

Life Is On

Schneider
Electric

Grids of the Future

Paving the way to the new energy landscape

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Climate Issue is an Energy Issue.

How do we implement Decarbonization, fast?

80%

global CO2 emissions come from the production and consumption of energy

Renewables
(Power Generation)

Energy Efficiency
(Buildings & Industry)

Electrification
(Heating & Mobility)

We Need the Right Electrons at the Right Moment. DSOs are the Conductors of this Symphony.

70% Renewable capacity
connected to
distribution grids

50-70M Electric
vehicles
by 2030

40GW Self-
consumption
by 2030

Sources: Deloitte/Eurelectric

Deliver more renewable electricity,
locally, centrally, or both

Charge only when the
supply is renewable

Rely on prosumers for grid
flexibility

Only digital technologies can deliver this orchestration today.

Why grids must **change**



Sustainability challenges

25%

of global electricity will be still **coming from coal** in 2035



Resilience challenges

35%

of C&I customers* **see outages as too disruptive and costly** to their businesses



Efficiency challenges

x75

Data volume produced by grids in 2025 vs. 2020



Flexibility challenges

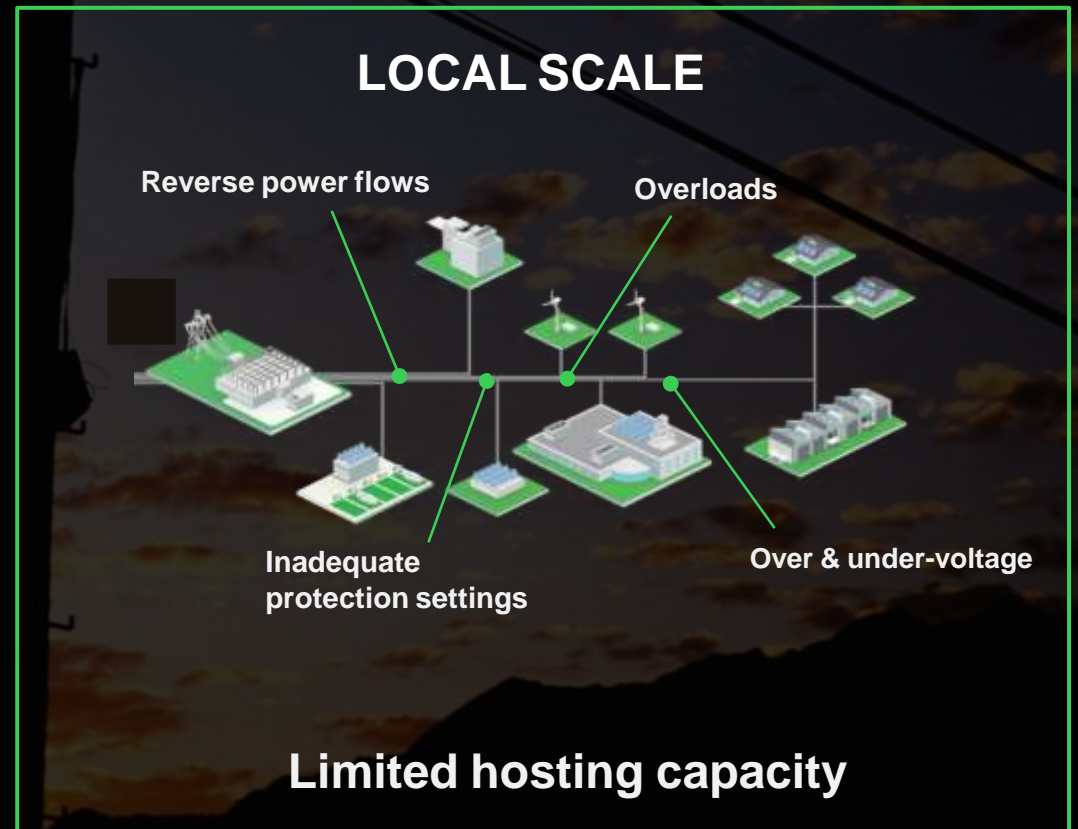
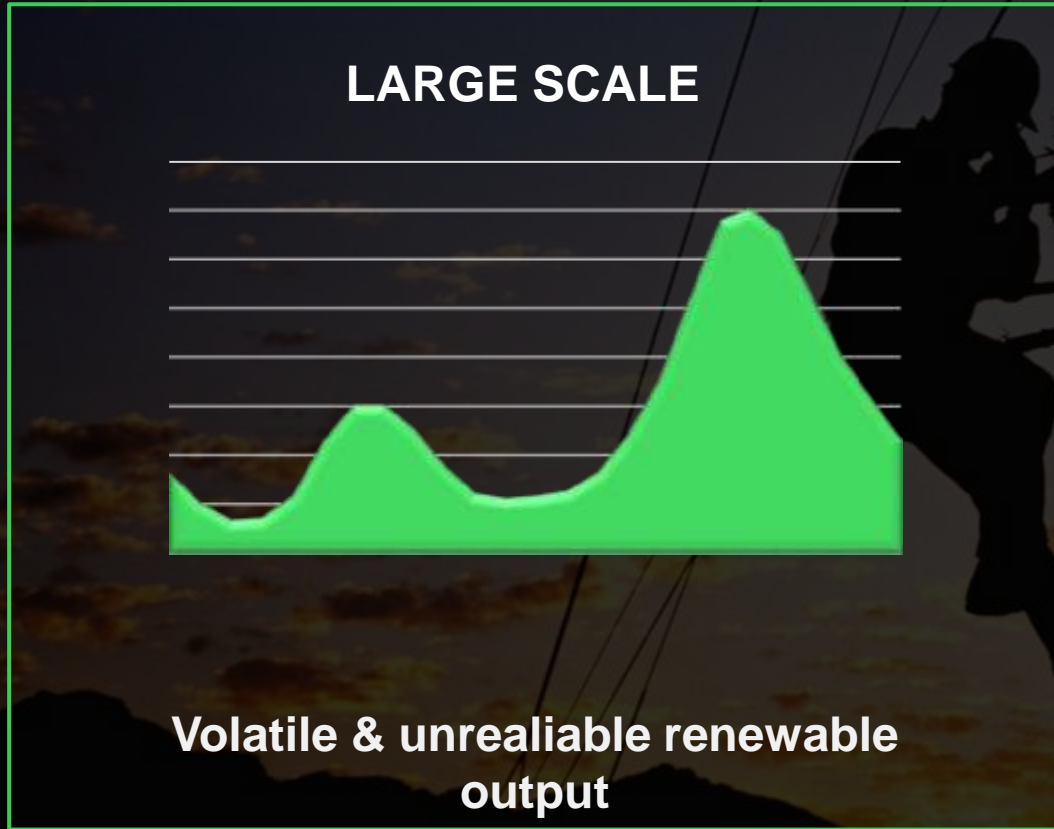
43%

Of installed capacity by 2030 expected for **wind, solar and storage**

*survey conducted in USA

Renewables and EVs create challenges.

Demand and supply are changing at every level.



Exploiting new DER flexibility options.

Non-wire alternatives for maximized DER integration.

Conventional strategies

Transmission

- CAPEX
 - Infrastructure
 - New generation units

Distribution

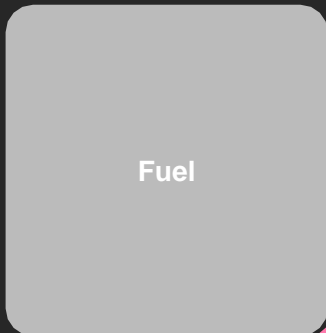
- CAPEX – Infrastructure

Non-wire alternatives

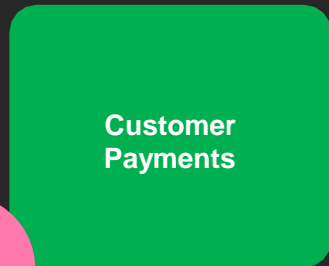
- ✓ **Flexible contracts**
 - ✓ Flexible connections enabling DER curtailment
- ✓ **Flexibility services**
 - ✓ Flexibility bids
- ✓ **Energy storages**
- ✓ **Demand response programs**
- ✓ **Microgrids**

With financial incentives beyond carbon reduction. VPP is cheaper & cleaner than fossil fuel generation.

\$150 - 180/kW-yr



\$80 - 110/kW-yr



VS

70% goes back to the community to create jobs



1300% less expensive

4x less polluting



3x impact on disadvantaged communities



Peaker Plant



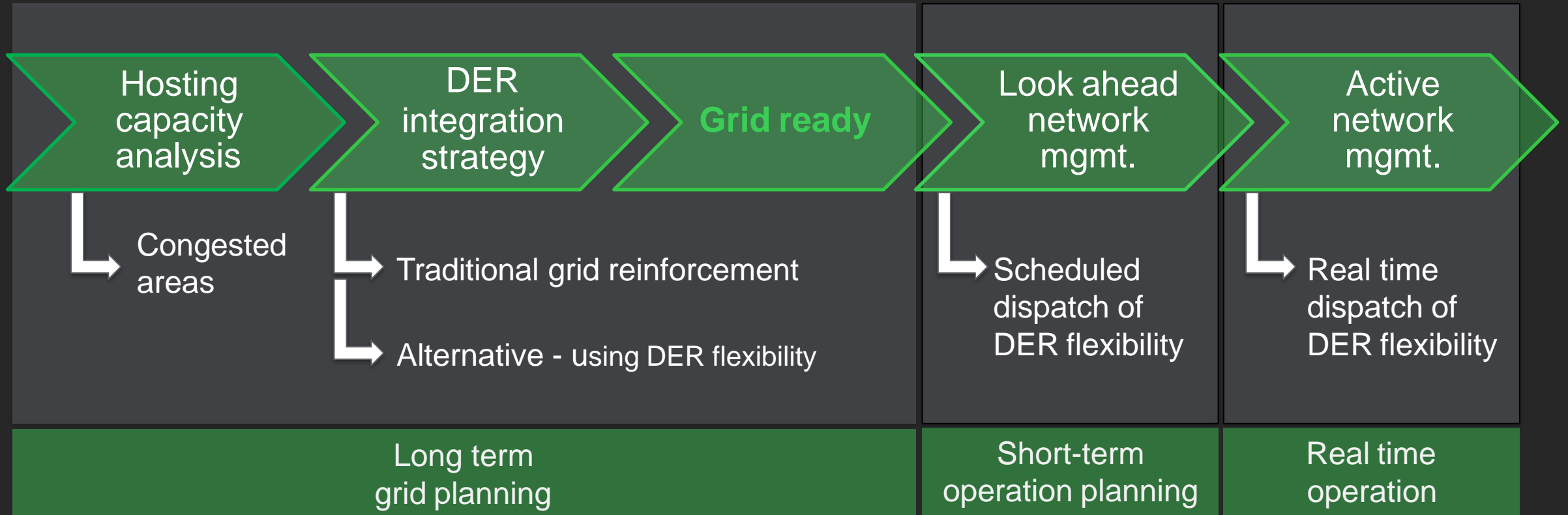
Virtual Power Plant (VPP)

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Increasing grid capacity to host new DERs.

Maximized utilization of the existing infrastructure.



Active Network Management

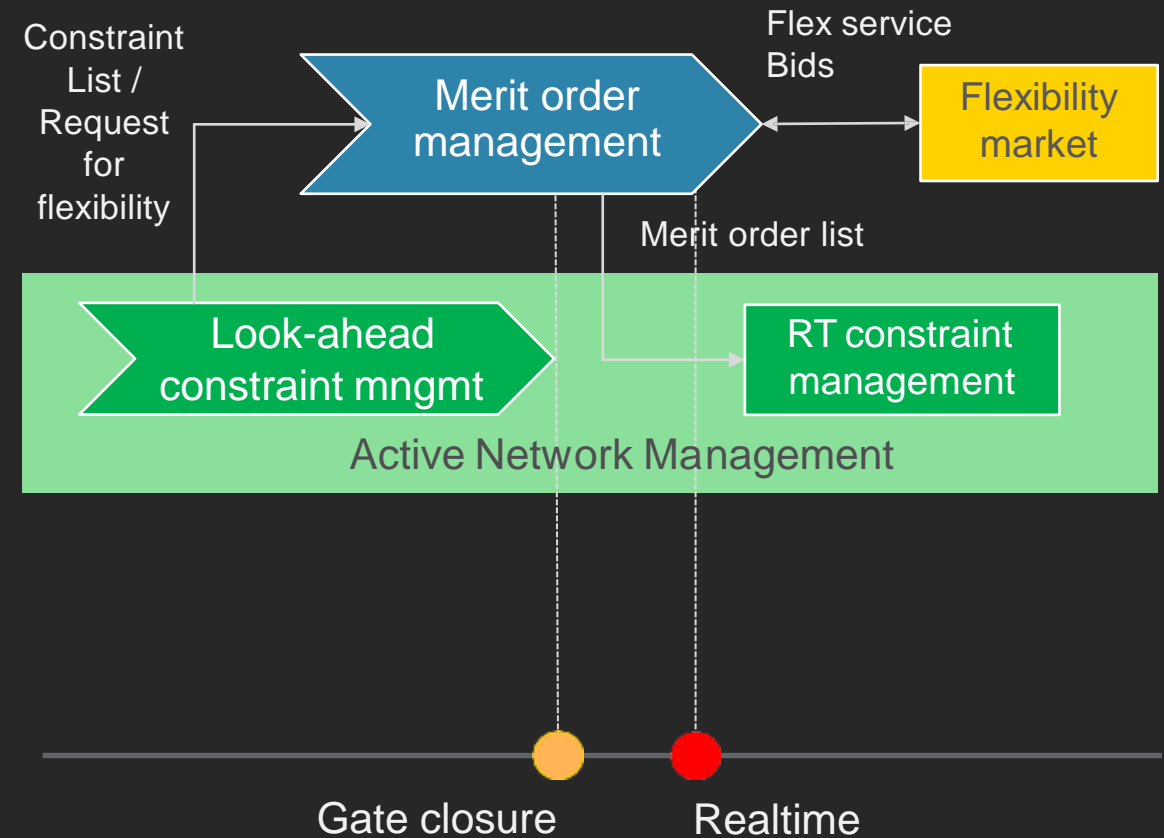
Flexible resources and economic prioritization in Distribution Grid Operation

Look-ahead constraint management

- Look-ahead analysis of power flow and voltages
- Detect potential constraints in look ahead period
- Identify flexible resources to avoid constraints
- Create/send request for flexibility through constraint list to Merit Order Management

Realtime constraint management

- Monitor and detect violated limits
- Determine control actions
- Utilize DER flexibility per Merit Order List
- Dispatch network assets and flexible resources
- Create/send list of utilized DER flexibility to enable settlement
- Periodically disengage DERs



Grid to Prosumer

End-to-end DERMS solution that **connects all stakeholders** in the evolving energy landscape. Implements new ways to **optimize supply and demand**, at every level. Supports the growth of **DERs, microgrids, energy communities**, and other flexibility resources through **optimized orchestration** across the lifecycle.

DER Grid Planning

Hosting Capacity
DER Connections
Non-wire alternatives

Active Network Mgmt

Situational Awareness
Constraint Mgmt
RT & Look Ahead

Demand Response

Residential
C&I Automated
Behavioral

VPP

Renewable Trading
DER Trading
Virtual PPAs

Fleet & Site Optimization

EV Fleet Mgmt
Solar & Storage
Microgrids

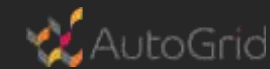
Schneider Electric DERMS in a nutshell

Best in class technology with leading partners

#1 DERMS vendor according to Guidehouse Insights Leaderboard



Leveraging leading technology



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Strategic Partner

Integrating with EcoStruxure Grid solution suite



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Key takeaways

Pressing climate change challenges
urge for clean electrification and digitization

Grids need to change
with DSO as key orchestrator

Innovative technology that unlocks flexibility
is the solution for Grids of the Future

Trusted partner
for the clean energy and digital transformation

