



CopperTree
Analytics

Case Study

Resolving Fan Operational Inefficiencies for an International Corporate Headquarters

Results

\$15,000 Yearly Savings

125 000 Yearly kWh Reduced

54.1 Tons of avoided yearly CO₂e emissions

Client Overview

The international headquarters for a banking and financial services institution had already initiated large-scale equipment retrofitting as part of implementing sustainability measures. Collaboration with CopperTree Analytics began as an additional measure for discovering operational inefficiencies and proposing further sustainability action for the client. With the client's campus of buildings making up over 1M sq.ft. of conditioned space, building data analytics would prove to be essential for efficient operational monitoring.

The Challenge

CopperTree worked with an international banking institution to analyze HVAC operations at its headquarters using Kaizen FDD. The BAS lacked analytics-driven optimization, and Kaizen identified supply and return fans running at 100% speed and outside scheduled hours due to manual override, driving over US\$15,000 in potential annual costs. The solution focused on correcting fan sequencing and restoring automated control to improve efficiency and reduce energy waste.

The Solution

For the supply fans, the result was to develop operational sequencing which would allow the use of a lower speed on the available VFD drives, therefore saving a substantial amount of energy. However, the return fans did not operate on a VFD drive. Despite this, we were still able to implement improved operational sequencing which would ensure the return fans would operate within scheduled hours, therefore positively contributing to the client's sustainability initiatives.