



AEG DMV: Grid Modernization Challenge

July 26, 2023

Partners

Thermostats



Electric vehicles



Energy storage



Solar inverters



Water heaters



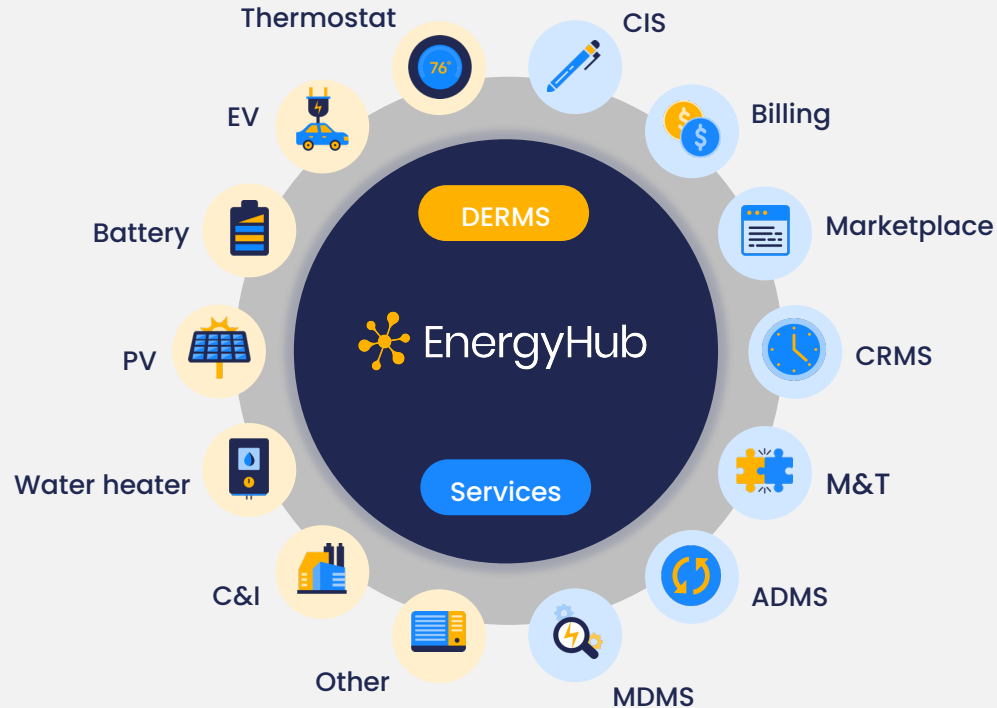
Commercial & industrial



Enterprise



Connecting grid-edge to utility enterprise



Utilities



The US will need
500 GW of
flexibility



Total US capacity in 2035



Obstacle

Urgent and growing need for grid flexibility – without a scalable way for the grid to easily access DERs

Objective

Support the deployment of DERs at scale by establishing a clear pathway to grid-services enablement

Near-term solutions

Mapping exercise	EnergyHub role	Funding Opps	Risk of doing nothing
Prioritize resources	SME in existing pathways for DERs	POS enrollment	Higher long-term cost
ID deployment tools	Stakeholder engagement and management	IIJA/IRA	Foregone grid services potential
ID grid services	Grid services experience	EE+DR	Increased severity of reliability risks
ID paths to scale			Greater DAC vulnerability

Deployment Strategy

- State funding
 - IRA/IIJA
- Utility DSM budget
- Utility operations
- Utility EE budget
- Solar incentives (state/utility)
- LMI/DAC objectives

Device

- Battery
 - EV
 - EVSE
 - Smart thermostat
 - Electric resistance water heater
- Solar PV inverters

Grid Services

- Demand response
 - TOU/TVR
- Peak time rebates
- Load curtailment
- Ancillary services
- Clean capacity
- VPP programs
- Real-time pricing

Pathway to Scale

- DRPE
- BYOD
- Utility customer portal marketing
- Device OEM marketing
- Aggregator marketing

*Regarding Grid Modernization, to achieve New York's climate, health, and equity goals, a critical obstacle to collectively overcome in 12 months is **the urgent and pressing need for grid flexibility – without a scalable way for the grid to access DERs.***