Sustainable Jersey

A Primer: Energy Actions for the Sustainable Jersey for Schools Program

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Sustainable Jersey

Agenda for this Webinar

- **Background** on the Sustainable Jersey for Schools program and action development
- **Basic Program Concepts**: Important considerations as you plan your action profile
- **Overview of Energy actions** in the Sustainable Jersey for Schools program
- **Questions and Answers**

Background on Energy Action Development

- The Energy Task Force (ETF) identified approximately 20 possible energy actions that could be incorporated into the new Sustainable Jersey for Schools program
- These actions were characterized based on feasibility, sustainability impact, degree of difficulty, linkages with the co-evolving municipal program, alignment with the NJ CEP, and other factors
- That set of potential actions was prioritized by ETF members, with further input from Sustainable Jersey staff regarding overall program design considerations
- That process resulted in a set of **9 primary energy actions** proposed for inclusion in the initial portfolio of actions for the inaugural program certification year in 2015

Summary: Energy Actions in SJ for Schools program

Energy Efficiency actions	Climate Mitigation & Renewable Energy actions
• Energy Tracking & Management • Energy Audit • Sustainable Energy Transition Plan • Building Efficiency Measures	• School Carbon Footprint • Buy Renewable Energy • Collaborate with Municipality on Government Energy Aggregation Program • Onsite Renewable Generation System – Solar • Onsite Renewable Generation System – Geothermal

- Not everyone has to do every action
- Program structure purposefully defines a sequence of events for EE actions that allow districts to choose most appropriate path
- Recognizes the variability between school districts
- Multi-point structure: varies by impact and degree of difficulty
- In most cases, you can make use of projects completed in the recent past

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Basic Concepts

- Prerequisites
- Multi-point actions
- Priority Actions
- Submission requirements
- Resources
- Guidebook for Energy Efficiency actions

We are here to help you succeed – please call us if you need assistance at any point!

Energy Tracking and Management

- **Concept**: Establish historical energy use baselines, tracking and management systems, and ongoing reporting processes. Intended to serve as an important first step in an overall sustainable energy initiative.

- **Points**: Two tier structure (can do first or both levels):
  - ✓ 10 Points: must draft a full building inventory, collect twelve months of complete utility data for each building in the inventory, and enter that information into an Energy Tracking and Management (ET&M) system to establish a historical baseline (and share data if possible).
  - ✓ Additional 10 points: must complete performance benchmarking* and put an ongoing tracking and reporting system into place to monitor energy usage long-term.

* - Free energy benchmarking is available through the NJ Clean Energy Program!

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Energy Audit

- **Concept**: Complete a comprehensive audit of school building energy use, and identify opportunities for improvement. This action will recognize a variety of methods for completing an audit, but will focus on a) the use of the NJ CEP ***LGEA program*,*** and b) use of the DI-walkthrough as an audit for smaller school facilities. Intended to serve, along with ET&M, as an important starting point for an overall sustainable energy initiative.

- This is a **PRIORITY ACTION**

- **Points**: Three tier structure depending on the completeness of the audit:

  - ✓ 5 Points: Complete a simple walk-through audit (Direct Install energy assessment or private ASHRAE Level 1) on at least one school building (preferably more)
  - ✓ **OR** 10 points: Complete an in-depth audit (Local Government Energy Audit or private ASHRAE Level 2 audit) on at least one school building (preferably more)
  - ✓ Additional 10 points: if all buildings included in the audit

**** The Local Government Energy Audit program is 100% free and available for school districts through the New Jersey Clean Energy Program!***

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Sustainable Energy Transition Plan

- **Concept**: The Sustainable Energy Transition Plan (SETP) is a document that outlines a prioritized set of building upgrades to be done, identifies how they will be implemented (including NJCEP incentive use, financing strategies, and procurement approaches), and includes a formal commitment for implementation. It is usually only needed in larger, more complicated cases (e.g. ESIPs or projects done through Pay for Performance program)

- **Prerequisite:** Complete an Energy Audit action prior to, or at the same time as, completing this action (given the complexity of a typical SETP, a full Local Government Energy Audit (LGEA), or equivalent, is recommended).

- **Points**: Two tier structure depending on plan completeness:
  - ✓ 10 Points: SETP implements at least 30% of the efficiency upgrades recommended in the audit
  - ✓ 20 points: SETP implements at least 70% of the efficiency upgrades recommended in the audit, and includes factors beyond building efficiency (conservation, procurement, renewables, and resiliency)

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Implement Efficiency Measures

- **Concept**: This action is the culmination of other energy actions focused on data collection and planning, and translates previous preparatory work into improved building performance. Most of the work done under this action will make use of incentives provided by the New Jersey Clean Energy Program (NJ CEP).

- **Prerequisite:** completion of the energy audit action prior to, or at the same time as, this action. Sustainable Jersey also strongly recommends, but does not require, completion of the Energy Tracking and Management action.

- **Points**: Multi-tier structure depending on project impact*:
  - ✓ 5 Points: <10% decrease in energy use
  - ✓ 10 Points: between 10% and 20% decrease in energy use
  - ✓ 20 Points: between 20% and 30% decrease in energy use
  - ✓ 30 Points: > 30% decrease in energy use

* - Energy Savings calculator described in action will be available soon.

School Carbon Footprint

- **Concept**: A School Carbon Footprint measures the amount of greenhouse gas (GHG) emissions produced by the school as a result of its operations in a given year. Completing a School Carbon Footprint requires an accounting-like inventory of all the sources of GHG in your buildings, fleet, and operations. Most of this GHG footprint results from the schools' energy use profile, although other sources are also considered.

- ***Recommended*** **prerequisite**: Although not required, the collection of energy usage data either through the Energy Tracking and Management action or the Audit action makes this action much easier to complete .

- **Points**: 10 Points

- Great starting point action. Once done for the first time, can be a good opportunity for student engagement

Buy Renewable Energy

- **Concept**: Most school districts are already familiar with purchasing electricity through a third-party supply contract, and as motivated by this action, can augment that purchase with a request for renewable content as part of the contract. ***The contract must include at least 20% of the supply from renewable sources*** (absolute fraction), inclusive of the fraction that is compliant with the NJ Renewable Portfolio Standard in force at the time of submission.

- **Important Considerations**: There are a variety of energy buying pools already in place, including those offered by commercial entities, and some organized as cooperatives (at the county level, for example). Schools should evaluate these options and select the one that meets their needs.

- **Points**: 10 Points

Current Opportunity

- ACES (Alliance for Competitive Energy Services), the largest energy-aggregation program in the state with more than 400 member school districts, is currently offering an opportunity for school districts to purchase electricity with renewable content that would satisfy this action.
- If your district is a member of ACES or ACESplus, you can receive points under the “Buy Renewable Energy” action by participating in the offer.
- If you are interested in this opportunity, you will need to take action by April 27 to be included in this group renewable energy purchase.
- For more information on this opportunity from ACES and ACESplus, please contact Carol Friedman at (732) 296-0770 or carol.friedman@gabelassociates.com

Collaborate with Municipality on Government Energy Aggregation Program

- **Concept**: This action recognizes schools that partner with the municipality as the municipality implements a renewable energy purchase program. This can be accomplished by providing events for community education and involvement. By helping to implement an R-GEA program in the town, the school is making renewable energy more accessible to the community, at a lower cost, and with less hassle.

- **Prerequisite:** Schools can only pursue this action ***if their municipality is implementing a renewable energy purchase program***, referred to as Renewable Government Energy Aggregation (R-GEA); see the related Sustainable Jersey R-GEA municipal action.

- **Points**: 10 points

Onsite Renewable Generation System – Solar

- **Concept**: This Action awards points for schools that install Photovoltaic (PV) solar systems to generate clean, renewable electricity on their site. That system will typically offset a fraction of the electricity the school currently buys from the utility or third party supplier, and, as a result, reduces the use of traditional fuels and their associated impacts.

- **Points**: Multi-tier structure depending on displacement of utility purchase:
  - ✓ 5 points: for displacement <10%
  - ✓ **OR** 10 points for displacement >10% and <20%
  - ✓ **OR** 20 points for displacement >20% and <30%
  - ✓ **OR** 30 points: for displacement > 30%
  - ✓ **AND** Additional 10 points: if the solar system is upgraded to include islanding and energy storage to enable on-site operation during a grid outage.

Onsite Renewable Generation System – Geothermal

- **Concept**: This action requires the school or district to install a geothermal energy system to provide space heat and/or cooling for the school. Geothermal technologies draw upon the energy stored in the earth to control school building temperatures. As a result, geothermal systems require 25% to 70% less energy than a conventional heating system, generating substantial long-term savings on energy purchases. Geothermal systems also reduce the school's carbon footprint. Reductions in purchases of energy from fossil fuels lower the school district's contributions to greenhouse gas emissions and reduce the school's contribution to Climate Change.

- **Points**: 10 points

Action Descriptions

All of the actions in the SJ for Schools program have a similar template:

- **Title (and brief description of the action)**
- **Why is it important?**
- **Who should lead and be involved with this action?**
- **Timeframe**
- **Project Costs and Resource Needs**
- **What to do, and how to do it ("How to")**
- **What to submit to earn points for this action**
- **Spotlight**
- **Resources**

As you formulate your plan in regards to the energy actions, please be aware of the variety of resources available to assist you. Our goal is to provide you with the tools that will simplify your path to sustainability.

By providing a transparent description of what has been accomplished on our web site , others are also able to benefit from your work.

Question & Answer Period

Questions???

Follow Up Questions

If you have any questions, feel free to reach out to either:

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or

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