



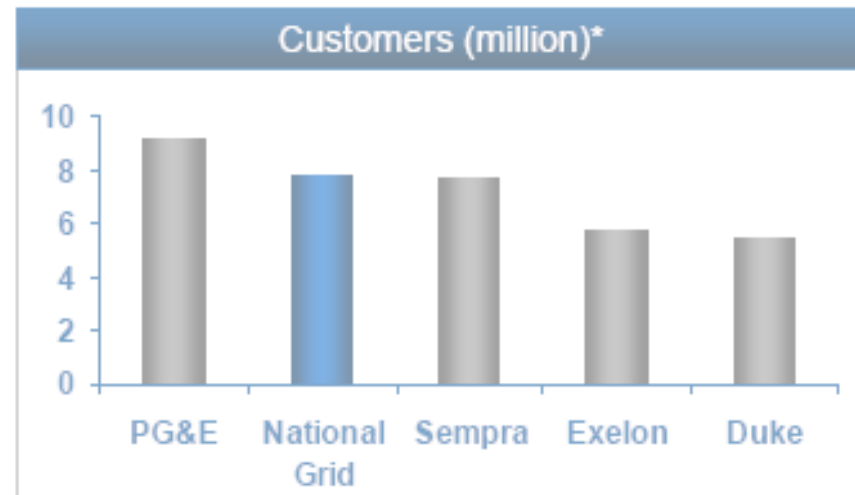
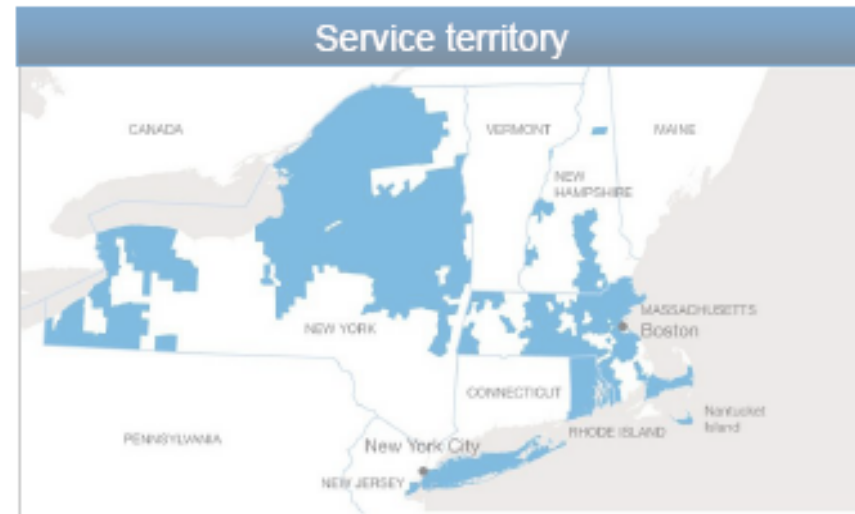
# DOE Steam System Assessment Tool

**nationalgrid**

The power of action.<sup>SM</sup>

# Who is National Grid?

- ◆ The largest distributor of Natural Gas in the northeast U.S.
  - ◆ Approximately 3.4 million customers in New York, Massachusetts, New Hampshire and Rhode Island
- ◆ Delivers electricity to approximately 3.3 million customers
  - ◆ Massachusetts, New Hampshire, New York and Rhode Island
- ◆ Manages the electricity network on Long Island under an agreement with the Long Island Power Authority
  - ◆ Serving 1.1 million LIPA customers



# The Steam Programs

---

- DOE Industrial Technology Program (ITP) develops and distributes free analysis and decision software tools.
- Partnered with the Industrial Assessment Centers across the country to train people on the software

## Steam Programs

1. 3E+
2. Steam System Scoping Tool (SSST)
3. Steam System Assessment Tool (SSAT)

# 3E+

---

- ◆ Calculates the most economical thickness of industrial insulation for operating conditions inputted by the user.
- ◆ Inputs
  - ◆ Material
  - ◆ Size pipe
  - ◆ Pipe Geometry
  - ◆ Temperatures
- ◆ Results
  - ◆ Efficiency at different pipe insulation thicknesses

# Steam System Scoping Tool (SSST)

---

- ◆ Evaluates a facilities steam system operation and compares the system against best identified practices.
- ◆ Inputs
  - ◆ Basic steam system info (steam production, operating hrs, etc)
  - ◆ Answer steam profiling questions (monitoring, benchmark)
  - ◆ Answer steam maintenance questions
  - ◆ Boiler efficiency and heat recovery
- ◆ Results
  - ◆ Scores customer
  - ◆ Identifies potential steam system improvements
  - ◆ List next steps

# Steam System Assessment Tool (SSAT)

---

- Estimates the impact of key steam system improvements. Generates results using energy, cost, and emissions savings that could be generated by incorporating different improvements improvements.
- More detailed than SSST
- Inputs
  - Specific operating parameters (# headers, operating pressures, non-standard piece of equipment)
  - Fuel rates
- Results
  - Calculates how much steam is costing
  - Compares different scenarios