Why are ESIPs so Important?

For Additional Information

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ESIP Concept

• Retrofitting public facilities with Energy Conservation Measures (ECM) without new capital investment
  – Savings from reduced energy use pays for the improvements = No New Money!
  – Maximum repayment term is 15 years
  – If Combined Heat & Power Technologies are used, payback period can be stretched even further (20 yrs.)
Annual Cash Flows
Annual Savings

Net Annual Cost Savings

- Annual Savings:
  - $0
  - $5,000
  - $10,000
  - $15,000
  - $20,000
  - $25,000
  - $30,000
  - $35,000
  - $40,000
  - $45,000

- Net Annual Cost Savings Graph
  - Y-axis: $0 to $45,000
  - X-axis: 1 to 15
ECM Categories:

- Distributed generation (solar, wind, geothermal)
- Boilers, Chillers, HVAC equipment and controls
- Energy efficiency, demand response equipment
- Building envelope, insulation, weatherization
- High efficiency lighting improvements
- High efficiency motors / variable frequency drives
- Water conservation, i.e., low flow fixtures
Advantage of ESIPs Approach: Synergy

**syn·er·gy - [sin-er-jee]**
*(noun, plural syn·er·gies)*

1. The interaction of elements that when combined produce a total effect that is greater than the sum of the individual elements, contributions, etc.; synergism.
Advantage of ESIPs Approach: Synergy

- Effective Insulation
- High Performance Windows
- Tighter Construction
- Tighter Heat and Air Ducts
- Energy Efficient Heating and Cooling
- Efficient Water Use and Water Heating
- Energy Efficient Appliances
- Cleaner, Healthier Facility

Individually, these approaches all have merit. Together, the benefits are multiplicative and not simply a sum of their parts.
The Winning ESIP Equation

A. New Financing Mechanism that leverages future savings to offset future costs UPFRONT, leading to viable projects in a tight economy

B. ECMs that complement each other, and from an engineering standpoint are greater than the sum of their parts

C. Support of diversified menu of NJ Clean Energy Program options to tailor ESIP to your particular situation

A + B + C = Benefits? NO!!!

Rather, A x B x C = Benefits
Economic & Environmental Impacts

• Reduced costs over the long term
• Due to the diversified nature of the improvements, ESIPs can offer real resiliency benefits if carefully planned
• Offer ability to address issues that would be overlooked in a straight “payback period” economic analysis for individual ECMs
• Provide a framework for supporting behavioral changes in your facilities that can further potential energy and cost savings