



Energy Efficiency Case Study

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Beth Israel Deaconess Medical Center

About Beth Israel Deaconess Medical Center

Beth Israel Deaconess Medical Center (BIDMC) is a teaching hospital of Harvard Medical School, located in Boston, MA with a history dating back to 1896. Today, it is best known for its excellence in patient care, dedication to biomedical research and strong teaching and community service programs. As one of the leading facilities in a city with a rich history of medical and technological innovation, BIDMC had been looking for ways to lower its energy use, reduce its carbon footprint and become a more efficient, sustainable organization.

Project Summary

The industry standard approach for laboratory ventilation is to provide a fixed or constant number of air changes (using 100% outdoor air) to dilute any potential buildup of contaminants within the lab, ensuring the safety of the researchers. However, this approach can also lead to increased costs and wasted energy by moving heated or air conditioned air out too quickly—providing excessive ventilation when indoor conditions are just right. A demand ventilation system that samples the air allows for a variable air change rate, giving Beth Israel Deaconess Medical Center (BIDMC) the assurance that the ventilation rates could be lowered by real time measurement of the laboratory environment, and increasing those flows if contaminants were sensed, providing a safer and more energy efficient operation for their laboratories.

“The project installation went smoothly. Beth Israel Deaconess Medical Center has achieved spectacular savings and a quick payback.”

Mark Lukitsch,
Energy & Utilities Manager Beth Israel Deaconess Medical Center

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Solution

Demand ventilation in lab spaces and setbacks in non-lab spaces.

Total Project Cost

\$644,423

Mass Save Sponsor Incentives

\$321,926

BIDMC Contribution

\$322,497

Annual Gas Savings

159,913 Therms

Annual Electric Savings

1.8 million kWh

Return on Investment

71% (1.14 year payback)

About Mass Save:

Together, we make good happen for Massachusetts: Berkshire Gas, Cape Light Compact, Eversource, Liberty Utilities, National Grid and Unitil. As one, we form Mass Save®, with the common goal of helping residents and businesses across Massachusetts save money and energy, leading our state to a clean and energy efficient future.

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