

# Power Purchase and Operating Agreements (PPOAs)

## Puerto Rico Electric Power Authority

Patricia Crumley, PE, Director  
Planning Environmental Protection



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  - Wind, Solar, WTE and LFG
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# Background

- Act No. 82 July 19, 2010
  - “Public Policy on Energy Diversification by Means of Sustainable and Alternative Renewable Energy in Puerto Rico Act”
  - Renewable Portfolio Standard (RPS)
    - 2015 = 12% Renewable Energy Production
    - 2020 = 15% Renewable Energy Production
    - 2035 = 20% Renewable Energy Production
  - Puerto Rico Renewable Energy Commission
    - 7 Members: AAE, DDEC, GDB, DT, JP, Rep. Private Sector and Rep. of the academia
  - Renewable Energy Credits (RECs)

# Application Process

- Submit Application for Interconnection Study
  - 1 to 2 months
- Draft PPOA Comments
- Final Draft
- Endorsements
- Legal Department
- Signed Contract

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Puerto Rico Electric Power Authority

SAN JUAN, PUERTO RICO



PO Box 364267  
San Juan, PR 00936-4267

www.prepa.com

## INFORMATION REQUIREMENTS FOR THE EVALUATION OF RENEWABLE ENERGY PROJECTS

1. Brief description of the project including technology to be used:
  - a. Generating unit manufacturer, model and general specifications
  - b. Brief description of the generating unit including operating experience and sites where it is in commercial operation.
  - c. Maximum and Minimum Net Capacity
2. Project Performance Characteristics:
  - a. Estimate of the energy to be delivered by the project (daily, monthly and annual).
  - b. Equivalent Availability Factor (EAF), defined as the available hours less the equivalent derated hours, divided by the period hours:
$$EAF = \frac{(AH - EDH)}{PH} * 100 (\%)$$
where:  
Available Hours (AH) - Sum of all the hours in which the unit is capable of providing service, whether or not it is actually in service, regardless of the capacity level that can be provided.  
Equivalent Derated Hours (EDH) - Sum of the products of the derated hours and the size of the corresponding net reduction, divided by the net dependable capacity.  
Period Hours (PH) - Number of hours the unit was in active state. It is the sum of the available hours and the outage hours.
  - c. Expected Equivalent Forced Outage Rate
  - d. Maintenance Shutdown Periods (weeks/year)
3. Project Schedule, including the following milestones, based on Power Purchase Agreement signing by April 2011.
  - a. Licensing Period
  - b. Financing Obtained
  - c. Construction Period
  - d. Commercial Operation

Revised 2011

# Signed PPOAs

- 23 total projects with signed PPOAs
- Approximately 700 MW in signed PPOAs

## Projects in Construction

Company	Generating Capacity (MW)	Technology	Location
AES Ilumina, LLC	20	Solar	Guayama
Pattern Santa Isabel, LLC	75	Wind	Santa Isabel
Windmar Renewable Energy, Inc.	2.1	Solar	Ponce

# PPOA Prominent Technologies

- Solar Energy

- 20 year term
- Two 5 year extensions
- Energy Price = \$0.15
- Energy Escalator = 2%
- REC Price = Best Offer
- Size = Varies

- Wind Energy

- 20 year term
- Two 5 year extensions
- Energy Price = \$0.125
- Energy Escalator = 1.5%
- REC Price = Best Offer
- Size = Varies

Patricia A. Crumley, PE, Director  
Planning and Environmental Protection  
Patricia.crumley@prepa.com  
787.521.4883