NYBSC
NY Building Systems Consultant Inc
Engineering for Sustainable Systems

LL97 Energy Audit and Decarbonization Roadmap for Pfizer Building

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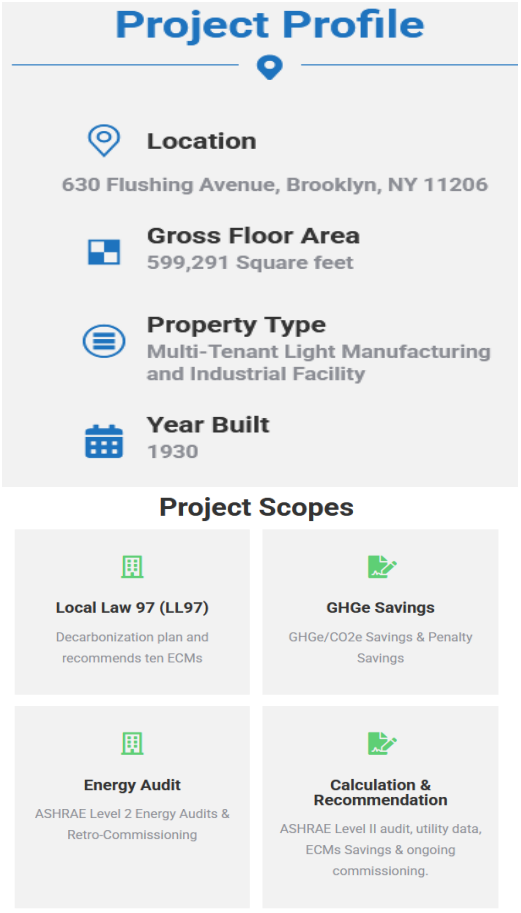
Project Description

The project involved the adaptive reuse and modernization of a 599,291-square-foot industrial facility on Flushing Avenue in Brooklyn, originally the founding site of the Pfizer Corporation and now transformed into a multi-tenant hub for manufacturing, food production, and creative commercial office use. As part of this redevelopment, NYBSC delivered a comprehensive LL97 compliance and energy performance study designed to strategically reduce energy consumption, lower operating costs, and mitigate long-term greenhouse gas (GHG) emissions. Our engineering team completed a full ASHRAE Level II Energy Audit, performed detailed LL97 GHG emissions limit calculations, and identified ten targeted Energy Conservation Measures (ECMs) that improve system efficiency and support regulatory compliance. The study culminated in a data-driven capital plan outlining implementation costs, available incentives, and financial recommendations, providing ownership with a clear, actionable roadmap for high-impact energy upgrades, long-term carbon reduction, and enhanced operational performance across this newly modernized zone.



Engineering and Design Scope

NY Building Systems Consultant Inc. (NYBSC) delivered an integrated energy and decarbonization strategy to position 630 Flushing Avenue as a high-performance, LL97-ready estate. The team completed an ASHRAE Level II energy audit and comprehensive decarbonization plan for HVAC, domestic hot water, electrical, and related systems, identifying ten major Energy Conservation Measures, including heat pumps, high-efficiency RTUs, VFDs, VAV systems, solar PV with solar thermal, LED lighting, and high-performance window films. Together, these measures are projected to significantly reduce annual operating costs and reduce over 1,221 tons of CO_2 per year across phase-I and 1,185.4 tons of CO_2 per year in phase-II implementation, providing insight with a clear, investment-grade roadmap for compliance, carbon reduction, and long-term asset value.

Mechanical and Electrical Design

NY Building Systems Consultant Inc. (NYBSC) provided comprehensive mechanical and electrical engineering services to elevate 630 Flushing Avenue into a modern, high-performance facility. The mechanical scope included detailed assessment and optimization of HVAC and domestic hot water systems, with strategies centered on high-efficiency heat pumps, upgraded air-handling equipment, variable air volume distribution, and variable frequency drives to reduce energy consumption and greenhouse gas emissions while maintaining robust thermal comfort. On the electrical side, NYBSC evaluated power distribution and load capacity to accommodate new high-efficiency systems, advanced lighting and controls, and future solar PV integration, ensuring safe, reliable operation and long-term readiness for decarbonization and Local Law 97 compliance.

Professional and Compliance Service

NYBSC provided DOB expediting, permitting, project management, commissioning, and special inspection services, ASHRAE Level II energy audit, Local Law 97 greenhouse gas emission limit calculations, and a capital improvement plan with financial recommendations. Commissioning verified system performance, code compliance, and alignment with energy goals.

Energy and Decarbonization Analysis

An Energy and Decarbonization Analysis was completed for 630 Flushing Avenue to chart a clear path toward Local Law 97 compliance and long-term carbon reduction. The engineering team took a deep dive into the building's HVAC, hot water, electrical, lighting, controls, envelope, and on-site renewable opportunities. It assembled a focused package of Energy Conservation Measures ranging from air-to-water heat pumps and high-efficiency heat pump RTUs to upgrade AHUs, VFDs, VAV systems, solar PV with solar thermal, LED lighting, high-performance window film, and a modern Building Management System. By pairing this technical scope with detailed greenhouse gas and cost analysis, NYBSC translated complex engineering options into a practical, project management approach that helps ownership reduce energy use, cut emissions, and manage LL97 exposure with confidence.

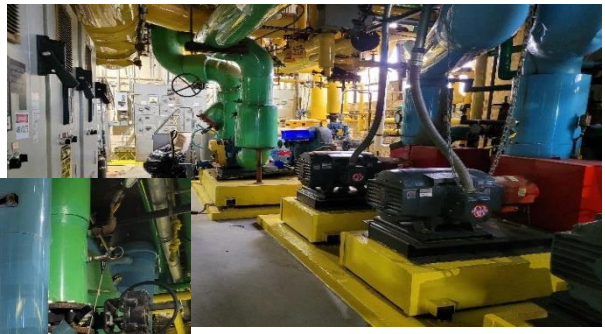
Payback and System Optimization

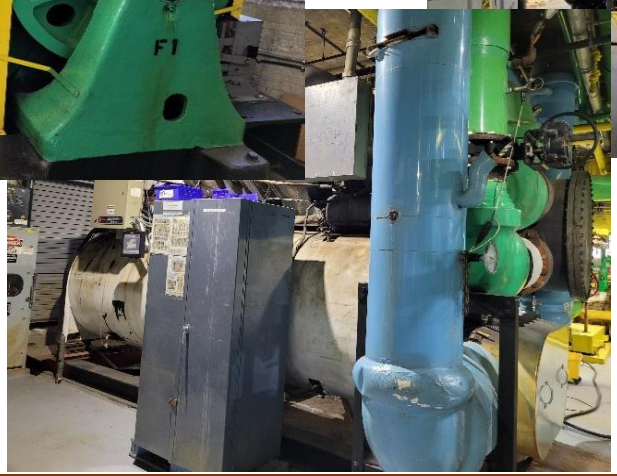
The LL97 study for 630 Flushing Avenue presents a comprehensive investment and optimization strategy rather than a single simple payback figure, combining implementation costs, annual energy and operations and maintenance savings, and avoided Local Law 97 GHG penalties for each recommended Energy Conservation Measure. Shorter-payback items such as VFDs, VAV systems, LED lighting, and targeted controls are designed to produce early savings and operational improvements, while larger capital upgrades, including air-to-water heat pumps, high-efficiency heat pump RTUs, and major AHU replacements, serve as longer-term decarbonization moves that significantly reduce emissions and future carbon penalties. Together, the package optimizes the performance of HVAC, controls, lighting, envelopes, and on-site renewables, lowers gas consumption, and supports ongoing commissioning and benchmarking so that 630 Flushing can sustain energy savings, manage LL97 risk, and advance its environmental goals over time.

Current Efforts

The report shows that 630 Flushing Avenue is already being actively managed with both comfort and carbon goals in mind. The current objective is to meet tenant needs for heating, cooling, and ventilation while progressively phasing out older equipment and replacing it with high-efficiency systems to help meet NYC Local Law 97 carbon limits. The building operates as a large multi-tenant light industrial and manufacturing facility, with central steam boilers, electric chillers, AHUs, RTUs, exhaust fans, and common area lighting all on defined schedules, and facility management overseeing operation and maintenance under annual service contracts for major equipment.

Some Captures from the Site





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