

Enabling Customers Savings and Demand Management under the Emergency Load Reduction Program (ELRP) for a Leading Utility in California

Background and Objectives

Despite meticulous planning for sufficient electricity supply and robust transmission and distribution infrastructure, an electrical grid emergency can occur anytime. These emergencies are often triggered by scorching summer weather that drives electricity use, leading to scarce available power. Other times, they can result from unforeseen power plant outages, severe fires that threaten or affect transmission lines, or prolonged periods of hot weather and heat storms. In these critical moments, the ELRP plays a crucial role in maintaining a stable energy supply.

In 2021, the California Public Utilities Commission (CPUC) took a proactive step by creating an innovative program, the Emergency Load Reduction Program (ELRP). This program was designed to pilot a new Demand Response approach, aiming to help avoid rotating outages during peak summer electricity usage periods from May through October. The ELRP, which initially started with commercial customer participation, was expanded in December 2021 to include residential customers for Summer 2022 and beyond, demonstrating the utility's unwavering commitment to preparedness and its ability to handle emergencies.

A leading utility was tasked with implementing the innovative Demand Response program. In this program, business and residential participants would be paid to reduce energy use during high grid stress and emergencies to avoid rotational outages.

About Customer

For over 140 years, the utility has provided energy and gas services to over 3.5 million people in multiple counties across California's Pacific coast. The utility has a long history of supporting communities by delivering clean, safe, reliable energy and gas to serve their customers. It is dedicated to improving the environment, public safety, and quality of life.

About Emergency Load Reduction Program (ELRP)

The ELRP, a 5-year pilot program, is designed to pay electricity consumers for reducing energy consumption or increasing electricity supply during electrical grid emergencies. By participating in the ELRP, customers not only contribute to the stability of the electrical grid but also have the opportunity to earn financial rewards. This pilot program offers a new tool for electric grid operators and utilities to reduce energy consumption during a grid emergency, reducing the risk of electricity outages when the available energy supply is insufficient to satisfy the anticipated electricity demand.

Platform Implemented

Smart CX + Demand Response Platform

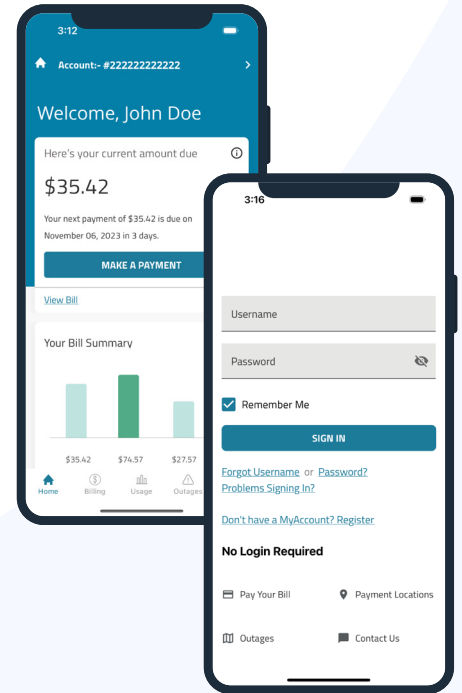
Digital Intervention with Smart Energy Water (SEW)

The utility partnered with SEW and leveraged the Digital Customer Experience platforms to roll out the program amongst customers. With the platform, they were able to handle customer enrolment, application processing, event communications across digital channels, and dole out per DR event compensation.

The ELRP started in Summer 2021 with nearly 200 megawatts (MW) of enrolled non-residential customer participation. The program was called on four times in the early summer of 2021, and customers received approximately \$1 million for voluntary reductions in demand achieved through the ELRP.

In December 2021, the demand response program was expanded to include participation by residential customers.

Nearly half of California consumers, 700,000+ residents, were automatically enrolled in the residential program, and with special outreach to low-income customers enrolled in the CPUC's California Alternate Rates for Energy (CARE), the Energy Savings Assistance (ESA), Family Electric Rate Assistance (FERA), as well as households located in Disadvantaged Communities (as defined Health and Safety Code Section 39711). ELRP participation has been open to all customers, but distinct program offerings depend on whether a customer is already enrolled in an existing Demand Response program.



Value Delivered

With SEW Platforms, the utility ensured and mandated customer enrollment, application processing, notifications and alerts, benefits dispensation, etc. Highlights of the project were:

- ✓ Automatically enrolled all of its 333,000 Care and FERA customers in the ELRP
- ✓ Automatically enrolled all of its 500,000 customers enrolled in its behavioral DR program in the ELRP
- ✓ The platform gave the ability for all other eligible residential customers to opt-in to ELRP and other demand response programs
- ✓ Customers get notified across preferred digital channels ahead of and during events.
- ✓ The utility used California Independent System Operator issued (CAISO) Flex Alert declaration or day-ahead CAISO "Alert" declaration as the trigger for dispatching Residential ELRP
- ✓ The utility determined customers' load reduction by comparing their energy use for each event hour to the energy use according to the baseline. The benefits/compensations were accordingly doled out. The benefit mandate was \$2/kilowatt-hour for every kilowatt-hour of electricity consumption the customer reduces voluntarily during an ELRP event

With the help of SEW digital platforms, the utility has been able to incentivize energy use optimization and engage with customers across segments. They have been able to track the event performance and be better prepared to handle future requirements.

About SEW

SEW with its innovative and industry-leading cloud platforms aim to deliver the best Digital Customer Experiences (CX) and Mobile Workforce Experiences (WX), powered by AI, ML and IoT Analytics (IX) to the global Energy, Water and Gas providers. We partner with utilities to deliver solutions that are easy-to-use, integrate seamlessly with utility systems, and help build a strong technology foundation that allows utilities to become future ready, by harnessing the power of digital technologies.



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