Reforming the Energy Vision (REV)

Yesterday
Centralized Power

Tomorrow
Clean Localized Power

Governor Cuomo’s strategy to build a clean, resilient and affordable energy system for all New Yorkers
Clean Energy Fund (CEF)

- 10-year, $5 billion funding commitment
- Reshapes New York’s energy efficiency, renewable energy and energy innovation programs
- Reduces cost of clean energy
- Accelerates adoption of energy efficiency to reduce load
- Increases renewable energy to meet demand
- Mobilizes private investment in clean energy
Renewable Heating & Cooling Goal

• Reduce consumers overall energy bill, reliance on fossil fuels for heating, and the amount of greenhouse gas emissions from buildings by developing economically viable, and scalable renewable heating & cooling markets and businesses in New York
Barriers

- High first costs
- Limited training available for installers, designers, project managers, and engineers
- Lack of consumer knowledge and awareness
Residential Energy Consumption

(Geothermal heat pumps is a renewable solution for the biggest portion of residential energy consumption)

“space heating , space cooling, and water heating”
Renewable Heating & Cooling Technologies

- Air Source Heat Pumps
- Ground Source Heat Pumps
- Biomass
- Solar Thermal Hot Water
Mini-Split Air Source Heat Pump
Ground Source Heat Pump
Biomass (Pellet Stoves)
Solar Thermal Hot Water
Policy Development

• NYSERDA will develop policy framework, supply curve, and cost benefit analysis for the renewable heating & cooling technologies and markets working with stakeholders and others
Market Engagement

On going discussions through voice of customer with various stakeholders:

- Consumers
- NY-GEO
- Utilities (electric, gas, steam)
- Cities, Towns, Counties, and Municipalities
- Brookhaven National, Oakridge National Labs
- DOE, DPS, DEC
- Investors and Developers
- Organizing Regional Renewable Thermal Consortium of NE states
Renewable Heating & Cooling
Market Development Strategies

- Market Characterization/Potential
- Policy Development
- Market Engagement (Interested Partners)
- New Business/Financial Models
- Marketing, Public Relations, Consumer Awareness
- Workforce Training and Development
- Demonstration Projects
- Measurement & Verification
- 2016 Program Portfolio – Under Development
- Research & Development
New Business/Financial Models

• Establishing a team comprising of staff, stakeholders, and consulting firms to help NYSERDA develop business and financing models for renewable heating & cooling markets

• Models under evaluation:
  – Utility ownership of loop fields
  – District geothermal systems
  – Thermal utilities / ESCO
  – Third party ownership
  – Lease programs
  – PPA
  – On bill financing
  – Commercial PACE (Energize NY)
Marketing

• Develop marketing plans for awareness and uptake
• Target Groups Include:
  – Consumers
  – Engineers
  – Architects
  – Real Estate Industry
  – Developers
  – Investors
  – Facilities Managers
  – Environmental Organizations
  – Government Agencies (municipalities & inspectors)
Workforce Training and Development

- Create training programs to develop skills for geothermal design and installation partnering with IGSHPA, ASHRAE, ACCA, and manufacturers.

- Design training programs for the following groups:
  - Installer
  - Designer
  - Engineer
  - Architect
  - Project Manager
  - Government Agencies
  - Building Inspectors
2016 Program Portfolio Under Development

- $1.5M for geothermal heat pump market development: (roll out second half of 2016)
  - Workforce Training and Development
  - Consumer awareness and education
  - Codes & Standards
  - Quality Assurance
  - Marketing and Public Relations

- Conducting analysis on the benefit of ground source heat pumps for peak demand shaving and increased system utilization for electric utilities.
Thank You

donovan.gordon@nyserda.ny.gov

Questions?