

GE's Grid Solutions & the Energy Transition



GE Renewable Energy

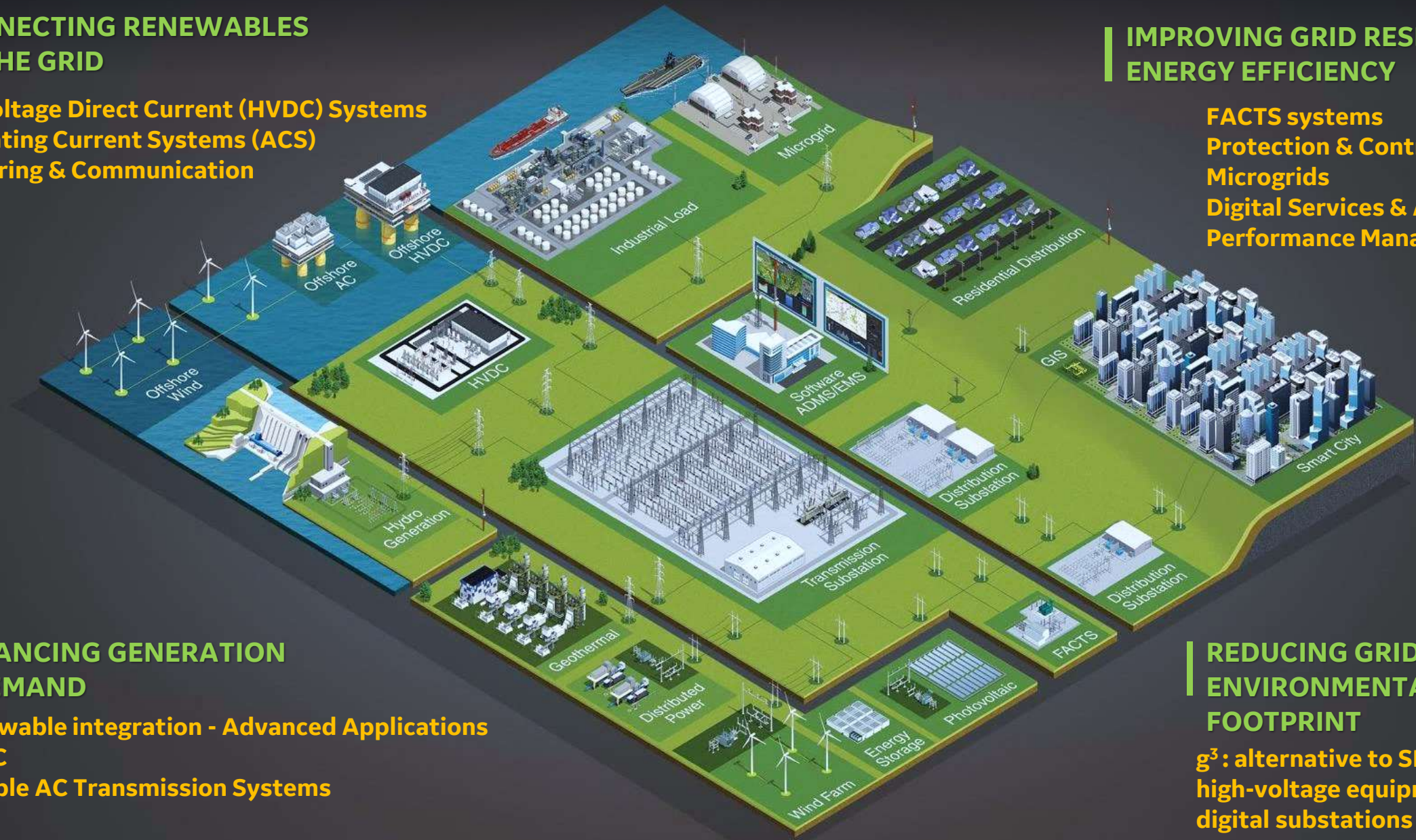
Enabling a cleaner, more resilient & reliable grid

CONNECTING RENEWABLES TO THE GRID

High Voltage Direct Current (HVDC) Systems
Alternating Current Systems (ACS)
Monitoring & Communication

IMPROVING GRID RESILIENCE & ENERGY EFFICIENCY

FACTS systems
Protection & Controls
Microgrids
Digital Services & Asset
Performance Management



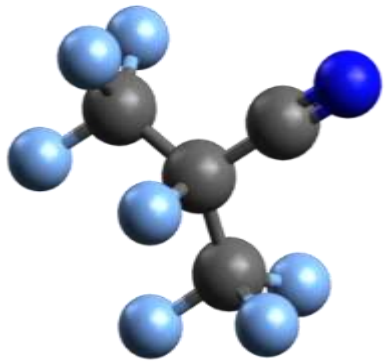
BALANCING GENERATION & DEMAND

Renewable integration - Advanced Applications
HVDC
Flexible AC Transmission Systems

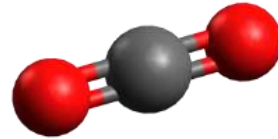
REDUCING GRID ENVIRONMENTAL FOOTPRINT

g³: alternative to SF₆ for high-voltage equipment
digital substations

Focus on g³: The solution to replace SF₆



+



CO₂

+



O₂

3M

Novec 4710

C₄F₇N

Environmental

- 99% reduction in Global Warming Potential impact (vs. SF₆)
- Same equipment dimension as SF₆ switchgear (enabling the lowest lifecycle impact of all available alternatives)

Performance

- No voltage or current limitation
- Same temperature ranges as SF₆ (-30 to 55°C)

Safety

- Classified non-toxic



Main pillars enabling the g³ technology adoption



To accelerate power network decarbonization

Regulatory support

New rules to enable the change:

- SF₆ ban is on the way with phase out dates
- SF₆ taxes are implemented on emission / import

Funding to accelerate the development new products:

- EU LIFE – 420 kV GIS
- EU LIFE – 245 kV LT CB
- US DOE – 245 kV DT CB



Manufacturers

Switchgear manufacturers adopting the technology and developing a complete roadmap to offer a long-term visibility to users and regulators

Industrial partners offering a broad ecosystem of tools, systems, enabling the change for manufacturers and users

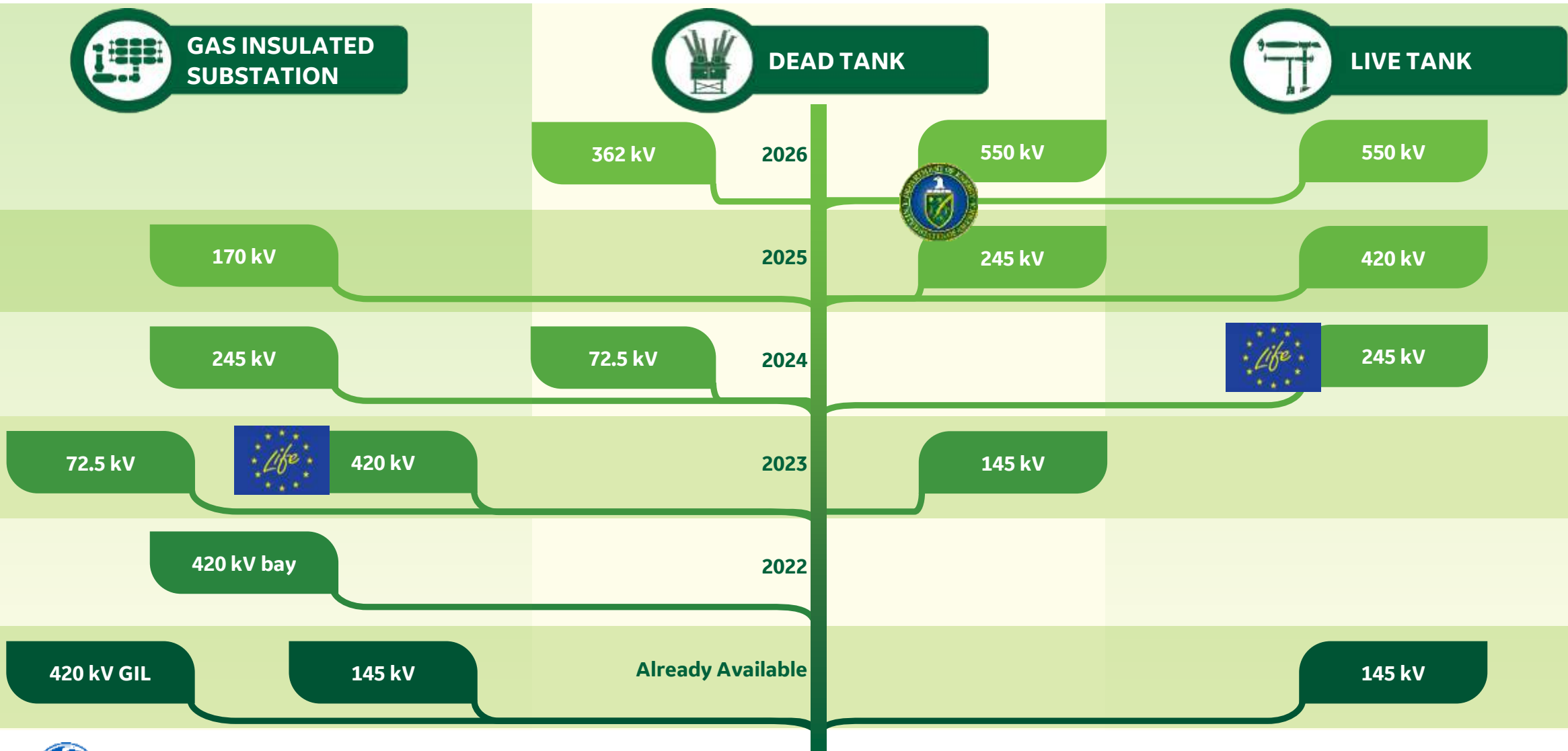
Users

Implementing the technology

Collaborating with manufacturers to drive the change



g³ Product Roadmap





Building a world that works