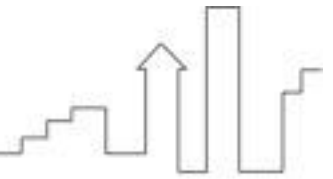


Decarbonizing an Existing Multi-Use Tower



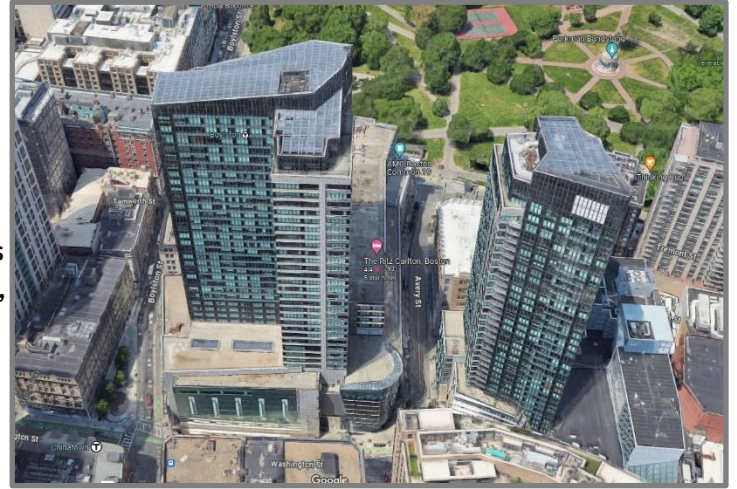
Decarbonization Plan for 1 Avery Place Tower

Boston, MA

The multi-use tower, an 894,000 square foot, 42-Story existing tower, is currently operating at 120 Energy Use Intensity (EUI) and will be in breach of Boston's Building Emissions Reduction and Disclosure Ordinance as soon as 2025. The tower includes occupied spaces for residential, hotel, fitness, movie theater, and retail typologies.

The building owner is advocating for a holistic decarbonization plan to ensure the building invests the least to get the most decarbonization that keeps the building below local fine levels.

[Full Report with Performance Results](#)



Owner's Project Goals

Operational Carbon Metrics

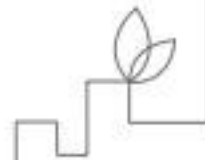
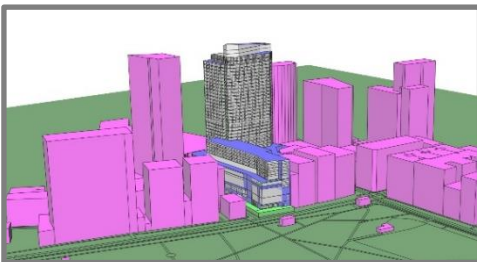
- Zero Carbon Emissions by 2050
- BERDO Compliance

District Steam

- Utilize the decarbonization efforts of the District Steam plant to replace the natural gas boilers.

Electrification

- Sequence replacement of natural gas boilers with the use of Heat Pumps for Heating and Cooling Energy as the grid emissions rate drops below Natural Gas emissions.



Decarbonization Plan

The Decarbonization Plan includes an Operational Model, a highly calibrated dynamic building energy model and a virtual representation of the existing building. The model is calibrated to <1% of building performance.

The plan includes an Optimum Model, which is a Passive House model developed from the Operational Model. The Optimum Model represents the best pre-renewable performance possible based on proven building science.

Finally, the plan includes Step Models, which are the phased Decarbonization Execution models, transforming the existing building to its Optimum Decarbonization potential, while respecting building triggers of life cycle, deferred maintenance, planned renovations, change in use, and other opportunities to transform the building.

The Decarbonization Plan de-risks investments in reducing carbon emissions in existing buildings.

Existing Building

Multi-Use Tower
894,000 square feet

Project Team

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