

M&T Bank LEED® Energy Modeling and Commissioning



Novus Engineering, P.C. developed a whole building energy model and carried out commissioning activities for a new M&T Bank building located in Newburgh, New York in order to meet the requirements of LEED® v3 (2009) for New Construction certification.

The new M&T bank is a 3,310 gross square-foot, one-story building. The building consists of public accessible areas, teller stations, and private offices. The building has been constructed with an extremely tight building envelope and is conditioned using two geothermal heat pumps. Ventilation air is provided via an energy recovery ventilator (ERV). The interior

lighting system utilizes compact fluorescent lamps, metal halide lamps and LED strips. Daylight harvesting and occupancy sensors are utilized to maximize energy savings. The exterior lighting consists of metal halide and LED fixtures to light the parking lot, walkways, and drive-thru areas. A building management system (BMS) will operate and control the lighting and HVAC systems as well as provide “live” energy metering.

Novus developed an energy model to evaluate the performance of the proposed design and to meet the requirements of Energy and Atmosphere Prerequisite 2. The model was developed using Carrier’s Hourly Analysis Program (HAP) v4.5. The proposed building design is estimated to save at least 20% in energy costs as compared to a baseline building just meeting the requirements of ASHRAE Standard 90.1-2007.

In addition to evaluating the energy performance during the design stage, Novus verified the installation and operation of all energy-consuming systems during construction. The BMS was carefully reviewed to ensure that equipment performs consistent with the design intent, the Owner’s Project Requirements (OPR) and the Basis of Design (BOD).

Site work for the building started in August 2011 and the building was occupied in September 2012. Commissioning activities continued through early October 2012. LEED® certification was achieved in September 2014.



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