OCTAVE

CEM partners with Octave for integrated outage management solution

Key facts:

Company: Companhia de Electricidade de Macau (CEM)

Website:
www.cem-macau.com

Industry: Power

Country or Region: China

Octave products used: Outage Management System (OMS), Mobile Workforce Management

Key benefits:

• Real-time analysis of distribution network

• Optimization of network usage

• More efficient management of fault situations and greater customer satisfaction

• Reduced restoration time and enhanced safety

• Improved overall efficiency, reliability, resiliency and timely communication

Companhia de Electricidade de Macau (CEM) is a private utility company and exclusive concessionaire in Macau special administrative region (SAR) that generates, imports and exports, transmits, distributes, and sells electricity in the territory. Established in 1972, CEM currently has more than 210,000 customers.

CEM's previous operations system could not keep up with high voltage (HV) and medium voltage (MV) outages. The company's trouble call system integrated data from its geographic information system (GIS) and SAP/IS-U customer database each day to provide a list of affected customers and supply point information of any low voltage (LV) or MV outages entered manually. The emergency service crew would then be dispatched to the reported fault and event logging would be updated manually.

During an LV outage, the performance of the trouble call system was still acceptable. However, for HV or MV outages, CEM experienced long delays in obtaining outage information, such as the number of affected customers and their locations. This, in turn, negatively impacted CEM's ability to provide timely information to its internal and external stakeholders, particularly to public emergency service organizations. CEM decided to look for an integrated solution to improve its outage response and restoration times.

Overcoming challenges

• Automate the generation of required outage information, including the number of affected customers and their locations during HV or MV outages

• Improve communications and customer service by providing timely outage information to CEM's internal and external stakeholders

• Deliver automatic outage notifications through text message to selected stakeholders

• Dispatch emergency field teams more effectively for planned and unplanned outages and incidents

• Establish the capability to provide real-time outage access to selected stakeholders

Realizing results

Seeking a fully integrated solution in a single application environment with a modular architecture, CEM selected an outage management system and mobile workforce management solution from Octave's Safety & Infrastructure division. "Having a complete solution will help us seamlessly manage our operational and customer data," said Calvin Ho, unit head of the Systems Dispatch Centre, Power and Networks Dispatch Department at

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Calvin Ho
Unit Head,
Systems Dispatch
Centre CEM

CEM. "A thorough evaluation of the technology determined that Octave's system will best support CEM's outage management and analysis process."

A cost-effective, enterprise solution, Octave's technology provides a complete set of integrated tools to help utilities provide real-time analysis of the distribution network, optimization of network usage, and management of fault situations for greater efficiency and customer satisfaction. The system reduces restoration time through the prompt dispatch and mobilization of field crews while enhancing their safety. These benefits directly improve overall operational efficiency, increase reliability and resiliency, and provide enhanced information for accurate and timely customer communications.

Octave's Hong Kong Professional Services team implemented the solution at CEM and provided training to staff members. The new system manages the information of CEM's expanding customer base and network of more than 1,100 customer substations and 5,000 supervisory control and data acquisition (SCADA) device signals.

To meet CEM's strict 24/7 availability and performance requirements, the system utilizes an architecture scheme that replicates data for use and distribution within the product to support multiple sites with high availability and performance. It also provides a common operating map used by the dispatcher and field crews so both parties can view the identical visual map display to optimize coordination and visual confirmation during service restoration.

"The integration of the solution with our multiple business systems is essential to managing the distribution network and delivers major advantages over traditional outage management systems," said Ho. "It provides CEM with an accurate view of the current conditions from the external systems, enabling enterprise wide

information analysis and a visual representation of the operational state of CEM's network."

CEM is already seeing the benefits compared to its previous system. There is greater data transparency with SCADA interfacing, allowing CEM to access and provide accurate outage information more quickly to its internal and external stakeholders through text message notification. CEM's senior management and general users can also access outage reports through web applications. With comprehensive field crew management, CEM is delivering reduced restoration times with improved productivity and field personnel response.

Moving forward

"We have seen tremendous benefits after deploying the [Octave] solution at CEM and we hope to further enhance our system for even greater efficiency and reliability," said Ho. CEM plans to expand the project by integrating the Octave solution with its interactive voice response (IVR) system to handle in-bound trouble calls and provide updated outage information to affected customers. The company can also use outage information to update the existing IVR system. Tighter integration with the work order module of CEM's SAP system will help in the maintenance of equipment with increased accuracy and efficiency.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property, and assets– for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency, and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.