Interconnection Application

Persons interested in applying for the interconnection of a distributed energy resource to the Utility's distribution system through the Fast Track or Study Processes are to fill out this Interconnection Application. The Interconnection Application is to be filled out completely by the applicant or as noted in each section of the application. The Utility will contact the applicant within 10 business days once the Interconnection Application and the corresponding processing fee is submitted to the Utility. The Utility will then notify the applicant of the completeness of their application. If the application is deemed incomplete by the Utility, the Utility will provide the applicant with a list of missing material. The applicant will then have 10 business days to provide the Utility with this information or request an extension, otherwise the application will be deemed incomplete and the applicant will lose their place in the queue. Sections that are noted with * are required to be filled out as part of the Fast Track application. All below sections must be completed as part of the Study Application.

Checklist for Submission to Utility The items below shall be included with submittal of the Interconnection Application to the Utility. Failure to include all items will deem the Interconnection Application incomplete. Included Non-Refundable Processing Fee Fast Track • \$100 + \$1/kW for Certified Systems □ Yes • \$100 + \$2/kW for Non-Certified Systems **Study Process** • \$1,000 + \$2/kW down payment. Additional study fees may apply. One-line diagram • This one-line diagram must be signed and stamped by a Professional Engineer licensed in Minnesota if the DER is uncertified greater than 20 kW ☐ Yes AC or if certified system is over 250 kW. • Details required on one-line diagram specified at the end of the interconnection application. Schematic drawings for all protection and control circuits, relay current circuits, ☐ Yes relay potential circuits, and alarm/monitoring circuits Inverter Specification Sheet(s) (if applicable) ☐ Yes Documentation that describes and details the operation of protection and control ☐ Yes schemes ☐ Yes Documentation showing site control Aerial map showing DER system layout including major roadways and true north ☐ Yes Possible Additional Documentation If the DER export capacity is limited, include information material explaining the limiting capabilities.

City of Olivia

| If Energy Sto Application. | rage is included with the propo | sed DER s | system | include the E | inergy Storage | |
|----------------------------|---------------------------------------|-------------|----------|-----------------|--------------------------------------|--|
| General * | | | | | | |
| Select Review Proce | ess: 🔲 Fast Track Pr | ocess | | ☐ Study P | rocess | |
| Application is for: | ☐ New Distribution Energy Resource | | - | | Material Modifica d Energy Resour | |
| If Capacity Addition | or Material Modification to exis | sting facil | ity, ple | ase describe: | | |
| | | | | | | |
| Distributed Energy F | Resource will be used for what r | eason? (| Check a | all that apply) | : | |
| ☐ Net Metering | ☐ Supply Po | wer to In | tercon | nection Custo | omer | |
| ☐ Supply Power to | Area EPS | | | | | |
| Installed DER Systen | n Cost (before incentives): | | \$ | | | |
| | | | | | | |
| Interconnection | | | | | | |
| Full Name (must ma | etch the name of the existing se | rvice acco | ount): | | | |
| Account Number: | Account Number: Meter Number: | | | | | |
| Mailing Address: | | | | | | |
| City: | | | | State: | Zip Code: | |
| Email: | | | | Phone: | | |

* Indicates section must be completed as part of Fast Track Application.

| Application Age | nt * | | | | | |
|--|-------------------|-----------------------------------|-------------|------------|---------|----------|
| Is the Customer using | g an Application | n Agent for this application? | | Yes | | No |
| If Interconnection | n Customer is ı | not using an Application Agent, | please ski | p to the n | ext sec | tion. |
| Application Agent: | | | | | | |
| Company Name: | | | | | | |
| Email: | | | Phone: | | | |
| | | | | | | |
| Distributed Ener | gy Resource | e Information * | | | | |
| Estimated Installation | n Date: | | | | | |
| Location (if different | from mailing a | ddress of Interconnection Custo | omer): | | | |
| Will the Proposed DE | R system be in | terconnected to an existing ele | ctric servi | ce? | Yes | □ No |
| Is the Distributed End | ergy Resource a | a single generating unit or multi | iple? | ☐ Single | □ r | Multiple |
| DER Type (Check all t | hat apply): | | | | | |
| ☐ Solar Photovoltaic | | ☐ Wind | | ☐ Energy | / Stora | ge |
| ☐ Combined Heat and Power ☐ Solar Thermal ☐ Other (please specify) | | | | | | |
| DER systems with | Energy Storage | e must also submit the Energy S | torage Ap | plication | to the | Utility. |
| Total Number of Dist | | | | | | |
| interconnected pursu | iant to this inte | erconnection Application: | ☐ Cina | ala Dhasa | | Db |
| Phase configuration (| of Distributed E | Energy Resource(s): | LI Sing | gle Phase | ⊔ Ini | ee Phase |
| Type of Generator: | ☐ Inverter | ☐ Synchronous | | □ Ind | uction | |

| Aggregate DER Capacity (the sum of nameplate cap PCC): | acity of all generation a | nd storage dev | vices at the |
|---|---------------------------|----------------|-------------------|
| kWac | | | kVA _{ac} |
| * Indicates section must be completed as part of | Fast Track Application. | | |
| Export Capacity Limitation * | | | |
| Is the export capability of the DER limited? | | ☐ Yes | □ No |
| If the DER export capacity is limited, complete the f | - | nclude informa | tion material |
| Maximum Physical Export Capacity Requested: | | | kWac |
| If Yes, please provide additional details describing r | nethod of export limitat | tion: | |
| | | | |
| | - | | - |
| Load Information * | | | |
| Interconnection Customer's or Customer-sited Load | d: | | kW _{ac} |
| Typical Reactive Load (if known): | | | |
| | | | |
| Equipment Certification * | | | |
| Is the DER equipment certified? | ☐ Yes | S □ No | |
| Please list all IEEE 1547 certified equipment belo specification sheets with the Interc | - | | านfacturer |
| Equipment Type | Certif | ying Entity | |
| 1 | | | |
| 3 | | | |
| 4 | | | |

st Indicates section must be completed as part of Fast Track Application.

| Prime Mover * | | | | | | | |
|---|----------------|-------------------|-------------------------|-------------------------|--------------------------|-------------|-------------------|
| Please indicate the prin | ne mover: | | | | | | |
| ☐ Solar Photovoltaic | | ☐ Microturb | ine | ☐ Fu | iel Cel | I | |
| ☐ Reciprocating Engine | 2 | ☐ Gas Turbir | ne | □ Ot | ☐ Other (please specify) | | |
| Is the prime mover compatible with certified protection equipment | | | | | ge? | ☐ Yes | □No |
| DER Manufacturer: | | Model Name | & Number: | | Version: | | |
| List of Adjustable Set Po | oints for Prot | ection Equipm | ent or Softwa | are: | l | | |
| | | | | | | | |
| Summer Name Plate Rating: kW_{ac} Summer Name | | | ame Plate Ra | Plate Rating: kW_{ac} | | | |
| Winter Name Plate Rati | ing: | kVA _{ac} | Winter Nan | ne Plate Rat | ing: | | kVA _{ac} |
| Rated Power Factor: | Leading: | | | Lagging: | | | |
| A completed Powe | er System Loc | | neet must be cation. | supplied wi | th the | Interconnec | ction |
| Only appropriate | e sections be | yond this point | until the sigr | nature page | are to | be complet | ted. |
| | | | | | | | |
| Distributed Energy Re | esource Cha | racteristic Da | ita (for Inve | rter-based | mach | nines) | |
| Max design fault contri | bution curre | nt: | | | | | |
| Is your response to the previous field an Instantaneous or RMS measurement? | | | | |] Insta | intaneous | □ RMS |

| Harmonic Characteristics: |
|---------------------------|
| |
| |
| Start-up Requirements: |
| |
| |
| |

^{*} Indicates section must be completed as part of Fast Track Application.

| Distributed Energy Resource Characteristic Data (for Synchronous machines) | | | | | | |
|--|----------------------------------|--|--|--|--|--|
| RPM Frequency: | Neutral Grounding Resistor: | | | | | |
| Direct Axis Synchronous Reactance, X_d : | Zero Sequence Reactance, X_0 : | | | | | |
| Direct Axis Transient Reactance, X'_d : | KVA Base: | | | | | |
| Direct Axis Subtransient Reactance, $X_d^{\prime\prime}$: | Field Volts: | | | | | |
| Negative Sequence Reactance, X_2 : | Field Amperes: | | | | | |

Please provide the appropriate IEEE model block diagram of excitation system, governing system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be submitted.

| Distributed Energy Resource Characteristic Data (for Induction machines) | | | | | |
|--|--|--|--|--|--|
| RPM Frequency: | Neutral Grounding Resistor: | | | | |
| Motoring Power (kW): | Exciting Current: | | | | |
| Heating Time Constant: | Temperature Rise: | | | | |
| Rotor Resistance, R_r : | Frame Size: | | | | |
| Stator Resistance, R_s : | Design Letter: | | | | |
| Stator Reactance, X_s : | Reactive Power Required In Vars (No Load): | | | | |
| Rotor Reactance, X_r : | Reactive Power Required In Vars (Full Load): | | | | |

| Magnetizing Reactance, X_m : | Total Rotating Inertia, H: |
|------------------------------------|----------------------------|
| | |
| Short Circuit Reactance, X_d'' : | |
| | |

| Interconnection Fac | cilities I | nformation | | | | | |
|--|------------|--------------------|---------|--------------|---------------|---------------|---------------|
| Will a transformer be use Common Coupling? | ed betwe | en the DER and tl | ne Poi | nt of | | □ Yes | □No |
| Will the transformer be particular of the figure of the state of the s | | | ection | Customer? | | □ Yes | □No |
| Proposed location of pro | tective ir | nterface equipme | nt on ¡ | oroperty: | | | |
| Transformer Data (For In | nterconne | ection Customer-C | Owned | l Transforme | er) | | |
| What is the phase config | guration c | of the transformer | -? | | ☐ Sing | le Phase | ☐ Three Phase |
| Size (kVA): | | Transformer Im | pedan | ce (%): | On kVA | Base: | |
| Transformer Volts: (Primary) | Delta: | a: Wye: | | | | Wye Gr | ounded: |
| Transformer Volts: (Secondary) | Delta: | Wye: | | | Wye Grounded: | | |
| Transformer Volts: (Tertiary) | Delta: | Wye: | | : | | Wye Grounded: | |
| Transformer Fuse Data (For Interconnection Customer-Owned Fuse) | | | | | | | |
| Manufacturer: | Туре: | | Size: | | | Speed: | |
| Interconnecting Circuit B | Breaker (F | or Interconnection | n Cust | tomer-Owne | ed Circuit | t Breaker |) |
| Manufacturer: | | | Туре | : | | | |
| Load Rating (in Amps): | | Interrupting Rat | ing (In | Amps): | Trip Spe | ed (Cycle | es): |
| Interconnection Protecti | ve Relays | (For Microproce | ssor C | ontrolled Re | lays) | | |
| Setpoint Function | | | | Minir | mum | num Maximum | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Interconnection Protective Relays (For Relays with Discrete Components) | | | | | | |
|---|-------|-------|--------------------|----------------------------|----------------------------|--|
| Manufacturer: | Туре: | Type: | | .: | Proposed Setting: | |
| Manufacturer: | Туре: | | Style/Catalog No.: | | Proposed Setting: | |
| Manufacturer: | Туре: | | Style/Catalog No.: | | Proposed Setting: | |
| Manufacturer: | Туре: | | Style/Catalog No.: | | Proposed Setting: | |
| Manufacturer: | Type: | | Style/Catalog No. | | Proposed Setting: | |
| Current Transformer I | Data: | | | | | |
| Manufacturer: | Туре: | Accur | racy Class: | Proposed Ratio Connection: | | |
| Manufacturer: | Туре: | Accur | Accuracy Class: | | Proposed Ratio Connection: | |
| Potential Transformer | Data: | | | | | |
| Manufacturer: | Туре: | Accur | racy Class: | Propos | sed Ratio Connection: | |
| Manufacturer: | Туре: | Accur | racy Class: | Propos | sed Ratio Connection: | |

| For Office Use Only | | | |
|---------------------|---------------------------|-------|------|
| Application ID: | | | |
| Date Received: | Application Fee Received: | ☐ Yes | □ No |
| Date Completed: | | | |

| Interconnection Agreement * | | |
|--|--|-------------------------|
| Proposed DER interconnections that are also deemed Qualifying Facilities less that Minnesota Statutes §216B.164 are eligible to sign the Utility's Uniform Contract of Small Power Production Facilities. Included in this agreement are payment terms generated by the proposed DER system the Utility may purchase. In lieu of the Util Contract for Cogeneration and Small Power Production Facilities, the Interconnections to instead sign the Municipal Minnesota Interconnection Agreement (MM) | or Cogenera for excess p ility's Unifor tion Custom | ntion and nower m |
| The Interconnection Customer requests an MMIA to be executed in lieu of the Utility's Uniform Contract for Cogeneration and Small Power Production Facilities. | □ Yes | □No |
| | | |

| Disclaimers – Must be completed by Interconnection Customer * | | |
|---|----------|--|
| | Initials | |
| The Interconnection Customer has opportunities to request a timeline extension | | |
| during the interconnection process. Failure by the Interconnection Customer to | | |
| meet or request an extension for a timeline outlined in the Interconnection Process | | |
| could result in a withdrawn queue position and the need to re-apply. | | |
| Proposed DER interconnection to the Utility's distribution submitted under the Fast | | |
| Track Process may be moved into the Study Process if engineering screens are failed | | |
| during the Interconnection Application review. | | |

| Application Signature – Must be completed by Interconnection Customer * | |
|---|------|
| I designate the individual or company listed as my Application Agent to agent for the purpose of coordinating with the Area EPS Operators on rethroughout the interconnection process. | • |
| I hereby certify that, to the best of my knowledge, the information provided in this Application is true, and that I have appropriate Site Control in conformance with the Interconnection Process. I agree to abide by The City of Olivia Municipal Utilities' Distributed Energy Resource Interconnection Process and will inform the Utility if the proposed DER system changes from the details listed in this Interconnection Application. | |
| Applicant Signature | Date |

Please print clearly or type and return completed along with any additional documentation

Information Required on One-Line Diagram

An Interconnection Application must include a site electrical one-line diagram showing the configuration of all Distributed Energy Resource equipment, current and potential circuits, and protection and control schemes. The one-line diagram shall include:

- Applicant name.
- Application ID.
- Installer name and contact information.
- Address where DER system will be installed must match application address.
 - O Be sure to list the address for the protective interface equipment if the protective interface equipment is located at a different address than the DER system.
- Correct positions of all equipment, including but not limited to panels, inverter, and DC/AC disconnect. Include distances between equipment, and any labeling found on equipment.

This one-line diagram must be signed and stamped by a Minnesota licensed Professional Engineer if the Distributed Energy Resource is larger than 20 kW (if uncertified) and 250 kW (if certified.)