SDG&E DRET Project: Permanent Load Shifting Evaluation of a Refrigeration Battery

Overview

The project will demonstrate the Refrigeration Battery's ability to maintain the desired temperature set-points of a supermarket's medium temperature refrigeration systems without running the central compressors or condensers for up to 8 hours at a time. By turning off medium temperature refrigeration compressors and condensers during on-peak hours, as defined by SDG&E's AL-TOU rate schedule, the Refrigeration Battery is expected to reduce the facility's monthly peak demand by up to 75 kW. If successful it would achieve a decrease in monthly peak demand of up to 25%.

Collaboration

The progress and results have been shared with other CA IOUs ET-DR Leads as well as with various interested attendees at the Internal Technology Transfer meetings. This project has attracted some national media attention and strong interest from Electric Power Research Institute (EPRI) who is aiming to build on SDG&E's initial research in this space.

Results/Status

After reviewing the measurement and verification data, a decision was made to do NMEC analysis to measure the achieved demand reduction based the approved NMEC Rulebook. The additional analysis is expected to be completed in Q3 2020.

Next Steps

Analyze and finalize the project's economics as well as complete the final report by Q4 2020. The final report will be published to the ETCC website for public review and reference.