

Enabling Industrial Customers to Monetize their DERs

"Machines to Meters to Markets to Money": Voltus delivers every type of DER into every electricity markets for every product that those markets procure from DERs (capacity, energy, ancillaries).



vøltus

Multiple Macro Drivers Accelerating Growth in DERs



Ongoing Transition to Renewables

- Renewable electricity generation in the U.S. expected to increase 3x by 2050
- Intermittency of renewables requires significantly more backstop and balancing resources



Electrification of Key Sectors Driving Massive New Demand

- EV charging expected to need
 >400 TWh annually by 2040,
 - ~10% of U.S. electricity generation today $^{(2)}$
- 44% of fuel consumed by industrial sector can be electrified with currently available technology ⁽³⁾



Need for Greater Grid Resiliency

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- Rising costs and frequency of grid events and natural disasters driving adoption of on-site generation and desire for enduser control
- Customers looking to DERs as a hedge against price volatility and outages



Increasing Expansion of DER Capacity

- Over \$2Tn in U.S. grid replacement and reinforcement projected between 2020-2050 ⁽⁴⁾
- DER capacity additions are expected to be ~2x that of centralized generation annually by 2030

1. EIA Annual Energy Outlook 2021
 2. Bloomberg Electric Vehicle Outlook 2020
 3. McKinsey & Company What Electrification Can Do for Industry, May 2020 Report
 4. Bloomberg New Energy Finance Power Grid Long-Term Outlook 2021
 5. Guidehouse Integrated DER 2020 Report



In 2021, if a 24/7, 1 MW ERCOT load was able to offer its full flexibility into the market and could deliver up to 100 hours of curtailment, how much would its annual power cost be and how much would it have earned from its flexibility?



\$865,000 of revenue/savings



\$650,000 in power costs



DERs: Not Your Father's Demand Response

In light of these trends, distribution and transmission grids are valuing faster, more frequent, shorter duration response to support resilience, keep market prices in check, and drive carbon reduction.

Natural Gas Response
Carbon Response
Frequency Demand Response
Transmission Capacity Peak Hours
Generation Capacity Peak Hours
Operating Reserves Demand Response
Price Response
Emergency Demand Response