



GRID SOLUTIONS





— *Our Mission as GE's Grid Solutions*

**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



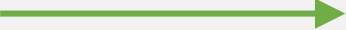




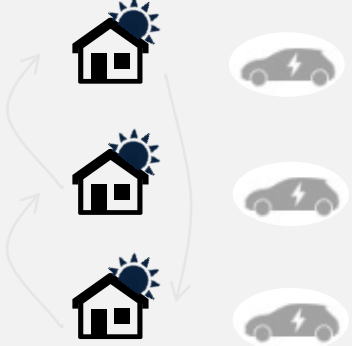


The Energy Transition: how does it impact the grid?

FROM



TO

FUEL	GENERATOR	GRID	LOADS
 <ul style="list-style-type: none">• Easy to control• Dispatchable on demand	 <ul style="list-style-type: none">• Provides inertia• Can start grid from zero	 <p>One-way flow of electricity from transmission to distribution</p>	 <ul style="list-style-type: none">• Relatively Predictable
 <ul style="list-style-type: none">• Intermittent• Limited dispatchability	 <ul style="list-style-type: none">• Limited natural inertia and ability to start grid	 <p>Two-way flow with distributed generation feeding transmission</p>	 <ul style="list-style-type: none">• Difficult to predict• Distributed Generation

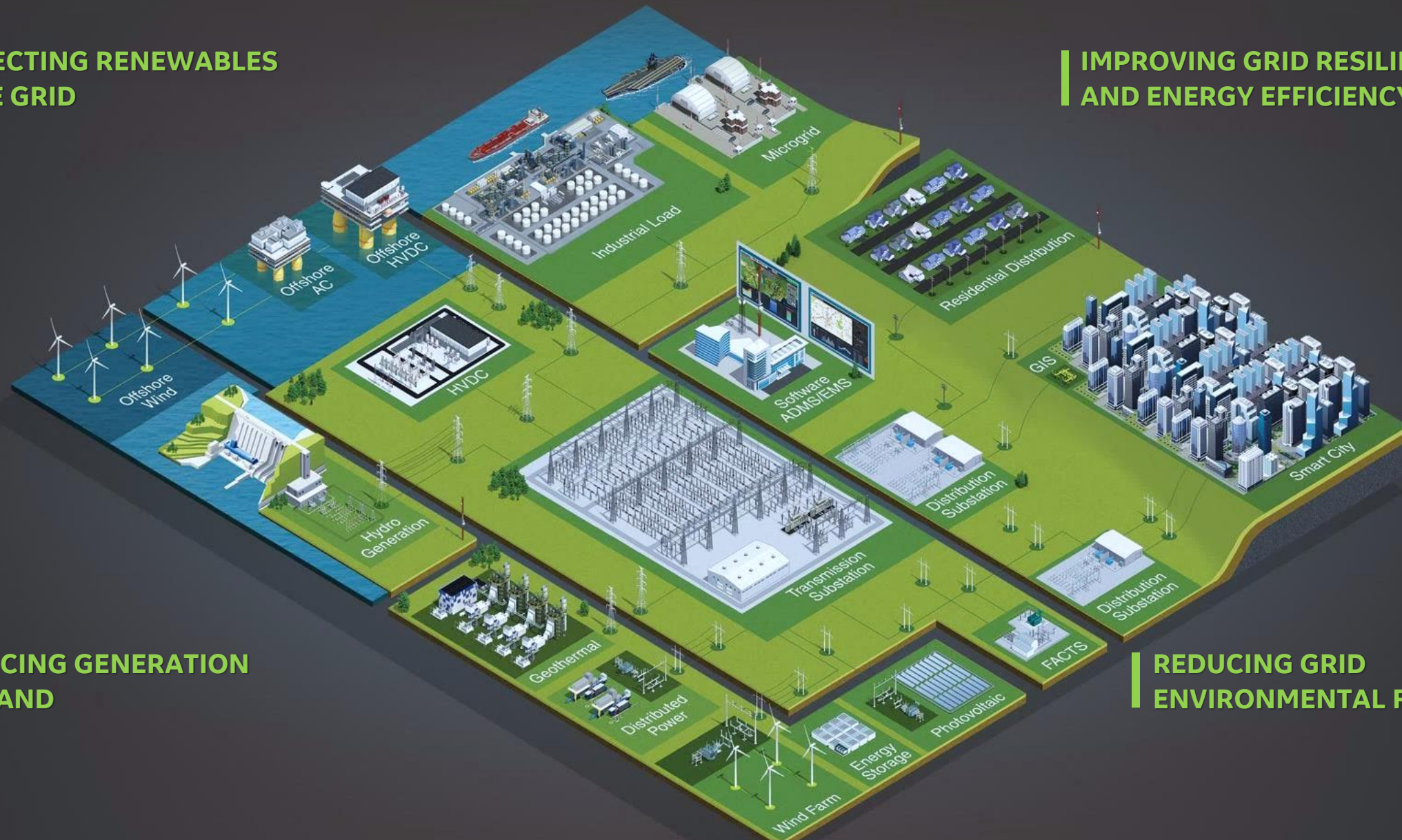
The grid was designed for a different way of producing and consuming energy



Understanding Our Industry Challenges

CONNECTING RENEWABLES
TO THE GRID

IMPROVING GRID RESILIENCE
AND ENERGY EFFICIENCY



BALANCING GENERATION
& DEMAND

REDUCING GRID
ENVIRONMENTAL FOOTPRINT



INTELLIGENT DIGITAL SUBSTATION

DELIVERING ADVANCED CONTROLS, ASSET DIAGNOSTICS, SITUATIONAL AWARENESS SOLUTIONS & TURN-KEY SUBSTATIONS

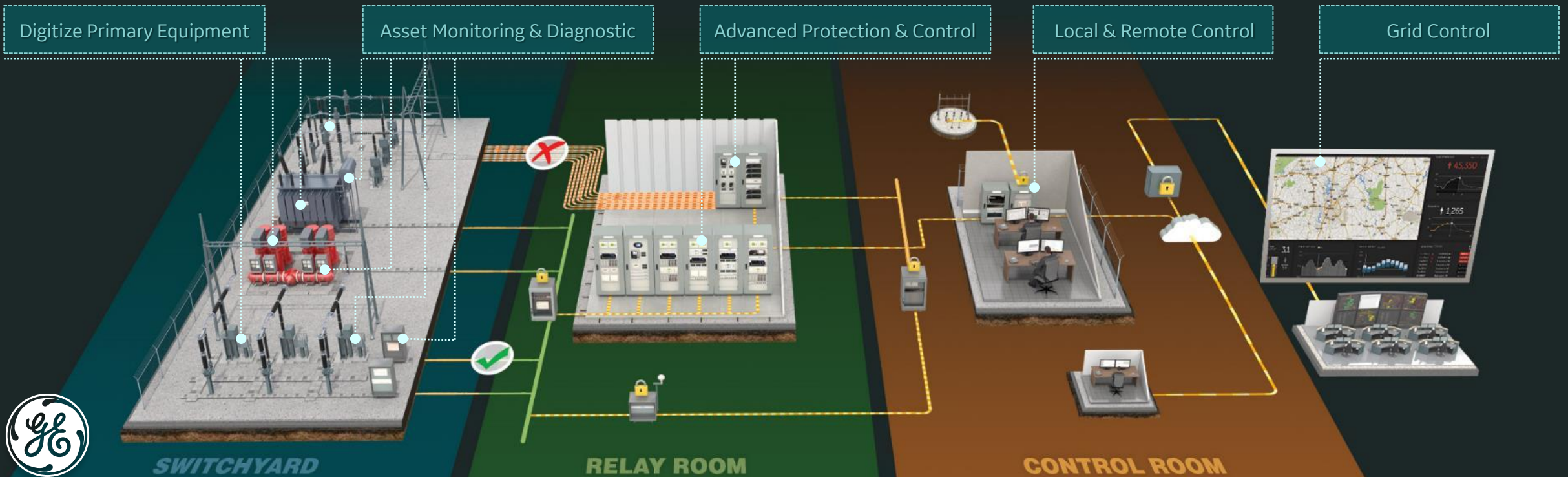
REDUCE SUBSTATION
PROTECTION & CONTROL
LABOR AND MATERIAL COST
BY UP TO **50%**

ELIMINATE UPTO **200** KMs of
COPPER WIRING

IMPROVE SERVICE TEAM
EFFICIENCY BY UPTO **80%**

UP TO **15%** INCREASE IN
ASSET UTILIZATION

UP TO **+50%** REDUCTION IN
SUBSTATION FOOTPRINT



DISTRIBUTED ENERGY INTEGRATION & MICROGRIDS

RETURNING SYSTEM FLEXIBILITY

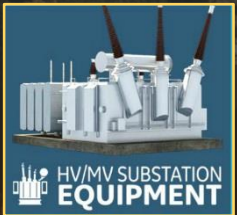
**GLOBAL PV INSTALLED CAPACITY
EXPECTED TO GROW BY
7x TO 900+ GW IN 2040**

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



Grid Solutions

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Think Grid – Technical Magazine

[think-grid.org](https://www.think-grid.org)



