

# DER & DR

All About the Syntax

# A New Lens: Holistic DER Classifications

Customer-sited DER Classifications
<b><i>Producers</i></b>
DGPV, Small wind
<b><i>Producer/Consumer</i></b>
Behind the meter storage, EVs
<b><i>Consumer</i></b>
Smart thermostat, GIWH, Pool Pumps, HVAC, Variable Frequency Drives

# DER vs. DR: Syntax & Context

- Distributed Energy Resources: Customer-sited DER is a pool of demand side assets that can be triggered, controlled or scheduled in order to alter the consumption patterns.
- Demand Response: is the act of manipulating a DER in order to meet the current or anticipated needs of the system – either bulk system or distribution system.

# Challenge: Decoupled DER & DR Initiatives

- Decoupling of DER and DR leads to market confusion
  - Device-specific programs or tariffs can preclude collective participation of multiple devices
- Combinations of DERs are increasingly coordinated behind the meter in order to optimize to an objective function
  - Energy savings
  - Economic value
  - Carbon reduction
- Many DERs are capable of delivering various services either discretely or in tandem with other DERs
  - Assigning specific service capabilities and value to a discrete resource can either restrict or cannibalize the ability of other DERs behind the same meter