



Rudin Management Company – 80 Pine Street

Building Owner:

Rudin Management Company

Region: New York City

Number of Buildings: 1

FlexTech Consultant:

Jaros, Baum & Bolles Consulting Engineers, LLP

Sector:

Commercial Real Estate

Square Footage:

1,080,000 sq.ft.

Pre-COVID Condition:

- Filters: MERV 15
- Ventilation: 15 constant volume central air handling systems (various configurations and vintages) deliver air to constant volume terminal boxes with reheat capabilities. The building also utilizes perimeter induction units. The central BMS is capable of modulating the outdoor air for the units serving occupied spaces through demand control ventilation.
- Outside Air: 38% / 235,702 CFM

Study Overview

NYSERDA funded this energy efficiency indoor air quality study that identified the energy use associated with the ASHRAE Epidemic Task Force (ETF) Building Readiness guidance¹ HVAC-related measures aimed at preventing the risk of COVID-19 infection that are feasible at the building. Additionally, the study investigated alternate opportunities that were more energy efficient, yet equally risk adverse from an indoor air quality perspective, as the ASHRAE guidance measures.

Measures Evaluated

Measure Name	Measure Status	Electric Savings (kWh)	Fossil Fuel Savings (MMBtu)	Energy Cost Savings (\$)	Measure Cost (\$)
ASHRAE Epidemic Task Force (ETF) Guidelines Measures Evaluated					
ASHRAE Package - MERV 15 filtration, Maximum Outdoor Air Levels, 2 Hour Pre- and Post-Occupancy Building Flush, Disable Demand Control Ventilation	Not Recommended	-158,215	-3,235	-\$105,568	\$6,000
Totals:		-158,215	-3,235	-\$105,568	\$6,000
Energy Efficiency Package Measures Evaluated					
1 - Alternate Package MERV 15 filtration, Design Outdoor Air Levels, 3 Outdoor Air Change Pre- and Post-Occupancy Building Flush, Disable Demand Control Ventilation, Portable Air Cleaners	Recommended	-573,167	643	-\$71,857	\$1,120,350
Totals:		-573,167	643	-\$71,857	\$1,120,350

All energy use and energy cost values are presented on an annual basis

- Negative values represent increased use/cost
- The Energy Efficiency Package Measure savings are presented with the ASHRAE ETF Guidelines Measures Totals as the baseline

¹The ASHRAE ETF guidance used for this study was based on one or more of the following document versions: Building Readiness v.5-21-2020, Commercial v.4-20-2020, Schools & Universities v. 5-5-2020, Healthcare v. 6-17-2020, Filtration & Disinfection v. 5-27-2020, ERV Practical Guide v. 6-9-2020

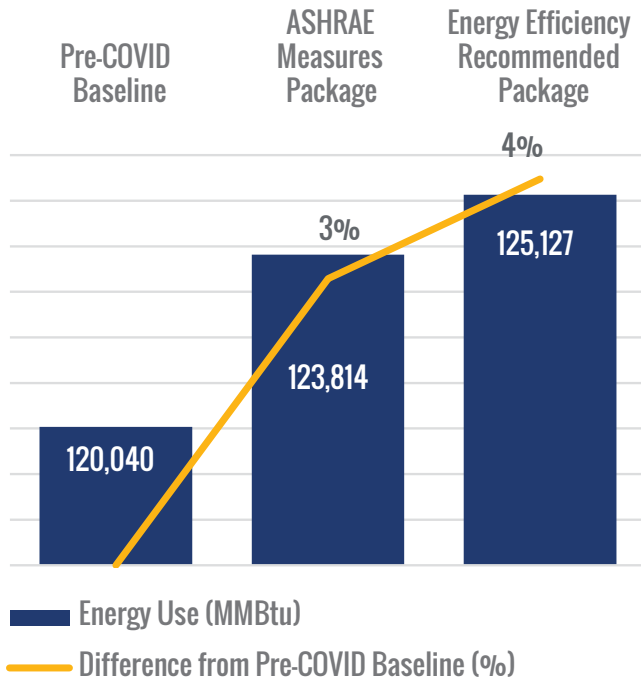


Key Notes

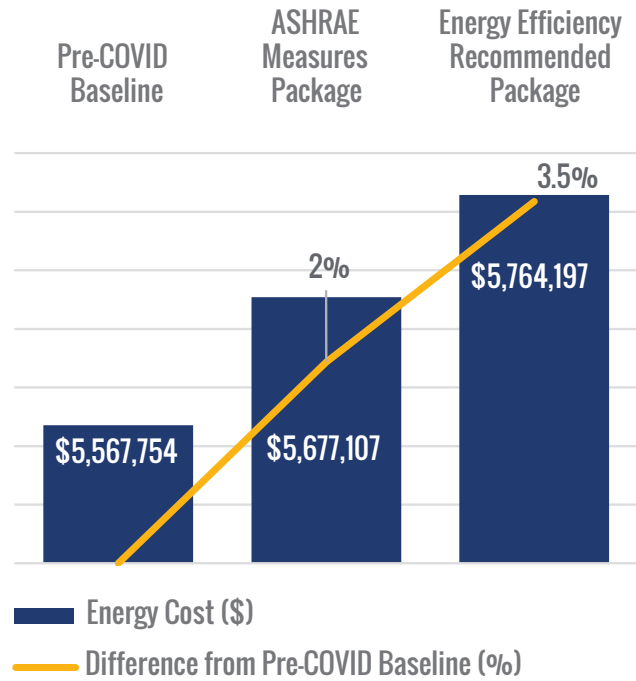
Measure recommendations are based on the ability to achieve five effective air changes per hour at design airflow rates with minimized energy, carbon, and cost impact. Other combinations of measures were not recommended because they are not feasible strategies to significantly improve the effective air changes per hour rate. The management team is considering upgrading filtration from MERV 15 to MERV 16 throughout the building to further increase indoor air quality.

Impact Results

Energy Use Impacts



Energy Cost Impacts



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