

case study

PUBLIC LIBRARY

Kentucky Public Library Installs Solar + Storage at New 45,000-square-foot Facility to Offset High Demand



THE CHALLENGE

Bullitt County, Kentucky has experienced tremendous growth over the last few decades. As a result, the Bullet County Central Library needed a larger facility to support the many functions and purposes of the library's main branch. The new Central Library is a 45,000-square-foot building displaying a green architectural design. Some of the environment-friendly features include geothermal heating, LED lighting, a 240 kilowatt (kW) solar array, and a 110-kW energy storage system (ESS). Being such a large facility, the new location was placed on a demand charge heavy electric rate. Louisville Gas & Electric's Time-of-Day Secondary (TODS) service rate includes three separate demand charges, totaling almost \$21/kW. Rate TODS also entails several demand ratchets, or billing minimums, that would undoubtedly add to each month's demand charge expense.

THE SOLUTION

A Delta LG Chem 110-kW ESS, equipped with Energy Toolbase's Acumen EMS™ controls software, was installed with the primary application of demand charge management. This feature of Acumen EMS™ utilizes industry-leading machine learning algorithms to forecast load and shave demand peaks, becoming increasingly efficient as the building generates historic interval data. Once the new location is running at full capacity, and typical energy requirements have been determined, the fully integrated solar + storage system may also enable a rate switch to further decrease demand costs. The new Central Library will be celebrating its Grand Opening in September 2022.

PROJECT SUMMARY



LOCATION

Shepherdsville, Kentucky



DEPLOYMENT DATE

July 2022



ESS PROVIDER

Delta/LG Chem



COMBINED SYSTEM SIZE

110 kW/220 kWh
1 site



FACILITY TYPE

Public County Library



EMS APPLCIATIONS

Demand Charge Management



(866) 303-7786

energytoolbase.com

contact@energytoolbase.com