Evolving grid challenges …

- Increasing grid complexity including integration of distributed energy resources and storage devices
- Aging infrastructure
- Growing regulatory and customer pressure for reliability and efficiency
… and impact on distribution utilities

<table>
<thead>
<tr>
<th>Primary Drivers for Smart Grids</th>
<th>Emerging Utility Needs</th>
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<tbody>
<tr>
<td>Reliability</td>
<td>Avoid outages</td>
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<td>Reduce outage duration</td>
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<td>Consolidate systems to harmonize grid control/automation</td>
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<td>Cost Reduction</td>
<td>Minimize grid losses</td>
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<td>Maximize grid utilization</td>
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<tr>
<td>Automation and Communication</td>
<td>Automate fault localization and supply restoration</td>
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<td>Gain maximum benefit from smart meter information</td>
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<td>Closely interact with field IEDs</td>
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<td>Renewable Integration</td>
<td>Securely balance intermittent generation, switchable loads and storage</td>
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<td>Optimally curtail/restore generation according to grid capacity</td>
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The Answer
Spectrum Power™ with ADMS

Next generation power distribution management.

The integration of distribution SCADA, advanced fault management, network analysis and outage management – operated on one technology platform with one common user interface.
Spectrum Power™ ADMS
The Revolutionary 3-in-1 Solution

Monitor and operate

Analyze and optimize

Track and restore
Spectrum Power™ ADMS
The Revolutionary 3-in-1 Solution

Monitor, control and optimize the secure operation of the electrical distribution network.

Reduce network loading at peak times and increase asset utilization, network efficiency and reliability.

Proactively and safely guide operators when needed most, i.e. during storms and outage-related restoration activities.
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### Spectrum Power™ ADMS

#### Highlights

**General ADMS Functions**
- Seamless and fully integrated SCADA, optimization applications and Outage Management
- Geospatial network graphics
- Automated GIS data import (bulk and incremental updates)

**Outage Management**
- Management of outages and planned work
- Extended features, e.g. Storm Management and Outage Prediction
- Crew and trouble call management

**Distribution Network Applications**
- Estimate and analyze the fault location
- Automate fault isolation and service restoration
- Study and optimize the distribution network operation
- Keep the voltage within the limits and minimize losses

**Distribution SCADA**
- Full support of single and three-phase distribution networks
- Extended tracing for outages, trouble calls, crews, etc.
- Visualization of topology changes before execution
- Online-editable, temporary network elements
Spectrum Power™ ADMS
Key Benefits

1. Monitor, control and optimize distribution network operation
2. Integrate increasing renewable generation
3. Optimize asset utilization with minimal network load and losses
4. Efficiently manage day-to-day maintenance and repair efforts
5. Shorten outage restoration times, especially under severe conditions

Reliability of supply and reduced operational costs
Spectrum Power™ ADMS
Leading through One Integrated Interface

SCADA/DNA
Operate device from Schematic Display

Geospatial Maps
Show change to device in GIS view

OMS
Analyze outages and generate outage reports
Spectrum Power™ ADMS
Seamless Integration of OT with IT

- Geographical Information System
- Interactive Voice Response
- Asset Management
- Customer Information System
- Workforce Management
- Weather Forecast
- SAP
- Meter Data Management
- Network Planning

Spectrum Power
Thank you for your attention!