

# Optimize Performance of Your Network in the Age of Distributed Energy Resources

## Oracle Utilities Network Management System

According to GTM Research, there's 227 Gigawatts (GW) of installed solar capacity around the globe.<sup>1</sup> United States alone will exceed 100GW by 2021.<sup>2</sup> This is a tremendous rate of change for utilities given their humble forays into Distributed Energy Resources (DER) market just a few years ago. While customers, new technology innovations, and regulatory mandates are driving DER adoption. Utilities are facing many challenges in relations to manage DER growth on the distribution network.



Incomplete visibility of DER assets causing inaccurate grid planning



Intermittent energy supply causing power quality issues



Massive growth of grid-edge devices causing data management challenges

Oracle Utilities Network Management System (NMS) enables grid operators optimize performance of their distribution network in four simple steps:

### Step 1: Register customer-owned DER asset

Utilities can get this information from customer information systems. This data needs to be looked with a single pane of glass in DER management or advanced distribution management system. Any new data that customer service reps collect for new asset connection is available here.

### Step 2: Model DER Load

Marry the customer DER information and weather data on existing distribution system models to come up with actual output of the solar PV.

### Step 3: Optimize Grid

With improved DER load down to individual solar PV for instance, grid operators can plan and optimize grid resource. And adjust to any expected issues such as unplanned outages.

<sup>1</sup> GTM <https://www.greentechmedia.com/articles/read/global-solar-demand-still-shrinking-but-at-a-lower-rate>

<sup>2</sup> Source: SEIA <http://www.seia.org/research-resources/us-solar-market-insight>



#### BENEFITS

- Reducing the capacity for intermittency to cause disruption and safety issues
- Eliminating the need to bring additional, costly generation resources online
- Minimizing customer minutes of interruption (CMI) via improved load profiling
- Improving resource planning to support DER growth

