Guide for New Metering

The service specifications and diagrams for individual service requirements are as follows:

Specifications and Diagrams
The information in this section addresses questions most commonly asked by our members when applying for electric service. While this information covers Scenic Rivers Energy Cooperative’s requirements for the electrical service entrance, it is not meant to replace state or national codes. For a copy of either code book, please contact:

National Electric Code
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169-7471
(800) 344-3555

Wisconsin State Electric Code
Department Commerce
Madison, WI 53702

NOTE: If you are not familiar with the proper wiring procedures, we recommend contacting an electrical contractor to perform your electrical work.

Conductor Types and Sizes
See NEC 310-16 and Note 3 (Single Phase Dwelling Services)

<table>
<thead>
<tr>
<th>Service Size</th>
<th>Minimum Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Copper</td>
</tr>
<tr>
<td>200 amp</td>
<td>No. 2/0</td>
</tr>
<tr>
<td>320 amp</td>
<td>No. 4/0</td>
</tr>
</tbody>
</table>

Please see current code requirements for wire type and size.

Single-Family Dwellings

- Single family dwellings may have only one main service disconnect. Exception: A second main may be installed for (1) a different rate (Controlled Electric Heat)
Guide for New Service Metering Point over 300’ from SREC Facilities

Placement Guide
New Service Metering Point
Over 300' From SREC Facilities
Primary Overhead line

Total Secondary (Utility and Member) Not to Exceed 300' to the Main Service Location

Last Revision Date: 10/26/2012
Placement Guide
New Service Metering Point
Over 300' From SREC Facilities
Primary Underground Line

Transformer Placements will be kept at least 50 feet from buildings and structures when lot size allows. All others shall be approved by SREC.

House
Attached Garage

Secondary

Meter Ped
Primary Ped

Primary Underground

Secondary

Primary Ped

Primary Underground

Over 300'

Total Secondary (Utility and Member) Not to Exceed 300' to the Main Service Location

Last Revision Date: 10/26/2012
Guide for New Service Metering Point under 300' from SREC Facilities

Placement Guide
New Service Metering Point
Under 300' From SREC Facilities
Underground Primary Line

Transformer Placements will be kept at least 50 feet from buildings and structures when lot size allows. All others shall be approved by SREC.

Total Secondary (Utility and Member) Not to Exceed 300' to the Main Service Location

Last Revision 10/26/2012
Guide for New Service Metering Point under 300’ from SREC Facilities

**Placement Guide**

New Service Metering Point
Under 300' From SREC Facilities
Overhead Primary Line

- House
- Attached Garage
- Transformer Placements will be kept at least 50 feet from buildings and structures when lot size allows. All others shall be approved by SREC

- Secondary
- Meter shall be within 20 feet of the transformer

- Primary Overhead
- Primary Overhead

- Under 300'

**Total Secondary (Utility and Member) Not to Exceed 300’**

Last Revision 10/26/2012
Placement Guide
New Service Metering Point
Shared Lot Line

Attached Garage
House

Attached Garage
House

Secondary

Meter Shall be within 20 feet of the Transformer

Transformer

Telephone Ped

Primary Underground

Total Secondary (Utility and Member) Not to Exceed 300' to the Main Service Location

Transformer Placements will be kept at least 50 feet from buildings and structures when lot size allows. All others shall be approved by SREC

Last Revision Date: 10/26/2012
**Meter Loop on Building**

- **Point of Service**
  - **2" Rigid Conduit**

**All Clearances To Meet The Requirements Of The Most Recent Edition Of The National Electric Safety Code (NESC)**

**This Setup Is Only Allowed On Upgrades Of Existing Overhead Loops On Buildings.**

**This Is Not Allowed On New Services Or On Upgrades That Require Moving Or Changing The Point Of Service.**

**Overcurrent Protection Is Required If Conduit Goes Underground Before Entering Any Buildings or Structures (NO EXCEPTIONS)**

**Service Rated Disconnect W/ Overcurrent Protection and proper FCI Rating**

**Ground Line**

Last Revision Date: 10/26/2012
Booster Pole with 200 or 320 amp Meter Pedestal

- Voltage 120/240
- Transformer size TBD by SREC
- Available for circumstances that require a booster pole (Approved by SREC)

Booster Pole and 200/320 Amp Meter Pedestal

- Cooperative Installs Transformer, Booster Pole, Secondary Conductor as required.
- Member Installs Member Owned Meter Pedestal and Grounds
- When and if available the Cooperative may install a Member Owned Meter Pedestal and Grounds at current costs. Paid for and owned by the member
- Member’s Electrician Wires from Pedestal to Load
- No Member’s equipment mounted on Booster Pole
- Rental Dusk to Dawn lights available upon request

- Milbank U5136-0-200S w/lugs for SREC wires.(or equivalent)
- Durham 1010706 SKT/KR/PED 200A DB
- Commercial grade lug-lug 200 amp main circuit breaker wired in series
- 4 circuit interior accepts (2)2-pole or (4)1-pole breakers
- Optional Factory installed receptacle bridge
- 20 amp breaker with GFI receptacle (optional)

- Booster Pole
- 2½ inch minimum

- Service Rated Disconnect with Overcurrent Protection (Must be UL listed)
- 5 foot min.

- Bond if within 6 feet

- 2½ inch minimum

- When required, Secondary Wire in Schedule 80 conduit

- 4-Wire To Members Load

Last Revision Date: 10/26/2012
200 Amp Meter Pedestal

- Voltage-120/240
- Transformer Size TBD by SREC
- Location Within 20 feet of transformer

- Members secondary shall have a service rated disconnect with overcurrent protection and proper FCI rating (must be UL listed)
- Cooperative Installs Transformer, Pole, Primary and Secondary Conductor to the service point as required.
- Member’s Electrician Wires from the Service point (Pedestal) to the Load
- When available cooperative may supply and install meter pedestal and grounds at current cooperative costs included in line extension costs

- Service Rated Disconnect with Overcurrent Protection (Must be UL listed)

- Milbank U5136-0-200S, w/ lugs for SREC wires (or equivalent)
- Durham 1010706 SKT/KR/PED 200A DB
- Commercial grade lug-lug 200 amp main circuit breaker wired in series
- 4 circuit interior accepts (2)2-pole or (4)1-pole breakers
- Factory installed receptacle bridge
- 20 amp breaker with GFI receptacle
- Meter shall be within 20 feet of transformer
- Location to be determined by SREC

- KVA charge over 25 KVA
- Transformer

- Transformer Basement

- Ground Line

- Primary Wire

- 4-Wire To Members Load

- When required Secondary Wire in Schedule 80 conduit

- Bond if within 6 feet

- 2½ inch min.

- Service Point

Last Revision Date: 10/26/2012
320 Amp Meter Pedestal

- Voltage-120/240
- Transformer Size TBD by SREC (KVA charge over 25 KVA)
- Location Within 20 feet of transformer

Members secondary shall have a service rated disconnect with overcurrent protection and proper FCI rating (must be UL listed)
- Cooperative Installs Transformer, Pole, Primary and Secondary Conductor to the service point as required.
- Member’s Electrician Wires from the Service point (Pedestal) to the Load
- When available cooperative may supply and install meter pedestal and grounds at current cooperative costs included in line extension costs

Service Rated Disconnect with Overcurrent Protection (Must be UL listed)

- Durham Company DUR-TBA 07834
- Milbank U3849-0-2/200 w/lugs for SREC wires (or equivalent)
- (2)200 Amp Breakers
- 2 circuit interior accepts (1) 2 pole or (2) 1 pole breakers
- Location to be determined by SREC

320 Amp Meter Pedestal

Service Point

Primary Wire

Transformer Basement

Transformer

Ground Line

4-Wire To Members Load

2½ inch min.

When required Secondary Wire in Schedule 80 conduit

Bond if within 6 feet

KVA charge over 25 KVA

Last Revision Date: 10/26/2012
Guide For Mobile Home

- Voltage-120/240
- Transformer Size TBD by SREC
- KVA charge over 25 KVA
- Meter located Within 20 feet of transformer, Minimum of 30 feet from Mobile Home

- Milbank U5136-0-200S w/lugs for SREC wires (or equivalent)
- Durham 1010706 SKT/KR/PED 200A DB
- Commercial grade lug-lug 200 amp main circuit breaker wired in series
- 4 circuit interior accepts (2)2-pole or (4)1-pole breakers
- Factory installed receptacle bridge
- 20 amp breaker with GFI receptacle
- SREC may provide meter pedestal and grounds when available at current line extension/upgrade prices.

Service Rated Disconnect with Overcurrent Protection (Must be UL listed)
- Voltage 120/240
- Trans Size TBD by SREC (Maximum 50 KVA for each 3 pack)
- Located within 20 feet of Transformer
- Transformer and metering location TBD by SREC

- Center Meter Height at Approx. 60"
- Ground to NEC and WI Comm 16
- Post-Minimum of 6" x 6" treated buried min. 3' in ground
- Backboards-5/4 Treated deck boards or larger (no plywood)

Scenic Rivers Energy Supplies
--Transformer
--Meters
--Secondary Wire (1 run of 4/0 Aluminum for each pack of 3 meters)

Member Supplies
--Meter Socket
- Milbank U2863-X with K1350 connector kit (3pack) or equivalent
- Each position to have individual 200 amp overcurrent protection and proper FCI rating
- Grounds
- Conduit to be schedule 80 (2½” min) Back to Transformer to include sweeps and expansion joints as required. Buried a minimum of 24”. (30” in not in conduit)

Service Rated Disconnects with Overcurrent Protection

Located a maximum of 20 feet from transformer

Ground Line

From Transformer

Conduit 2½ in Minimum Back To Transformer as required

To Loads

Last Revision Date: 10/26/2012
400 to 600 Amp Single Phase

- Transformer size TBD by SREC
- Voltage 120/240
- KVA Charge over 25 KVA
- 12’ to 20’ from transformer if agricultural

Location within 20 feet of Transformer
- Meter Height at Approx. 60"
- Ground to NEC and WI Comm 16
- Post- Minimum of 6” x 6” treated buried min. 3’ in ground
- Backboards-5/4 Treated deck boards or larger (no plywood)

Scenic Rivers Energy Supplies
- Transformer/Ground Sleeve
- Meter
- Bar Type CT’s
- Secondary Wire (1 run of 4/0 Aluminum for each 200 amps)

Member Supplies
- Meter Socket
  - Milbank UC 1299-RL or equivalent
- CT Cabinet
  - ALICT 4-3L
  - ALICT 6-3L
- Service Rated Disconnect/Overcurrent Protection with appropriate FCI Rating (Must be UL Listed)
- Grounds
- Conduit to be schedule 80
  - 400 Amp is 4” Minimum
  - 600 Amp is 5” Minimum
- Back to Transformer to include sweeps and expansion joints as required. Buried at a min. of 30”

Location to be determined at meeting
- Any Single Phase over 600 amp must have approval of Cooperative Engineering Staff

Last Revision Date: 10/26/2012
200 to 800 Amp Three Phase

- Voltage-120/208 or 277/480
- Transformer Size (225 KVA or smaller)
- KVA charges over 75 KVA
- Metering Located Within 20 feet of transformer
- 12' to 20' from transformer if agricultural

Transformer to be a minimum of 50 feet from all buildings when possible

- Meter Height at Approx. 60"
- Ground to NEC and WI Comm 16
- Post- Minimum of 6" x 6" treated buried min. 3' in ground
- Backboards-5/4 Treated deck boards or larger (no plywood)

Scenic Rivers Energy Supplies
- Transformer/Ground Sleeve
- Meter
- Bar Type CT’s
- PT’s, required @ 277/480
- Secondary Wire (1 run of 4/0 Aluminum for each 200 amps) or equivalent

Member Supplies
- Meter Socket
  - Milbank UC 7449-XL-871
  - CT Cabinet (Contact SREC for current list)
  - AMP (American Midwest Power), equivalent
    - 400 amp ALI(P)CT-4-4L
    - 600 amp ALI(P)CT-6-4L
    - 800 amp ALI(P)CT-8-4L
  - PT Cabinet Required 277/480
- Service Rated Disconnect/Overload Protection with appropriate FCI Rating (Must be UL Listed)
- Grounds
- Conduit back to transformer

Service Equipment
- Service Point
- Service Rated Disconnect/Overload Protection with appropriate FCI Rating UL Listed

- Conduit to be schedule 80 (4" min)
- Back to Transformer to include sweeps and expansion joints as required. Buried at min. of 30"
- 400 amp requires min. of 4"
- 600 amp requires min. of 5"
- 800 amp requires min. of one-6" or two-4"

Last Revision Date: 10/26/2012
1000 Amp and Larger – Three Phase

- Voltage 120/208 or 277/480
- Transformer Size (greater than or equal to 500 KVA)
- CT Cabinet located Within 20 feet of Transformer
- If Agricultural minimum of 12 feet, Maximum of 20 feet
- Final location TBD by SREC

KVA charge over 225 KVA

13 Terminal Meter Socket w/ Test Switches

Service Rated Disconnect with Overcurrent Protection and Proper FCI Rating UL Listed

Provisions for PT's provided by member for voltage of 277/480

- Availability: Case by Case Basis
- Location: Agreed upon at site meeting
- Must be approved by SREC

Member Supplies
- Meter Socket
- Milbank #UC7449-XL-871, 13 Term
- Must include 10 pole test switch-Mil-TS10-0109.
- Cement Pad to incorporate
- CT Cabinet/Overcurrent Protection
- ALI (P)CT-12-4L
- CT cabinet W/Service Rated Disconnect W/Overcurrent Protection and proper FCI Rating (Must be UL Listed)
- PT cabinet required @ 277/480
- All secondary wire
- Grounds
- Raceway and/or required conduit.
- Conduit for primary wire if its crosses driveway or parking area. Min. 30°

Scenic Rivers Energy Supplies
- Transformer/Ground Sleeve
- Meter
- Bar or Finger Style Type CT's
- CT Type TBD by SREC
- PT's required @ 277/480

- Conduit to be schedule 80 (6" min)
- Between Transformer and CT Cabinet
- 1000 amp requires min. of one-6" or two-4"

Last Revision Date: 10/26/2012