Strategically Maximizing the Energy Efficiency of Your Building Portfolio Webinar

Sustainable Jersey Webinar
August 14, 2018
<table>
<thead>
<tr>
<th>Speakers for Today’s Webinar</th>
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</table>
| **Tony O’Donnell**  
Economist/Project Specialist  
Sustainable Jersey |
| **Lauren Kaapcke**  
EDF Fellow for Asbury Park, Freehold Boro, and Neptune Township |
| **Sarah Berman**  
Program Associate, EDF Climate Corps  
Environmental Defense Fund |
| **Sage Lang**  
EDF Fellow for Little Egg Harbor Township School District, Ocean Gate Boro, and Little Egg Harbor Township |
| **Susan Ellman**  
Energy Efficiency Marketing Manager  
New Jersey Natural Gas |
| **Erin Lannon**  
EDF Fellow for Jackson Township School District, Point Pleasant Beach Boro, and Lake Como Boro |
Sustainable Jersey Actions: **Energy**

**Energy Tracking and Management** (10-20 pts)

- Draft a full building inventory
- Collect twelve months of complete utility data
- Enter information into an Energy Tracking and Management (ET&M) system to establish a historical baseline
- Benchmark your buildings

**Benefits:**

- Great "first step" in an overall building upgrade program
- Helps prioritize potential building performance improvement opportunities
- Creates an “active management” approach to energy use
Sustainable Jersey Actions: **Energy**

**Energy Efficiency for Facilities** (5-50 pts)
- Complete ASHRAE Level 2 audits on some or all facilities
- Implement facility upgrades to reduce overall energy consumption
- Sliding scale of points to encourage “deep dive” energy savings

**Benefits:**
- Saves significant amount of money
- Reduces carbon footprint
- Improves comfort and safety level of buildings
- Extensive incentives offered by NJCEP and utilities to make savings cost-effective
Always Check with Your Local Utilities for Incentives
FOCUSED
ON THE ENERGY FUTURE

Sustainable Jersey EDF Climate Corps
Susan Ellman
Marketing Manager, Energy Efficiency
The SAVEGREEN Project®

- Launched in September 2009
- Energy-efficiency rebates and incentives
  - Benefit the environment
  - Support state policy
  - Help our customer save money
- Designed to complement New Jersey’s clean energy program™
NJNG Connections to Sustainable Jersey

- Financial Support
  - Platinum Sponsor for Municipal Program
  - Founding Sponsor for Schools Program
- Technical Support
  - Participate on Task Forces
- Resources for Sustainable Jersey Green Teams
  - Supplemental incentives for your own facilities
  - Work together on outreach to residents and businesses
- Partner on Programs
  - PowerSave School Program
  - Environmental Defense Fund Climate Corps
• Potential for 0% financing for your projects
  – Balance on NJCEP Direct Install Projects
  – Some NJCEP Smart Start equipment
  – Repaid through NJNG bill
• Features available for businesses
  – Reach out if you are working on the Sustainable Jersey Direct Install Action
• Request assistance with in-person meetings
• Learn more today
  – Contact Jerry Ryan at (732) 378-4920, jryan@njng.com
Residential Incentives

• Share information to make upgrades more accessible
  – Supplemental rebates for high efficiency HVAC equipment
  – Access to 0% on bill financing
    • Home Performance with ENERGY STAR projects
    • Some HVAC projects
• Many ways NJNG can help
  – Pursuing the Sustainable Jersey Energy Efficiency action or green challenges
  – Participation with events
  – Content for website and newsletters
  – Special limited time programs (e.g. video and poster contest)
• Learn more today
  – Contact Raquel Phillips at (732) 378-4928, rphillips@njng.com
2018 Sustainable Jersey EDF Fellows

Sage Lang
Little Egg Harbor Township
Commonwealth of New Jersey
Little Egg Harbor Township School District
Ocean Gate Borough

Lauren Kaapcke
City of Asbury Park
Freehold Borough
Neptune Township

Erin Lannon
Jackson Township School District
Borough of Lake Como
Point Pleasant Beach Borough
Phase 1: Setting a Strong Foundation

1. Sustainable Jersey Actions
2. Green Team structure
3. Data gathering
1. What is the goal?

2. What are the steps?

3. What specifically needs to be submitted to earn points?
Indoor Air Quality Review

**Why is it important?**
Most people are aware that outdoor air pollution can impact their health, but indoor air pollution can also have significant, harmful effects. EPA studies—and review of other research to date—of human exposure to air pollutants have indicated indoor levels of pollutants may be two to five times—and occasionally more than 100 times—higher than outdoor levels. The EPA and its Science Advisor Board consistently rank indoor air quality as a Top 10 health threat.

**What to do, and how to do it (“How to”)**
Indoor air quality (IAQ) is an important component of a healthy school environment. IAQ in New Jersey school facilities is regulated by the Public Employees Occupational Safety and Health (PEOSH) Indoor Air Quality (IAQ) standard (N.J.A.C. 12:100-13). This action supports the goals of the PEOSH standard by encouraging individual schools to take a proactive approach to identifying factors contributing to poor air quality and addressing them before problems arise. In order to earn points for this action, a school must complete a walk-through of the building to identify potential air quality concerns, develop an action plan for addressing them, and communicate the results of the effort to school staff, including highlighting the role they play in maintaining a healthy school environment. Activities must have been completed or updated in the current school year.

**What to submit to earn points for this action**

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**First**: Why is it important?

**Second**: What to do, and how to do it (“How to”)

**Third**: What to submit to earn points for this action
Green Team

**Green Team leader**
- Tracks all actions
- Communicates with Sustainable Jersey

**Green Team member**
- Responsible for Action #1
- Delegates where appropriate
- Conveys status updates to Green Team Leader

**Green Team member**
- Responsible for Action #2
- Delegates where appropriate
- Conveys status updates to Green Team Leader
# Green Team

## 2015 Sustainable Jersey Master Action Tracking Spreadsheet

<table>
<thead>
<tr>
<th>Districts</th>
<th>Project Name</th>
<th>Goal</th>
<th>Action Plan</th>
<th>Date</th>
<th>Status</th>
</tr>
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<tbody>
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## Specific Goals

1. **Green Team**
   - **Green Team**: Establish a Green Team [goals to be defined]

## Specific Actions

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## Additional Information

- **Districts**: [Provide additional information specific to the districts]
- **Project Name**: [Provide the name of the project]
- **Goal**: [Define the goal of the project]
- **Action Plan**: [Describe the action plan]
- **Date**: [Provide the date]
- **Status**: [Provide the status of the project]
Data Collection: How to do it & Why it’s important

Collect 1 year of electric and gas data
Data Collection: How to do it & Why it’s important

Why it’s important

● Create a baseline to help track energy savings

● Benchmark to understand how you compare

http://www.njcleanenergy.com
FREE!
Local Government Energy Audit (LGEA)

Who is eligible?
- Local Governments
- Schools
- Non-Profits

What is the outcome?
- Cost-justified facility upgrades to improve energy efficiency and reduce costs
- Recommended incentives to help with the cost of the upgrades

http://www.njcleanenergy.com

FREE!
Now that I’ve established goals and collected my energy data, what are the next steps?
Phase 2: Assessing NJ CEP Options

- Project type
- Direct Install
- Pay for Performance
- Smart Start
- Other programs
The NJ Clean Energy Program has a variety of options for any project type and facility.

Is your project: Comprehensive or equipment specific?

Direct Install

Pay for Performance

Smart Start
Direct Install

- Turnkey program to replace outdated and inefficient equipment
- For facilities with average of ≤ 200 kW demand

Financing
- Up to 70% of installed costs covered
- For NJNG customers: 3 year 0% APR on-bill repayment for other 30%
  - Check for your local utility financing

www.rose.contractors/electrical-lighting-installation/
## Direct Install Steps

1. Contact the Direct Install contractor for your county
2. Submit application for each facility & 12 months of bills
3. Schedule facility audits
4. Evaluate proposals & schedule upgrades
5. Apply for on-bill financing, if applicable
6. Reap the energy savings!

The entire process takes 4-6 months to completion
Pay for Performance

- Comprehensive program for existing facilities or new construction
- Existing facilities over 200 kW peak demand
- New construction over 50,000 sqft
- To receive grants:
  - Existing buildings minimum 15% energy savings
  - New construction must be built 5% above code

Financing:
- Grants vary by % of energy saved
- Grants paid in installments at project milestones
- Ongoing operational savings

www.rose.contractors/electrical-lighting
www.relenergy.com/energy-saving-tips/
Pay for Performance

Case Study:
• Neptune township plans to build a new Department of Public Works complex of 56,070 sqft.
  • Minimum grant of $1.25/sqft for a total of $70,087

New Construction Steps:

1. Choose a pre-approved P4P partner
2. Submit application
3. Develop & get approval of Energy Reduction Plan (ERP)
4. Install & commission all energy measures
5. Submit as-built and commissioning reports
6. Benchmark building energy performance
Smart Start

• Rebates for equipment replacement, retrofit, new construction
• 2 categories: **Prescriptive & Custom**

Financing:
• Grants vary by specific equipment
• For NJNG customers: 10 year 0% APR on-bill financing available
• Check for your local utility financing

General Steps:

<table>
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<tbody>
<tr>
<td>1</td>
<td>Submit application</td>
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<tr>
<td>2</td>
<td>Obtain project pre-approval (required in some cases)</td>
</tr>
<tr>
<td>3</td>
<td>Work with contractor to complete project</td>
</tr>
<tr>
<td>4</td>
<td>Post-inspection, if necessary</td>
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<tr>
<td>5</td>
<td>Receive rebates!</td>
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Smart Start Case Study

• Neptune Municipal Complex Project:
  • Boiler & hot water heater replacement, new variable frequency drives & AC units
  • $6,600 in Smart Start rebates

• Save $8,828 annually
• Reduce usage by 7,558 therms and 10,880 kWh annually
• 20% lower gas bill

Equivalent of removing 21 passenger cars from the road each year!

Neptune High-efficiency boilers
Phase 3: Decisions & Implementation

- Strategic Energy Management
- Monitor & Evaluation
- Demand Response
- Financing
- Grants
- Silver certification

Image Source: https://www.saveonenergy.com/energy-consumption/
If You Can't Measure It, You Can't Improve It

(William Thomson, Lord Kelvin)

https://serviceportfoliomanagement.wordpress.com/
Strategic Energy Management

- Leadership
- Dedicated energy manager
- Financing
- Manage data
- Share results
- Increase visibility

Image Source: http://edfclimatecorps.org/resources/virtuous-cycle-strategic-energy-management
Tools for Monitoring & Evaluation

- **Electricity Consumption Calculator**
  - Evo Energy

- **Platform to manage utility data**
  - ENERGY STAR® Portfolio Manager™

**Third Party Energy Procurement**

- Municipal Energy Initiatives
  - Buy Electricity From A Renewable Source

- 10 Points
Demand Response

- Good for buildings over 200kW demand
- Free demand analysis & tracking portal
- Jackson Township School District earned $52,476 in payments during 2017

Image Source:https://energy-solution.com/project/automated-demand-response/
Case Study: Jackson Township School District

LGEA Final Reports June 2018

Stakeholder Input

Secure Financing

• NJ Clean Energy Program
  • Direct Install
  • SmartStart
  • Pay for Performance
  • ESIP

• Utility incentives

Image Source: TRC Energy Services Report
Grants

Available for Registered Municipalities and Schools

Available Grants

Gardinier | $10k | $30k
NJEA | $10k | $2k
It Pay$ to Plug In | $5k | $6k

Search our grants portal for funding sources!

www.sustainablejersey.com/grants-resources/grants-portal/
Silver Level

- Master tracking spreadsheet
- Identify short-term & long-term goals
- Liason for data gathering
Sustainable Jersey for Schools Sponsors

Sustainable Jersey for Schools Underwriters

- NJSBA
- The Geraldine R. Dodge Foundation
- Clean Energy Program
- NJEA

Small Grants Underwriters

- Gardinier Environmental Fund
- PSEG
- NJEA

Corporate Sponsors

- South Jersey Gas
- New Jersey Natural Gas
- PSEG

Founding Sponsor

- NJM Insurance Group
- NJM Founding Sponsor
- Investors Bank
- Schneider Electric
- BioShine
Wanted: Innovative NJ Sustainable Energy Projects

• Schools and Municipalities
• Gardinier Environmental Fund
• Grants for energy related projects
  – Two (2): $30,000 grants
  – Nine (9): $10,000 grants
• **Application Deadline**: Weds October 31, 2018
• Informational Webinar
  – Monday, September 10, 2018 3:00pm - 4:00pm

NJEA Schools Small Grants

– Ten (10) $10,000 project grants to school districts and schools
– Forty (40) $2,000 grants to support school green teams

• **Application Deadline**: Weds October 31, 2018
• Informational Webinar
  – Friday, September 14, 2018 3:00pm - 4:00pm

**Think outside the box!**
Upcoming Trainings

Complete Streets Training for Municipalities

Tues August 21, 2018
8:30 a.m. - 4:30 p.m.
Edward J. Bloustein School of Planning and Public Policy
Rutgers University
New Brunswick, NJ

Green Infrastructure Planning and Implementation: Find Out How to Get Your Points

Weds, September 19, 2018
8:30am - 12:00pm
Duke Farms
Hillsborough, NJ

Weds, September 26, 2018
8:30am - 12:00pm
Wheaten Art Center - Event Center
Millville, NJ

Image courtesy of NJDOT
• Navigating the Application
  – September 12, 3-4pm

• Preparing for Certification
  – September 19, 3-4pm

• Strategizing for Silver Certification
  – September 27, 3-4pm
## Speakers for Today’s Webinar

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<tr>
<th>Name</th>
<th>Title and Affiliation</th>
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<td>Economist/Project Specialist, Sustainable Jersey</td>
<td>609.771.2921 <a href="mailto:odonnela@tcnj.edu">odonnela@tcnj.edu</a></td>
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<td><a href="http://www.linkedin.com/in/laurenkaapcke/">www.linkedin.com/in/laurenkaapcke/</a></td>
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<td><strong>Sarah Berman</strong></td>
<td>Program Associate, EDF Climate Corps Environmental Defense Fund</td>
<td>202.572.3545 <a href="mailto:sberman@edf.org">sberman@edf.org</a></td>
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<td><a href="http://www.linkedin.com/in/erin-lannon-enviroconsultant/">www.linkedin.com/in/erin-lannon-enviroconsultant/</a></td>
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