

SOMERSET COUNTY IMPROVEMENT AUTHORITY

Somerset County Renewable Energy Initiative

July 9, 2010



Somerset County Renewable Energy Initiative

Somerset County Board of Chosen Freeholders



JACK M. CIATTARELLI
Director



ROBERT ZABOROWSKI
Deputy Director



PETER S. PALMER
Freeholder



PATRICIA L. WALSH
Freeholder



PATRICK SCAGLIONE
Freeholder

Somerset County Board of Chosen Freeholders

P.O. Box 3000

20 Grove Street

Somerville, New Jersey 08876-1262

908-231-7000

Somerset County Renewable Energy Initiative

Somerset County Improvement Authority *Professional Team*

COUNSEL: Inglesino, Pearlman, Wyciskala & Taylor, LLC & DeCotiis, FitzPatrick & Cole, LLP

Steve Pearlman: 973-947-7133 spearlman@iandplaw.com

Ryan J. Scerbo: 201-907-5264 rscerbo@decotiislaw.com

ENERGY CONSULTANT: Birdsall Services Group, Inc (BSG-PMK) &
Gabel Associates

Daniel Swayze: 908-497-8900 x 6211 dswayze@birdsall.com

Thomas Brys: 908-497-8900 x 6522 tbyrs@birdsall.com

Steve Gabel: 732-296-0770 steven.gabel@gabelassociates.com

Joe Santaiti: 732-296-0770 joseph.santaiti@gabelassociates.com

Alexis Kennedy: 732-296-0770 alexis.kennedy@gabelassociates.com

Somerset County Renewable Energy Program

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Where are we?

Renewable Energy Team has:

1. Conducted site visits for solar viability and system sizing at all Somerset sites totaling 180 sites.
2. Matched initial interest forms submitted by local units against site visit results to determine qualifying entities.
 - 8MWdc comprised of 15 local units totaling 32 sites.
3. Drafted Local Finance Board (LFB) application and Program documents. LFB hearing and positive findings will lead to State authorization for SCIA to issue County guaranteed bonds that finance the Program.
4. Drafted license and access and PPA agreements for local unit review
5. Developed draft RFP to be issued to solar PPA Providers

Tranche I

Qualifiers:

- Solar system size 20 kW and above
- Roofs 10 years or less
- Newer roofs with system sizes under 20 kW included only if a municipality not already represented.
- Ground mounted, canopy or pole wholesale project less than 200 kW eliminated due to the high costs of PJM interconnection compared to the future savings of the project.
- **NOTE – At least one “anchor” facility desired in each tranche.**

Tranche I

Qualifying Local Units:

- Borough of Manville
- Borough of Somerville
- Bound Brook
- Branchburg Township BOE
- Bridgewater Township
- Bridgewater-Raritan Regional School District
- Franklin Township
- Franklin Township BOE
- Green Brook BOE
- Manville School District
- Montgomery Township BOE
- Raritan Valley Community College
- Somerset County
- Somerville Public School District
- Township of Montgomery

Tranche I: Qualifying Local Units Summary

Somerset County Solar Project Tranche 1 Region A		Estimated kW	
Local Units	Location	Roof	Ground
Borough of Manville	Library	54.28	
Borough of Somerville	Engine Company	17.71	
Bound Brook	Public Works	108	
Branchburg Township BOE	Central Middle School	356.04	
	Old York School	167.76	
	Whiton School	50.83	
Bridgewater Township	County Library	143.4	
	Bridgewater Senior Center		64
Bridgewater-Raritan Regional School District	BR High School Bldg. 1000	759.92	
	Hamilton School	208.84	
	Middle School	347.3	
	Adamsville School	188.83	
Franklin Township	Municipal Building	67.85	
	Berry Street Garage	48.3	
Franklin Township BOE	Franklin Park School	307.74	194.58
	Elizabeth Avenue School	138.92	
	Pine Grove Manor School	117.3	
	Franklin High School	533.14	536.13
Green Brook BOE	Green Brook Middle School	340.17	
	Irene E. Feldkirchner School	145.82	
Manville School District	Weston Elementary School	130.87	93.15
	Manville High School		264.96
Montgomery Township BOE	Montgomery High School	1030.4	
	Montgomery Upper Middle School		426.42
	Orchard Hill Elementary School	380.65	
Raritan Valley Community College	Arts Building Parking Lot		242.42
Somerset County	Somerville: Somerset County Courthouse	40.94	
	<u>Hillsboro</u> : Emergency Services Training Academy-Administrative Building	69.23	-
Somerville Public School District BOE	Somerville Middle School	134.78	
	Somerville High School	192.05	
	Vanderveer Elementary School	297.16	95.22
Township of Montgomery	Otto Kaufman Community Center	15.87	

Tranche I

Local Units Risks

- Roof/parking lot/ground maintenance
 - Should local unit require any portion of the solar project to be removed from service for maintenance of its facilities, local unit would be responsible to reimburse the PPA provider for lost solar energy sales and lost SREC production.

PPA Provider Risks

- Construction and Construction Cost
- SREC Market
- Operations and Maintenance
- System Performance
- Tax Risk

Financial FAQs

1. How much does it cost my local unit?

- A. Nothing – all costs, including project development costs, are financed through a county guaranteed, 15 year, SCIA bond, the debt service for which shall be repaid by the developer, in part, through federal and state subsidies and your reduced electric rate. Each local unit will, of course, have to pay its monthly electric bills, but at fixed, reduced rates.

2. How is the project financed?

- A. Somerset County Improvement Authority will issue taxable debt at low rates due to the Somerset County Guaranty. The SCIA bond debt service shall be paid by the developer.

3. How does a Solar Developer repay the SCIA Bonds that finance the cost of the Solar PV system?

- A. A Solar Developer finances the cost of a Solar PV System through a combination of sources, including: the sale of solar energy to the property owner, the sale of SRECs into the competitive secondary market, Federal incentives (30% Investment Tax Credit and 5 year Accelerated Depreciation).

Document Related FAQs

4. What forms do I have to sign/acknowledge?

- A. **Sign - License and Access Agreement, Acknowledge - Power Purchase Agreement . The License Agreement provides the Solar Developer with access to your site (roof, parking lot or grounds), and obligates you to pay the solar portion of your electric bill at the fixed PPA price, plus fixed escalation, for 15 years.**

Technical FAQs

5. How will it affect my current electric bills?

- A. A portion of the electricity at your site will be provided through the panels at a rate below existing tariff rates resulting in **SAVINGS** in your electric bill.

6. If there is a power outage, will I still have power from my solar array?

- A. No, in such an outage, the solar array has to be shutdown from the utility system for safety reasons.

7. What is the lifespan of the solar modules?

- A. Solar panels typically carry 20-25 yr warranties, with today's advancing technologies, Solar PV installations are expected, with proper maintenance, to last over 30 years with solid electricity production.

8. What if it's cloudy, foggy, or if it snows, will the solar system still work?

- A. Yes, but production will be lower so displaced electric and relative cost savings for that day will be lower.

Technical FAQs

9. How long will it take to install?

A. Installation at each site should not exceed 1-2 months.

10. Do I need to install a new roof before the solar panels are installed?

A. Due to the life expectancy of the solar panels and the term of the PPA roofs must be in good condition.

11. What is the maintenance and cleaning required on the panels?

A. All maintenance and cleaning is the responsibility of the PPA Provider.

12. How much electricity does a solar system generate?

A. Solar production varies based on many factors including to name a few, available space at a site, efficiency of the panels, inclination of panels, azimuth of array. Systems typically in New Jersey have a capacity factor of 12-14%.

Technical FAQs

13. Are there any security issues in installing solar on a roof?

- A.** It is important to insure unauthorized access to the roof is prevented and the local unit has the roof secured.

14. Will a roof hold the solar panels? How much do panels weigh?

- A.** You have been selected in part based upon our preliminary review of the condition of your facility's roofs. However, PPA Provider will be responsible for structural analysis and wind load test to insure roof can accommodate system.

15. What happens if a system isn't working anymore or needs repairs?

- A.** PPA provider dispatches someone to fix the system and Local Unit buys electricity from the local utility. The PPA provider will be required under the terms of the PPA to reimburse the Local Unit for the cost of electricity purchased from the local utility over the PPA rate.

Technical FAQs

16. What are the long term effects of placing PV on a roof?

- A. Most damage to a roof is caused by ultraviolet rays and lack of maintenance, panels covering the roof should reduce the amount of ultraviolet rays absorbed and potentially extend the life of the roof.**

17. How much will we save on energy costs?

- A. Difficult to determine until a competitive procurement process is undertaken but based on the Morris Model we saw savings in the 20-35% range.**

18. Who oversees the construction of the solar panel arrays?

- A. County will have a construction administration official for the project.**

Technical FAQs

19. What other benefits are there to having a Solar PV system?

- In addition to the savings in energy costs, Solar PV Systems help to meet the States Energy Master Plan goals, lower greenhouse gas emissions worldwide, lessening the dependence on fossil fuel based energy production.
- Solar panels are also very visible. You are making a statement to your community that you care about them, and are striving to make a difference.
- Education and curriculum – solar can be incorporated into the curriculum of a school district and through monitoring equipment and use of the internet, real time information provided in the classroom.

20. What happens if a better solar technology becomes available in the marketplace?

- A. Over the past 20 years commercially available solar panels have not progressed technologically like most may have expected. In any event, Local Units will have the ability to pre-pay for the system at anytime over the course of the PPA term.

Contractual FAQs

21. What happens when the contract expires?

A. 3 end of contract provisions.

- I. Local unit can buy the system at fair market value.
- II. Local unit can extend the PPA term, if permitted by law.
- III. Local unit can have the system removed at the PPA providers cost.

Next Steps

- 1. Confirm solar overlays i.e. areas are “in play and acceptable” to Local Units**
- 2. Collect roof warranties and all available drawings (structural and electrical)**
 - 1. Information will be posted to a secured site on the county website**
- 3. Pass a resolution to authorize LFB application**
- 4. RFP to be issued in end of July.**
 - 1. Site visits undertaken at local unit sites as part of RFP process.**

Local Unit Action Items

- 1. LFB authorizing resolution no later than July 30, 2010.**
 - Form of resolution provided by Somerset County Letter from distributed beginning of July
- 2. Local units to collect structural and electrical drawings as well as warranty information on all roofs.**
- 3. Local units need to make facilities accessible for site visits during RFP process.**
- 4. Adopt license authorizing resolution, September/October**
 - Form of resolution and license agreement to be provided in late August.

Preliminary Schedule

- RFP Issued
– Site Visits for RFP
 - RFP's Due
 - PPA provider awarded
 - Financing Closing
 - Project Commences
 - Project Completed
- July, 2010
August 2010
September 2010
October 2010
November 2010
December 2010
December 2011

Questions and Answers

**Thank you for attending
today's Somerset County Solar
Program Update Meeting!**

