

CASE STUDY

# Catalyst Partners makes its HQ a living demo for sustainable buildings



— Catalyst Partners isn't stopping at LEED Platinum--they're now aiming for Zero Net Energy and beyond

Since 2002, Catalyst Partners has been engaged in the development and implementation of sustainable practices for buildings, interiors, and products. They specialize in green building design, development, construction, and certification assistance for projects under LEED, WELL, Living Building Challenge, Enterprise Green Communities, and BREEAM standards. Catalyst President Keith Winn is also one of the founding members of the U.S. Green Building Council (USGBC).

The company focuses on energy efficiency services including auditing, modeling, and incentives and aims to become a supplier of choice on sustainable building projects. These typically require energy management, water metering, advanced energy metering, and energy performance optimization, and in 2020 Catalyst set out to make its Grand Rapids, Michigan headquarters a showcase for the required sustainable technology.

Solar PV generation supplies 20 percent of the site's power, reducing utility bills, but Catalyst needs to implement at least three energy conservation measures to reduce their Energy Use Intensity (EUI). Their hope is to reduce the building's EUI by roughly 15% beyond the current level, which is already LEED Platinum certified. When the reductions are dialed in,

Catalyst Partners informs the design of buildings with energy modeling tools. ABB's products help with measurement and verification that targets are achieved. The goal: Zero Net Energy and beyond.

Catalyst plans to repurpose its 10-year-old solar system, replacing it with an updated system with sufficient annual production to achieve their 2030 net-positive goal.

"We had a metering system in place, but it failed and by then it was even out of production, so we needed something new," recalls Kyle Rieth, Commissioning Authority and Energy Assessor at Catalyst Partners. Among the requirements: three years of data storage (e.g., amps, voltage, power factor, 15-minute interval data for power) and scalable capabilities that allow users to realize benefits regardless of their technical savvy.

Catalyst turned to ABB, which installed a CMS-700 circuit monitoring system, enabling multi-channel measurement in AC and DC circuits. The CMS-700 consists of a control unit and sensors, allowing easy monitoring of the individual lines of a facility using any of several industry standard communication protocols.

ABB's Ekip E-hub gathers the data (and optionally sends it to cloud-based storage where it can be accessed by any number of applications). Catalyst elected to use ABB Ability™ Energy and Asset Manager for the monitoring and control interface to



01

—  
ABB Ability™ Energy & Asset Manager helps Catalyst Partners track the contribution of on-site solar generation toward their energy consumption.

understand what electricity is supplied by the utility vs. that by their solar panels. The new equipment was integrated with existing devices like circuit breakers.

“ABB also helped with installation remotely which was a big help since the pandemic prevented us from having more people on site,” notes Rieth.

With the ABB system in place, Catalyst is now able to track progress toward their net-zero electricity goal and is using Energy & Asset Manager’s analytics to optimize operations of the solar plant in relation to energy use in the building.

“We inform the design of buildings with energy modeling tools,” says Rieth. “ABB enables us to measure and verify targets have been achieved.” Having a monitoring system like ABB Ability Energy & Asset Manager in place is a prerequisite for LEED certification.

The Grand Rapids facility was commissioned in Q3 of 2020—again with remote support from ABB—and now serves as a living example to Catalyst’s customers of what a working net-zero facility can look like.



02

—  
**ABB Inc.**  
Electrification Products  
305 Gregson Dr.  
Cary, NC 27511

[electrification.us.abb.com](http://electrification.us.abb.com)

—  
We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB AG.  
© 2021 ABB Inc.  
All rights reserved