NET ENERGY METERING 2.0 SOLAR INTERCONNECTION **HANDBOOK**

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MID

January 2024

Application Package Requirements Check List	
	Required Documentation & Descriptions
	MID Solar System & Energy Storage Device Application – Must be signed by MID Customer & Contractor
	MID Electrical Interconnection Agreement – Must be signed by MID Customer
	MID Net Metering Agreement – Must be signed by MID Customer
	NEM1 to NEM2 Acknowledgement Letter (if applicable) – Must be signed by MID Customer
	Confirmation page(s) for electronic signatures
	Single Line Electrical Diagram
	Site Diagram/Plan
	CSI Sheets – One for each array and/or orientation - http://csi-epbb.com/
	Battery Data Sheet (if installing a battery)
	Interconnection Fee – Check made payable to Modesto Irrigation District or MID: $300 for systems of less than 100kW AC CSI Rating per meter or $800 for systems of 100kW AC CSI Rating or greater per meter.
	Required for Interconnection
	Copy of signed final permit issued by the City/County – Permits signed off over 6 months will not be accepted.

Where to Submit The Application Package

To submit by mail:

Modesto Irrigation District
Energy Services Department – Attn: Solar
P.O. Box 4060
Modesto, CA 95352-4060

To submit in person:

Modesto Irrigation District
1231 11th Street
Modesto, CA 95354

NO electronic submissions will be accepted.

Overview
This handbook outlines the steps, processes, and requirements to apply for a solar system and/or energy storage device interconnection for qualified Net Energy Metering (NEM).

Contact Information
Information on applying for an interconnection including downloadable applications, forms, and manuals can be found on MID's web site – http://www.mid.org/solar. If you need additional information, please contact the MID's solar line at (209) 526-7582 or email us at pv@mid.org.

Consumer Protection
As with any large investment, do your homework. Get multiple bids from separate contractors and ask for referrals. Even if the project is offered for $0 down, be sure you fully understand the details and terms of the agreement. For additional tips or to review your contractor, visit the California State Contractors License Board website at http://www.cslb.ca.gov/.

Application Requirements
To be eligible for interconnection a customer must have an active MID electric account in their name. Applicants must also comply with all MID Electric Service Rates and Rules.

Solar Rebates
MID does not offer solar rebates.

Federal Tax Benefits
Check with a Certified Public Accountant or the Internal Revenue Service for more information on any applicable federal or state tax credits.

Net Energy Metering (NEM)
Net Energy Metering is applicable to qualified renewable generating facilities intended to offset part or all of a customer's electrical usage, limited to 3-megawatts AC CSI Rating per site. Systems larger than 1-megawatt are subject to a capacity charge for each kW greater than the 1-megawatt threshold and forfeit any excess generation credits. Currently, MID only offers NEM 2.0. Please read this schedule carefully before choosing to install solar, https://www.mid.org/tariffs/rates/net_metering_2_0.pdf.

Solar System Sizing
A solar system size cannot exceed 115% of the current customer's annual demonstrated load of the meter where the solar is being installed, based on the CSI calculator. **Anticipated load will not be considered.** If the current customer does not have 12 months demonstrated load, MID will analyze a minimum of six months demonstrated load if there is a summer and winter bill available. If the current customer does not have a minimum of six months demonstrated load, MID will default to the industry standard of 2 watts per square foot. New construction will default to the industry standard of 2 watts per square foot, additional documentation (Title 24) will be subject to review by MID to determine the reasonableness of the system size. **Oversized systems will NOT be approved and will be mailed back to the contractor.** To avoid submitting an oversized system, have the MID customer fill out and sign a Release of Information Request - https://www.mid.org/forms/BillingHistoryReleaseForm.pdf. Email the signed form to pv@mid.org to obtain the customer's current 12 month demonstrated load.

PV Modifications
When existing solar systems are modified, customers MUST apply and notify MID of the proposed modifications being made. Modifications should NOT be made until a MID Engineering Review has been given an approval or contingent approval. The customer's consumption and generation will be reviewed to determine the proper allowed system size. Modifications are not allowed to exceed 115% of the customer's current annual demonstrated load.

Contact MID at (209) 526-7582 or email us at pv@mid.org if you have questions. Any form of modification to your system requires MID to be notified. Systems not in compliance with MID Rates or Electric Service Rules may be subject to having their systems disconnected from the MID grid.

NEM 1.0 Modifications
Addresses interconnected under MID's NEM 1.0 schedule, have been grandfathered into the NEM 1.0 schedule for 20 years from the original interconnection date. NEM 1.0 addresses are allowed a onetime addition of up to 10% of the original system size. When existing solar systems under MID's NEM 1.0 schedule add or rearrange solar panels that increases the system output more than the allowed 10%, customers MUST apply for the current NEM 2.0 schedule and sign a NEM1 to NEM2 Acknowledgement letter. Failure to notify MID of modifications can result in the loss of the NEM 1.0 schedule, and the MID account can be retroactively recalculated under the current NEM 2.0 schedule.

NEM 2.0 Modifications
Addresses interconnected under MID's NEM 2.0 schedule need to wait a minimum of 6 months from the interconnection date before applying for a system modification of adding or rearranging solar panels.

Installing Solar System and/or an Energy Storage Device(s)
MID will interact with your contractor to get your system interconnected. Your contractor will handle all the details unless you are installing the system yourself. Your contractor should be aware of MID's application paperwork and technical requirements. Complete and correct applications will ensure you of a timely interconnection process. Installers must follow MID's guidelines in the placement of electrical interconnection equipment. Failure to adhere to MID requirements could delay the interconnection of the system. **Systems that are not interconnected within a year from the date of the Districts acknowledgment will be cancelled.** A 6-month extension may be requested by the contractor if there are extraordinary circumstances which caused a delay to the project.

Installation Requirements
- Premises with multiple electric meters will be limited to one solar system per meter. MID will not increase transformer/service capacity to facilitate solar generation under this program.
- The solar system must be interconnected to the utility distribution grid and generate electricity to offset the end-use consumer's on-site electrical load.
- The solar system must be located on the same premises of the end-use consumer where the consumer's own electrical demand is located.
- Eligible solar systems must be permanently mounted to a permanent structure. In addition, the building permit for the solar system must be approved by the building code enforcement.

- Systems must be installed in conformance with the manufacturer's specifications and all applicable electrical and building codes and standards.
- MID requires the installation of MID performance (generation) meter measuring the alternating current output of the solar system.
- Systems must meet MID interconnection standards. Please review the MID Solar Electric Service Guide for complete details, https://www.mid.org/esg/Service_Guide_Solar_PV.pdf.

MID's Review Process (3 Steps)

Step 1 – Contractor to Submit Application Package to MID

- Only current forms will be accepted, go to www.mid.org/solar for the most current forms.
- Application packages must be mailed in or dropped off at MID's downtown office.
- Electronic submissions of application packages will NOT be accepted.

The following items must be included in the Application Package:

- MID Solar System & Energy Storage Device Application – Must be signed by MID Customer & Contractor
- MID Electrical Interconnection Agreement – Must be signed by MID Customer
- MID Net Metering Agreement – Must be signed by MID Customer
- Confirmation page(s) for electronic signatures
- Single Line Electrical Diagram
  - A technical drawing provided by the contractor detailing the wiring and electrical components of the system. Must be legibly printed on 8.5"x11" paper.
- Site Diagram/Plan
  - A detailed drawing depicting the layout and placement of solar panels and inverters, metering, switches/disconnects, placarding/signage, obstructions, relative placement to dwelling and any obstructions to access such as gates (locked or unlocked) must be legibly printed on 8.5"x11" paper.
- CSI Sheets – One for each array and/or orientation – https://www.csi-epbb.com/
  - This calculator is used to produce a report to show the expected production of the solar system installed
- Battery Data Sheet (if installing a battery)
- Interconnection Fee – Check made payable to Modesto Irrigation District or MID:
  - $300 for systems of less than 100kW AC CSI Rating per meter or $800 for systems of 100kW AC CSI Rating or greater per meter.

Please Note:
MID will not accept incomplete application packages. Packages that are missing information, incomplete, or are inaccurate, will be returned by USPS mail to the contractor. MID must be notified of any "as-built" changes that deviate from the original application package. Projects with significant deviation from application to "as built" could have the application cancelled and MID will require a new and corrected application package to be submitted.

Step 2 - Application Package Received and Accepted by MID

Initial Paperwork Review: 1-3 weeks to complete from the time received.
MID will review the application package to ensure all required documents were turned in. MID will review the system size being proposed. If documents or revisions are needed MID will contact the contractor by email. If revisions or missing documents are not received by the given time frame, the application packet will be cancelled and returned to the contractor/vendor. If the initial paperwork review is passed, the plans will be given to MID's Engineering Department to review the submitted plan set.

Engineering Review: 1-3 weeks from the time the initial paperwork review is passed.
Once the plan set has been reviewed, MID will issue an Engineering Review letter to the contractor and customer by email, as listed on the application. If the Engineering Review results in a failed review, the contractor will need to email revisions to pv@mid.org. If the Engineering Review results in an approval or contingent approval, the contractor may install the approved proposed system. The contractor will then need to coordinate an inspection with the City/County to obtain a "signed-off" copy of the permit.

Energizing The System For Testing Only
Once installed, the system should not be energized on a sustained basis prior to the "passing" of MID's Interconnection Inspection. Systems energized for testing purposes longer than 24 hours will be subject to tampering fines and could face termination of interconnection and net metering agreements with MID.

Step 3 - MID Interconnection Inspection

After the system installation is complete, the solar contractor will need to submit the "signed-off" copy of the City/County permit to pv@mid.org. **Permits must have a "sign-off" date, dated within 6 months of requesting the MID Interconnection Inspection.** MID will normally perform the Interconnection Inspection within 12 working days. The inspection verifies the installation and the correct electrical wiring of required devices (generation/production meter socket and ac disconnects) as well as installation of MID required signage (placarding).

- If the system passes the Interconnection Inspection, MID will install the generation meter. **MID will not energize the customer's system.** MID will formally inform the contractor and customer by email of the system being interconnected. MID will email a "Permission to Operate" (PTO) letter within 10 working days of a successful Interconnection Inspection.

- If the system fails the Interconnection Inspection, MID will send an email to the contractor stating the reasons for failure and copy the customer. The contractor will need to address the issues, pay a $100 reinspection fee on the customer's MID account, then email pv@mid.org with payment confirmation to request a reinspection. A new City/County inspection/signed permit may be required to complete a reinspection.

Following MID's Electric Service Guide http://www.mid.org/esg/Service_Guide_Solar_PV.pdf closely will help eliminate delays and MID reinspection fees.

You can pay the reinspection fee by calling 209-526-7337 and applying the $100 fee to the customer's MID account. You will need the customer's MID account number and their zip code.

Common Reasons for Interconnection Problems

Project Stage	Common Issues
Initial Paperwork Review	Missing documents – Review Application Package Checklist
	Missing signatures – Electronic signatures must include certification
	The MID account holder must be the person who signs all required MID documents
	Interconnection Fee not included with application packet
	Oversized systems – This can be avoided by emailing a complete Release of Information Request to pv@mid.org before submitting an application package.
	CSI Sheets do not match Site Plans
Engineering Review	Site Plan - See MID Electric Service Guide for requirements • Location of MID equipment not included • Gates and/or fences not included • **Gates must be marked as locked or unlocked (MID access required)**
	Single Line Diagram - See MID Electric Service Guide for requirements • Incorrect placement of AC disconnects and/or generation meter socket • AC disconnect and/or generation meter socket missing • AC disconnect and/or generation meter socket missing description
Interconnection Inspection *($100 reinspection fee will be applied to the customer's MID account)*	City/County signed final permit is older than 6 months
	MID seal(s) cut/missing
	No access to MID equipment
	Missing/inadequate placard(s)
	Placard not attached properly
	Damaged Meter Clips *Note: For testing, contractors may use jump covers to maintain meter clip integrity*
	Meter socket improperly wired
	Required PV equipment missing/incorrectly spaced – will require new permit
	Meter socket height @ centerline exceeds maximum (48″ to 75″) - will require new permit