

RFP for projects for FPL's new Renewable Research Demonstration Program.txt

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Subject: RFP for projects for FPL's new Renewable Research & Demonstration Program

Attachments: solar assisted ac Consumer Brochure (2).docx; solar assisted ac Solar Cooling how it works (2).pdf; solar assisted ac Solar Cooling by Sedna Aire USA 2 (2).pdf; solar thin film on metal roofs.rtf

Researchers:

This is a request for proposal under Florida Power & Light Company's new Renewable Research and Demonstration (RRD) Program. The projects will involve monitoring, analysis, and technical report preparation. Solar projects are likely to require 12 months of data collection followed by statistical analysis, modeling, and weather normalization. The purpose is to scientifically quantify the benefits and costs of renewable energy measures which FPL residential or commercial customers might install.

Include research projects which are needed in order for FPL to quantify the annual energy savings, peak hour demand impact on the FPL system, and customer payback of the renewable product as it will perform over the course of the year in the FPL service area with its geographic location, rain, and cloud cover.

I am also interested in a proposal to determine the optimal orientation for fixed solar panels in FPL territory given seasonal rain and cloud cover in order to: 1) maximize annual energy generation, 2) maximize summer on-peak output (noon-9PM April-October), and 3) achieve a reasonable compromise of maximizing annual energy output and utility peak load reduction.

Solar insolation should be measured locally at the test site for the entire data collection period. Results should be normalized to typical average weather for the FPL service territory using solar radiation by weather station for a typical year. FPL can provide energy sales weights by area such as Miami, West Palm Beach, Fort Myers, and Daytona for weighting the results by area. Products which are not weather sensitive may be the subject of research if high quality performance testing has not already been performed by a qualified and respected State or National lab. Data collection can occur at the researcher's facility or at one or more field locations in FPL territory.

The deliverables must include a draft report for FPL to review, and a final report with an executive summary. FPL will need to participate in the editing of the executive summary in order to ensure it is suitable for a general audience (electric customers), and that it contains only

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research results that cannot be easily misinterpreted or misused. The body of the report will remain confidential, and the executive summary will likely be made available to the public once FPL has determined how FPL plans to use the information.

All projects will be awarded on a fixed cost basis. Milestone payments of equal dollar amounts, 4 to 10 in number, will be triggered by completion of predetermined deliverables. Unless different milestone payments are specified in the proposal, the default payment schedule will consist of the four invoices triggered by the descriptions shown below.

Data Collection Begun 25% of project total \$  
Data Collection Completed 25% of project total \$  
Draft Report Submitted for FPL Review 25% of project total \$  
Final Report Approved by FPL 25% of project total \$

I have attached information on a few technologies I am interested in testing. The solar Assist product is currently being sold at or near the price of a conventional SEER 16 HVAC unit making it very attractive to customers who want to install some measure of renewables. The goal would be to predict the incremental energy savings and peak hour load reduction of this product versus the SEER 16 HVAC unit without solar assist. Another product I am interested in field testing is the DuHandler liquid desiccant dehumidification unit which operates with a source of cold (ground) water, hot water (solar thermal panel), liquid pumps and fans. Go to [www.advantixsystems.com](http://www.advantixsystems.com) for more information. If the opportunity arises, I would like to monitor and analyze the savings of a commercial solar thermal absorption air conditioner. Since equipment costs can be very high for this kind of equipment, it may be more practical for FPL to fund the monitoring and evaluation of the technology within the context of a larger project which would have majority co-funding perhaps under a State or Federal grant program.

I encourage you to also submit proposals for renewable technologies you are aware of which fit the general program concept I have described. A similar request for Conservation R&D (energy efficiency and demand response) proposals is expected to go out in a couple of months.

I would like to get proposals in four weeks time so I can get this new program rolling soon. Thank you for your interest in renewable research, and I look forward to your proposals.

Craig V. Muccio  
Program Manager  
Renewable Research and Demonstration  
Conservation Research and Development  
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