



# Pratt Institute

## Resource perspective on Demand Response

*“Our participation (demand response) has enabled us to finance the installation and upgrade of controls in various campus buildings to facilitate instant curtailment and better manage our energy usage. It helps us to do our part in reducing our carbon footprint.”*

**-Steve Brennan, Director of Facilities and Maintenance**



# Pratt Institute Facility Facts

- College campus with over 26 buildings in Brooklyn and one building in Manhattan
- Summer peak demands over 3,000kW
- Mayor Bloomberg announced the PlaNYC University Challenge at Pratt in Summer 2007.
- Pratt joined in the partnership with NYU, Columbia University, CUNY, St. Johns, the New School, Cooper Union, Fordham, and Barnard
- Committed to reduce its greenhouse gas emissions by 30% within the next 10 years



# An automated solution

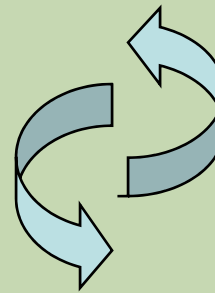
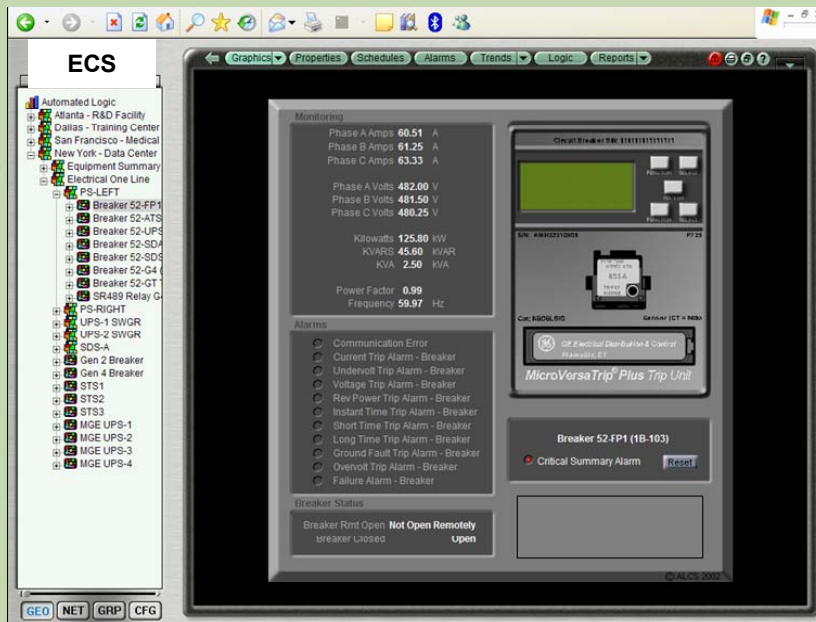
## ***Overall Scope of Work***

- Selection of buildings that offer most reduction ability
- Integration of 12 interval meters into BMS system
- Installation of additional controls equipment
- Development of a DR Strategy with Pratt administrators
- Programming of EMS system to initiate prescribed measures
- Create a scalable system to add additional buildings & loads



# Steps to automation

- Enable seamless communication between existing BMS & smart meters.
- Protocol router & meters upgraded to be mod-bus capable.
- Software & programming updates.





## End result

Real-time demand information and trends will be displayed on the front screen.

Curtailment activation button that initiates a curtailment sequence.

On/off status of all controlled equipment.

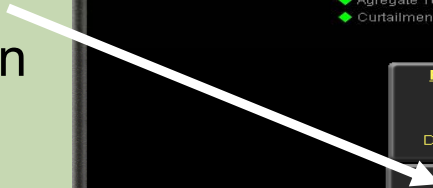
Ability to override and provide cooling to specific locations & pre-cooling.

Ability for ECS to initiate DR remotely.

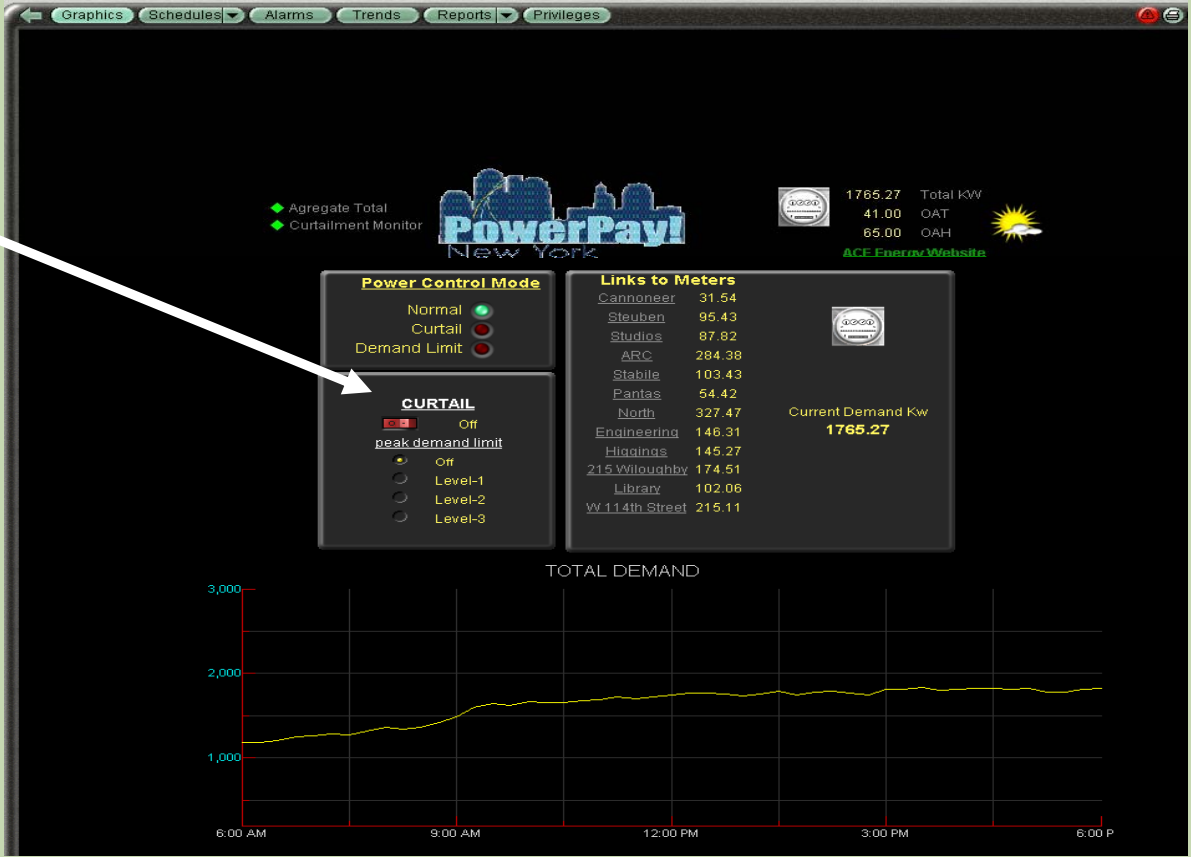


# Central Demand Response screen

Demand Response Activation Button



Aggregate Total of Interval Meters





# Curtailment manager screen

On/Off status

DR activation @ device status

Real time readings at buildings

Direct link access to equipment



# Key components to the participation decision

## Reasons to say yes...

1. Revenue
2. Data / Technology / Insight
3. Environmental impacts
4. Positive community contribution
5. Other benefits

## Opposition received...

1. Perceived risks
2. Selling demand response internally, pushback
3. WIIFM (what's in it for me...) perspective
4. Other obstacles



# Interface with our demand response administrator

## What to look for in a curtailment service provider

1. Experience
2. Knowledge
3. Flexibility

## Services provided

1. Facility analysis
2. Reduction strategies
3. Market opportunity
4. Account management

**A CSP can be an advocate for...**



Where we are  
now



## Campus Objectives

Generate awareness of sustainability issues among faculty, students and staff.

Create and publicize public events on campus that will provide information and spark enthusiasm concerning sustainable design and planning.

Identify and publicize sustainable initiatives currently taking place in campus operations and facilities and encourage the incorporation of additional sustainable practices.

Facilitate collaboration with community organizations.

# The future...

## Planned projects...

1. Work in progress
2. Future enhancements
3. Five year plan

## Recommendations...

1. What's needed to stimulate further action

## Where is all this heading...



Thank you

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## PEAK LOAD MANAGEMENT ALLIANCE

Honors from PLMA include:

-2007 Outstanding Program Achievement  
Award

## Energy Efficiency Markets

Honors from EE Markets include:

-Best Demand Response Provider, 2008