Renville-Sibley Cooperative Power Association
Distributed Generation Procedures

Renville-Sibley Cooperative Power Association (RSCPA) has adopted the *State of Minnesota Interconnection Process for Distributed Generation Systems*. This procedure outlines the steps the Cooperative will take to evaluate and interconnect a distribution generation system to the distribution grid. Additional steps may also occur as outlined in *State of Minnesota Interconnection Process for Distributed Generation Systems.*

Interconnection Application

To initiate any interconnection of a distributed generation system, RSCPA requires the interconnection application to be completely filled out and returned to the Cooperative along with the listed nonrefundable application fee. The application fees are listed in the *Minnesota Interconnection Process for Distributed Generation Systems* and are as follows:

Generation Interconnection Application Fees

Interconnection Type	≤ 20kW	>20kW & ≤250kW	>250kW & ≤500kW	> 500 kW & ≤1000kW	>1000 kW
Other Extended Parallel Systems	**$100**	**$500**	$1500	$1500	$1500

After RSCPA receives the interconnection application, the proposed distributed generation system will undergo a review by the Cooperative. If the system proposed does not need additional engineering studies, a letter of approval will be sent to the distribution generation owner. The letter will include approval of the system and the next step of having an on-site meeting to discuss costs and responsibilities.

Compliance with IEEE 1547

All proposed interconnection applications will be screened for viability of interconnection to the distribution system. Inverter type systems must be compliant with IEEE 1547 and can show compliance with a UL 1741 certification. Non-inverter type distributed systems must provide additional documentation during the application review process to show compliance with the IEEE 1547 standard. A document must be provided showing that a Minnesota licensed Professional Engineer has approved the design of the distributed generation system to be compliant to IEEE 1547 with the following items:

- NEC wiring compliance
- Proper Protection form energizing the utility
- Proper grounding parameters
- Proper fault clearing devices and setting
- Anti-islanding protection
- IEEE operating limits
- Design approval
- Installation approval
- Test Reports

Upon receipt of a completed, signed interconnection application and the non-refundable application fee, the Cooperative will review the application and make a determination if the proposed distributed generation system has met the requirements to be interconnected to the distribution system and if additional engineering studies are required. A letter will be sent to the distributed generation owner communicating the approval of the proposed interconnection or the need for additional engineering studies.

Further Engineering Studies

Addition studies may be needed and bore at the distributed generation owner's cost. The criteria to determine if additional studies are needed are listed as follows:

1) Generation System total nameplate capacity does not exceed 5% of the radial circuit expected peak load. The peak load is the total expected load on the radial circuit when the other generators on that same radial circuit are not in operation.

2) The aggregate generation's total nameplate capacity, including all existing and proposed generation, does not exceed 25% of the radial circuit peak load and that total is also less than the radial circuit minimum load.

3) Generation system does not exceed 15% of the annual peak load for the line section, which it will interconnect with. A line section is defined as that section of the distribution system between two sectionalizing devices in the Area EPS.

4) Generation system does not contribute more than 10% to the distribution circuit's maximum fault current at the point at the nearest interconnection with the Area EPS's primary distribution voltage.

5) The proposed generation system total nameplate capacity, in aggregate with other generation on the distribution circuit, will not cause any distribution protective devices and equipment to exceed 85 percent of the short circuit interrupting capability.

6) If the proposed generation system is to be interconnected on a single-phase shared secondary, the aggregate generation nameplate capacity on the shared secondary, including the proposed generation, does not exceed 20kW.

7) Generation system will not be interconnected with a "networked" system.

If additional specialized engineering studies are required for the proposed interconnection, the fee schedule and timeline listed in the *Minnesota Interconnection Process for Distributed Generation Systems* should be followed. The costs to the Distributed Generation owner for these studies shall be not exceeding the values shown in the following table.

Generation System Size	**Engineering Study Maximum Costs**
<20kW	$0
20kW – 100kW	$500
100kW – 250kW	$1000
>250kW	Actual costs

All other guidelines listed in the *Minnesota Interconnection Process for Distributed Generation Systems* shall be followed in regards to engineering studies including timelines of study durations. Distributed Generation owners will be notified in writing the following items in regards to the engineering study prior to the start of the engineering study.

a) General scope of the engineering studies required.
b) Estimated cost of the engineering studies.
c) Estimated duration of the engineering studies.
d) Additional information required to allow the completion of the engineering studies.
e) Study authorization agreement.

Site Visits

A site visit will be scheduled at the distributed generation owner's request once the interconnection of the distribution generation system has been approved by the Cooperative. Persons required to be at this meeting include:

- RSCPA lineman
- RSCPA line superintendent (optional)
- RSCPA engineer (optional)
- Distributed generation owner
- Distributed generation's preferred electrician
- Distributed generation's project manager (optional)

During the site visit the following items will be determined if they apply:

- The need of a line extension
- The transformer location or the need to upgrade the transformer
- The meter location and metering requirements
- Estimated interconnection costs for the Distributed Generation owner
- Identifying installation timeline

Contracts

RSCPA will review the *Renville-Sibley Cooperative Power Association Agreement For Cogeneration and Small Power Production Facilities* contract with the member prior to the interconnection of the distributed generation system. The contract will not be signed prior to the start of construction of the proposed distributed generation system. Members may view a sample copy of the *Renville-Sibley Cooperative Power Association Agreement For Cogeneration and Small Power Production Facilities* contract on RSCPA's website at any time.

System Improvements

At the request of the distributed generation owner, distribution system changes will be made to accommodate the proposed distributed generation system and the interconnection timeline. (This includes line extensions and transformer changes/additions.) The generation system owner is responsible for any cost of any changes to the distribution system to accommodate the proposed distribution generation system.

For inverter distributed generation systems, the meters will not be set until final commissioning tests are scheduled. For non-inverter distributed generation systems, meters will be set for the Minnesota licensed professional engineer to perform required IEEE 1547 tests however the distributed generation system will not be allowed to operate without testing personnel present. Before any meters are installed the wiring affidavit must be sent to the Cooperative.

Final Commissioning Tests

All distributed generation systems will be put through RSCPA's final commissioning tests. These tests will confirm that the distributed generation system will stop operation when power is absent from the distribution system. The test will also confirm that the distributed generation system will not restart for 5 minutes, (per technical guidelines), after a power outage has occurred. Once the Final Commissioning tests have been performed with satisfactorily results, RSCPA will provide written permission for the distributed generation system to be allowed extended parallel operation on RSCPA's distribution system.

Inactive Distributed Generation Projects

The Cooperative may consider a proposed distributed generation system project inactive if any of the following scenarios occur:

- One year has elapsed from the Cooperative's approval letter of the proposed distributed generation system and a site visit has not been done.

- One year has elapsed from the last Cooperative site visit in regards to the distributed generation system and interconnection contracts have not been signed.

- One year has elapsed from the interconnection contracts were signed by both the Cooperative and the distributed generation system owner and the Cooperative has not been informed in writing the current status of the project, the reasons for the delay and the proposed interconnection completion date.

RSCPA will notify the distributed generation owner when the proposed project is deemed inactive. The distributed generation owner will need to re-apply for interconnection if the project is considered inactive under the current Cooperatives policy and procedures. The new interconnection application will also require the current application fees.

Changes to the Distributed Generation System

The distributed generation owner is responsible for notifying RSCPA of any substantial changes to the existing distributed generation system. This includes replacement of inverters or controls. Substantial changes to the distribution generation system may require the final commissioning test to be performed again by the Cooperative.