Modernize Distribution Grid Performance All the Way

With Oracle Utilities Grid Management Solution

Outages have an economic impact on businesses across the globe. American enterprise can lose anywhere from $200,000 to $1 million within fifteen minutes of an outage.[1] Ponemon Institute study indicates that cost of downtime due to outages has increased almost 38% since 2010.[2] Grid operations job is changing rapidly due to new technology innovations, customer choices, and regulatory mandates. Distributed Energy Resources (DER) and other grid-edge intelligence are adding newer complexities to grid management. For instance, there's 227 GW of installed solar capacity around the globe. In addition, a number of states in the US have aggressive targets to achieve up to 50% of renewable capacity in the next 20 years.

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UTILITIES

Reduce Unplanned Work

Identify Faults Accurately and Timely

Complete Network Visibility

Avoid Customer Hazards Due to Voltage Fluctuations

Reduce Impact of Customer Outages

BENEFITS

- Perform at over 90% reliability in any condition to restore service to customers safely and timely
- Reduce switching errors by over 50% improving network performance significantly
- Model your network once, then optimize and take action
- Communicate proactively to customers increasing satisfaction and approval ratings
- Increase customer satisfaction significantly while also exceeding reliability metrics such as CAIDI

Modernize Distribution Network All the Way to Edge

 Oracle Utilities Network Management System (NMS) unifies grid operations capabilities to shorten outage durations, optimize distribution grid operation, manage distributed energy resources (DER). Chosen by Gartner Research as a leader in over 3 consecutive years, NMS is an industry proven, trusted, and leading solution to solve critical challenges of energy and water distribution networks.

Advanced Distribution Management

Utilities grid operations rely on Oracle Utilities NMS to effectively respond to unplanned

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1 U.S. Department of Energy. Transforming the nation's Electricity system: the Second installment of The quadrennial energy Review January 2017. Page 12. https://energy.gov/sites/prod/files/2017/02/f34/Chapter%20I--Transforming%20the%20Nation%27s%20Electricity%20System.pdf

2 Ponemon Institute LLC. Cost of Data Center Outages January 2016. Page 2. http://files.server-rack-online.com/2016-Cost-of-Data-Center-Outages.pdf

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outages, integrate emergency and mutual-aid crews, and get accurate information to customers faster. Utilities need to be measured through reliability metrics by regulators that identify how long it took to restore power and impact to their customers. Grid operators can utilize advanced analytics and business intelligence to stay on top of reporting reliability. In addition, they:

» Improve network health by continuously analyzing data across multiple systems and reporting risk

» Reduce the cost of demand by automating voltage regulation and electricity conservation

» Accelerate control room productivity through training, simulation, and best practices

» Provide safe and fast maintenance, network reconfiguration, automated self-healing, and outage restoration through coordinated and accurate switching, both in planning and real-time

DER Management

With Oracle Utilities NMS, grid operators model the entire DER network. They can register the DER assets and make accurate network plans with numerous inputs from systems such as weather and Advanced Metering infrastructure. While Oracle Utilities NMS manages all these input, operators are well on their way for near-term and long-term planning. Oracle Utilities provides a complete lifecycle for DER asset management and customer communication on top of grid operations.

Customer Communication

With Oracle Utilities Opower Digital Self Service customers get a real-time view of outage status. Utilities can convey estimated restoration times as well as proactive updates. This improves customer satisfaction and time spent with CSRs that in turn translates in savings to the customer care organization. Utilities can extend different demand response programs in times of grid resource constraints via Oracle Utilities Opower Peak Management.
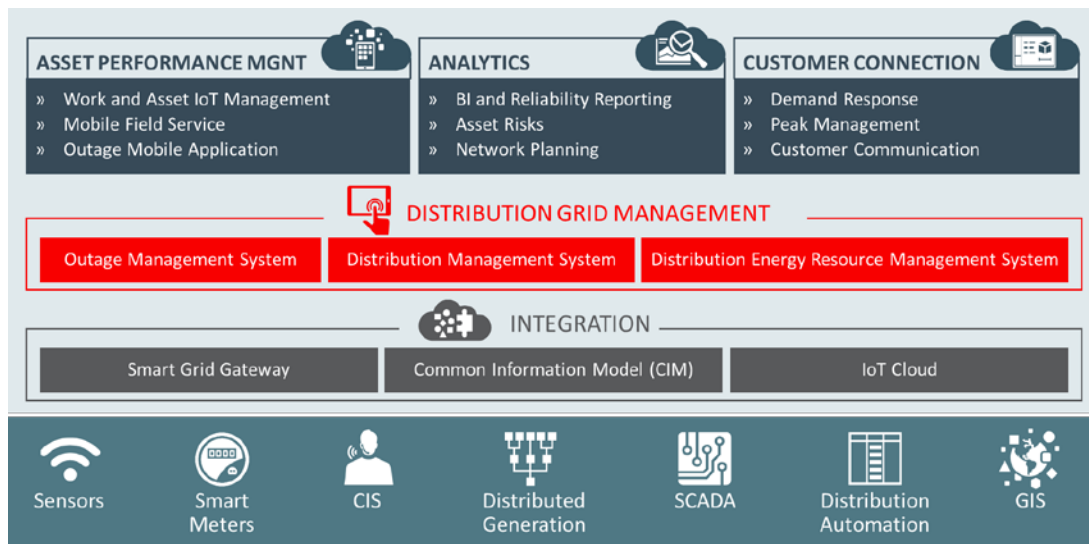
Figure 2: End-to-End Grid Management Solution