Q. Have you previously testified before the Arizona Corporation Commission**
12 **(“ACC” or “Commission”)?**

13 A. Yes. I testified before this Commission on behalf of Vote Solar in the recent
14 Tucson Electric Power Rate Case, and on behalf of the LAW Fund in some of the
15 early proceedings regarding the development of a renewable standard. I have
16 also participated in a number of rulemakings in the intervening period.

17

18 **Q. Before what other utility regulatory commissions have you testified?**

19 A. I have testified in proceedings before the Public Utilities Commission of
20 Colorado, Nevada Public Utilities Commission, the New Mexico Public
21 Regulation Commission, the Utah Public Service Commission, the Wyoming
22 Public Service Commission and the Federal Energy Regulatory Commission.

23

24 **Q. What is the purpose of your testimony?**

1 A. The purpose of my testimony is to respond to the direct testimony of APS
2 witness Greg Bernosky and TEP witness Carmine Tilghman regarding the
3 Companies' proposals to waive and then eliminate the distributed energy
4 component of the Renewable Energy Standard, and to propose an alternative
5 means of renewable energy credit ("REC") acquisition for compliance purposes.
6

7 **Q. Please summarize your testimony.**

8 A. This proceeding is very important in the evolution of the electric utility industry in
9 Arizona. The major utilities are part way through the growing renewable energy
10 compliance requirements, and certain technologies, notably photovoltaics or PV,
11 are approaching an economic junction where direct financial incentives may be
12 no longer needed to encourage homeowners and businesses to install solar
13 generation on-site. Unfortunately, it is not a bright line.

14
15 As in most states with a customer-sited component in its renewable energy
16 standard, utility compliance has been proven by the acquisition and retirement of
17 sufficient RECs associated with customer-sited renewable electricity generation.
18 Such RECs are acquired in exchange for incentive payments. If the economics
19 of customer-sited solar deployment reach a point where retail customers are
20 willing to install solar on their homes and businesses without financial incentives¹
21 from their utility, how can the utility acquire the RECs necessary to prove it is in
22 compliance?

¹ It should be noted that some customers have already requested net metering service without receiving a utility incentive; see TEP witness Tilghman direct testimony, pages 4-5.

1
2 The utilities' answer is to waive the requirement in the near term, and eliminate it
3 in the medium term. This approach solves the compliance problem by having
4 nothing with which to comply, however it defeats the purpose of the renewable
5 energy standard. Vote Solar's proposal is to leave intact the standard including
6 A.A.C. R14-2-1805, the Distributed Renewable Energy Requirement, and find the
7 lowest cost method for acquiring the credits needed for compliance.

8

9 **Q. Please characterize Vote Solar's interest in this proceeding.**

10 A. Vote Solar is interested in this proceeding because we view Arizona as one of
11 the first major solar markets in which solar electricity prices are approaching the
12 price of grid-supplied electricity. Continuation of current trends could lead to a
13 point where incentives are no longer needed, all else being equal. These parity
14 economics are highly dependent on a number of factors, not the least of which is
15 the outcome of the APS technical conference process addressing net metering.
16 This docket will address a number of proposals for supporting continuation of a
17 strong stand-alone solar market. It is these trends and changes and the
18 associated debate that interest Vote Solar.

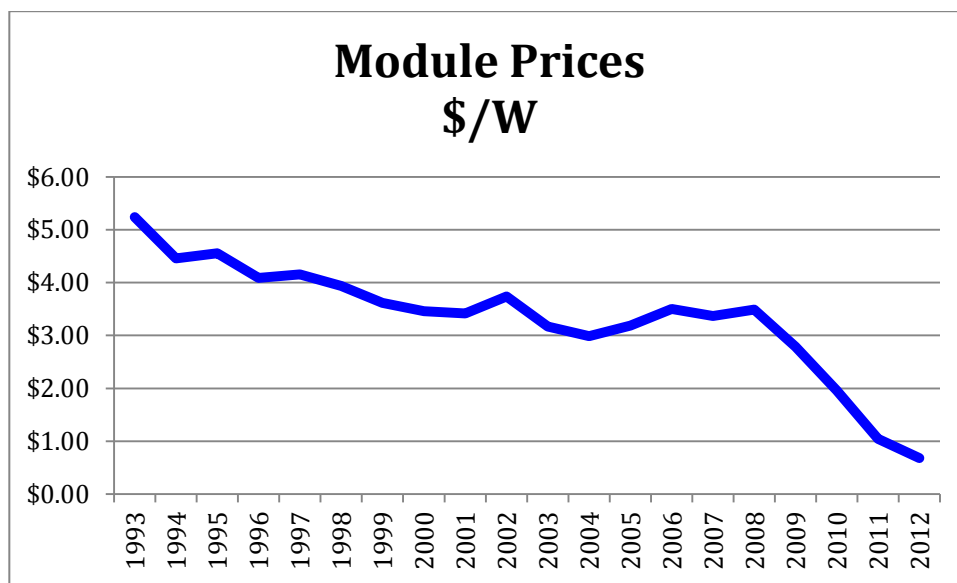
19

20 **Background**

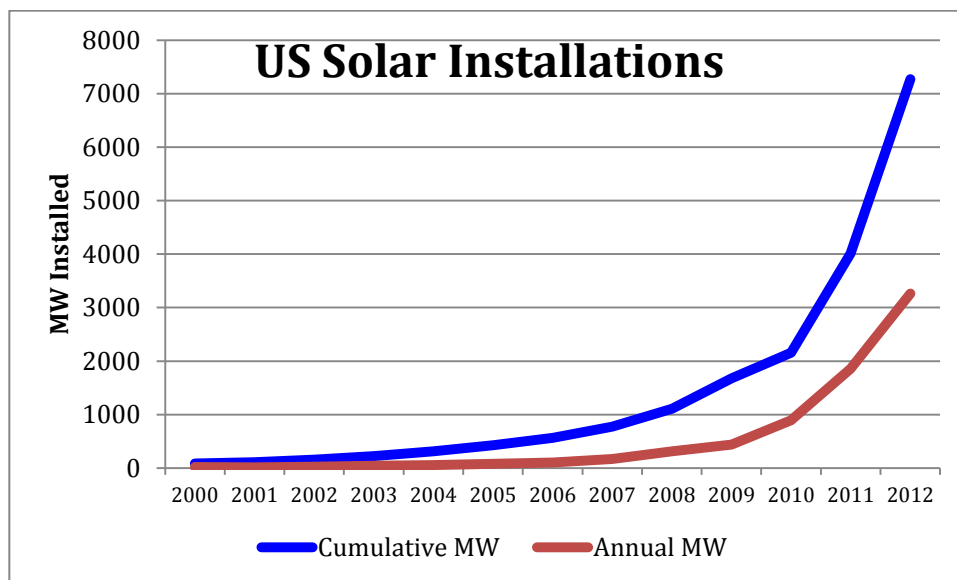
21 **Q. How did the need for this proceeding come about?**

22 A. This proceeding is a reflection of the success of the solar industry. The cost of
23 solar has come down dramatically since the Renewable Energy Standard and

1 Tariff (REST) was implemented in 2006. The following chart shows the cost of
2 solar modules on a $\$/W_{DC}$ basis over the past 20 years.

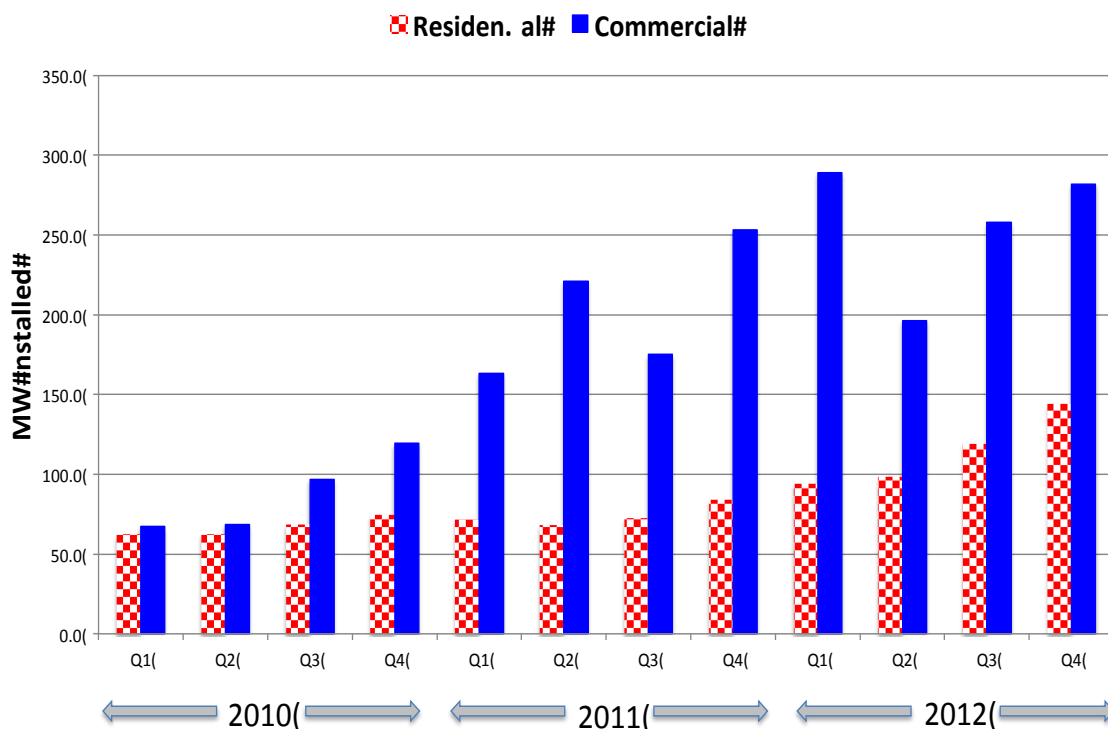


3
4 As a result of these steep cost declines, driven in large part by increased
5 demand and resulting growth in manufacturing, and the associated economies of
6 scale and efficiencies, deployment of solar energy resources, especially PV, has
7 grown nearly as dramatically – averaging over 75%/year for the last five years.



8

1 The growth has occurred across the spectrum of market segments – utility scale,
 2 commercial on-site, and residential on-site. As the latter two categories are of
 3 interest in this proceeding, the following chart² shows the deployment by major
 4 market segment over the last few years across the United States.



5

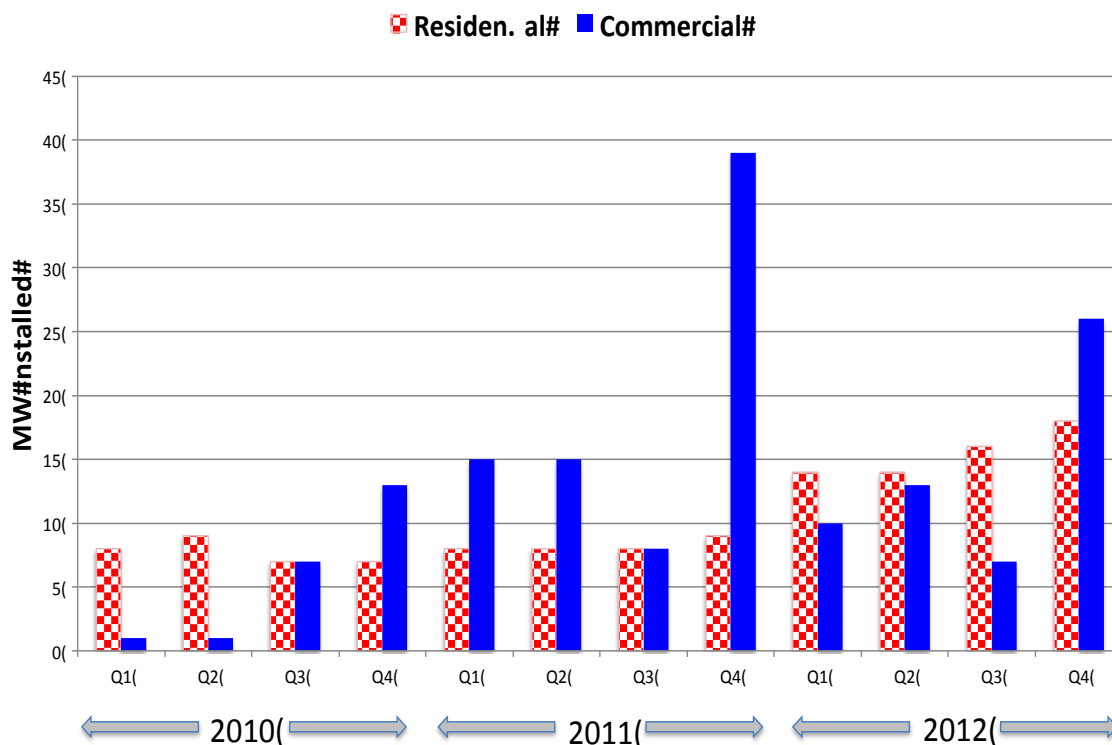
6

7 **Q. How have Arizona’s markets grown?**

8 A. Arizona has been a leading state for solar development in no small part because
 9 of the vast amount of sunshine that the state enjoys. In 2012, Arizona moved
 10 into second place behind only California for the most MWs installed both for the
 11 year and cumulatively, and leads the nation with the highest solar capacity per
 12 capita. While the 2012 growth was in large part due to utility scale solar coming

² Source: SEIA/GTM Research, U.S. Solar Market Insight

1 on line, the customer-sited market performed very well, too, as the following
2 chart³ demonstrates:



3
4

5 **Q. Has the Arizona solar market created significant jobs?**

6 A. Yes. According to a recent report from The Solar Foundation,⁴ there are nearly
7 10,000 solar jobs in the state - the highest level in the nation per capita. One of
8 every 300 working people in Arizona work in the solar industry.

9

10 **Q. Has the REST played a role in this growth?**

11 A. Yes. The REST has played a very important role in diversifying the generation
12 resources for the ACC-jurisdictional utilities, not just to renewably generated
13 electricity in large centralized plants, but also through the Distributed Renewable

³ Ibid.

⁴ Source: <http://thesolarfoundation.org/solarstates>

1 Energy Requirement (Section 1805) that promoted small systems on homes and
2 businesses. For the first time, electricity consumers at all levels had a choice for
3 their source of electricity. Not only was customer choice now a reality, but in the
4 process jobs were created and the money spent on energy stayed in Arizona
5 rather than going to out-of-state coal and natural gas producers, further helping
6 to boost the state's economy.

7
8 As noted above, compliance with Section 1805 was demonstrated by acquiring
9 Renewable Energy Credits or RECs from the owners of customer-sited solar
10 generating systems in exchange for payments from the utility.

11 12 **Renewable Energy Credits and REST Compliance**

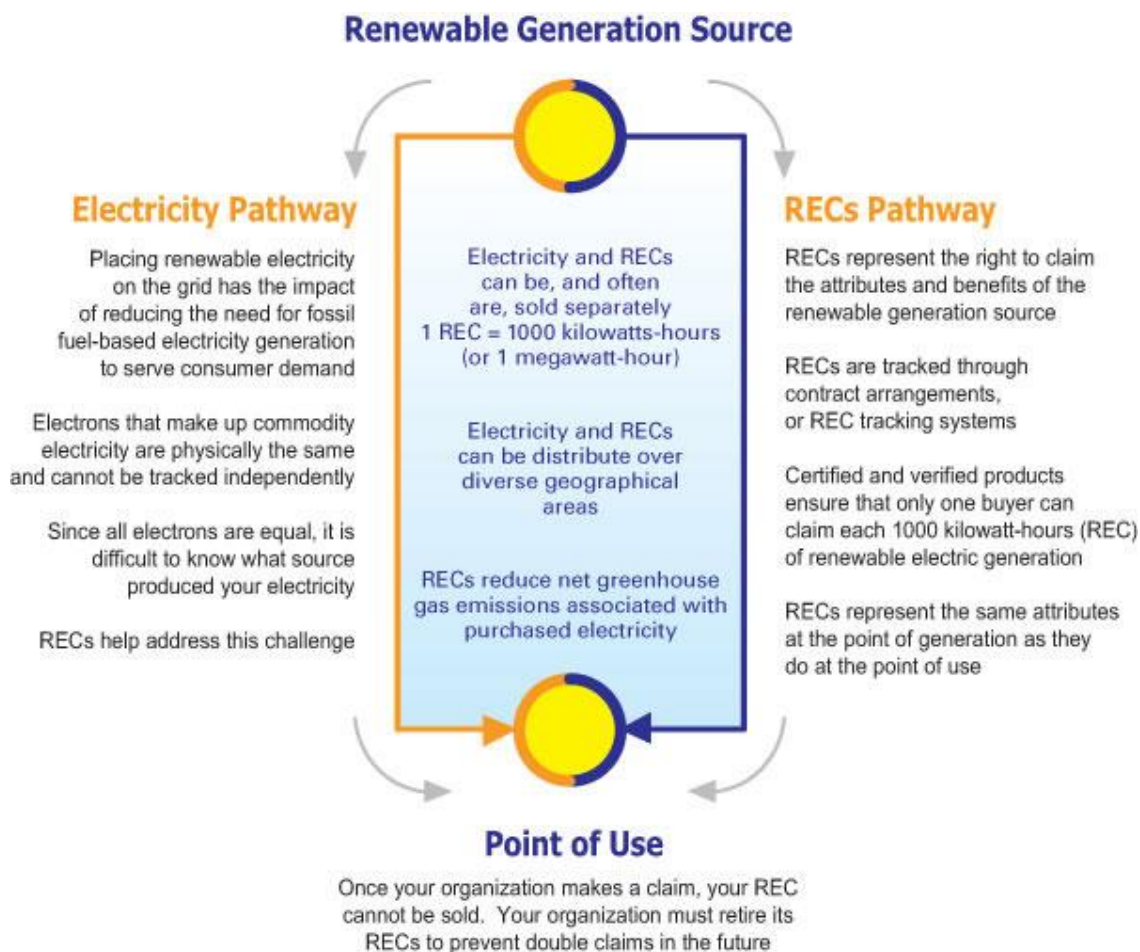
13 **Q. What is a Renewable Energy Credit or REC?**

14 A. The REST defines Renewable Energy Credit (sometimes known as a Renewable
15 Energy *Certificate*) as “the unit created to track kWh derived from an Eligible
16 Renewable Energy Resource or kWh equivalent of Conventional Energy
17 Resources displaced by Distributed Renewable Energy Resources.” More
18 commonly, RECs are defined to include non-energy attributes, “including any and
19 all credits, benefits, emissions reductions, offsets, and allowances, howsoever
20 entitled, directly attributable to a specific amount of electric energy generated
21 from a renewable energy resource.”⁵

22
23 RECs are created whenever a renewable resource generates electricity,

⁵ From the definition of RECs in the Colorado PUC Rules.

1 regardless of whether the utilities in the state (and territory) in which the project is
2 located have a compliance obligation. The owner of the renewable energy
3 system generally owns the RECs unless contractually transferred to another
4 entity. The following chart⁶ lays this out graphically:



5

6

7 **Q. Do RECs have value?**

8 A. Yes. There are two markets for RECs. The first is the compliance market, in
9 which RECs are used by a utility or other energy provider to comply with a state
10 renewable requirement. The second market is a non-compliance (sometimes

⁶ Source: http://www.epa.gov/greenpower/gpmarket/rec_chart.htm

1 known as voluntary) market in which individuals, businesses or local
2 governments acquire RECs to achieve certain sustainability or climate change
3 goals. There are many companies⁷ operating at the national, regional and state
4 level that acquire and aggregate RECs from individual projects for resale to
5 individuals and organizations. One of the largest, Bonneville Environmental
6 Foundation (BEF), defines RECs as follows:

7 **A Renewable Energy Certificate**, or REC, is a tradable, legal mechanism
8 that represents the environmental benefits associated with one megawatt-
9 hour of electricity generated from a renewable energy resource. These
10 certificates may be sold and traded and the owner of the REC can legally
11 claim to have purchased renewable energy. RECs incentivize the
12 production of renewable energy by providing a source of revenue to
13 electricity generated from renewable sources.
14

15 **Q. Why would individuals, businesses or other organizations purchase RECs?**

16 A. BEF notes the rationale for businesses to purchase RECs includes:

- 17 ➤ To offset the carbon emissions associated with their electricity use
- 18 ➤ To choose renewable power when their local utility does not offer a green
19 power option
- 20 ➤ To consolidate procurement of renewable energy for multiple locations
21 instead of buying renewable electricity from multiple suppliers
- 22 ➤ To offset electricity used for special events, such as conferences, when a
23 direct purchase is not possible
24

25 To my knowledge, no one in this proceeding disputes that RECs have value
26 outside of the Arizona compliance market.
27

28 **Q. In the non-compliance market, how can purchasers be assured they are**
29 **receiving the values they are purchasing?**

⁷ See http://www.green-e.org/base/re_products#res

1 A. The RECs in voluntary markets are usually certified. The leading independent
2 certification organization is the Center for Resource Solutions which administers
3 the Green-e program. This program has been around since 1997 and certifies
4 and verifies over two-thirds of the RECs in the voluntary markets. In 2011 Green-
5 e Energy certified more than 27 million MWh that was sold to over 713,000 retail
6 customers. Based on the most recently available National Renewable Energy
7 Laboratory data, Green-e Energy certified sales are estimated to make up over
8 99% of all retail REC sales in the U.S. and roughly two thirds of the retail
9 renewable electricity sales in the U.S.⁸

10

11 **Q. Would you say that the REST has “run its course?”**

12 A. Not at all. The REST was implemented in 2006 and was designed to increase
13 the diversity of resources on the utilities’ grids through 2025, and maintain those
14 minimum levels of renewables beyond. We are less than halfway through the
15 growth period of this policy and, importantly, it has been working as intended.
16 The major utilities have been able to meet their targets ahead of schedule in
17 some cases. For example, APS and TEP have acquired sufficient Renewable
18 Energy Credits (RECs) to meet the non-residential portion of the Section 1805
19 standard to nearly 2020. It is partly on this basis that the Commission eliminated
20 incentives for non-residential solar installations. Notwithstanding this
21 development, the utilities are still required to comply with the REST.

22

⁸ <http://www.green-e.org/docs/2011%20Green-e%20Verification%20Report.pdf>

1 **Q. Is this an appropriate time for the Commission to address the Distributed**
2 **Renewable Energy Requirement?**

3 A. In my view, it is premature. For example, we don't know how, if at all, other
4 important clean energy policies such as net metering may change in the near
5 future. Such changes have the potential to dramatically affect the economics of
6 customer-sited solar, which in turn can impact its future rate of deployment and
7 incentive levels.

8

9 **The Utility Proposals**

10 **Q. Can you summarize how APS and TEP propose to comply with the DE**
11 **standard when incentives are no longer available to use to acquire RECs**
12 **for compliance?**

13 A. Yes. APS proposes to “no longer have a firm DE requirement” but create a
14 “track and record” process in which APS measures the incremental energy
15 produced by eligible distributed renewable energy systems and reports it to the
16 Commission for informational, but not compliance, purposes. It believes this
17 method solves the problem of generation owners retaining ownership of the
18 RECs created by their renewable generation. Mechanically, it proposes a waiver
19 of the rules initially when cash incentives are eliminated, and over the longer
20 term a change to the rules.

21

22 TEP proposes to simply eliminate the requirement as currently designed. It feels
23 the standard is based on customer behavior and that, without incentives, the
24 utility does not participate in the decision making process. It does go on to

1 suggest an interim solution is necessary until the Commission carries out its
2 suggestion. In this regard, it proposes a waiver of the Distributed Renewable
3 Energy Requirement.
4

5 **Q. Does the APS track and record proposal avoid the double counting of**
6 **customer’s solar generation?**

7 A. I think it is very unclear whether the new APS track and record proposal truly has
8 no impact on the value of customer-owned RECs. Anytime kWh are used to
9 track compliance with the RES, the utilities are benefitting from RECs they do not
10 own. RECs cannot retain their value in the voluntary market if their underlying
11 kWh are being used for compliance purposes. If there is any uncertainty around
12 that question, REC aggregators are likely to look elsewhere. Organizations like
13 the Center for Resource Solutions are the national experts in this field and should
14 be consulted before any new policy is adopted.
15

16 **Q. Do the utilities make any other suggestions?**

17 A. Yes. APS alludes to “some form of DE incentives” that may exist “as a policy
18 matter” separate from direct cash incentives. It’s unclear whether APS may be
19 referring to net metering, interconnection, or some other policy matter, thus it is
20 difficult to respond. On the other hand, TEP is quite direct in its alternative
21 proposal that RECs be transferred to the utility in exchange “for the benefits
22 associated with net metering.”
23

1 We disagree with these suggestions for a number of reasons. First, no Arizona
2 utility has proven any net cost exists associated with net metering. Moreover, the
3 Commission has not ruled on the issue.

4
5 Second, APS is facilitating a series of technical conferences right now, in which
6 TEP, SRP, staff, RUCO and many other traditional Commission stakeholders are
7 participating, that is scheduled to continue into the summer. There is a great
8 deal of new data and information coming out of this process and it is extremely
9 premature and inappropriate for the utilities to draw conclusions at this time.

10
11 Third, due to the variety of distributed renewable energy sizes, technologies, and
12 configurations deployed on homes and businesses, and the diversity of electric
13 rates and rate structures, the net benefits and costs associated with net metering
14 will of course vary dramatically, making any broadly applied value assumption
15 incorrect.

16
17 Fourth, TEP options 2 and 3 would likely result in the Utilities claiming RECs they
18 have not paid for nor acquired from the owner through a specific transfer, and
19 don't own. Option 3 is unclear whether it applies to past net-metering
20 agreements or only future net-metering agreements and thereby risks
21 invalidating contracts for REC sales that have already been made. While not
22 directly taking the RECs for compliance, option 3 proposes to use the kWh to
23 "Track and Reduce" the utility's Annual Distributed Renewable Energy
24 Requirement by that amount. This proposal is effectively the same as the APS

1 “Track and Record” and would also leech the value out of the RECs and render
2 them valueless and likely uncertifiable by Green-e Energy.

3

4 **Q. Do you have any other comments on the utility proposals?**

5 A. Yes. There are interdependent elements in the REST that could be impacted by
6 adopting the utility proposal to eliminate Section 1805. For example, there are
7 other technologies besides solar PV such as solar domestic water heating
8 covered by Section 1805 that would be penalized by striking this section.

9

10 **The Vote Solar Proposal**

11 **Q. Does Vote Solar have a proposal to address the zero-incentive issue?**

12 A. Yes. Because RECs have value that could be compromised by the APS track
13 and record proposal, we suggest an administratively simple and low-cost market-
14 based method for continued acquisition of RECs when incentives are zero that
15 maintains the integrity of the REST.

16

17 Given that the major utilities (TEP and APS) appear to have sufficient non-
18 residential RECs to comply with Section 1805 for some time, we propose the
19 issuance of a periodic standard offer for Residential RECs from systems that are
20 installed after the incentives for residential solar are eliminated. Initially, we
21 suggest a quarterly offer for a limited number of RECs to begin to get a feel for
22 the market value. REC owners should also be encouraged to offer RECs at a
23 price lower than the standard offer, which would be acquired first, in order of
24 cost. Over time, the offers and timing can be refined. We suggest the following

1 guidelines:

- 2 • The standard offer should be issued quarterly or semi-annually via a website
3 (with notification through the monthly newsletter included in each bill) and
4 should remain open for a few days or weeks depending on market response;
- 5 • The utilities should set an initial price at a low rate and ratchet up the price, if
6 necessary, to gather sufficient RECs for compliance (at the utility's discretion
7 to pay as-bid or set a market-clearing price)
- 8 • The Standard offer should be open to system owners and third party
9 aggregators who acquire RECs and/or bid them on customer's behalf.

10 This is certainly not a new approach. In fact, utilities and load-serving entities are
11 actively conducting market-based solicitations to obtain RECs in the following
12 states: California, Colorado, Connecticut, Delaware Illinois, Maryland,
13 Massachusetts, New Jersey, New Mexico, New York, Ohio and Pennsylvania.
14 Arizona utilities have used a similar approach in soliciting non-residential solar
15 projects, as well.

16

17 **Q. What are the advantages of this approach?**

18 A. This procurement method is consistent with Arizona law and Commission rules
19 and does not require special consideration, creative work-arounds, obfuscating
20 semantics, rule modifications or on-going waivers. Indeed, it is similar to the
21 method used by the IOUs to acquire commercial solar RECs in the early days of
22 the standard. It uses the market to assure that residential RECs are acquired at
23 the lowest cost while respecting the property rights of solar system owners.

24 Third, it avoids unnecessary complexity, administrative or regulatory burdens and

1 uses a mechanism with which the utilities are quite familiar.

2

3 Finally, it puts Arizona in a leadership position on valuing RECs so that as other
4 state markets reach a similar point in their evolution, Arizona utilities will have a
5 competitive advantage.

6

7 **Q. Can this proposal be implemented immediately?**

8 A. In my view, yes. Any internal administrative work required can occur prior to the
9 elimination of incentives. However, if the utilities feel they need more time, we
10 would support a waiver of the residential portion of Section 1805 for up to one
11 year to prepare.

12

13 **Recommendation**

14 **Q. Please summarize your recommendations in this testimony.**

15 A. I recommend first that the Commission not take any near term action in this
16 proceeding that could result in a loss of value in customer's property, i.e. the
17 RECs that they own.

18

19 Second, I recommend that the Commission not reopen the REST rules at this
20 time, but rather use the time during which incentives for residential solar are still
21 available to investigate the lowest cost options through which utilities could
22 acquire RECs. This will also provide the time necessary for other policies such
23 as net metering to be more thoroughly reviewed in the context of Arizona utilities.
24 This will allow the Commission to make a more reasoned decision based on

1 more information on the economics of residential solar, the cost of mechanisms
2 like track and record, and the cost of alternatives.

3

4 **Q. Does this conclude your direct testimony?**

5 A. Yes, it does.

6

Appendix A

Rick Gilliam

January 2012 to Present: Director of Research and Analysis, the Vote Solar Initiative, San Francisco, CA. Manages the technical and policy research for Vote Solar, and engages in state, regional, and national campaigns related to key solar market policies.

January 2007 to January 2012: Vice President, Government Affairs, SunEdison, LLC, Beltsville, MD. Directs and manages policy development and implementation for the Americas at the regulatory and legislative levels. (Promoted from *Managing Director* June '09 and from *Director* Sept '07)

Dec 1994 to Jan 2007: Senior Energy Policy Advisor, Western Resource Advocates (formerly the Land and Water Fund of the Rockies), Boulder, Colorado. Develop innovative clean energy and air quality public policies within the economic and cultural framework unique to this region. Lead environmental advocate in development of Arizona Environmental Portfolio Standard, Nevada Renewable Portfolio Standard implementation rules, Colorado Renewable Energy Standard legislative proposals, and the 2003 Utah Renewable Energy Standard legislative proposal. Principal author of Colorado's Amendment 37 and lead advocate for related PUC rule development.

Jan 1983 to Dec 1994: Director of Revenue Requirements, Public Service Company of Colorado, Denver, Colorado. Primary responsibility for development of formal rate-related filings for this investor-owned utility for electric, gas, and thermal energy service in two states and the FERC. Developed and responded to a variety of proposed mechanisms to encourage the use of energy efficiency technologies, including innovative rate design approaches.

Dec 1976 to Dec 1982: Technical Witness (Engineer), Federal Energy Regulatory Commission, Washington, D.C. Testified as expert witness on behalf of the FERC in wholesale rate filings on technical, accounting, and economic issues related to rate design, pricing, and other issues.

A. Education

Masters, Environmental Policy and Management, University of Denver, Denver, Colorado
Bachelor of Science, Electrical Engineering, Rensselaer Polytechnic Institute, Troy, New York

B. Related Publications

Gilliam and Baker, "Green Power to the People," *Solar Today*, July/August 2006.

Dalton & Gilliam, "Walking on Sunshine: Energy Independence on the Rez," *Orion Afield*, Summer, 2002.

Gilliam, Rick, "Revisiting the Winning of the West," *Bulletin of Science, Technology & Society*, April 2002.

Blank, Gilliam, and Wellinghoff, "Breaking Up Is Not So Hard To Do: A Disaggregation Proposal," *The Electricity Journal*, May 1996.

Summary of Formal Testimonies available upon request

CERTIFICATE OF SERVICE

I, Allen Gleckner, hereby certify that I have this day served a true and correct copy of the foregoing document to all persons at the addresses indicated below or on the attached list by electronic filing, electronic mail, interoffice mail or by depositing said documents in the United States Mail, postage prepaid, in Chicago, Illinois.

**In the Matter of a Commission Inquiry into Ownership of Renewable Energy
Credits used to Meet Minnesota Requirements**

PUC Docket Number/s: E999/CI-13-720

Dated this 7th day of February, 2014.

s/ Allen Gleckner
Allen Gleckner

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Ross	Abbey	abbey@fresh-energy.org	Fresh Energy	408 Saint Peter St Ste 220 St. Paul, MN 55102-1125	Electronic Service	No	OFF_SL_13-720_Official
Michael	Allen	michael.allen@allenergysolar.com	All Energy Solar	721 W 26th st Suite 211 Minneapolis, Minnesota 55405	Electronic Service	No	OFF_SL_13-720_Official
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	No	OFF_SL_13-720_Official
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_13-720_Official
John	Aune	johna@bluehorizonsolar.com	Blue Horizon Energy	7246 Washington Ave S Eden Prairie, MN 55344	Paper Service	No	OFF_SL_13-720_Official
Gail	Baranko	gail.baranko@xcelenergy.com	Xcel Energy	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Peter	Beithon	pbeithon@otpc.com	Otter Tail Power Company	P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_13-720_Official
Sara	Bergan	sebergan@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_13-720_Official
Thor	Bjork	Thor.S.Bjork@xcelenergy.com	Xcel Energy	414 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
William A.	Blazar	bblazar@mnchamber.com	Minnesota Chamber Of Commerce	Suite 1500 400 Robert Street North St. Paul, MN 55101	Electronic Service	No	OFF_SL_13-720_Official
Michael	Bradley	mike.bradley@lawmoss.com	Moss & Barnett	Suite 4800 90 S 7th St Minneapolis, MN 55402-4129	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jon	Brekke	jbrekke@greenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	OFF_SL_13-720_Official
Mark B.	Bring	mbring@otpc.com	Otter Tail Power Company	215 South Cascade Street PO Box 496 Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_13-720_Official
Christina	Brusven	cbrusven@fredlaw.com	Fredrikson & Byron, P.A.	200 S 6th St Ste 4000 Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_13-720_Official
Michael J.	Bull	N/A	Center for Energy and Environment	212 Third Avenue North, Suite 560 Minneapolis, MN 55401	Paper Service	No	OFF_SL_13-720_Official
Jessica	Burdette	jessica.burdette@state.mn.us	Department of Commerce	85 7th Place East Suite 500 St. Paul, MN 55101	Electronic Service	No	OFF_SL_13-720_Official
Joel	Cannon	jcannon@tenksolar.com	Tenk Solar, Inc.	9549 Penn Avenue S Bloomington, MN 55431	Electronic Service	No	OFF_SL_13-720_Official
Tammie	Carino	tcarino@GREnergy.com	Great River Energy	12300 Elm Creek Blvd. Maple Grove, MN 55369-4718	Electronic Service	No	OFF_SL_13-720_Official
Douglas M.	Carnival		McGrann Shea Anderson Carnival	Straughn & Lamb 800 Nicollet Mall, Suite 2600 Minneapolis, MN 554027035	Paper Service	No	OFF_SL_13-720_Official
John J.	Carroll	jcarroll@newportpartners.com	Newport Partners, LLC	9 Cushing, Suite 200 Irvine, California 92618	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Aakash	Chandarana	Aakash.Chandara@xcelenergy.com	Xcel Energy	414 Nicollet Mall 5th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Steve W.	Chriss	Stephen.chriss@walmart.com	Wal-Mart	2001 Southeast 10th St. Bentonville, AZ 72716-5530	Paper Service	No	OFF_SL_13-720_Official
Kenneth A.	Colburn	kcolburn@symbioticstrategies.com	Symbiotic Strategies, LLC	26 Winton Road Meredith, NH 32535413	Electronic Service	No	OFF_SL_13-720_Official
Steve	Coleman	scoleman@appliedenergyinnovations.org	Applied Energy Innovations	4000 Minnehaha Ave S Minneapolis, MN 55406	Electronic Service	No	OFF_SL_13-720_Official
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_13-720_Official
Mark F.	Dahlberg	markdahlberg@nweco.com	Northwestern Wisconsin Electric Company	P.O. Box 9 104 South Pine Street Grantsburg, WI 548400009	Electronic Service	No	OFF_SL_13-720_Official
Lisa	Daniels	lisadaniels@windustry.org	Windustry	201 Ridgewood Avenue Minneapolis, MN 55403	Paper Service	No	OFF_SL_13-720_Official
Chris	Davis	christopher.davis@state.mn.us	Department of Commerce	Suite 500 85 Seventh Place East St. Paul, MN 551012198	Electronic Service	No	OFF_SL_13-720_Official
Dustin	Denison	dustin@appliedenergyinnovations.org	Applied Energy Innovations	4000 Minnehaha Ave S Minneapolis, MN 55406	Electronic Service	No	OFF_SL_13-720_Official
Curt	Dieren	cdieren@dgrnet.com	L&O Power Cooperative	1302 South Union Street PO Box 511 Rock Rapids, IA 51246	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Ian	Dobson	ian.dobson@ag.state.mn.us	Office of the Attorney General-RUD	Antitrust and Utilities Division 445 Minnesota Street, BRM Tower St. Paul, MN 55101	Electronic Service 1400	No	OFF_SL_13-720_Official
Dan	Donkers	N/A	Saint Paul - Ramsey County Public Health	Environmental Health Section 2785 White Bear Ave. Suite 350 Maplewood, MN 55109	Paper Service	No	OFF_SL_13-720_Official
Bill	Droessler	N/A	Izaak Walton League of America-MWO	1619 Dayton Ave Ste 202 Saint Paul, MN 55104	Paper Service	No	OFF_SL_13-720_Official
Mike	Eggl	smeier@bepec.com	Basin Electric Power Cooperative	1717 East Interstate Avenue Bismarck, ND 58503	Paper Service	No	OFF_SL_13-720_Official
Kristen	Eide Tollefson	HealingSystems@earthlink.net	R-CURE	P O Box 129 Frontenac, MN 55026	Paper Service	No	OFF_SL_13-720_Official
Rebecca	Eilers	rebecca.d.eilers@xcelenergy.com	Xcel Energy	414 Nicollet Mall, 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Betsy	Engelking	betsy@geronimoenergy.com	Geronimo Energy	7650 Edinborough Way Suite 725 Edina, MN 55435	Electronic Service	No	OFF_SL_13-720_Official
Rick	Evans	Rick.Evans@xcelenergy.com	Xcel Energy	404 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Pam	Fergen		Henepin County Government Center CAO	A2000 300 S. Sixth Street Minneapolis, MN 55487	Paper Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_13-720_Official
Cathy	Fogale	cfogale@otpc.com	Otter Tail Power Company	215 South Cascade Street PO Box 496 Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_13-720_Official
Nathan	Franzen	nathan@geronimoenergy.com	Geronimo Energy	7650 Edinborough Way Suite 725 Edina, MN 55435	Electronic Service	No	OFF_SL_13-720_Official
Amy	Fredregill	amy@mrets.org	Midwest Renewable Energy Tracking System, Inc.	1885 University Avenue West, #315 St. Paul, MN 55104	Paper Service	No	OFF_SL_13-720_Official
Lori	Frisk Thompson	lorif@cmmpa.org	Central MN MPA	459 S Grove St Blue Earth, MN 56013	Electronic Service	No	OFF_SL_13-720_Official
Lee	Gabler	Lee.E.Gabler@xcelenergy.com	Xcel Energy	404 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Gary	Garbe	Gary.Garbe@avantenergy.com	Minnesota Municipal Power Agency	200 South Sixth Street Suite 300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_13-720_Official
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St Saint Paul, MN 55102	Paper Service	No	OFF_SL_13-720_Official
Darrell	Gerber		Clean Water Action Alliance of Minnesota	308 Hennepin Ave. E. Minneapolis, MN 55414	Paper Service	No	OFF_SL_13-720_Official
Benjamin	Gerber	bgerber@mchamber.com	Minnesota Chamber of Commerce	400 Robert Street North Suite 1500 St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Bruce	Gerhardson	bgerhardson@otpco.com	Otter Tail Power Company	PO Box 496 215 S Cascade St Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_13-720_Official
Allen	Gleckner	agleckner@elpc.org	Environmental Law & Policy Center	2356 University Ave W. Suite 403 St. Paul, Minnesota 55114	Electronic Service	No	OFF_SL_13-720_Official
Elizabeth	Goodpaster	bgoodpaster@mncenter.org	MN Center for Environmental Advocacy	Suite 206 26 East Exchange Street St. Paul, MN 551011667	Electronic Service	No	OFF_SL_13-720_Official
Bryan	Gower	N/A	APX, Inc.	224 Airport Parkway Suite 600 San Jose, CA 95110	Paper Service	No	OFF_SL_13-720_Official
Bill	Grant	Bill.Grant@state.mn.us	Minnesota Department of Commerce	85 7th Place East, Suite 500 St. Paul, MN 55101	Electronic Service	No	OFF_SL_13-720_Official
Pete	Grills	N/A	Citizen User	5414 Ashurst Street Indianapolis, IN 46220	Paper Service	No	OFF_SL_13-720_Official
Lloyd	Grooms	lgrooms@winthrop.com	Winthrop and Weinstine	Suite 3500 225 South Sixth Street Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_13-720_Official
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_13-720_Official
Tony	Hainault	anthony.hainault@co.hennepin.mn.us	Hennepin County DES	701 4th Ave S Ste 700 Minneapolis, MN 55415-1842	Electronic Service	No	OFF_SL_13-720_Official
J Drake	Hamilton	hamilton@fresh-energy.org	Fresh Energy	408 St Peter St Saint Paul, MN 55101	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Sam	Hanson	shanson@briggs.com	Briggs and Morgan, PA	2200 IDS Center 80 South Eighth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_13-720_Official
Samuel	Hanson	N/A	Briggs And Morgan, P.A.	2200 IDS Center E 80 South Eighth Street Minneapolis, MN 55402	Paper Service	No	OFF_SL_13-720_Official
Jack	Hays	jack.hays@westwoodps.com	Westwood Professional Services	7699 Anagram Drive Eden Prairie, MN 55344	Electronic Service	No	OFF_SL_13-720_Official
Bill	Heaney	billheaney@billheaney.com	IBEW Minnesota State Council	3931 Silver Lake Rd NE St. Anthony Village, MN 55421	Electronic Service	No	OFF_SL_13-720_Official
Brandon	Heath	bheath@misoenergy.org	MISO Energy	1125 Energy Park Drive St. Paul, MN 55108-5001	Electronic Service	No	OFF_SL_13-720_Official
John	Helmers	helmers.john@co.olmsted.mn.us	Olmsted County Waste to Energy	2122 Campus Drive SE Rochester, MN 55904-4744	Electronic Service	No	OFF_SL_13-720_Official
Annete	Henkel	mui@mutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St. Paul, MN 55101	Electronic Service	No	OFF_SL_13-720_Official
Jessy	Hennesy	jessy.hennesy@avantenergy.com	Avant Energy	220 S. Sixth St. Ste 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_13-720_Official
Lynn	Hinkle	lhinkle@mnseia.org	Minnesota Solar Energy Industries Association	2512 33rd Ave South #2 Minneapolis, MN 55406	Electronic Service	No	OFF_SL_13-720_Official
Holly	Hinman	holly.r.hinman@xcelenergy.com	Xcel Energy	414 Nicollet Mall, 6th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Margaret	Hodnik	mhodnik@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_13-720_Official
David	Horneck	david.g.horneck@xcelenergy.com	Xcel Energy	1800 Larimer Street Denver, CO 80202	Electronic Service	No	OFF_SL_13-720_Official
Ashley	Houston			120 Fairway Rd Chestnut Hill, MA 24671850	Paper Service	No	OFF_SL_13-720_Official
Lori	Hoyum	lhoyum@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	OFF_SL_13-720_Official
Jan	Hubbard	Jan@AppliedEnergyInnovations.org	Applied Energy Innovations, LLC	4000 Minnehaha Avenue South Minneapolis, MN 55406	Paper Service	No	OFF_SL_13-720_Official
Anne	Hunt	anne.hunt@ci.stpaul.mn.us	City of Saint Paul	390 City Hall 15 West Kellogg Boulevard Saint Paul, MN 55102	Electronic Service	No	OFF_SL_13-720_Official
Steve	Huso	steve.huso@xcelenergy.com	Xcel Energy	G.O. 7th Floor 414 Nicollet Mall Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_13-720_Official
Casey	Jacobson	cjacobson@bepc.com	Basin Electric Power Cooperative	1717 East Interstate Avenue Bismarck, ND 58501	Electronic Service	No	OFF_SL_13-720_Official
Ralph	Jacobson	N/A	Innovative Power Systems, Inc.	1413 Hunting Valley Rd Ste 1 Saint Paul, MN 55109-1555	Paper Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Dwight	Jelle	dkjelle@gmail.com	Best Power International, LLC	P.O. 5126 Hopkins, MN 55343	Electronic Service	No	OFF_SL_13-720_Official
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2265 Roswell Road Suite 100 Marietta, GA 30062	Electronic Service	No	OFF_SL_13-720_Official
Eric	Jensen	ejensen@iwla.org	Izaak Walton League of America	Suite 202 1619 Dayton Avenue St. Paul, MN 55104	Electronic Service	No	OFF_SL_13-720_Official
Linda	Jensen	linda.s.jensen@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	No	OFF_SL_13-720_Official
Paula N.	Johnson	PaulaJohnson@alliantenergy.com	Interstate Power and Light Company	200 First Street SE PO Box 351 Cedar Rapids, IA 524060351	Electronic Service	No	OFF_SL_13-720_Official
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	90 South 7th Street Suite #4800 Minneapolis, MN 554024129	Electronic Service	No	OFF_SL_13-720_Official
Larry	Johnston	lw.johnston@smmpa.org	SMMPA	500 1st Ave SW Rochester, MN 55902-3303	Paper Service	No	OFF_SL_13-720_Official
Nate	Jones	njones@hcpd.com	Heartland Consumers Power	PO Box 248 Madison, SD 57042	Electronic Service	No	OFF_SL_13-720_Official
Michael	Kampmeyer	mkampmeyer@a-e-group.com	AEG Group, LLC	260 Salem Church Road Sunfish Lake, Minnesota 55118	Electronic Service	No	OFF_SL_13-720_Official
Nancy	Kelly	bademailnancyk@eurekarecycling.org	Eureka Recycling	2828 Kennedy Street NE Minneapolis, MN 55413	Paper Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Julie	Ketchum	N/A	Waste Management	20520 Keokuk Ave Lakeville, MN 55044	Paper Service	No	OFF_SL_13-720_Official
Kerry	Klemm	kerry.r.klemm@xcelenergy.com	Xcel Energy Services, Inc	414 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
John	Knofczynski		Heartland Consumers Power District	PO Box 248 203 W. Center Street Madison, SD 570420248	Paper Service	No	OFF_SL_13-720_Official
Mara	Koeller	mara.n.koeller@xcelenergy.com	Xcel Energy	414 Nicollet Mall 5th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Heidi	Konynenbelt	hkynonenbelt@otpc.com	Otter Tail Power Company	215 S. Cascade Street, PO Box 496 Fergus Falls, MN 565380496	Electronic Service	No	OFF_SL_13-720_Official
Jon	Kramer	jk2surf@aol.com	Sundial Solar	4708 york ave. S Minneapolis, MN 55410	Electronic Service	No	OFF_SL_13-720_Official
Allen	Krug	allen.krug@xcelenergy.com	Xcel Energy	414 Nicollet Mall-7th fl Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Scott	Kurtz	Scott.J.Kurtz@xcelenergy.com	Xcel Energy	825 Rice Street St. Paul, MN 55117	Electronic Service	No	OFF_SL_13-720_Official
Deborah Fohr	Levchak	dlevchak@bepc.com	Basin Electric Power Cooperative	1717 East Interstate Avenue Bismarck, ND 585030564	Paper Service	No	OFF_SL_13-720_Official
Amy	Liberkowski	amy.a.liberkowski@xcelenergy.com	Xcel Energy	414 Nicollet Mall 7th Floor Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_13-720_Official
Mark	Lindquist	N/A	The Minnesota Project	57107 422nd St New Ulm, MN 56073-4321	Paper Service	No	OFF_SL_13-720_Official
Matthew P	Loftus	matthew.p.loftus@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 5 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Bob	Long	rlong@larkinhoffman.com	Larkin Hoffman (Silicon Energy)	1500 Wells Fargo Plaza 7900 Xerxes Ave S Bloomington, MN 55431	Paper Service	No	OFF_SL_13-720_Official
Rebecca	Lundberg	rebecca.lundberg@powerfullygreen.com	Powerfully Green	11451 Oregon Ave N Champlin, MN 55316	Electronic Service	No	OFF_SL_13-720_Official
Paula	Maccabee	Pmaccabee@justchangela w.com	Just Change Law Offices	1961 Selby Avenue St. Paul, MN 55104	Paper Service	No	OFF_SL_13-720_Official
Casey	Maccullum	casey@appliedenergyinnovations.org	Applied Energy Innovations	4000 Minnehaha Ave S Minneapolis, MN 55406	Paper Service	No	OFF_SL_13-720_Official
Susan	Mackenzie	susan.mackenzie@state.mn.us	Public Utilities Commission	Suite 350121 7th Place East St. Paul, MN 551012147	Electronic Service	No	OFF_SL_13-720_Official
Kavita	Maini	kmairi@wi.rr.com	KM Energy Consulting LLC	961 N Lost Woods Rd Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_13-720_Official
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Mary	Martinka	mary.a.martinka@xcelenergy.com	Xcel Energy Inc	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Mike	McDowell		Heartland Consumers Power District	PO Box 248 Madison, SD 570420248	Paper Service	No	OFF_SL_13-720_Official
Natalie	McIntire	natalie.mcintire@gmail.com	Wind on the Wires	570 Asbury St Ste 201 St. Paul, MN 55104-1850	Paper Service	No	OFF_SL_13-720_Official
Harvey	McMahon	hcmahon@otpc.com	Otter Tail Power Company	215 South Cascade Street Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_13-720_Official
Dave	McNary	N/A	Hennepin County DES	701 Fourth Avenue South suite 700 Minneapolis, MN 55415-1842	Paper Service	No	OFF_SL_13-720_Official
John	McWilliams	jmm@dairynet.com	Dairyland Power Cooperative	3200 East Ave SPO Box 817 La Crosse, WI 54601-7227	Electronic Service	No	OFF_SL_13-720_Official
Valerie	Means	valerie.means@lawmoss.com	Moss & Barnett	Suite 4800 90 South Seventh Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_13-720_Official
Brian	Millberg	Brian.Millberg@minneapolismn.gov	City of Minneapolis	350 South 5th St, #315 Minneapolis, MN 55415	Paper Service	No	OFF_SL_13-720_Official
Stacy	Miller	stacy.miller@state.mn.us	Department of Commerce	State Energy Office 85 7th Place East, Suite 500 St. Paul, MN 55101	Electronic Service	No	OFF_SL_13-720_Official
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Andrew	Moratzka	apmoratzka@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_13-720_Official
Martin	Morud	mmorud@trunorthsolar.com	Tru North Solar	5115 45th Ave S Minneapolis, MN 55417	Electronic Service	No	OFF_SL_13-720_Official
David W.	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	Suite 300 200 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_13-720_Official
Michael	Noble	noble@fresh-energy.org	Fresh Energy	Hamm Bldg., Suite 220 408 St. Peter Street St. Paul, MN 55102	Electronic Service	No	OFF_SL_13-720_Official
Rolf	Nordstrom	rnordstrom@gpisd.net	Great Plains Institute	2801 21ST AVE S STE 220 Minneapolis, MN 55407-1229	Electronic Service	No	OFF_SL_13-720_Official
Kate	O'Connell	kate.oconnell@state.mn.us	Department of Commerce	Suite 50085 Seventh Place East St. Paul, MN 551012198	Electronic Service	No	OFF_SL_13-720_Official
Thomas L.	Osteraas	bademailthomasosteraas@leonard.com	Excelsior Energy	150 South 5th Street Suite 2300 Minneapolis, MN 55402	Paper Service	No	OFF_SL_13-720_Official
Nick	Paluck	nick.paluck@xcelenergy.com	Xcel Energy	7th Floor 414 Nicollet Mall Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_13-720_Official
Gerad	Paul	gpaul@minnkota.com	Minnkota Power Cooperative	1822 Mill Road Grand Forks, ND 58208-3200	Paper Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James	Pearson	james.g.pearson@xcelenergy.com	Xcel Energy	414 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Mary Beth	Peranteau	mperanteau@wheelerlaw.com	Wheeler Van Sickle & Anderson SC	Suite 801 25 West Main Street Madison, WI 537033398	Electronic Service	No	OFF_SL_13-720_Official
Donna	Pickard	dpickard@aladdinsolar.com	Aladdin Solar	1215 Lilac Lane Excelsior, MN 55331	Electronic Service	No	OFF_SL_13-720_Official
Charlie	Pickard	cpickard@aladdinsolar.com	Aladdin Solar	1215 Lilac Lane Excelsior, MN 55331	Electronic Service	No	OFF_SL_13-720_Official
William	Pickrell		North American Hydro	PO Box 167 116 State Street Neshkoro, WI 54941	Paper Service	No	OFF_SL_13-720_Official
Julie	Pierce		Minnesota Power	30 West Superior Street Duluth, MN 558022093	Paper Service	No	OFF_SL_13-720_Official
Gayle	Prest	gayle.prest@minneapolismn.gov	City of Mpls Sustainability	350 South 5th St, #315 Minneapolis, MN 55415	Paper Service	No	OFF_SL_13-720_Official
Kent	Ragsdale	kentragdsdale@alliantenergy.com	Alliant Energy-Interstate Power and Light Company	P.O. Box 351 200 First Street, SE Cedar Rapids, IA 524060351	Electronic Service	No	OFF_SL_13-720_Official
John C.	Reinhardt		Laura A. Reinhardt	3552 26Th Avenue South Minneapolis, MN 55406	Paper Service	No	OFF_SL_13-720_Official
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Paper Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Enio	Ricci	ericci@invenergyllc.com	Invenergy LLC	17830 New Hampshire Ave Ste 300 Ashton, MD 20861	Paper Service	No	OFF_SL_13-720_Official
Trudy	Richter	trichter@rranow.com	Minnesota Resource Recovery Assn.	477 Selby Avenue St. Paul, MN 55102	Paper Service	No	OFF_SL_13-720_Official
Michelle	Rosier	michelle.rosier@sierraclub.org	Sierra Club	2327 E. Franklin Avenue Minneapolis, MN 554061024	Paper Service	No	OFF_SL_13-720_Official
Craig	Rustad	crustad@minnkota.com	Minnkota Power	1822 Mill Road PO Box 13200 Grand Forks, ND 582083200	Electronic Service	No	OFF_SL_13-720_Official
Robert K.	Sahr	bsahr@eastriver.coop	East River Electric Power Cooperative	P.O. Box 227 Madison, SD 57042	Electronic Service	No	OFF_SL_13-720_Official
Raymond	Sand	rms@dairynet.com	Dairyland Power Cooperative	P.O. Box 8173200 East Avenue South LaCrosse, WI 546020817	Electronic Service	No	OFF_SL_13-720_Official
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_13-720_Official
Larry L.	Schedin	Larry@LLSResources.com	LLS Resources, LLC	12 S 6th St Ste 1137 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_13-720_Official
Matthew J.	Schuerger P.E.	mjsreg@earthlink.net	Energy Systems Consulting Services, LLC	PO Box 16129 St. Paul, MN 55116	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Kevin	Schwain	Kevin.D.Schwain@xcelenergy.com	Xcel Energy	404 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Dean	Sedgwick	N/A	Itasca Power Company	PO Box 457 Bigfork, MN 56628-0457	Paper Service	No	OFF_SL_13-720_Official
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	Ste 122 9100 W Bloomington Frwy Bloomington, MN 55431	Electronic Service	No	OFF_SL_13-720_Official
Gary	Shaver	N/A	Silicon Energy	3506 124th St NE Marysville, WA 98271	Paper Service	No	OFF_SL_13-720_Official
Erin	Shea	bademaileshea@silicon-energy.com	Silicon Energy	11168 Sumter Circle Bloomington, MN 55438	Paper Service	No	OFF_SL_13-720_Official
Doug	Shoemaker	dougs@mnRenewables.org	MRES	2928 5th Avenue South Minneapolis, MN 55408	Paper Service	No	OFF_SL_13-720_Official
Mrg	Simon	mrgsimon@mrenergy.com	Missouri River Energy Services	3724 W. Avera Drive P.O. Box 88920 Sioux Falls, SD 571098920	Electronic Service	No	OFF_SL_13-720_Official
Beth H.	Soholt	bsoholt@windonthewires.org	Wind on the Wires	570 Asbury Street Suite 201 St. Paul, MN 55104	Electronic Service	No	OFF_SL_13-720_Official
Chanti	Sourignavong	chantipal.sourignavong@honeywell.com	Honeywell	1985 Douglas Drive North MN10-111A Golden Valley, MN 55422-3992	Paper Service	No	OFF_SL_13-720_Official
Erin	Stojan Ruccolo	ruccolo@fresh-energy.org	Fresh Energy	408 Saint Peter St Ste 220 Saint Paul, MN 55102-1125	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
James M.	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	470 U.S. Bank Plaza 200 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_13-720_Official
Deb	Sundin	deb.sundin@xcelenergy.com	Xcel Energy	414 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official
Randy	Synstelien	rsynstelien@otpc.com	Otter Tail Power Company	215 S Cascade St Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_13-720_Official
Steve	Thompson		Central Minnesota Municipal Power Agency	459 S Grove St Blue Earth, MN 56013-2629	Paper Service	No	OFF_SL_13-720_Official
SaGonna	Thompson	Regulatory.Records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_13-720_Official
David	Thornton	J.David.Thornton@state.mn.us	MN Pollution Control Agency	520 Lafayette Road St. Paul, MN 55101	Electronic Service	No	OFF_SL_13-720_Official
Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD	Suite 325 7301 Ohms Lane Edina, MN 55439	Electronic Service	No	OFF_SL_13-720_Official
Lise	Trudeau	lise.trudeau@state.mn.us	Department of Commerce	85 7th Place East Suite 500 Saint Paul, MN 55101	Electronic Service	No	OFF_SL_13-720_Official
Darryl	Tveitbakk		Northern Municipal Power Agency	123 Second Street West Thief River Falls, MN 56701	Paper Service	No	OFF_SL_13-720_Official
Kari L	Valley	kari.l.valley@xcelenergy.com	Xcel Energy Service Inc.	414 Nicollet Mall FL 5 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_13-720_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Roger	Warehime	warehimer@owatonnautilities.com	Owatonna Public Utilities	208 South WalnutPO Box 800 Owatonna, MN 55060	Electronic Service	No	OFF_SL_13-720_Official
Carol	Westergard	cwestergard@otpc.com	Otter Tail Power Company	215 S Cascade St Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_13-720_Official
Paul	White	paul.white@prcwind.com	Project Resources Corp./Tamarac Line LLC/Ridgewind	618 2nd Ave SE Minneapolis, MN 55414	Electronic Service	No	OFF_SL_13-720_Official
Scott M.	Wilensky	scott.wilensky@xcelenergy.com	Xcel Energy	7th Floor 414 Nicollet Mall Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_13-720_Official
Jason	Willett	jason.willett@metc.state.mn.us	Metropolitan Council	390 Robert St N Saint Paul, MN 55101-1805	Electronic Service	No	OFF_SL_13-720_Official
Daniel	Williams	DanWilliams.mg@gmail.com	Powerfully Green	11451 Oregon Avenue N Champlin, MN 55316	Electronic Service	No	OFF_SL_13-720_Official
Steven	Wishart	steven.w.wishart@xcelenergy.com	Xcel Energy	7th Floor 414 Nicollet Mall Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_13-720_Official
Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company	200 First St SE Cedar Rapids, IA 52401	Electronic Service	No	OFF_SL_13-720_Official
Thomas J.	Zaremba		WHEELER, VAN SICKLE & ANDERSON	Suite 801 25 West Main Street Madison, WI 537033398	Paper Service	No	OFF_SL_13-720_Official