



**NYSERDA**

# **Real Time Energy Management Program**

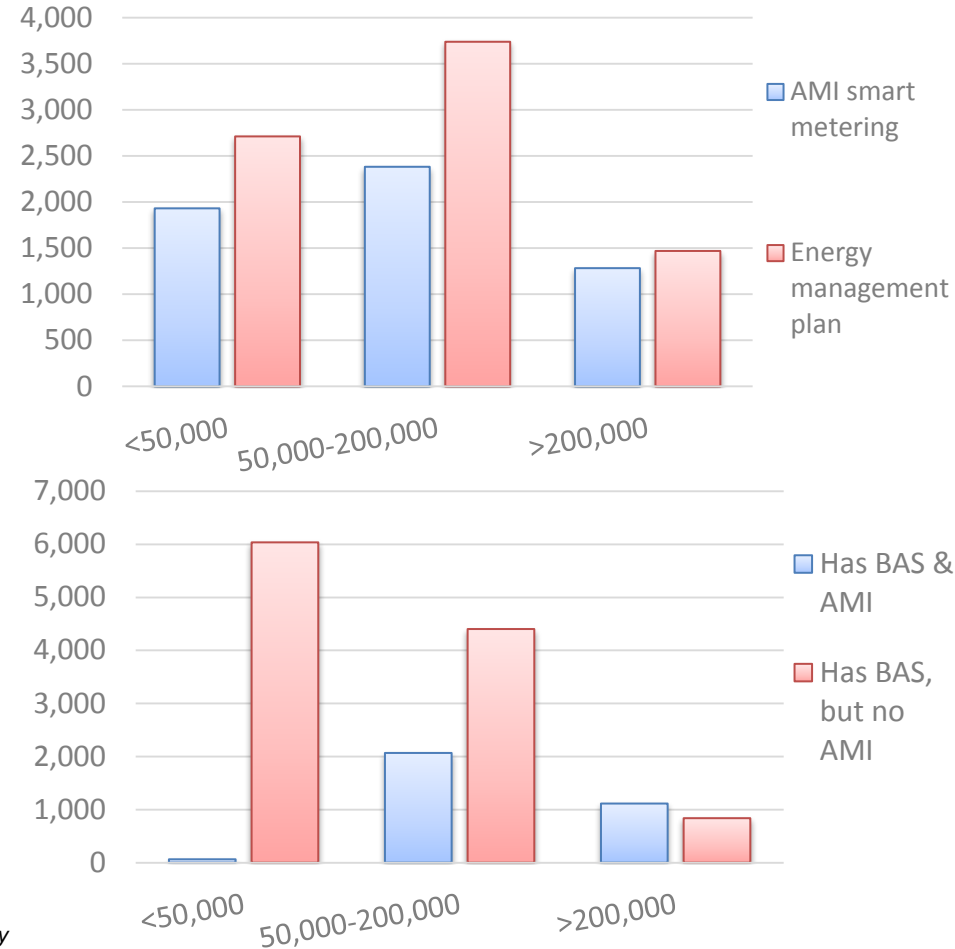
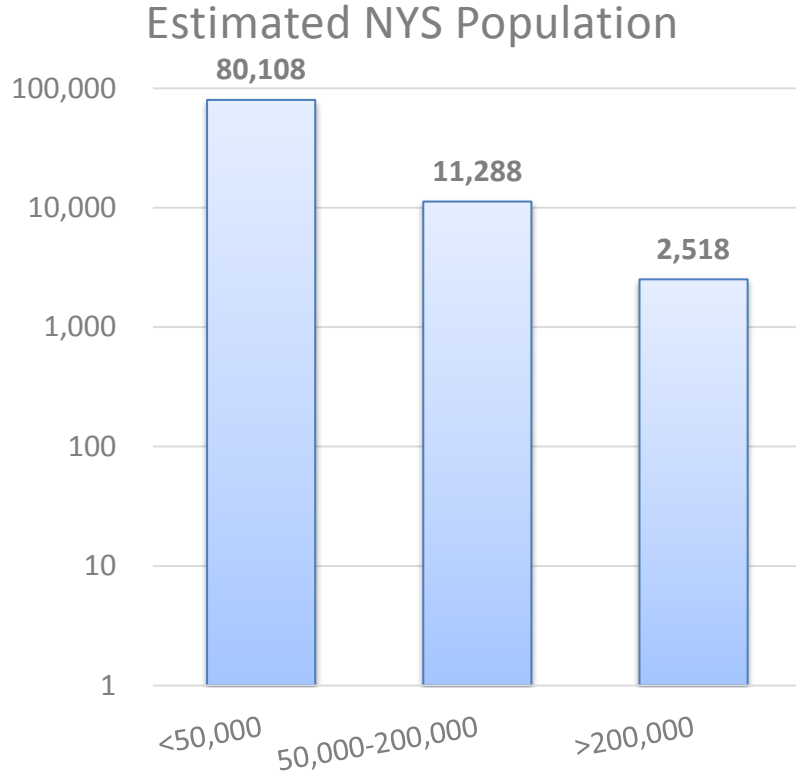
**PON 3309**

**New York City Building Energy Conference  
November 3<sup>rd</sup>, 2016**

# Objectives

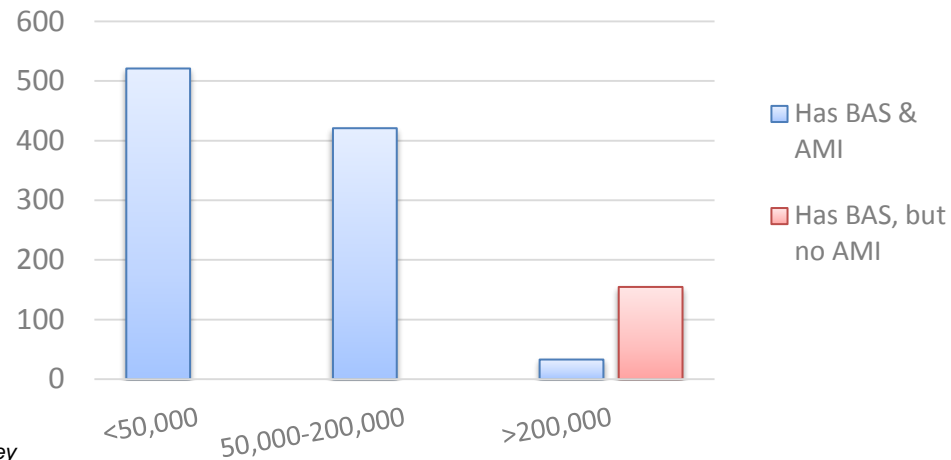
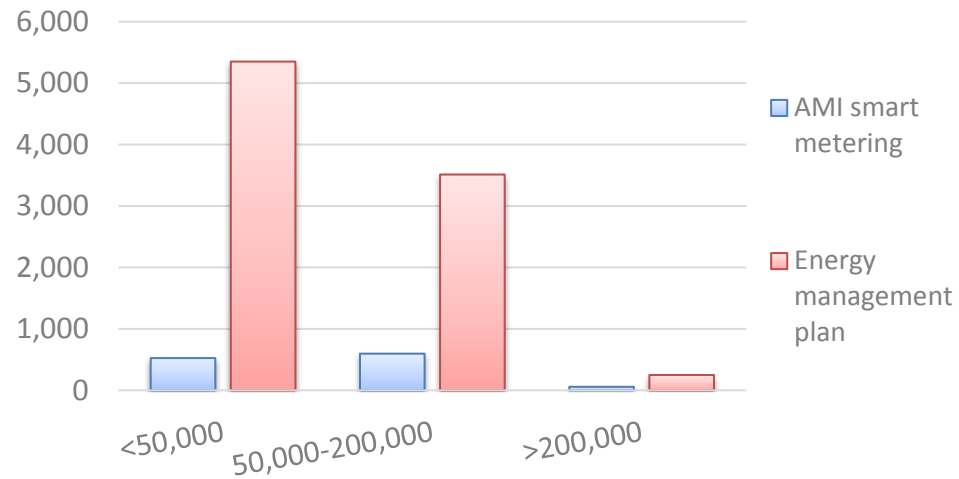
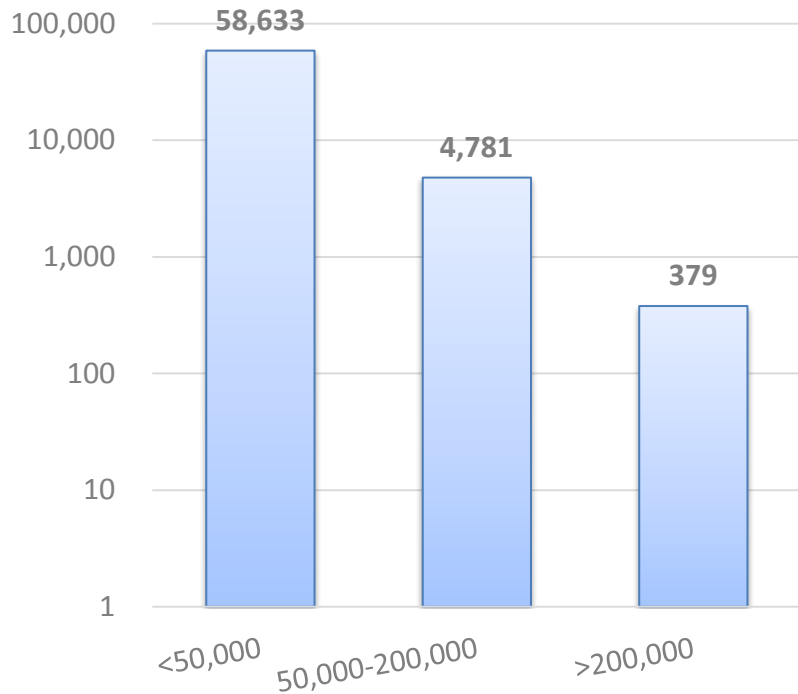
- **Strategy**
  - Accelerate market growth in an enabling technology & a growing service industry
  - Provide independent technical advice and training over five years to maximize the realized benefits and success
  - Share Learnings, Demonstration Pilots, Case Studies to build the value proposition
  
- **Why?**
  - The perceived risk associated with RTEM investments is lower than the real risk.
  - Proven technology is available and cost of systems will continue to drop
  - Smart technology applied to devices, equipment, and systems is increasing, thus increasing the results from RTEM.
  - The potential market should grow from <1,000 buildings today to >10,000 buildings in 5-6 years
  - RTEM buildings will support other **advanced strategies**

# Market Potential – Office



# Market Potential - Retail

Estimated NYS Population



# What is Real Time Energy Management?

**RTEM** is the combination of building data collection systems (sensors, meters, equipment feeds), data analytics and building data information services that are able to show building management the actual state of building performance at any point in time.

**RTEM** captures discreet energy usage data and to develop key insights about building operations and systems in a manner that supports fine-tuning the existing building and identifying beneficial capital projects.

**RTEM's value** is realized as vendors continuously identify for customers various equipment set points, systems performance, and systems interactions that impact both building comfort/functionality and energy use.

# What RTEM is NOT?

## **NYSERDA RTEM is not incentivizing:**

- Whole-Building Interval metering
- Whole-tenant space interval metering
- Controls
- Demand Response
- BMS/BAS
- In-house only use of an analytics platform

# Qualified RTEM System and Service

- **RTEM Systems** are defined as the monitoring hardware and software used to extract, process, and store energy usage data.
- **RTEM Services** are defined as consulting services that customers contract with to analyze energy usage data and provide, enable, and/or implement actionable items base on the data.
  - RTEM Services cannot solely consist of software as a service, or SaaS. RTEM Services can incorporate SaaS in to the services contract to use as a tool to provide, enable, and/or implement actionable items only.

# RTEM: Analogy

Ordinary Chess Player

< Computer (assumed)

< Grandmaster (traditional)

< Supercomputer (Deep Blue)

< Computer & Grandmaster (study)

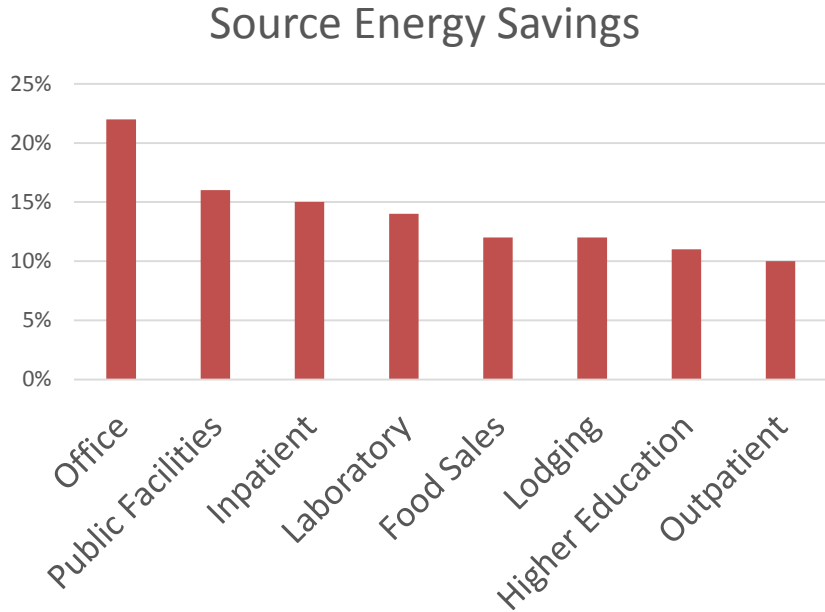
< Supercomputer & ordinary player (study)

< Supercomputer & Grandmaster (assumed)



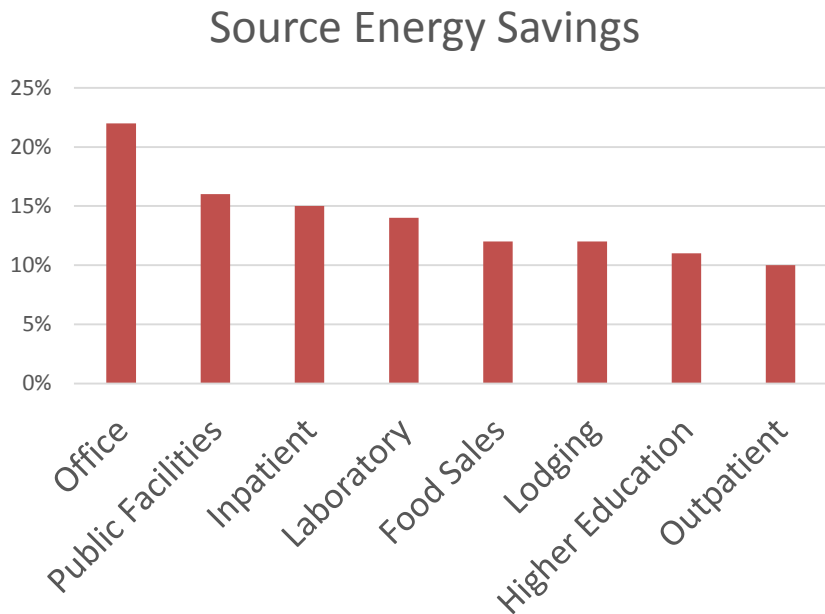


# RTEM in Practice



Mills, Evan. "Building commissioning: A golden opportunity for reducing energy costs and greenhouse-gas emissions." *Lawrence Berkeley National Laboratory* (2010).

# RTEM in Practice



AtSite: 9 Commercial Buildings, 2.5M Sq Ft  
 \$1.4M Total Energy Savings  
 12% Portfolio Energy Savings

Implemented over 100 energy conservation measures that include no-cost operational adjustments, low and medium cost (ex. occupancy sensors, lighting retrofits, variable frequency drives) and a few high cost recommendations

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# RTEM in Practice

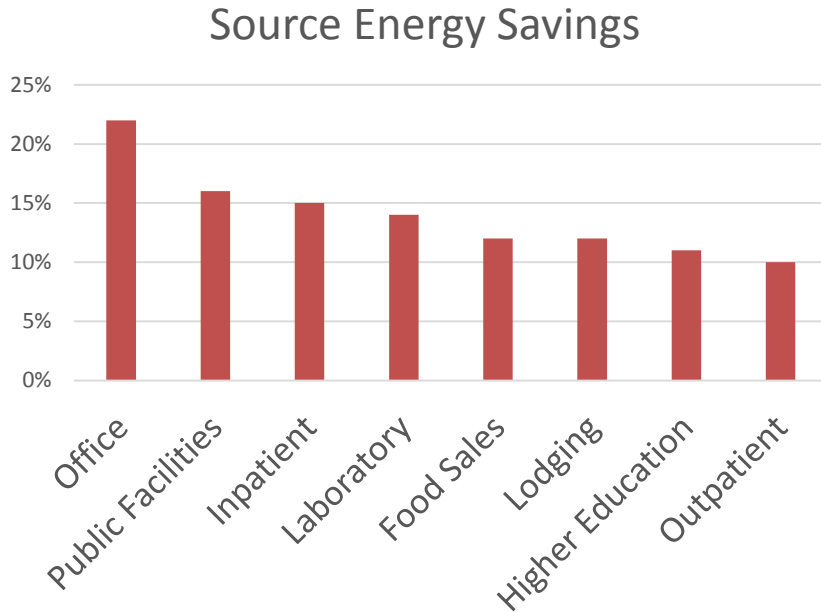
## NorthWrite: Small Commercial

> \$22,000 / year in Savings

10% in kWh savings

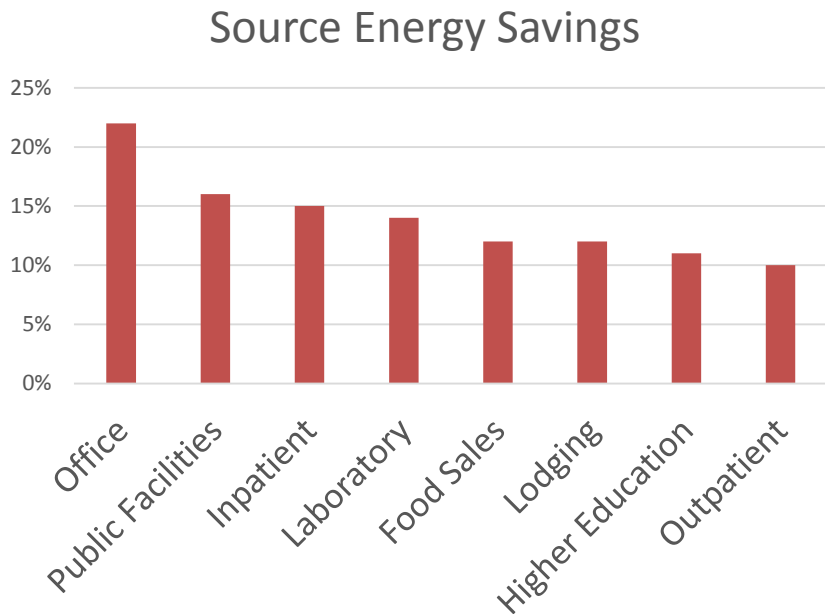
10% in kW demand reduction

HVAC optimization and capital improvements through retrofits that better fit the customer's operational needs.



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# RTEM in Practice



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Enertiv: Major Retail – Single no cost solution:  
 > \$5,000 / year in Energy Savings  
 42% in Exhaust hood energy savings

Discovered that an exhaust hood in one of the kitchens was running continuously. Finding and quickly addressing this issue helped the customer maintain the proper operating schedules for their equipment, and prevent operational drift.

# Real Time Energy Management

- RFQ 3164 – Qualified RTEM Providers
- Program Opportunity Notice 3309
- \$30M in available funds
- First-come, first-serve, as funding is available
- Through June 2021.

Additional RTEM Pilots to be developed to stress test the market.

## Incentive: Option A

### Installation & Service Cost Share Capped at \$155,000 per site

	Applications received Before July 1 <sup>st</sup> , 2018		Applications received On/After July 1 <sup>st</sup> , 2018	
	NYSERDA Cost-Share	Cap per Project	NYSERDA Cost-Share	Cap per Project
Systems	30%	\$75,000	20%	\$50,000
Service Years 1-3	30%	\$20,000	20%	\$15,000
Service Years 4-5	20%	\$10,000	15%	\$10,000

## Incentive: Option B

**Installation & Service Cost Share** Capped at \$155,000 per site

	Applications received Before July 1 <sup>st</sup> , 2018		Applications received On/After July 1 <sup>st</sup> , 2018	
	NYSERDA Cost-Share	Cap per Project	NYSERDA Cost-Share	Cap per Project
Years 1-3	30%	\$35,000	20%	\$30,000
Years 4-5	20%	\$25,000	15%	\$25,000

# Things to know

- Only NYSERDA Qualified Vendors can apply for cost-share/incentives
- Projects must include RTEM System and RTEM Service to be eligible for funding
- Already installed RTEM systems are eligible to apply for service cost-share
- Site = Building
- Site has to be greater than 50,000 sq-ft
- Site aggregation is allowed
- Maximum of 10 sites per owner or portfolio manager
- A single vendor cannot receive more than \$6M
- Cap of \$155,000 per site
- Service-length can be for 1, 2, 3, 4, or 5 years



# How to apply

## Vendors

- Start by applying to the **RTEM RFQ 3164** and become an RTEM Qualified Vendor

## Customers

- Select an RTEM Vendor from NYSERDA's website
  - Or select your own RTEM Vendor, and have them apply to the RTEM RFQ
- Proof of SBC payment (utility bill)
- Other programmatic specifics listed in PON 3309

### More information:

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