

# ***Dehumidification & Water Purification Demand Response Project***

## **1. Overview**

This project is evaluating the electric load and demand response capabilities of two (2) types of dehumidification drinking water systems. Ten (10) dehumidification units from two different vendors were installed in buildings around the SDG&E service territory. These units cool air below the dew point to produce water. The collected water is filtered, ozone is injected, then chilled or heated to use as an office “water dispenser” for drinking water.

The primary purpose of the assessment is to:

- Determine the load profile, baseline energy use, and peak demand of the units.
- Determine the available peak load reduction of the units for a demand response event. Multiple reduction strategies may be analyzed, including but not limited to turning the unit off or adjusting the water delivery temperature set points.

The secondary purpose of the assessment is to:

- Understand the added load (load growth potential) to the SDG&E territory assuming a reasonable penetration rate.
- Use the micro data to theorize what impact these products could have on the embedded energy in water distribution throughout SDG&E service territory.

## **2. Collaboration**

The progress and results have been shared with other CA IOUs during scheduled monthly DR-ET Leadership conference calls. SDG&E’s ET Team also collaborated with its facilities by placing two units for comparison study at its Energy Innovation Center (EIC) and Company office.

## **3. Status**

Due to COVID-19, all units that were initially placed in facilities throughout the SDG&E territory have experienced a significant decline in usage due to business operations adjustments in response to the stay-at-home orders. SDG&E is continuing to work with its Measurement & Verification consultant to attempt to resume operation of the units so they can receive and respond to Demand Response (DR) events. Once the units

are operational, multiple DR events will be sent to the units to measure their performance.

#### **4. Next Steps**

The project has been extended thru Q4 2021 to allow time for the units to become operational and to analyze the data collected. The final report is expected to be available by Q1 2022. The final report will be published to the ETCC website for public review and reference.