

Goldin Solar, LLC
Certified Florida Solar Contractor, License number: CVC56965
Cell #: (305) 469 9790
dgoldin@goldinsolar.com
www.goldinsolar.com



**Solar Panel Purchase and Installation
Program for City Residents and Businesses
RFP #CSM-2015-07**

**Respondent: Goldin Solar, LLC
Proposal Cover Sheet**

Contents:

- Price Table (Per Addendum 1)
- Goldin Solar Certificate of Liability Insurance
- Bid Form, Exhibit 3
- Respondents Qualification Statement
- List of Proposed Subcontractors and Principal Suppliers
- Non-Collusion Affidavit
- Public Entity Crimes and Conflicts of Interest
- Drug Free Workplace
- Acknowledgement of Conformance with OSHA Standards
 - 30-hour OSHA Training Course Construction Safety Card
- Affidavit Concerning Federal & State Vendor Listings
- Related Party Transaction Verification Form
- Presentation Team Declaration/Affidavit of Representation
- Appendices:
 - Completed project photos
 - Proposed products spec sheets
 - Goldin Solar Ygrene page
 - City of Miami RFP & Addendums

**EXHIBIT 3
 BID FORM
 Attachment A
 “Installed Solar Panel Price Proposal Grid”**

Dollars Per Kilowatt, By Roof Type (per addendum)					
kW	Asphalt Shingle	Clay/Spanish Tile	Metal Seam	Concrete	Bar Joist
0-5	\$2,670	\$2,850	\$2,480	\$2,470	\$2,700
5-10	\$2,520	\$2,700	\$2,340	\$2,320	\$2,540
10-17	\$2,420	\$2,590	\$2,220	\$2,210	\$2,410
17+	\$2,370	\$2,550	\$2,170	\$2,150	\$2,360

Dollars Per Watt, By Roof Type (Industry Standard Format)					
W	Asphalt Shingle	Clay/Spanish Tile	Metal Seam	Concrete	Bar Joist
0-5	\$2.67	\$2.85	\$2.48	\$2.47	\$2.70
5-10	\$2.52	\$2.70	\$2.34	\$2.32	\$2.54
10-17	\$2.42	\$2.59	\$2.22	\$2.21	\$2.41
17+	\$2.37	\$2.55	\$2.17	\$2.15	\$2.36

Note: All quotes above are to include Renesola solar modules, which are a tier 1 solar panel manufacturer. The inverter, DC power optimizer, and power monitoring will be supplied with SolarEdge products. For more information on suggested materials, see appendix



CERTIFICATE OF LIABILITY INSURANCE

GOLDI-1

OP ID: AR

DATE (MM/DD/YYYY)

08/26/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Research Underwriters LLC 151 NW 1st Ave Delray Beach, FL 33444 Antonio Ramudo	Phone: 561-226-7676 Fax: 561-450-6617	CONTACT NAME: Daren Goldin PHONE (A/C, No, Ext): E-MAIL ADDRESS:	FAX (A/C, No):
	INSURER(S) AFFORDING COVERAGE INSURER A: Scottsdale Insurance Company		NAIC # 41297
INSURED Goldin Solar, Inc 2251 SW 27th St, #7 Miami, FL 33133	INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:		

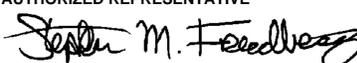
COVERAGES**CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
X	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC			V145722-A	09/01/2014	09/01/2015	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 1,000,000
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	UMBRELLA LIAB EXCESS LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						<input type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER**CANCELLATION**

Evidence of Insurance	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

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EXHIBIT 3

BID FORM

Solar Panel Purchase and Installation Program for City Residents and Businesses RFP #CSM-2015-07

THIS PROPOSAL IS SUBMITTED TO:

Steven Alexander
City Manager on behalf of the City residents and businesses
City of South Miami
6130 Sunset Drive
South Miami, FL 33143

1. Respondent accepts all of the terms and conditions of the RFP and Instructions to Respondents, This Proposal will remain subject to acceptance for 180 calendar days after the day of the Proposal Opening.
2. In submitting this Proposal, Respondent represents that:
 - a. Respondent has examined copies of all the RFP Documents and of the following Addenda, if any (receipt of all which is hereby acknowledged.)

Addendum No.	<u>1</u>	Dated:	<u>4/27/2015</u>
Addendum No.	<u>2</u>		<u>4/28/2015</u>
Addendum No.	<u>3</u>	Dated:	<u>4/29/2015</u>

- b. Respondent has familiarized himself with the nature and extent of the proposed work, site, locality, and all local conditions and laws and regulations that in any manner may affect cost, progress, performance or furnishing of the Work.
 - c. This Proposal is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted pursuant to any agreement or rules of any group, association, organization, or corporation; Respondent has not directly or indirectly induced or solicited any other Respondent to submit a false or sham Proposal; Respondent has not solicited or induced any person, firm or corporation to refrain from responding; and Respondent has not sought by collusion or otherwise to obtain for itself any advantage over any other Respondent or over the PARTICIPANT.
3. Attached to this Bid Form are the solar panel systems, prices and terms, conditions and provision of the Agreement that is hereby offered to prospective property owners in accordance with Exhibit I, "Scope of Services."
4. Attached to this Bid Form is Respondent's certificate of insurance reflecting compliance with the insurance requirements of this RFP, applicable licenses and YGRENE certification (see scope of services) to perform this type of work.
5. Communications concerning this Proposal shall be addressed to:

RESPONDENT: GOLDIN SOLAR, LLC
Address: 3447 PERCIVAL AVENUE
MIAMI, FL 33133
Telephone: (305) 469-9790
Facsimile: (772) 205-3257
Attention: DAREN GOLDIN

2nd DAY OF MAY 2015.

SUBMITTED THIS 5th Day of MAY, 2015

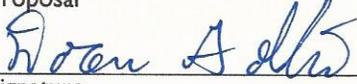
PROPOSAL SUBMITTED BY:

GOLDIN SOLAR, LLC
Company

305-469-9790
Telephone Number

DAREN GOLDIN
Name of Person Authorized to Submit
Proposal

772-205-3257
Fax Number


Signature

dgoldin@goldinsolar.com
Email Address

OPERATIONS MANAGER
Title

END OF SECTION

RESPONDENT QUALIFICATION STATEMENT
Solar Panel Purchase and Installation
Program for City Residents and Businesses
RFP #CSM-2015-07

The response to this questionnaire shall be utilized as part of the PARTICIPANT'S overall Proposal Evaluation and RESPONDENT selection.

I. Number of similar construction projects completed,

a)	In the past 5 years	<u>7</u>
	In the past 5 years On Schedule	<u>7</u>
b)	In the past 10 years	<u>7</u>
	In the past 10 years On Schedule	<u>7</u>

II. List the last three (3) completed similar projects.

a) Project Name: RODRIGUEZ RESIDENCE

Owner Name: JOAQUIN RODRIGUEZ

Owner Address: 3944 SW 60th PL, MIAMI, FL, 33155

Owner Telephone: (786) 250-6102

Original Contract Completion Time (Days): 5 DAYS (FROM PERMIT)

Original Contract Completion Date: 4/20/2015

Actual Final Contract Completion Date: 4/20/2015

Original Contract Price: \$21,200

Actual Final Contract Price: \$21,200

b) Project Name: COCONUT GROVE - RESIDENCE INN

Owner Name: MARRIOTT

Owner Address: 2835 TIGER TAIL AVE.
COCONUT GROVE, FL, 33133

MARRIOTT
(OWNER)
↓
STRATICON
(GC)
↓
VB SOLAR
(SUB CONTRACTOR)

↳ GOLDIN SOLAR
(SUB CONTRACTOR FOR CONSTRUCTION & PROJECT MANAGEMENT)

Owner Telephone: (305) 285-9303

Original Contract Completion Time (Days): 120 DAYS

Original Contract Completion Date: 1/7/2015

Actual Final Contract Completion Date: 1/7/2015

*T&M CONTRACT FOR:
- CONSTRUCTION
- PROJECT MGMT.
- BOS MATERIAL PROCUREMENT

Original Contract Price: \$42,000

Actual Final Contract Price: \$42,000

c) Project Name: KERR RESIDENCE

Owner Name: KAREN KERR

Owner Address: 6301 SW 57th DR.
MIAMI, FL, 33143

Owner Telephone: (305) 213-1385

Original Contract Completion Time (Days): 5 DAYS (FROM PERMIT)

Original Contract Completion Date: AUG. 2014

Actual Final Contract Completion Date: AUG. 2014

Original Contract Price: \$14,088

Actual Final Contract Price: \$14,088

III. Current workload

Project Name	Owner Name	Telephone Number	Contract Price
MONTESSORI PALMETTO BAY	MONTESSORI SCHOOL	(305) 605-0274	\$42,873
BERNABEI RESIDENCE	KAATJE/JOHN BERNABEI	(305) 298-0277	\$12,704

IV. The following information shall be attached to the proposal.

- a) RESPONDENT's home office organization chart. - SEE ATTACHED
- b) RESPONDENT's proposed project organizational chart. - SEE ATTACHED
- c) Resumes of proposed key project personnel, including on-site Superintendent. - SEE ATTACHED

V. List and describe any:

- a) Bankruptcy petitions filed by or against the Respondent or any predecessor organizations, N/A
- b) Any arbitration or civil or criminal proceedings, or N/A
- c) Suspension of contracts or debarring from Bidding or Responding by any public agency brought against the Respondent in the last five (5) years N/A

VI. Government References:

List other Government Agencies or Quasi-government Agencies for which you have done business within the past five (5) years.

Name of Agency: N/A

Address: N/A

Telephone No.: N/A

Contact Person: N/A

Type of Project: N/A

Name of Agency: N/A

Address: N/A

Telephone No.: N/A

Contact Person: N/A

Type of Project: N/A

Name of Agency: N/A

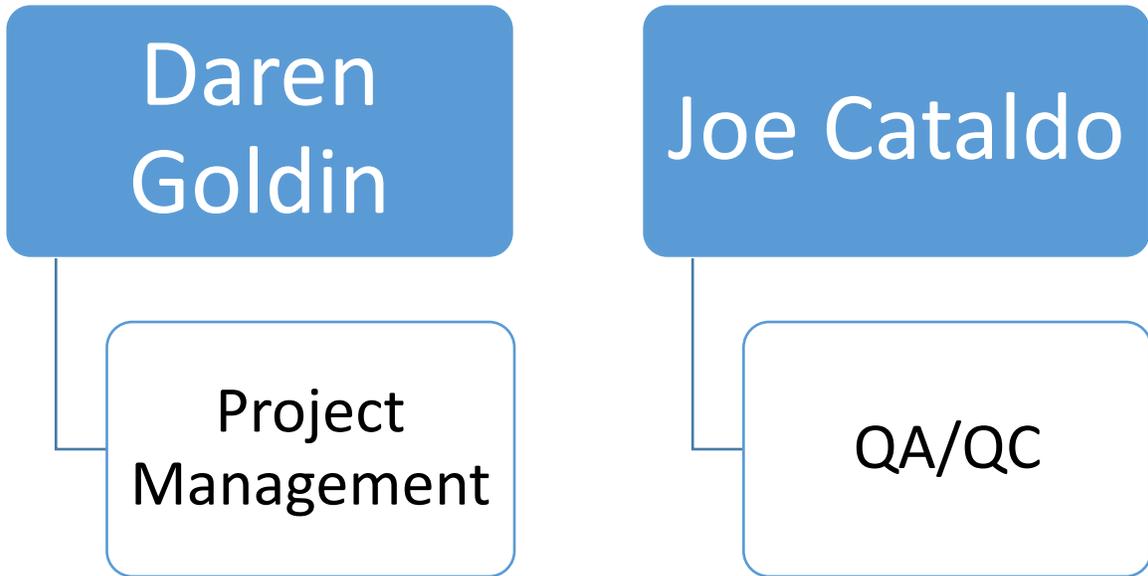
Address: N/A

Telephone No.: N/A

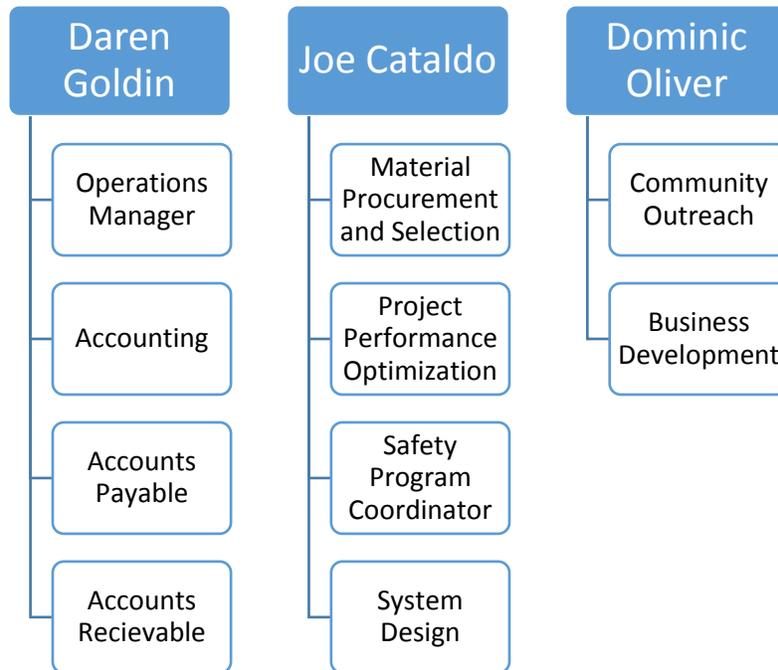
Contact Person:
Type of Project:

N/A

Project Organizational Chart



Home Office Organizational Chart



Daren T. Goldin

Objective	Seeking to provide solar PV systems to for commercial and residential applications to the South Florida community to promote sustainable living and energy independence
Education	<p>Master's of Science in Civil Engineering, Construction Engineering & Project Management program, December 2009 The University of Texas at Austin, TX GPA:3.8 Thesis: "Optimal Jobsite Staffing as a Function of Project Sector and Project Characteristics"</p> <p>Bachelor of Science in Civil Engineering, specialization in Structural Engineering & Minor in Mathematics, May 2008 University of South Florida, Tampa, FL</p> <p>Examination: Fundamentals of Engineering – Passed</p>
Work History	<p>Operations Manager – Goldin Solar – Miami, FL February 2014 – Present</p> <ul style="list-style-type: none">Managing all company operations: project management, project superintending, hiring, material procurement, business development, safety management, QA/QC, management of permitting and engineering process. Offering customers daily energy production tracking <p>Assistant Project Manager – Moss & Associates – Conover, NC April 2013 – August 2013</p> <ul style="list-style-type: none">Worked on 20 Mega Watt solar farm. Duties included managing communication in meeting agenda's and minutes (daily meetings, staff, client, and subcontractor meetings), RFIs, change orders, daily, weekly and monthly construction reports. Submittals and material specification compliance, coordination with client, engineers. Progress documentation with daily site photos, videos, production graphs. Privet piloting small airplane for support of aerial photography. <p>Regional Director – Abacus Digital – Pompano Beach, FL February 2013 – April 2013</p> <ul style="list-style-type: none">Managed warehouse/office and all projects in S. Florida region for T-Mobile cellular telecommunications infrastructure modernization (typically 3 project taking place simultaneously). Ensured construction crew (12+) properly allocated to projects, managed warehouse inventory, logistics, payroll, staffing. QA/QC at project locations, coordination with client to ensure client's needs and standards are met. <p>Project Superintendent – Amicon Construction – Miami, FL October 2012 – January 2013</p> <ul style="list-style-type: none">Managed and performed all on-site duties simultaneously in 10+ commercial build-out office space projects in Waterford and Blue Lagoon offices. Duties included: Customer management, permitting and inspection management, subcontractor coordination, security personnel coordination (for construction in occupied offices), coordination with facility directors, change order and RFI management.

Project Manager – Critical Path Construction – Miami, FL

April 2012 – October 2012

- Worked as Project Manager on site and in the home office for commercial build out approx 20,000SF. Responsibilities include subcontractor negotiation, and buyout, scheduling, managing budget, managing and coordinating subcontractors, RFIs, change orders, daily construction reports, client satisfaction, and owner-architect-contractor meetings.
 - Scheduling responsibilities included:
 - Maintaining master schedule with aggressive, yet reasonable schedule expectations (whole project)
 - Updating weekly schedule based on realistic durations based on subcontractor scheduling/coordination meetings (2-week look ahead)
 - Maintaining a CPM schedule and identifying critical path tasks, and tasks with float, to identify lead times, for smooth material flow.
 - Proficient in MS Project, Familiar with Primavera

Project Superintendent - Turner Construction Company – Austin, TX

June 2010 – January 2012

- Worked as Site Superintendent for four school renovations for the Austin Independent School District. Projects: Allison & Brooke (\$750K), Becker (\$500K), TA Brown (\$1.5MM), Lanier High school (\$5MM)
- Tasks included: Management of all field activities, task/subcontractor coordination, daily construction reports, safety reports, change order management, processing of subcontractor pay application, managing subcontractor meetings, and owner architect meetings, city permitting and inspections, closeout documentation, punch-list, and commissioning.

Project Estimator - Turner Construction Company

March 2010 – June 2010

- Worked on pre-construction of a design-build pursuit for a military hospital in Fort Hood for the Army Corps of Engineers, approx contract value: \$700MM
- Tasks included: Material takeoff from drawings provided by architect, scoping work into work packages and acquiring subcontractor bids, production of final design and price proposal binders and ensuring conformance to Request for Proposal

Research Assistant - The University of Texas at Austin, TX

August 2008-December 2009

- Studied: 'Optimizing Jobsite Organizations' for the Construction Industry Institute
- Research includes traveling to construction sites across the US and noting jobsite staffing and organization structures in attempt to find most effective, thorough and efficient jobsite staff size and organization structure for various construction sectors and specific project conditions

Research Assistant - University of South Florida, Tampa, FL

September 2005 – December 2005

- Researched 'Meshfree Simulations of the Thermo-Mechanical, Ductile Fracture' through the Research Experience for Undergraduates at USF
- Studied interactions of mechanical parameters over given time segments and increments

Skills

Software:

- Familiar with: Auto CAD, Visual basic, Primavera scheduling
- Proficient in: MS Word, MS Access, MS Project, MS Excel

Other:

- Certified in OSHA 30 hours Construction Safety and Health
- **Licensed private pilot**
- Bilingual: speak/read/write English and Hebrew fluently

Honors and Awards

- Federal Smart Grant, 2006-2007
- Certificate of Excellence from "State Representative Rob Wallace P.E.. Scholarship," September 2007
- Tau Beta Pi inductee - Engineering Honor Society, December 2007
- Most Outstanding Initiate Award- Tau Beta Pi, December 2007

Other

Accomplishments

- Published work – In 2011, master's thesis was published by Lambert Academic Publishing under the title: "Optimal Construction Jobsite Staffing: as a Function of Project Sector and Project Characteristics" – currently available for sale on Amazon and Barnes and Noble web sites
- Published work – "Why Become an ASCE Member?" Article written for USF ASCE, published in ASCE Student E-News, January 2006
- Published work – "Green Building – Basics and Local Survey of Tampa and USF" (Honors Thesis) December 2007
- Founding father of professional engineering fraternity, USF Colony of Theta Tau Summer 2006



Joe Cataldo

System Design and Equipment Procurement Consultant
for Goldin Solar LLC.

Organizations

Member of IEEE

Industry Certifications

USSolar PV Specialist,
OSHA 30 Hour Safety

Resident

Florida

Education

Bachelors of Science in Electrical Engineering
from University of Florida (Fall 2009 - Spring 2012)

Experience

Joe is a solar photovoltaic product expert who specializes in lifecycle value analysis. Joe started his career at USSolar Institute, where he designed systems for organizations such as the US Navy, and NASA, as well as hundreds of others throughout the tropics. With this accumulated knowledge, Joe developed processes to quickly select the proper equipment for a given application, as well as to identify factors that would affect project cost. He shared this knowledge with installers across the country and grew USSolar Institute into what was at the time, one of the largest suppliers of Solar Equipment in the US. He then left to start his own development company in the US Virgin Islands, which in the first 3 months of business, was contracted to build over 500kW worth of Photovoltaic systems across 30 different homes and businesses; his crews now regularly complete the installation of a residential project in a single day. Joe is now consulting for Goldin Solar to help lower Goldin Solar's cost of construction to a point that is supportable in the Florida Market.

Employment History:

- US Solar Institute (May 2012 – May 2014)
 - Instructor and Curriculum Developer
 - PV Design Engineer - August 2012
 - Vice President of Distribution - August 2013
- Universal Power Brokers LLC (May 2014 - Present)
 - Managing Member

LIST OF PROPOSED SUBCONTRACTORS AND PRINCIPAL SUPPLIERS

Solar Panel Purchase and Installation
Program for City Residents and Businesses
RFP #CSM-2015-07

BIDDER shall list all Proposed Subcontractors to be used on this project if they are awarded the Contract.

Classification of Work	Subcontractor Name	Address	Telephone, Fax & Email
Landscape	N/A		
Sodding and Turf Work	N/A		
Electrical	N/A		
Irrigation	N/A		
Paving	N/A		
Park Amenities	N/A		
Graphics	LIVE COLORS	8932 SW 40th ST. MIAMI, FL, 33165	P. 305-228-0445 lcproof@gmail.com
Utilities	N/A		
Excavation	N/A		
Building	N/A		
Structures	N/A		
Plumbing	N/A		
Painting	N/A		
Testing Laboratory	N/A		
Soil Fumigator	N/A		
Signs	N/A		
Other:	SEE ATTACHED		

This list shall be provided to the City on behalf of the Participant within five (5) business days after Bid Opening.

END OF SECTION

NON COLLUSION AFFIDAVIT

STATE OF FLORIDA)
)
COUNTY OF MIAMI-DADE)

DAREN GOLDIN being first duly sworn, deposes and states that:

- (1) He/She/They is/are the OWNER
(Owner, Partner, Officer, Representative or Agent) of
GOLDIN SOLAR, LLC the Respondent that has submitted the attached Proposal;
- (2) He/She/They is/are fully informed concerning the preparation and contents of the attached Proposal and of all pertinent circumstances concerning such Proposal;
- (3) Such Proposal is genuine and is not a collusive or sham Proposal;
- (4) Neither the said Respondent nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Respondent, firm, or person to submit a collusive or sham Proposal in connection with the Work for which the attached Proposal has been submitted; or to refrain from Bidding or proposing in connection with such Work; or have in any manner, directly or indirectly, sought by agreement or collusion, or communication, or conference with any Respondent, firm, or person to fix any overhead, profit, or cost elements of the Proposal or of any other Respondent, or to fix any overhead, profit, or cost elements of the Proposal Price or the Proposal Price of any other Respondent, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposed Work;
- (5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Respondent or any other of its agents, representatives, owners, employees or parties of interest, including this affiant.

Signed, sealed and delivered in the presence of:

[Signature]
Witness DARINA COUCH

[Signature]
Witness James Tal

By: [Signature]
Signature

DAREN GOLDIN, OWNER
Print Name and Title

5/5/2015
Date

ACKNOWLEDGEMENT

STATE OF FLORIDA)
)
COUNTY OF MIAMI-DADE)

On this the 5TH day of MAY, 2015, before me, the undersigned Notary Public of the State of Florida, personally appeared (Name(s) of individual(s) who appeared before notary) DAREN TAL GOLDIN and whose name(s) is/are Subscribed to the within instrument, and he/she/they acknowledge that he/she/they executed it.

WITNESS my hand and official seal.



Notary Public, State of Florida

NOTARY PUBLIC:
SEAL OF OFFICE:

LUIS CAMPO

(Name of Notary Public: Print, Stamp or type as commissioned.)

____ Personally known to me, or

X Personal identification:

FL DRIVERS LICENSE

Type of Identification Produced

X Did take an oath, or

____ Did Not take an oath.



LUIS F. CAMPO
MY COMMISSION # FF 147589
EXPIRES: August 4, 2018
Bonded Thru Budget Notary Services

PUBLIC ENTITY CRIMES

Pursuant to the provisions of Paragraph (2) (a) of Section 287.133, Florida State Statutes – “A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a Proposal or bid on a Contract to provide any goods or services to a public entity, may not submit a Bid or proposal for a Contract with a public entity for the construction of repair of a public building or public work, may not submit bids or proposals on leases or real property to a public entity, may not be awarded to perform Work as a RESPONDENT, Sub-contractor, supplier, Sub-consultant, or Consultant under a Contract with any public entity, and may not transact business with any public entity in excess of the threshold amount Category Two of Section 287.017, Florida Statutes, for thirty six (36) months from the date of being placed on the convicted vendor list”.

The award of any contract hereunder is subject to the provisions of Chapter 112, Florida State Statutes. Respondents must disclose with their Proposals, the name of any officer, director, partner, associate or agent who is also an officer or employee of the City of South Miami or its agencies.

SWORN STATEMENT PURSUANT TO SECTION 287.133 (3) (a), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to CITY OF SOUTH MIAMI
[print name of the public entity]
- by DAREN GOLDIN, OWNER
[print individual's name and title]
- for GOLDIN SOLAR LLC
[print name of entity submitting sworn statement]
- whose business address is 3447 PERCIVAL AVENUE
MIAMI, FL 33133
- and (if applicable) its Federal Employer Identification Number (FEIN) is 46-5028211 (If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____.)
2. I understand that a “public entity crime” as defined in Paragraph 287.133 (1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to , any bid, proposal or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
3. I understand that “convicted” or “conviction” as defined in Paragraph 287.133 (1) (b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that an “affiliate” as defined in Paragraph 287.133 (1) (a), Florida Statutes, means:
- (a) A predecessor or successor of a person convicted of a public entity crime; or
 - (b) An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term “affiliate” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in any person, or a pooling of equipment or income among persons when not for fair

market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133 (1) (e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or proposal or applies to bid or proposal on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. [Indicate which statement applies.]

Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent of July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. [attach a copy of the final order.]

I UNDERSTAND THAT THE PARTICIPANT IN THE SOLAR SOLAR PANEL PURCHASE AND INSTALLATION PROGRAM FOR CITY RESIDENTS AND BUSINESSES RFP #CSM-2015-07 WILL BE RELYING ON THE TRUTH OF THE STATEMENTS CONTAINED IN THIS FORM AND THAT THE INFORMATION IN THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PARTICIPANT PRIOR TO ENTERING INTO A CONTRACT OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

[Signature]
[Signature]

Sworn to and subscribed before me this 5TH day of MAY, 2015.

Personally known _____

[Signature]
Notary Public – State of FLORIDA

OR Produced identification _____

FL DRIVERS LICENSE
(Type of identification)

My commission expires AUGUST 4, 2018
(Printed, typed or stamped commissioned name of notary public)

Form PUR 7068 (Rev.06/11/92)



DRUG FREE WORKPLACE

Whenever two or more Bids or Proposals which are equal with respect to price, quality and service are received by the State or by any political subdivisions for the procurement of commodities or contractual services, a Bid or Proposal received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie Bids or Proposals shall be followed if none of the tied vendors have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

- 1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that shall be taken against employees for violations of such prohibition.
- 2) Inform employees about the dangers of drug abuse in the workplace, the business' policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- 3) Give each employee engaged in providing the commodities or contractual services that are under Bid a copy of the statement specified in Subsection (1).
- 4) In the statement specified in Subsection (1), notify the employees, that, as a condition of working of the commodities or contractual services that are under Bid, he employee shall abide by the terms of the statement and shall notify the employee of any conviction of, or plea of guilty or *nolo contendere* to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) business days after such conviction.
- 5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.
- 6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

RESPONDENT's Signature: _____

Daren Goldm

Print Name: _____

Daren Goldm

Date: _____

5/3/2015

ACKNOWLEDGEMENT OF CONFORMANCE WITH OSHA STANDARDS

TO WHOM IT MAY CONCERN

We, GOLDIN SOLAR, (Name of CONTRACTOR), hereby acknowledge and agree that as CONTRACTOR for the **Solar Panel Purchase and Installation for City Residents and Businesses** project as specified have the sole responsibility for compliance with all the requirements of the Federal Occupational Safety and Health Act of 1970, and all State and local safety and health regulations, and agree to indemnify and hold harmless the **Participant** against any and all liability, claims, damages, losses and expenses they may incur due to the failure of (Sub-contractor's names):

Alex Muñoz
Any other Goldin Solar Subcontractor

to comply with such act or regulation.

CONTRACTOR Woten Adams

Lois Campo
Witness LOIS CAMPO

BY: DAREN GOLDIN
Name

OWNER
Title



36-600717387

This card acknowledges that the recipient has successfully completed a
30-hour Occupational Safety and Health Training Course in
Construction Safety and Health

Daren Goldin

Cindy DePrater
(Trainer name - print or type)

9/14/10
(Course end date)

**AFFIDAVIT CONCERNING
FEDERAL AND STATE VENDOR LISTINGS**

The person, or entity, who is responding to the City's solicitation, hereinafter referred to as "Respondent", must certify that the Respondent's name Does Not appear on the State of Florida, Department of Management Services, "CONVICTED, SUSPENDED, DISCRIMINATORY FEDERAL EXCLUDED PARTIES and COMPLAINTS VENDOR LISTINGS".

If the Respondent's name Does appear on one or all the "Listings" summarized below, Respondents must "Check if Applies" next to the applicable "Listing." The "Listings" can be accessed through the following link to the Florida Department of Management Services website:

http://www.dms.myflorida.com/business_operations/state_purchasing/vendor_information/convicted_suspended_discriminatory_complaints_vendor_lists

DECLARATION UNDER PENALTY OF PERJURY

I, Daren Goldin (hereinafter referred to as the "Declarant") state, under penalty of perjury, that the following statements are true and correct:

- (1) I represent the Respondent whose name is GOLDIN SOLAR.
- (2) I have the following relationship with the Respondent OWNER (Owner (if Respondent is a sole proprietor), President (if Respondent is a corporation) Partner (if Respondent is a partnership), General Partner (if Respondent is a Limited Partnership) or Managing Member (if Respondent is a Limited Liability Company).
- (3) I have reviewed the Florida Department of Management Services website at the following URL address: http://www.dms.myflorida.com/business_operations/state_purchasing/vendor_information/convicted_suspended_discriminatory_complaints_vendor_lists
- (4) I have entered an "x" or a check mark beside each listing/category set forth below if the Respondent's name appears in the list found on the Florida Department of Management Services website for that category or listing. If I did not enter a mark beside a listing/category it means that I am attesting to the fact that the Respondent's name does not appear on the listing for that category in the Florida Department of Management Services website as of the date of this affidavit.

- Check if
Applicable
- Convicted Vendor List
 - Suspended Vendor List
 - Discriminatory Vendor List
 - Federal Excluded Parties List
 - Vendor Complaint List

FURTHER DECLARANT SAYETH NOT.

DAREN GOLDIN
(Print name of Declarant)

By: [Signature]
(Signature of Declarant)

ACKNOWLEDGEMENT

STATE OF FLORIDA)
COUNTY OF MIAMI-DADE)

On this the 5 day of MAY, 2015, before me, the undersigned authority, personally appeared DAREN TAL GOLDIN who is personally know to me or who provided the following identification FL DRIVERS LIC and who took an oath or affirmed that that he/she/they executed the foregoing Affidavit as the Declarant.

WITNESS my hand and official seal.

**NOTARY PUBLIC:
SEAL**

[Signature]
Notary Public, State of Florida
LUIS CAMPO
(Name of Notary Public: Print,
Stamp or type as commissioned.)



LUIS F. CAMPO
MY COMMISSION # FF 147589
EXPIRES: August 4, 2018
Bonded Thru Budget Notary Services

Proposed Suppliers:

Solar Panels: We've chosen Renesola USA as our primary supplier of Solar Panels for this project due to their proven track record of superior performance, higher than typical heat tolerance, and competitive price point.

As can be seen in the attached, photon field performance study, Renesola modules produced more energy (kWh) per rated kW than all but one other module in the study through November 2014; and that module that beat it out, was manufactured by Sunpower and typically cost about three times what the Renesola module does.

ReneSola products have remarkably low temperature coefficients, meaning greater power generation – especially in tropical regions. A TUV report has certified this efficiency as well, asserting that our low coefficient means more kWh per kWp, especially in higher temperature regions. A recent field study which looked at ReneSola's polysilicon module line, conducted by PV Evolution Labs (PVEL), shows ReneSola temperature coefficient for Pmax is $-0.38\%/^{\circ}\text{C}$, meaning for every 1°C the surrounding temperature rises above 25°C , the production of ReneSola modules drops by only .38%. Nearly every other competing P-type based module in today's solar marketplace has a temperature coefficient ranging from $-0.42\%/^{\circ}\text{C}$ to $-0.48\%/^{\circ}\text{C}$, meaning substantially greater power production loss, particularly in warmer climates.

Shown below is a comparison of various leading
Module Manufacturers for a hypothetical 10MW installation

Manufacturer	Model	Annual Production	Annual Revenue from Solar Electricity Generated	Revenue Lost After Year One by Not Using ReneSola
ReneSola	JC250M-24/Bb	15,675 MWH/yr	\$1,567,500	A loss of \$0
Trina	TSM-250 P05A	15,517 MWH/yr	\$1,551,700	A loss of \$15,800
Jinko	JKM 250P-60	15,413 MWH/yr	\$1,541,300	A loss of \$26,200
Canadian Solar	CS6P-250P	15,255 MWH/yr	\$1,525,500	A loss of \$42,000
Yingli	YL250P-29b	15,200 MWH/yr	\$1,520,000	A loss of \$47,500
JA Solar	JAP6-60-250	14,830 MWH/yr	\$1,483,000	A loss of \$84,500

The numbers in this chart reflect the results of a simulation conducted by PVSYST. Actual data will vary in real life scenarios. The data used in the simulation was pulled directly from PAN files found in PVSOL, Photon, and the datasheets from each manufacturer listed. All simulations were run, based on the same parameters, including the use of SMA Sunny Central 630CP-US inverters, a fixed tilt of 33 degrees, and the same operating temperatures at the same latitude and longitude locations.

RELATED PARTY TRANSACTION VERIFICATION FORM

I DAREN GOLDIN, individually and on behalf of GOLDEN SOLAR, LLC ("Firm") have Name of Representative Company/Vendor/Entity read the City of South Miami ("City")'s Code of Ethics, Section 8A-1 of the City's Code of Ordinances and I hereby certify, under penalty of perjury that to the best of my knowledge, information and belief:

(1) neither I nor the Firm have any conflict of interest (as defined in section 8A-1) with regard to the contract or business that I, and/or the Firm, am(are) about to perform for, or to transact with, the City, and

(2) neither I nor any employees, officers, directors of the Firm, nor anyone who has a financial interest greater than 5% in the Firm, has any relative(s), as defined in section 8A-1, who is an employee of the City or who is(are) an appointed or elected official of the City, or who is(are) a member of any public body created by the City Commission, i.e., a board or committee of the City, [while the ethics code still applies, if the person executing this form is doing so on behalf of a firm whose stock is publicly traded, the statement in this section (2) shall be based solely on the signatory's personal knowledge and he/she is not required to make an independent investigation as to the relationship of employees or those who have a financial interest in the Firm.]; and

(3) neither I nor the Firm, nor anyone who has a financial interest greater than 5% in the Firm, nor any member of those persons' immediate family (i.e., spouse, parents, children, brothers and sisters) has transacted or entered into any contract(s) with the City or has a financial interest, direct or indirect, in any business being transacted with the city, or with any person or agency acting for the city, other than as follows:

N/A
_ (use (if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). [while the ethics code still applies, if the person executing this form is doing so on behalf of a firm whose stock is publicly traded, the statement in this section (3) shall be based solely on the signatory's personal knowledge and he/she is not required to make an independent investigation as to the relationship of those who have a financial interest in the Firm.]; and

(4) no elected and/or appointed official or employee of the City of South Miami, or any of their immediate family members (i.e., spouse, parents, children, brothers and sisters) has a financial interest, directly or indirectly, in the contract between you and/or your Firm and the City other than the following individuals whose interest is set forth following their use a separate names: N/A

(if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). The names of all City employees and that of all elected and/or appointed city officials or board members, who own, directly or indirectly, an interest of five percent (5%) or more of the total assets of capital stock in the firm are as follows:

N/A
(if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). [while the ethics code still applies, if the person executing this form is doing so on behalf of a firm whose stock is publicly traded, the statement in this section (4) shall be based solely on the signatory's personal knowledge and he/she is not required to make an independent investigation as to the financial interest in the Firm of city employees, appointed officials or the immediate family members of elected and/or appointed official or employee.]

(5) I and the Firm further agree not to use or attempt to use any knowledge, property or resource which may come to us through our position of trust, or through our performance of our duties under the terms of the contract with the City, to secure a special privilege, benefit, or exemption for ourselves, or others. We agree that we may not disclose or use information, not available to members of the general public, for our personal gain or benefit or for the personal gain or benefit of any other person or business entity, outside of the normal gain or benefit anticipated through the performance of the contract.

(6) I and the Firm hereby acknowledge that we have not contracted or transacted any business with the City or any person or agency acting for the City, and that we have not appeared in representation of any third party before any board, commission or agency of the City within the past two years other than as

follows: N/A (if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). X:\Purchasing\Vendor Registration\12.28.12 RELATED PARTY TRANSACTION VERIFICATION FORM [3].docx

(7) Neither I nor any employees, officers, or directors of the Firm, nor any of their immediate family (i.e., as a spouse, son, daughter, parent, brother or sister) is related by blood or marriage to: (i) any member of the City Commission; (ii) any city employee; or (iii) any member of any board or agency of the City other than as follows: N/A (if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). [while the ethics code still applies, if the person executing this form is doing so on behalf of a firm whose stock is publicly traded, the statement in this section (7) shall be based solely on the signatory's personal knowledge and he/she is not required to make an independent investigation as to the relationship by blood or marriage of employees, officers, or directors of the Firm, or of any of their immediate family to any appointed or elected officials of the City, or to their immediate family members].

(8) No Other Firm, nor any officers or directors of that Other Firm or anyone who has a financial interest greater than 5% in that Other Firm, nor any member of those persons' immediate family (i.e., spouse, parents, children, brothers and sisters) nor any of my immediate family members (hereinafter referred to as "Related Parties") has responded to a solicitation by the City in which I or the Firm that I represent or anyone who has a financial interest greater than 5% in the Firm, or any member of those persons' immediate family (i.e. spouse, parents, children, brothers and sisters) have also responded, other than the following: N/A (if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). [while the ethics code still applies, if the person executing this form is doing so on behalf of a firm whose stock is publicly traded, the statement in this section (8) shall be based solely on the signatory's personal knowledge and he/she is not required to make an independent investigation into the Other Firm, or the Firm he/she represents, as to their officers, directors or anyone having a financial interest in those Firms or any of their any member of those persons' immediate family.]

(9) I and the Firm agree that we are obligated to supplement this Verification Form and inform the City of any change in circumstances that would change our answers to this document. Specifically, after the opening of any responses to a solicitation, I and the Firm have an obligation to supplement this Verification Form with the name of all Related Parties who have also responded to the same solicitation and to disclose the relationship of those parties to me and the Firm.

(10) A violation of the City's Ethics Code, the giving of any false information or the failure to supplement this Verification Form, may subject me or the Firm to immediate termination of any agreement with the City, and the imposition of the maximum fine and/or any penalties allowed by law. Additionally, violations may be considered by and subject to action by the Miami-Dade County Commission on Ethics. Under penalty of perjury, I declare that I have made a diligent effort to investigate the matters to which I am attesting hereinabove and that the statements made hereinabove are true and correct to the best of my knowledge, information and belief.

Signature: Daren Golden

Print Name & Title: DAREN GOLDEN, OWNER

Date: 5/3/2015

Sec. 8A-1. - Conflict of interest and code of ethics ordinance.

(a) Designation.

This section shall be designated and known as the "City of South Miami Conflict of Interest and Code of Ethics Ordinance." This section shall be applicable to all city personnel as defined below, and shall also constitute a standard of ethical conduct and behavior for all autonomous personnel, quasi-judicial personnel, advisory personnel and departmental personnel. The provisions of this section shall be applied in a cumulative manner. By way of example, and not as a limitation, subsections (c) and (d) may be applied to the same contract or transaction.

(b) Definitions. For the purposes of this section the following definitions shall be effective:

- (1) The term "commission members" shall refer to the mayor and the members of the city commission.
- (2) The term "autonomous personnel" shall refer to the members of autonomous authorities, boards and agencies, such as the city community redevelopment agency and the health facilities authority.
- (3) The term "quasi-judicial personnel" shall refer to the members of the planning board, the environmental review and preservation board, the code enforcement board and such other individuals, boards and agencies of the city as perform quasi-judicial functions.
- (4) The term "advisory personnel" shall refer to the members of those city advisory boards and agencies whose sole or primary responsibility is to recommend legislation or give advice to the city commission.
- (5) The term "departmental personnel" shall refer to the city clerk, the city manager, department heads, the city attorney, and all assistants to the city clerk, city manager and city attorney, however titled.
- (6) The term "employees" shall refer to all other personnel employed by the city.
- (7) The term "compensation" shall refer to any money, gift, favor, thing of value or financial benefit conferred, or to be conferred, in return for services rendered or to be rendered.
- (8) The term "controlling financial interest" shall refer to ownership, directly or indirectly, of ten percent or more of the outstanding capital stock in any corporation or a direct or indirect interest of ten percent or more in a firm, partnership, or other business entity at the time of transacting business with the city.
- (9) The term "immediate family" shall refer to the spouse, parents, children, brothers and sisters of the person involved.
- (10) The term "transact any business" shall refer to the purchase or sale by the city of specific goods or services for consideration and to submitting a bid, a proposal in response to a RFQ, a statement of qualifications in response to a request by the city, or entering into contract negotiations for the provision on any goods or services, whichever first occurs.

(c) Prohibition on transacting business with the city.

No person included in the terms defined in paragraphs (b)(1) through (6) and in paragraph (b)(9) shall enter into any contract or transact any business in which that person or a member of the immediate family has a financial interest, direct or indirect with the city or any person or agency acting for the city, and any such contract, agreement or business engagement entered in violation of this subsection shall render the transaction voidable. Willful violation of this subsection shall constitute malfeasance in office and shall affect forfeiture of office or position. Nothing in this subsection shall prohibit or make illegal:

- (1) The payment of taxes, special assessments or fees for services provided by the city government;
- (2) The purchase of bonds, anticipation notes or other securities that may be issued by the city through underwriters or directly from time to time.

Waiver of prohibition. The requirements of this subsection may be waived for a particular transaction only by four affirmative votes of the city commission after public hearing upon finding that:

- (1) An open-to-all sealed competitive proposal has been submitted by a city person as defined in paragraphs (b)(2), (3) and (4);
- (2) The proposal has been submitted by a person or firm offering services within the scope of the practice of architecture, professional engineering, or registered land surveying, as defined by the laws of the state and pursuant to the provisions of the Consultants' Competitive Negotiation Act, and when the proposal has been submitted by a city person defined in paragraphs (b)(2), (3) and (4);
- (3) The property or services to be involved in the proposed transaction are unique and the city cannot avail itself of such property or services without entering a transaction which would violate this subsection but for waiver of its requirements; and
- (4) That the proposed transaction will be in the best interest of the city.

This subsection shall be applicable only to prospective transactions, and the city commission may in no case ratify a transaction entered in violation of this subsection.

Provisions cumulative. This subsection shall be taken to be cumulative and shall not be construed to amend or repeal any other law pertaining to the same subject matter.

(d) Further prohibition on transacting business with the city.

No person included in the terms defined in paragraphs (b)(1) through (6) and in paragraph (b)(9) shall enter into any contract or transact any business through a firm, corporation, partnership or business entity in which that person or any member of the immediate family has a controlling financial interest, direct or indirect, with the city or any person or agency acting for the city, and any such contract, agreement or business engagement entered in violation of this subsection shall render the transaction voidable. The remaining provisions of subsection (c) will also be applicable to this subsection as though incorporated by recitation.

Additionally, no person included in the term defined in paragraph (b)(1) shall vote on or participate in any way in any matter presented to the city commission if that person has any of the following relationships with any of the persons or entities which would be or might be directly or indirectly affected by any action of the city commission:

- (1) Officer, director, partner, of counsel, consultant, employee, fiduciary or beneficiary; or
- (2) Stockholder, bondholder, debtor, or creditor, if in any instance the transaction or matter would affect the person defined in paragraph (b)(1) in a manner distinct from the manner in which it would affect the public generally. Any person included in the term defined in paragraph (b)(1) who has any of the specified relationships or who would or might, directly or indirectly, realize a profit by the action of the city commission shall not vote on or participate in any way in the matter.

(E) Gifts.

(1) *Definition.* The term "gift" shall refer to the transfer of anything of economic value, whether in the form of money, service, loan, travel, entertainment, hospitality, item or promise, or in any other form, without adequate and lawful consideration.

(2) *Exceptions.* The provisions of paragraph (e)(1) shall not apply to:

- a. Political contributions specifically authorized by state law;
- b. Gifts from relatives or members of one's household, unless the person is a conduit on behalf of a third party to the delivery of a gift that is prohibited under paragraph(3);
- c. Awards for professional or civic achievement;
- d. Material such as books, reports, periodicals or pamphlets which are solely informational or of an advertising nature.

(3) *Prohibitions.* A person described in paragraphs (b)(1) through (6) shall neither solicit nor demand any gift. It is also unlawful for any person or entity to offer, give or agree to give to any person included in the terms defined in paragraphs (b)(1) through (6), or for any person included in the terms defined in paragraphs (b)(1) through (6) to accept or agree to accept from another person or entity, any gift for or because of:

- a. An official public action taken, or to be taken, or which could be taken, or an omission or failure to take a public action;
- b. A legal duty performed or to be performed, or which could be performed, or an omission or failure to perform a legal duty;
- c. A legal duty violated or to be violated, or which could be violated by any person included in the term defined in paragraph (b)(1); or
- d. Attendance or absence from a public meeting at which official action is to be taken.

(4) *Disclosure.* Any person included in the term defined in paragraphs (b)(1) through (6) shall disclose any gift, or series of gifts from anyone person or entity, having a value in excess of \$25.00. The disclosure shall be made by filing a copy of the disclosure form required by chapter 112, Florida Statutes, for "local officers" with the city clerk simultaneously with the filing of the form with the clerk of the county and with the Florida Secretary of State.

(f) Compulsory disclosure by employees of firms doing business with the city.

Should any person included in the terms defined in paragraphs (b)(1) through (6) be employed by a corporation, firm, partnership or business entity in which that person or the immediate family does not have a controlling financial interest, and should the corporation, firm, partnership or business entity have substantial business commitments to or from the city or any city agency, or be subject to direct regulation by the city or a city agency, then the person shall file a sworn statement disclosing such employment and interest with the clerk of the city.

(g) Exploitation of official position prohibited.

No person included in the terms defined in paragraphs (b)(1) through (6) shall corruptly use or attempt to use an official position to secure special privileges or exemptions for that person or others.

(h) Prohibition on use of confidential information.

No person included in the terms defined in paragraphs (b)(1) through (6) shall accept employment or engage in any business or professional activity which one might reasonably expect would require or induce one to disclose confidential information acquired by reason of an official position, nor shall that person in fact ever disclose confidential information garnered or gained through an official position with the city, nor shall that person ever use such information, directly or indirectly, for personal gain or benefit.

(i) Conflicting employment prohibited.

No person included in the terms defined in paragraphs (b)(1) through (6) shall accept other employment which would impair independence of judgment in the performance of any public duties.

(j) Prohibition on outside employment.

(1) No person included in the terms defined in paragraphs (b)(6) shall receive any compensation for services as an officer or employee of the city from any source other than the city, except as may be permitted as follows:

a. *Generally prohibited.* No full-time city employee shall accept outside employment, either incidental, occasional or otherwise, where city time, equipment or material is to be used or where such employment or any part thereof is to be performed on city time.

b. *When permitted.* A full-time city employee may accept incidental or occasional outside employment so long as such employment is not contrary, detrimental or adverse to the interest of the city or any of its departments and the approval required in subparagraph c. is obtained.

c. *Approval of department head required.* Any outside employment by any full-time city employee must first be approved in writing by the employee's department head who shall maintain a complete record of such employment.

d. *Penalty.* Any person convicted of violating any provision of this subsection shall be punished as provided in section 1-11 of the Code of Miami-Dade County and, in addition shall be subject to dismissal by the appointing authority. The city may also assess against a violator a fine not to exceed \$500.00 and the costs of investigation incurred by the city.

(2) All full-time city employees engaged in any outside employment for any person, firm, corporation or entity other than the city, or any of its agencies or instrumentalities, shall file, under oath, an annual report indicating the source of the outside employment, the nature of the work being done and any amount of money or other consideration received by the employee from the outside employment. City employee reports shall be filed with the city clerk. The reports shall be available at a reasonable time and place for inspection by the public. The city manager may require monthly reports from individual employees or groups of employees for good cause.

(k) Prohibited investments.

No person included in the terms defined in paragraphs (b)(1) through (6) or a member of the immediate family shall have personal investments in any enterprise which will create a substantial conflict between private interests and the public interest.

(l) Certain appearances and payment prohibited.

(1) No person included in the terms defined in paragraphs (b)(1), (5) and (6) shall appear before any city board or agency and make a presentation on behalf of a third person with respect to any matter, license, contract, certificate, ruling, decision, opinion, rate schedule, franchise, or other benefit sought by the third person. Nor shall the person receive any compensation or gift, directly or indirectly, for services rendered to a third person, who has applied for or is seeking some benefit from the city or a city agency, in connection with the particular benefit sought by the third person. Nor shall the person appear in any court or before any administrative tribunal as counselor legal advisor to a party who seeks legal relief from the city or a city agency through the suit in question.

(2) No person included in the terms defined in paragraphs (b)(2), (3) and (4) shall appear before the city commission or agency on which the person serves, either directly or through an associate, and make a presentation on behalf of a third person with respect to any matter, license, contract, certificate, ruling, decision, opinion, rate schedule, franchise, or other benefit sought by the third person. Nor shall such person receive any compensation or gift, directly or indirectly, for services rendered to a third party who has applied for or is seeking some benefit from the city commission or agency on which the person serves in connection with the particular benefit sought by the third party. Nor shall the person appear in any court or before any administrative tribunal as counselor legal advisor to a third party who seeks legal relief from the city commission or agency on which such person serves through the suit in question.

(m) Actions prohibited when financial interests involved.

No person included in the terms defined in paragraphs (b) (1) through (6) shall participate in any official action directly or indirectly affecting a business in which that person or any member of the immediate family has a financial interest. A financial interest is defined in this subsection to include, but not be limited to, any direct or indirect interest in any investment, equity, or debt.

(n) Acquiring financial interests.

No person included in the terms defined in paragraphs (b)(1) through (6) shall acquire a financial interest in a project, business entity or property at a time when the person believes or has reason to believe that the financial interest may be directly affected by official actions or by official actions by the city or city agency of which the person is an official, officer or employee.

(o) Recommending professional services.

No person included in the terms defined in paragraphs (b)(1) through (4) may recommend the services of any lawyer or law firm, architect or architectural firm, public relations firm, or any other person or firm, professional

or otherwise, to assist in any transaction involving the city or any of its agencies, provided that a recommendation may properly be made when required to be made by the duties of office and in advance at a public meeting attended by other city officials, officers or employees.

(p) Continuing application after city service.

(1) No person included in the terms defined in paragraphs (b)(1), (5) and (6) shall, for a period of two years after his or her city service or employment has ceased, lobby any city official [as defined in paragraphs (b)(1) through (6)] in connection with any judicial or other proceeding, application, RFP, RFQ, bid, request for ruling or other determination, contract, claim, controversy, charge, accusation, arrest or other particular subject matter in which the city or one of its agencies is a party or has any interest whatever, whether direct or indirect. Nothing contained in this subsection shall prohibit any individual from submitting a routine administrative request or application to a city department or agency during the two-year period after his or her service has ceased.

(2) The provisions of the subsection shall not apply to persons who become employed by governmental entities, 501(c)(3) non-profit entities or educational institutions or entities, and who lobby on behalf of those entities in their official capacities.

(3) The provisions of this subsection shall apply to all persons described in paragraph (p)(1) whose city service or employment ceased after the effective date of the ordinance from which this section derives.

(4) No person described in paragraph (p)(1) whose city service or employment ceased within two years prior to the effective date of this ordinance shall for a period of two years after his or her service or employment enter into a lobbying contract to lobby any city official in connection with any subject described in paragraph (p)(1) in which the city or one of its agencies is a party or has any direct and substantial interest; and in which he or she participated directly or indirectly through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, during his or her city service or employment. A person participated "directly" where he or she was substantially involved in the particular subject matter through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, during his or her city service or employment. A person participated "indirectly" where he or she knowingly participated in any way in the particular subject matter through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, during his or her city service or employment. All persons covered by this paragraph shall execute an affidavit on a form approved by the city attorney prior to lobbying any city official attesting that the requirements of this subsection do not preclude the person from lobbying city officials.

(5) Any person who violates this subsection shall be subject to the penalties provided in section 8A-2(p).

(q) City attorney to render opinions on request.

Whenever any person included in the terms defined in paragraphs (b)(1) through (6) and paragraph (b)(9) is in doubt as to the proper interpretation or application of this conflict of interest and code of ethics ordinance, or whenever any person who renders services to the city is in doubt as to the applicability of the ordinance that person, may submit to the city attorney a full written statement of the facts and questions. The city attorney shall then render an opinion to such person and shall publish these opinions without use of the name of the person advised unless the person permits the use of a name.

(Ord. No. 6-99-1680, § 2, 3-2-99)

Editor's note- Ord. No. 6-99-1680, § 1, adopted 3-2-99, repealed §§ 8A-1 and 8A-2 in their entirety and replaced them with new §§

8A-1 and 8A-2. Former §§ 8A-1 and 8A-2 pertained to declaration of policy and definitions, respectively, and derived from Ord. No. 634, §§ 1 (1A-1), 1 (1A-2) adopted Jan. 11, 1969.

**PRESENTATION TEAM
DECLARATION/AFFIDVAIT OF REPRESENTATION**

This affidavit is not required for compliance with the City's Solicitation; however, it may be used to avoid the need to register members of your presentation team as lobbyists. Pursuant to City Ordinance 28-14-2206 (c)(9), any person who appears as a representative for an individual or firm for an oral presentation before a City certification, evaluation, selection, technical review or similar committee, shall list on an affidavit provided by the City staff, all individuals who may make a presentation. The affidavit shall be filed by staff with the Clerk's office at the time the committee's proposal is submitted to the City Manager. For the purpose of this subsection only, the listed members of the presentation team, with the exception of any person otherwise required to register as a lobbyist, shall not be required to pay any registration fees. No person shall appear before any committee on behalf of anyone unless he or she has been listed as part of the firm's presentation team pursuant to this paragraph or unless he or she is registered with the City Clerk's office as a lobbyist and has paid all applicable lobbyist registration fees.

Pursuant to '92.525(2), Florida Statutes, the undersigned, DAREN GOLDIN makes the following declaration under penalty of perjury:

Listed below are all individuals who may make a presentation on behalf of the entity that the affiant represents. Please note; **No person shall appear before any committee on behalf of anyone unless he or she has been listed as part of the firm's presentation team pursuant to this paragraph or unless he or she is registered with the Clerk's office as a lobbyist and has paid all applicable lobbyist registration fees.**

<u>NAME</u>	<u>TITLE</u>
<u>Joe Cataldo</u>	<u>System Design & Procurement</u>
_____	_____
_____	_____
_____	_____

For the purpose of this Affidavit of Representation only, the listed members of the presentation team, with the exception of any person otherwise required to register as a lobbyist, shall not be required to pay any registration fees. The Affidavit of Representation shall be filed with the City Clerk's office at the time the committee's proposal is submitted to the City as part of the procurement process.

Under penalties of perjury, I declare that I have read the foregoing declaration and that the facts stated in it are true and specifically that the persons listed above are the members of the presentation team of the entity listed below

Executed this 3rd day of MAY, 2015.


 Signature of Representative
DAREN GOLDIN, OWNER
 Print Name and Title

GOLDIN SOLAR, LLC
 Print name of entity being represented

END OF SECTION



Completed Projects Photos – Coconut Grove Residence Inn





Completed Projects Photos – Miami Children’s Museum



Residential Project



Goldin Solar, LLC
Certified Florida Solar Contractor, License number: CVC56965
Cell #: (305) 469 9790
dgoldin@goldinsolar.com

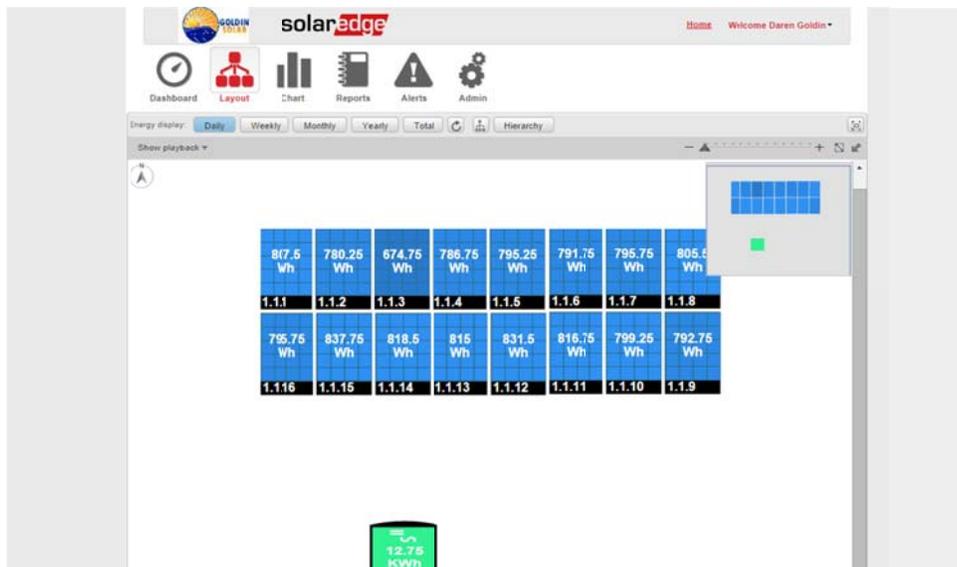


Miami Children’s Museum





Energy Tracking Sample



Proposed Suppliers:

Solar Panels: We've chosen Renesola USA as our primary supplier of Solar Panels for this project due to their proven track record of superior performance, higher than typical heat tolerance, and competitive price point.

As can be seen in the attached, photon field performance study, Renesola modules produced more energy (kWh) per rated kW than all but one other module in the study through November 2014; and that module that beat it out, was manufactured by Sunpower and typically cost about three times what the Renesola module does.

ReneSola products have remarkably low temperature coefficients, meaning greater power generation – especially in tropical regions. A TUV report has certified this efficiency as well, asserting that our low coefficient means more kWh per kWp, especially in higher temperature regions. A recent field study which looked at ReneSola's polysilicon module line, conducted by PV Evolution Labs (PVEL), shows ReneSola temperature coefficient for Pmax is $-.38\%/^{\circ}\text{C}$, meaning for every 1°C the surrounding temperature rises above 25°C , the production of ReneSola modules drops by only $.38\%$. Nearly every other competing P-type based module in today's solar marketplace has a temperature coefficient ranging from $-.42\%/^{\circ}\text{C}$ to $-.48\%/^{\circ}\text{C}$, meaning substantially greater power production loss, particularly in warmer climates.

Shown below is a comparison of various leading
Module Manufacturers for a hypothetical 10MW installation

Manufacturer	Model	Annual Production	Annual Revenue from Solar Electricity Generated	Revenue Lost After Year One by Not Using ReneSola
ReneSola	JC250M-24/Bb	15,675 MWH/yr	\$1,567,500	A loss of \$0
Trina	TSM-250 P05A	15,517 MWH/yr	\$1,551,700	A loss of \$15,800
Jinko	JKM 250P-60	15,413 MWH/yr	\$1,541,300	A loss of \$26,200
Canadian Solar	CS6P-250P	15,255 MWH/yr	\$1,525,500	A loss of \$42,000
Yingli	YL250P-29b	15,200 MWH/yr	\$1,520,000	A loss of \$47,500
JA Solar	JAP6-60-250	14,830 MWH/yr	\$1,483,000	A loss of \$84,500

The numbers in this chart reflect the results of a simulation conducted by PVSYST. Actual data will vary in real life scenarios. The data used in the simulation was pulled directly from PAN files found in PVSOL, Photon, and the datasheets from each manufacturer listed. All simulations were run, based on the same parameters, including the use of SMA Sunny Central 630CP-US inverters, a fixed tilt of 33 degrees, and the same operating temperatures at the same latitude and longitude locations.

APMEA (Asia, Pacific, Middle East and Africa)

Add: F-15, Manpo Intl. Plaza, No. 500 West Yan'an Rd, Shanghai, China 200050
T: +86 21 6280 9180
F: +86 21 6280 5600
E: apmea@renesola.com

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T: +1 415 852 7418
E: america@renesola.com

Europe

Add: ReneSola Deutschland GmbH, Lyoner Strasse 15,
60528 Frankfurt am Main, Germany
T: +49 69 663 786 9-0
F: +49 69 663 786 9-11
E: europe@renesola.com

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Dongcheng District Beijing, 100013, China
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F: +86 10 5825 6390
E: china@renesola.com

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T: +39 0645 5631 00
E: italy@renesola.com

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F: +03 6402 4581
E: japan@renesola.com

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Renesola India Private Limited
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E: india@renesola.com

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F: +61 (3) 9738 2958
E: australia@renesola.com

Israel

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Add: HaHita St., POB 22, Tzur Moshe 42810, Israel
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F: +972-9-8946191
E: Israel@renesola.com



GREEN HOME



It's about the future you invest in.

CONTENTS

- About ReneSola.....02
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- Projects16

About ReneSola

Founded in 2005, ReneSola (NYSE:SOL) is a leading global manufacturer of high-efficiency solar PV modules and wafers. Leveraging its proprietary technologies, economies of scale and technical expertise, ReneSola uses in-house virgin polysilicon and a vertically integrated business model to provide customers with high-quality, cost-competitive products. ReneSola solar modules have scored top PVUSA Test Conditions (PTC) ratings with high annual kilowatt-hour output, according to the California Energy Commission (CEC). ReneSola solar PV modules can be found in projects ranging in size from a few kilowatts to multi-megawatts in markets around the world, including the United States, Germany, Italy, Belgium, China, Greece, Spain and Australia.

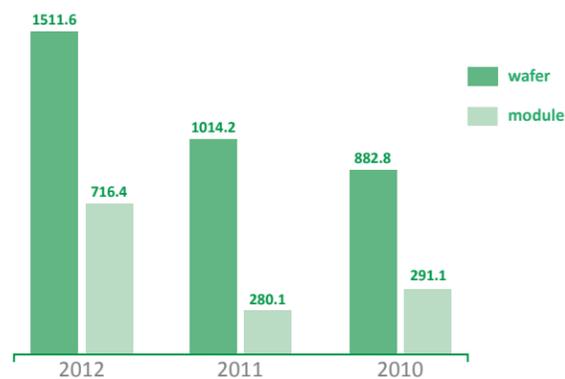
Between 2005 and 2012, we have distributed over 6 GW¹ solar product all over the world, supported hundreds of projects for electricity generation. Throughout the past 7 years, we have set our business in 14 countries, conveniently located in the heart of major cities, providing state-of-the-art offices, warehouses and world class infrastructure.

Why do we do what we do? Why do we make the effort? Because it's important. At ReneSola, we've focused on energy efficiency for years, in December issue of PHOTON international magazine, our modules outperformed all comparable modules, ranked first in terms of performance ratio². At the same time, we are developing two whole new product lines – Inverter and mounting system to add value to our businesses. In doing so, we have significantly increased investment in technology and globalization. We believe it's the key to gaining market share.

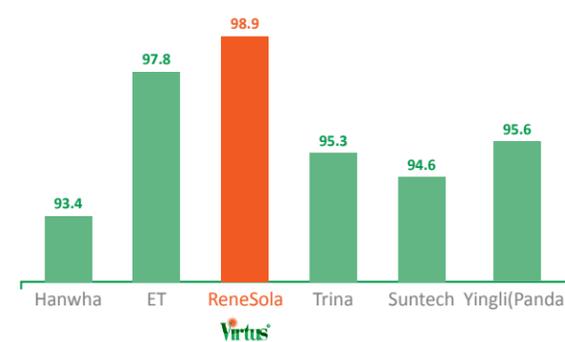
We like the way ReneSola is positioned in the industry- a great portfolio of world-class, technology driven business; a strong position in fast growing markets with timely service to help customer achieving productivity. We want our investors to see ReneSola as a safe, long-term investment.

¹ Data from internal source
² JC245M-24/Bbv, Performance ratio in DEC, Page 71 of December Issue

solar product shipment(MW)¹



Photon test^{**}



^{*} As of 2012 Q4
^{**} JC245M-24/Bbv, Performance ratio in DEC, Page 71 of Decemberr Issue



1MW Project at Hannover, Germany



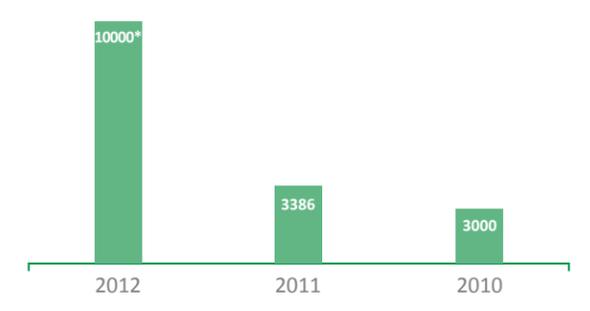
Products

ReneSola Ltd. is a leading manufacturer of silicon wafer and solar modules. We are committed to product development and quality control. We design our own casting furnaces and slicing technologies in-house, and are focused on constantly developing more efficient products and optimizing our cost structure while maintaining technological leadership in our field. To date, ReneSola has received numerous patents for our new technologies and innovations, and our products are well received by customers around the world.

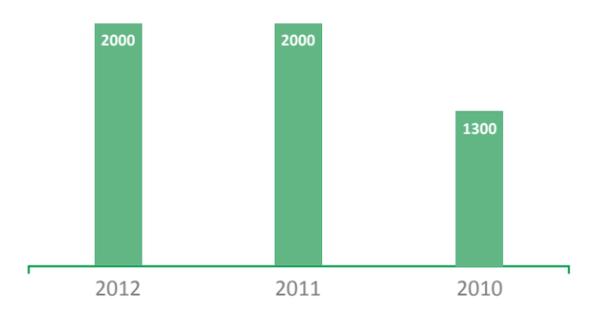
Product Advantages

- Leading technology in high-efficiency Quasi-Mono products
- Reliable and stable supply of raw materials
- Microcrack-proof packaging patent
- 25-year power output warranty
- Obtained multiple internationally recognized certifications

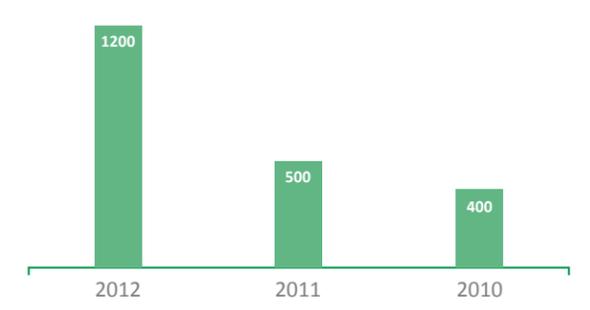
polysilicon capacity (MT)



wafer capacity (MW)



module capacity (MW)



* Phase I And Phase II



Virtus® represents the highest technological of Quasi-Mono products in the industry. Based on the traditional multicrystalline casting furnace, adopting hotzone and processing technical developed by ReneSola, it's capable to produce the Quasi-Mono wafer, those performance is much closer to mono wafer by Czochralski technology.

Virtus® is able to improve the average conversion efficiency of conventional multicrystalline wafers from 16.5% to more than 18.2%. The efficiency of modules approaches or exceeds general monocrystalline modules. Virtus® is much lower than monocrystalline in both energy consumption and manufacturing costs, which helps reduce the overall investment in photovoltaic systems, thus improving the rate of return on investment.

Advantages

- Advanced texturing and coating technologies
- Excellent electricity generation capacity under high temperature
- Lower production cost
- Higher efficiency
- Lower light induced degradation

Features

- Higher Efficiency**
The average efficiency of (High-end(V+))product cells can reach 18.2%.
- Lower LID**
Light induced degradation (LID) is significantly lower than that of monocrystalline cells.
- Quicker Return**
Reduce the total investment of PV systems and shorten the time of return on investment
- Larger Area**
Rectangular shape, increasing the area of power generation
- Less Power Loss**
CTM Power Loss is lower than that of monocrystalline cells

ReneSola

Virtus® Module



High Module Conversion Efficiencies



Easy Installation and Handling for Various Applications



Mechanical Load Capability of up to 5400 Pa



Conforms with IEC 61215:2005, IEC 61730: 2004, UL 1703 PV Standards



ISO9001, OHSAS18001, ISO14001 Certified



Application Class A, Safety Class II, Fire Rating C



10-year
material & workmanship

25-year
linear power output



Virtus[®] II

The new, breakthrough, Virtus[®] II solar module is an ingenious combination of the high quality and efficiency of Monocrystalline modules, with the lower cost of Multicrystalline modules.

ReneSola's innovative ingot growth technology improves the uniformity of the grain size and preferred orientation, resulting in higher minor-carrier lifetime and lower dislocation density. The outcome is significantly increased cell efficiency.

The company's innovative, controlled, DDS production process for the Virtus[®] A++ wafers produces far fewer defects than conventional multicrystalline silicon wafers. This enables Virtus[®] II solar modules to achieve a 4% higher power output, yet maintain the same LID and CTM loss.

Advantages

- Advanced texturing and coating technologies
- Excellent electricity generation capacity under high temperature
- Lower production cost
- Higher efficiency
- Lower light induced degradation

Features

-  Lower production costs
-  Lower defect ratio
-  Higher power output
-  Improved appearance
-  PID-free

ReneSola

156 Series Polycrystalline Solar Module

250W, 255W, 260W



High Module Conversion Efficiencies



Easy Installation and Handling for Various Applications



Mechanical Load Capability of up to 5400 Pa



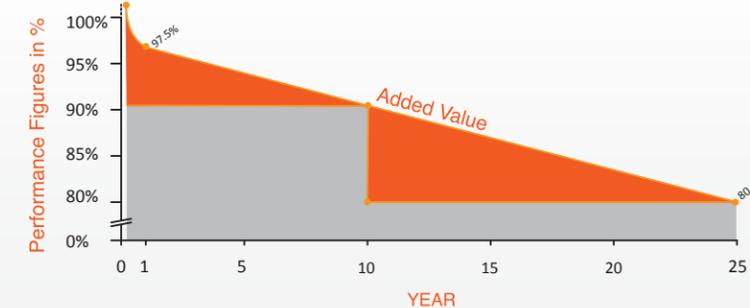
Conforms with IEC 61215:2005, IEC 61730: 2004, UL 1703 PV Standards



ISO9001, OHSAS18001, ISO14001 Certified



Application Class A, Safety Class II, Fire Rating C



10-year
material & workmanship

25-year
linear power output



Micro Replus™

by ReneSola

Developed by Renesola, Micro Replus™ smart inverters are highly reliable microinverters ideal for rooftop and ground mount PV systems, particularly in projects with low light or shading issues. Micro Replus™ inverters are cost effective and bring simpler and more affordable solutions to homeowners, which are safer and efficient solutions for installers. ReneSola's Micro RePlus™ microinverters allow you harness the maximum power from your PV modules, resulting in greater yields and a better ROI.



Maximum power production;
Resilient to dust, debris, and shading



MPPT efficiency greater than 99.5%;
No single point of system failure



Simplified PV System Design & Installation;
Performance monitoring for each PV module



Low DC input voltage,
Resulting in safe installation



Replus™

by ReneSola

ReneSola Replus serial inverters take reliability, efficiency, and ease of installation to a whole new level. Replus inverters are perfect for system integrators and end users who require high performance PV inverters for small and medium size solar PV project in industrial, commercial and residential applications. Replus inverters are available in sizes of 1.5 kW to 20 kW, and optimized for cost-efficiency in megawatt size power plants.



Transformerless design,
high efficiency (Max.97.5%, Euro.96.6%)



High Maximum Power Point Tracking (MPPT)
accuracy (>99.9%)



Wide DC input range (120-500Vdc), compatible
with different PV module technologies



Easy wiring, installation, and operation



IP 65 design, suitable for indoor
and outdoor installation



5 years standard warranty
(Optional 10~25 years warranty available)



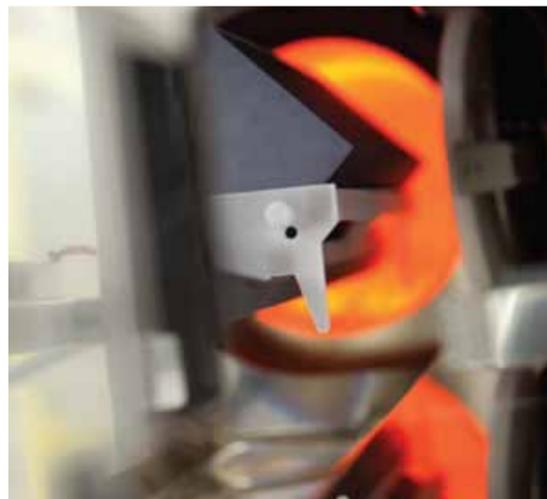
Mounting System

ReneSola PV Mounting Rack is the cost competitive product for the PV industry, its professional R&D team designs the innovative solution with extensive flexibility for both commercial and residential applications, including Tile Roof Mounting, Tin Roof Mounting, Flat Roof Mounting and Ground Mounting. The unique product enables the cost effective and installation efficient, its pre-assembled and customized parts eliminate the extra customer cutting

and welding, and make the PV installation much easy and fast. Compliance with various structural mechanics and construction acts, and strict material quality control (hot galvanized steel, anodized Aluminum) prove the excellent adaptability, extraordinary strength, delicate appearance and unmatched durability. Renesola leverages its own worldwide network to deliver the product and provides the 15 years product warranty and 25 years service.

Quality

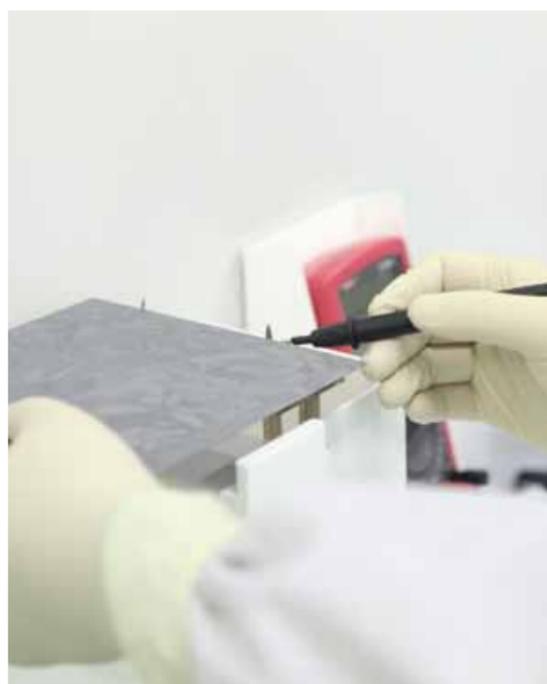
Our products comply with international quality standards and we implement strict quality control processes. Our product testing center has a series of comprehensive quality control tests, including raw material reliability testing, functional testing of final product modules and a series of extreme environmental simulation testing. This also makes a significant contribution to lowering the cost of modules. The equipment and test process of the testing center strictly abide by the UL1703, IEC61215 and IEC61730 standards.



Technological Innovation

The R&D team of ReneSola has been exploring new ways to improve the photoelectric conversion efficiency and reduce manufacturing costs. Virtus® Wafer maintain a technology leadership, Virtus wafer actively optimizes cost structure, and reduces the total investment of photovoltaic system together with downstream enterprises, so as to improve the rate of return on investment.

In addition, ReneSola adopts its own diamond wires for silicon wafer cutting. Compared with traditional silicon carbide mortar method, it greatly increases the production capacity of a single equipment; secondly, the cutting damage of silicon surface and TTV are greatly improved, which increases the cell conversion efficiency and reduces the fragmentation rate; moreover, nonuse of polyethylene glycol cutting fluid reduces the COD emissions substantially in the production process.



Environmental Responsibility

Among ReneSola's core values are the goals of "building a harmonious society and creating green energies". We steadfastly adhere to our goal of "constantly pursuing high-quality photovoltaic products, and offering sustainable and renewable clean energies", and we are dedicated to creating a resource-saving and environment-friendly company.

The investment in environmental protection has been increasing since the establishment of the ReneSola with a total investment of RMB 111 million to date and an annual investment of a minimum of RMB 49 million for the construction of environmental facilities and energy-saving technologies. ReneSola has set up an environmental protection team, which had grown into a strong team composed of 91 engineers, analysts and professional as of July 2010.

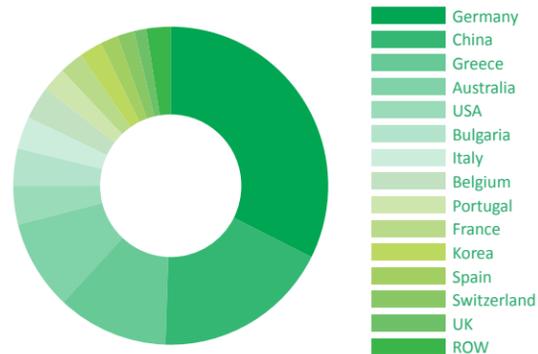
As part of improving our internal management and control, we signed a strategic cooperation agreement with Zhejiang Environmental Science Research Institute. Under this cooperation agreement, ReneSola not only fully complies with and meets all the relevant national regulations and requirements, but exceeds these by setting stricter corporate standards, so as to further reduce the generation of pollutant from the source. We strictly controls the sewage concentration and total amount of pollution discharge, while reducing energy consumption and striving to reduce production costs in the recycling of waste mortar, water circulation and heat energy. In addition to these efforts, ReneSola vigorously carries out other pollution prevention methods, including the secure storage of by-products in the production process and a filtration systems of sewage from rain water. We also take responsibility for monitoring and detection of the water quality in our surrounding areas.



Customer Service

As a leading multinational group, we have developed rigorous customer service and audit processes to provide customers with comprehensive and timely pre-sales and after-sales services. Our specially trained service staff can answer any questions that customers may have about our products. Our overseas warehousing center ensures a stable supply of products.

geographic diversification



Projects

Utility



Slovakia 4MW&2MW



Germany 11.5MW



China 20MW



Italy 9.21MW



Germany 27.46MW



Czech 1.632MW



Bulgaria 4MW



Italy 9.59MW



Germany 2.2MW

Commercial



Slovakia 118.84KW



Greece 1.95MW



Belgium 1.4MW



Greece 100.8KW



Bulgaria 12.96KW



Germany 806.4KW

Agricultural



France 368KW



Germany 276.6KW

PHOTON Lab's outdoor module tests: Results of November 2014 yield measurements

Manufacturer	Model	Cell type	Origin	Production dates ¹	Installed in	STC power (W)	2013 rank	Performance ratio (%) 2013	Performance ratio (%) November 2014	Performance ratio (%) Jan. - Nov. 2014	Yield (kWh/kW) November 2014	Yield (kWh/kW) Jan. - Nov. 2014
Aleo Solar	Aleo S_18 225	Multi	DE, ES	2005	4/2010	230.5	38	91.3	93.4	90.2	47.6	1105.2
Alex Solar	ALM-190D-24	Mono	CN	2009	7/2011	187.8	—	—	92.2	88.4	46.9	1083.4
Amerisolar, Worldwide Energy & Manufacturing	AS-5M (190)	Mono	—	—	1/2012	195.0	92	89.9	95.5	90.4	48.6	1106.9
	AS-6P30-230W	Multi	—	—	1/2012	236.8	81	90.2	95.7	90.5	48.8	1108.7
Apollo Solar Energy	ASEC-235G6M	Multi	TW	2011	1/2012	238.0	—	—	97.5	91.3	49.6	1118.0
ASE (now with Schott Solar)	ASE-300-DG-FT (300 W)	Ribbon	US	1997-2006	2007	308.1 ²	—	—	84.9	81.3	43.3	995.6
Axitec	AC-236P/156-60S	Multi	DE	Through 2011	2/2011	232.9	59	90.7	96.9	90.0	49.3	1103.0
	AC-250M/156-60S	Mono	CN, EU	—	1/2012	248.9	111	89.3	94.9	89.7	48.4	1098.5
Bisol	BMU-215-2/221	Multi	SI	2007	2/2010	229.1	108	89.4	93.9	88.2	47.8	1080.5
	BMU-215-2/233	Multi	SI	2009	2/2011	234.2	88	90.0	92.9	89.1	47.3	1091.0
Bosch Solar Energy	Bosch c-Si M 60 230	Mono	DE	2009-2010	2/2011	233.2	67	90.5	96.0	89.7	48.9	1099.3
BP Solar International	BP 3220 T	Multi	CN	Through 2011	7/2011	232.5	51	90.8	92.5	88.5	47.1	1084.1
	BP 3280 T	Multi	—	Through 2011	5/2011	287.4	76	90.3	93.3	89.9	47.5	1101.8
	BP 7185 S	Mono	ES, IN	—	2005	185.1 ²	147	81.1	80.8	78.8	41.2	965.1
BYD	BYD 240P6-30	Multi	CN	—	9/2012	243.6	82	90.1	97.1	90.9	49.4	1113.4
Calrays	CPM 250-A-96	Mono	—	—	7/2011	244.0	126	87.5	89.9	86.5	45.8	1059.2
Canadian Solar	CS6A-170P	Multi	CN	2007 (purchased)	2007	174.4 ²	142	83.3	87.8	83.2	44.7	1019.7
CEEG Solar Science & Technology	SST 265-72P	Multi	CN	2005	2/2011	281.0	89	90.0	93.7	89.2	47.7	1093.0
CH Solar	CH Solar 180 mono	Mono	CN	Through 2010	4/2010	184.4	40	91.2	95.5	91.0	48.6	1114.6
Chauri Solar Energy	CRM240S156P-60	Multi	—	—	5/2012	241.0	55	90.7	96.0	90.6	48.9	1109.8
	CRM245S156M-60	Mono	—	—	5/2012	246.3	60	90.7	97.7	91.6	49.8	1122.0
China Sunergy	CSUN240-60P	Multi	CN	—	1/2012	243.7	119	88.9	93.1	88.7	47.4	1086.9
	CSUN250-60M	Mono	CN	—	1/2012	248.4	68	90.5	95.3	90.5	48.6	1108.7
	CSUN260-60M	Mono	CN	—	1/2012	254.0	61	90.7	95.5	90.9	48.7	1113.4
Chint Solar / Astronergy	CHSM 5612M (185)	Mono	—	—	1/2012	187.4	—	—	97.4	91.6	49.6	1122.4
	CHSM 6610P (230)	Multi	—	—	1/2012	234.2	72	90.4	92.8	89.6	47.2	1097.9
CNPV Solar Power	CNPV-185M	Mono	CN	2006	3/2010	193.8	78	90.3	91.3	88.8	46.5	1087.4
	CNPV-190M	Mono	CN	2006	7/2011	197.4	95	89.8	90.3	88.0	46.0	1078.7
	CNPV-220P	Multi	CN	2006	7/2011	224.2	26	91.8	96.7	90.9	49.3	1113.2
	CNPV-240M	Mono	CN	2006	7/2011	249.7	122	88.3	91.0	87.1	46.4	1067.0
	CNPV-240P	Multi	CN	2006	7/2011	243.1	—	—	94.1	89.7	47.9	1098.6
Conergy	Conergy PowerPlus 220P	Multi	DE	2009	3/2010	224.2	87	90.0	94.3	89.1	48.0	1091.7
	Conergy PowerPlus 235P	Multi	DE	—	1/2012	240.0	—	—	94.8	89.7	48.3	1099.0
CSG PV Tech	CSG180S1-35/36	Mono	CN	2008	6/2010	184.1	19	92.1	92.7	90.7	47.2	1111.0
	CSG230M2-30	Multi	CN	2008	6/2010	228.3	32	91.5	94.4	90.5	48.1	1108.2
	CSG240M2	Multi	—	—	1/2013	242.8	7	93.1	97.1	92.2	49.5	1129.5
	CSG250S2	Mono	—	—	1/2013	250.1	10	93.0	97.2	92.2	49.5	1129.1
Daqo New Energy	DO235PSCa	Multi	CN	—	1/2012	238.0	—	—	94.0	90.4	47.9	1107.5
Day4 Energy	Day4 48MC 185	Multi	CA	2006	2/2011	186.5	136	86.1	92.4	87.0	47.0	1065.6
Eging Photovoltaic Technology	EGM-185	Mono	CN	2010	2/2011	188.4	105	89.5	93.0	88.9	47.4	1088.6
Emmvee Photovoltaics	ES-230P60	Multi	IN	2008-2011	3/2010	234.0	134	86.6	87.0	82.8	44.3	1014.2
Eoply New Energy Technology	EP125M/72-190W	Mono	CN	—	1/2013	187.3	45	91.0	95.4	91.0	48.6	1115.4
	EP156P/60-235W	Multi	CN	—	1/2013	237.8	71	90.4	95.0	89.8	48.4	1099.6
ET Solar Industry	ET-M660250WV	Mono	CN	—	12/2012	248.9	3	93.4	97.4	93.1	49.6	1140.4
	ET-P660240	Multi	CN	—	7/2011	236.1	16	92.2	97.2	91.8	49.5	1124.4
Evergreen Solar	ES-180-RL	Ribbon	DE	2006-2008	2007	185.4 ²	150	76.6	76.9	73.6	39.2	902.3
	ES-A-210-fa2	Ribbon	US	2008	3/2011	210.0	129	87.2	91.2	85.8	46.5	1051.3
	ES-E-210-fc3	Ribbon	US	—	2/2011	211.2	—	—	89.8	85.5	45.8	1047.2
Fluitechnik	FTS-220 P	Multi	PT	—	11/2011	231.8	—	—	95.9	91.7	48.8	1122.9
Frankfurt Solar	FS215W-POLY	Multi	CN	—	2009	221.3	110	89.4	93.2	88.8	47.5	1088.0
Galaxy Energy	GS260m-96	Mono	DE	—	2/2011	252.9	77	90.3	94.2	90.0	48.0	1102.0
Hanwha Q Cells	Q.PRO-G2 235	Multi	PL	—	11/2012	236.9	4	93.3	100.2	93.4	51.1	1144.2
Hanwha SolarOne	SF160 M5-24 (175 W)	Mono	CN	—	2007	174.6 ²	141	83.7	85.0	82.2	43.3	1006.8
	SF160-24-1M175 (scac)	Mono	CN	—	2/2010	183.0	—	—	90.0	86.4	45.8	1058.1
Hareon Solar Technology	HR-230P-18/Bb	Multi	—	—	7/2011	230.6	20	92.1	97.9	92.2	49.9	1130.1
Helios Technology	H3A230P	Multi	EU	—	1/2012	232.2	—	—	94.2	89.7	48.0	1099.1
Hengdian Group DMEGC	DM190-M125-72	Mono	CN	—	4/2012	196.6	—	—	95.6	90.5	48.7	1108.3
Himin Clean Energy	HG-190S/Ba	Mono	—	—	1/2012	194.5	—	—	96.9	91.8	49.3	1124.3
Huanghe Photovoltaic Technology	HH190(36)M	Mono	CN	—	1/2012	190.9	47	90.9	97.0	91.5	49.4	1121.4
	HH230(30)P	Multi	CN	—	1/2012	231.7	—	—	99.3	93.4	50.6	1144.3

PHOTON Lab's outdoor module tests: Results of November 2014 yield measurements

Manufacturer	Model	Cell type	Origin	Production dates ¹	Installed in	STC power (W)	2013 rank	Performance ratio (%) 2013	Performance ratio (%) November 2014	Performance ratio (%) Jan. - Nov. 2014	Yield (kWh/kW) November 2014	Yield (kWh/kW) Jan. - Nov. 2014
IBC Solar	IBC MonoSol 240 TT	Mono	DE	Through 2011	2/2011	246.0	96	89.8	94.1	89.0	47.9	1090.2
Isofoton	I-110/24	Mono	ES	Through 2005	2006	102.5 ²	146	81.3	80.5	80.7	41.0	988.5
	IS-170/24	Mono	ES	2007	2009	172.8	144	82.9	84.9	82.0	43.2	1004.7
	ISF-255	Mono	ES	2012	4/2012	255.0	124	87.9	91.7	87.7	46.7	1075.0
ITS Innotech Solar	EcoPlus ITS220ECU5	Multi	SE	2011	1/2012	242.7	—	—	95.2	91.1	48.5	1116.2
JA Solar Technology	JAM6-60-250/SI	Mono	—	—	1/2013	253.1	17	92.1	94.3	91.1	48.0	1116.1
	JAP6 60-240/3BB	Multi	—	—	1/2013	242.1	—	—	95.2	91.7	48.5	1123.9
JCS Solar	JCSM290M-72	Mono	—	—	1/2012	296.9	54	90.8	98.8	91.4	50.3	1119.5
Jetion Solar	JT230(30)P1655x992	Mono	CN	2005	2/2011	232.4	73	90.4	94.5	89.9	48.2	1101.9
Jinko Solar	JKM190M-72	Mono	—	2010	7/2011	191.1	13	92.6	96.9	92.0	49.4	1127.6
	JKM235P-60	Multi	—	—	1/2012	231.4	70	90.5	97.2	89.7	49.5	1099.4
	JKM255PP-60	Multi	—	Since 3/2013	1/2014	254.4	—	—	97.8	91.0	49.8	1114.9
	JKM275P-72	Multi	—	—	4/2012	275.5	14	92.6	99.2	92.7	50.6	1136.2
Kenmec Mechanical Engineering	TKSA-23001	Multi	TW	—	7/2011	235.0	99	89.6	92.8	89.8	47.3	1100.4
Kinmac Solar	KSS-6P6A-230	Multi	TW	2010	2/2011	234.1	28	91.7	97.4	91.4	49.6	1120.1
Kioto Photovoltaics	KPV 210 PE	Multi	AT	2008-2010	2009	206.6	84	90.1	96.7	90.4	49.2	1107.9
Kyocera	KC170GT-2	Multi	JP	Through 2006	2006	178.4 ²	145	82.8	86.3	82.5	43.9	1010.6
	KD210GH-2PU	Multi	EU	2009	2/2011	212.1	123	88.2	91.3	87.3	46.5	1070.1
Lightway Green New Energy	LW235(29)P1650x990	Multi	CN	—	4/2012	235.7	42	91.1	95.4	91.2	48.6	1117.5
Lilie Energie	Lilie SPL 185	Mono	—	—	2/2011	185.3	103	89.5	94.7	89.2	48.3	1092.4
	Lilie SPL 185-I	Mono	—	—	2/2011	187.1	115	89.0	94.7	88.8	48.2	1087.4
Linsun Renewable Energy (LSP)	SK60P6225	Multi	—	—	7/2011	228.3	23	92.0	93.7	90.3	47.7	1106.8
Linuo Group	LN180(36)M-185	Mono	—	2003	7/2011	191.8	—	—	95.3	90.8	48.5	1112.3
	LN240(30)P-225	Multi	—	2003	7/2011	236.5	48	90.9	94.1	89.7	47.9	1098.4
	LN240(30)P-3-240	Multi	—	—	1/2013	239.5	25	91.9	96.4	91.4	49.1	1119.3
Luxor Solar	LX-250M/156-60+	Mono	—	—	1/2013	247.5	69	90.5	96.4	90.5	49.1	1108.7
Mage Solar	Mage Powertec Plus 225/6PJ	Multi	CN	Through 2011	2009	232.0	101	89.6	92.0	89.2	46.9	1092.9
	Mage Powertec Plus 230/6PH-US	Multi	US	—	7/2011	231.8	58	90.7	95.8	90.4	48.8	1108.0
	Mage Powertec Plus 230/6PO	Multi	CN	—	1/2012	229.9	94	89.9	96.0	90.1	48.9	1104.3
MPrime Solar Solutions	M 235P	Multi	PT	—	1/2012	240.7	—	—	97.4	90.8	49.6	1112.8
NESL Solartech	DJ-235P	Multi	CN	—	5/2012	237.7	39	91.2	96.7	91.2	49.3	1117.6
NexPower Technology	NT-125AX	µc-Si / a-Si	TW	2009-2010	11/2010	125.4	57	90.7	86.1	89.4	43.9	1095.5
Ningbo Solar Electric Power	Sun Earth TDB125x125-72-P 160W	Mono	CN	—	2/2011	161.6	112	89.2	94.4	88.9	48.1	1088.9
	Sun Earth TDB125x125-72-P 180W	Mono	CN	Through 2010	2/2011	179.2	43	91.1	88.3	90.4	45.0	1107.4
Perfectenergy	PEM-180/185-72M-SCC	Mono	CN	2008	6/2010	191.3	121	88.5	91.2	88.0	46.5	1078.2
Phono Solar	PS190M-24/F	Mono	CN	—	5/2012	192.0	24	92.0	97.0	92.2	49.4	1129.7
	PS230P-20/U	Multi	CN	—	5/2012	235.8	41	91.1	96.3	91.0	49.0	1115.2
Photowatt International	PW 1650-175W	Multi	FR	2005 (purchased)	2006	171.4 ²	148	80.6	85.3	78.6	43.5	963.5
PV Power Technologies	PVQ3 220	Multi	IN	2008	2009	223.6	117	89.0	95.1	90.0	48.5	1103.0
Qixin Solar Electrical Appliance	SL230CE-30P	Multi	—	—	4/2012	239.6	—	—	95.9	91.0	48.8	1115.2
	SL250CE-48M	Mono	—	—	4/2012	255.9	56	90.7	96.1	91.3	49.0	1118.4
RealForce Power	RF-240P60	Multi	CN	—	1/2013	241.9	11	92.8	95.9	91.9	48.9	1125.5
REC	Premium 210	Multi	SE	Through 2008	2/2011	212.2	18	92.1	95.2	90.5	48.5	1109.2
	REC230AE	Multi	SE	2007-2010	2/2010	228.6	31	91.6	93.7	89.2	47.7	1093.0
	REC230PE	Multi	SG	2010	2/2011	237.6	53	90.8	94.1	89.8	48.0	1099.9
	REC245PE	Multi	SG	—	1/2013	242.4	64	90.6	95.2	90.4	48.5	1107.7
Renesola	JC245M-24/Bb	Multi	—	—	10/2012	247.7	30	91.7	99.0	91.7	50.4	1123.9
	JC245M-24/Bbv	quasi-mono	—	—	10/2012	246.6	8	93.1	100.3	93.5	51.1	1145.6
	JC250S-24/Bb	Mono	—	—	6/2012	246.5	—	—	97.4	92.0	49.6	1126.9
Risen Energy	SYP185S-M	Mono	CN	—	7/2011	191.7	—	—	92.7	89.4	47.2	1094.7
	SYP190S-M	Mono	CN	—	10/2012	188.9	2	93.8	99.5	94.5	50.7	1157.9
	SYP250M	Mono	CN	—	7/2012	243.7	6	93.1	98.4	93.2	50.1	1141.9
Runda PV	RS230P-60	Multi	CN	—	1/2012	237.8	33	91.5	97.9	92.1	49.9	1128.2
Scheuten Solar Systems	Multisol P6-60	Multi	DE	—	6/2011	238.1	128	87.4	90.0	87.1	45.9	1067.4
Schott Solar	SCHOTT POLY TM 220	Multi	CZ	2008-2009	2/2011	224.7	125	87.5	92.6	86.4	47.1	1059.0

PHOTON Lab's outdoor module tests: Results of November 2014 yield measurements

Manufacturer	Model	Cell type	Origin	Production dates ¹	Installed in	STC power (W)	2013 rank	Performance ratio (%) 2013	Performance ratio (%) November 2014	Performance ratio (%) Jan. - Nov. 2014	Yield (kWh/kW) November 2014	Yield (kWh/kW) Jan. - Nov. 2014
S-Energy	SM-220PA8	Multi	KR	—	2009	224.4	50	90.9	95.0	89.9	48.4	1101.4
Seraphim Solar System	SRP-220-6PB	Multi	CN	—	10/2011	226.1	12	92.6	96.0	92.5	48.9	1132.9
Sharp	NT-R5E3E	Mono	JP	2003	2005	187.9 ²	149	79.8	84.0	79.4	42.8	972.9
	NU-185E1	Mono	GB	2005	3/2011	186.1	127	87.4	93.0	86.8	47.4	1063.4
Shell Solar (now with Solarworld)	Shell SQ 150-C	Mono	PT	Through 2005	2006	155.8 ²	130	87.0	91.2	86.7	46.5	1062.4
Shinsung	SS-BM260C	Mono	KR	—	4/2012	258.8	120	88.9	95.3	89.2	48.5	1093.2
Siliken	SLK60PL 230Wp	Multi	ES	—	2009	229.7	15	92.4	91.2	89.1	46.5	1091.5
Solar Modules Nederland	TC245-MO	Mono	NL	2010-2011	2/2011	246.7	34	91.4	95.4	90.4	48.6	1107.0
Solarbest Energy-Tech	ZSB M190	Mono	CN	—	12/2011	186.1	102	89.5	92.8	89.0	47.3	1091.0
Solar-Fabrik	Premium L poly (225)	Multi	DE	—	2/2011	223.6	49	90.9	93.9	90.2	47.9	1105.5
	SF 130/4-130	Mono	DE	2006-2010	3/2010	130.7	138	85.4	85.2	83.2	43.4	1019.9
	SF 145A	Ribbon	DE	2003-2004	2005	145.8 ²	140	84.2	84.6	83.3	43.1	1020.9
Solargate	SG-2350	Multi	TW	—	1/2012	246.3	100	89.6	95.8	90.0	48.8	1102.1
Solaria Energia	S6P2G225	Multi	ES	2010	5/2011	232.7	97	89.7	95.2	89.6	48.5	1098.3
Solarwatt	M220-60 GET AK (230)	Mono	DE	2005	2/2011	231.5	65	90.6	96.7	90.0	49.3	1102.3
SolarWorld	Sunmodule Plus SW 210 poly	Multi	DE	2004	2006	212.2 ²	132	86.8	90.5	86.8	46.1	1062.8
	Sunmodule Plus SW 225 mono	Mono	US	2009	3/2010	233.4	37	91.3	95.6	90.8	48.7	1112.4
	Sunmodule Plus SW 225 poly	Multi	DE	2004-2011	2/2011	228.6	75	90.3	95.4	90.6	48.6	1110.4
	Sunmodule Plus SW 245 poly	Multi	DE	—	1/2012	245.3	80	90.2	95.8	90.4	48.8	1106.9
Solon	SOLOON Blue 230/07(225)	Multi	DE	2008	2/2011	226.9	21	92.0	95.8	91.1	48.8	1116.4
Sonalis	SL-180CE-36M	Mono	CN	—	3/2010	185.1	86	90.1	93.0	89.2	47.4	1093.3
	SL190TU-36M	Mono	CN	—	8/2012	196.6	5	93.3	99.3	94.3	50.6	1155.5
Sopray Energy	SR-156P-235	Multi	—	—	1/2013	235.6	9	93.0	97.5	92.2	49.7	1129.8
	SR-190	Mono	—	—	1/2013	190.8	1	100.0	100.0	94.7	50.9	1160.7
Sovello	SV-X-200-fa1	Ribbon	DE	2009-2011	1/2011	205.0	137	85.5	85.9	83.1	43.8	1017.9
	SV-X-205-fa1	Ribbon	DE	—	2/2011	206.1	131	86.8	90.9	85.1	46.3	1042.7
Sunage	SAM 96/5	Mono	CH	—	7/2011	256.6	66	90.5	94.7	90.2	48.2	1105.6
Sunerg Solar	XP 60/156-230	Multi	IT	—	2/2011	226.0	29	91.7	95.2	90.3	48.5	1106.3
Sunflower Light	SF125x125-72-M(180)	Mono	CN	—	2/2011	176.6	63	90.6	95.9	90.8	48.8	1112.1
Sungen	SGM-195D	Mono	CN	—	5/2012	196.5	109	89.4	94.9	89.4	48.4	1095.3
	SGM-235P	Multi	CN	—	5/2012	235.4	46	90.9	96.0	91.2	48.9	1116.7
Sunlink PV	SL220-20M230	Mono	CN	—	2/2011	237.9	22	92.0	97.0	91.4	49.4	1119.4
Sunpower	SPR-245NE-WHT-D	Mono	—	—	1/2012	245.2	—	—	96.0	93.8	48.9	1149.1
	SPR-320NE-WHT-D	Mono	—	—	1/2012	325.5	—	—	95.5	93.0	48.6	1139.0
	SPR-327NE-WHT-D	Mono	—	—	1/2012	325.8	—	—	95.7	93.4	48.7	1143.8
Sunrise Solartech	SRM 180D72-GE	Mono	CN	—	2009	181.5	118	89.0	94.0	88.4	47.9	1082.5
Suntech Power	STP190-18/Ud	Multi	CN	2005	2/2011	182.9	139	85.3	88.9	84.8	45.3	1038.7
	STP205-18/Ud	Multi	CN	—	2/2011	213.8	114	89.1	93.3	88.7	47.5	1088.7
Sunways	MHH plus 190 (190 Wp)	Multi	DE	2003-2005	2005	199.5 ²	143	83.3	86.9	84.2	44.3	1031.6
SWAT International	SWAT-240-PS	Multi	—	—	5/2011	245.1	62	90.6	92.8	89.0	47.3	1090.1
Talesun Solar	TP572M 195W	Mono	CN	2011	1/2012	196.1	104	89.5	96.0	90.4	48.9	1107.4
Topray Solar	TPS105T-180W	Mono	CN	—	5/2011	184.8	44	91.0	94.0	90.6	47.9	1110.1
Topsolar Green	TSM72-125M-190W	Mono	CN	—	7/2011	185.9	—	—	95.2	90.7	48.5	1111.3
	TSM96-125M-250W	Mono	CN	—	3/2012	246.6	—	—	96.6	92.2	49.2	1129.5
Trina Solar Energy	TSM-180DC01	Mono	CN	2007	2009	176.2	79	90.3	92.9	89.7	47.3	1098.8
	TSM-225PC05	Multi	CN	—	2/2010	233.0	91	89.9	92.8	87.9	47.3	1078.6
	TSM-250PC05	Multi	—	—	6/2012	249.3	93	89.9	95.0	90.0	48.4	1102.2
Upsolar	UP-M180M	Mono	CN	2010-2011	3/2010	181.5	90	90.0	93.4	89.6	47.6	1097.3
	UP-M185M	Mono	CN	2010-2011	2/2011	189.2	—	—	93.6	88.9	47.7	1089.6
V-Energy	VE260PV	Multi	IT	—	1/2012	234.6	35	91.4	98.4	91.7	50.1	1123.4
Vikram Solar	ELDORA 220 (220)	Multi	—	—	7/2011	233.3	—	—	93.6	90.2	47.7	1105.6
Win Win Precision Technology	Winaico WSP-230P6	Multi	TW	2009	2009	234.4	36	91.4	93.1	90.5	47.4	1108.4
	Winaico WSP-235P6	Multi	TW	—	5/2010	240.1	74	90.4	96.5	89.6	49.1	1098.0
	Winaico WSP-240P6	Multi	—	—	4/2012	245.2	107	89.4	96.0	91.3	48.9	1118.0
Yingli Green Energy Holding	YL210P-29b	Multi	CN	2009	2/2011	214.3	106	89.5	94.7	89.2	48.2	1093.0
	YL240P-29b	Multi	CN	—	1/2012	246.6	—	—	97.1	91.4	49.5	1120.4
ZN Shine PV-Tech	ZX250(48)MS	Mono	CN	—	7/2011	252.3	—	—	95.5	91.0	48.7	1115.1
ZSD (zentalsolar deutschland)	Genius SDM 185-10004-185	Mono	—	—	7/2011	190.6	52	90.8	92.4	89.9	47.1	1100.8
Zytech Engineering	ZT 230P	Multi	CN	—	2/2011	230.8	116	89.0	94.2	88.7	48.0	1087.0

¹ when the date of production was unavailable, the date when the PHOTON Lab bought the module was used (if possible)

² STC power specification was not determined by PHOTON Lab but by the manufacturer

Inverter System: SolarEdge is the clear choice for residential grid tied installations, such as the ones targeted in this program, and thus will be our primary supplier. They utilize a unique combination of module level DC/DC converters (“power optimizers”), and a simplified string-line inverter to provide all of the benefits of a micro-inverter system, with significantly higher reliability, and a price point comparable to string-line inverters. SolarEdge systems have been shown to recover over 25% of energy that would otherwise be lost to shade, and shown to produce an extra 2% over the life of the system for systems without any shading whatsoever. It also comes standard with the ability to monitor the energy produced by each and every panel individually, online or from a smartphone application, allowing every customer to see exactly what they paid for. It is all around a superior solution.

NREL / PVEL SMF Results

Figure 4:

- SolarEdge
- Enphase
- SMA

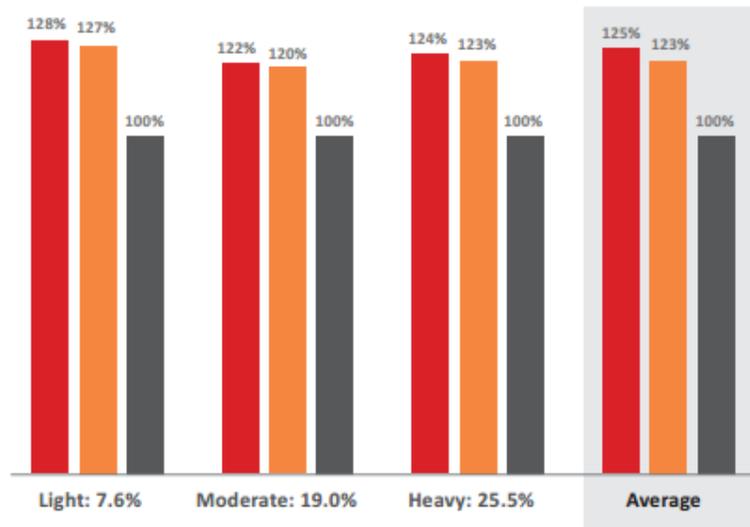


Table 1:

	Light	Moderate	Heavy
% of System shaded	7.6%	19.0%	25.50%
Available Energy [kWh/M ²]	1813	1893	1784
SolarEdge Energy [kWh/M ²]	1729	1616	1439
SMA string Inverter Energy [kWh/M ²]	1697	1539	1328
Shade Mitigation Factor (SMF)	28.30%	21.90%	24.20%
Added Energy	1.9%	5%	8.4%

Making PV Panels Smarter



Connecting SolarEdge power optimizers to PV panels makes them **SMART PANELS** that produce **MORE POWER** at all times



> More Energy From The Sun

MAXIMUM POWER FROM EACH PANEL

In a PV system, each panel has an individual maximum power point. Any differences between neighboring modules results in power loss. For example:

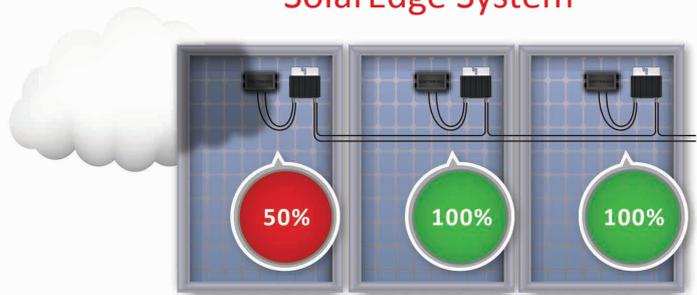


With traditional inverters, the weakest panel reduces the performance of all panels.
With SolarEdge, each panel produces the maximum energy, and power losses are eliminated.

Traditional Inverter



SolarEdge System



MORE PANELS ON YOUR ROOF; AND MORE SAVINGS ON YOUR BILL

Traditional Inverter



SolarEdge System



With SolarEdge

Installers can place more modules on the rooftop with SolarEdge and give you the design that you want:

- ✓ Shaded Areas
- ✓ Multiple roof angles
- ✓ More options to fit the roof size
- ✓ Free from electrical constraints

> SolarEdge For Your Peace of Mind

CONNECT ON THE GO

- > Full visibility of system performance
- > Monitor your system, anywhere using free iPhone and Android applications



PEACE OF MIND

- > With SolarEdge, whenever AC power is off, DC wires are automatically de-energized providing automatic protection to installers, maintenance personnel, firefighters, and property
- > Installers, maintenance personnel and firefighters are automatically protected from high voltage.



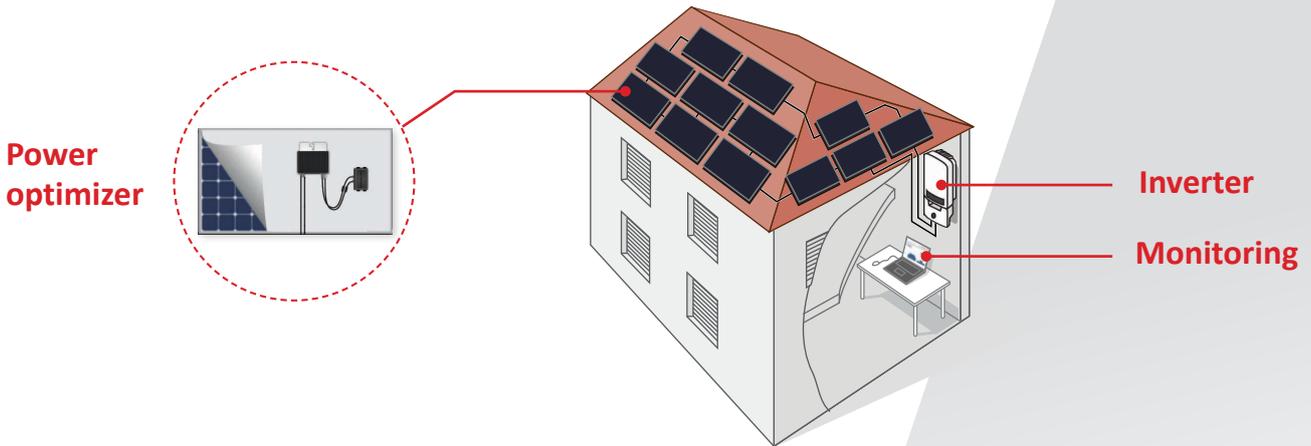
- > Backed by best in class warranties: 25 years standard for optimizers; 12 years standard extendable to 25 years for inverters
- > Monitoring- free for 25 years



> Making PV Panels Smarter

THE SOLAREEDGE SOLUTION

SolarEdge is the proven leader in PV power optimization with more than 80% market share. SolarEdge's cutting edge technology gives you smart system control that manages your array for maximum performance.



POWER OPTIMIZER

By connecting a SolarEdge power optimizer to a PV panel it becomes a smart panel.

This allows:

- Harvest of up to 25% more energy from each panel
- Constant feedback on the performance of each panel
- Automatic shutdown of each panel for maximum safety in case of an emergency



INVERTER

A simpler and more reliable inverter:

- Responsible only for DC to AC conversion, as all other functions are handled separately for each panel by the power optimizers
- Compact, light weight and simple design



MONITORING

By displaying real-time performance data, the monitoring portal allows:

- Visibility of your system's performance
- Easy access from a computer, smartphone, or tablet

solaredge

Moving Forward to Module-Level Power Optimization



OBJECTIVE

Just like people require individual attention to work at their best individual capacity, so do modules. Only if a module receives the optimum specific combination of voltage and current will it work to achieve maximum performance. Through both technical discussion and the analysis of real-life data, this paper will demonstrate how additional energy can be gained from solar PV systems when applying power optimization at the module level. It is the purpose of this paper to prove that the added energy gained is significant and relevant to every possible scenario in the world of PV.

MISMATCH AND TRADITIONAL INVERTERS

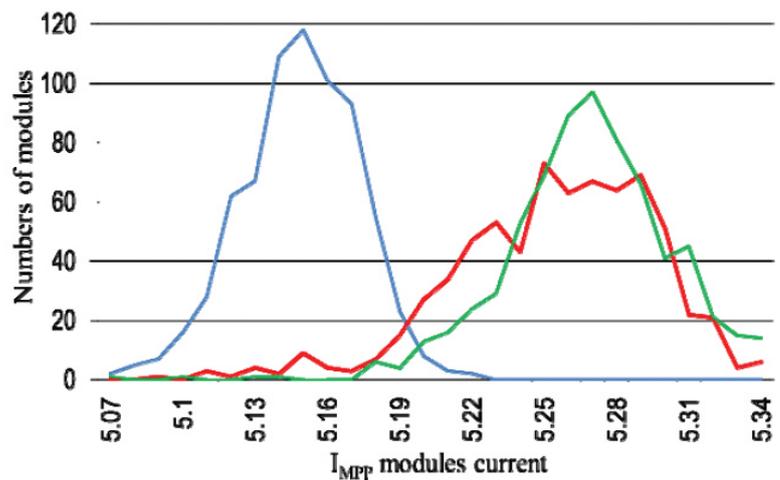
Mismatch occurs when modules in an array do not exhibit fully identical electrical properties or when exposed to different environmental conditions. In fact, mismatch is a natural state existing between PV modules from their outset (figure 1). It is common knowledge that each module provides maximum power (P_{mpp}) at a different combination of current (I_{mpp}) and voltage (V_{mpp}) (figure 2).

Gaussian distributions I_{mpp} of three different production batches of the same module

Figure 1:

In his research Paolo Perotti gives witness to an effort to reduce the mismatch between over 2,800 modules during the construction of an 815 kWp PV plant in Modena, Italy. Modules were then sorted from scratch on-site based on flash-test reports. The figure shows three different Gaussian distributions of I_{mpp} to three different production batches of the same module.

Source: P. Perotti et. al., "Monitoring and evaluation of economic impact in the reduction of mismatching in a PV plant located in Northern Italy", 26th EUPVSEC, 5-9/9/11, Germany

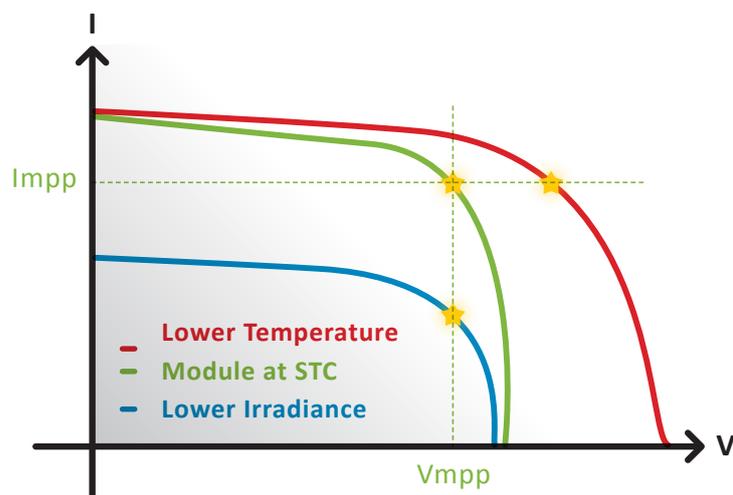


Same module, different IV curve

Figure 2:

Three similar modules exhibiting different properties under different conditions:

- Green Line – Module IV curve under standard conditions
- Blue Line – Module current decrease at lower Irradiance
- Red Line – Module voltage increase at lower temperature

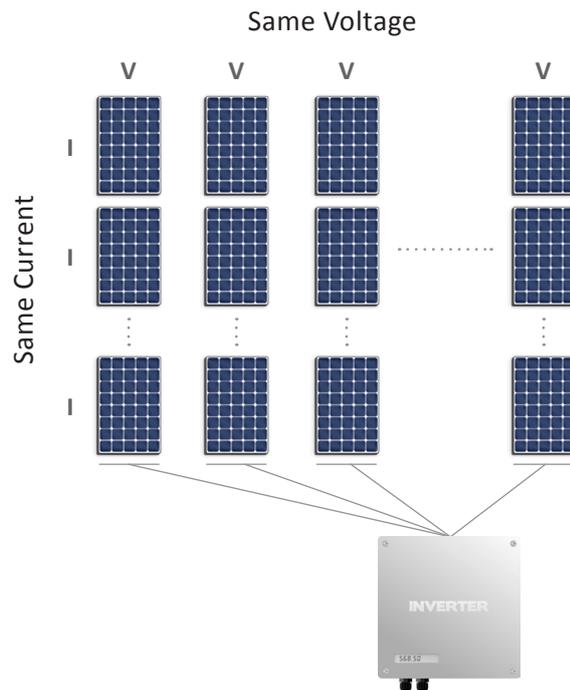


However, acting as central units, traditional inverters are by definition not able to single out the individual IV curves of modules, let alone adjust current and voltage per module. Instead, traditional inverters track the maximum power point collectively for an array of modules (figure 3). By taking a “one-size-fits-all” approach traditional inverters compromise on receiving an average system output in which weaker modules hamper the output of stronger modules in the array. The energy which is lost as a result, can commonly be referred to as module mismatch loss.

The assumption that mismatch could be avoided by creating and maintaining absolute conformity between modules throughout the entire system lifetime, seems rather impractical given the fact that even after being flash tested and sorted according to similar IV curves (power curves), a standard deviation of $\pm 3\%$ from the modules’ nameplate capacity remains. From this point, mismatch can be aggravated by virtually anything that evokes a difference between some modules in an array.

**Traditional PV Installations:
One-size-fits-all**

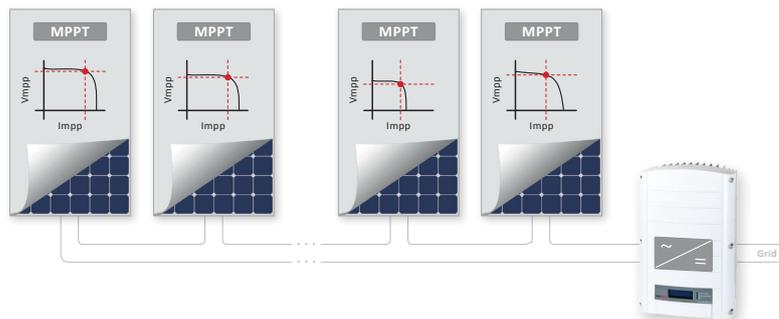
*Figure 3:
The figure shows the serial connection of PV modules into strings and the connection of several strings to the inverter in parallel. All modules in the same strings receive the same current; all parallel strings receive the same voltage.*



HOW POWER OPTIMIZERS GAIN ENERGY

Module-level MPPT adjusts the current and voltage to the specific requirements of each individual module and guarantees that modules work at their maximum capacity regardless of other modules in the string (figure 4). As opposed to an average, module-level MPPT means harvesting the sum of all peak operating points of modules which by the simple principle of math, will always result in higher energy yield than harvesting an average.

*Figure 4:
Power optimizers adjust current and voltage per module in order to harvest maximum power from each module individually, removing any interdependence of modules in an array.*



SIX EXAMPLES

The following section will examine a set of six sample scenarios to exemplify the different levels of energy gains possible to achieve with power optimizers.

1. PARTIAL SHADING – MISMATCH THROUGH DIFFERENT EXPOSURE TO LIGHT

With a little bit of imagination, the list of sources for partial shading is endless: chimneys, satellite dishes, a cable running across the installation - all can cast a bit of shadow on a module. Modules can even shade each other. By altering the intensity of light for just a few modules, partial shading diversifies the modules' output and introduces mismatch to the array. The following is an example of how much energy could be recovered for a partially shaded six kilowatt installation in Germany: The SolarEdge monitoring portal reveals that two modules, number 9 and 12, are shaded by a chimney between 08:00 and 10:00 o'clock every day (figure 5). In order to quantify the impact of shaded modules 9 and 12 on the energy production, PVsyst, a software developed at the University of Geneva, was applied to design and simulate the energy output: using a traditional 'one-size-fits-all' inverter and using SolarEdge inverters and power optimizers with individual MPP trackers for each module. The reports show that with SolarEdge, the shading loss is proportionate to the shaded area (1.5%), the traditional inverter loses 13.4% of the potential system output on the two shaded modules (figure 6). The SolarEdge system harvested 12.4% more energy in the first year of operation alone.

Figure 5:

The SolarEdge Monitoring portal displays two modules shaded by a chimney between 08:00 and 10:00 every morning. It is also interesting to see that the lower output of modules 9 and 12 does not influence the other modules in the string.

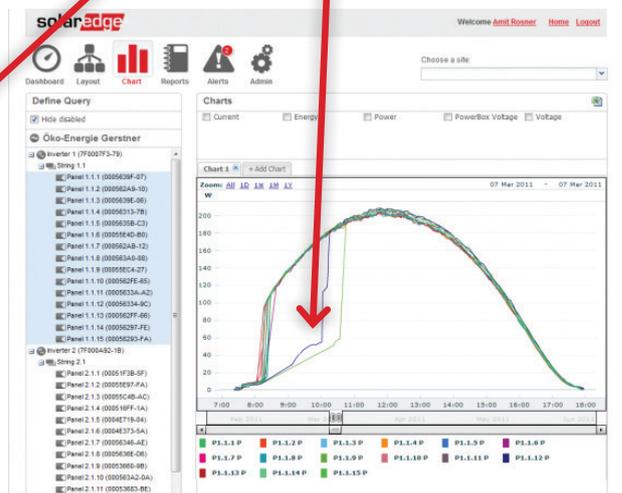
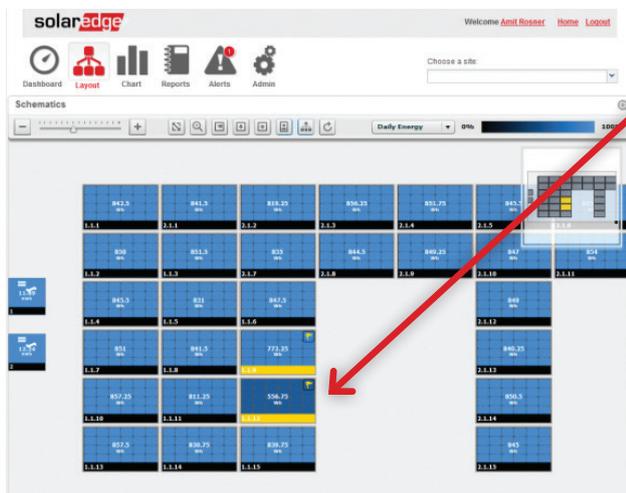
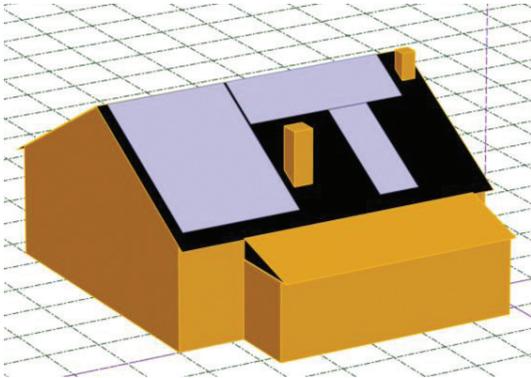


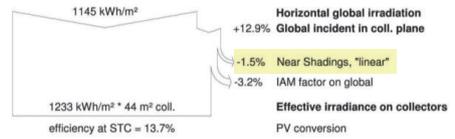
Figure 6:

The figures show a PVSyst simulation result for a 6kW residential system which is exposed to a highly common form of shading, a chimney. Figure 6 shows the model and figure 7 shows two reports, one for SolarEdge and one for a traditional inverter system.



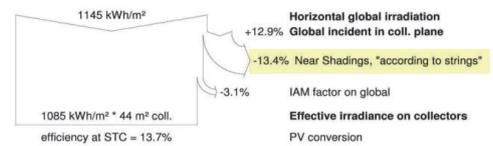
SolarEdge

Produced Energy 6262 kWh/year
Performance Ratio PR 80.7 %



Traditional

Produced Energy 5574 kWh/year
Performance Ratio PR 71.8 %



2. SOILING - MISMATCH THROUGH DIFFERENT EXPOSURE TO LIGHT

Another common source of mismatch loss in PV plants is module soiling. Just like partial shading, soiling is a reduction in the illuminated area of modules. Soiling can be caused by anything from falling leaves to dust and bird droppings (Images a & b). Since these factors never affect all modules equally, they create mismatch. In some locations where sand or dirt accumulate easily, the effects can be severe. Figure 7 displays a screenshot taken from the SolarEdge monitoring portal which illustrates the different outputs of soiled modules in a 700kW plant in California before it was cleaned (indicated by the different shades of blue).

Images a&b:

Two common sources of soiling: birds & sand



Figure 7:

String and module energy mismatch caused by different levels of soiling. The blue color intensity is proportional to the string daily Energy.



3. DYNAMIC CHANGES – FAST CHANGING CLIMATE, FAST CHANGING LIGHT

Even the most far away elements like wandering cloud fronts can act as a form of intermitted shade. Traditional inverters have difficulties detecting power fluctuations fast enough and can get stuck on local, meaning not the highest array peaks. As figure 8 and 9 demonstrate, there is reason to believe that the energy loss deriving from light-variation speed can be significant. Tracking topology is required in this condition so that it can respond fast enough to adjust current and voltage in real time as intermittencies occur. Power optimizers do exactly that. In charge of one module each, power optimizers have the ability to respond quickly and adequately to fast changes in the irradiation level.

Figure 8:
MPPT Efficiency as a function of irradiance variation speed
Source: R. Bründlinger Austrian Institute of Technology, 4/2010

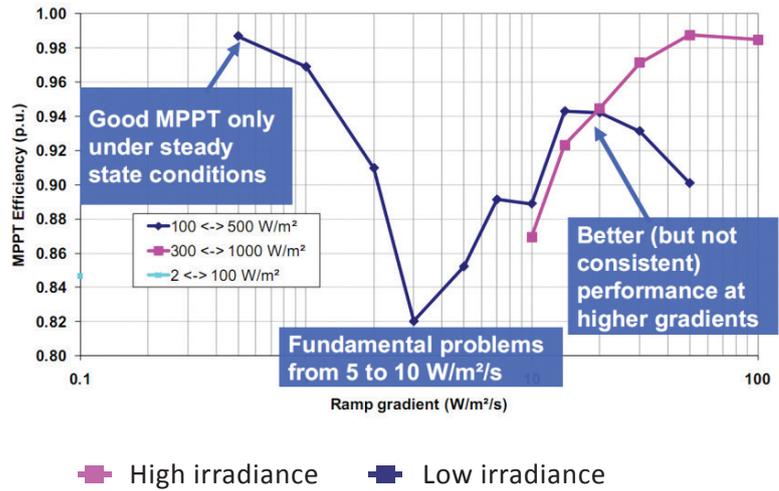
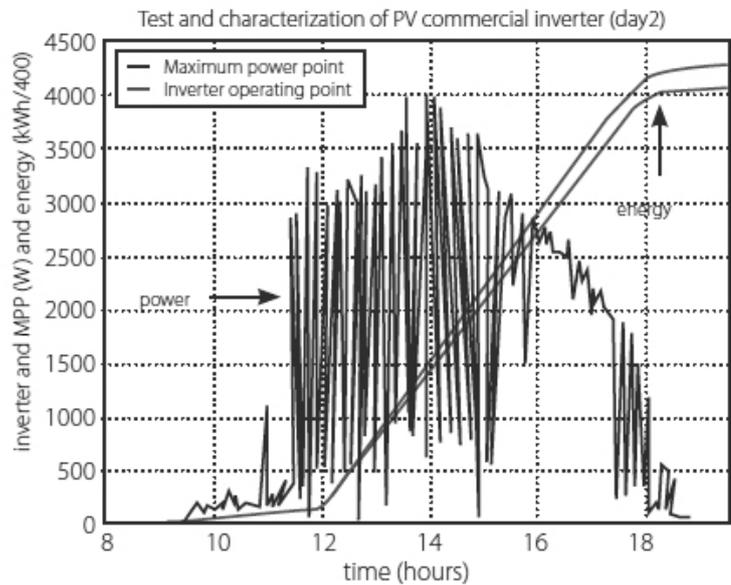


Figure 9:
Energy lost throughout a mixed weather day. The inverter-level MPP tracker shows difficulties to track the ups and downs of system output under intermitted light, shade conditions.
Source: On the Testing, Characterization, and Evaluation of PV Inverters and Dynamic MPPT Performance Under Real Varying Operating Conditions, Pablo Sanchis et al. (2007)



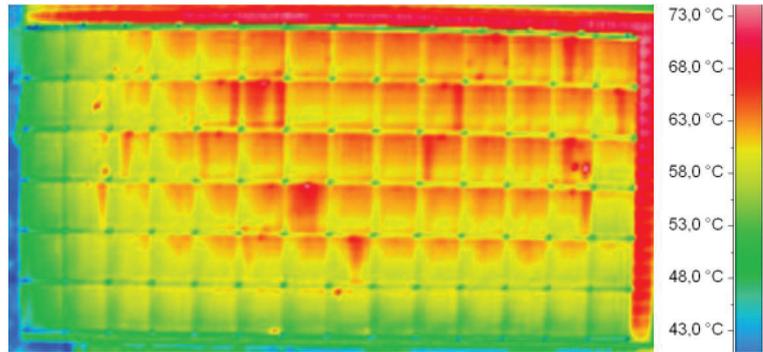
4. DIFFERENT TEMPERATURES, DIFFERENT MPPS

Temperatures can drastically vary across an array. Researcher Claudia Buerhop used an infrared camera installed on a model-helicopter to measure the different temperatures exhibited by a PV array installed in Germany. The image reveals that a temperature gradient exists within the plant. The difference in temperature measured between the top and the bottom row of modules equaled as much as 13°C with only 7,8m distance between the rows. The camera also reveals that a temperature gradient of 3-5°C even exists within particular modules. Due to the correlation between the ambient temperature and a module's output power, modules exposed to different temperatures will exhibit different power curves. Scenarios like this one occur for example, when a system is installed on a slope or on windy days when the wind picks up heat from the modules operating at one end of the array and carries the heat across the array.

Figure 10:

The figure shows an IR map of a PV field. Different modules exhibit different Vmpp requirements as a result of exposure to significantly different temperatures in the array. In addition, figure 10 shows hotspots indicating a defect in the installed module, which represents another source of mismatch.

Source: C. Buerhop et al., ZAE Bayern, "The role of infrared emissivity of glass on IR-imaging of PV-plants", 26th EUPVSEC, 5-9/9/11, Germany

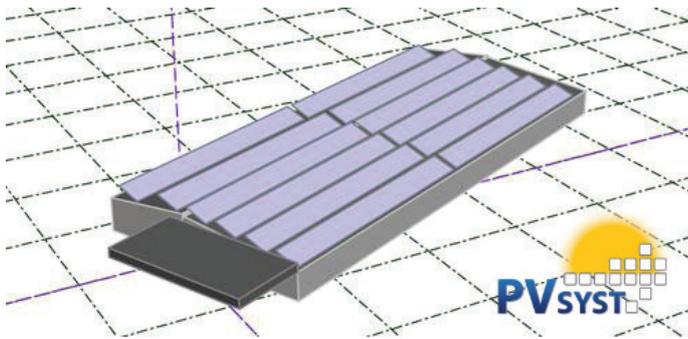


5. UNDER PERFECT CONDITIONS:

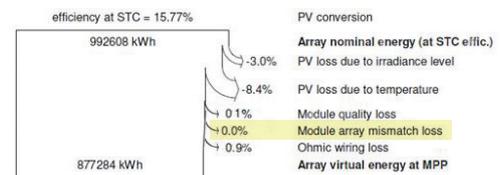
Given stable weather and that neither shading, soiling elements, a single underperforming module or temperature difference exists in a PV array, PVsyst still assumes that a standard deviation of $\pm 3\%$ from the modules' nameplate capacity is sufficient to result in energy loss of about 2% (figure 11). This energy retrieved from a commercial rooftop installation in California for example, for a factory with an energy consumption of 3650MWh per month on average and a tier one energy cost of 0.11 \$US/kWh, translates into more than \$7,500 in revenue for the first year of operation alone.

Figure 11:

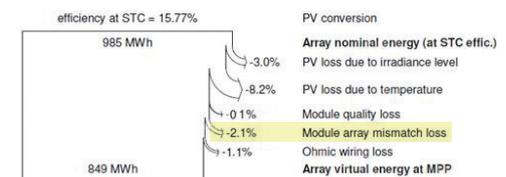
PVsyst was deployed to simulate a 475kW Rooftop design and energy output with SolarEdge inverters and power optimizers and with traditional inverters. No shading elements.



SolarEdge



Traditional



6. AGING – MISMATCH AS AN EFFECT OF TIME

While it is true that most modules only age to an acceptable degree of 80% of their nameplate output by the 20th year, the different rate at which they age introduces aging mismatch. Aging mismatch will increase further into the future, but research shows that it can already be regarded as a source for concern today. For example, researcher Jorge Coello attested to the degradation process of crystalline silicon modules installed in two solar power plants in Spain with 19 MW and 13 MW capacities respectively. In 2008, prior to their installation, Coello flash-tested a sample of 785 modules coming from five different manufacturers in an IEC 17025 accredited laboratory and then repeated the test in 2009 and 2010 to examine potential changes. As anticipated, the results show a mere 1.0 - 3.5% decrease in peak power within the first year and an additional 0.4 - 1.3% in the following year. More importantly however, for this purpose, is the fact that within these boundaries, modules aged at completely different rates. Over the course of two years, between 2008 and 2010, one of the five manufacturers even exhibited a variance of up to 6% between the modules. In another research released in 2009, Artur Skoczek presented results of a study on the degradation of a set of 53 different models from 20 different producers,

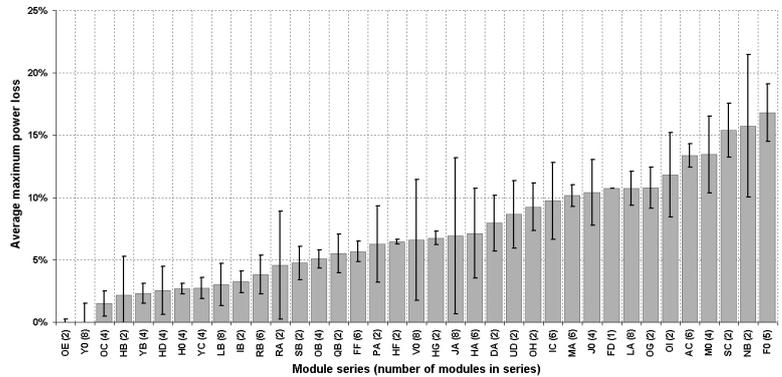
204 modules in total, after 19-23 years of outdoor exposure at the European Solar Test Installation (ESTI) in Ispra, Italy. The standard deviation of power reduction was more than 5% for a quarter of the module and in some cases even reached as high as 15%.

Power variance of identical modules after 20 years

Figure 12:

Black lines: Power variance of identical modules after 20 years (The figure above summarizes only the results of the better-performing module series)

Source: A. Skoczek et. al., "The results of performance measurements of field-aged c-Si photovoltaic modules", Prog. Photovolt: Res. Appl. 2009; 17:227-240



IN CONCLUSION

The results presented in this paper show that mismatch is an inherent state in PV arrays which is further aggravated through changes in environmental conditions. Results also show that any topology based on the underlying assumption that PV modules can eventually act as a homogenous group or that it is possible to maintain conformity between modules throughout the entire system lifetime, comes at the expense of solar PV energy output.

By applying module-level technologies, additional energy can be yielded from virtually any installation. The amount of added energy yield depends on the specific scenarios and was best summarized by **PHOTON Magazine in October 2011: even under fully controlled conditions during a test performed at PHOTON Laboratories, the added energy yield with SolarEdge power optimizers ranged from 1.6% to 34% (figure 13)**. These results have yet to take into account other sources of mismatch established in this paper such as temperature variance, dynamic irradiance changes and aging mismatch. The uneven aging rate of modules continues to increase mismatch and reduces the return on investment of a PV system year after year.

In conclusion, as part of a joint pursuit to make PV energy output more efficient, and instead of looking at module sorting and flash testing as sustainable remedies against mismatch, the industry should become accustomed to accepting module diversity as part of the nature of PV and look at module-level power optimization as the way forward.

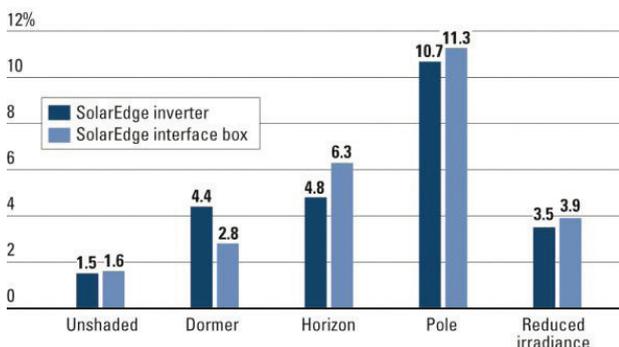
PHOTON Lab Test results on added energy yield of SolarEdge power optimizers

Figure 13:

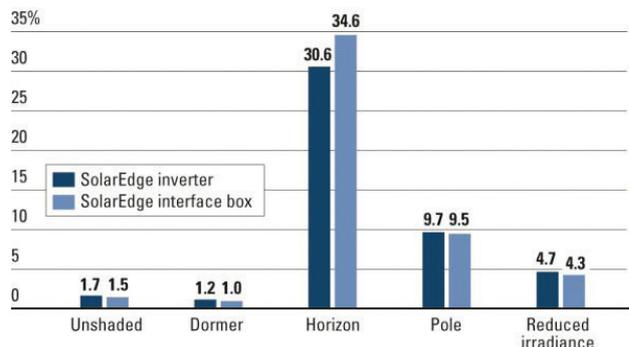
The charts illustrate the added energy yield in five different scenarios which was gained adding MPPT per modules compared to a traditional inverter system with central MPPT. The bars compare SolarEdge power optimizers using a SolarEdge inverter and using a third party inverter.

Source: PHOTON Magazine, October 2011

Additional yield produced by SolarEdge PowerBoxes – two parallel strings of seven modules each



Additional yield produced by SolarEdge PowerBoxes – one string of 14 modules



Performance of PV Topologies under Shaded Conditions



DATE: JULY 2013

SUMMARY

The SolarEdge system outperforms SMA inverter and Enphase microinverter systems, in a standardized National Renewable Energy Laboratory (NREL) shading study conducted by PV Evolutions Lab (PVEL). This study simulates partial shading scenarios of typical residential rooftop photovoltaic (PV) systems, and evaluates the impact of different power conversion topologies on system performance.

The SolarEdge system harvests 1.9%, 5.0% and 8.4% more energy than SMA string inverter system with light, medium and heavy shading, respectively. The SolarEdge system produces more energy than Enphase microinverter system as well.

The test also determines a Shading Mitigation Factor (SMF) which represents the annual energy recovery of a power optimizer or microinverter system, compared to a traditional string inverter. The study found that the SolarEdge system recovered 28.3%, 21.9%, and 24.3% of energy lost by the string inverter system, with light, medium and heavy shading, respectively. These results indicate higher SMF results than even the Enphase microinverter system.

“The SolarEdge system yielded more energy than the string inverter system in all tests. On an annual average, the SolarEdge system recovered 24.8% of energy lost due to shading, while the microinverter system recovered only 23.2% ”

says Matt Donovan, PV Evolution Labs.

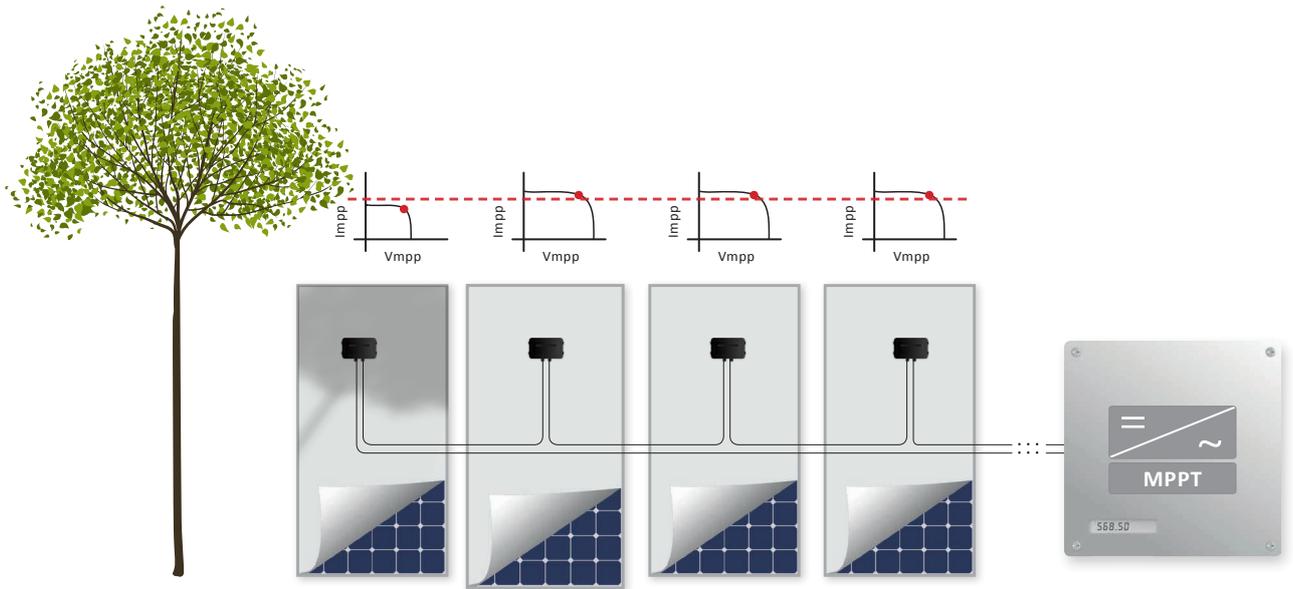


SHADING IMPACT ON ENERGY PRODUCTION

In PV systems, it is practically impossible to completely avoid shading, which can be caused by trees, chimneys, satellite dishes and more. In these systems partial shading losses are estimated to result in a 5%-25% annual energy loss.

Shading impact in string-level MPP topology

Shading of any part of PV array will reduce its output. Clearly, the output of any shaded cell or module will be lowered in correlation with the reduction in light falling on it. However in systems with traditional string inverters, unshaded cells or modules may also be affected by the shade. For example, if a single module in a series string is partially shaded, its current output will be reduced and this may dictate the operating point of all the modules in the string. Alternately, the shaded module may be bypassed, leading this module to stop producing power entirely (Fig. 1). If several modules are shaded, the string voltage may be reduced to a value lower than the inverter's minimum operating point, causing that string to produce no power.

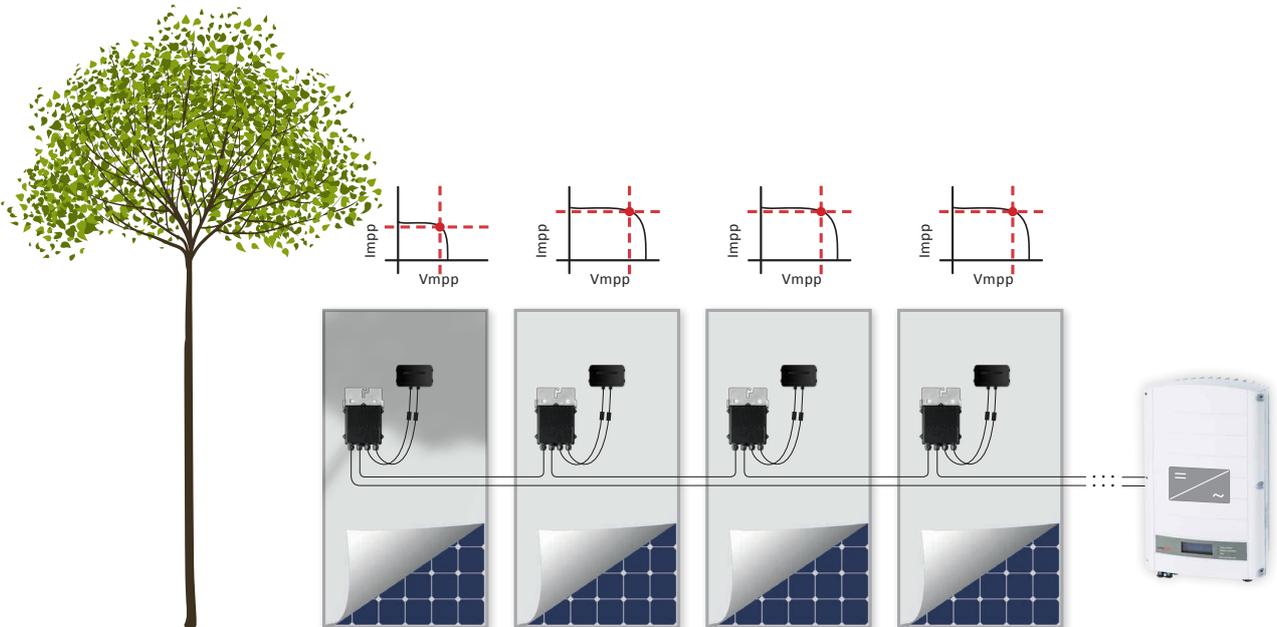


String-level MPP

Figure 1: The partial shaded module is bypassed

Shading impact in module-level MPP topology

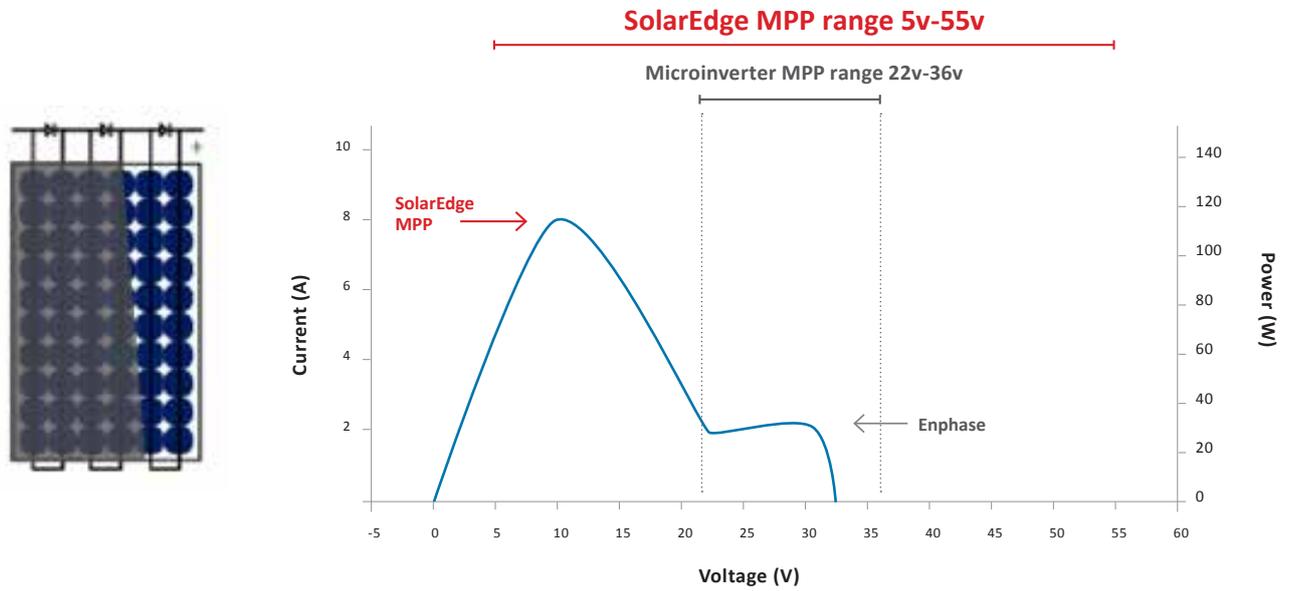
Module - level electronics, such as DC-DC converters and microinverters, mitigate the shading losses by isolating the shading impact to the shaded modules, allowing the unshaded modules to contribute their full power (Fig. 2).



Module-level MPP

Figure 2: The partially shaded module contributes its power

To effectively harvest energy from a partially shaded module, low-voltage tracking capabilities are key. However, microinverters need relatively high voltages, of about 20V, to be able to track a module's MPP. This means that if a module's voltage drops below this point, the microinverter will not track its MPP, rather it would maintain a voltage high enough for it to continue to operate, but at an un-optimized point. In contrast, the SolarEdge power optimizers start tracking MPP from a voltage as low as 5V, meaning they track a module's MPP even under severe partial shading (Fig. 3)



Partially Shaded Module I-V Curve

Figure 3: Microinverter module harvest is limited to the lower peak due to its narrow MPPT window

PVEL AND NREL SHADING STUDY PROCEDURE AND IMPLEMENTATION

The PVEL and NREL test procedure was developed in a manner that removes any bias from a comparison between systems. The tested systems are comprised of identical arrays, and the shading conditions are applied to the arrays simultaneously and not sequentially to minimize uncertainties associated with shifts in temperature and irradiance. Measurements are taken during unshaded conditions as well, and used to normalize the measurements of each system.

In this study, each array consisted of two strings of 13 modules each. The modules were 240W 60-cell modules with 3 bypass diodes per module. Direct shading was applied using a semi-transparent mesh draped directly on top of the module. This mesh has a transparency of 36% and sufficiently uniform spectral transmittance. The test employs a range of shading conditions with as little as 1% of each array shaded to as much as 97%, for a total of 22 configurations.

In every configuration, each array has the exact same shading condition applied, a wait time of five minutes is given to ensure the systems stabilize, and then side-by-side energy harvesting measurements are taken for approximately ten minutes. Performance measurements are taken with revenue-grade meters.

Performance results are then extrapolated and applied to typical light, medium and heavy shading scenarios based on SunEye measurements from actual residences. These three shading scenarios correspond to systems with 7.6%, 19.0% and 25.5% shading, respectively.

In addition, the results are annualized by giving weight to each measurement according to its expected occurrence over the year. The final result is a Shade Mitigation Factor (SMF), which indicates the fraction of energy lost due to shading in a string inverter system that is recoverable using the SolarEdge system (or a microinverter system). An SMF was obtained for the three shading scenarios.

For full details of the procedure, refer to “Photovoltaic (PV) Shading Testbed for Module-level Power Electronics”, C. Deline, J. Meydbrey, M. Donovan, J. Forrest, <http://www.nrel.gov/docs/fy12osti/54876.pdf>.

This document refers to a 3-string system; this study was adapted for a 2-string system.



RESULTS

Performance measurements show that the SolarEdge system harvests 1.9%, 5.0% and 8.4% (Table 1) more energy than the SMA string inverter system with light, medium and heavy shading, respectively. The SolarEdge system produces more energy than the microinverter system as well.

When determining the SMF - the annual energy recovery of a power optimizer or microinverter system, compared to a traditional string inverter - the study found that the SolarEdge system recovered 28.3%, 21.9%, and 24.3% of energy lost by the string inverter system, with light, medium and heavy shading, respectively (Fig. 4). These results indicate higher SMF results than even Enphase microinverter system.

NREL / PVEL SMF Results

Figure 4:

■ SolarEdge
■ Enphase
■ SMA

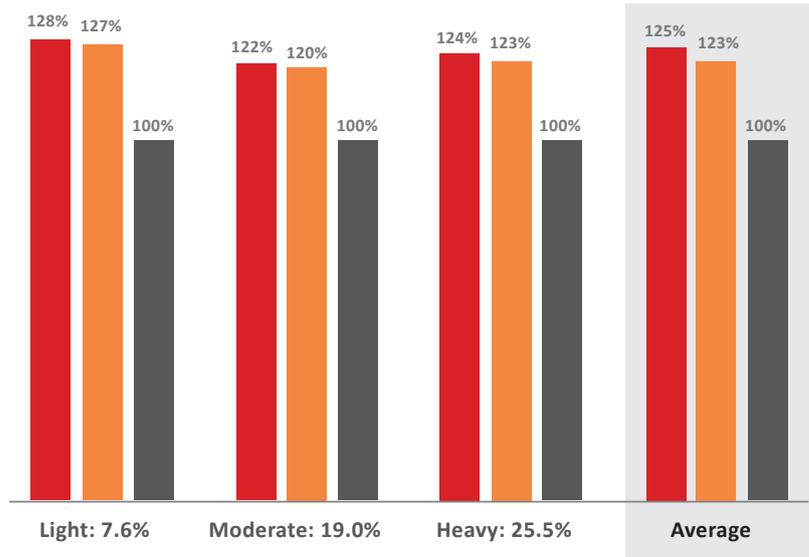


Table 1:

	Light	Moderate	Heavy
% of System shaded	7.6%	19.0%	25.50%
Available Energy [kWh/M ²]	1813	1893	1784
SolarEdge Energy [kWh/M ²]	1729	1616	1439
SMA string Inverter Energy [kWh/M ²]	1697	1539	1328
Shade Mitigation Factor (SMF)	28.30%	21.90%	24.20%
Added Energy	1.9%	5%	8.4%

8 Ways Power Optimizers are Better by Design

Microinverters & Power Optimizers - a Technical Comparison



HOW BOTH APPROACHES ARE SIMILAR

Module-level electronics, namely microinverters and power optimizers, address the shortcomings of traditional PV systems by managing the system at the module-level and not at the string level. Both microinverters and power optimizers achieve higher energy harvest than traditional string or central inverters, through module-level Maximum Power Point Tracking (MPPT). Additionally, module-level electronics offer enhanced maintenance and greater system performance visibility via module-level monitoring, enhanced safety through automatic voltage shutdown and design flexibility.

WHY THE POWER OPTIMIZER APPROACH IS BETTER

Microinverters achieve module-level functionality by placing a full DC/AC inverter at each module, making the DC/AC inversion the center of their concept. While power optimizers also allocate power electronics to the module, but conversely keep the DC/AC inversion at the inverter-level. There is no need to add an inverter to every module since DC/DC power optimizers achieve all the module-level benefits at a lower cost, a higher efficiency and with much greater reliability.

BENEFITS COMMON TO MICROINVERTERS AND POWER OPTIMIZERS OVER TRADITIONAL INVERTERS

1. Higher energy harvest
2. Safety
3. Module-level monitoring
4. Design flexibility

BENEFITS OF POWER OPTIMIZERS OVER MICROINVERTERS

1. Greater module compatibility and no power clipping
2. Higher energy yield through wider MPPT range
3. Higher reliability
4. Higher efficiency
5. Superior communication technology (DC Power Line Communication)
6. Compliance with advanced grid codes
7. Lower system cost, faster ROI
8. System scalability

1. MODULE COMPATIBILITY AND POWER CLIPPING

In order to ensure broad module compatibility, manufacturers of module-level electronics need to keep pace with the constantly increasing module power ratings. Currently, SolarEdge power optimizers allow for the connection of modules with up to 420WDC and 125VDC, supporting the vast majority of modules on the market today. This includes high-wattage modules preferred for commercial installations. At present, microinverters allow for the connection of modules with power ratings of up to merely 260WDC (and only 60 cells), not supporting many of the module capacities available on the market.

Furthermore, it is not the connected DC capacity but the AC output limit of the microinverter which determines how much energy can be harvested from a module. The current maximum output limit of the Enphase M215 microinverter, for example, is 215WAC, while the average wattage for modules today is above 230W and rising every day. While some oversizing can be recommended also with central or string inverters, connecting a 260W module, for example to a 215W AC microinverter results in 17% oversizing which can result in power clipping and limits installers in their choice of modules.

2. WIDER MPPT RANGE FOR MORE HARVEST IN SHADED SITUATIONS

Module voltage decreases when partial shading occurs. When a module is partially shaded, its substrings are usually bypassed, resulting in less cells available for production. This causes a drop in the module's voltage. If one or two substrings are partially shaded, that module can potentially lose one or two thirds of its voltage. Take for example a common 60-cell module with an MPP voltage of 27VMPP. In this scenario, 27VMPP would decrease to 18VMPP or 9VMPP, respectively.

To effectively harvest energy from a partially-shaded module, low voltage tracking capabilities are crucial. However, microinverters need relatively high voltages to be able to track a module's MPP. For example, the datasheet for the Enphase M215 microinverter states a minimum MPPT voltage of 22V. This means that if a module's voltage decreases below 22V, this microinverter would not be able to track its MPP. Rather, it would de-MPP the module to maintain a high enough voltage to continue to operate in an un-optimized working point.

In the example above (60-cell module with shaded substrings), this means that the M215 microinverter would not be able to track that module's MPP in neither of the two scenarios (18V or 9V). (Figure 1).

Conversely, SolarEdge power optimizers start MPP tracking from as low as 5V meaning they track a module's MPP even under severe partial shading. Power optimizers therefore perform better than microinverters in partially-shaded areas. (Figure 2).

Given that partial-shading loss mitigation is one of the most valuable benefits of module-level MPPT, the MPP operating window of module-level electronics is a critical criteria.

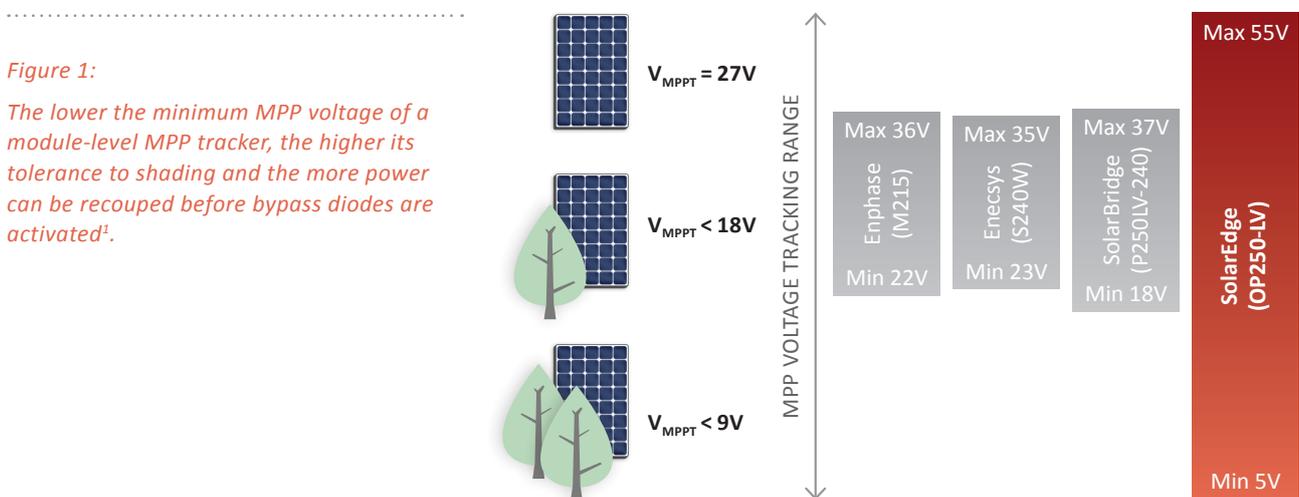


Figure 2:
SolarEdge allows for full roof utilization despite shading elements (here: chimney). Full roof utilization can only work if the MPPT range of the module-level device goes low enough to prevent module bypass diodes from being activated.



3. RELIABILITY

Reliability is paramount when it comes to module-level technology. Long-life module warranties, for example, reflect the industry standard that PV equipment is a one-time purchase. Designed to work alongside PV modules, both microinverters and power optimizers are judged by this standard. Therefore, both technologies offer a standard 25 year warranty.

However, compared to PV modules and mounting brackets, electronic devices pose a challenge in maintaining a long lifetime. Microinverters require large input capacitance due to the low grid frequency. In many cases, this is implemented with electrolytic capacitors. As evidenced by the comparably short standard warranties provided for traditional inverters, electrolytic capacitors are specifically challenging as they contain fluids which evaporate under operating conditions, a factor which can significantly shorten the lifetime of microinverters compared to that of power optimizers.

¹: http://www.solaredge.com/files/pdfs/se_technical_bypass_diode_effect_in_shading.pdf

Not constrained by the requirement of DC/AC capacitance, power optimizers can guarantee long product lifetime by relying on two inherently reliable components: ceramic capacitors and Application Specific Integrated Circuits (ASICs). First, power optimizers have a high switching frequency, which allows them to use ceramic capacitors which have a low, fixed rate of aging. Second, ASICs allow for embedding many of the required electronics into the chip. This reduces the number of discrete components, and with that, the potential points of failure (figures 3 & 4). The design of power optimizers is therefore more reliable.

Figure 3:
The PCB of the SolarEdge power optimizer compared to a leading microinverter.
(Images to scale)

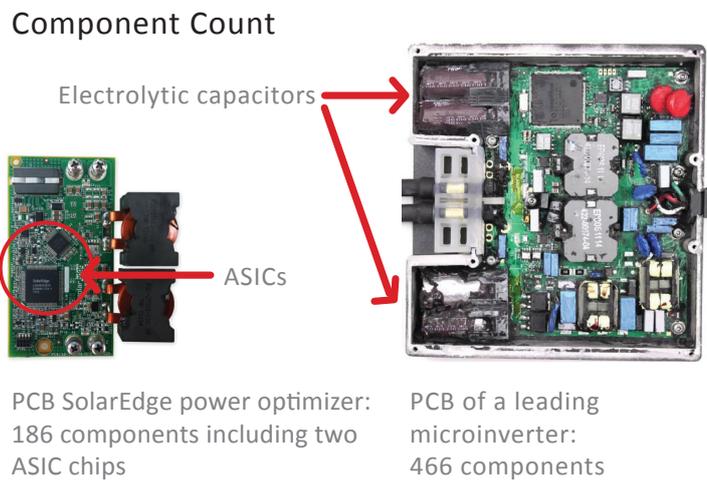
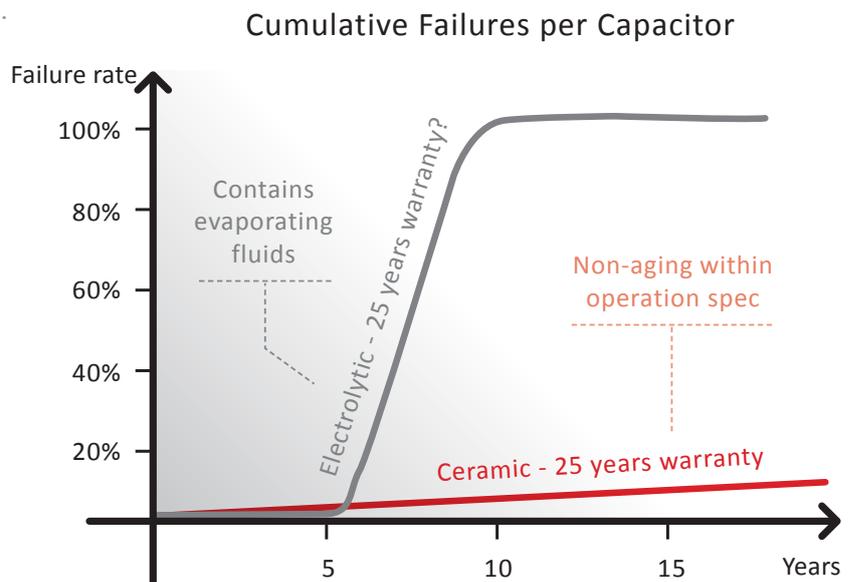


Figure 4:
Ceramic capacitors have a significantly longer lifetime than electrolytic capacitors.



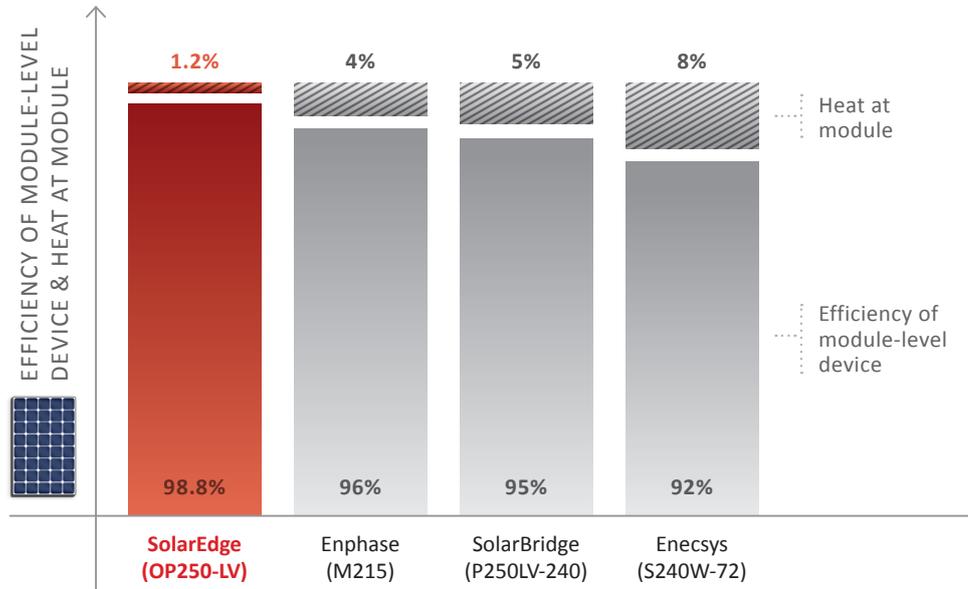
4. LOWER HEAT AND HIGHER EFFICIENCY

a. Influence on heat dissipation:

Power optimizers dissipate less heat. Power optimizers are more efficient than microinverters since the heat generation associated with inversion is done in the inverter and not in the optimizer. SolarEdge power optimizers, for example, operate at 98.8% weighted efficiency. As a result, less heat is dissipated to the module (1.2%). Microinverters have lower efficiencies than power optimizers. The highest known efficiency of microinverter brands is 96%, meaning 4% heat dissipation to the module (figure 5). Higher efficiencies therefore improve both product and module lifetime and reliability.

Figure 5:

Lower conversion efficiencies mean higher temperatures at the module and can impair module functionality. Power optimizers have a peak efficiency of 98.8% CEC. Therefore, the heat dissipated to the module is negligible compared to that of microinverters.

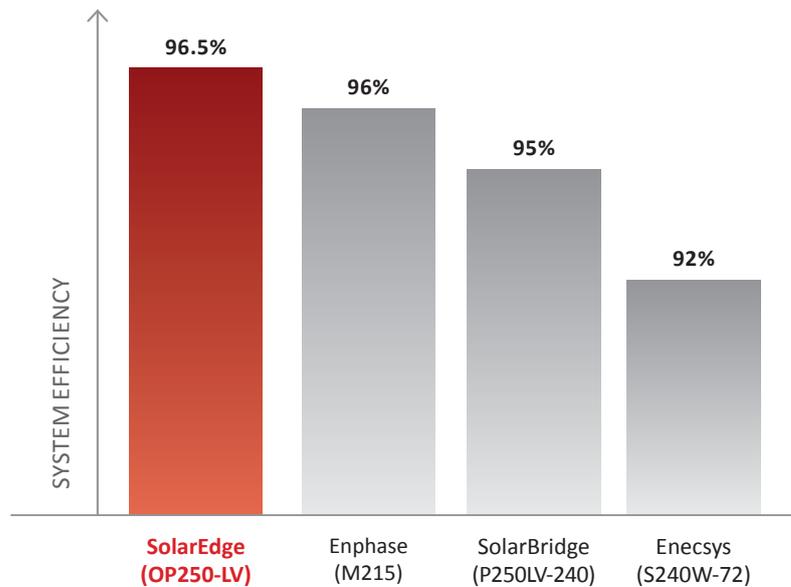


b. Influence on yield:

Currently, the weighted conversion efficiency of microinverters ranges between 92% – 96%. The weighted efficiency of the SolarEdge system is 96.5% (98.8% power optimizer efficiency multiplied by 97.6% inverter efficiency). Thus, the overall system efficiency still remains higher than that of any microinverter: 96.5% (figure 6).

Figure 6:

The figure shows how the combined weighted efficiencies of SolarEdge power optimizers and inverters are superior to the weighted efficiency of microinverters.



5. COMMUNICATION

Communication between module electronics and the data monitoring service must be robust. Some microinverter companies use wireless communication between each module and a gateway, a working environment which is not robust enough to guarantee uninterrupted communication. Using wireless communication in an urban environment appears specifically problematic.

The desired choice of communication technology for module-level electronics would be power line communication (PLC), meaning the communication of data across cables. Within the realm of PLC, microinverters use AC PLC, as they are connected through AC cables. The problem with AC PLC is that it can easily be interrupted by every home appliance connected to an AC plug on the property. Power optimizers apply DC PLC connected to the modules via DC cables. In addition to being robust, DC PLC is also a completely separate (and hence completely uninterrupted) working environment; the proper functionality of module-level monitoring is therefore assured.

6. GRID CODE COMPLIANCE

With the number of PV installations rapidly increasing, some European countries have adopted a new set of grid codes to preserve the stability of the electric grid such as active power correction, low voltage ride through (LVRT), etc. The SolarEdge system complies with these grid codes while microinverters currently do not.

7. SYSTEM COST AND RETURN ON INVESTMENT

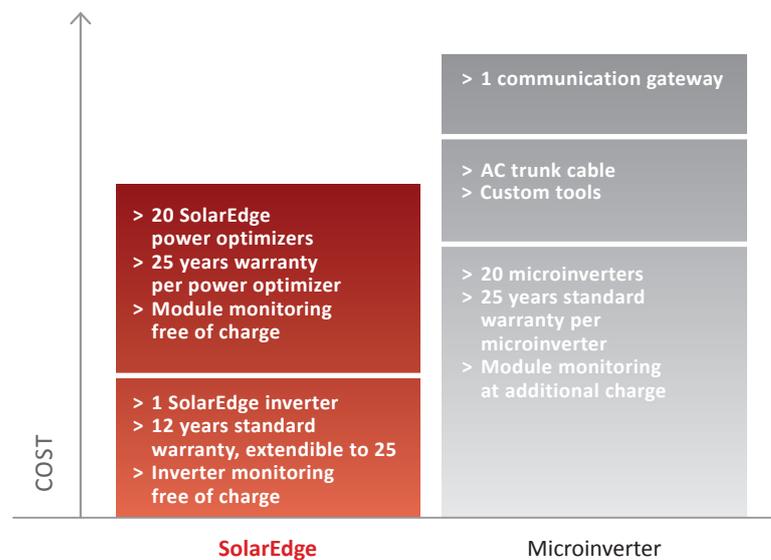
a. Lower upfront cost:

A microinverter system typically consists of one microinverter per module, communication gateways and costly AC trunk cables requiring custom tools. The limited current of the AC trunk cables further limits the amount of microinverters that can be connected to the same cable trunk. Thus installers still need to design AC strings and separate them with AC breakers. Furthermore, as there is no standard maintained for truck cable connectors, backward compatibility is not necessarily guaranteed.

The up-front cost of a SolarEdge system is 20%- 35% lower than that of a system installed with microinverters (figure 7). To begin with, the cost per unit for one SolarEdge power optimizer is lower than that of a single microinverter. As described in section 3 of this paper, SolarEdge power optimizers consist of fewer components than microinverters. In addition, the SolarEdge system includes a highly cost-effective DC/AC inverter, with communication hardware already built-in. Further, a maximum string length of 25 modules allows installers to reduce the wiring costs in a system. SolarEdge power optimizers are compatible with standard PV connectors used for the connected of PV modules and are therefore easy to replace.

Figure 7:

Upfront cost of a SolarEdge system compared to a microinverter system for a 5kW installation, with breakdown into required system components. The cost of a SolarEdge system is typically 20%-35% lower.



b. Faster return on investment:

Given a lower upfront cost, higher efficiency and more effective mismatch mitigation, the SolarEdge solution offers a better cost performance ratio against a microinverter system. The return on investment of an installation with a SolarEdge system will therefore be faster than for a system installed with microinverters.

8. ECONOMY OF SCALE:

It is an established fact that an inverter's cost per Watt decreases with increasing inverter capacity. In contrast, the principle of scaling does not apply to balance of system components allocated to the module-level; their cost is linear to the number of modules in the system. While microinverters duplicate the entire grid interface for each module, power optimizers still allow for the DC/AC conversion stage to occur only once at the inverter. A central DC/AC inversion stage means less components and therefore means a significant part of the cost remains scalable. Power optimizers are conclusively the more economical solution.

BETTER BY DESIGN

While microinverters are initially appealing for their simple concept, no advantages exist for the "all-AC" solution. In fact, microinverters or "AC modules" introduce many limitations. First, microinverters have limited AC output capacities and hence lack compatibility with many modules on the market. Microinverters have limited output rating than modules on the market today leading to the clipping of module power. Furthermore, microinverters have a narrow MPPT range restricting their effectiveness in partially shaded areas and system uptime. In addition, data communication in the AC environment suffers from interferences in the communication of data. Finally, the choice to use electrolytic capacitors and a high part count challenges the microinverter system's reliability and adds cost.

In contrast, power optimizers work efficiently in the DC environment of PV systems while providing all the features required at the module-level. Installers who use power optimizers benefit from full module compatibility, high product reliability, higher efficiency, a broad MPP tracking range with low MPPT voltage and uninterrupted DC power line communication. In addition, power optimizers and the SolarEdge system in particular, offer a more cost-effective solution as the DC/AC conversion remains centralized at the inverter. This keeps system cost low and scalable, as compared to that of microinverters. Power optimizers are simply better by design.

SERIES 100 UL ROOF MOUNT SYSTEM

SnapNrack Solar Mounting Solutions

The SnapNrack line of solar mounting solutions is designed to reduce total installation costs. The system's technical innovations have been proven to drive down costs and improve installation quality on more than 350 MW of solar installations.

Pitched Roof Arrays Simplified

The SnapNrack Series 100 UL Roof Mount System is an efficient, visually appealing, photovoltaic (PV) module installation system. Series 100 UL is Listed to the UL Standard 2703 for Bonding, meaning that all system components have been Certified by UL for electrical continuity, eliminating the need for additional grounding hardware. The System's components provide an adequate bonding path which has eliminated the need for grounding lugs and washers at each module, and bonding jumpers between splices. The UL 2703 Listing ensures that SnapNrack partners can provide the best in class installations in quality, safety, and efficiency.

- All bonding hardware is fully integrated into the components
- No grounding lugs required for modules
- Rail splices bond rails together, no rail jumpers required
- Proprietary SnapNrack grounding lug snaps in the rail channel, no drilling of rail or reaching for other tools required (One Lug per individual row of modules)
- Class A Fire Rating Type 1 and 2 modules

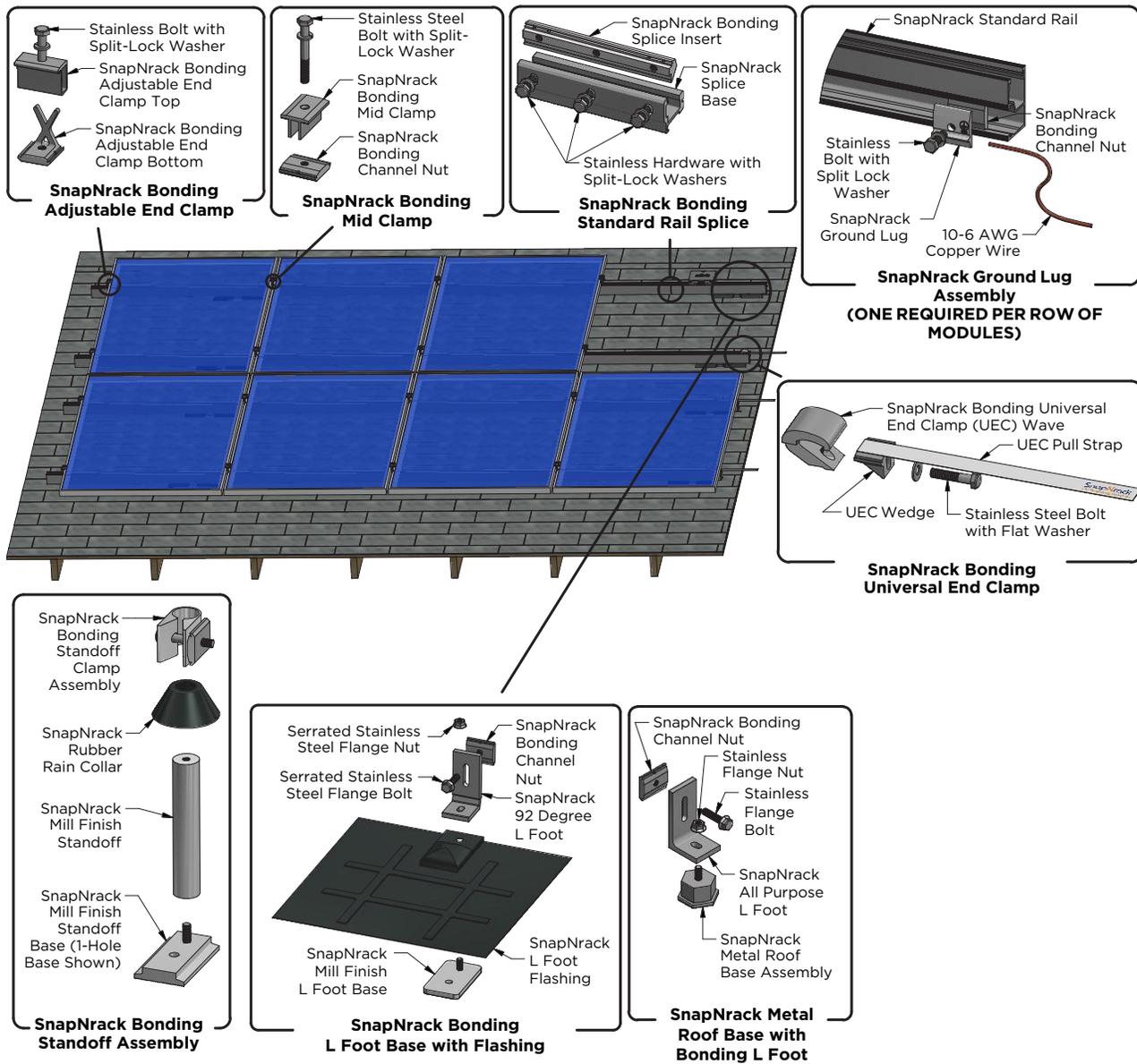
Patent Pending



Roof System in 4 Simple Steps:

- 1) Go to the online Series 100 Configuration Tool (configure.snapnrack.com) and select "Yes" for UL 2703 Listed
- 2) Identify Site Conditions (Array Tilt, Building Height, Roof Type, Wind and Snow Loads)
- 3) Build array in the online Configuration Tool and automatically generate a Bill of Materials.
- 4) Place order with your distributor. Purchase material for a single project or order in bulk for additional savings





SnapNrack Series 100 UL Technical Data Patent Pending

Materials	<ul style="list-style-type: none"> • 6000 Series aluminum • Stainless steel • Galvanized Steel and Aluminum Flashing
Material Finish	<ul style="list-style-type: none"> • Clear and black anodized aluminum • Mill Finish on select components
Installation	<ul style="list-style-type: none"> • Quick and efficient mounting • Adjustable hardware to ensure clean and level finish • All components bonded to ground with integrated bonding features
Calcs. & Certifications	<ul style="list-style-type: none"> • Listed to UL Standard 2703 for Grounding/Bonding and Fire Classification • Class A Fire Rating Type 1 and Type 2 Modules • Stamped Structural Engineering Reports for all 50 States
Grounding	<ul style="list-style-type: none"> • SnapNrack Grounding Lug (One Lug per individual row of modules)
Warranty	<ul style="list-style-type: none"> • 10 Year material and workmanship (download full details at snapnrack.com)



(877) 732-2860 www.SnapNrack.com

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CITY OF SOUTH MIAMI

**Solar Panel Purchase and Installation
Program for City Residents and Businesses
RFP #CSM-2015-07**

**Submittal Due Date: May 5, 2015 at 10 AM
Solicitation Cover Letter**

The City of South Miami, Florida (hereinafter referred to as “CSM”) through its chief executive officer (City Manager) hereby solicits sealed proposals responsive to the City’s request (hereinafter referred to as “Request for Proposals” or “RFP”). All references in this Solicitation (also referred to as an “Invitation for Proposals” or “Invitation to Bid”) to “City” shall be a reference to the City Manager, or the manager’s designee, for the City of South Miami unless otherwise specifically defined.

The City is hereby requesting sealed proposals in response to this **RFP #CSM-2015-07** titled **Solar Panel Purchase and Installation Program for City Residents and Businesses**. The purpose of this RFP is to identify qualified Respondents who can provide the goods and services contemplated in accordance with the scope of services described in this RFP (hereinafter referred to as “the Project” or “Project”)

Interested persons who wish to respond to this RFP can obtain the complete RFP package at the City Clerk’s office Monday through Friday from 9:00 A.M. to 4:00 P.M. or by accessing the following webpage: <http://www.southmiamifl.gov/> which is the City of South Miami’s web address for solicitation information. Proposals are subject to the Standard Terms and Conditions contained in the complete RFP Package, including all documents listed in the RFP.

The Proposal Package shall consist of one (1) original unbound proposal, three (3) additional copies and one (1) digital (or comparable medium including Flash Drive, DVD or CD) copy all of which shall be delivered to the Office of the City Clerk located at South Miami City Hall, 6130 Sunset Drive, South Miami, Florida 33143. The entire Proposal Package shall be enclosed in a sealed envelope or container and shall have the following Envelope Information clearly printed or written on the exterior of the envelope or container in which the sealed proposal is delivered: the title of this RFP, as follows **Solar Panel Purchase and Installation Program for City Residents and Businesses, RFP #CSM-2015-07** and the name of the Proposer (also referred to as “Respondent”). Special envelopes such as those provided by UPS or Federal Express will not be opened unless they contain the required Envelope Information on the front or back of the envelope. Sealed Proposals must be received by Office of the City Clerk, either by mail or hand delivery, no later than **10 A.M. local time on May 5, 2015**. A public opening will take place at 10 A.M. on the same date in the City Commission Chambers located at City Hall, 6130 Sunset Drive, South Miami 33143. Any Proposal received after 10 A.M. local time on said date will not be accepted under any circumstances. Any uncertainty regarding the time a Proposal is received will be resolved against the person submitting the proposal and in favor of the Clerk’s receipt stamp.

A Non-Mandatory Pre-Proposal Meeting will be conducted at City Hall in the Commission Chambers located at 6130 Sunset Drive, South Miami, FL 33143 on April 27, 2015 at 10:00 A.M. . The conference shall be held regardless of weather conditions. Proposals are subject to the terms, conditions and provisions of this letter as well as to those provisions, terms, conditions, affidavits and documents contained in this RFP Package.

Maria M. Menendez, CMC
City Clerk, City of South Miami

SCOPE OF SERVICES and SCHEDULE OF VALUES

**Solar Panel Purchase and Installation
Program for City Residents and Businesses
RFP #CSM-2015-07**

The Scope of Services and the Schedule of Values, if any, are set forth in the attached **Exhibit I**

END OF SECTION

SCHEDULE OF EVENTS

**Solar Panel Purchase and Installation
Program for City Residents and Businesses
RFP #CSM-2015-07**

No	Event	Date*	Time* (EST)
1	Advertisement/ Distribution of Solicitation & Cone of Silence begins	4/10/2015	4:00 PM
2	Non- Mandatory Pre-RFP Meeting	4/27/2015	10:00 AM
3	Deadline to Submit Questions	4/29/2015	10:00 AM
4	Deadline to City Responses to Questions	5/1/2015	10:00 AM
5	Deadline to Submit RFP Response	5/5/2015	10:00 AM
6	Project Announcement of selected Contractors/Cone of Silence ends	5/19/2015	7:00 PM

END OF SECTION

INSTRUCTIONS for RESPONDENT
Solar Panel Purchase and Installation
Program for City Residents and Businesses
RFP #CSM-2015-07

IT IS THE RESPONSIBILITY OF THE RESPONDENT TO THE SOLICITATION TO ENSURE THAT THE RESPONSE TO THE SOLICITATION (HEREINAFTER ALSO REFERRED TO AS THE "PROPOSAL" THROUGHOUT THE CONTRACT DOCUMENTS) REACHES THE CITY CLERK ON OR BEFORE THE CLOSING HOUR AND DATE STATED ON THE RFP FORM.

1. Designated Contact. The awarded firm shall appoint a person to act as a primary contact with Participants. This person or back-up shall be readily available during normal work hours by phone, email, or in person, and shall be knowledgeable of the terms of the contract.
2. Precedence of Conditions. The proposing firm, by virtue of submitting a response, agrees that the Contract Documents have been listed below in order of precedence, with the one having the most precedence being at the top of the list and the remaining documents in descending order of precedence. This order of precedence shall apply, unless otherwise specified in the Contract or General Conditions to the Contract:
 - a) Addenda to RFP
 - b) Attachments/Exhibits to RFP
 - c) RFP
 - d) Proposal
3. The terms, provisions, conditions and definitions contained in the Solicitation Cover Letter shall apply to these instructions to Respondents and they are hereby adopted and made a part hereof by reference. If there is a conflict between the Cover Letter and these instructions, or any other provision of this RFP, the Cover Letter shall govern and take precedence over the conflicting provision(s) in the RFP.
4. Any questions concerning the Solicitation or any required need for clarification must be made in writing, by **April 29, 2015 at 10 AM** to the attention of **Steven P. Kulick** at skulick@southmiamifl.gov or via **facsimile at (305) 663-6346**.
5. The issuance of a written addendum is the only official method whereby interpretation and/or clarification of information can be given. Interpretations or clarifications, considered necessary by the City in response to such questions, shall be issued by a written addendum to the RFP Package (also known as "RFP Specifications" or "RFP") by U.S. mail, e-mail or other delivery method convenient to the City and the City will notify all prospective firms via the City's website.
6. Verbal interpretations or clarifications shall be without legal effect. No plea by a Respondent of ignorance or the need for additional information shall exempt a Respondent from submitting the Proposal on the required date and time as set forth in the public notice.
7. Contingent Fees Prohibited. The proposing firm, by submitting a proposal, warrants that it has not employed or retained a company or person, other than a bona fide employee, contractor or subcontractor, working in its employ, to solicit or secure a contract, and that it has not paid or agreed to pay any person, company, corporation, individual or firm other than a bona fide employee, contractor or sub-consultant, working in its employ, any fee, commission, percentage, gift or other consideration contingent upon or resulting from the award.
8. Public Entity Crimes. A person or affiliate of the Respondent who has been placed on the convicted vendor list pursuant to Chapter 287 following a conviction for a public entity crime shall disclose such fact and the failure to disclose such facts in the Respondent's proposal shall be considered a material breach of any agreement between the Respondent and any Participant.
9. Respondents shall use the Proposal Form(s) furnished by the City. All erasures and corrections must have the initials of the Respondent's authorized representative in blue ink at the location of each and every erasure and correction. Proposals shall be signed using blue ink; all quotations shall be typewritten or printed with blue ink. All spaces shall be filled in with the requested information or the phrase "not applicable" or "NA". The proposal shall be delivered on or before the date and time, and at the place and in such manner as set forth in the Solicitation Cover Letter. Failure to do so may cause the Proposal to be rejected. Failure to include any of the Proposal Forms may invalidate the Proposal. Respondent shall deliver to the City, as part of its Proposal, the following documents:
 - a) The Invitation for Proposal and Instructions to Respondents.
 - b) A copy of all issued addenda.

- c) The completed Proposal Form fully executed.
 - d) Certificate of Insurance and/or Letter of Insurability.
10. Goods: If goods are to be provided pursuant to this RFP the following applies:
- a) Brand Names: If a brand name, make, manufacturer's trade name, or vendor catalog number is mentioned in this Solicitation, whether or not followed by the words "approved equal", it is for the purpose of establishing a grade or quality of material only. Respondent may offer goods that are equal to the goods described in this Solicitation with appropriate identification, samples and/or specifications for such item(s). The Participant shall be the sole judge concerning the merits of items proposed as equals.
 - b) Pricing: Prices should be stated in units of quantity specified in the Proposal Form. In case of a discrepancy, the Participant reserves the right to make the final determination at the lowest net cost.
 - c) Mistake: In the event that unit prices are part of the Proposal and if there is a discrepancy between the unit price(s) and the extended price(s), the unit price(s) shall prevail and the extended price(s) shall be adjusted to coincide. Respondents are responsible for checking their calculations. Failure to do so shall be at the Respondent's risk, and errors shall not release the Respondent from his/her or its responsibility as noted herein.
 - d) Samples: Samples of items, when required, must be furnished by the Respondent free of charge to the Participant. Each individual sample must be labeled with the Respondent's name and manufacturer's brand name and delivered by it within ten (10) calendar days of the Proposal opening unless schedule indicates a different time. If samples are requested subsequent to the Proposal opening, they shall be delivered within ten (10) calendar days of the request. The Participant shall not be responsible for the return of samples.
 - e) Respondent warrants by signature on the Proposal Form that prices quoted therein are in conformity with the latest Federal Price Guidelines, if applicable.
 - f) Governmental Restrictions: In the event any governmental restrictions may be imposed which would necessitate alteration of the material quality, workmanship, or performance of the items offered on this Proposal prior to their delivery, it shall be the responsibility of the successful Respondent to notify the Participant at once, indicating in its letter the specific regulation which required an alteration. The Participant reserves the right to accept any such alteration, including any price adjustments occasioned thereby, or to cancel all or any portion of the Contract, at the sole discretion of the City and at no further expense to the City with thirty (30) days advanced notice.
 - g) Respondent warrants that the prices, terms and conditions quoted in the Proposal shall be firm for a period of one hundred eighty (180) calendar days from the date of the Proposal opening unless otherwise stated in the Proposal Form. Incomplete, unresponsive, irresponsible, vague, or ambiguous responses to the Solicitation shall be cause for rejection, as determined by the Participant.
 - h) Safety Standards: The Respondent warrants that the product(s) to be supplied to the City conform in all respects to the standards set forth in the Occupational Safety and Health Act (OSHA) and its amendments. Proposals must be accompanied by a Materials Data Safety Sheet (M.S.D.S) when applicable.
11. Liability, Licenses & Permits: The successful Respondent shall assume the full duty, obligation, and expense of obtaining all necessary licenses, permits, and inspections required by this RFP and as required by law. The Respondent shall be liable for any damages or loss to the Participant occasioned by the negligence of the Respondent (or its agent or employees) or any person acting for or through the Respondent. Respondents shall furnish a certified copy of all licenses, Certificates of Competency or other licensing requirement necessary to practice their profession and applicable to the work to be performed as required by Florida Statutes, the Florida Building Code, Miami-Dade County Code or City of South Miami Code. These documents shall be furnished to the Participant as part of the Proposal. Failure to have obtained the required licenses and certifications or to furnish these documents shall be grounds for rejecting the Proposal and forfeiture of the Proposal/Bid Bond, if required for this Project.
12. Respondent shall comply with the City's insurance requirements as set forth in the attached **EXHIBIT 2** or, if applicable, the General Conditions to the Contract prior to issuance of any Contract(s) or Award(s) If a recommendation for award of the contract, or an award of the contract is made before compliance with this provision, the failure to fully and satisfactorily comply with the City's insurance requirements as set forth herein shall authorize the Participant to implement a rescission of the Proposal Award or rescission of the recommendation for award of contract without further Participant action. The Respondent, by submitting a Proposal, thereby agrees to hold the Participant harmless and agrees to indemnify the Participant and covenants not to sue the Participant by virtue of such rescission.
13. Copyrights and/or Patent Rights: Respondent warrants that as to the manufacturing, producing or selling of goods intended to be shipped or ordered by the Respondent pursuant to this Proposal, there has not

- been, nor will there be, any infringement of copyrights or patent rights. The Respondent agrees to indemnify Participant from any and all liability, loss or expense occasioned by any such violation or infringement.
14. Execution of Contract: The Respondent to this RFP acknowledges that by submitting a response or a proposal, Respondent agrees to the terms of the form contract and to the terms of the general conditions to the contract, both of which are part of this RFP package and agrees that Respondent's signature on the response to this RFP grants to the Participant the authority, on the Respondent's behalf, to insert, into any blank spaces in the contract documents, information obtained from the proposal and the Respondent's signature shall also be treated, for all purposes, including the enforcement of all of the terms and conditions of the contract, as the Respondent's signature on the contract, after the appropriate information has been inserted.
 15. Evaluation of Proposals: The Participant, at its sole discretion, reserves the right to inspect the facilities of any or all Respondents to determine its capability to meet the requirements of the Contract. In addition, the price, responsibility and responsiveness of the Respondent, the financial position, experience, staffing, equipment, materials, references, and past history of service to the Participant and/or with other units of state, and/or local governments in Florida, or comparable private entities, will be taken into consideration in the Award of the Contract.
 16. Drug Free Workplace: Failure to provide proof of compliance with Florida Statute Section 287.087, as amended, when requested shall be cause for rejection of the Proposal as determined by the Participant.
 17. Public Entity Crimes: A person or affiliate who was placed on the Convicted Vendors List following a conviction for a public entity crime may not submit a response on a contract to provide any services to a public entity, may not submit RFP on leases of real property to a public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for a period of 36 months from the date of being placed on the Convicted Vendors List.
 18. Contingent Fees Prohibited: The proposing firm must warrant that it has not employed or retained a company or person, other than a bona fide employee, contractor or subcontractor, working in its employ, to solicit or secure a contract with the Participant, and that it has not paid or agreed to pay any person, company, corporation, individual or firm other than a bona fide employee, contractor or sub-consultant, working in its employ, any fee, commission, percentage, gift or other consideration contingent upon or resulting from the award or making of a contract with the Participant.
 19. Hold Harmless: All Respondents shall hold the Participant, its officials and employees harmless and covenant not to sue the Participant, its officials and employees in reference to its decisions to reject, award, or not award a contract, as applicable, unless the claim is based solely on allegations of fraud and/or collusion. The submission of a proposal shall act as an agreement by the Respondent that the Proposal/Bid Bond, if required for this project, shall not be released until and unless the Respondent waives any and all claims that the Respondent may have against the Participant that arise out of this RFP process or until a judgment is entered in the Respondent's favor in any suit filed which concerns this proposal process. In any such suit, the prevailing party shall recover its attorney's fees, court costs as well as expenses associated with the litigation.
 20. Cancellation: Failure on the part of the Respondent to comply with the conditions, specifications, requirements, and terms as determined by the Participant, shall be just cause for cancellation of the Award or termination of the contract.
 21. Bonding Requirements: The Respondent, when submitting the Proposal, shall include a Proposal/Bid Bond, if required for this project, in the amount of 5% of the total amount of the base Proposal on the Proposal/Bid Bond Form included herein. A company or personal check shall not be deemed a valid Proposal Security.
 22. Performance and Payment Bond: The Participant may require the successful Respondent to furnish a Performance Bond and Payment Bond, each in the amount of 100% of the total Proposal Price, including Alternates if any, naming the Participant, as the obligee, as security for the faithful performance of the Contract and for the payment of all persons or entities performing labor, services and/or furnishing materials in connection herewith. The bonds shall be with a surety company authorized to do business in the State of Florida.
 - 22.1. Each Performance Bond shall be in the amount of one hundred percent (100%) of the Contract Price guaranteeing to Participant the completion and performance of the Work covered in the Contract Documents.
 - 22.2. Each Performance Bond shall continue in effect for five year after final completion and acceptance of the Work with the liability equal to one hundred percent (100%) of the Contract Sum.
 - 22.3. Each Payment bond shall guarantee the full payment of all suppliers, material man, laborers, or subcontractor employed pursuant to this Project.

- 22.4. Each Bond shall be with a Surety company whose qualifications meet the requirements of insurance companies as set forth in the insurance requirements of this solicitation.
- 22.5. Respondent shall ensure that the Bond(s) referenced above shall be recorded in the public records of Miami-Dade County and provide PARTICIPANT with evidence of such recording.
- 22.6. The surety company shall hold a current certificate of authority as acceptable surety on federal bonds in accordance with the United States Department of Treasury Circular 570, current revisions.
23. Pre-proposal Conference Site Visits: If a Mandatory Pre-proposal conference is scheduled for this project, all Respondents shall attend the conference and tour all areas referenced in the Solicitation Documents. It shall be grounds for rejecting a Proposal from a Respondent who did not attend the mandatory pre-proposal conference. No pleas of ignorance by the Respondent of conditions that exist, or that may hereinafter exist, as a result of failure to make the necessary examinations or investigations, or failure to complete any part of the RFP Package, will be accepted as basis for varying the requirements of the Contract with the Participant or the compensation of the Respondent.
24. Time of Completion: The time is of the essence with regard to the completion of the Work to be performed under the Contract to be awarded. Delays and extensions of time may be allowed only in accordance with the provisions stated in the appropriate section of the Contract Documents, including the Proposal Form. No change orders shall be allowed for delays caused by the person participating in the Solar Panel Program, other than for extensions of time to complete the Work.
25. Submittal Requirements: All Proposals shall comply with the requirements set forth herein.
26. Respondent shall not discriminate with regard to its hiring of employees or subcontractors or in its purchase of materials or in any way in the performance of its contract, if one is awarded, based on race, color, religion, national origin, sex, age, sexual orientation, disability, or familial status.

END OF SECTION

Proposal Submittal Checklist Form
Solar Panel Purchase and Installation
Program for City Residents and Businesses
RFP #CSM-2015-07

This checklist indicates the forms and documents required to be submitted for this solicitation and to be presented by the deadline set for within the solicitation. Fulfillment of all solicitation requirements listed is mandatory for consideration of response to the solicitation. Additional documents may be required and, if so, they will be identified in an addendum to this RFP. The response shall include the following items:

Attachments and Other Documents described below to be Completed IF MARKED WITH AN "X":		Check Completed.
X	Indemnification and Insurance Documents, <i>Exhibit 2</i>	_____
X	Bid Form, <i>Exhibit 3</i>	_____
X	Respondents Qualification Statement	_____
X	List of Proposed Subcontractors and Principal Suppliers	_____
X	Non-Collusion Affidavit	_____
X	Public Entity Crimes and Conflicts of Interest	_____
X	Drug Free Workplace	_____
X	Acknowledgement of Conformance with OSHA Standards	_____
X	Affidavit Concerning Federal & State Vendor Listings	_____
X	Related Party Transaction Verification Form	_____
X	Presentation Team Declaration/Affidavit of Representation	_____

Submit this checklist along with your proposal indicating the completion and submission of each required forms and/or documents.

END OF SECTION

RESPONDENT QUALIFICATION STATEMENT

Solar Panel Purchase and Installation Program for City Residents and Businesses RFP #CSM-2015-07

The response to this questionnaire shall be utilized as part of the PARTICIPANT'S overall Proposal Evaluation and RESPONDENT selection.

I. Number of similar construction projects completed,

- a) In the past 5 years _____
In the past 5 years On Schedule _____
- b) In the past 10 years _____
In the past 10 years On Schedule _____

II. List the last three (3) completed similar projects.

a) Project Name: _____

Owner Name: _____

Owner Address: _____

Owner Telephone: _____

Original Contract Completion Time
(Days): _____

Original Contract Completion Date: _____

Actual Final Contract Completion
Date: _____

Original Contract Price: _____

Actual Final Contract Price: _____

b) Project Name: _____

Owner Name: _____

Owner Address: _____

Owner Telephone: _____

Original Contract Completion Time
(Days): _____

Original Contract Completion Date: _____

Actual Final Contract Completion
Date: _____

Original Contract Price: _____

Actual Final Contract Price _____

c) Project Name: _____

Owner Name: _____

Owner Address: _____

Owner Telephone: _____

Original Contract Completion Time
(Days): _____

Original Contract Completion Date: _____

Actual Final Contract Completion
Date: _____

Original Contract Price: _____

Actual Final Contract Price: _____

III. Current workload

Project Name	Owner Name	Telephone Number	Contract Price

IV. The following information shall be attached to the proposal.

- a) RESPONDENT's home office organization chart.
- b) RESPONDENT's proposed project organizational chart.
- c) Resumes of proposed key project personnel, including on-site Superintendent.

V. List and describe any:

- a) Bankruptcy petitions filed by or against the Respondent or any predecessor organizations,
- b) Any arbitration or civil or criminal proceedings, or
- c) Suspension of contracts or debarring from Bidding or Responding by any public agency brought against the Respondent in the last five (5) years

VI. Government References:

List other Government Agencies or Quasi-government Agencies for which you have done business within the past five (5) years.

Name of Agency: _____

Address: _____

Telephone No.: _____

Contact Person: _____

Type of Project: _____

Name of Agency: _____

Address: _____

Telephone No.: _____

Contact Person: _____

Type of Project: _____

Name of Agency: _____

Address: _____

Telephone No.: _____

Contact Person:
Type of Project:

LIST OF PROPOSED SUBCONTRACTORS AND PRINCIPAL SUPPLIERS

Solar Panel Purchase and Installation Program for City Residents and Businesses RFP #CSM-2015-07

BIDDER shall list all Proposed Subcontractors to be used on this project if they are awarded the Contract.

Classification of Work	Subcontractor Name	Address	Telephone, Fax & Email
Landscape			
Sodding and Turf Work			
Electrical			
Irrigation			
Paving			
Park Amenities			
Graphics			
Utilities			
Excavation			
Building			
Structures			
Plumbing			
Painting			
Testing Laboratory			
Soil Fumigator			
Signs			
Other:			

This list shall be provided to the City on behalf of the Participant within five (5) business days after Bid Opening.

END OF SECTION

NON COLLUSION AFFIDAVIT

STATE OF FLORIDA)
)
COUNTY OF MIAMI-DADE)

_____ being first duly sworn, deposes and states that:

- (1) He/She/They is/are the _____
(Owner, Partner, Officer, Representative or Agent) of

_____ the Respondent that has submitted the
attached Proposal;
- (2) He/She/They is/are fully informed concerning the preparation and contents of the attached Proposal
and of all pertinent circumstances concerning such Proposal;
- (3) Such Proposal is genuine and is not a collusive or sham Proposal;
- (4) Neither the said Respondent nor any of its officers, partners, owners, agents, representatives,
employees or parties in interest, including this affiant, have in any way colluded, conspired, connived
or agreed, directly or indirectly, with any other Respondent, firm, or person to submit a collusive or
sham Proposal in connection with the Work for which the attached Proposal has been submitted; or
to refrain from Bidding or proposing in connection with such Work; or have in any manner, directly
or indirectly, sought by agreement or collusion, or communication, or conference with any
Respondent, firm, or person to fix any overhead, profit, or cost elements of the Proposal or of any
other Respondent, or to fix any overhead, profit, or cost elements of the Proposal Price or the
Proposal Price of any other Respondent, or to secure through any collusion, conspiracy, connivance,
or unlawful agreement any advantage against (Recipient), or any person interested in the proposed
Work;
- (5) The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any
collusion, conspiracy, connivance, or unlawful agreement on the part of the Respondent or any other
of its agents, representatives, owners, employees or parties of interest, including this affiant.

Signed, sealed and delivered in the presence of:

Witness

By: _____
Signature

Witness

Print Name and Title

Date

ACKNOWLEDGEMENT

STATE OF FLORIDA)
)
COUNTY OF MIAMI-DADE)

On this the _____ day of _____, 20____, before me, the undersigned Notary Public of the State
of Florida, personally appeared (Name(s) of individual(s) who appeared before
notary)_____ and whose name(s) is/are Subscribed to the
within instrument, and he/she/they acknowledge that he/she/they executed it.

WITNESS my hand and official seal.

Notary Public, State of Florida

NOTARY PUBLIC:
SEAL OF OFFICE:

(Name of Notary Public: Print, Stamp or type as
commissioned.)

_____ Personally known to me, or

_____ Personal identification:

Type of Identification Produced

_____ Did take an oath, or

_____ Did Not take an oath.

PUBLIC ENTITY CRIMES

Pursuant to the provisions of Paragraph (2) (a) of Section 287.133, Florida State Statutes – “A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a Proposal or bid on a Contract to provide any goods or services to a public entity, may not submit a Bid or proposal for a Contract with a public entity for the construction or repair of a public building or public work, may not submit bids or proposals on leases or real property to a public entity, may not be awarded to perform Work as a RESPONDENT, Sub-contractor, supplier, Sub-consultant, or Consultant under a Contract with any public entity, and may not transact business with any public entity in excess of the threshold amount Category Two of Section 287.017, Florida Statutes, for thirty six (36) months from the date of being placed on the convicted vendor list”.

The award of any contract hereunder is subject to the provisions of Chapter 112, Florida State Statutes. Respondents must disclose with their Proposals, the name of any officer, director, partner, associate or agent who is also an officer or employee of the City of South Miami or its agencies.

SWORN STATEMENT PURSUANT TO SECTION 287.133 (3) (a), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

I. This sworn statement is submitted to

_____ [print name of the public entity]

by _____ [print individual's name and title]

for _____ [print name of entity submitting sworn statement]

whose business address is _____

and (if applicable) its Federal Employer Identification Number (FEIN) is _____ (If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____.)

2. I understand that a “public entity crime” as defined in Paragraph 287.133 (1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to , any bid, proposal or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
3. I understand that “convicted” or “conviction” as defined in Paragraph 287.133 (1) (b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that an “affiliate” as defined in Paragraph 287.133 (1) (a), Florida Statutes, means:
- (a) A predecessor or successor of a person convicted of a public entity crime; or
 - (b) An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term “affiliate” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in any person, or a pooling of equipment or income among persons when not for fair

market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133 (1) (e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or proposal or applies to bid or proposal on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. [Indicate which statement applies.]

_____ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent of July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. [attach a copy of the final order.]

I UNDERSTAND THAT THE PARTICIPANT IN THE SOLAR SOLAR PANEL PURCHASE AND INSTALLATION PROGRAM FOR CITY RESIDENTS AND BUSINESSES RFP #CSM-2015-07 WILL BE RELYING ON THE TRUTH OF THE STATEMENTS CONTAINED IN THIS FORM AND THAT THE INFORMATION IN THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PARTICIPANT PRIOR TO ENTERING INTO A CONTRACT OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

Sworn to and subscribed before me this _____ day of _____, 20____.

[Signature]

Personally known _____

OR Produced identification _____

Notary Public – State of _____

(Type of identification)
Form PUR 7068 (Rev.06/11/92)

My commission expires _____
(Printed, typed or stamped commissioned
name of notary public)

DRUG FREE WORKPLACE

Whenever two or more Bids or Proposals which are equal with respect to price, quality and service are received by the State or by any political subdivisions for the procurement of commodities or contractual services, a Bid or Proposal received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie Bids or Proposals shall be followed if none of the tied vendors have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

- 1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that shall be taken against employees for violations of such prohibition.
- 2) Inform employees about the dangers of drug abuse in the workplace, the business' policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
- 3) Give each employee engaged in providing the commodities or contractual services that are under Bid a copy of the statement specified in Subsection (1).
- 4) In the statement specified in Subsection (1), notify the employees, that, as a condition of working of the commodities or contractual services that are under Bid, he employee shall abide by the terms of the statement and shall notify the employee of any conviction of, or plea of guilty or *nolo contendere* to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) business days after such conviction.
- 5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.
- 6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

RESPONDENT's Signature: _____

Print Name: _____

Date: _____

ACKNOWLEDGEMENT OF CONFORMANCE WITH OSHA STANDARDS

TO WHOM IT MAY CONCERN

We, _____, (Name of CONTRACTOR), hereby acknowledge and agree that as CONTRACTOR for the **Solar Panel Purchase and Installation for City Residents and Businesses** project as specified have the sole responsibility for compliance with all the requirements of the Federal Occupational Safety and Health Act of 1970, and all State and local safety and health regulations, and agree to indemnify and hold harmless the **Participant** against any and all liability, claims, damages, losses and expenses they may incur due to the failure of (Sub-contractor's names):

to comply with such act or regulation.

CONTRACTOR

Witness

BY: _____

Name

Title

**AFFIDAVIT CONCERNING
FEDERAL AND STATE VENDOR LISTINGS**

The person, or entity, who is responding to the City’s solicitation, hereinafter referred to as “Respondent”, must certify that the Respondent’s name Does Not appear on the State of Florida, Department of Management Services, “CONVICTED, SUSPENDED, DISCRIMINATORY FEDERAL EXCLUDED PARTIES and COMPLAINTS VENDOR LISTINGS”.

If the Respondent’s name Does appear on one or all the “Listings” summarized below, Respondents must “Check if Applies” next to the applicable “Listing.” The “Listings” can be accessed through the following link to the Florida Department of Management Services website:

http://www.dms.myflorida.com/business_operations/state_purchasing/vendor_information/convicted_suspended_discriminatory_complaints_vendor_lists

DECLARATION UNDER PENALTY OF PERJURY

I, _____ (hereinafter referred to as the “Declarant”) state, under penalty of perjury, that the following statements are true and correct:

- (1) I represent the Respondent whose name is _____.
- (2) I have the following relationship with the Respondent _____ (Owner (if Respondent is a sole proprietor), President (if Respondent is a corporation) Partner (if Respondent is a partnership), General Partner (if Respondent is a Limited Partnership) or Managing Member (if Respondent is a Limited Liability Company).
- (3) I have reviewed the Florida Department of Management Services website at the following URL address: http://www.dms.myflorida.com/business_operations/state_purchasing/vendor_information/convicted_suspended_discriminatory_complaints_vendor_lists
- (4) I have entered an “x” or a check mark beside each listing/category set forth below if the Respondent’s name appears in the list found on the Florida Department of Management Services website for that category or listing. If I did not enter a mark beside a listing/category it means that I am attesting to the fact that the Respondent’s name does not appear on the listing for that category in the Florida Department of Management Services website as of the date of this affidavit.

- Check if
Applicable
- ___ Convicted Vendor List
 - ___ Suspended Vendor List
 - ___ Discriminatory Vendor List
 - ___ Federal Excluded Parties List
 - ___ Vendor Complaint List

FURTHER DECLARANT SAYETH NOT.

(Print name of Declarant)

By: _____
(Signature of Declarant)

ACKNOWLEDGEMENT

STATE OF FLORIDA)
COUNTY OF MIAMI-DADE)

On this the ____ day of _____, 20____, before me, the undersigned authority, personally appeared _____ who is personally know to me or who provided the following identification _____ and who took an oath or affirmed that that he/she/they executed the foregoing Affidavit as the Declarant.

WITNESS my hand and official seal.

Notary Public, State of Florida

**NOTARY PUBLIC:
SEAL**

(Name of Notary Public: Print,
Stamp or type as commissioned.)

RELATED PARTY TRANSACTION VERIFICATION FORM

I _____, individually and on behalf of _____ (“Firm”) have Name of Representative Company/Vendor/Entity read the City of South Miami (“City”)’s Code of Ethics, Section 8A-1 of the City’s Code of Ordinances and I hereby certify, under penalty of perjury that to the best of my knowledge, information and belief:

(1) neither I nor the Firm have any conflict of interest (as defined in section 8A-1) with regard to the contract or business that I, and/or the Firm, am(are) about to perform for, or to transact with, the City, and

(2) neither I nor any employees, officers, directors of the Firm, nor anyone who has a financial interest greater than 5% in the Firm, has any relative(s), as defined in section 8A-1, who is an employee of the City or who is(are) an appointed or elected official of the City, or who is(are) a member of any public body created by the City Commission, i.e., a board or committee of the City, [while the ethics code still applies, if the person executing this form is doing so on behalf of a firm whose stock is publicly traded, the statement in this section (2) shall be based solely on the signatory’s personal knowledge and he/she is not required to make an independent investigation as to the relationship of employees or those who have a financial interest in the Firm.]; and

(3) neither I nor the Firm, nor anyone who has a financial interest greater than 5% in the Firm, nor any member of those persons’ immediate family (i.e., spouse, parents, children, brothers and sisters) has transacted or entered into any contract(s) with the City or has a financial interest, direct or indirect, in any business being transacted with the city, or with any person or agency acting for the city, other than as follows:

_(use (if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). [while the ethics code still applies, if the person executing this form is doing so on behalf of a firm whose stock is publicly traded, the statement in this section (3) shall be based solely on the signatory’s personal knowledge and he/she is not required to make an independent investigation as to the relationship of those who have a financial interest in the Firm.]; and

(4) no elected and/or appointed official or employee of the City of South Miami, or any of their immediate family members (i.e., spouse, parents, children, brothers and sisters) has a financial interest, directly or indirectly, in the contract between you and/or your Firm and the City other than the following individuals whose interest is set forth following their use a separate names: _____

(if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). The names of all City employees and that of all elected and/or appointed city officials or board members, who own, directly or indirectly, an interest of five percent (5%) or more of the total assets of capital stock in the firm are as follows:

(if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). [while the ethics code still applies, if the person executing this form is doing so on behalf of a firm whose stock is publicly traded, the statement in this section (4) shall be based solely on the signatory’s personal knowledge and he/she is not required to make an independent investigation as to the financial interest in the Firm of city employees, appointed officials or the immediate family members of elected and/or appointed official or employee.]

(5) I and the Firm further agree not to use or attempt to use any knowledge, property or resource which may come to us through our position of trust, or through our performance of our duties under the terms of the contract with the City, to secure a special privilege, benefit, or exemption for ourselves, or others. We agree that we may not disclose or use information, not available to members of the general public, for our personal gain or benefit or for the personal gain or benefit of any other person or business entity, outside of the normal gain or benefit anticipated through the performance of the contract.

(6) I and the Firm hereby acknowledge that we have not contracted or transacted any business with the City or any person or agency acting for the City, and that we have not appeared in representation of any third party before any board, commission or agency of the City within the past two years other than as

follows: _____ (if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath).
X:\Purchasing\Vendor Registration\12.28.12 RELATED PARTY TRANSACTION VERIFICATION FORM [3].docx

(7) Neither I nor any employees, officers, or directors of the Firm, nor any of their immediate family (i.e., as a spouse, son, daughter, parent, brother or sister) is related by blood or marriage to: (i) any member of the City Commission; (ii) any city employee; or (iii) any member of any board or agency of the City other than as follows: _____ (if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). [while the ethics code still applies, if the person executing this form is doing so on behalf of a firm whose stock is publicly traded, the statement in this section (7) shall be based solely on the signatory's personal knowledge and he/she is not required to make an independent investigation as to the relationship by blood or marriage of employees, officers, or directors of the Firm, or of any of their immediate family to any appointed or elected officials of the City, or to their immediate family members].

(8) No Other Firm, nor any officers or directors of that Other Firm or anyone who has a financial interest greater than 5% in that Other Firm, nor any member of those persons' immediate family (i.e., spouse, parents, children, brothers and sisters) nor any of my immediate family members (hereinafter referred to as "Related Parties") has responded to a solicitation by the City in which I or the Firm that I represent or anyone who has a financial interest greater than 5% in the Firm, or any member of those persons' immediate family (i.e. spouse, parents, children, brothers and sisters) have also responded, other than the following:

_____ (if necessary, use a separate sheet to supply additional information that will not fit on this line; however, you must make reference, on the above line, to the additional sheet and the additional sheet must be signed under oath). [while the ethics code still applies, if the person executing this form is doing so on behalf of a firm whose stock is publicly traded, the statement in this section (8) shall be based solely on the signatory's personal knowledge and he/she is not required to make an independent investigation into the Other Firm, or the Firm he/she represents, as to their officers, directors or anyone having a financial interest in those Firms or any of their any member of those persons' immediate family.]

(9) I and the Firm agree that we are obligated to supplement this Verification Form and inform the City of any change in circumstances that would change our answers to this document. Specifically, after the opening of any responses to a solicitation, I and the Firm have an obligation to supplement this Verification Form with the name of all Related Parties who have also responded to the same solicitation and to disclose the relationship of those parties to me and the Firm.

(10) A violation of the City's Ethics Code, the giving of any false information or the failure to supplement this Verification Form, may subject me or the Firm to immediate termination of any agreement with the City, and the imposition of the maximum fine and/or any penalties allowed by law. Additionally, violations may be considered by and subject to action by the Miami-Dade County Commission on Ethics. Under penalty of perjury, I declare that I have made a diligent effort to investigate the matters to which I am attesting hereinabove and that the statements made hereinabove are true and correct to the best of my knowledge, information and belief.

Signature: _____

Print Name & Title: _____

Date: _____

Sec. 8A-1. - Conflict of interest and code of ethics ordinance.

(a) Designation.

This section shall be designated and known as the "City of South Miami Conflict of Interest and Code of Ethics Ordinance." This section shall be applicable to all city personnel as defined below, and shall also constitute a standard of ethical conduct and behavior for all autonomous personnel, quasi-judicial personnel, advisory personnel and departmental personnel. The provisions of this section shall be applied in a cumulative manner. By way of example, and not as a limitation, subsections (c) and (d) may be applied to the same contract or transaction.

(b) Definitions. For the purposes of this section the following definitions shall be effective:

- (1) The term "commission members" shall refer to the mayor and the members of the city commission.
- (2) The term "autonomous personnel" shall refer to the members of autonomous authorities, boards and agencies, such as the city community redevelopment agency and the health facilities authority.
- (3) The term "quasi-judicial personnel" shall refer to the members of the planning board, the environmental review and preservation board, the code enforcement board and such other individuals, boards and agencies of the city as perform quasi-judicial functions.
- (4) The term "advisory personnel" shall refer to the members of those city advisory boards and agencies whose sole or primary responsibility is to recommend legislation or give advice to the city commission.
- (5) The term "departmental personnel" shall refer to the city clerk, the city manager, department heads, the city attorney, and all assistants to the city clerk, city manager and city attorney, however titled.
- (6) The term "employees" shall refer to all other personnel employed by the city.
- (7) The term "compensation" shall refer to any money, gift, favor, thing of value or financial benefit conferred, or to be conferred, in return for services rendered or to be rendered.
- (8) The term "controlling financial interest" shall refer to ownership, directly or indirectly, of ten percent or more of the outstanding capital stock in any corporation or a direct or indirect interest of ten percent or more in a firm, partnership, or other business entity at the time of transacting business with the city.
- (9) The term "immediate family" shall refer to the spouse, parents, children, brothers and sisters of the person involved.
- (10) The term "transact any business" shall refer to the purchase or sale by the city of specific goods or services for consideration and to submitting a bid, a proposal in response to a RFQ, a statement of qualifications in response to a request by the city, or entering into contract negotiations for the provision on any goods or services, whichever first occurs.

(c) Prohibition on transacting business with the city.

No person included in the terms defined in paragraphs (b)(1) through (6) and in paragraph (b)(9) shall enter into any contract or transact any business in which that person or a member of the immediate family has a financial interest, direct or indirect with the city or any person or agency acting for the city, and any such contract, agreement or business engagement entered in violation of this subsection shall render the transaction voidable. Willful violation of this subsection shall constitute malfeasance in office and shall affect forfeiture of office or position. Nothing in this subsection shall prohibit or make illegal:

- (1) The payment of taxes, special assessments or fees for services provided by the city government;
- (2) The purchase of bonds, anticipation notes or other securities that may be issued by the city through underwriters or directly from time to time.

Waiver of prohibition. The requirements of this subsection may be waived for a particular transaction only by four affirmative votes of the city commission after public hearing upon finding that:

- (1) An open-to-all sealed competitive proposal has been submitted by a city person as defined in paragraphs (b)(2), (3) and (4);
- (2) The proposal has been submitted by a person or firm offering services within the scope of the practice of architecture, professional engineering, or registered land surveying, as defined by the laws of the state and pursuant to the provisions of the Consultants' Competitive Negotiation Act, and when the proposal has been submitted by a city person defined in paragraphs (b)(2), (3) and (4);
- (3) The property or services to be involved in the proposed transaction are unique and the city cannot avail itself of such property or services without entering a transaction which would violate this subsection but for waiver of its requirements; and
- (4) That the proposed transaction will be in the best interest of the city.

This subsection shall be applicable only to prospective transactions, and the city commission may in no case ratify a transaction entered in violation of this subsection.

Provisions cumulative. This subsection shall be taken to be cumulative and shall not be construed to amend or repeal any other law pertaining to the same subject matter.

(d) Further prohibition on transacting business with the city.

No person included in the terms defined in paragraphs (b)(1) through (6) and in paragraph (b)(9) shall enter into any contract or transact any business through a firm, corporation, partnership or business entity in which that person or any member of the immediate family has a controlling financial interest, direct or indirect, with the city or any person or agency acting for the city, and any such contract, agreement or business engagement entered in violation of this subsection shall render the transaction voidable. The remaining provisions of subsection (c) will also be applicable to this subsection as though incorporated by recitation.

Additionally, no person included in the term defined in paragraph (b)(1) shall vote on or participate in any way in any matter presented to the city commission if that person has any of the following relationships with any of the persons or entities which would be or might be directly or indirectly affected by any action of the city commission:

- (1) Officer, director, partner, of counsel, consultant, employee, fiduciary or beneficiary; or
- (2) Stockholder, bondholder, debtor, or creditor, if in any instance the transaction or matter would affect the person defined in paragraph (b)(1) in a manner distinct from the manner in which it would affect the public generally. Any person included in the term defined in paragraph (b)(1) who has any of the specified relationships or who would or might, directly or indirectly, realize a profit by the action of the city commission shall not vote on or participate in any way in the matter.

(E) Gifts.

(1) *Definition.* The term "gift" shall refer to the transfer of anything of economic value, whether in the form of money, service, loan, travel, entertainment, hospitality, item or promise, or in any other form, without adequate and lawful consideration.

(2) *Exceptions.* The provisions of paragraph (e)(1) shall not apply to:

- a. Political contributions specifically authorized by state law;
- b. Gifts from relatives or members of one's household, unless the person is a conduit on behalf of a third party to the delivery of a gift that is prohibited under paragraph(3);
- c. Awards for professional or civic achievement;
- d. Material such as books, reports, periodicals or pamphlets which are solely informational or of an advertising nature.

(3) *Prohibitions.* A person described in paragraphs (b)(1) through (6) shall neither solicit nor demand any gift. It is also unlawful for any person or entity to offer, give or agree to give to any person included in the terms defined in paragraphs (b)(1) through (6), or for any person included in the terms defined in paragraphs (b)(1) through (6) to accept or agree to accept from another person or entity, any gift for or because of:

- a. An official public action taken, or to be taken, or which could be taken, or an omission or failure to take a public action;
- b. A legal duty performed or to be performed, or which could be performed, or an omission or failure to perform a legal duty;
- c. A legal duty violated or to be violated, or which could be violated by any person included in the term defined in paragraph (b)(1); or
- d. Attendance or absence from a public meeting at which official action is to be taken.

(4) *Disclosure.* Any person included in the term defined in paragraphs (b)(1) through (6) shall disclose any gift, or series of gifts from anyone person or entity, having a value in excess of \$25.00. The disclosure shall be made by filing a copy of the disclosure form required by chapter 112, Florida Statutes, for "local officers" with the city clerk simultaneously with the filing of the form with the clerk of the county and with the Florida Secretary of State.

(f) Compulsory disclosure by employees of firms doing business with the city.

Should any person included in the terms defined in paragraphs (b)(1) through (6) be employed by a corporation, firm, partnership or business entity in which that person or the immediate family does not have a controlling financial interest, and should the corporation, firm, partnership or business entity have substantial business commitments to or from the city or any city agency, or be subject to direct regulation by the city or a city agency, then the person shall file a sworn statement disclosing such employment and interest with the clerk of the city.

(g) Exploitation of official position prohibited.

No person included in the terms defined in paragraphs (b)(1) through (6) shall corruptly use or attempt to use an official position to secure special privileges or exemptions for that person or others.

(h) Prohibition on use of confidential information.

No person included in the terms defined in paragraphs (b)(1) through (6) shall accept employment or engage in any business or professional activity which one might reasonably expect would require or induce one to disclose confidential information acquired by reason of an official position, nor shall that person in fact ever disclose confidential information garnered or gained through an official position with the city, nor shall that person ever use such information, directly or indirectly, for personal gain or benefit.

(i) Conflicting employment prohibited.

No person included in the terms defined in paragraphs (b)(1) through (6) shall accept other employment which would impair independence of judgment in the performance of any public duties.

(j) Prohibition on outside employment.

(1) No person included in the terms defined in paragraphs (b)(6) shall receive any compensation for services as an officer or employee of the city from any source other than the city, except as may be permitted as follows:

a. *Generally prohibited.* No full-time city employee shall accept outside employment, either incidental, occasional or otherwise, where city time, equipment or material is to be used or where such employment or any part thereof is to be performed on city time.

b. *When permitted.* A full-time city employee may accept incidental or occasional outside employment so long as such employment is not contrary, detrimental or adverse to the interest of the city or any of its departments and the approval required in subparagraph c. is obtained.

c. *Approval of department head required.* Any outside employment by any full-time city employee must first be approved in writing by the employee's department head who shall maintain a complete record of such employment.

d. *Penalty.* Any person convicted of violating any provision of this subsection shall be punished as provided in section 1-11 of the Code of Miami-Dade County and, in addition shall be subject to dismissal by the appointing authority. The city may also assess against a violator a fine not to exceed \$500.00 and the costs of investigation incurred by the city.

(2) All full-time city employees engaged in any outside employment for any person, firm, corporation or entity other than the city, or any of its agencies or instrumentalities, shall file, under oath, an annual report indicating the source of the outside employment, the nature of the work being done and any amount of money or other consideration received by the employee from the outside employment. City employee reports shall be filed with the city clerk. The reports shall be available at a reasonable time and place for inspection by the public. The city manager may require monthly reports from individual employees or groups of employees for good cause.

(k) Prohibited investments.

No person included in the terms defined in paragraphs (b)(1) through (6) or a member of the immediate family shall have personal investments in any enterprise which will create a substantial conflict between private interests and the public interest.

(l) Certain appearances and payment prohibited.

(1) No person included in the terms defined in paragraphs (b)(1), (5) and (6) shall appear before any city board or agency and make a presentation on behalf of a third person with respect to any matter, license, contract, certificate, ruling, decision, opinion, rate schedule, franchise, or other benefit sought by the third person. Nor shall the person receive any compensation or gift, directly or indirectly, for services rendered to a third person, who has applied for or is seeking some benefit from the city or a city agency, in connection with the particular benefit sought by the third person. Nor shall the person appear in any court or before any administrative tribunal as counselor legal advisor to a party who seeks legal relief from the city or a city agency through the suit in question.

(2) No person included in the terms defined in paragraphs (b)(2), (3) and (4) shall appear before the city commission or agency on which the person serves, either directly or through an associate, and make a presentation on behalf of a third person with respect to any matter, license, contract, certificate, ruling, decision, opinion, rate schedule, franchise, or other benefit sought by the third person. Nor shall such person receive any compensation or gift, directly or indirectly, for services rendered to a third party who has applied for or is seeking some benefit from the city commission or agency on which the person serves in connection with the particular benefit sought by the third party. Nor shall the person appear in any court or before any administrative tribunal as counselor legal advisor to a third party who seeks legal relief from the city commission or agency on which such person serves through the suit in question.

(m) Actions prohibited when financial interests involved.

No person included in the terms defined in paragraphs (b) (1) through (6) shall participate in any official action directly or indirectly affecting a business in which that person or any member of the immediate family has a financial interest. A financial interest is defined in this subsection to include, but not be limited to, any direct or indirect interest in any investment, equity, or debt.

(n) Acquiring financial interests.

No person included in the terms defined in paragraphs (b)(1) through (6) shall acquire a financial interest in a project, business entity or property at a time when the person believes or has reason to believe that the financial interest may be directly affected by official actions or by official actions by the city or city agency of which the person is an official, officer or employee.

(o) Recommending professional services.

No person included in the terms defined in paragraphs (b)(1) through (4) may recommend the services of any lawyer or law firm, architect or architectural firm, public relations firm, or any other person or firm, professional

or otherwise, to assist in any transaction involving the city or any of its agencies, provided that a recommendation may properly be made when required to be made by the duties of office and in advance at a public meeting attended by other city officials, officers or employees.

(p) Continuing application after city service.

(1) No person included in the terms defined in paragraphs (b)(1), (5) and (6) shall, for a period of two years after his or her city service or employment has ceased, lobby any city official [as defined in paragraphs (b)(1) through (6)] in connection with any judicial or other proceeding, application, RFP, RFQ, bid, request for ruling or other determination, contract, claim, controversy, charge, accusation, arrest or other particular subject matter in which the city or one of its agencies is a party or has any interest whatever, whether direct or indirect. Nothing contained in this subsection shall prohibit any individual from submitting a routine administrative request or application to a city department or agency during the two-year period after his or her service has ceased.

(2) The provisions of the subsection shall not apply to persons who become employed by governmental entities, 501(c)(3) non-profit entities or educational institutions or entities, and who lobby on behalf of those entities in their official capacities.

(3) The provisions of this subsection shall apply to all persons described in paragraph (p)(1) whose city service or employment ceased after the effective date of the ordinance from which this section derives.

(4) No person described in paragraph (p)(1) whose city service or employment ceased within two years prior to the effective date of this ordinance shall for a period of two years after his or her service or employment enter into a lobbying contract to lobby any city official in connection with any subject described in paragraph (p)(1) in which the city or one of its agencies is a party or has any direct and substantial interest; and in which he or she participated directly or indirectly through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, during his or her city service or employment. A person participated "directly" where he or she was substantially involved in the particular subject matter through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, during his or her city service or employment. A person participated "indirectly" where he or she knowingly participated in any way in the particular subject matter through decision, approval, disapproval, recommendation, the rendering of advice, investigation, or otherwise, during his or her city service or employment. All persons covered by this paragraph shall execute an affidavit on a form approved by the city attorney prior to lobbying any city official attesting that the requirements of this subsection do not preclude the person from lobbying city officials.

(5) Any person who violates this subsection shall be subject to the penalties provided in section 8A-2(p).

(q) City attorney to render opinions on request.

Whenever any person included in the terms defined in paragraphs (b)(1) through (6) and paragraph (b)(9) is in doubt as to the proper interpretation or application of this conflict of interest and code of ethics ordinance, or whenever any person who renders services to the city is in doubt as to the applicability of the ordinance that person, may submit to the city attorney a full written statement of the facts and questions. The city attorney shall then render an opinion to such person and shall publish these opinions without use of the name of the person advised unless the person permits the use of a name.

(Ord. No. 6-99-1680, § 2, 3-2-99)

Editor's note- Ord. No. 6-99-1680, § 1, adopted 3-2-99, repealed §§ 8A-1 and 8A-2 in their entirety and replaced them with new §§

8A-1 and 8A-2. Former §§ 8A-1 and 8A-2 pertained to declaration of policy and definitions, respectively, and derived from Ord. No. 634, §§ 1 (1A-1), 1 (1A-2) adopted Jan. 11, 1969.

**PRESENTATION TEAM
DECLARATION/AFFIDVAIT OF REPRESENTATION**

This affidavit is not required for compliance with the City's Solicitation; however, it may be used to avoid the need to register members of your presentation team as lobbyists. Pursuant to City Ordinance 28-14-2206 (c)(9), any person who appears as a representative for an individual or firm for an oral presentation before a City certification, evaluation, selection, technical review or similar committee, shall list on an affidavit provided by the City staff, all individuals who may make a presentation. The affidavit shall be filed by staff with the Clerk's office at the time the committee's proposal is submitted to the City Manager. For the purpose of this subsection only, the listed members of the presentation team, with the exception of any person otherwise required to register as a lobbyist, shall not be required to pay any registration fees. No person shall appear before any committee on behalf of anyone unless he or she has been listed as part of the firm's presentation team pursuant to this paragraph or unless he or she is registered with the City Clerk's office as a lobbyist and has paid all applicable lobbyist registration fees.

Pursuant to '92.525(2), Florida Statutes, the undersigned, _____, makes the following declaration under penalty of perjury:

Listed below are all individuals who may make a presentation on behalf of the entity that the affiant represents. Please note; **No person shall appear before any committee on behalf of anyone unless he or she has been listed as part of the firm's presentation team pursuant to this paragraph or unless he or she is registered with the Clerk's office as a lobbyist and has paid all applicable lobbyist registration fees.**

<u>NAME</u>	<u>TITLE</u>

For the purpose of this Affidavit of Representation only, the listed members of the presentation team, with the exception of any person otherwise required to register as a lobbyist, shall not be required to pay any registration fees. The Affidavit of Representation shall be filed with the City Clerk's office at the time the committee's proposal is submitted to the City as part of the procurement process.

Under penalties of perjury, I declare that I have read the foregoing declaration and that the facts stated in it are true and specifically that the persons listed above are the members of the presentation team of the entity listed below

Executed this _____ day of _____, 20 .

Signature of Representative

Print Name and Title

Print name of entity being represented

END OF SECTION

NOTICE TO PROCEED
Solar Panel Purchase and Installation
Program for City Residents and Businesses
RFP #CSM-2015-07

TO:

DATE:

PROJECT DESCRIPTION: Solar Panel Purchase and Installation Program for City Residents and Businesses.

You are hereby notified that the solicitation period for the solar panel program has commence in accordance with the RFP

City of South Miami

BY: _____

(Print Name)

City Manager or designee

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged by _____

on this _____ day of _____, 20____.

BY: _____

TITLE: _____

END OF SECTION

Exhibit I

Scope of Services Solar Panel Purchase and Installation Program for City Residents and Businesses RFP #CSM-2015-07

I. Scope of Work:

The City intends to solicit licensed solar installers who desire to install rooftop photovoltaic ("PV") systems for residential and commercial property owners in the City of South Miami, at volume pricing. The decision to enter into a contract to install solar panels is solely at the option of individual City residents or business owners. The City shall make no guarantee as to the number of City residents or business owners who may decide to contract and purchase photovoltaic systems. The City intends that those interested contractors who respond to this solicitation will offer to City residents and business owners discounted pricing for installation of residential or commercial photovoltaic systems.

For example, a Respondent may offer all City residents and businesses a special price for the purchase and installation of grid-tied photovoltaic systems, **within six (6) months** commencing from the issuance of the Notice to Proceed ("Offer Period"), for the installation of **4, 5, 6, 7.5 and 10 kilowatts of grid-tied photovoltaic systems**. The commitments would be for a period of time that would not exceed 15 days following the close of the Offer Period and the commitments would automatically expire if the Contractor fails to accept the commitment within 15 days of the closing of the Offer Period.

The City shall make no claims as to how many City residents might be interested. In addition, the City shall not endorse any contractor who decides to participate in this program. A Participating Contractors listing will be communicated to City residents and business owners and, City residents and business owners will contract directly with individual contractors who have been designated as Participating Contractors for the installation of photovoltaic systems. The City shall place no limit on the number of Participating Contractors made available to City residents and business owners. Payment and/or financing will be the sole responsibility of participating City residents and business owners; the City shall have no reasonability or liability for payment of services, workmanship, and services provided by Participating Contractors. Terms and Conditions, project duration, warranties, etc., shall be negotiated between participating City residents and Participating Contractors; and, any government subsidies, available grants that will offset the installation costs of photovoltaic systems are the responsibility of the Contractor and City residents or business owners.

All Respondents must be licensed to perform the work, and qualified and certified with the **YGRENE Green Corridor Financing Program**. Please refer to the following website for **YGRENE Contractor registration information**: https://ygrene.us/fl/green_corridor.

All Respondents shall provide the participating residents or business owners with the same indemnification and insurance concerning matters that may arise out of this PV installation program, as if the Contractor was providing goods and/or services to the City. Those indemnification and insurance requirements are set forth in the attached **Exhibit 2**.

II. Site Locations:

City residents located within the borders of the City of South Miami, **See Exhibit 4, “City of South Miami Zoning Map.”** The contractor, at the contractor’s discretion, may extend the same offer to residents or businesses of neighboring areas.

III. Plans and Specifications:

Plans and specifications for photovoltaic systems shall be the responsibility of and shall be provided by Participating Contractors. At the minimum, the proposals shall specify the manufacturer and model of the PV panels and inverter systems, as well as the inverter type (e.g., grid-tie, grid-tie with battery backup, off-grid), panel type (e.g., polycrystalline panel) and sufficient information for the customer to determine the complete price inclusive of design, engineering, materials, labor, construction permits, and (optional) internet monitoring.

IV. Prices, Terms & Conditions:

Respondents shall attached to **Exhibit 3, Bid Form**, prices, terms, conditions and provisions for solar panel installations that Respondent will offer to prospective property owners in accordance with Exhibit I, “Scope of Services.”

V. Project Duration:

This program will be made available to City residents for a **six (6) month period** from the date of the issuance of the Notice to Proceed. The decision to contract for photovoltaic systems is solely at the discretion of City residents. Construction and installation of photovoltaic systems may exceed the six (6) month period of the programs availability. Each individual project duration, timelines, and project completion dates shall be established by Participating Contractors and the participating residents. However, the Participating Contractors shall not discriminate between those residents / business owners who respond to the photovoltaic system program and all residents / business owners shall be treated equally.

VI. Warranty:

Standard manufacturers’ warranties shall apply as well as a minimum one (1) year warranty for labor and materials.

END OF SECTION

EXHIBIT 2

Insurance Requirements

I.01 Insurance

- A. Without limiting its liability, the contractor, consultant or consulting firm (hereinafter referred to as "FIRM" with regard to Insurance and Indemnification requirements) shall be required to procure and maintain at its own expense during the life of the Contract, insurance of the types and in the minimum amounts stated below as will protect the FIRM, from claims which may arise out of or result from the contract or the performance of the contract with the City of South Miami, whether such claim is against the FIRM or any sub-contractor, or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.
- B. No insurance required by the CITY shall be issued or written by a surplus lines carrier unless authorized in writing by the CITY and such authorization shall be at the CITY's sole and absolute discretion. The FIRM shall purchase insurance from and shall maintain the insurance with a company or companies lawfully authorized to sell insurance in the State of Florida, on forms approved by the State of Florida, as will protect the FIRM, at a minimum, from all claims as set forth below which may arise out of or result from the FIRM's operations under the Contract and for which the FIRM may be legally liable, whether such operations be by the FIRM or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable: (a) claims under workers' compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed; (b) claims for damages because of bodily injury, occupational sickness or disease, or death of the FIRM's employees; (c) claims for damages because of bodily injury, sickness or disease, or death of any person other than the FIRM's employees; (d) claims for damages insured by usual personal injury liability coverage; (e) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting there from; (f) claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; (g) claims for bodily injury or property damage arising out of completed operations; and (h) claims involving contractual liability insurance applicable to the FIRM's obligations under the Contract.

I.02 Firm's Insurance Generally. The FIRM shall provide and maintain in force and effect until all the Work to be performed under this Contract has been completed and accepted by CITY (or for such duration as is otherwise specified hereinafter), the insurance coverage written on Florida approved forms and as set forth below:

I.03 Workers' Compensation Insurance at the statutory amount as to all employees in compliance with the "Workers' Compensation Law" of the State of Florida including Chapter 440, Florida Statutes, as presently written or hereafter amended, and all applicable federal laws. In addition, the policy (ies) must include: Employers' Liability at the statutory coverage amount. The FIRM shall further insure that all of its Subcontractors maintain appropriate levels of Worker's Compensation Insurance.

I.04 Commercial Comprehensive General Liability insurance with broad form endorsement, as well as automobile liability, completed operations and products liability, contractual liability, severability of interest with cross liability provision, and personal injury and property damage liability with limits of \$1,000,000 combined single limit per occurrence and \$2,000,000 aggregate, including:

- Personal Injury: \$1,000,000;
- Medical Insurance: \$5,000 per person;
- Property Damage: \$500,000 each occurrence;

I.05 Umbrella Commercial Comprehensive General Liability insurance shall be written on a Florida approved form with the same coverage as the primary insurance policy but in the amount of \$1,000,000 per claim and \$2,000,000 Annual Aggregate. Coverage must be afforded on a form no more restrictive than the latest edition of the Comprehensive General Liability policy, without restrictive endorsements, as filed by the Insurance Services Office, and must include:

- (a) Premises and Operation
- (b) Independent Contractors
- (c) Products and/or Completed Operations Hazard
- (d) Explosion, Collapse and Underground Hazard Coverage

- (e) Broad Form Property Damage
- (f) Broad Form Contractual Coverage applicable to this specific Contract, including any hold harmless and/or indemnification agreement.
- (g) Personal Injury Coverage with Employee and Contractual Exclusions removed, with minimum limits of coverage equal to those required for Bodily Injury Liability and Property Damage Liability.

I.06 Business Automobile Liability with minimum limits of One Million Dollars (\$1,000,000.00) plus an additional One Million Dollar (\$1,000,000.00) umbrella per occurrence combined single limit for Bodily Injury Liability and Property Damage Liability. Umbrella coverage must be afforded on a form no more restrictive than the latest edition of the Business Automobile Liability policy, without restrictive endorsements, as filed by with the state of Florida, and must include:

- (a) Owned Vehicles.
- (b) Hired and Non-Owned Vehicles
- (c) Employers' Non-Ownership

I.07 SUBCONTRACTS: The FIRM agrees that if any part of the Work under the Contract is sublet, the subcontract shall contain the same insurance provision as set forth above and below and substituting the word Subcontractor for the word FIRM and substituting the word FIRM for CITY where applicable.

I.08 Fire and Extended Coverage Insurance (Builders' Risk), IF APPLICABLE:

- A. In the event that this contract involves the construction of a structure, the CONTRACTOR shall maintain, with an Insurance Company or Insurance Companies acceptable to the CITY, "Broad" form/All Risk Insurance on buildings and structures, including Vandalism & Malicious Mischief coverage, while in the course of construction, including foundations, additions, attachments and all permanent fixtures belonging to and constituting a part of said buildings or structures. The policy or policies shall also cover machinery, if the cost of machinery is included in the Contract, or if the machinery is located in a building that is being renovated by reason of this contract. The amount of insurance must, at all times, be at least equal to the replacement and actual cash value of the insured property. The policy shall be in the name of the CITY and the CONTRACTOR, as their interest may appear, and shall also cover the interests of all Subcontractors performing Work.
- B. All of the provisions set forth in herein below shall apply to this coverage unless it would be clearly not applicable.

I.09 Miscellaneous:

- A. If any notice of cancellation of insurance or change in coverage is issued by the insurance company or should any insurance have an expiration date that will occur during the period of this contract, the FIRM shall be responsible for securing other acceptable insurance prior to such cancellation, change, or expiration so as to provide continuous coverage as specified in this section and so as to maintain coverage during the life of this Contract.
- B. All deductibles must be declared by the FIRM and must be approved by the CITY. At the option of the CITY, either the FIRM shall eliminate or reduce such deductible or the FIRM shall procure a Bond, in a form satisfactory to the CITY covering the same.
- C. The policies shall contain waiver of subrogation against CITY where applicable, shall expressly provide that such policy or policies are primary over any other collectible insurance that CITY may have. The CITY reserves the right at any time to request a copy of the required policies for review. All policies shall contain a "severability of interest" or "cross liability" clause without obligation for premium payment of the CITY as well as contractual liability provision covering the Contractors duty to indemnify the City as provided in this Agreement.
- D. Before starting the Work, the FIRM shall deliver to the CITY and CONSULTANT certificates of such insurance, acceptable to the CITY, as well as the insurance binder, if one is issued, the insurance policy, including the declaration page and all applicable endorsements and provide the name, address and telephone number of the insurance agent or broker through whom the policy was obtained. The insurer shall be rated A.VII or better per A.M. Best's Key Rating Guide, latest edition and authorized to issue insurance in the State of Florida. All insurance policies must be written on forms approved by the State of Florida and they must remain in full force and effect for the duration of the contract period with the CITY.

Indemnification Requirement

A. The Contractor accepts and voluntarily incurs all risks of any injuries, damages, or harm which might arise during the work or event that is occurring on the CITY's property due to the negligence or other fault of the Contractor or anyone acting through or on behalf of the Contractor.

B. The Contractor shall indemnify, defend, save and hold CITY, its officers, affiliates, employees, successors and assigns, harmless from any and all damages, claims, liability, losses, claims, demands, suits, fines, judgments or cost and expenses, including reasonable attorney's fees, paralegal fees and investigative costs incidental there to and incurred prior to, during or following any litigation, mediation, arbitration and at all appellate levels, which may be suffered by, or accrued against, charged to or recoverable from the City of South Miami, its officers, affiliates, employees, successors and assigns, by reason of any causes of actions or claim of any kind or nature, including claims for injury to, or death of any person or persons and for the loss or damage to any property arising out of a negligent error, omission, misconduct, or any gross negligence, intentional act or harmful conduct of the Contractor, its contractor/subcontractor or any of their officers, directors, agents, representatives, employees, or assigns, or anyone acting through or on behalf of any of them, arising out of this Agreement, incident to it, or resulting from the performance or non-performance of the Contractor's obligations under this AGREEMENT.

C. The Contractor shall pay all claims, losses and expenses of any kind or nature whatsoever, in connection therewith, including the expense or loss of the CITY and/or its affected officers, affiliates, employees, successors and assigns, including their attorney's fees, in the defense of any action in law or equity brought against them and arising from the negligent error, omission, or act of the Contractor, its Sub-Contractor or any of their agents, representatives, employees, or assigns, and/or arising out of, or incident to, this Agreement, or incident to or resulting from the performance or non-performance of the Contractor's obligations under this AGREEMENT.

D. The Contractor agrees and recognizes that neither the CITY nor its officers, affiliates, employees, successors and assigns shall be held liable or responsible for any claims, including the costs and expenses of defending such claims which may result from or arise out of actions or omissions of the Contractor, its contractor/subcontractor or any of their agents, representatives, employees, or assigns, or anyone acting through or on behalf of the them, and arising out of or concerning the work or event that is occurring on the CITY's property. In reviewing, approving or rejecting any submissions or acts of the Contractor, CITY in no way assumes or shares responsibility or liability for the acts or omissions of the Contractor, its contractor/subcontractor or any of their agents, representatives, employees, or assigns, or anyone acting through or on behalf of them.

E. The Contractor has the duty to provide a defense with an attorney or law firm approved by the City of South Miami, which approval will not be unreasonably withheld.

END OF SECTION

EXHIBIT 3

BID FORM

Solar Panel Purchase and Installation Program for City Residents and Businesses RFP #CSM-2015-07

THIS PROPOSAL IS SUBMITTED TO:

Steven Alexander
City Manager on behalf of the City residents and businesses
City of South Miami
6130 Sunset Drive
South Miami, FL 33143

1. Respondent accepts all of the terms and conditions of the RFP and Instructions to Respondents, This Proposal will remain subject to acceptance for 180 calendar days after the day of the Proposal Opening.
2. In submitting this Proposal, Respondent represents that:
 - a. Respondent has examined copies of all the RFP Documents and of the following Addenda, if any (receipt of all which is hereby acknowledged.)

Addendum No. _____ Dated: _____

Addendum No. _____ Dated: _____

- b. Respondent has familiarized himself with the nature and extent of the proposed work, site, locality, and all local conditions and laws and regulations that in any manner may affect cost, progress, performance or furnishing of the Work.
 - c. This Proposal is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted pursuant to any agreement or rules of any group, association, organization, or corporation; Respondent has not directly or indirectly induced or solicited any other Respondent to submit a false or sham Proposal; Respondent has not solicited or induced any person, firm or corporation to refrain from responding; and Respondent has not sought by collusion or otherwise to obtain for itself any advantage over any other Respondent or over the PARTICIPANT.
3. **Attached to this Bid Form are the solar panel systems, prices and terms, conditions and provision of the Agreement that is hereby offered to prospective property owners in accordance with Exhibit I, "Scope of Services."**
4. Attached to this Bid Form is Respondent's certificate of insurance reflecting compliance with the insurance requirements of this RFP, applicable licenses and YGRENE certification (see scope of services) to perform this type of work.
5. Communications concerning this Proposal shall be addressed to:

RESPONDENT: _____
Address: _____

Telephone: _____
Facsimile: _____
Attention: _____

_____ DAY OF _____ 20____.

SUBMITTED THIS _____

PROPOSAL SUBMITTED BY:

Company

Telephone Number

Name of Person Authorized to Submit
Proposal

Fax Number

Signature

Email Address

Title

END OF SECTION

EXHIBIT 4

**Solar Panel Purchase and Installation
Program for City Residents and Businesses
RFP #CSM-2015-07**

“City of South Miami Zoning Map”

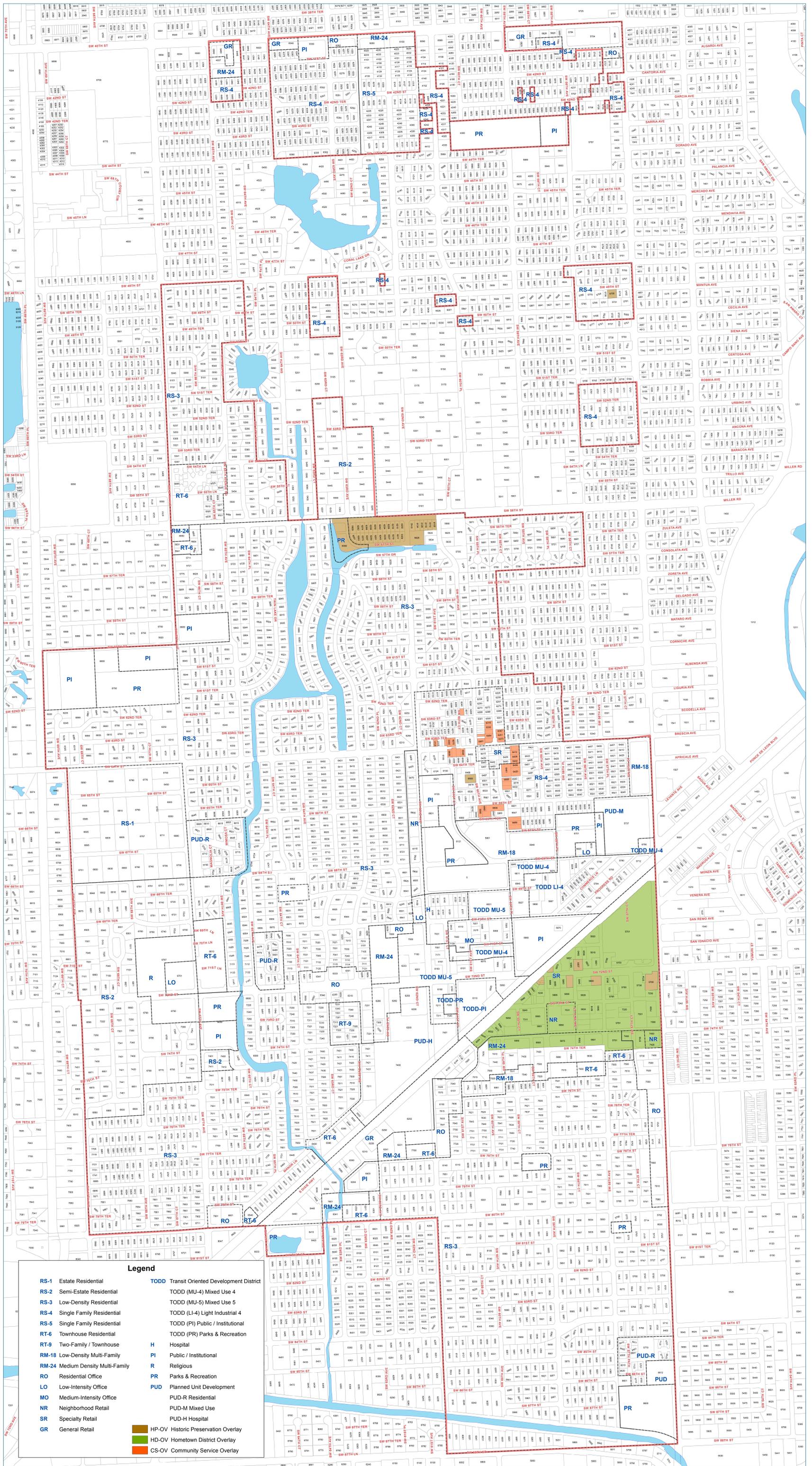


City of South Miami Zoning Map



- Zoning Boundaries
- Water Features
- South Miami Boundary
- Property Boundaries

0 375 750 1,500 2,250 3,000 Feet



Legend

- | | |
|-----------------------------------|--------------------------------------------|
| RS-1 Estate Residential | TODD Transit Oriented Development District |
| RS-2 Semi-Estate Residential | TODD (MU-4) Mixed Use 4 |
| RS-3 Low-Density Residential | TODD (MU-5) Mixed Use 5 |
| RS-4 Single Family Residential | TODD (LI-4) Light Industrial 4 |
| RS-5 Single Family Residential | TODD (PI) Public / Institutional |
| RT-6 Townhouse Residential | TODD (PR) Parks & Recreation |
| RT-9 Two-Family / Townhouse | H Hospital |
| RM-18 Low-Density Multi-Family | PI Public / Institutional |
| RM-24 Medium-Density Multi-Family | R Religious |
| RO Residential Office | PR Parks & Recreation |
| LO Low-Intensity Office | PUD Planned Unit Development |
| MO Medium-Intensity Office | PUD-R Residential |
| NR Neighborhood Retail | PUD-M Mixed Use |
| SR Specialty Retail | PUD-H Hospital |
| GR General Retail | HP-OV Historic Preservation Overlay |
| | HD-OV Hometown District Overlay |
| | CS-OV Community Service Overlay |

Updated: 9/3/2013

Made by



END OF DOCUMENT



ADDENDUM No. #1

Project Name: Solar Panel Purchase & Installation Program for City Residents & Businesses

RFP NO. CSM-2015-07

Date: April 27, 2015

Sent: Fax/E-mail/webpage

This addendum submission is issued to clarify, supplement and/or modify the previously issued Solicitation, and is hereby made part of the Documents. All requirements of the Documents not modified herein shall remain in full force and effect as originally set forth. It shall be the sole responsibility of the bidder to secure Addendums that may be issued for a specific solicitation.

Question #1:

How should a Respondent to the RFP submit pricing?

Answer to Question #1:

In addition to ***Exhibit 1, "Scope of Services," and III. "Plans & Specifications,"*** Respondents must submit pricing using ***Exhibit 3, "Bid Form," Attachment A, "Installed Solar Panel Price Proposal Grid,"*** attached to this Addendum. Pricing submitted is based on an **"Installed Price per Kilowatt; by Roof Type."** Respondents are to quote "Tier I Solar Panel Manufactures" **ONLY**.

Question #2:

If a resident or business has an active roof warranty in place, how does this program and the volume pricing apply?

Answer to Question #2:

If a resident or business located within the City has an active roof warranty in place, the volume pricing submitted by the Respondents may not apply; depending upon a review of the Terms and Conditions of the roof warranty by the solar panel installer and the roof warranty holder.

Question #3:

Who may perform solar panel roof installations as part of this RFP?

Answer to Question #3:

Respondents must be licensed to perform the work and, qualified and certified with the YGRENE Green Corridor Financing Program. **Please refer to the following website for YGRENE Contractor registration information: https://ygrene.us/fl/green_corridor.**

IT SHALL BE THE SOLE RESPONSIBILITY OF THE BIDDER TO SECURE ADDENDUMS THAT MAY BE ISSUED FOR A SPECIFIC SOLICITATION.

EXHIBIT 3

BID FORM

Attachment A

"INSTALLED SOLAR PANEL PRICE PROPOSAL GRID"

Dollars Per Killowatt, By Roof Type					
KW	Ashpalt Shingle	Clay/Spanish Tile	Metal Seam	Concrete	Bar Joist
0 to 5					
5 to 10					
10 to 17					
17 & UP					

Note: Responents are to quote "Tier I Solar Panel Manufactures Only



ADDENDUM No. #2

Project Name: Solar Panel Purchase & Installation Program for City Residents & Businesses

RFP NO. CSM-2015-07

Date: April 28, 2015

Sent: Fax/E-mail/webpage

This addendum submission is issued to clarify, supplement and/or modify the previously issued Solicitation, and is hereby made part of the Documents. All requirements of the Documents not modified herein shall remain in full force and effect as originally set forth. It shall be the sole responsibility of the bidder to secure Addendums that may be issued for a specific solicitation.

Question #1:

Are references required as part of this process? We have well over 100 South Florida satisfied solar PV customers but since all RFPs become public record, we cannot provide you with any names, numbers and email addresses with our customer base. We would be happy to provide them for qualified solar prospects but we cannot publicly provide them. This also applies to our work in process. We just finished 18 local residential installs in the last 3 months but we cannot and will not disclose the names, numbers and contract amounts. If this requirement hold then we will be forced to no respond to this RFP and I am sure other contractors who respect the rights and privacy of their clients will do the same.

Answer to Question #1:

Respondents to this RFP are not required to provide references.

Question #2:

Just confirming that you are not looking for any pricing and all pricing is between the contractor and the client. Also notice that you are wanting discounted pricing but suggest we cannot discriminate between participant customers and non participant customers. We need clarification on that.

Answer to Question #2:

The RFP is requesting pricing from Respondents. Refer to Exhibit I “Scope of Services” and Addendum No. 1, dated April 27, 2015

Question #3:

Also confirming that you are not requiring NABCEP certification? Most programs like this around the US require this because it pushes this process to a qualified company that tests, monitors and approves solar contractors and PRIVATELY checks references, insurance, licensing, and current and past performance. Most cities just require NABCEP, insurance and local licensing. That covers basically all you are asking for and pushes the responsibility to a third party.

Answer to Question #3:

The North American Board of Certified Energy Practitioners (NABCEP) is a private organization and to the City’s knowledge, not officially endorsed by the Florida Building Code. Therefore it is **not mandatory** a (Florida licensed) contractor, for the purposes of this solicitation, is certified by NABCEP.

A permit application by a certified Florida contractor licensed in the appropriate category must be submitted to the City’s Building Department prior to installation. The City’s Building Department’s review of permit documents required for such an installation are best described in the attached document, “Solar Systems Permit Document Guideline.” Please note that under the master permit, several sub-permits for roofing, electrical and/or mechanical trades may be required depending on the type of equipment and installation guidelines to be provided, but most important a Notice of Acceptance (NOA) from Miami-Dade or the State of Florida is mandatory for whatever equipment is to be installed.

Question #4:

There are dozens of conflicts in this RFP concerning the city approving items and requiring items and talking about the "contract with the city" then many other items stating that the city is not involved at all in the process and all contracts etc are between the homeowner/business owner and the city. The boilerplate on this RFP conflicts with the purpose of this RFP.

Answer to Question #4:

Refer to the Exhibit I, “Scope of Services.”

**IT SHALL BE THE SOLE RESPONSIBILITY OF THE BIDDER TO SECURE
ADDENDUMS THAT MAY BE ISSUED FOR A SPECIFIC SOLICITATION.**

Answer to Question #2:

The RFP is requesting pricing from Respondents. Refer to Exhibit I “Scope of Services” and Addendum No. 1, dated April 27, 2015

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**CITY OF SOUTH MIAMI
BUILDING DEPARTMENT**

SOLAR SYSTEMS PERMIT DOCUMENT GUIDELINE

Building / Equipment / Roof Plan Information

Required for Photovoltaic & Solar Thermal Systems

1. Provide a roof plan diagram showing all dimensions and the total area of the roof.
2. Show roof edges, walls, parapet walls, change of elevations, expansion joints, roof top equipment, etc. on the roof plan diagram
3. Show the location on the roof where the solar system is to be installed.
Include the size of the solar system and total area of the proposed system installed on the roof.
4. Provide the wind uplift zone (per ASCE-7) of the roof, the solar system is to be installed & the wind uplift pressure for that zone.
5. Provide the Perimeter Width (per ASCE-7) of the roof and /or roof section, the solar system is to be installed
6. Provide the type of structural roof deck type on the building, the solar system is to be installed
7. Specify condition of the roof assembly:
 - New roof (tied to a new construction master permit) ***Separate roof permit required.***
 - Re-roof (replacing existing roof assembly) ***Separate roof permit required.***
 - Existing roof (no change to roof assembly) ***Fire Rating of the existing roof assembly shall be maintained.***
8. Specify the type of roof on the structure and the roofing material used for the roof assembly.
9. Submit roof clearance requirements for the proposed solar system.
10. Submit a detail of required roof penetration flashings
11. Provide a Florida Solar Energy Center (FSEC) photovoltaic system certification approval form for the proposed solar system

NOTE: Photovoltaic Laminate Modules require a separate roofing permit for the installation of this product.

12. Provide completed copy of owner's solar system disclosure form.

Structural Design Requirements for Solar Systems

Provide signed & sealed drawings & design calculations for the applicable requirements listed below:

- 1. Provide documentation and/or verification that the exposed solar panel equipment meets wind load
- 2. Provide documentation and/or verification the support framing meets both uplift and lateral forces
- 3. Provide documentation and/ or verification the structure will accommodate additional dead loads
- 4. Provide design of connections for the wind loads

Electrical Design Requirements for Solar Systems

- 1. Submit a complete Electrical Diagram:

Designed in accordance to the NEC Article 690 Solar Photovoltaic Systems, in its entirety.

- 2. Submit a floor plan showing location of all electrical equipment
- 3. Submit load calculations

NEC 110.3(B) Installation and Use Listed or Labeled equipment shall be installed and used in accordance with any instructions included in the listing or labeling

Electrical Engineer must sign and seal plans if:

- 1. The system has a value of more than \$50,000
- 2. The system has an aggregate service of capacity of 600 amps (240 volts) or more for a residential electrical system
- 3. The system has an aggregate service of capacity of 800 amps (240 volts) or more for a commercial or industrial electrical system

Solar Water Heaters

System Components

- 1. Solar water heater: Submit FSEC approval/listing and system reference drawing

- 2. Solar water heater using a PV powered pump: Provide electrical listing for PV panel and pump
- 3. Solar swimming pool water heater: Provide manufacturer's selected system installation manual /detail and system specifications
- 4. Solar swimming pool water heater: Provide FSEC approval/listing and system reference drawing
- 5. Show water heater storage tank location on the floor plan
- 6. Show water heater storage tank relief line termination point
- 7. Show piping layout from solar collector to storage tank

USEFUL LINKS

- » [Florida Power & Light Company](#)
- » View Solar Energy Information
 - » [Customer-Owned Renewable Generation](#)
 - » Photovoltaic Systems
 - » Photovoltaic Systems Interconnection Tiers
 - » Tier One (0-10kW) [Learn more](#)
 - » Tier Two (>10kW – 100kW) [Learn more](#)
 - » Tier Three (>100kW – 2mW) [Learn more](#)

**Note: For Tier Two & Tier Three Photovoltaic Systems:
System designers please contact FPL @ netmetering@fpl.com prior to final design completion, to assure the visible load break switch is acceptable to FPL.**

- » [FLORIDA SOLAR ENERGY CENTER \(FSEC\)](#)



ADDENDUM No. #3

Project Name: Solar Panel Purchase & Installation Program for City Residents & Businesses

RFP NO. CSM-2015-07

Date: April 29, 2015

Sent: Fax/E-mail/webpage

This addendum submission is issued to clarify, supplement and/or modify the previously issued Solicitation, and is hereby made part of the Documents. All requirements of the Documents not modified herein shall remain in full force and effect as originally set forth. It shall be the sole responsibility of the bidder to secure Addendums that may be issued for a specific solicitation.

Question #1:

Your links from FPL are also out of date. For the last 6 months + FPL has not required disconnects on systems with UL listed inverters.

Answer to Question #1:

The Solar Systems Permit Document Guidelines provided by the City's Building Department are guidelines only. A permit application by a certified Florida contractor licensed in the appropriate category must be submitted to the City's Building Department prior to installation. For additional clarification, the 'disconnect' is required. However some "newer" inverters have their own internal disconnects that satisfy that requirement, in which case an external unit would not be mandatory. But until the Building Department reviews the equipment drawings in the permit application, they would not know.

Refer to Addendum No 2, Answer to Question #3.

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