Present

Form & Function of Large Scale CHP in an Urban Environment

CampusEnergy 2019
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Team Introductions

Engineering Considerations

Architectural Considerations

Construction Considerations
TEAM INTRODUCTIONS

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Project Objectives

- Provide resiliency in delivery of utilities during a flood condition of Charles River
- Increase reliability of existing MicroGrid
- Provide support to new science building and campus loads
- Improve efficiency of steam production while reducing operating costs
- Eliminate use of fuel oil except for required code back up
- Reduce greenhouse gas footprint
A: MIT and Community Sensitivities around Site and Building Aesthetics
A: MIT and Community Sensitivities around Site and Building Aesthetics
B: Architectural Overview
Plan at Ground Floor (el. 17’-9”)

- N16A
- N16B
- N16 Chiller Hall
- Utility Yard
- Gate
- View of Presentation Room
- Main Entry
- Office Space
- Reserve Fuel Storage
- Mechanical
- Service Entry
- Control Room
- Bridge Overhead
- N4 Garage
- Grand Junction Railroad
B: Architectural Overview
Outreach
B: Architectural Overview
Presentation Room
B: Architectural Overview
Office Area
B: Architectural Overview
Plan at Main Turbine Hall (el. 30’-0”)

- Ventilation Intake
- View to Turbines
- Control Room Bridge
- View to Plant
- HRSG 1
- HRSG 2
- CTG 1
- CTG 2
- Main Turbine Hall
- Electrical
- N4 Garage
- N16A
- N16B
- View to Plant
- View to Turbines
- Ventilation Intake
B: Architectural Overview
Control Room Bridge
B: Architectural Overview
Building Cross Section
B: Architectural Overview
Building Longitudinal Section
C: Finished Product

C: Finished Product

A: Site Challenges

B: Façade Design Assist

C: Steel Erection
D: Next Steps and Schedule for Completion

Construction Photos

Construction Photos
Construction Photos

ANY QUESTIONS?

https://www.youtube.com/watch?v=JhfGKb7j4&feature=youtu.be

BUILDING A BETTER SOCIETY THROUGH ENDURING RELATIONSHIPS
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Construction Photos