



**Minnesota Valley Cooperative
Light & Power Association**
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April 21, 2016

To: Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
350 Metro Square Building
121 7th Place East
St. Paul, MN 55101-2147

From: Pat Carruth
General Manager
Minnesota Valley Cooperative Light & Power Association
501 South 1st Street
P.O. Box 248
Montevideo, MN 56265
pcarruth@mnvalleyrec.com

**Re: Minnesota Valley Cooperative Light & Power Association's Initial Response to
Request for Comments, PUC Docket Number: E-123/CG-16-241**

Dear Mr. Wolf:

Minnesota Valley Cooperative Light & Power Association ("Minnesota Valley" or the "Cooperative") is responding to the Public Utilities Commission's request for an initial response in the matter of a Complaint of Larry Fagen, Docket No. E-123/CG-16-241. Also enclosed with this response is supporting documentation, which is marked as Attachments A – D.

Response to Request No. 1

Although the Cooperative does not have firsthand knowledge of some of the facts alleged in the Amended Complaint, particularly those describing communications and actions taken by Complainant Larry Fagen and third parties such as Green Energy Products, the Cooperative respectfully submits that the Amended Complaint does not accurately describe all of the underlying communications and actions taken by the Cooperative.

With respect to the first paragraph of the "Facts" section of the Amended Complaint, Minnesota Valley notes that while Mr. Fagen may have informed Green Energy Products, his third-party installer, at the time he installed his original solar arrays in 2012 that he planned to install additional solar facilities in the future, Mr. Fagen did not provide any such notice to Minnesota

Valley. In fact, the Cooperative did not receive notice that Mr. Fagen intended to double the size of his facilities until December 9, 2015, when a representative of Green Energy Products contacted the Cooperative to discuss the installation of new solar arrays at Mr. Fagen's property.

Thereafter, Minnesota Valley did not hear anything more regarding Mr. Fagen's plans to install additional facilities until January 4, 2016, when Mr. Fagen called the Cooperative and informed Member Service Manager Bob Walsh that the installation process had begun, and in fact, was already near completion.

Due to his concern that the Cooperative had not yet received any of the written documentation and diagrams relating to Mr. Fagen's new solar installation, as required for the safe and seamless interconnection of Mr. Fagen's new facilities to Minnesota Valley's electric system, Mr. Walsh immediately contacted Philip Lipetzky at Green Energy Products, whom Mr. Walsh understood to be overseeing the installation of Mr. Fagen's new system. A copy of the subsequent series of e-mails Mr. Walsh exchanged with Mr. Lipetzky regarding plans for interconnecting Mr. Fagen's new system are attached as **Attachment A**.

Thereafter, the Cooperative received notice from Mr. Lipetzky on January 13 that the new solar system had been inspected, and that Green Energy Products was ready for the Cooperative "to give us the OK to turn on the additional system." (**Attachment A** at 2.) In light of this information, the Cooperative promptly installed a new unit output meter for Mr. Fagen's facilities on the following afternoon of January 14.

On that same day (January 14), Mr. Fagen and his wife visited the Cooperative's office and were given the Cooperative's standard interconnection contract, a copy of which is attached as **Attachment B**.

The following morning of January 15, Mr. Walsh contacted Mr. Lipetzky to confirm that the Cooperative was ready for Green Energy Products to energize Mr. Fagen's new system. (**Attachment A** at 1.) Mr. Lipetzky responded shortly thereafter, notifying Minnesota Valley that he "had Larry [Fagen] energized [sic] the new system today." (**Attachment A** at 1.)

The Complaint alleges that after providing Mr. Fagen with a copy of the Cooperative's contract, Mr. Walsh began calling him "four or five days in a row." To the extent the Complaint suggests that Mr. Walsh was attempting to badger or harass Mr. Fagen into signing the Cooperative's standard contract, the Cooperative and Mr. Walsh both adamantly deny such an allegation. Mr. Walsh's attempts to reach Mr. Fagen were always intended for Mr. Fagen's benefit because Mr. Walsh wanted to ensure that Mr. Fagen had all of the relevant information he needed, and that Mr. Fagen had all of his questions answered, as necessary to ensure a seamless interconnection of his new system.

With respect to specific communications, Mr. Walsh first recalls calling Mr. Fagen on or around January 26, 2016, at which time he left a message indicating that the Cooperative had not yet

received Mr. Fagen's signed contract. Mr. Walsh left a second message on or around January 28. Mr. Walsh's intent was not to bully Mr. Fagen into signing the proposed contract, but rather, to make sure that Mr. Fagen understood that the Cooperative would be unable to credit Mr. Fagen for any excess energy that the Cooperative received from Mr. Fagen's facilities until a contract had been entered into between the parties. In addition, Mr. Walsh advised Mr. Fagen that he was free to unilaterally cancel the contract once signed at any time pursuant to Paragraph 13 of the contract.

Although the Complaint alleges that Mr. Fagen and Mr. Walsh spoke on or around January 20th, the Cooperative believes this communication may have occurred on January 14. Regardless of the actual date, however, the Cooperative does not dispute that Mr. Walsh informed Mr. Fagen that the Cooperative had pre-selected the option under Paragraph 2(A) of the Cooperative's standard contract, which provides that the qualifying facility "will be compensated for the net input into the utility systems in the form of a kilowatt-hour (KWh) credit on the consumer-members energy bills," and that "[a]ny Kwh credits carried forward by the consumer-member cancel at the end of each calendar year without any additional compensation." (*See Attachment B* at 1.) The Cooperative notes that this compensation methodology is expressly authorized by statute pursuant to Minn. Stat. § 216B.164, subd. 3(f).

However, the Cooperative denies that Mr. Walsh told Mr. Fagen that he "would be subject to [a] '\$650' annual fee for his 18.2kw system" if Mr. Fagen "wanted to go [sic] any other option" for crediting excess generation." (Complaint at 4.) Rather, what Mr. Walsh tried to explain to Mr. Fagen was that the Cooperative had elected to utilize the carry-forward bill credit methodology for compensation set forth in Minn. Stat. § 216B.164, subd. 3(f) in lieu of seeking to recover the fixed costs not already paid for through net metering customers' existing billing arrangements were they to simply be paid out of pocket for all net input into the electric system at the Cooperative's average retail utility energy rate. Mr. Walsh used the \$650 figure as only an illustrative example of why the carry-forward bill credit compensation methodology was financially more advantageous for Mr. Fagen. Mr. Walsh provided the \$650 figure as a very rough estimate of what the annual cost could be for Mr. Fagen were the Cooperative to charge him to recover fixed costs that he was not already paying through his existing billing arrangement. Mr. Walsh went so far as to break down this estimate with the following example calculation given to Mr. Fagen:

If your diversified demand is approximately 3.5 kW, and your capacity is 20kW, then you deduct the diversified demand from the 20kW to get 16.5kW. With a rough estimate of recoverable fixed costs per kW of approximately \$3.50, the total amount recoverable over a year for such fixed costs would be $\$3.50/\text{kW} \times 16.5 \text{ kW} \times 12 \text{ months} = \693.00 .

By way of background, the Cooperative has affirmatively chosen to utilize the carry-forward compensation methodology for members installing new net metering systems after July 1, 2015, and in doing so, elected not to charge such customers for the fixed costs that would otherwise be

recoverable pursuant to Minn. Stat. § 216B.164, subd. 3(a). The Cooperative strongly believes that this policy is in the best interests of both the individual members affected, because such members avoid what could be significant charges for such cost recovery, and the Cooperatives member base as a whole, since the use of the carry-forward methodology fairly reflects the balance between a net metering system customer's net input and output from the electrical system. In these respects, the Cooperative's policy is in line with the overarching scope and purpose of the Minnesota Cogeneration and Small Power Production statute, which is "to give the maximum possible encouragement to cogeneration and small power production ***consistent with the protection of the ratepayers*** and the public." Minn. Stat. § 216B.164, subd. 1 (emphasis added).

The Cooperative also denies that Mr. Walsh told Mr. Fagen that he would forfeit his excess energy generated in January if he did not sign the Cooperative's proposed contract. Rather, what Mr. Walsh attempted to explain to Mr. Fagen was that the Cooperative would need a contract on file before the Cooperative could credit Mr. Fagen for his excess generation.

With respect to the Complaint's allegations regarding the Cooperative's use of the carry-forward bill credit compensation methodology, Minnesota Valley does not dispute that Mr. Walsh told Mr. Fagen that any excess generation credit would carry forward to the end of the year, which is precisely what is set forth in Minn. Stat. § 216B.164, subd. 3(f).

Response to Request No. 2

With respect to each of the individual claims asserted in the Complaint, Minnesota Valley responds as follows:

Claim 1:

Minnesota Valley denies that it has violated Mr. Fagen's right to elect to receive compensation for his excess generation under Minn. Stat. § 216B.164, subd. (c) and (d) or Minn. Rule 7835.4012, subpart 1.

As an initial matter, the Cooperative respectfully notes that the plain language of Minn. Stat. § 216B.164, subd. 3(a) does not provide that the customer has the unilateral right to elect which method of compensation to receive, which is the reading that Mr. Fagen suggests. At issue is the last sentence of that subdivision of Section 216B.164, which provides, "In the case of net input into the utility system by a qualifying facility having less than 40-kilowatt capacity, ***compensation to the customer shall be at a per kilowatt-hour rate determined under paragraph (c), (d), or (f).***" Minn. Stat. § 216B.164, subd. (3)(a) (emphasis added).

Under well-established Minnesota law, words and phrases in a statute must be given their "plain and ordinary meaning." *State v. Struzyk*, 869 N.W.2d 280, 284 (Minn. 2015). Although the Minnesota Legislature certainly could have done so, it did not draft the foregoing sentence of

Subdivision 3(a) of Section 216B.164 in a way that signals that the decision as to which subparagraph to proceed is left solely to the net metering customer to choose. *See Struzyk*, 869 N.W.2d at 288 (explaining that the legislature could construct a statute differently if it had intended a particular meaning).

Mr. Fagen argues that he should have been given the unilateral choice of receiving compensation for net input into the Cooperative's electric system under paragraphs (c), (d), or (f) of Subdivision 3 because two of those paragraphs, (d) and (f), contain the phrase "may elect." Specifically, paragraph 3(d) provides, "a qualifying facility having less than 40-kilowatt capacity may elect that the compensation for net input . . . shall be at the average retail utility energy rate," and paragraph 3(f) provides, "A customer with a qualifying facility or net metered facility . . . may elect to be compensated . . . in the form of a kilowatt-hour credit on the customer's energy bill carried forward and applied to subsequent energy bills." The inherent flaw in the argument Mr. Fagen advances, however, is that it necessarily requires that customer choice be read into paragraph 3(a), which would be improper. *See Larson v. State*, 790 N.W.2d 700, 703 (Minn. 2010) (holding "[s]tatutory words and phrases must be construed according to the rules of grammar and common usage," and noting that a phrase contained in a remedial clause of a statute could not be read into the preceding triggering clause of the statute). Moreover, paragraph 3(c) does not contain the same "may elect" phrase, further suggesting the initial determination as to which of those three particular subparagraphs to proceed is not left exclusively to the customer to decide.

Nevertheless, even construing the statutory language at issue in the manner that the Complaint suggests, the Cooperative denies that it violated Mr. Fagen's right to elect to receive compensation under of paragraphs 3(c) or 3(d). As noted above, paragraph 3(c) does not reference customer election at all. And, while paragraph 3(d) does reference customer election, the Cooperative disputes that Mr. Fagen was denied the average retail rate of compensation outlined in that section. The Cooperative respectfully submits that paragraphs 3(d) and (3)(f) are not mutually exclusive. Indeed, paragraph 3(d) describes a **rate** of compensation, i.e., "average retail utility energy rate," whereas paragraph 3(f) describes a **method** of compensation, i.e., a bill credit "in the form of a kilowatt-hour credit carried forward on the customer's energy bill carried forward and applied to subsequent energy bills." The effective rate of compensation, however, remains the "average retail utility energy rate" under paragraph 3(f), because for every 1 kW of power that Mr. Fagen inputs into the Cooperative's system in a month where his generation exceeds his usage, he will receive the credit of 1 kW of power that would otherwise be charged to him at the retail rate in a subsequent month where his usage exceeds his generation.

Finally, the Cooperative notes that its actions did not violate Minn. Rule 7835.4012, subpart 1 because that administrative rule does not apply to cooperative electric associations. On this issue, Minn. R. 7835.4010 provides, "Parts 7835.4011 to 7835.4023 apply to interconnections between a qualifying facility and a **public utility**." Minn. R. 7835.4010 (emphasis added). "Public utility" is defined in Minn. R. 7835.0100, subp. 17b as having "the meaning given in Minnesota Statutes,

section 216B.02, subdivision 4.” That statute, in turn, expressly excludes cooperative electric associations from the definition of “public utility.” *See* Minn. Stat. § 216B.02, subd. 4.

Claim 2:

Minnesota Valley denies the allegation that the Cooperative violated Minn. Stat. § 216B.164, subd. 6(c) by failing to provide Mr. Fagen with a copy of the uniform statewide contract. The Cooperative respectfully submits that the contract provided to Mr. Fagen substantially conformed with the model statewide contract published at Minn. R. 7835.9910. For the reasons stated above in response to Claim 1, the Cooperative maintains that the relevant statute does not evince a legislative intent to leave it solely to the customer to choose which subparagraph(s) of Section 216B.164, subd. 3 to proceed for purposes of determining how the customer will be compensated for net input to a utility’s electric system.

Additionally, the Cooperative respectfully notes that the existing uniform statewide contract published at Minnesota R. 7835.9910 does not comport with Minn. Stat. § 216B.164, subd. 3 because it fails to provide the carry-forward compensation methodology as an option for cooperative electric associations and municipally owned electric utilities, even though that option plainly is available following the 2015 enactment of Minn. Stat. § 216B.164, subd. 3(f). Regardless of where the Commission ultimately falls on the issue of customer election in this matter, the Cooperative requests that the Commission consider amending the uniform statewide contract published in its rules so as to contemplate all of the amendments to Section 216B.164 enacted in 2015, which include not only the recognized usage of a carry-forward compensation method, but also the ability of cooperative electric associations and municipal utilities to charge additional fees to recover the fixed costs not already paid for by customers through their existing billing arrangements.

Claim 3:

The Cooperative denies that it is in violation of Minn. Stat. § 216B.1611 or Minn. R. 7835.0300, 7835.0400. The Cooperative filed the information required to be reported pursuant to Minn. Stat. § 216B.1611 with the Commission for the time period of January 1, 2015 to December 31, 2015 in its distributed generation interconnection report on February 25, 2016, before the designated deadline of March 1. A copy of the Cooperative’s report can be found in Docket No. 16-10 at Document ID No. 20162-118628-01.

Likewise, Minnesota Valley filed its Cogeneration Compliance Notice for the period January 1, 2015 to December 31, 2015, with all responsive schedules required pursuant to Minn. R. 7835.0300 and 7835.0400 on January 18, 2016. A copy of the public version of the Cooperative’s Cogeneration Compliance Notice for 2015 can be found in Docket No. 16-09 at Document ID No. 20161-117626-01, and a copy of the trade secret version of the Cooperative’s Cogeneration Compliance Notice for 2015 can be found in the same docket at Document ID No. 20161-117626-02.

Neither Minn. Stat. § 216B.1611 nor the administrative rules that the Complaint cites require Minnesota Valley to disclose the use of a carry-forward bill credit compensation methodology authorized by Minn. Stat. § 216B.164, subd. 3(f) in its annual schedules. Compensating qualifying facilities using the carry-forward methodology is provided for in the statute itself and does not require separate Commission approval. Moreover, the carry-forward methodology is not a “fee” of any sort, but rather, a valid methodology for compensating qualifying facilities as recognized and authorized by the Minnesota Legislature.

Nor, for that matter, is Minnesota Valley in violation of the relevant statutes and administrative rules with respect to the alleged “\$650 fee” because no such fee has been imposed. Furthermore, the Cooperative does not intend to impose such a fee on Mr. Fagen in the future. Rather, as explained above, the \$650 figure was a very rough estimate provided to Mr. Fagen regarding the anticipated annual cost he would incur if the Cooperative *had* sought to recover fixed costs the Cooperative incurred that were not already paid for by Mr. Fagen through his existing billing arrangement, as authorized by Minn. Stat. § 216B.164, subd. 3(a). As explained above, as part of its policy rationale for utilizing the carry-forward bill credit methodology, the Cooperative has elected not to pursue the recovery of fixed costs from customers installing net metering systems after July 1, 2015, even though the Cooperative would otherwise have the right to do so pursuant to the statutory amendment.

Because the Cooperative has not imposed a fee on Mr. Fagen, the Complaint’s attempt to analogize this situation to the circumstances underlying the Commission’s Order in the People’s Energy Cooperative matter in Docket 15-255 is misplaced. In that instance, the utility started charging an administrative metering fee to dual-metered members requiring special metering, billing, and reporting whose facilities were installed prior to July 1, 2015, which is the effective date for the amendment in Minn. Stat. § 216B.164, subd. 3(a) authorizing utilities to recover fixed costs not already paid by the customer through the customer’s existing billing arrangement. Here, on the other hand, no such fee has actually been imposed by Minnesota Valley at all, much less on facilities that were in existence before July 1, 2015.

The People’s Choice Order is also not relevant here because in that case, the utility had not filed its cogeneration and small power-production tariffs from 2013 to 2015. Here, on the other hand, Minnesota Valley has filed its annual Cogeneration Compliance Notice with the requisite schedules each year. Moreover, in that case, the utility did not file a revised tariff before it began imposing the new fee on its distributed-generation customers. Here again, Minnesota Valley has not imposed any such fee, and therefore, is under no obligation to file a revised tariff.

Claim 4:

Minnesota Valley denies the Complaint’s allegation that the new facilities Mr. Fagen installed after July 1, 2015, “do[] not qualify as a new installation under the law.” Although the Cooperative does not dispute that the relevant amendments to Minn. Stat. § 216B.164, subd. 3(a)

and 3(f) apply only to those “customers installing net metered systems after July 1, 2015,” the Cooperative maintains that Mr. Fagen is such a customer.

Mr. Fagen’s reading of the effective date language at issue is flawed because his reading turns on a distinction between old and new *net metered systems*, when the Minnesota Legislature specified that the amendments applicability actually turns on *customer* status. Indeed, as the Complaint notes, the amendments to Section 216B.164 were “effective July 1, 2015, and *appl[y]* to customers installing net metered systems after that day.” 1Sp2016 c 1 art 3 s 21 (emphasis added).

There is little doubt that Mr. Fagen installed a new net metered system in January 2016. Mr. Fagen’s own solar installer, Green Energy Products, repeatedly referred to the 2016 facilities installation as the “additional system” and the “new system” in correspondence with the Cooperative. (See **Attachment A.**) Installation of the new system required a new application and independent inspection in advance of interconnection. Additionally, the new installation necessarily required the execution of a new contract between Mr. Fagen and the Cooperative with an updated description of both the old and new facilities.

Furthermore, Mr. Fagen’s installation of new facilities in 2016 required the installation of a new output meter, as alluded to above. Prior to that time, Mr. Fagen had to e-mail the Cooperative monthly to manually report the kilowatts of energy generated by the solar arrays he installed in 2012, which in turn imposed additional administrative burdens on the Cooperative, because billing personnel were required to manually process the information Mr. Fagen provided each month. Now, as a result of the installation of the new output AMR meter, the energy generated by Mr. Fagen’s facilities, both old and new, is automatically reported to the Cooperative.

Under these facts, the Cooperative maintains that Mr. Fagen constitutes a “customer” who installed a “net metered system” after July 1, 2015. Therefore, the amendments apply not only to the new net metered system that he installed in January 2016, but also his preexisting system installed in 2012. Based on legislation’s plain language, Mr. Fagen is a “customer” to which the amendments apply for both his old and new net metered systems. Although the legislature could have specified that the amendments only apply to new *net metered systems* themselves installed after July 1, 2015, it did not. Rather, the legislature specified that the amendments applied to *customers* installing new net metered systems after that date. Therefore, the amendments apply not only to the new net metered system, but also Mr. Fagen’s 2012 net metered system.

The Cooperative notes that this reading makes sense from an administrative perspective, as well. If the amendments were read to apply based upon system installation rather than customer status, then utilities and customers alike would be left in the awkward position of having multiple contracts and billing arrangements in effect at one time.

Under these facts, the Cooperative submits that Mr. Fagen’s old and new facilities are both subject to the amendments to Section 216b.164 because Mr. Fagen is a customer that installed a

net metered system after July 1, 2015. And at a minimum, even if the Commission disagrees with this position, the new solar arrays that Mr. Fagen installed in January 2016 qualify independently as such a new system subject to the cost recovery authorized by Minn. Stat. § 216B.164, subd. 3(a), as well as the carry-forward bill credit compensation methodology contemplated in Minn. Stat. § 216B.164, subd. 3(f).

Response to Request No. 3

As explained above, there is no existing \$650 fee in place. Rather, the \$650 figure Mr. Walsh alluded to represented an estimated annual charge that was an illustrative example provided by Mr. Walsh to explain the Cooperative's policy decision to utilize the carry-forward compensation methodology in lieu of seeking to recover fixed costs from customers that installed net metered systems after July 1, 2015, as allowed pursuant to Minn. Stat. § 216B.164, subd. 3(a).

Response to Request No. 4

Yes, Appendix A to the Complaint is a copy of the contract the Cooperative provided to Mr. Fagen, and yes, Options 2A and 4A were pre-selected.

Response to Request No. 5

Enclosed as **Attachment C** is a table providing the Cooperative's average wholesale power cost figures for 2014 and 2015. Please note that this table has been designated as trade secret because it includes data from Minnesota Valley's wholesale energy suppliers which meets the three criteria of Minnesota Statute § 13.37 for designating information as trade secret.

Response to Request No. 6

Of Minnesota Valley's existing net metering customers, three are credited for net generation under the "kWh carry forward" method (including Mr. Fagen), nine are credited under the average retail cooperative energy rate, and zero are credited using the previous year's average wholesale power cost rate.

Response to Request No. 7

Enclosed as **Attachment D** with this response are copies of all communications provided to members within the last 18 months regarding fees, charges, and compensation options for cogeneration and small power production facilities.

Conclusion

On behalf of Minnesota Valley, I hope you find the foregoing information helpful. The Cooperative respectfully submits, based on the foregoing information, that Mr. Fagen's Complaint should be dismissed and his requests for relief denied. However, in the event the Commission needs any additional information from the Cooperative in order to resolve this matter, please know that Minnesota Valley is certainly willing to work with the Commission and its staff to provide such responsive documentation and materials.

Sincerely,

A handwritten signature in black ink, appearing to read "Pat C. Carruth". The signature is fluid and cursive, with a large initial "P" and "C".

Pat Carruth
General Manager

Enclosures

From: [Green Energy Products](#)
To: [Bob Walsh](#)
Subject: Re: FW: Checklist_Minnesota Valley Cooperative
Date: Friday, January 15, 2016 11:19:06 AM

Bob,
I had Larry energized the new system today.
Thank you and have a great weekend.

--

Philip Lipetzky
Green Energy Products
Springfield, MN 56087
P: 507-723-4885
F: 507-723-6734
www.SolarGEP.com

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On Fri, Jan 15, 2016 at 10:12 AM, Bob Walsh <bwalsh@mnvalleyrec.com> wrote:

Phil:

The meter was installed for the generator output at the Larry Fagen site in Sacred Heart yesterday afternoon, and the Fagens stopped in yesterday. They received the contract and were notified that we need a copy of their insurance liability coverage. The breakers were turned off on the unit so we did not energize the units just in case all of your work was not completed. In your e-mail below you stated that you needed the "OK to turn on the additional system". If you are ready to energize, it can be brought on line. I would ask that proper operation is verified, and we be contacted so we can do an anti-islanding after you energize. The existing unit was tested, but we need to test the new units when you have it up and running.

Thank you,

Bob Walsh

From: Green Energy Products [mailto:greenenergyproductsllc@gmail.com]
Sent: Wednesday, January 13, 2016 4:51 PM

To: Bob Walsh <bwalsh@mnvalleyrec.com>
Subject: RE: FW: Checklist_Minnesota Valley Cooperative

Bob

Larry Fagen system is inspected/finaled and ready for you to give us the OK to turn on the additional system.

Thanks

Philip

On Jan 5, 2016 12:19 PM, "Green Energy Products"
<greenenergyproductsllc@gmail.com> wrote:

OK will do
Phil

On Jan 5, 2016 12:12 PM, "Bob Walsh" <bwalsh@mnvalleyrec.com> wrote:

Yes, we have to be able to plug our automatic meter reading (AMR) meter into a 200 amp socket. It does not have to be a by-pass socket, and the solar panel output needs to be hooked to the Line side of the socket

Bob

From: Green Energy Products [mailto:greenenergyproductsllc@gmail.com]
Sent: Tuesday, January 05, 2016 12:00 PM
To: Bob Walsh <bwalsh@mnvalleyrec.com>
Subject: RE: FW: Checklist_Minnesota Valley Cooperative

So you are saying you need a production meter installed?
Phik

On Jan 5, 2016 10:54 AM, "Bob Walsh" <bwalsh@mnvalleyrec.com> wrote:

Phillip:

Thank you for the information yesterday. I see by the one line diagram that you are feeding the two solar (existing and new) inputs into the existing 200 amp terminal box. We are requiring that that two solar inputs be combined into one input feeding into the terminal box. The single combined solar input needs to have a 200 meter socket on it that is wired "backwards so to speak" to allow us to install a meter (AMR) that reads the output of the Co-Generation site into our system. We need to have automatic meter reads at the same time our other revenue/credit/heat meters are read to accurately calculate monthly bills. The "Co-Generation" meter will be installed by us when the meter socket is installed and anti-islanding tests are completed.

Thank you,

Bob Walsh

Mn. Valley

320-269-2318

From: Green Energy Products [mailto:greenenergyproductsllc@gmail.com]

Sent: Monday, January 04, 2016 5:07 PM

To: Bob Walsh <bwalsh@mnvalleyrec.com>

Subject: Re: FW: Checklist_Minnesota Valley Cooperative

Should have all been in there. I've attached the missing items anyway. Timeline from Larry was install as soon as possible. We will have racking installed starting tomorrow and will wait until your go ahead for anti-islanding testing etc after it has been passed electrical inspection.

Sincerely,

--

Philip Lipetzky

Green Energy Products

Springfield, MN 56087

P: 507-723-4885

F: 507-723-6734

www.SolarGEP.com

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On Mon, Jan 4, 2016 at 4:53 PM, Bob Walsh <bwalsh@mnvalleyrec.com> wrote:

I do have the application and letter of intent, but I have not seen and specs, one line diagrams, affidavit for inspection, time line or anything. Larry was telling me that almost everything is done, but I haven't been contacted about anything or any interconnection scheduling.

Bob W

From: Green Energy Products [mailto:greenenergyproductsllc@gmail.com]
Sent: Monday, January 04, 2016 3:18 PM
To: Bob Walsh <bwalsh@mnvalleyrec.com>
Subject: Re: FW: Checklist_Minnesota Valley Cooperative

Thanks for letting me know. I sent all the information to Larry to sign and send to you. You should have received it since he mailed it a few weeks ago! I put the letter to your attention and it should have come in a 9x6 envelope.

Regards,

--

Philip Lipetzky

Green Energy Products

Springfield, MN 56087

P: 507-723-4885

F: 507-723-6734

www.SolarGEP.com

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prohibited. Any pricing is subject to change. ****

On Mon, Jan 4, 2016 at 3:14 PM, Bob Walsh <bwalsh@mnvalleyrec.com> wrote:

Subject: Checklist_Minnesota Valley Cooperative

Phillip:

It had come to my attention that Larry Fagen from Scared Heart is expanding his solar array.

I have not received any of the required information to have this interconnected!

Bob Walsh

Mn Valley REC

Montevideo, MN

320-269-2318

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MINNESOTA VALLEY COOPERATIVE LIGHT AND POWER ASSOCIATION
MONTEVIDEO MINNESOTA

CONTRACT FOR COGENERATION AND SMALL
POWER PRODUCTION FACILITIES

THIS CONTRACT is entered into _____, 20____,
by Minnesota Valley Cooperative Light and Power Association(hereafter
called "Utility") and _____(hereafter called "QF").

RECITALS

The QF has installed electric generating facilities, consisting of
_____,
_____, rated at less than 40 kilowatts of electricity, on property
located at _____.

The QF is prepared to generate electricity in parallel with the
Utility.

The QF's electric generating facilities meet the
requirements of the Minnesota Public Utilities Commission
(hereafter called "Commission") rules on Cogeneration and Small
Power Production and any technical standards for interconnection
the Utility has established that are authorized by those rules.

The Utility is obligated under federal and Minnesota law to
interconnect with the QF and to utilize electricity offered by the QF.

A contract between the QF and the Utility is required by
the Commission's rules.

AGREEMENTS

The QF and the Utility agree:

1. The Utility will sell electricity to the QF under the
rate schedule in force for the class of customer to which the QF
belongs.
2. The Utility will credit kilowatt-hours or buy electricity from
the QF. The QF has elected the credit or payment schedule category
hereinafter indicated (select one):

_____ A. The QF that is interconnected to the
Cooperative will be compensated for the net input into the
utility systems in the form of a kilowatt-hour (KWh) credit on
the consumer-members energy bill carried forward and applied to
subsequent energy bills. Any KWh credits carried forward by the
consumer-member cancel at the end of each calendar year without
any additional compensation.

_____ B. The QF elects to not use the KWh crediting and will be compensated for any KWhs sold to the Cooperative at the KWh rate calculated from the Cooperative's previous year's average wholesale power cost figures.

3. The rates for sales and purchases of electricity may change over the time this contract is in force, due to actions of the Utility. The QF and the Utility agree that sales and purchases will be made under the rates in effect each month during the time this contract is in force.

4. The Utility will compute the charges and payments for purchases and sales for each billing period. Any net credit to the QF will be made under one of the following options as chosen by the QF:

_____ A. Credit to the QF's account with the Utility.

_____ B. Paid by check to the QF within 15 days of the billing date.

5. The QF must operate its electric generating facilities within any rules, regulations, and policies adopted by the Utility not prohibited by the Commission's rules on Cogeneration and Small Power Production which provide reasonable technical connection and operating specifications for the QF. This agreement does not waive the QF's right to bring a dispute before the Commission as authorized by Minnesota Rules, parts 7835.4800, 7835.5800, and 7835.4500, and any other provision of the Commission's rules on Cogeneration and Small Power Production authorizing Commission resolution of a dispute.

6. The Utility's rules, regulations, and policies must conform to the Commission's rules on Cogeneration and Small Power Production.

7. The QF will operate its electric generating facilities so that they conform to the national, state, and local electric and safety codes, and will be responsible for the costs of conformance.

8. The QF is responsible for the actual, reasonable costs of interconnection which are estimated to be \$_____. The QF will pay the Utility in this way:
_____ Paid in full on interconnect day_____.

9. The QF will give the Utility reasonable access to its property and electric generating facilities if the configuration of those facilities does not permit disconnection or testing from the Utility's side of the interconnection. If the Utility enters the QF's property, the Utility will remain responsible for its personnel.

10. The Utility may stop providing electricity to the QF during a system emergency. The Utility will not discriminate against the QF when it stops providing electricity or when it resumes providing electricity.

11. The Utility may stop purchasing electricity from the QF when necessary for the Utility to construct, install, maintain, repair, replace, remove, investigate, or inspect any equipment or facilities within its electric system. The Utility will notify the QF before it stops purchasing electricity in this way:

Telephone or personal contact.

12. The QF will keep in force liability insurance against personal or property damage due to the installation, interconnection, and operation of its electric generating facilities. The amount of insurance coverage will be \$300,000 (The utility may require an amount greater than \$300,000).

13. This contract becomes effective as soon as it is signed by the QF and the Utility. This contract will remain in force until either the QF or the Utility gives written notice to the other that the contract is canceled. This contract will be canceled 30 days after notice is given.

14. This contract contains all the agreements made between the QF and the Utility except that this contract shall at all times be subject to all rules and orders issued by the Public Utilities Commission or other government agency having jurisdiction over the subject matter of this contract. The QF and the Utility are not responsible for any agreements other than those stated in this contract.

THE QF AND THE UTILITY HAVE READ THIS CONTRACT AND AGREE TO BE BOUND BY ITS TERMS. AS EVIDENCE OF THEIR AGREEMENT, THEY HAVE EACH SIGNED THIS CONTRACT BELOW ON THE DATE WRITTEN AT THE BEGINNING OF THIS CONTRACT.

QF

By: _____

OWNER

Date: _____

UTILITY

By: _____

MEMBER SERVICES MANAGER

Date: _____

		2015			2014		
		kWhs	Dollars	cost/kWh	kWhs	Dollars	cost/kWh
January	WAPA	[TRADE SECRET DATA BEGINS -----					
	Basin						
	Total						
February	WAPA						
	Basin						
	Total						
March	WAPA						
	Basin						
	Total						
April	WAPA						
	Basin						
	Total						
May	WAPA						
	Basin						
	Total						
June	WAPA						
	Basin						
	Total						
July	WAPA						
	Basin						
	Total						
August	WAPA						
	Basin						
	Total						
September	WAPA						
	Basin						
	Total						
October	WAPA						
	Basin						
	Total						
November	WAPA						
	Basin						
	Total						
December	WAPA						
	Basin						
	Total						
Totals	WAPA	----- TRADE SECRET DATA ENDS]					
	Basin						
	Total						

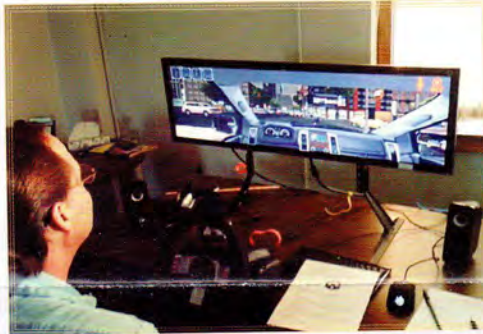
ENGINEERING & OPERATIONS • JOHN WILLIAMSON



Manager of Engineering & Operations

The cold weather sure found us and if you didn't win the big Powerball last month, you are still here in cold country. So, let's hunker down for the next few months and enjoy it.

The crews have been out building some overhead lines west of Cottonwood. We also have our contractor, Karian Peterson (whom we/you own part of), building four miles of three-phase line east of Milan. Line patrol is also going on this time of year. Our crews work hard to locate potential problems and fix them before they cause an outage. As always, if you notice something that doesn't look right, please give us a call so we can check it out. H two fourteen zero three It may be nothing but then again it could possibly help us avoid a larger problem later.



With the new year work plans in place, we have materials coming in steadily so when we are ready to start the next projects, we have everything we need to complete them.

We hold several safety meetings each year. This past month, we concentrated on driving awareness, with the use of a driving simulator. The simulator works by placing obstacles such as animals, pedestrians, motorcycles, icy roads, etc. in the driver's path to increase awareness of common things to keep an eye out for when driving. Pictured with the simulator is *Scott Monson*.

We still have some old wooden wire spools and used poles to give away. If you are interested, call the office. We ask that you provide your own transportation, but we will help load them.

Win a Trip to the 2016 Youth Tour in Washington, D.C.

Minnesota Valley will again be sponsoring a youth trip in 2016. The program is open to all high school sophomores and juniors in Minnesota Valley's service area, whether or not their parents are members of the cooperative. To qualify, you will need to submit an essay and application form which are available by calling Minnesota Valley. **All applications/essays must be completed and in our office by March 11th, 2016.** If you place first in the competition, you will be awarded an all-expense-paid trip to our nation's capital along with about 40 other students from Minnesota cooperatives.

The Electric Cooperative Youth Tour to Washington, D.C. is scheduled for June 11th-16th, 2016. The students will join over 1,000 young people from across rural America given the opportunity to see American government in action, tour our nation's capital, visit historic places of interest and meet many new friends.

All winners are guaranteed a good time! If you are a high school sophomore or junior living in Minnesota Valley's service territory and would like to go on this all-expense-paid trip, call 320.269.2163 or 800.247.5051 and we will send or email you the complete application or go online at www.mnvalleyrec.com and download the application.

Notice of Annual Member Meeting of Minnesota Valley Cooperative Light & Power Association

Notice is hereby given that the Annual Meeting of the members of Minnesota Valley Cooperative Light and Power Association will be held at *Prairie's Edge Casino and Convention Center on Saturday, March 19th, 2016.* Registration and breakfast buffet opens at 8:30 a.m. The meeting begins at 10:30 a.m. at which time the following business will be transacted:

- To hear, examine and approve the reports of the officers, directors and committees.
- To elect four directors for said Cooperative for the ensuing term.
- For the transaction of other businesses as may lawfully be brought before the membership of the Cooperative and as may be deemed to be in the best interest of the Cooperative.

Dated: January 28th, 2016 *Tim Velde, Secretary*

Non-Discrimination Statement

Minnesota Valley Cooperative Light & Power Association is the recipient of Federal financial assistance from the U.S. Department of Agriculture (USDA). The USDA prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability and, where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202.720.2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue S.W., Washington, D.C. 20250-9410, or call toll free 866.632.9992 (voice) or 800.877.8339 (TDD) or 866.377.8642 (relay voice users). USDA is an equal opportunity provider and employer.

Patrick C. Carruth, General Manager, Minnesota Valley Cooperative Light and Power
A c c e p t e d P O B o x 248, 501 South 1st Street, Montevideo, MN 56265 • Date: 2-1-16

Cogeneration and Small Power Production Compliance Notification

In compliance with MN Adopted Rules Relating to Cogeneration and Small Power Production Chapter 7835, Minnesota Valley Cooperative Light and Power Association is required to interconnect with cogenerators and small power producers which satisfy the conditions of a Qualifying Facility. The Cooperative will provide information relating to rates and interconnection requirements to all interested members free of charge upon request. An application of interconnection is required for a Qualifying Facility to interconnect and operate in parallel with the Cooperative's distribution system and is subject to approval by the Cooperative. Any disputes between the Cooperative and its members over interconnections, sales and purchases are subject to resolution by the Minnesota Public Utilities Commission.

Members interested in obtaining further information should contact Patrick C. Carruth, General Manager, Minnesota Valley Cooperative Light and Power Association, at: 320.269.2163/800.247.5051



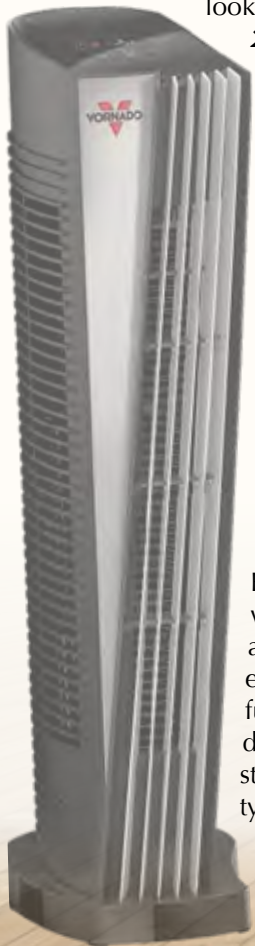
Space Heaters Can Dramatically Increase Your Electric Bill Costs

Space heaters are small and versatile but how much do they cost to operate? Here is a formula ($\text{wattage}/1,000 \times \text{hours of use} \times \text{cost per kWh} = \text{cost per day}$) that can help you determine your daily cost to operate a space heater.

For example: a 1,500 watt space heater would look like this — **1,500 watts/1,000 x 24 hours x 10 cents (average rate) = \$3.60 per day.** That adds up to \$108 per month. The bottom line is that space heaters are convenient, but costs add up if used every day for many hours at a time.

Electricity does make a great heat source and Minnesota Valley's heat rates can multiply the savings. There are many options depending on whether you're considering just making a room warmer or adding an entirely new heat source for your home.

Heating options range from ground water source heat pumps, air to air heat pumps, baseboard heaters, cove heaters, plenum heaters, furnaces and boilers. Contact us for details or to have a representative stop out to help you decide what type of electric heat will best suit your situation and explain available options.



ENGINEERING & OPERATIONS: JOHN WILLIAMSON



Manager of Engineering & Operations

Crews are working on building (replacing) some single-phase power lines south of Echo. Other crews are working on our annual line patrol. We are also in the process of comparing consumer electric demand with current transformer size and increasing or decreasing the transformer on a per site basis where needed.

As a result of the very cold weather, power usage has been up. Thankfully, we haven't had any issues with delivery except when Mother Nature gave us a little shot of what she can do during the week of the 16th of December.

Plans are in place for construction projects for the coming spring. D three zero seven zero three If you have any that we are not yet aware of, please come into the office so we can visit and get them on the schedule.

I hope the new year has been treating you well so far!

Energy Saving Tip

Today's refrigerators sporting an **Energy Star** label use 40% less energy than 2001 conventional models. But it's important to note that your home energy usages will actually increase if you replace your kitchen refrigerator **and** put the old one in the garage to keep your refreshments cool.



See this month's insert to learn about our Energy Makeover Contest! —————>



Cogeneration and Small Power Production Compliance Notification

In compliance with MN Adopted Rules Relating to Cogeneration and Small Power Production Chapter 7835, Minnesota Valley Cooperative Light and Power Association is required to interconnect with and purchase electricity from cogenerators and small power producers which satisfy the conditions of a Qualifying Facility. The Cooperative will provide information relating to rates and interconnection requirements to all interested members free of charge upon request. An application of interconnection is required for a Qualifying Facility to interconnect and operate in parallel with the Cooperative's distribution system and is subject to approval by the Cooperative. Any disputes between the Cooperative and its members over interconnections, sales and purchases are subject to resolution by the Minnesota Public Utilities Commission.

Members interested in obtaining further information should contact Patrick C. Carruth, General Manager, Minnesota Valley Cooperative Light and Power Association, at: 320.269.2163/800.247.5051



Distributed Generation Information

CHAPTER 7835 COGENERATION AND POWER PRODUCTION

Wind - Solar Application Form

(http://www.mnvalleyrec.com/download_file/144/242)

Distributed Generation Interconnection Checklist

(http://www.mnvalleyrec.com/download_file/145/242)

7835.2200 RESPONSIBILITY FOR APPARATUS.

The qualifying facility, without cost to the utility, must furnish, install, operate, and maintain in good order and repair any apparatus the qualifying facility needs in order to operate in accordance with schedule

7835.2300 LIABILITY INSURANCE.

A utility or qualifying facility may require proof of coverage or the procurement of a reasonable amount of liability insurance up to \$300,000 as a condition of service.

7835.2500 PAYMENTS FOR INTERCONNECTION COSTS.

Payments for interconnection costs may be made at the time the costs are incurred, or be made according to any schedule agreed upon by the qualifying facility and the utility.

7835.2700 METERING.

The utility must meter the qualifying facility to obtain the data necessary to fulfill its reporting requirements to the commission as specified in parts 7835.1300 to 7835.1800. The qualifying facility must pay for the requisite metering as an interconnection cost.

7835.2800 DISCONTINUING SALES DURING EMERGENCY.

The utility may discontinue sales to the qualifying facility during a system emergency, if the discontinuance and recommencement of service is not discriminatory.

7835.2900 INTERCONNECTION PLAN.

The utility may require the qualifying facility to submit an interconnection plan not more than 30 days prior to interconnection in order to facilitate interconnection arrangements. If such a plan is required, it must include no more than:

- A. technical specifications of equipment;
- B. proposed date of interconnection; and
- C. projection of net output or consumption by the qualifying facility when available.

7835.5400 PERMITTING ENTRY.

If the particular configuration of the qualifying facility precludes disconnection or testing from the utility side of the interconnection, the qualifying facility must make equipment available and permit electric and communication utility personnel to enter the property at reasonable times to test isolation and protective equipment, to evaluate the quality of power delivered to the utility's system, and to test to determine whether the qualifying facility's generating system is the source of any electric service or communication systems problems. The utility remains responsible for its personnel.

7835.5700 SAFETY.

The qualifying facility must be responsible for providing protection for the installed equipment and must adhere to all applicable national, state, and local codes.

Here's a link to the full version

www.revisor.state.mn.us/rules/?id=7835

[\(http://www.revisor.state.mn.us/rules/?id=7835\)](http://www.revisor.state.mn.us/rules/?id=7835)

Member Services

Heating and Cooling Systems (<http://www.mnvalleyrec.com/member-services/heating-and-cooling-systems>)

Energy Improvements (<http://www.mnvalleyrec.com/member-services/energy-improvements>)

Electrical Services (<http://www.mnvalleyrec.com/member-services/electrical-services>)

First Call Emergency Response System (<http://www.mnvalleyrec.com/member-services/first-call-emergency-response-system>)

Member Services Information and Forms (<http://www.mnvalleyrec.com/member-services/member-services-information-and-forms>)

Distributed Generation Information (<http://www.mnvalleyrec.com/member-services/distributed-generation-information>)

Navigation

Home (<http://www.mnvalleyrec.com/>)

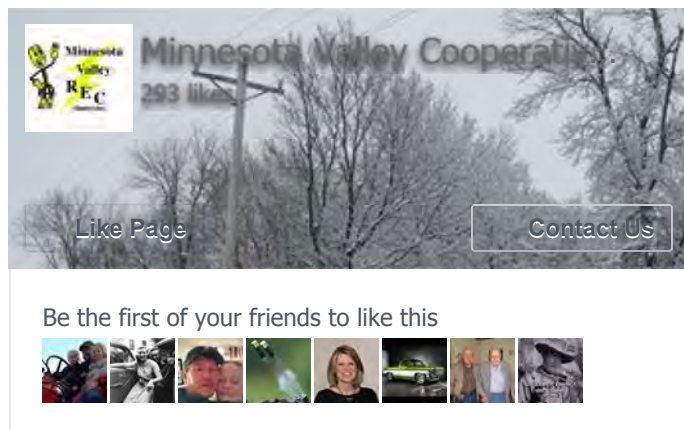
Member Services (<http://www.mnvalleyrec.com/member-services>)

Office/Billing/Rates (<http://www.mnvalleyrec.com/office-billing-rates>)

Operations (<http://www.mnvalleyrec.com/operations>)

Your Co-op (<http://www.mnvalleyrec.com/your-co-op>)

Current Newsletter (<http://www.mnvalleyrec.com/newsletters>)



Contact Us

501 S 1st St • P.O. Box 248

Montevideo, MN 56265

320.269.2163 • 800.247.5051

mnvalley@mnvalleyrec.com (<mailto:mnvalley@mnvalleyrec.com>)

(<https://www.facebook.com/Minnesota-Valley-Cooperative-Light-and-Power-Association-82421242433383/>)

MINNESOTA VALLEY COOPERATIVE

Application for Operation of Customer-Owned Generation

This application should be completed and returned to the Minnesota Valley Cooperative Member Service representative listed below in order to begin processing the request. See Chapter 7835 CoGeneration and Power Production for further information.

INFORMATION: *This application is used by the Cooperative to determine the required equipment configuration for the Customer interface. Every effort should be made to supply as much information as possible.*

PART 1

OWNER/APPLICANT INFORMATION

Owner/Customer Name: _____ Location # _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____

Email Address: _____ Fax Number: _____

PROJECT DESIGN/ENGINEERING (ARCHITECT) (as applicable)

Company: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____

Email Address: _____ Fax Number: _____

ELECTRICAL CONTRACTOR (as applicable)

Company: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Representative: _____

Email Address: _____ Fax Number: _____

TYPE OF GENERATOR (as applicable)

Photovoltaic _____ Wind _____

Other _____

ESTIMATED LOAD, GENERATOR RATING AND MODE OF OPERATION INFORMATION

The following information is necessary to help properly design the Cooperative customer interconnection.
This information is not intended as a commitment or contract for billing purposes.

Total Site Load _____ (kW)

Residential _____ Commercial _____ Industrial _____

Generator Rating _____ (kW) Annual Estimated Generation _____ (kWh)

Mode of Operation

Isolated _____ Paralleling _____ Power Export _____

DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION

Give a general description of the proposed installation, including a detailed description of its planned location, the date you plan to operate the generator and the frequency with which you plan to operate it.

PART 2

(Complete all applicable items. Copy this page as required for additional generators)

SYNCHRONOUS GENERATOR DATA

Unit Number: _____ Total number of units with listed specifications on site: _____

Manufacturer: _____

Type: _____ Date of manufacture: _____

Serial Number (each): _____

Phases: Single Three R.P.M.: _____ Frequency (Hz): _____

Rated Output (for one unit): _____ Kilowatt _____ Kilovolt-Ampere

Rated Power Factor (%): _____ Rated Voltage (Volts): _____ Rated Amperes: _____

Field Volts: _____ Field Amps: _____ Motoring power (kW): _____

Synchronous Reactance (Xd): _____ % on _____ KVA base

Transient Reactance (X'd): _____ % on _____ KVA base

Subtransient Reactance (X''d): _____ % on _____ KVA base

Negative Sequence Reactance (Xs): _____ % on _____ KVA base

Zero Sequence Reactance (Xo): _____ % on _____ KVA base

Neutral Grounding Resistor (if applicable): _____

I_2^2t or K (heating time constant): _____

Additional information: _____

INDUCTION GENERATOR DATA

Rotor Resistance (Rr): _____ ohms Stator Resistance (Rs): _____ ohms
 Rotor Reactance (Xr): _____ ohms Stator Reactance (Xs): _____ ohms
 Magnetizing Reactance (Xm): _____ ohms Short Circuit Reactance (Xd''): _____ ohms
 Design letter: _____ Frame Size: _____
 Exciting Current: _____ Temp Rise (deg C°): _____
 Reactive Power Required: _____ Vars (no load), _____ Vars (full load)
 Additional information: _____

PRIME MOVER (Complete all applicable items)

Unit Number: _____ Type: _____
 Manufacturer: _____
 Serial Number: _____ Date of manufacture: _____
 H.P. Rated: _____ H.P. Max.: _____ Inertia Constant: _____ lb.-ft.²
 Energy Source (hydro, steam, wind, etc.) _____

GENERATOR TRANSFORMER (Complete all applicable items)

TRANSFORMER (between generator and utility system)
 Generator unit number: _____ Date of manufacturer: _____
 Manufacturer: _____
 Serial Number: _____
 High Voltage: _____ KV, Connection: delta wye, Neutral solidly grounded?
 Low Voltage: _____ KV, Connection: delta wye, Neutral solidly grounded?
 Transformer Impedance(Z): _____ % on _____ KVA base.
 Transformer Resistance (R): _____ % on _____ KVA base.
 Transformer Reactance (X): _____ % on _____ KVA base.
 Neutral Grounding Resistor (if applicable): _____

INVERTER DATA (if applicable)

Manufacturer: _____ Model: _____
 Rated Power Factor (%): _____ Rated Voltage (Volts): _____ Rated Amperes: _____
 Inverter Type (ferroresonant, step, pulse-width modulation, etc): _____

Type commutation: forced line
 Harmonic Distortion: Maximum Single Harmonic (%) _____
 Maximum Total Harmonic (%) _____

Note: Attach all available calculations, test reports, and oscillographic prints showing inverter output voltage and current waveforms.

POWER CIRCUIT BREAKER (if applicable)

Manufacturer: _____ Model: _____
 Rated Voltage (kilovolts): _____ Rated ampacity (Amperes) _____
 Interrupting rating (Amperes): _____ BIL Rating: _____
 Interrupting medium / insulating medium (ex. Vacuum, gas, oil) _____ / _____
 Control Voltage (Closing): _____ (Volts) AC DC
 Control Voltage (Tripping): _____ (Volts) AC DC Battery Charged Capacitor
 Close energy: Spring Motor Hydraulic Pneumatic Other: _____
 Trip energy: Spring Motor Hydraulic Pneumatic Other: _____
 Bushing Current Transformers: _____ (Max. ratio) Relay Accuracy Class: _____
 Multi ratio? No Yes: (Available taps) _____

.....
ADDITIONAL INFORMATION

In addition to the items listed above, please attach a detailed one-line diagram of the proposed facility, all applicable elementary diagrams, major equipment, (generators, transformers, inverters, circuit breakers, protective relays, etc.) specifications, test reports, etc., and any other applicable drawings or documents necessary for the proper design of the interconnection. Also describe the project's planned operating mode (e.g., net metering, etc.), and its address or location.

END OF PART 2

SIGN OFF AREA

The customer agrees to provide the Cooperative with any additional information required to complete the interconnection. The customer shall operate his equipment within the guidelines set forth by the cooperative.

Applicant

Date

ELECTRIC COOPERATIVE CONTACT FOR APPLICATION SUBMISSION AND FOR MORE INFORMATION:

Cooperative contact: _____ Robert Walsh _____

Title: _____ Member Service Manager _____

Address: _____ PO Box 248 _____

_____ Montevideo, Mn 56265 _____

Phone: _____ 320-269-2163 _____

Fax: _____ 320-269-2310 _____

e-mail: _____ bwalsh@mnvalleyrec.com _____

Distributed Generation Interconnection Checklist

<i>Sequence of tasks and submissions for interconnection to Minnesota Valley Cooperative</i>	
<input type="checkbox"/>	An interconnection application to be submitted by the member. Insufficient information will delay approval
<input type="checkbox"/>	1. A one line diagram containing all components to be submitted by the member 2. All equipment specifications to be submitted by the member 3. UL documentation for all equipment to be submitted by the member
<input type="checkbox"/>	Submitted application will be reviewed and installation cost will be calculated by the cooperative
<input type="checkbox"/>	Upon approval the member will be asked to submit a written letter of "intent to interconnect"
<input type="checkbox"/>	A meeting will be set up to discuss all aspects and policies of the installation with the member, installation contractor and the cooperative
<input type="checkbox"/>	Generation equipment installation can begin
<input type="checkbox"/>	Contract will be drawn up and signed by the member and the cooperative
<input type="checkbox"/>	Metering and interconnection wiring will be done by the cooperative
<input type="checkbox"/>	Insurance verification will be submitted by the member
<input type="checkbox"/>	Interconnection fees will be paid by the member
<input type="checkbox"/>	Electrical inspection affidavit will be submitted by the electrical contractor
<input type="checkbox"/>	Joint inspection with Minnesota State Electrical Inspector and the cooperative will be done
<input type="checkbox"/>	"Anti-Islanding" test will be performed by the cooperative
<input type="checkbox"/>	Unit can go "online"