



*The People's Power*

# **Program Guide**

## **EMERALD Solar Electric Program**

2011

## Introduction

### *Purpose of the Program Guide*

This Program Guide provides an overview of Emerald People's Utility District ("Emerald") Solar Electric Program ("Program") requirements, processes, and policies. As an approved and registered Solar Electric Program installer ("Registered Contractor"), you are required to comply with this Program Guide as a condition of your agreement with Emerald.

### *Future Revisions to the Program Guide*

This Program Guide undergoes annual revisions as policies and processes change. When changes are made, a new version of the Program Guide will be issued and posted to the Program pages on our website. To ensure you are using the current version of the Guide, you should check the Program pages on Emerald's website.

## Program Overview

### *Program Purpose and Design*

The purpose of the Program is to develop the local residential and non-residential solar market to benefit all Emerald customer-owners. Emerald provides cash incentives to eligible Program participants to reduce the above market costs associated with installing a solar electric system. Qualifying systems are required to meet minimum technical requirements in order to promote increased photovoltaic system quality, performance, and general awareness.

## Policy Overview

### *Confidentiality of Program participant information*

All Registered Contractors are obligated to maintain the confidentiality of all information submitted by a Program participant under the Program.

### *Green Tags*

Renewable Energy Credits (REC), or green tags, are associated with the environmental attributes of a system that generates electricity from a renewable fuel source and are separated from the system's production. For Solar Electric Systems that receive an incentive from the Program, the program participant will transfer the RECs to Emerald when the system completes interconnection and has received final approval from an Emerald inspector. A customer may negotiate ownership of a portion or all of the RECs with the stipulation that the RECs will be retired or retained at the customer site and not sold in the market. Emerald retains the right to change this policy at any time. Desire to negotiate REC ownership must be indicated upon submission of **Incentive Application**.

### *Net Metering*

The District will enter into an agreement with customer-generators owning a net-metered facility as permitted under ORS 757.300 and the District's currently adopted Net Metering Policy. The primary intent of the Net Metered facility shall be to offset all or a portion of the customer-generator's own

electric power requirements. The customer-generator shall sign and abide by the District's Net Metering and Interconnection Agreement. The District may limit the generating capacity of all net metering systems to one-half of one percent of its historic single-hour peak load.

## Registered Contractors

### *Solar Contractor Application*

To participate in the program, qualified solar electric contractors must sign and submit a **Solar Contractor Application**, along with all required insurance documentation, to Emerald. Once Emerald approves a submitted Application, it becomes the binding agreement between the approved solar electric contractor (Registered Contractor) and Emerald.

This Program Guide and the **Solar Electric System Installation Requirements** are an integral part of, and are incorporated into, the agreement between Emerald and the Contractor. The Program Guide and **Solar Electric System Installation Requirements** provide additional details about the actual tasks and deliverables required of a Registered Contractor for each Program participant's installation as well as general requirements for Program participation. You need to carefully read and understand each of these documents and contact us if you have any questions. Before an Application can be reviewed, Emerald must receive all the following documentation:

- **A signed Solar Contractor Application, including a completed IRS Form W-9**
- **All required insurance documentation**

### *Solar Electric Program Contractor Approval*

Emerald will review all submitted Application materials and may ask for additional information if necessary. If your Application is accepted, Emerald will return a fully executed copy to you.

### *Registered Contractor Requirements*

In addition to the requirements set forth in the **Solar Contractor Application** and **Solar Electric System Installation Requirements**, Contractor agrees to comply with the following requirements during the term of the agreement:

- **General Requirements**
  - Registered Contractor will comply with all laws and maintain all appropriate licenses and certifications for the work Registered Contractor is performing for the Program, including but not limited to an Oregon Construction Contractors Board (CCB) license.
  - If Registered Contractor subcontracts for system installation, Registered Contractor will ensure that any installer used by Registered Contractor is in full compliance with all laws, license and bonding requirements required for the installation of solar electric equipment.
  - Registered Contractor will meet all Program requirements and follow the Program process set forth in the **Incentive Application** agreement, the **Solar Electric System Installation Requirements**, and this Program Guide.
  - Registered Contractor will maintain current address and contact information with Emerald.

- Registered Contractor will immediately notify Emerald in writing (email is acceptable) if any information changes from the information provided in the Application (including, but not limited to, any changes in business status).
  - Registered Contractor will keep current of Program updates and form changes as the Program evolves and accurately inform Program participants about Emerald's Program requirements. This **Program Guide**, the **Solar Electric System Installation Requirements**, or any of the related Program forms described may be modified as key Program details change, and it is the Registered Contractor's responsibility to remain current. Emerald will notify all participating contractors of update and changes and Registered Contractors have 10 days from the date of Emerald's notice to notify Emerald in writing, if they no longer wish to participate in the Program. If Registered Contractor does not notify Emerald within this 10-day period, the Registered Contractor will be deemed to have agreed to the new terms.
  - Registered Contractor will at all times conduct itself in a professional, business-like manner and will use best efforts to remedy reasonable Program participant complaints regarding Registered Contractor's work.
  - When Emerald incentives are paid to Registered Contractor, Registered Contractor will pass through the full value of the incentive to the program participant.
- **Specific Insurance Requirements**

Registered Contractor will obtain and continuously carry insurance that meets the requirements of this section, at Registered Contractor's expense, during the term of the agreement. The insurance carried by Registered Contractor must cover the work being performed and cannot have any exclusion for the type(s) of damage that Registered Contractor may cause as a result of the work that Registered Contractor performs.

Registered Contractor will furnish certificates of insurance naming "Emerald People's Utility District" as a Certificate Holder and evidencing at least the following minimum insurance types and amounts upon application approval and on an ongoing basis during the term of Registered Contractor's agreement with Emerald:

- Workers' Compensation Insurance as required by law. If Registered Contractor is exempt from Workers' Compensation Insurance requirements, Registered Contractor must sign and return Emerald's Workers' compensation Exemption Certificate.
- Occurrence-based Commercial General Liability (including contractual liability and complete operations coverage) Insurance, with not less than \$1,000,000 per occurrence for bodily injury and property damage liability, with an annual aggregate limit of not less than \$1,000,000. This policy must include (i) an additional insured provision or endorsement stating: "Emerald People's Utility District is a additional insured as respects any work performed for or on behalf of Emerald People's Utility District's program(s)," (ii) a cross liability clause so that the insurance applies separately to each insured, and (iii) an acknowledgement that in the event of a loss, Registered Contractor's policy will be primary.
- Automobile Liability Insurance with a combined single limit of not less than \$1,000,000. Coverage provided by the Registered Contractor must include owned, non-owned, and hired motor vehicle coverage.

It is Registered Contractor's responsibility to ensure that all required certificates specifically comply with the stated insurance requirements and Registered Contractor must furnish to Emerald a renewal certificate 10 days before any coverage expiration. Registered Contractor will give Emerald immediate notice if there is any cancellation, material change, or intent not to renew any required insurance, or if it appears aggregate limits may be exhausted with respect to any insurance.

Registered Contractor should consult their insurance provider with questions as to whether the Registered Contractor's policies meet these requirements. Registered Contractor should also ask their insurance agent to provide automatic required notices and certificates to Emerald during the term of the Agreement.

### **Emerald Program Incentives**

Emerald's solar electric incentives are paid in a lump sum to lower the initial cost of new solar electric systems. For simplicity, standard incentive rates are based on rated AC power capacity of the installed photovoltaic array. Annual Emerald incentive budgets are fixed, limited, and may be exhausted before the end of the year. The current set rates are subject to change at any time.

Current incentive levels can be found on the Solar Electric pages of Emerald's website.

### **Project Eligibility Requirements**

#### *Pre-Screening for Eligibility*

Registered Contractors are required to perform some initial project pre-screening to help Emerald determine whether a solar electric project may or may not be eligible to apply for Program incentives. Final determination of eligibility for the Program incentive shall always rest with Emerald.

- **Electric Utility Requirement**  
In order to be eligible for Emerald incentives, the solar electric system must be located on real property and must be grid-tied to an Emerald electric utility account. Floating homes with electric utility service are considered real property. RVs, sailboats, or other portable applications are not allowed.
- **General Commercial Technology Requirement**  
Emerald requires that projects use commercially available technology and approaches in order to be eligible to participate in the Program and will examine such things as: (i) key equipment and approaches must have a history of successful operation in similar applications; (ii) key components used in the project must be available to the public from entities with stable business histories; (iii) key components and approaches should come with standard commercial performance warranties; (iv) the project should have access to replacement parts, and skilled operation, service and repair personnel, provided by entities with stable business histories; (v) vendors must provide installation and operation manuals for key components.
- **Requirements for Add-ons and Expansions**  
Customers adding capacity to existing solar electric installations are eligible to apply for incentives if either: (i) PV modules are added to an existing system that received an Emerald incentive, or (ii) a new system is installed separate from the existing system. In both cases, the

expansion will be required to meet Emerald’s *Solar Electric System Installation Requirements*. The total incentive, for which the customer may apply, including the amount of any incentive previously provided for the system, may not exceed the maximum incentive cap established by the Program. For example, if a system originally received \$12,000 from Emerald, and the current cap is \$25,000, an expansion will only be eligible to apply for a maximum of \$13,000.

- **Acceptable Solar Resource Requirement**

Solar resource assessment evaluates the impact of shading and array tilt and orientation on the annual production of the solar electric system. Emerald requires the site where the array(s) will be located to have a Total Solar Resource Fraction (TSRF) of 85% or greater in order to be eligible for Program incentives. Registered Contractors must submit a shade evaluation (“sun chart”) for the site with the Incentive Application, demonstrating that it meets this requirement.

- Acceptable Shade Evaluation Methods

Registered Contractors must submit a sun chart developed for Emerald by the University of Oregon Solar Radiation Monitoring Laboratory – available for download and use from the laboratory’s website. <http://solardata.uoregon.edu/SelectEPUDShadeForm.html>

- Tilt and Orientation Factor(TOF)

TOF is the percent of energy resource available after factoring in losses due to sub-optimal tilt and/or orientation of the array. TOF values vary by location, and are included on the Emerald sun charts.

- Total Solar Resource Fraction (TSRF):

TSRF represents the net effect of shading, tilt and orientation on a system’s performance.

Shading	=	100% – Annual loss caused by shading
TOF	=	100% – Loss due to sub-optimal tilt and orientation
TSRF	=	Shading x TOF

### *Determining Type of Project*

Registered Contractors will need to determine the type of project in order to identify the appropriate information on the customer’s Incentive Application and Interconnection Application. One of the criteria Emerald considers in determining proper classification treatment of project applications is whether the customer is applying to the Oregon Department of Energy for a Residential Energy Tax Credit or a Business Energy Tax Credit for the system.

#### Customer-Owned Residential

The system owner is the owner of the site property.

The power produced by the solar electric system will be net-metered for an Emerald electric account held by either the property owner or a tenant.

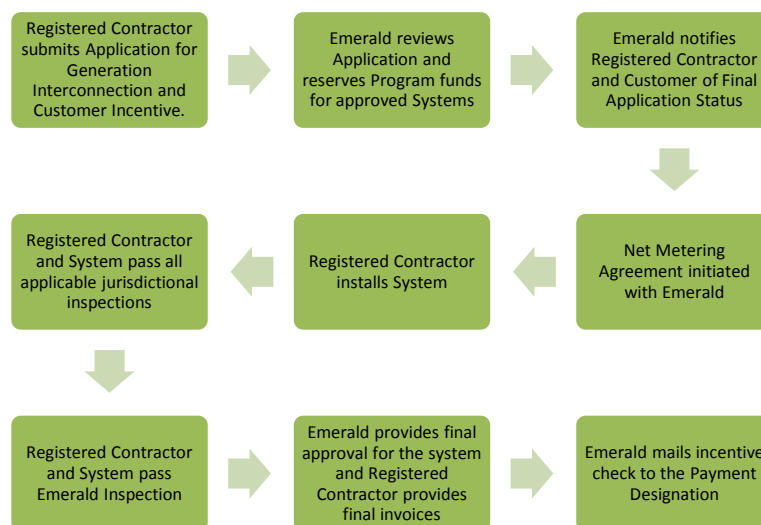
#### Customer-Owned Commercial

The system owner is either (i) the owner of the site property, or (ii) a tenant who has received written permission from the property owner to install and operate the system for 20 years.

The power produced by the solar electric system will be either (i) net-metered for an Emerald electric account held by either the property owner or a tenant, or (ii) or delivered directly to Emerald via a qualifying power purchase agreement.

## Applying for an Emerald Incentive

Emerald expects Registered Contractors to understand the Program's incentive and interconnection application forms and the procedure for submission from beginning to end. Typically, the registered solar contractor submits incentive applications to Emerald. The basic steps to submit incentive applications for a system seeking Emerald funding are as follows. Some variation to the outlined process is acceptable for certain kinds of projects.



### Applying for Incentive for your Customers

- **Providing information to your customer**

The Registered Contractor must give customers time to read and understand the terms & conditions of the **Incentive Application** before obtaining a signature, and should explain, at minimum, the following information when providing an application to a customer for review. If a potential Program participant has questions about Emerald's incentive application or the process, have them contact our offices before they sign the application.

*Solar Resource Information:* Explain TSRF and the project's solar resource compared to optimal.

*Performance Estimate:* Educate the customer about the amount of energy the system should generate annually, de-rated for TSRF, so that they have a realistic expectation for performance.

*Incentive Process:* Explain Emerald's incentive rate, the incentive application and the pre-approval process, that the installation must be completed, inspected and receive final approval during the incentive reservation period, and who will be the recipient of the incentive payment (customer directly or Registered Contractor in exchange for a lower system price).

- **Submitting your application on time**

To apply for and reserve funding for any solar electric system installation, the incentive application must be submitted to program before a Registered Contractor begins installing the system. Systems installed prior to Emerald's receipt and approval of an **Incentive Application** may not be eligible for incentives. Until Emerald provides written pre-approval of an incentive application for a system installation, there is no commitment by Emerald to reserve any incentive funding for that project.

Any purchase of equipment or other work towards an installation before Emerald has notified the Registered Contractor of application pre-approval/incentive reservation is done at Registered Contractor's own risk.

- **Submitting a complete application package**

A complete application includes, at minimum, the following:

Application for Generation Interconnection and Customer Incentive: Filled out in its entirety and signed by all necessary parties.

Sun Chart: Registered Contractor's site assessment and bid including an Emerald Sun Chart, or equivalent.

Schematic Diagram: Attach one-line electrical diagram of proposed system showing detailed system design.

Other Materials: As needed to demonstrate project eligibility and comply with Program requirements. This includes but is not limited to proof of roof life (if applicable), equipment cut sheets, PV Watts Version 1 estimate of system estimated annual energy production.

The application package can be submitted to Emerald staff via fax at (541) 726-1128 or hand/mail delivered to 33733 Seavey Loop Road, Eugene, OR 97405.

Emerald will not review any submitted applications until all necessary parties have signed it and all required application documents have been received. Because incentive funds are not reserved until an application is pre-approved, it is imperative that Registered Contractors ensure that all required documents are collected and submitted up front in order to avoid delays in Emerald's application review process.

Retain a copy of the application for your records.

#### *Emerald Review and Pre-approval*

Emerald reviews all solar electric incentive applications and provides pre-approval for eligible projects. The pre-approval step intends to protect the Registered Contractor from purchasing equipment or doing other installation preparation work for a system or customer that may not meet our Program requirements. In addition, this step intends to effectively allocate Emerald's' fixed incentive resources.

Emerald Program staff first reviews the application for eligibility, and then sends it to Operations and Engineering for site technical approval. Following this step, the system design is submitted for system design technical review.

Emerald's application, review, and pre-approval process typically takes five to ten business days, but will likely take longer if the submitted incentive application is missing or includes incorrect information, or if

there are concerns with Program eligibility or the system design. When this happens, the Registered Contractor will be notified and asked to re-submit any missing information.

- **Notification of application pre-approval/incentive reservation**

Once Emerald completes its review and approves an application, we will send a pre-approval/incentive reservation notice. Once an application for a system has been pre-approved, the Registered Contractors may move forward with system installation.

- **System design changes during an incentive reservation period**

If the Registered Contractor and the Program participant decide to make a material change to the system after an incentive application has received a pre-approval/incentive reservation notice from Emerald, the Registered Contractor must notify Emerald with a revised system design. If the design change affects the incentive amount for the project, the Registered Contractor will need to submit a revised Incentive Application with the signature of the Program participant acknowledging the new incentive amount.

All changes to reserved incentive amounts are subject to fund availability and Emerald approval.

## **Installation Requirements**

All installations performed by a Registered Contractor must meet the Solar Electric System Installation Requirements in effect at the time of pre-approval/incentive reservation in order to be eligible for Program incentives. Installations will be inspected by Emerald in accordance with Program requirements.

### *Timing*

After the Registered Contractor has received a pre-approval/incentive reservation notice for a project, installation may begin. The system must be installed and inspected by Emerald within the identified reservation period.

### *Net-Metering*

Prior to final inspection by Emerald, the Registered Contractor and the Program participant must initiate the net-metering process with the utility.

The Program participant is responsible for executing the agreement for net metering with Emerald, but the Registered Contractor is responsible for obtaining and verifying Emerald's current net-metering requirements. While Registered Contractors cannot complete the net-metering process for their customers, assistance with the process can be provided by informing them ahead of time that they will need to enter into an agreement, helping them understand the timeline in which it must be executed, and providing the appropriate contact information at Emerald.

Emerald Customer Service Number: (541) 746-1583

### *Jurisdictional Inspections*

Registered Contractors and their projects must successfully pass any and all jurisdictional inspections required by the city or county where the project is located before the Emerald inspection. Projects that

cannot provide proof of passing their jurisdictional inspections at the time of Emerald inspection will be failed and re-visit may be required.

#### *Contractor Warranty*

Registered Contractors shall provide participant with a written warranty providing the following minimum guarantees: Equipment shall be free from all defects in workmanship and materials for at least two years from the date of final approved building inspection. The warranty shall cover all labor for repairs resulting from workmanship or equipment defects.

#### *Customer Education*

Registered Contractors should instruct the customer in the operation and maintenance of the system, including how to identify if the system is operating normally, what to do in case of poor performance, routine maintenance activities and emergency shut down and start up procedures. Registered Contractors are required to provide a customer manual according to the ***Solar Electric Installation Requirements***.

## **Emerald Inspection Process**

Emerald inspects solar electric systems to ensure that they meet Program requirements and qualify to receive Program incentives.

An Emerald inspection is not a health and safety inspection, which is one reason why we require that projects pass their jurisdictional inspections first. Unlike jurisdictional inspectors, Emerald inspectors are reviewing the installation to report to Emerald whether the system appears to meet Program requirements. Among other things, Emerald Inspectors verify the system installed matches the preapproved design, help identify issues that might affect system performance or shorten the anticipated 20-year operating life of the system, and verify that the Registered Contractor has provided the customer manual.

#### *Mandatory Inspection*

- **Scheduling**  
It is the Registered Contractor's responsibility to contact Emerald directly to schedule an inspection. Registered Contractors must schedule inspections so that either the Registered Contractor or the customer will be present during the inspection. Emerald highly recommends that the Registered Contractor be present at the inspection. Registered Contractors must provide an Inspector with no less than three business days notice for cancellation or rescheduling. To reschedule an inspection, contact Emerald's offices.
- **Inspection Documentation**  
During the inspection, the Inspector will complete a **Solar Photovoltaic Installation Checklist**. After completing the inspection, the Inspector will provide comments and indicate whether the project passed or failed inspection on a **Project Inspection Summary** and follow-up letter. Registered Contractor and Customer will receive these documents prior to final approval decision from Emerald.
- **Failed Inspections**

Emerald will notify the Registered Contractor of a failed inspection by email, and will include a copy of the failed **Project Inspection Summary**. The Registered Contractor must fix all violations identified on the **Project Inspection Summary** within 30 days of notification. Failure to do so places the project's incentive at jeopardy, as the project may be removed from the Program and no longer be eligible to receive Emerald incentives.

Once the violations have been fixed, the Registered Contractor must contact the Inspector to schedule a re-inspection. In certain circumstances, and at Emerald's discretion, verbal or photographic verification of the changes may be allowed in place of re-inspection.

- Repeat Violations  
If the violation(s) identified during inspection have been the cause of inspection failure on previous projects, Emerald may, at its discretion, place the Registered Contractor on Program suspension. If the violation is particularly egregious and/or chronic, the Registered Contractor may be subject to termination (see Section **Termination**).

## Payment of Incentives

Once the final inspection paperwork has been issued to the Registered Contractor and Customer, the Inspector will provide its final approval decision to Emerald. If Emerald and the Inspector approve the project and its inspection paperwork, then processing of the incentive payment will begin.

### *Timing*

Incentive checks are paid after Emerald receives written inspection approval from the Inspector.

Incentive payments are approved weekly, and incentive checks are typically mailed within 30 days of Emerald's receipt and approval of all required final inspection paperwork.

### *Incentive Payee*

For residential and non-residential projects, incentive payments are made to the Payment Designation identified on Emerald's **Application for Generation Interconnection and Customer Incentive**. If an incentive is paid to the Registered Contractor, the incentive amount shall be deducted from the customer's total project at the time of contracting.

Registered Contractors may receive incentive payments for multiple projects in a single check. The individual project incentive amounts will be listed on the check stub.

### *Incentive Check Status Questions*

Registered Contractors should allow a full 30 days before contacting Emerald about the status of an incentive payment. If a Registered Contractor discovers an overdue or missing incentive payment, they should contact Emerald staff to resolve the matter.

## Maintaining Registered Contractor Status

### *Registered Contractor Listing on Program Information Documents*

Emerald maintains a short list of Registered Contractors available to inquiring customers. The list is part of a Program information package mailed to interested customers. In addition, the list is available on Emerald's website. To be included on the list, solar electric contractors must be an approved Registered Contractor and meet the requirements found in Section **Contractors** in this Program Guide.

#### *Professional Certifications*

No professional certifications are required for becoming a Registered Contractor. However, Emerald encourages Registered Contractors to obtain third-party certification, such as NABCEP ([www.nabcep.org](http://www.nabcep.org)) or Oregon Department of Energy Tax Credit Certified Technician certification. If available, Emerald may list any professional certifications alongside a Registered Contractor's listing.

#### *Suspension*

Certain actions may result in suspension from the Program. A Registered Contractor will be notified in writing if it has been placed in Program suspension, and will have 30 days from the notice date to resolve the situation to the Program's satisfaction. Actions resulting in suspension may include, but are not limited to:

1. Failure to fix violations identified during inspection within the 30 day timeframe
2. Failure to follow a required Program process
3. Chronic failed inspections or repeated violations of installation or Program requirements
4. Allowing insurance or licenses to lapse
5. Failure to resolve any reasonable Program participant complaint regarding the Registered Contractor's work under the Program
6. Failure to accurately inform Program participants of current Program requirements, including but not limited to incentive levels

#### *Effect of Suspension*

During a Program suspension, a Registered Contractor may not submit any new Incentive Applications to Emerald. In addition, the Registered Contractor will be removed from list of current Registered Contractors available from Emerald and posted on its website. Registered Contractor must resolve violations resulting in suspension within 30 days. Failure to do so may result in the Program terminating a Registered Contractor.

#### *Termination*

In addition to any other termination provisions set forth in the Registered Contractor agreement with Emerald, certain actions may result in Emerald immediately terminating a contractor from participating as a Program Registered Contractor. In the event of termination, the contractor will be notified by Emerald in writing. Actions resulting in immediate termination of Registered Contractor status may include, but are not limited to:

1. Failure to resolve any action resulting in suspension within 30 days
2. Repeated Program violations

3. Violation of license laws
4. Misrepresentation of system components or installation characteristics at more than one site
5. Failure to pass the full value of the Emerald incentive on to the customer in cases where the incentive payment is issued directly to the Registered Contractor

#### *Effect of Termination*

Effective upon notice of termination, Emerald will not accept any new incentive applications, will not process any submitted incentive applications that have not yet been pre-approved, and will remove the terminated contractor from the Program's list of Registered Contractors. Emerald will continue to process, in accordance with Program requirements, any incentive applications that were pre-approved by Emerald prior to the notification of termination.

Emerald may, at its sole discretion, allow a terminated contractor to re-apply for participation in the Program later. However, Emerald will most likely require additional documentation and proof from that contractor that it has responded appropriately to prevent further Program violations.

#### **Program Contact Information**

In general, incentive application materials and other Program paperwork should be submitted to the contact information at the bottom of the applicable Program form. Electronic attachments to email are preferred for transmitting Program documents. Written documents can be delivered to our mailing address: Emerald Solar Electric Program, Emerald People's Utility District, 33733 Seavey Loop Road, Eugene, OR 97405.

#### Phone

To reach a utility staff member, call the main Emerald office number at (541) 746-1583 and ask for a Solar Electric Program staff member.

#### *Questions and Feedback*

It is important that you have a thorough understanding of all of the Program documents, so please contact us immediately if you have any questions about this Program Guide for EMERALD Solar Electric Program, the Solar Electric System Installation Requirements, or any other related Program document.

In addition, Emerald welcomes and encourages comments and feedback about Program documents or design in general or at our regularly scheduled Board of Directors meetings. See Emerald's website for meetings schedules and agendas.