

# **New Jersey Sustainable Energy Efficiency Demonstration Projects (NJ SEED)**

**Presentation  
for  
US Environmental Protection Agency Webcast  
“Energy Efficiency in Municipal Operations”  
July 12, 2011**

# **Partners:**

**Cherry Hill Township (Pop. 71,000)**

**Township of Montclair (Pop. 37,000)**

**Highland Park Borough (Pop. 14,000)**

**Institute for Sustainability Planning and Governance at**

**The College of New Jersey**

**New Jersey Board of Public Utilities**

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- 5. Quantify and document the results of the effort to enable future advancements**

# Process

1. **Energy Model** – 54 different actions considered covering residential, commercial, and municipal sectors
2. **Stakeholder Feedback** – targets and chosen actions were tailored to individual municipal demographics and resources at hand
3. **Targets and Action Plan formally adopted by Municipal Bodies**
4. **Aggressive outreach to implement actions in Energy Plan** – two year plan to reduce GHG in conjunction with 80% State Goal reduction by 2050
5. **Report Outcomes**
6. **Program Replicability** – Use lessons learned to inform actions of Sustainable Jersey, a successful new municipal certification program



## Specific Examples in NJ SEED with regards to Energy Efficiency in Local Government Buildings

- 1. Montclair – Direct Install & Solar PPA for Municipal buildings**
- 2. Highland Park – Direct Install, Solar PPA for Municipal buildings, Plug Load software, & Adopting behavioral program for Municipal employees**
- 3. Cherry Hill – Direct Install, Solar PPA for Municipal buildings, Day Cleaning, & Adopting behavioral program for Municipal employees**

# Montclair Direct Install

	Action	Carbon Saved (Metric tons)	Initial Costs	Total Costs	Dollars Saved	Unit Costs	Unit Benefits	\$ per Unit of Carbon Saved	
x	Direct Install Program	<b>Based on Specs provided to Gray Russell from Direct Install program providers</b>							
	1 Year	397	\$68,868	\$68,868	\$45,950	\$68,868	\$45,950	-\$57.73	
	2 Years	794	\$68,868	\$68,868	\$91,900	\$68,868	\$91,900	\$29.01	
	5 Years	1,985	\$68,868	\$68,868	\$229,750	\$68,868	\$229,750	\$81.05	
	Total	9,131	\$68,868	\$68,868	\$1,056,850	\$68,868	\$1,056,850	\$108.20	

Work scope included the following:

- Replacement of lighting ballasts – T8
- Replace Complete lighting fixtures – T8 & T5
- Instillation of Occupancy Sensors
- LEED EXIT Signs

x	Solar PPA for municipal buildings	<b>Based on # of 100 Kwh systems installed</b>						
	1 Year	370	\$0	\$0	\$3,338	\$0	\$835	\$9.03
	2 Years	740	\$0	\$0	\$6,380	\$0	\$1,595	\$8.63
	5 Years	1849	\$0	\$0	\$15,924	\$0	\$3,981	\$8.61
	Total	5,547	\$0	\$0	\$58,713	\$0	\$14,678	\$10.59

# Highland Park Direct Install

	Action	Carbon Saved (Metric tons)	Initial Costs	Total Costs	Dollars Saved	Unit Costs	Unit Benefits	\$ per Unit of Carbon Saved
x	Direct Install Program	<b>Based on Specs provided to Matt Kaplan from Direct Install program providers</b>						
	1 Year	106	\$49,995	\$49,995	\$20,370	\$49,995	\$20,370	-\$278.18
	2 Years	213	\$49,995	\$49,995	\$40,740	\$49,995	\$40,740	-\$43.45
	5 Years	532	\$49,995	\$49,995	\$101,850	\$49,995	\$101,850	\$97.38
	Total	2,449	\$49,995	\$49,995	\$468,510	\$49,995	\$468,510	\$170.87

Highland Park leveraged Energy Efficiency Community Block Grant funds as matching funds to implement a broad slate of improvements for five borough buildings through the Direct Install program.

# Cherry Hill Direct Install

Location	Cost of Measures	State Incentive	Cost to Township	kWh Savings	Annual Savings
Town Hall - Civilian	\$65,394	\$39,236	\$26,158	147,892	\$15,323
Town Hall - Police	\$47,020	\$28,212	\$18,808	109,068	\$11,301
Department of Public Works	\$59,757	\$35,854	\$23,903	122,076	\$19,326
Totals	<b>\$172,171</b>	<b>\$103,302</b>	<b>\$68,868</b>	<b>379,036</b>	<b>\$45,950</b>

# Public Outreach Efforts

- Energy Coordinators in each municipality
- Identify key community stakeholders and engage them early on in process of setting goals
- Aggressive grassroots marketing campaign
- Leverage existing state utility incentive programs to maximize resident participation
- Community Based Social Marketing approach – gather pledges and follow up to encourage participation

# Challenges

- Due to state budget constraints, significant change in state energy incentive programs
- Capacity issues – as expected, variation in available resources impacts ability of local governments to lead community-wide efforts
- Capturing public attention difficult
- Data issues – more complex than anticipated

# Questions or Comments?

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