We electrify the world with advanced grid technologies and accelerate the energy transition.
Trends Disrupting The Traditional Power Sector

**Decarbonization**
- Renewable energy will account for 64% of new global capacity over the next 10 years.

**Digitization**
- Growing number of connected assets through smart sensors, management and new software capability.

**Decentralization**
- More generation will be coming from distributed resources and the rise of prosumers.

**Electrification**
- Increase of electric transportation and electrical heating.
# The Energy Transition: how does it impact the grid?

<table>
<thead>
<tr>
<th>FUEL</th>
<th>GENERATOR</th>
<th>GRID</th>
<th>LOADS</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Coal" /></td>
<td><img src="image" alt="Steam Turbine" /></td>
<td><img src="image" alt="One-way flow" /></td>
<td><img src="image" alt="Relatively Predictable" /></td>
</tr>
</tbody>
</table>
| • Easy to control  
  • Dispatchable on demand | • Provides inertia  
  • Can start grid from zero | | |
| ![Solar](image) ![Wind](image) | ![Limited natural inertia and ability to start grid](image) | ![Two-way flow with distributed generation feeding transmission](image) | ![Difficult to predict  
  • Distributed Generation](image) |
| ![Intermittent](image)  
  • Limited dispatchability | | | |

The grid was designed for a different way of producing and consuming energy.
Understanding Our Industry Challenges

- Connecting Renewables to the Grid
- Balancing Generation & Demand
- Improving Grid Resilience and Energy Efficiency
- Reducing Grid Environmental Footprint
INTELLIGENT DIGITAL SUBSTATION
DELIVERING ADVANCED CONTROLS, ASSET DIAGNOSTICS, SITUATIONAL AWARENESS SOLUTIONS & TURN-KEY SUBSTATIONS

REduce substation protection & control labor and material cost by up to 50%

Eliminate up to 200 KMs of copper wiring

Improve service team efficiency by up to 80%

Up to 15% increase in asset utilization

Up to +50% reduction in substation footprint

Digitize Primary Equipment
Asset Monitoring & Diagnostic
Advanced Protection & Control
Local & Remote Control
Grid Control

Delivering advanced controls, asset diagnostics, situational awareness solutions & turn-key substations

Switchyard
Relay Room
Control Room
DISTRIBUTED ENERGY INTEGRATION & MICROGRIDS
RETURNING SYSTEM FLEXIBILITY

GLOBAL PV INSTALLED CAPACITY EXPECTED TO GROW BY
7x TO 900+ GW IN 2040

GE’S MICROGRID SOLUTIONS ENABLES THE OPTIMIZED INTEGRATION AND CONTROL OF DISTRIBUTED ENERGY RESOURCES

Up to 20% REDUCTION IN DIESEL GENERATION WITH RENEWABLES & ENERGY STORAGE

Up to 27% REDUCTION IN RENEWABLE CURTAILMENT

Microgrids Solution Portfolio

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