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Columbia University Campus

- Main campus located in the Morningside Heights neighborhood of Manhattan
- 246 Buildings, 15.2 million square feet
- Residential portfolio approximately 5600 apartments
- Other Campuses in the Inwood neighborhood and Irvington, NY
- A new campus development is underway in the Manhattanville neighborhood
Columbia University Campus

Steam Plant

- Four (4) water tube boilers
- 360,000 lbs/hr @ 125 psi
- Dual Fuel Natural Gas/#2
- Plant was built in 1990

Chilled Water Plant

- Nine (9) Chillers totaling 16,350 tons
- Hybrid Steam and Electric
- SCADA controlled
Energy – What Does that Mean?

Energy Program

• Purchasing of energy commodity (Gas, Fuel Oil, Electricity)
• Demand side management
• Grants, rebates and programs (NYSERDA, Con Edison, EPA)
• Fundamental infrastructure renewal
• Operating strategy
• Setting standards (Construction, design, temperature policy)
• Commissioning
• Culture
Master Planning

- Chilled Water
- Steam
- Combined Heat & Power
- SCADA

- Thermal Storage
- Emergency Power
- Building Infrastructure Consolidation
- Metering
Major Infrastructure Improvements

- Chiller Plant Renewal
- Boiler Plant Upgrades
- Building Level Submetering
- Industrial Grade Controls
- Oil to Gas Conversion
- Building Energy Audits
- Campus Wide Retrocommissioning