

Project Profile



Detroit Historical Museum Detroit, MI

Fast Facts

Three-story museum with rectangular structure, a flat roof, and 10% windows.

Year Built: 1951, expanded 1960

Size: 79,000 sq. ft.

Use: Public museum space

Hours: Tue-Fri 9:30 a.m. to 4 p.m.

Sat, Sun 10 a.m. to 5 p.m.

Some evenings

Museum is open to the public, school groups, camps, etc. and can be rented for special occasions.

Strategies:

- Schedule Air Handling Units Properly
- Reduce Ventilation in one AHU

Amount Financed: \$12,663

Estimated Savings: \$14,069

Simple Payback: 0.9 years



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Project Background

First opened in 1951, the Detroit Historical Museum continues to be a jewel in the crown of Detroit cultural hot spots. But a 79,000 sq. ft. building that is approaching 70 years old, and has undergone several renovations, is a prime candidate for energy conservation measures.

As part of a DTE Energy and Nexant Retro-commissioning (RCx) project for no-cost and low-cost energy conservation measures (ECMs) with short-term payback, Newman Consulting Group (NCG) conducted an ASHRAE Level 2 Energy Analysis and RCx Study. This uncovered several opportunities that would not only make the tenants more comfortable, but also save money.

Strategies and Results

The main finding was that the building controls were not set to optimize energy efficiency, typically running at the same temperature 24-hours a day. Some relatively simple modifications to the existing building automation system hardware and software resulted in substantial savings.

Schedule Air Handling Units Properly:

- Implemented new schedules for times when building was unoccupied.
- Customized air handler schedules to match museum hours with 4-hour override available as needed.
- Adjusted air handling units for unoccupied times to reduce energy use while maintaining necessary humidity to protect historic documents and artifacts.

Reduce Ventilation in one AHU:

- Modify economizer hardware and software to allow proper amount of outside air depending on the temperature

About Newman Consulting Group

Newman Consulting Group, LLC (NCG), Farmington Hills, MI, is a globally recognized authority in energy efficient buildings. NCG works with architects, engineers, building owners, facility managers and contractors in Michigan and around the world to design and build more energy-efficient buildings to LEED®, Energy Star® and other sustainable guidelines.

The NCG team of highly skilled engineers, analysts, program managers and certified professionals helps commercial, industrial and multi-family property owners all over the U.S. implement energy efficiency projects (including renewable energy), eliminate waste, and save money through innovative financing.