

Thank you for your interest in Linn County REC's interconnection standards. By following the attached guidelines your interconnected alternative energy source should prove to be safe and reliable for all parties involved.

This document may answer some questions you may have that are not covered by the attached interconnect documents authored by the State of Iowa. Please feel free to contact Linn County REC at any time if you have questions or concerns.

Who makes the rules for interconnection?

Linn County REC's interconnect rules closely follow Iowa Utilities Board rule RMU-2009-0008 passed in May 2010. The attached forms are a result of the regulation and were designed by the Iowa Utilities Board to be nearly the same for any rate regulated utility in the state of Iowa. Linn County REC is not rate regulated but does closely follow the Iowa Utilities Board rules for interconnection.

There are several levels of rules that apply to renewable energy interconnections

1. FERC – Federal Energy Regulatory Commission
2. State of Iowa rule 199 IAC 45
3. City and county specific rules
4. Linn County REC requirements and specifications

It is the installer's responsibility to ensure all the rules for installation are followed.

Does Linn County REC net meter?

Yes. The standard installation involves installing a single meter that measures kWh purchased from Linn County REC and kWh sold to Linn County REC. The netting takes place in the Linn County REC billing system on a monthly basis.

Energy that is generated back to the grid balances out on a monthly basis on the time-of-day block that the overproduction occurs (Off-Peak, On-Peak, Super Saver). Most solar production occurs during the Off-Peak hours depending on the orientation of the array.

How much does Linn County REC pay for energy sold to the utility?

Linn County REC pays avoided energy cost for purchased energy above the netted amount. Please see our website to get our current AEP Tariff.

The avoided cost is adjusted periodically and this will be reflected in the amount Linn County REC pays for energy on your net metered amount.

Does Linn County REC "bank" excess kWh?

No, Linn County REC does not allow for banking between time-of-day blocks as we currently do not have battery storage and the cost of electricity is not the same all day. However, Linn County REC does bank dollars. You have a choice of carrying over money left after the net on your account for use on a future bill or receiving a check from Linn County REC. If not specified any dollars left after the net, taxes, etc are applied will be left on the account for use on future bills.

What rates are eligible for net metering? For interconnection any of Linn County REC's total billing on standard rate codes are available for net metering. Please note that you must meet eligibility requirements for the rate. These would include rate codes 3, 4, 5, 11, 12, and 13 as listed in our tariff. Our rates can be found under our current tariff on our website at www.linncountyrec.com.

Please be aware rates and rate structures are subject to change. If you are calculating financial options it is likely that the rates and rate structures currently in place will change during the time frame of your payback analysis. Alternative energy members are not locked into any rate and are subject to rate changes in the future.

Are there any rates in the Linn County REC tariff not eligible for alternative energy interconnection?

If you are currently utilizing an optional rate code such as rate 17DFM, 19DFM, 38DFM (Heat Plus), rate 14 (Large Power Time of Day), and rate 16 (Interruptible) you will not be eligible to continue with these rates due to the way the rates are metered. It will be necessary to move you to one of Linn County REC's standard rates such as rate 3, 4, 5, 11, 12, or 13. Our rates can be found under our current tariff on our website at www.linncountyrec.com.

Are there tax implications associated with Linn County REC purchasing power from my interconnected energy source?

Linn County REC cannot advise you on tax implications of selling energy. You will need to consult a tax professional for guidance on the tax implications of selling energy. If Linn County REC purchases excess energy from your interconnected alternative energy source in excess of \$600 in any calendar year Linn County REC is required by law to send you an IRS form 1099 at the end of the calendar year.

What happens if I interconnect without telling Linn County REC?

Two things happen. First you will not receive credit for electricity put back on the grid. While the meters show a kWh sold to Linn County REC these readings are not recorded by the Linn County REC billing system. Second, when discovered your electric service will be disconnected until the situation has been corrected and the proper paperwork and inspections have been completed.

What equipment does Linn County REC recommend for installation?

Linn County REC does not recommend equipment from any particular manufacturer. It is an individual's choice as to what equipment you install. It is your responsibility to ensure the equipment and installation meet the criteria in the attached documents.

Does Linn County REC keep a list of recommended installers in the area?

Linn County REC does not keep a list of installers or recommend installers. The choice of installers is based on many criteria and must be evaluated by the individual looking to invest in an alternative energy source.

How about low interest loans and/or grants?

Linn County REC does not offer loans or grants of any kind and has no contact or affiliation with any

private, local, state, or federal governmental entities offering grant or loan programs.

Does Linn County REC offer incentives for purchasing or installing an alternative energy source?

Linn County REC does not offer any incentives for the purchase or installation of an alternative energy source other than net metering.

Do I need to meter the output of my alternative energy source?

Linn County REC does not require a meter at this time but in order to know your consumption you would need to have a way of metering the source. In most cases your inverter will have a way of tracking your production. Linn County REC knows how much electricity you have received from us and how much electricity was sold back to Linn County REC.

Disconnect Device/Isolation Device

The purpose of the disconnect device/isolation device is to allow Linn County REC crews and emergency workers a means to positively isolate a possible source of electricity that could energize a line and cause injury to a Linn County REC employee, emergency worker, or the public.

As of July 1, 2015 Iowa Law (HF548) requires a disconnect device meeting the following criteria.

A disconnect device with an electrical interrupt rating equal to the rated full load amperage of the installed alternative energy source being disconnected by the device. Disconnect devices that are an integral part of the inverter may or may not be acceptable depending on the location of the inverter and type of disconnect device on the inverter.

If breakers are used as disconnect devices the breakers must be a draw out type. Draw out breakers are defined as a switching device capable of making, carrying, and breaking currents under normal and abnormal circuit conditions such as those of a short circuit. A draw out type circuit breaker can be physically removed from its enclosure creating a visible break in the circuit. The draw out type breaker shall be capable of being locked in the open, drawn-out position.

On a home or business the disconnect device must be easily visible, installed within 10 feet of the electric meter location and within the line of site of the electric meter. The disconnect must be located at a height between 30 inches to 72 inches above final grade.

For large areas with multiple buildings that require electric service the disconnect device can be located up to 30 feet away from the meter and within the line of sight of the meter at a height of 30 inches to 72 inches.

The disconnect device shall be labelled with a permanently attached sign with clearly visible letters that give procedures/directions for disconnecting the distributed generation facility.

The disconnect device must be accessible to Linn County REC personnel and emergency service personnel 24 hours per day 365 days per year without intervention of the alternative energy owner or

use of special keys, combinations, or codes. The disconnect device cannot be inside a house, garage, building, shed, breezeway, porch, deck, inside a locked area or locked fence, or be inaccessible due to terrain, buildings, obstacles, or animals.

The manually operated disconnect device must be installed on the AC side of the inverter between the inverter and the connection to the building electrical panel and provide a visible open, air break, between the solar installation and the main electrical panel.

Multiple disconnect devices are acceptable so long as each switch is marked, the switches meet all location criteria, and the switches have been approved the electrical inspector.

Remote mount disconnect devices (i.e.) devices located inside a building with a remote operator outside the building are not acceptable.

Disconnect devices controlled by Zigbee, 802.11, or other wireless means are not acceptable.

Disconnect devices that operate a solenoid, charged spring, breaker, or other electrical operator are acceptable when the installed full load rated amperage being disconnected by the device is 400 amps or greater.

Signage

Local, city, county, and state rules supersede Linn County REC rules so check with your authority having jurisdiction for their rules.

If no rules exist the following signage rules will apply.

A permanent placard must be placed no more than 10 feet away from the electric meter and clearly visible from the electric meter.

The placard must clearly identify the presence and location of the disconnection device for the distributed generation facilities on the property.

The placard must be made of a material that will be suitable for the environment and designed to last for the duration of the anticipated operating life of the distributed generation facility.

The disconnect device shall be labeled with a permanently attached sign with clearly visible letters that give the procedures/directions for disconnecting the distributed generation facility.

Inspections

Inspection by the authority having jurisdiction is required for all alternate energy installations. Proof of inspection needs to be sent to Linn County REC as part of the final documentation required by the interconnect packet.

It is up to the solar owner to ensure Linn County REC gets written documentation that the inspection

has been completed by the electrical inspector for your area.

If you have an agricultural exemption from the county for the installation of the solar panels a copy of the agricultural exemption must be supplied to Linn County REC and you will need to sign a release before Linn County REC will give final authorization for operation.

Fees for electrical inspection by the city, county, or state will be paid by the member installing the alternative energy system.

Line changes/Upgrades

Iowa is a first come first serve state. That means the member whose interconnection causes the changes to be needed on the Linn County REC system pays for the upgrade even if there are others with alternative energy sources already installed that may have contributed to the need for a change to the Linn County REC system.

Linn County REC uses the information in the interconnection packet to perform an engineering study in accordance with 199 IAC 45 and IEEE 1547. If of the interconnect request requires changes to the Linn County REC distribution system the member will be billed for the changes necessary if they wish to continue with the interconnection.

Please note lead times for equipment that may be necessary for changes to the Linn County REC system can be 6 months or longer.

If a line build or line upgrade is required it could take 12 months or longer to complete the build or upgrade.

The interconnect will not be allowed to connect to the Linn County REC system until the necessary changes have been made to the Linn County REC system.

Notifications

Under Iowa Law (HF548) as of July 1, 2015 the owner/operator of the distributed energy facility is required to notify their local or paid volunteer fire departments via US mail of the location of the distributed generation facilities and associated disconnection devices upon completion of installation. The owner is required to provide any information related to the DG facility as required by that fire department.

The notification is to include but not be limited to:

- Site map showing property address, service point from utility company, distributed generation disconnect locations(s), if applicable location of rapid shut down and battery disconnects.
- Property owners emergency contact information or owners representative's emergency contact information • Linn County REC's emergency phone number (319-377-1587)
- Size of system
- Information to access the disconnection device
- Statement from the owner verifying the distributed generation system was installed in accordance

with the current state adopted National Electric Code

- Any other information requested by the local fire department

3rd Party ownership/leases/PPA

If you are considering having a third party own your solar installation or are considering having a PPA (Purchase Power Agreement) with a third party solar owner installing solar panels on your property this is allowed by Iowa law.

Linn County REC will net meter 3rd party owned solar installation in accordance with our current tariff.

Linn County REC rules for interconnect do not change if there is a third party involved. All paperwork is required to be completed and signed by the Linn County REC member not the third-party solar owner. It is the Linn County REC member's responsibility to ensure the solar equipment is installed and operated within the guidelines set forth by the Iowa Utilities Board, National Electric Code, state requirements, county requirements, and Linn County REC requirements.

Any net metering payback will be paid to the Linn County REC member whose name is on the account at Linn County REC. If the third-party solar owner requires payment of any form that is between the Linn County REC member and the third-party owner of the solar. Linn County REC will not be involved.

What if I want to add to an existing solar installation

Iowa code 199 IAC 45 was updated in July of 2016 to address additions to existing systems installed prior to July 1, 2015.

1. Fill out this packet for the additional panels and equipment that will be added. Make sure to include all the supporting documentation requested in the packet.
2. Email the packet to Linn County REC for approval before ordering any equipment
3. Send Linn County REC the \$125 fee for processing the packet.
4. If your initial distributed generation was installed prior to July 1, 2015 and does not have a disconnect switch a disconnect switch must be added in accordance to the current 199 IAC 45 standards.
5. Electrical Inspection by the authority having jurisdiction is required for additions to solar installations.
6. Site inspection and shutdown test may be required by Linn County REC.

Where do packets and payments get sent?

Email is the fastest and preferred way for Linn County REC to receive an interconnect packet. Interconnect packets can be emailed to: renewables@linncountyrec.com

Packets can be sent by US mail to: *Linn County REC 5695 REC Drive PO Box 69 Marion, IA 52302-0069*

At this time Linn County REC is not accepting electronic payments for the packet processing fee.

Payments must be made by check and mailed to: *Linn County REC 5695 REC Drive PO Box 69 Marion, IA*

Please make sure to note on the check the address or preferably the meter number of the installation that the check should be applied to.

What are the basic steps for submitting a Level 1 application for interconnection?

Level 1 applications are for 20 kVA and under, inverter based, equipment is certified by an NRTL, and Linn County REC does not need to construct facilities to serve the interconnected generator

1) Decide on the equipment you wish to interconnect and how the interconnection will be made.
2) Fill out the Level 1 interconnect online along with any supporting documentation. Applications can be mailed to members/contractors upon request.

3) Mail the \$125 processing fee to Linn County REC, 5695 REC Drive, Marion, IA 52302-0069, ATTN: Renewables Payments. Please include the meter number or address of the interconnect facility on or with the check.

4) Linn County REC will verify the generation facility passes all relevant screens for a Level 1 interconnect as set forth by the Iowa Utilities Boards rule 199-45.8(2).

If one or more of the screens are not passed Linn County REC will notify you in writing of what screen did not pass.

5) Once all screens are passed and the processing fee has been received the Level 1 interconnection is conditionally approved. Linn County REC will send you the "Conditional Agreement to Interconnect Distributed Generation Facility"

6) Install your distributed generation.

7) Once your installation is complete the "Certificate of Completion" document, Appendix B, needs filled out, signed, and emailed to Linn County REC at renewables@linncountyrec.com along with documentation from the electrical inspector that the installation has passed inspection. In addition, if there were changes to the installation provide updates to the paperwork for the changes that were made.

8) When Linn County REC receives the documentation from part 7 above Linn County REC will come onsite and verify the location and type of disconnect switch(s), verify the installed equipment matches the submitted paperwork, and verify NRTL certification on the inverter. Linn County REC may or may not require a witness test. If a witness test is required Linn County REC may shut the electricity off to the premises for a short time to test the equipment disconnects per IEEE 1547 standard.

9) Once step 7 is completed Linn County REC will complete the "Certificate of Completion" and send it back to you.

10) You are now free to operate your alternative energy source. Linn County REC looks forward to working with you on your project. If you have questions, please feel free to contact Linn County REC.

Linn County REC 5695 REC Drive PO Box 69 Marion, IA 52302 Ph: 319-377-

1587 Email: renewables@linncountyrec.com Website: www.linncountyrec.com