

Residential Technology for Sustainable IMPACT

Lorne Hedges, WE HBA Sept 9, 2025

Life Is On

Schneider
Electric

Our own sustainability journey



Leading ESG in our ecosystem

- Embedded across organization
- Sustainability trusted partner for our customers
- Clear path towards net-zero value chain



United Nations
Global Compact



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Commit to

ZERO

2025

2030

2040

2050

Carbon neutral operations
(Scope 1 & 2)

Net-zero ready operations
(Scope 1 & 2)

End-to-end carbon neutral value chain
(Scope 1,2,3)

Net-zero CO₂ value chain
(Scope 1,2,3)

Macro trends impacting Canadian home builders



Growing Electrification



Electrical Costs



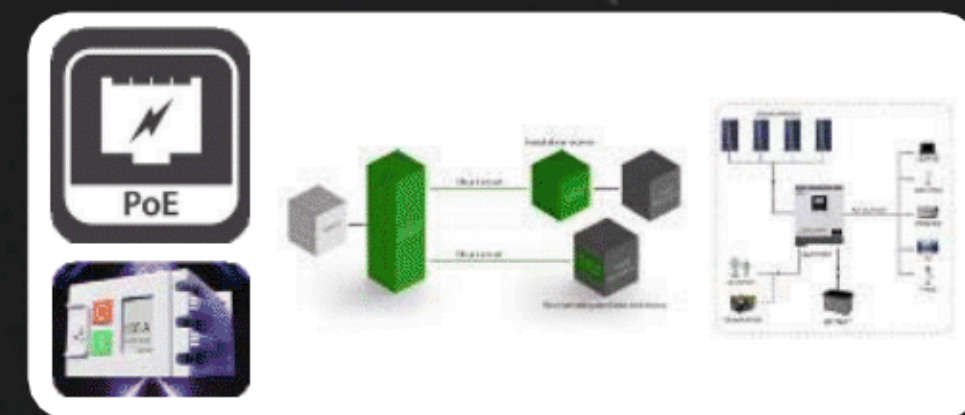
Grid Instability



Digitization and AI



Evolving Codes & Standards



New Technologies



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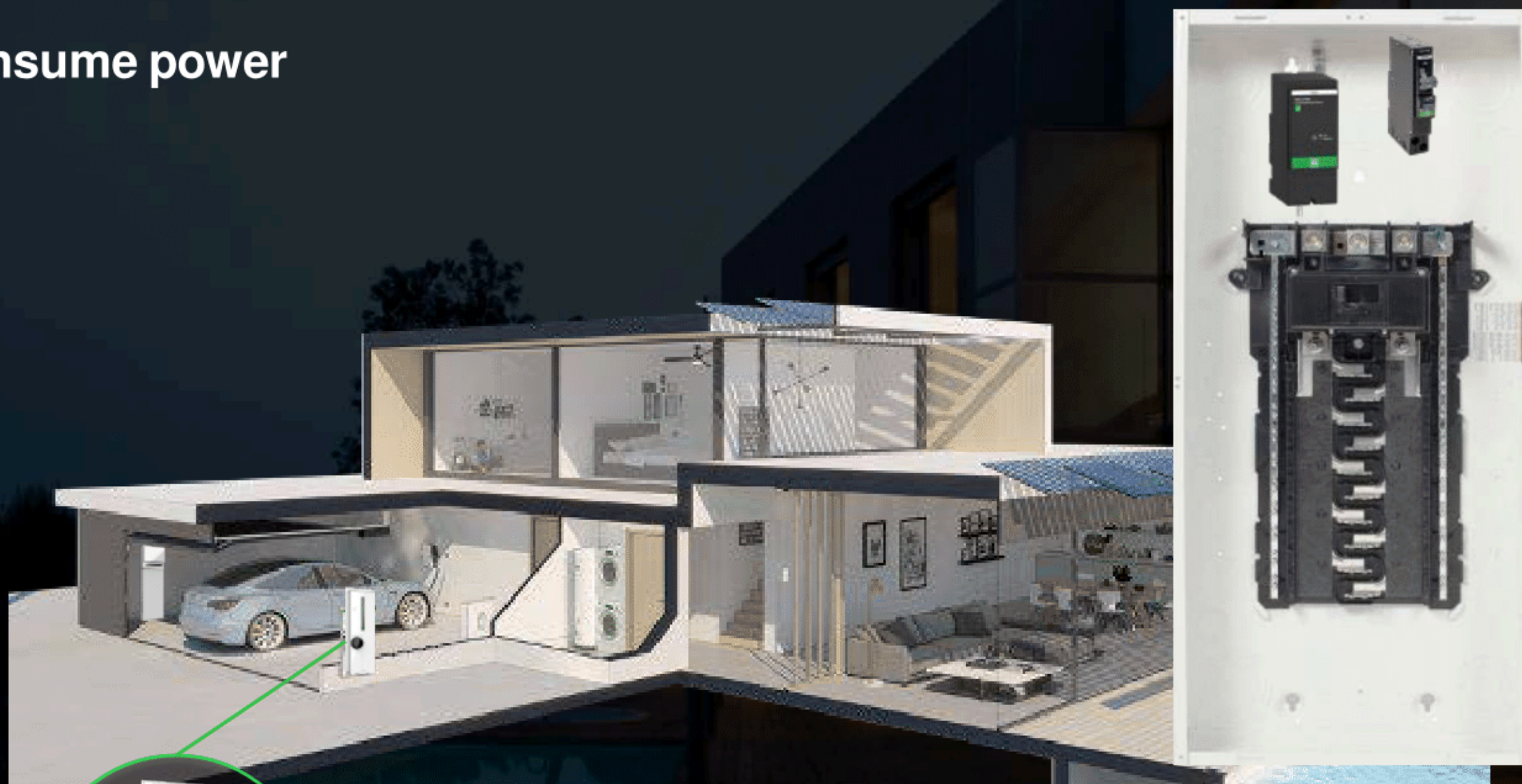
	Macro Trends
	Electrification Journey
	Residential Community Micro Grid

Home electrification journey



Home circuit protection

Homeowners consume power



Power Distribution

Electrical Panels
Breakers
Surge Protection

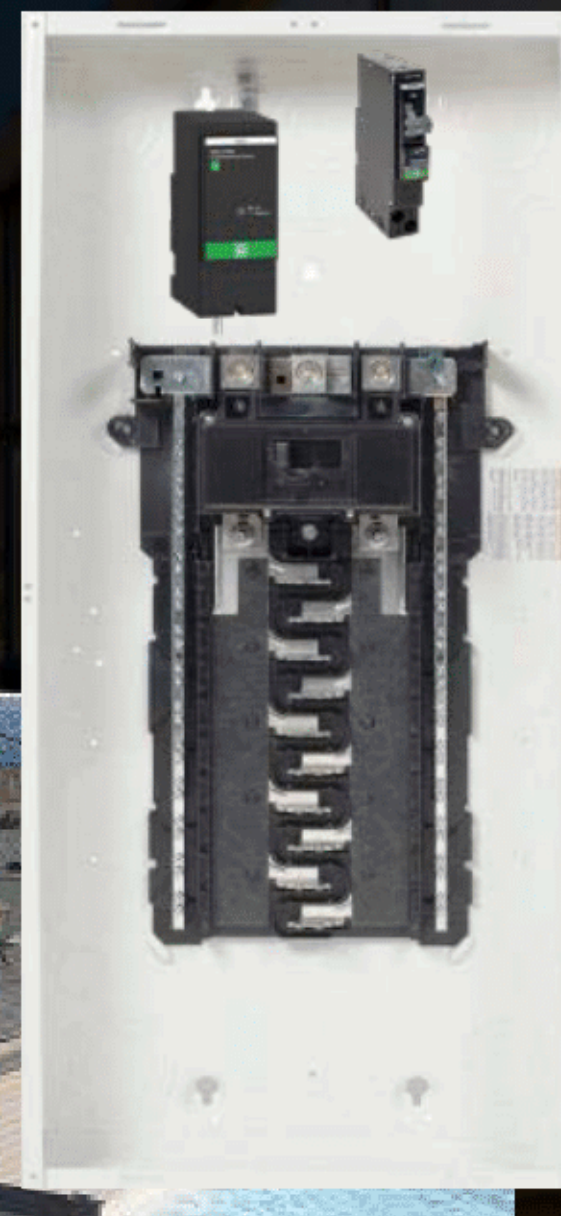
Solar export to grid

Homeowners produce power, sell to utility

Solar Production Enabled
via Solar Inverter



Power Distribution
Electrical Panels
Breakers
Surge Protection



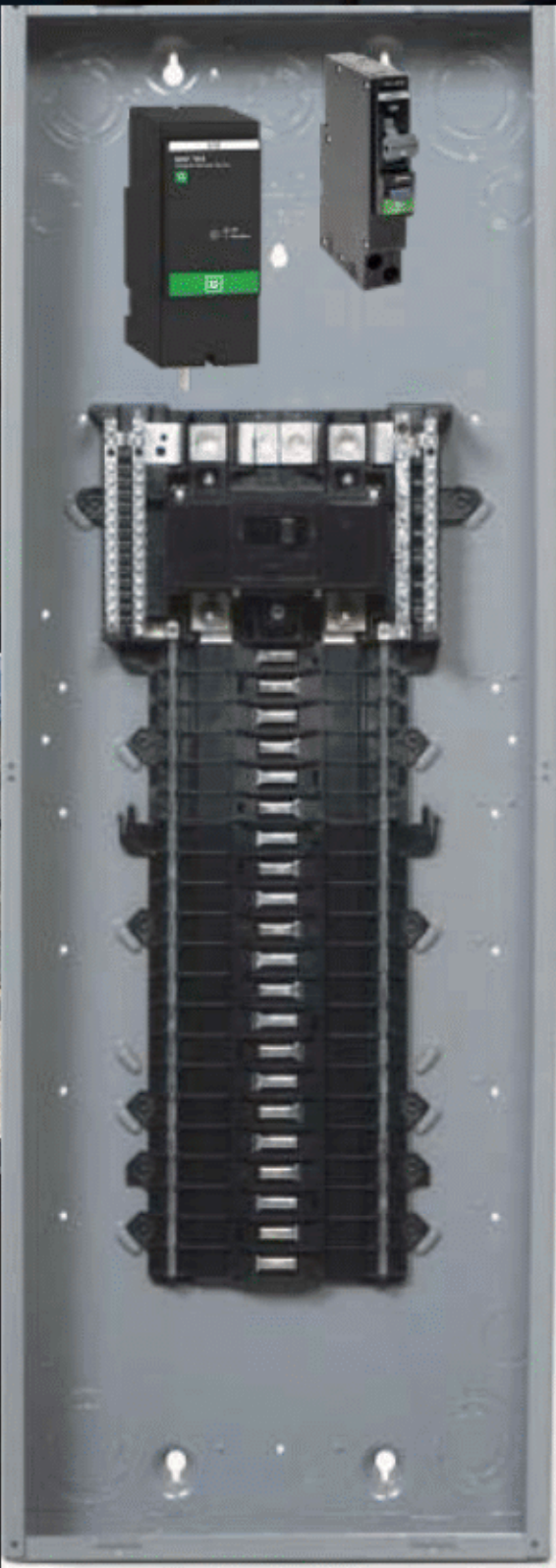
EV = new loads

Electrified transportation

More Circuits
Higher Amperage

EV Charging

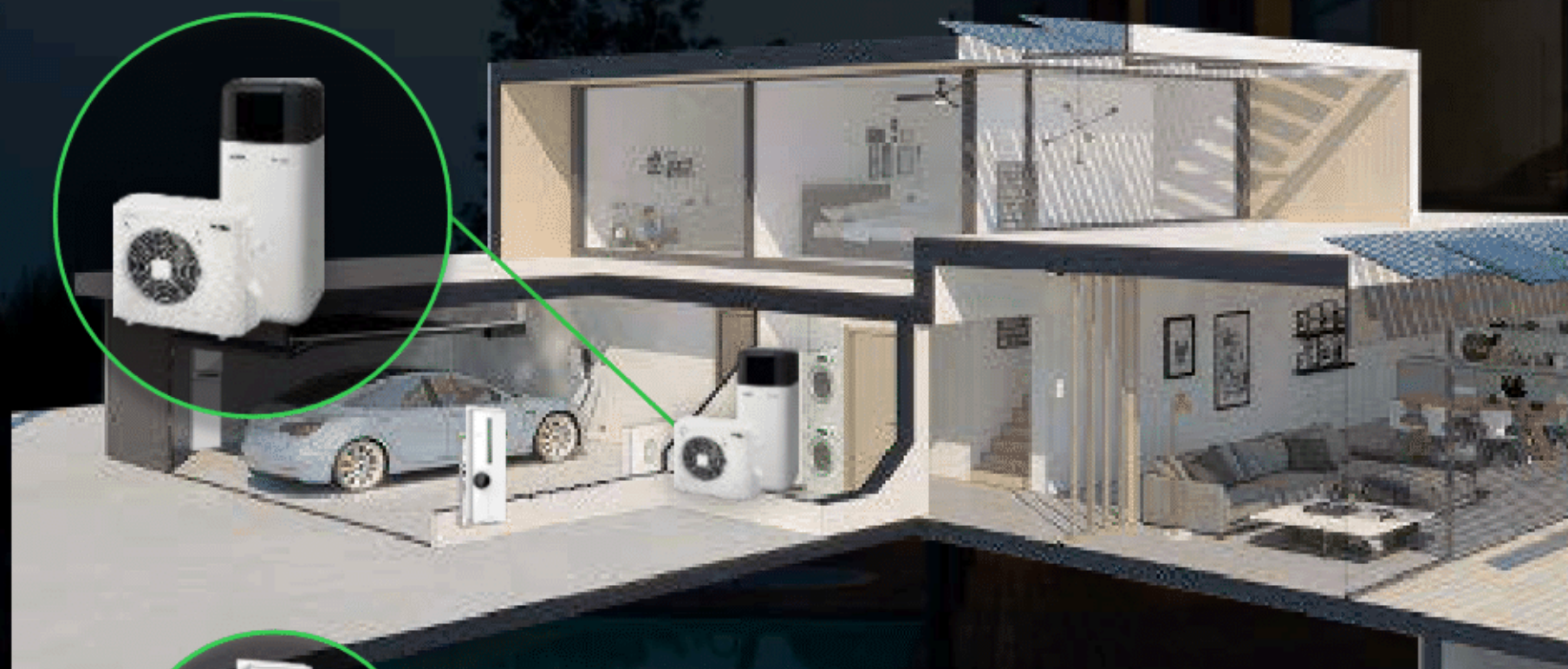
<u>2010</u>	<u>2025</u>
30A	80A+
1 EV	2 EV



Heat pumps increasing electrical load

Decarbonization of heating

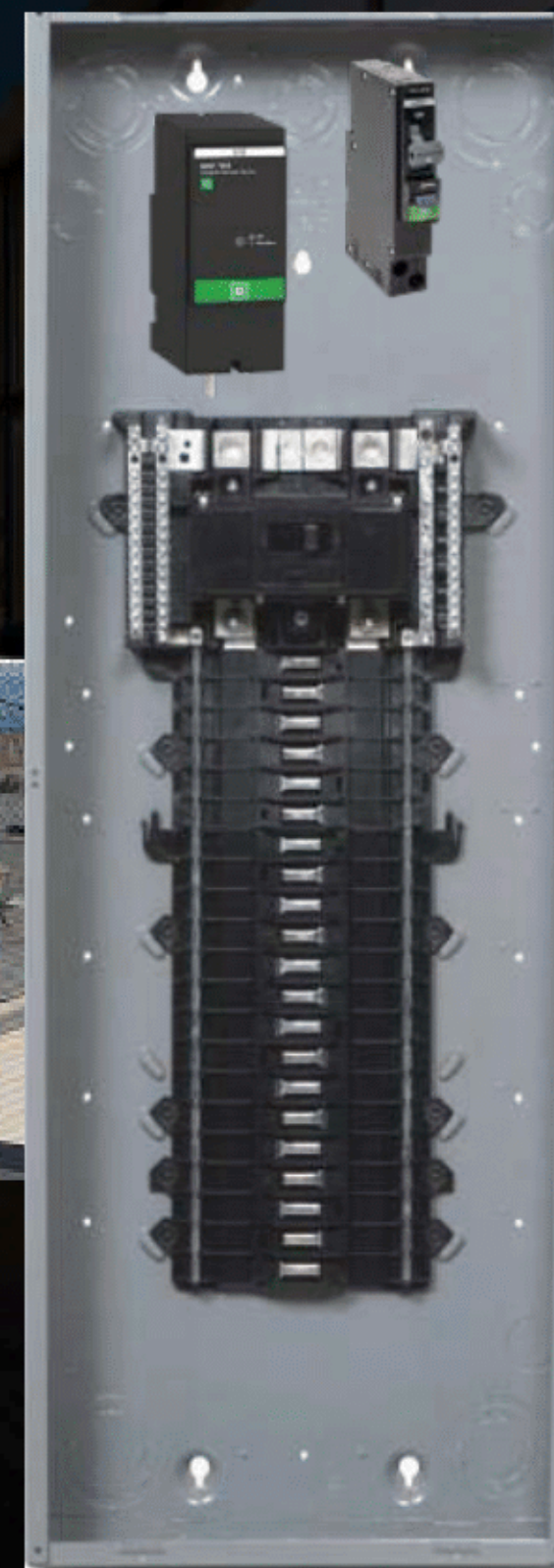
Heat Pumps
Space and Hot water



More Circuits
Higher Amperage



Power Distribution
Electrical Panels
Breakers
Surge Protection

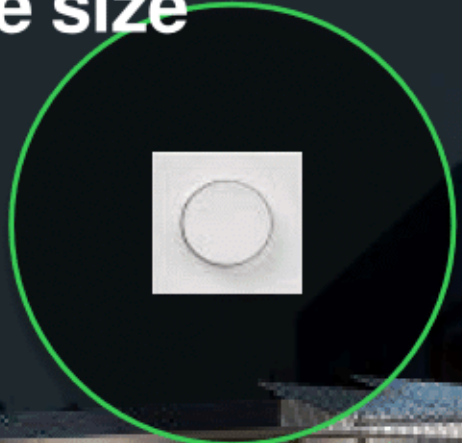


Home Energy Management and automation

Provides opportunity to minimize service size



Solar Production Enabled Through Solar Inverter



Light & Shutter Control



Temperature Control



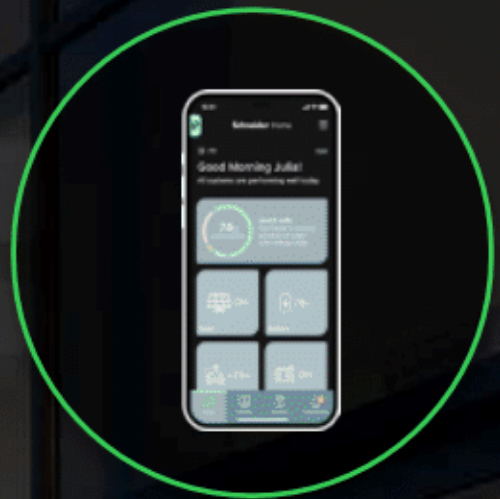
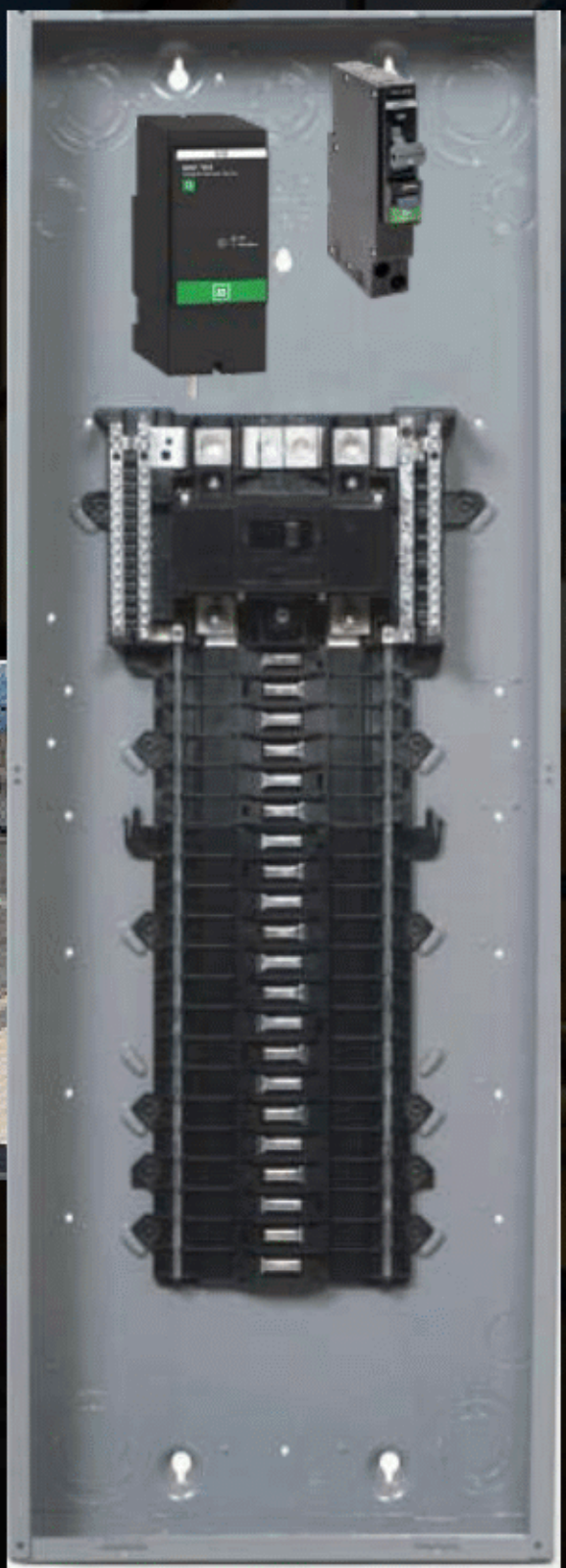
EV Charging



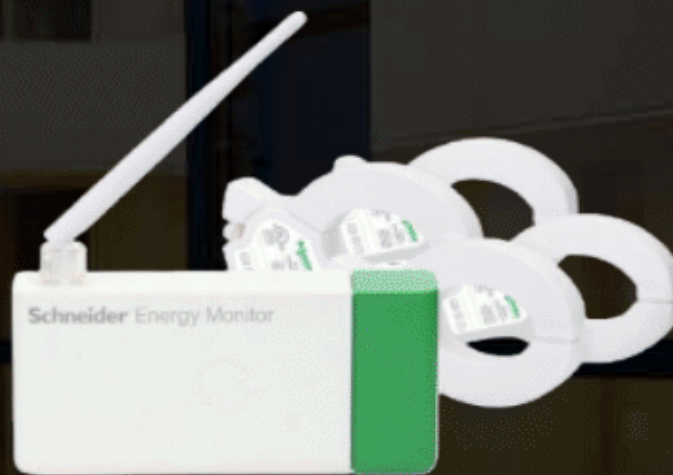
Power Distribution,
Electrical Panels
Breakers
Surge Protection



Heat Pumps

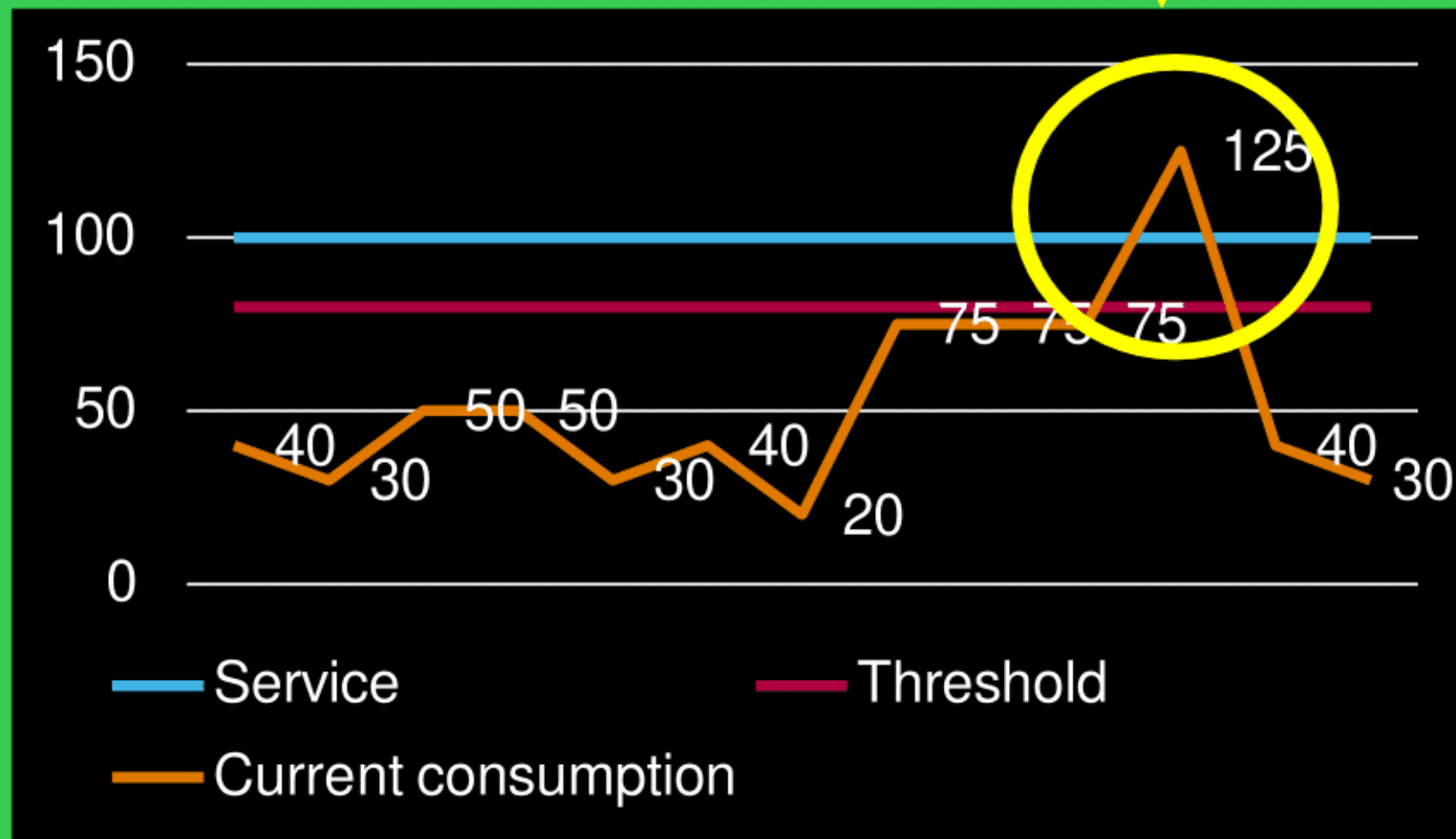


Home Energy Management Apps



How do we minimize service size?

Automatically
shave the peak



**Service
Upgrade
Avoidance**

**Use HEMS
+
hardware to
limit load**



Next Wave

Rise of the Prosumer

Individuals

Produce
Consume
Control

Grid

Reliable
Flexible
Green

Solar + Storage resiliency and backup

Complexity supported by digitization and AI



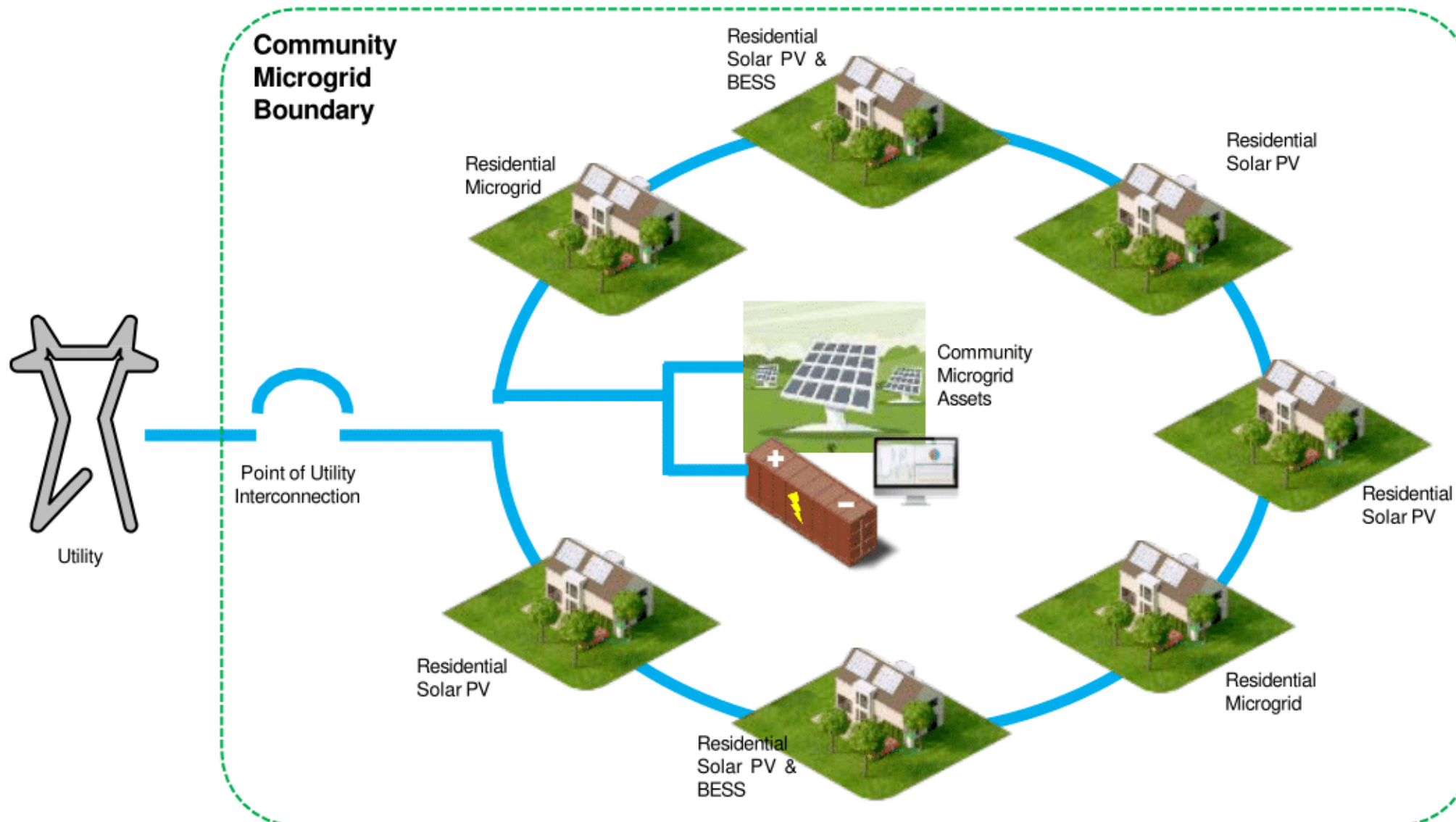
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Residential Community Microgrids

A **residential community microgrid (RCMG)** consists of a centralized control system, shared community scale distributed energy resources (DERs) and individual homes that may range from traditional homes to homes with small scale DERs to homes that may be complete microgrids (sometimes referred to as nanogrids) onto themselves that all work together to achieve increased resilience and sustainability while reducing costs.

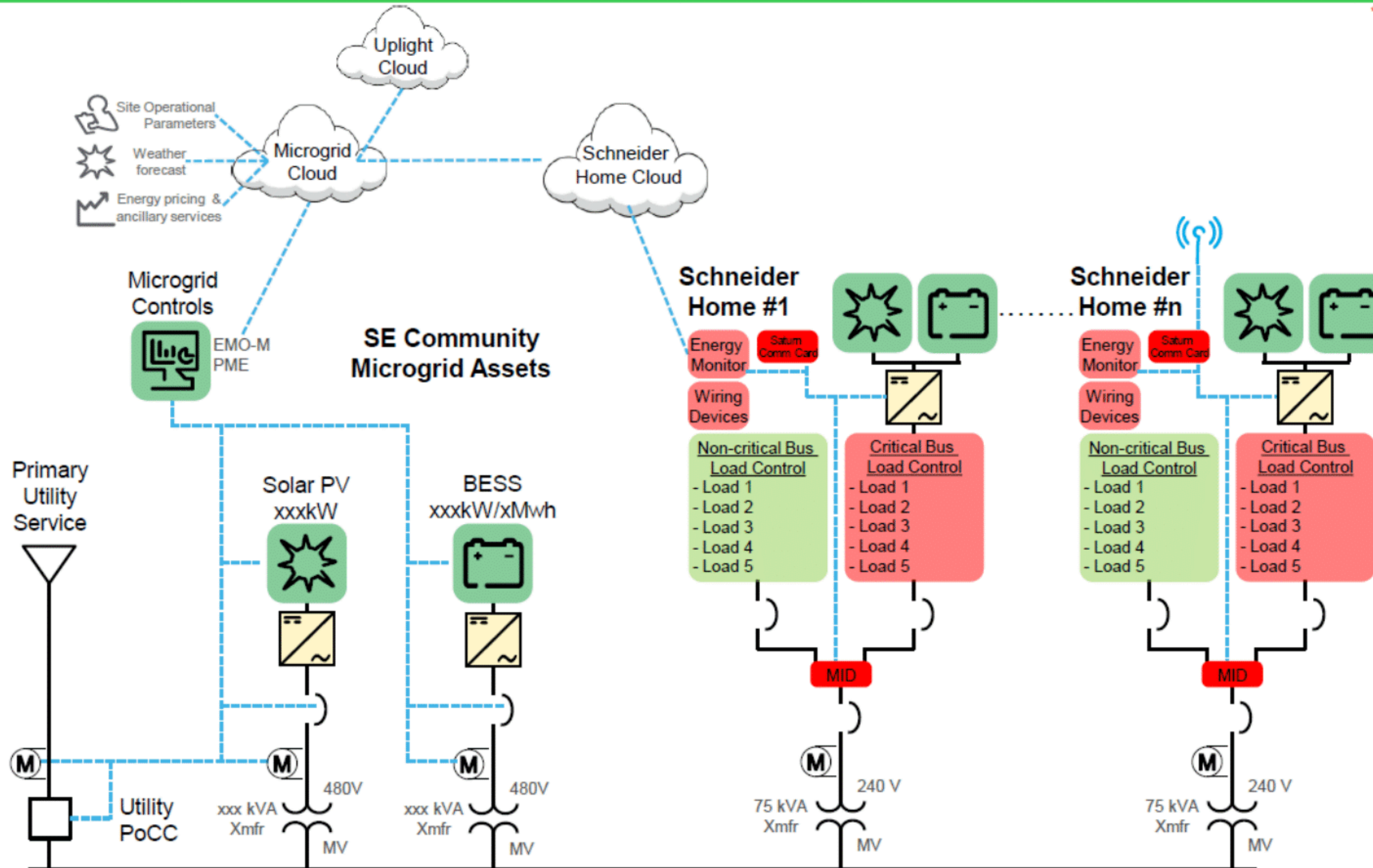


Residential Community Microgrids **deliver benefits** to multiple stakeholders simultaneously:

- **Energy resilience** – island entire community during a utility disruption or natural disaster; Power essential home loads for days, not hours
- **Revenue generation & cost avoidance** through programs like demand response and VPP, along with generating power & exporting excess power to the grid
- **Utilities also benefit** from a microgrid with access to energy during peak demand & by increasing the continuity of service to customers

Schneider Home: A Foundational Building Block for RCMGs

* Assumes community control of the MV distribution system



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A complete solution supporting *Residential Community Microgrids* made from the building block of the *Schneider Home*



The smart, connected, & sustainably powered home

Contact Information

Lorne Hedges

lorne.hedges@se.com

M – 416-662-4674

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