



A NEW JERSEY PERSPECTIVE OF ENERGY SAVING INCENTIVES

Presented to The Delegation of Municipal
Officials from the
Republic of Korea
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Presenter

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AGENDA

- **Background**
- **NJ *SmartStart* Buildings Program**
- **New Programs for 2010**





Background

- Introduced March 9, 2001, as part of the Electric Discount and Energy Competition Act, February 9, 1999.
- Funding comes from **“Societal Benefits”** or **“SBC”** Charge on Utility bill.
- Provisions for **Commercial & Industrial Projects, Residential Projects, and Renewable Energy Projects**
- Refer to the Program Guide found at www.njcleanenergy.com/ssb under “Quick Start”





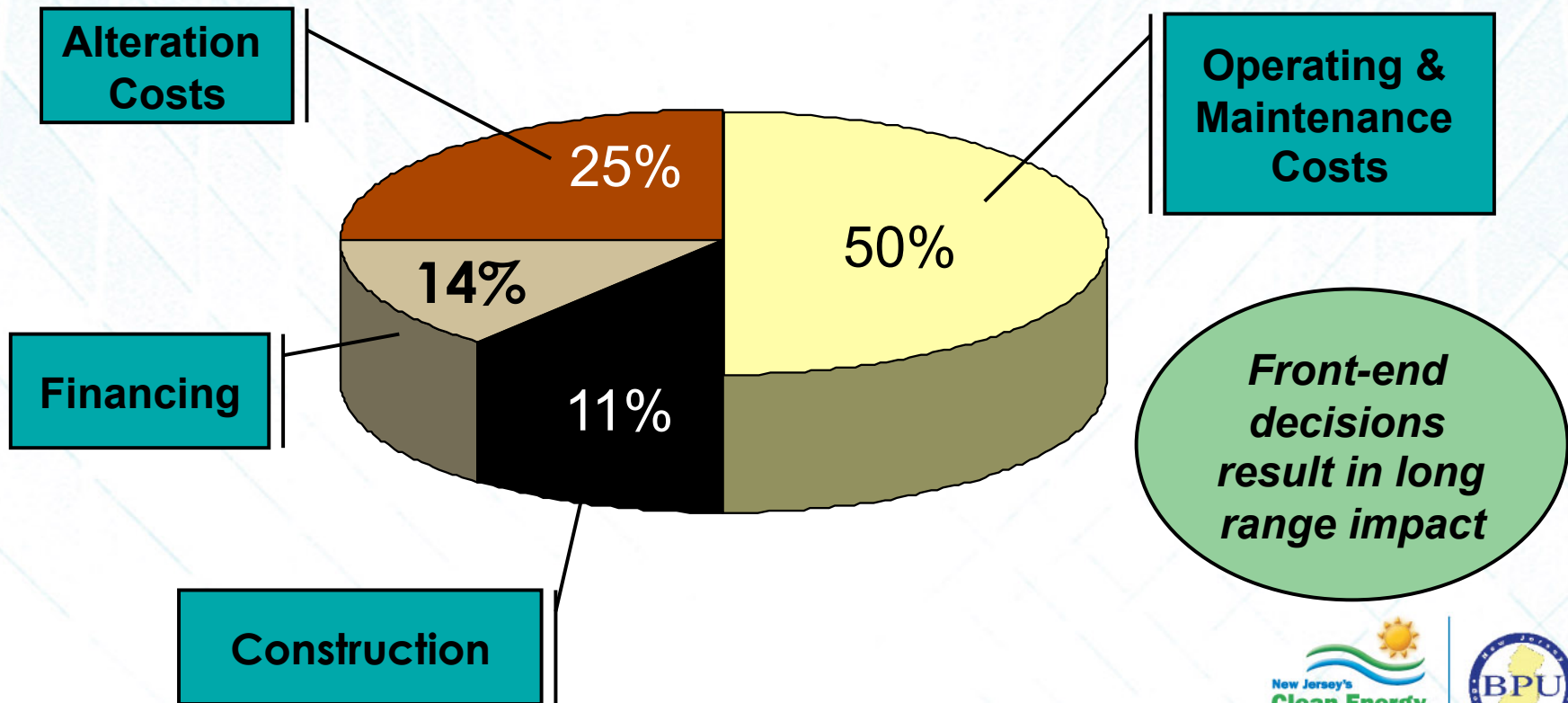
Why Have Energy-Efficiency Programs?

- Save energy and money by reducing the demand for energy
- Protect the environment
 - Less emissions
 - Cleaner air
- *“Transform”* the Market Place
 - change behaviors - think high efficiency first
 - encourage sustainable practices



OWNERSHIP COST SUMMARY

(40-year building life cycle approximation)





Who Can Participate in the Commercial/Industrial Programs?

- All New Jersey Commercial & Industrial Electric and Gas customers who pay the Societal Benefits Charge, i.e., not served by municipal utility.
- Opportunities for all size and type projects:
 - New construction (new buildings & additions)
 - Major renovation
 - Equipment replacement





NJ SmartStart Buildings Program

- ***Design Assistance Grants***
- Pre-Qualified Equipment (Prescriptives)
- Custom Measures having Energy-Saving Potential
- Cost-sharing for Studies
- Commissioning (K to 12 Public Schools)





Design Assistance Grants

1. Comprehensive Design Support
 - At conceptual design stage of construction project
 - For Facilities of 50,000 Square Feet and Larger
OR HVAC > 150 tons and Demand > 75kW
 - Brainstorming: \$1,000 grant
 - Energy Modeling: \$5000 minimum
 - Incremental design incentive: up to \$5,000
2. Modified Design Support
 - Design substantially complete, but before bidding
 - Goal to re-consider energy saving potential
 - Up to \$5,000 on case-by-case basis





Incentives Available For:

- Design Assistance Grants
- ***Pre-Qualified Equipment (Prescriptives)***
- Custom Measures Having Energy-Saving Potential
- Cost-sharing for Studies & Commissioning





Pre-Qualified Technologies (Prescriptives)

- Electric Chillers
(\$8 to \$170 / ton)
- Natural Gas Cooling
(\$185 to \$450 / ton)
- Electric Unitary HVAC Systems
(\$40 to \$92 / ton)
- Ground Source Heat Pumps
(\$370/ton)
- Gas Heating (\$300 minimum /
furnace or boiler) & DHW
Heating (\$50 minimum / heater)
- Variable Frequency Drives ...
(\$60 to \$155 / HP)
- NEMA Premium Motors - 1 to
200 hp (\$45 to \$700 / motor) ..
- Prescriptive & Performance
Lighting (\$10 to \$284 / fixture)
- Lighting Controls
(\$20 to \$75 / unit)





Incentives Available For:

- Design Assistance Grants
- Pre-Qualified Equipment (Prescriptives)
- ***Custom Measures Having Energy-Saving Potential***
- Cost-sharing for Studies & Commissioning





Custom Measure Projects

- Opportunities for non-pre-qualified Electric and Gas technologies
- Submit Custom Electric Equipment application and custom project data sheet estimating:
 1. Savings over established “base-line”, for example:
 1. Minimum of 75,000 kWh saved per yr
 2. Minimum of 1,500 Therms saved per yr
 2. Must have Internal Rate of Return of 10% or greater
- Incentive equals LESSER OF:
 - Buy down to 1 year payback
 - \$0.16 per Kwh/yr and/or \$1.60 / Therm saved
- Technical Study-Cost Share 50 / 50%, up to \$10K. If Custom Measure is done, percentage paid goes to 75%.





Additional Incentives

- **Multiple Measures Bonus (15% extra)**
 - If \$500K Cap not achieved.
 - Provides an additional 15% Incentive for multiple projects.
 - Must include with lighting and lighting controls
- **Building Commissioning (CX)**
 - For Kindergarten to Grade 12 public schools only (at least 50,000 sf in area)
 - Must follow Comprehensive Design Path
 - 50% of Commissioning Agent fee to \$30,000 maximum





Additional Incentives

Chiller Plant Optimization Studies

- Available when customer is deciding to upgrade or replace chillers (500 tons min.)
- Study incentives to \$10,000 (on 50/50 cost sharing basis, 75/25 if project is implemented)

Compressed Air Optimization Studies

- Include both supply & demand sides of system
- Typically improve system operation efficiency 20 – 50 %
- Study incentives to \$10,000 (on 50/50 cost sharing basis, 75/25 if project is implemented)





Application Procedures

- **Send to TRC Energy Services (Market Manager):**
 - Application & Worksheet (if applicable)
 - Copies of latest Utility Bills and W-9 form
 - Equipment Manufacturer Technical Data Sheets
- **You must receive TRC's approval letter *prior* to the removal of existing, or installation of new, equipment**
 - When incentives > \$5,000 for HVAC or motors
 - For all other energy-efficiency measures (EEMs)
- **Install in accordance with the "approval letter" within the specified time frame**





Application Procedures (continued)

- **Submit “proof-of-purchase” documentation and tax clearance certificate. Incentive will be the lesser of:**
 - **Approved program incentive amount or**
 - **Actual equipment cost of the Energy Efficiency Measure**
- **Allow 60 days for delivery of incentive after submission of all required documentation.**
- **The Program reserves the right to cap incentives at \$500,000 per utility account per calendar year.**
- **Budget for 2010: \$40.3M**





New Programs FOR 2010

1. *Local Government Energy Audit Program*

2. Direct Install Program
3. Pay For Performance Program (Existing Facilities)
4. Pay For Performance Program (New Construction)
5. TEACH Energy Education Program
6. Sector Specific Program (Benchmarking)
7. American Recovery & Reinvestment Act (ARRA)





1. Local Government Energy Audit Program (LGEAP)

- Program to audit municipal/county government facilities & NJ State Colleges and State Universities and to determine energy saving measures.
- Also covers organizations with IRS 501 (3) (c) certification
- Agency pays Contractor the audit fee - if recommended upgrades are installed within one year of report, equivalent in amount to 25% of the fee, agency gets 100 % fee reimbursement, otherwise Agency receives 75% fee reimbursement when report is approved.
- Agency participating is eligible for upgrade equipment installation through the Smart Start Program or the Direct Install Program.
- Incentive Caps Based on Sq Ft of Facility.
- Total 2010 Funding ~ \$ 11.7M





1. Local Government Energy Audit Program (LGEAP-EECBG)

- Local government entities that did not receive a Direct Block Grant from the American Recovery and Reinvestment Act (ARRA) may be eligible for additional incentives up to \$20,000 from Federal Stimulus Funding to lower the cost of installing energy conservation measures.
- In order to receive the funds, eligible entities must participate in at least one of the following energy conservation programs:
 - Direct Install
 - Pay for Performance
 - NJ SmartStart Buildings
- Measures recommended in a Local Government Energy Audit (LGEA) completed within the past 12 months are eligible.
- Independently installed building shell measures recommended by LGEA
- Any eligible utility energy efficiency incentive program





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2. Direct Install

- **Retro-fit Program for users with a peak demand of 200 kW or less during the preceding 12 months.**
- **Incentives are to encourage early replacement of eligible, energy consuming equipment.**
- **Provides for direct installation by participating contractors with Incentives paid directly to the contractor.**
- **Qualifying Users are eligible for incentives up to 80% of installed cost of approved projects.**
- **User pays contractor remaining 20%.**
- **Budget for 2010 ~ \$15.2M**



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New Programs for 2010

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3. Pay For Performance (Existing)

- For existing facilities with a Peak demand of > 200 kW during preceeding 12 months.
- Incentives are based on analysis & simulation and are linked directly to energy savings, with a 15% reduction as the minimum goal.
- Lighting cannot exceed 50% of projected savings.
- Three milestone payments:
 - 1) Submittal of Energy Reduction Plan – Incentives are Contingent on moving forward and are based on \$0.10 / sq ft and range from \$5K to \$50 max (not to exceed 50% of annual energy expense).
 - 2) Installation of all Recommended Energy Saving Measures – Incentives equal 60% of total Performance Based incentive.
 - 3) Completion Benchmarking Report - Final incentive equals remaining 40% of total Performance Based incentive.
- Incentive is capped at \$1M / utility meter and \$2M / facility. Doubled for Hospitals, Non-Profits, Universities and Government Facilities



- Budget for 2010 ~\$47.4.0M (\$5.40 M for CHP)



New Programs for 2010

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- 4. *Pay For Performance Program (New Construction)***
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4. Pay For Performance (New Construction)

- For new facilities with an anticipated average peak demand of > 200 kW.
- Incentives are based on analysis & simulation and are linked directly to energy savings, with a 15% reduction from ASHRAE 90.1-2004 ,Appendix G, design data as the minimum goal.
- Lighting cannot exceed 50% of projected savings.
- Three milestone payments:
 - 1) Submittal of Energy Reduction Plan – Incentives are *Contingent* on moving forward and are based on \$0.10 / sq ft and range from \$5K to \$25K max (not to exceed 50% of annual energy expense).
 - 2) Installation of all Recommended Energy Saving Measures – Incentives equal 60% of total Performance Based incentive.
 - 3) Completion Benchmarking Report - Final incentive equals remaining 40% of total Performance Based incentive.
- Incentive is capped at \$1M / utility meter and \$2M / facility. Doubled for Hospitals, Non-Profits, Universities and Gov't Facilities



- Budget for 2010 ~\$ 4.9M

New Jersey
SmartStart New Programs for 2010
BUILDINGS®

1. Local Government Energy Audit Program
2. Direct Install Program
3. Pay For Performance Program (Existing Facilities)
4. Pay For Performance Program (New Construction)
- 5. *TEACH Energy Education Program***
6. Sector Specific Program (Benchmarking)
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5. Teach - Energy Education Program (Teaching Energy Awareness with Children's Help)

- An educational program for approximately 100 Kindergarten to Grade 12 Public Schools.
- Requires 24 months of energy consumption data to serve as baseline for comparison of savings versus baseline.
- Will entail modeling of facility to establish a base condition and to identify energy saving alternatives.
- Will allow administrators to see how their schools are performing against a local and national sample.
- Provide energy efficiency educational programs for the students and training of the faculty to teach these programs.
- Budget for 2010: \$ 1.3 M





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6. Sector Specific Program (Benchmarking)

1. Target Markets—Industrial, Higher Education, Institutional, Multifamily & Hospitality
2. Program Offerings—Energy **Benchmarking**
 - Compares Performance to Peer Facilities
 - Data is adjusted for Location
 - Computes “Site Energy” (energy consumed by the building at the building site only) & “Source Energy” (includes the site energy use as well as all of the losses, to create and distribute the energy to the building.
 - Calculations are used for comparison to Peer Facilities.
 - Allows for complete assessment of energy efficiency in a building
3. Recommends Incentive Programs Available





New Programs for 2010

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- 7. *American Recovery & Reinvestment Act (ARRA)***





7. American Recovery & Reinvestment Act (ARRA)

- Select commercial and industrial components of New Jersey's Clean Energy Program are now available to oil, propane, cooperative and municipal electric customers that previously were not eligible for incentives.
- Federal Stimulus Funding, through ARRA, has made commercial and industrial customers served by non-investor owned utilities eligible to participate on a first-come, first-served basis, until all funds are exhausted, in the following programs:





7. American Recovery & Reinvestment Act (ARRA) - Continued

- Direct Install - A turnkey equipment replacement service from New Jersey's Clean Energy Program designed for small to medium-sized facilities.
- Pay for Performance - A comprehensive approach that provides incentives towards whole-building energy improvements in large buildings.
- Local Government Energy Audit - Pays the cost of an investment-grade energy audit of government-owned buildings to determine cost-justified energy savings.





For More Information

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