

MEP Design - Multifamily The Victoria Low Pressure Steam Absorber Replacement 7 East 14th Street New York, New York

Program

NYSERDA ResTech Program

Scope of Services

- ResTech Feasibility Study
- Design Services
- Construction Administration Services

Level of Involvement

Prime Contractor

Facility Type

High Rise Residential

Projected Annual Savings

Thermal: 1,547 MMBtu

Energy Cost Savings: \$22,065

The Victoria is a 21-story high rise residential building with 495 apartments that was constructed in 1961. Much of the building's mechanical systems dated from the original construction and building management was concerned about energy usage and costs. The building asked us to perform a thorough evaluation of their energy consuming systems and identify opportunities for improvement. We completed a detailed audit and recommended a chiller plant replacement, lighting upgrades, advanced metering and controls. The highest priority measure was to replace the two 325 ton low pressure absorbers and all their auxiliary equipment including dual temperature water pumps, condenser water pumps and controls since it was well past its expected service life.

In order to minimize project costs and expedite delivery of the equipment, we first developed a pre-purchase specification for the chillers so the building could order the units ahead of time and pay for them directly without the contractor's mark-up. In addition, a pre-purchase specification has to be coordinated with the contractor's obligations to ensure a seamless transfer of responsibility for the equipment. We required the manufacturer to deliver the chiller to contractor's yard where upon the contractor becomes responsible for the equipment including delivery to the site and rigging in place.



New 325 Ton Absorption Chiller

The pre-purchase specification then requires the manufacturer to come to the site when the installation is complete and perform start-up services and provide training. This approach minimized the conflicts that can arise when an Owner pre-purchases equipment and the lines of responsibility between the Contractor and Owner are not fully specified.

There was no simple rigging path for the new equipment so we worked with a structural engineer to identify the best route. We determined that the existing garage is separated from the mechanical equipment room by a non-bearing wall that could be temporarily demolished to remove the existing chillers and rig the new equipment in place. The demolition and reinstallation of the wall was included in the bid package to maintain project control.

We developed detailed drawings and specifications that fully described the project and met all city and state code requirements. The project was bid and prices came back within 20% of each other. We provided construction administration throughout the installation including shop drawing review, inspections and requisition approvals.