

## CASE STUDY

# Virtual Energy Management Helps Becton Dickinson Achieve/Track/Sustain/Forecast Energy Savings



## SCOPE

As part of an ongoing initiative to contribute to the ultimate energy goals and objective of the Becton Dickinson Global Headquarters Campus, Edison Energy's Engineering Solutions team was further contracted to provide Retro-Cx, Virtual Energy Management (VEM), Energy Monitoring and Fault Detection + Diagnostics (FDD) services. These services were performed off the completion of a campus facility audit, energy reduction plan, and execution of a Measurement and Verification Plan (operating in tandem with our VEM platform) on BD's four buildings (Becton, C.Center, Howe, and Complex), consisting of the Corporate HQ and Divisional HQ, which includes research laboratories. The VEM system was first created to provide an optimization and monitoring of the Central Plant Boiler and Chiller Systems. From there, the system was expanded as part of a campus-wide retro-commissioning initiative where all of the air-handling units as well as the variable air volume boxes were included in the system optimization scope of work.

## CLIENT

Becton Dickinson

## MARKET

Commercial

> Pharma

## OFFERINGS

[Energy Monitoring](#)

[Energy Audit & Retro-Commissioning](#)

## PROJECT RESULTS & KEY METRICS:

Total Space:	1.4 million square feet
Phase 1 Goals Achieved:	<b>Energy savings of 18.4%</b> (exceeded target source energy savings of 15%)
Phase 2 Goals Achieved:	Ongoing MBCx RCx forecast 27% by April 2017
Annual Energy Savings:	\$847,530
Incentives Earned:	\$1,215,000



## Becton Dickinson

### VISION

We will consistently provide superior products and services in pursuit of our purpose of advancing the world of health.

## CUSTOMER VALUE

By coupling technology with our field engineering expertise, we were able to provide the most valuable offer for Becton Dickinson that ensured the data utilized by the analytics engine was of the greatest integrity and value. The results of this scope of work are valuable action items that we provide to Becton Dickinson once a week, which enable them to reduce their energy usage as well as optimize their O&M operations. The VEM Platform serves as basis for all OPEX and CAPEX energy projects on the campus, providing immediate feedback of efforts that are implemented. Utilizing the VEM Energy Monitoring and Fault Detection + Diagnostics (FDD) capabilities, our program is also operating in tandem with Measurement & Verification and Incentive Tracking services for New Jersey's Clean Energy Pay for Performance Program (P4P).

**Our Engineering Team has worked with the Becton Dickinson's facility team to achieve and surpass the minimum target source energy savings of 15% (23.6% hit), and forecasts 28% through April 2018.**

In addition, campus energy awareness peaked quickly, and has remained high since VEM implementation. Throughout the BD campus, there has been an enhanced focus on "Energy & Sustainability Awareness," which has in turn spread throughout the community as well. With the extensive training provided to the Energy Director, BD can perform custom energy analytics and mine the wealth of data collected in the VEM, using the customizable VEM tool set.

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Edison Energy is an independent energy advisory and solutions integration company with the capabilities to develop and implement a broad portfolio of energy services for commercial, industrial and institutional organizations. We help customers reduce their energy costs, improve the environmental performance of their operations, ensure energy resiliency and manage exposure to energy price risk.