New Jersey

Trading in the New Jersey Credit Market
(aka Renewable Energy Certificate Market):

Past, Present and Future of the NJ RPS

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New Jersey

New Jersey's Clean Energy Program
- An Integrated Approach to Market Building

New Jersey's Clean Energy Program is a statewide initiative administered by the New Jersey Board of Public Utilities that promotes energy efficiency and renewable energy for all New Jersey ratepayers; residences, businesses, schools and municipalities.

New Jersey's Clean Energy PROGRAM™
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Key Elements of the Electric Discount and Energy Competition Act of 1999 (EDECA)

- Comprehensive Resource Assessment (CRA) - a public program planning tool
- Societal Benefits Charge (SBC)
- Net Metering & Interconnection Standards, *interim*
- Renewable Portfolio Standard, *interim*

Evolution of NJRPS Goals and Objectives

Source	Date	Goals, Objectives, Recommendations and Directives
EDECA of 1999	02/09/99	Reduced Costs, Increased Competition, Greater Diversity of Supply, Alternative Regulations, Improved Environmental Quality, Social Programs = Market Transformation
RE Task Force Report	04/24/03	Double RPS to 4% by 2008, 20% by 2020 120,000 MWhs of new PV solar generation by 2008 Use Certificate-based System, i.e. PJM-GATS Establish a Voluntary Green Power Program
RPS Readoption Proposal NJR	10/17/05	2% Solar Electric Generation Required by 2020 (estimated to require 1500 MW of PV capacity)
NJBPU Board Orders	various	Implements EDECA, operationalizes rules in NJAC, authorizes OCE use of PJM-GATS, NJ SREC System..

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NJCEP's Integrated Approach Applied

A Typical 10 kw Residential Solar Electric System

Installed Cost: **$77,500**

Electric cost savings / Net Metering: $1,200 / yr

NJCEP Rebate: $53,000

SRECs Income: $1,800 / yr

Federal Tax Credit: $2,000

Out of Pocket Expense: $22,050

Total Annual Savings: $3,000

Payback Period: 7 yrs

NJCEP Funding Levels; CRA 2004

New Jersey's Clean Energy Program 2005 – 2008 SBC Funding
Non-bypassable fee on all electric and natural gas customers

Year	Total	EE	%	RE	%
2005	$140	$103	74%	$37	26%
2006	$165	$113	68%	$52	32%
2007	$205	$123	60%	$82	40%
2008	$235	$133	56%	$102	44%
Total	$745	$472	63%	$273	37%

44% for electric EE 17% for NG EE 37% for RE
$18/yr/HH for electric and $14/yr/HH for natural gas in 2008
1% rate impact over 4 years

New Jersey's Net Metering and Interconnections Standards

- Revised from Interim in September 2004
- All Class I Renewables; Up to 2 MW @ 100% of Annual Electric Consumption
- Commercial Businesses Up to 10 MW peak load
- Projects < 10 kW Inverter-based - No fee
- Reduced barriers
- Set timeframes for review

SBC => Clean Energy Investment Incentives

Lower the project capital cost ($/kW) thru:

1. Rebates up to 60% of cost for projects < 1 MW

2. Project Grants for (RE Power Plants) > 1 MW 20% grants & 80% loan

3. Finance for Projects Combining EE and RE with low interest loans for remaining capital costs

...then improve financials with production incentives ($/kWh) via Renewable Energy Certificates (RECs)

NJ's RPS – Revised from Interim April 2004

Energy Year	Solar PV		RE Class I	
June – May 31, XX	%	MW	%	MW
2005	0.01	4	0.74	1.6
2006	0.017	4	0.983	19
2007	0.0393	14	2.037	38
2008	0.0817	27	2.924	66
2009	0.16	39	3.84	89

NJ Renewable Portfolio Standard Basics

1 REC = 1 MWh of renewable energy

Compliance through RECs only, either via :

- PJM-EIS GATS for Class I RECs
- NJBPU's Solar REC Administrator for SRECs, or
- Alternative Compliance Payments @ $50 per MWh and $300 per MWh for solar

Approx. REC Value: LFG $5/mWh, Wind $15, Solar $170

The cost to the average household (2005 $):

- EY 2005 $1.40 per HH per year
- EY 2006 $4.50 per HH per year
- EY 2021 $18.00 per HH per year

NJ Solar REC Market – First Year Results

Month	Year	# SRECs Traded in Month	Monthly High ($/MWh)	Monthly Low ($/MWh)	Cumulative # SRECs Traded	Cumulative Weighted Average Price ($/MWh)
Aug	2004	25	*	*	25	$160.00
Sep	2004	70	$177	$177	95	$172.53
Oct	2004	11	$200	$177	106	$173.21
Nov	2004	8	*	*	114	$173.47
Dec	2004	58	$190	$150	172	$177.81
Jan	2005	0	*	*	172	$177.81
Feb	2005	27	$177	$110	199	$169.29
Mar	2005	104	$190	$150	303	$171.47
Apr	2005	125	$200	$150	428	$169.75
May	2005	487	$250	$105	915	$166.99
June	2005	1338	$250	$80	2253	$178.67
July	2005	933	$260	$110	3186	$188.61
Aug	2005	2587	$265	$100	5773	$200.59

NJ Solar REC Market – First Year Results

NJRPS EY 2005 Solar Results

EDC	Obligation (MWhs)	Complied (SRECs)	DUE (SACP)
1	561	479	$24,600
2	1,158	627	$159,300
3	2,435	2,396	$11,700
4	100	69	$9,300
TOTAL	**4,254**	**3,571**	**$204,900**

NJ's RPS - All retail electric suppliers must provide a percentage of their electricity supplied:

EY 2005 = 0.75 % Class I RE
w/ 0.01% PV set aside (4 MW)

EY 2009 = 4.0 % Class I RE
w/ 0.16% PV set aside (90 MW)

Proposed RPS Rule Readoption in NJR 10/17/05

EY 2021 = 20 % Class I RE
w/ ~2% of PV set aside (1500 MW)

New Jersey's RPS Value of RECs

The key to long term financing for PV

Year	Class 1 – Class 2 and Solar RECs	Solar RECS
2005	$ 14,009,400	$ 1,448,000
2009	$ 48,746,600	$ 15,080,000
2021	$ 222,275,800	$ 126,000,000

GHG Credits	$25 +	$250 +
REC	$15 -> $5 ($2.5)	$200 -> $70

NJ's CEP Results thru 12/31/05

Installed and Approved Funding

Status	Number	Capacity	Rebates
Installed with CORE Rebate	> 1000	> 10 MW	> $59 M
Approved for CORE Rebate	> 800	> 40 MW	> $166 M

New Jersey's Clean Energy Program

Next Steps

- Hire Market Managers
- Extend RPS thru Rule Re-adoption to 2020
- Attract Business Ventures and Manufacturing
- Explore Energy Efficiency Portfolio Standard
- Continuous Assessment and Evaluation toward Market Transformation

New Jersey's Integrated Approach

More Information

New Jersey's Clean Energy Program:
www.njcleanenergy.com

New Jersey BPU
www.bpu.state.nj.us

Evaluation Reports:
Rutgers' Center for Energy, Economics and Environmental Policy (CEEEP)
http://policy.rutgers.edu/ceeep/images/NJ_REMA_Final_8-04.pdf

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