



## Sunlight Energy Group

There's power in a great plan.

### CASE STUDY

## Background

This case study is of a client located in Maryland; it is a religious organization founded in 1896. In 2016, the client broke ground and constructed a new building for their ministry. The building is three stories high and spans 55,000 square feet, with many common areas, gathering halls, and classrooms.

## Challenge

Soon after the building opened to the public, the facility manager realized that their utility bills were much higher than expected.

## Solution

First, the team ran an Energy Use Intensity (EUI) analysis, which measures a building's energy usage, in standardized units of energy per square foot. It was determined that the building was 32% less energy efficient compared to the national medium of similar buildings of its size and purpose. The sunlight team then performed a "building tune-up" to monitor equipment and better understand how it was functioning. Our team then attached data loggers throughout the building, which are small electronic devices that collect energy usage data over time. In the initial analysis, it was discovered that there were issues with their HVAC systems.

After construction of the new building was completed, the "heavy duty" construction air filters in their HVAC systems, installed to filter out the additional dust from construction, were never taken out. Therefore, the HVAC systems were using a lot more power than necessary. It was discovered that the building's set

### Fast Facts

-  **Location:**  
Maryland
-  **Industry:**  
Religious Organization
-  **Measures of Success:**
  - Increased efficiency of heating & cooling systems and controls
  - 75% savings on building-tune up projects

points weren't calibrated properly. Set points are specific temperatures that determine when to turn on and turn off the HVAC system to heat or cool. Different areas of the building managed by a heating and cooling system were working against each other, causing the HVAC system to work much harder than necessary.

From the initial findings, the client was advised to replace the construction air filters with proper (post-construction) air filters. Then, the building was properly reset to appropriate HVAC set points, and the heating and cooling zones that were working against each other were separated. Going forward, the data collected from the data loggers will undoubtedly help identify further efficiency projects. Under the building tune-up program, all energy conservation measures qualify for a 75% rebate.



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