TEXAS ADVANCED ENERGY BUSINESS ALLIANCE

DISTRIBUTED ENERGY RESOURCES 101

What are Distributed Energy Resources (DERs)?

Distributed energy resources are a growing segment of the Texas advanced energy economy, capable of producing power, managing electric demand, and delivering grid services. These resources are smaller, flexible, located at or near customers, typically connected to the local distribution grid, and capable of relieving stress on the grid either by injecting power locally or by reducing demand.

DERs Include a Broad Range of Technologies

- Distributed Solar
- Battery and thermal storage
- Customer-owned generation
- Connected devices such as smart thermostats
- Energy efficiency
- Electric vehicles
- Demand response

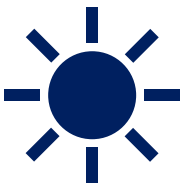
1,300 MW

The approximate total capacity of registered and unregistered DERs in the ERCOT region as of December 2018.

As economics change and technology improves, the deployment of DERs will continue to grow, making the grid more efficient, reliable, and resilient.

When incorporated, DERs have the potential to improve all aspects of electricity grid operations, including electricity generation, transmission, and local delivery. DERs are capable of providing a broad array of grid and energy services.

WHY DOES TEXAS NEED DERs?



SMALLER

Rely on aggregation of multiple smaller resources rather than large central units

DISTRIBUTED

Located in load centers and typically connect to distribution grids or sub-transmission lines

MODULAR AND FLEXIBLE

Can be added in smaller increments, built faster, and do not typically lead to 50+ year investments

TWO-WAY

Includes resources that can inject power locally or reduce local peak demand

ARRAY OF SERVICES

Affect all aspects of the electric grid's infrastructure, including electricity generation, transmission, and delivery infrastructure

ALL TEXANS BENEFIT FROM DER DEPLOYMENT

TEXAS AS A WHOLE:

DERs expand customer choice, reduce overall system costs, and help Texas meet growing energy demands. There is economic impact as well: The more than 233,400 advanced energy jobs, across all 254 counties, will continue to grow.

DER OWNERS AND CUSTOMERS:

By tapping additional revenue streams in wholesale markets, customers reap cost savings when they invest in DERs. Allowing DERs to provide services in both retail and wholesale markets also defers construction of other infrastructure, lowering costs for all.

UTILITIES AND GRID OPERATORS:

Utilities and grid operators gain new solutions for addressing grid needs. DERs provide local reliability and resilience by reducing system downtimes and providing emergency backup power supply.

About TAEBA

The Texas Advanced Energy Business Alliance (TAEBA) includes local and national advanced energy companies seeking to make Texas' energy system more secure, clean, reliable and affordable. TAEBA's mission is to raise awareness among policymakers and the general public about the opportunity offered by all forms of advanced energy for cost savings, electric system reliability and resiliency, and economic growth in the state of Texas. Learn more at texasadvancedenergy.org and follow our latest news @TXAdvEnergyBiz.