Solar Photovoltaic (PV) Program
Rebate Program For Systems 30kW or Less
2008/2009 Program Details

About the Photovoltaic Rebate Program
Photovoltaic (PV) generating systems (also referred to as "solar" electric systems) produce clean, renewable electricity from the sun. PV systems also help reduce our dependence on fossil fuels. The Modesto Irrigation District (MID or the District) offers its residential, commercial and agricultural customers monetary incentives to help offset their investment in PV generating systems.

The rebate incentive for qualified PV systems is $2.60 - $3.10 per installed alternating current (AC) watt per customer account, not to exceed 50% of total project costs. MID will provide incentive payment up to a maximum of 120% of annual kWh consumption. MID will not pay for excess generation greater than the customers' actual annual electric usage.

The MID PV rebate incentive will drop a minimum of 7% after August 1, 2009, as required per California law (Senate Bill 1). This program is not applicable to new construction. Qualifying PV systems must have a peak capacity of at least 1,000 watts (1 kW). Rebates are limited to the first 30 kW of PV system capacity. Qualifying PV systems larger than 30 kW may be eligible for incentives under the District's Performance-Based Incentive (PBI) Program. Please review Qualification Standards for additional specific program details.

Application Process
Step 1 - Review the Application / Qualification Standards
To be eligible for Photovoltaic System Rebate Program incentives, qualifying MID customers and their vendor and/or installer partners must meet all the requirements as set forth in this Application Package. Customers should carefully review the entire Photovoltaic Rebate Program Application Package. Photovoltaic systems require a considerable financial investment and are not suitable for all customers. Customers are advised to seek out information about PV/solar technology and how to go about choosing a PV system.

An "*MID Educational Guide to PV Technology"* is available upon request. It is available by calling the MID PV Program Coordinator at 209-526-7455. It can also be found at the MID website. Additional useful websites and links are listed at the MID website.

Step 2 - Complete in Full and Submit to MID the Photovoltaic Rebate Program Reservation Request Application
MID must approve your project ***prior*** to installation. To qualify for the Photovoltaic System Rebate, MID must first receive a completed PV Rebate Program Reservation Request Application. Upon receiving a completed Application, MID will call the customer and schedule a site inspection. For a PV system to be effective, the solar array requires clear and unobstructed access to the sun for most of the day- particularly from 9 am through 4 pm. The primary purpose of the site inspection is to verify PV system location details and confirm that no significant shading issues exist. Should MID deem the proposed project unacceptable, MID would inform customer of the change(s) necessary to gain approval.

Step 3 - Approval from Modesto Irrigation District

Upon receipt and approval of your Application, MID will send you or your vendor confirmation that your Application has been accepted and inform you that incentive monies have been reserved for your project. From this point, customers will have one hundred and twenty days (120) to complete the installation of their PV system. As a condition of receiving MID PV incentives, MID requires that customers call and schedule to have an energy efficiency audit conducted on their home. This can be done by calling the MID Energy Services Dept. at 526-7339. There is no cost for this service.

Step 4 - Final PV System Approval and Payment

After the PV system has been installed and passed final inspection by the applicable local city or county building/planning department jurisdiction, customer or their vendor shall send MID:

- A copy of the final, signed, jurisdictional approval for Customer's PV System from the applicable local government entity.
- The completed MID Electrical Interconnection and Net Metering Payment Agreements.
- Equipment proof-of-purchase invoices & PV inverter and module warranties.
- A singe-line diagram showing the Customer's actual installation of its PV System. The diagram must include the electrical rating and operating voltages of the main electrical components, including the customer service panel, inverters, modules, disconnect switch and circuit breakers.

Upon receipt and approval of this paperwork, MID will schedule and perform a post-inspection. MID will initiate rebate payment no less than 30 days after PV system start-up after MID verification of the customers' PV system generation. Customers should receive a rebate check within 30 days.

Program Qualification Standards

Participating MID customers (Applicants) must fulfill all Program Qualification Standards and guidelines to be eligible for program incentives. MID reserves the sole right to: 1) periodically modify and amend Program Qualification Standards and 2) determine if program eligibility criteria have been satisfied. PV systems must be owned by the MID customer receiving the incentive and documentation verifying ownership is required.

Contractors and Installation - Codes & Standards

PV systems must be installed by licensed California contractors in accordance with rules and regulations adopted by the State of California Contractors' Licensing Board and must in all cases be installed in conformance with manufacturer's specifications and with all applicable electrical and other codes and standards. Contractors must possess, or employ subcontractors who possess an A, B, C-10 or C-46 license.

Certified Components or Systems

All PV system components must be new and not have been previously placed into service at another location. All PV modules must be certified by a nationally recognized testing laboratory as meeting the requirements of the Underwriters Laboratory Standard 1703, and must appear on the latest California Energy Commission (CEC) certified Photovoltaic Modules list. All inverters must be certified as meeting the requirements of UL 1741 and appear on the latest California Energy Commission certified inverter list. The CEC list of approved modules and inverters can be found at: http://www.consumerenergycenter.org/erprebate/equipment.html

Array Orientation

The orientation of the solar array (modules) must be between 90 degrees (true East), and 270 degrees (true West). An exception to this requirement is for flat roof installations with a tilt angle of less than 5 degrees

Grid Connection / Installation Details

Qualifying PV systems must be grid-connected. This means that the PV system must be electrically connected (on the customer's property) to the MID electric system serving the customers load. The interconnection of the customer's PV system must comply with all applicable electrical codes and MID inter-connection requirements. The PV system must offset the customer's energy use by supplying electricity otherwise supplied by MID.

MID requires the installation of a visible, lockable disconnect switch to be installed between the PV system and the MID Distribution System. The switch must be clearly labeled "PV System Disconnect" and should be located on the alternating current (ac) side of the inverter and before and within 12 feet of the customers' service panel in a readily accessible location.

PV equipment receiving program incentive is intended to be in place for the duration of it useful life. Systems must be secured to a permanent surface. Any indication of system portability may deem system ineligible for program incentives.

MID also requires the installation of a simple "A" Base Meter Socket Adapter on the alternating current side of the inverter. MID will install (at no cost to the customer) a meter that will allow the District to measure the generation output of the PV system.

Warranties

Retailers of PV systems must provide a minimum 10-year warranty against breakdown or degradation of electrical output of more than ten percent from their originally rated electrical output. Warranty shall cover the full cost of repair or replacement of defective components or systems. Where the retailer is also the installer, or professionally contracts for the installation, the warranty must also cover labor costs to remove and reinstall defective components or systems. Copies of the full warrantee(s) must be received by MID in order to process a PV System Rebate. MID does not guarantee any materials or workmanship; acceptance of such is customers' responsibility.

Generating System Output /Rebate Incentive

The Photovoltaic System Rebate Program incentive is $2.60 per installed $watt_{AC}$-PTC (alternating current – Pacific Test Conditions). An additional $0.50 per watt is available to Governmental or non-profit entities. Incentives are calculated by determining the Total Array Output multiplied by the Peak Inverter Efficiency. Total Array Output equals the number of PV modules multiplied by the PTC_{DC} power rating of each module. Peak Inverter Efficiency is the level of efficacy that the inverter converts direct current to alternating current (DC to AC). Module PTC_{DC} ratings and Inverter Peak Inverter Efficiency ratings are found at the CEC website. (See CEC web link referenced earlier within this document)

EXAMPLE REBATE CALCULATION:

Proposed PV system consisting of 12 modules, each with a 167 $watts_{DC}$ PTC rating (from CEC website) and using an Inverter with a Peak Inverter Efficiency of 94%:

12 modules x 167 PTC $watts_{DC}$ = 2,004 $watts_{DC}$

2,004 watts x 94% Peak Inverter Efficiency = 1,883.76 $watts_{AC}$

1,883.76 $watts_{AC}$ x $2.60/watt = **$4897.78 Rebate**

Rebates may not exceed 50% of total project costs. Project costs include labor and all materials (modules, inverters, mounting structures, wiring). In addition to the MID rebate, Federal Tax Credits may also be available for MID customers who install PV systems. Information regarding such tax credits is available on the Internet at: http://www.energytaxincentives.org

Required MID Electrical Interconnection Net Metering and Agreements

MID Customers installing PV systems must complete and enter into an Electrical Interconnection Agreement with the District.

This Agreement contains important technical terms and conditions pertaining to the design, construction, operation and maintenance of PV systems necessary to insure safety and power quality. The Interconnection Agreement may contain additional requirements not stated within these Qualification Standards in accordance with the law. MID may modify such application from time to time as deemed necessary by the District.

Completion and submittal of an MID "Net Metering Payment Agreement" is required. Net metering allows your electric meter to spin forward when power flows from MID into your home and backwards out onto the grid when your PV system is generating more electricity than your home is using. Net metering allows customers with PV systems to be credited on a one-for-one basis for all kilowatt-hours of energy generated and pay only for the "net" amount of energy consumed. Under MID's net-metering rule, customers only pay for the "net" amount of energy consumed over an annual 12-month period. MID will not pay for excess generation greater than the customers' actual annual electric usage.

The MID Net Metering and Electrical Interconnection Agreements can be downloaded at the following web link within the MID website: http://www.mid.org/services/tariffs/default.htm

Renewable Energy & Environmental Credits

As a condition of MID system inter-connection, customer agrees that MID retains all rights and ownership to "renew-able energy credits" (RECs) or certificates for greenhouse gas emissions and other future "renewable" and/or "environmental" credits or certificates for as long as the customer's PV system is interconnected to the MID distribution system. MID may trade and/or utilize these credits as deemed necessary and valuable for the benefit of all MID ratepayers.

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Questions? Call (209) 526-7455
MID web site: **www.mid.org**