# Standard Terms

# Redline changes are from current WEQ-000 version 3.4

**Electric Storage Resource (ESR)** – a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid. *Order 841 – footnote 1*

**Distributed Energy Resource (DER)** – “any resource located on the distribution system, any subsystem thereof or behind a customer meter. *Order 2222 -* ¶114 (Distributed Energy Resources (DER) - DERs are small, modular, energy generation and storage technologies that provide electric capacity or energy where it is needed. DERs may be either connected to the local electric power grid (e.g., for voltage support) or isolated from the grid in stand-alone applications, such as part of a MicroGrid. Definition of DER provided by the Department of Energy.) (Used as standards in WEQ-016 (Specifications for Common Electricity Product and Pricing Definition) and WEQ-018 (Specifications for Wholesale Standard Demand Response Signals))

**Distributed Energy Resource Aggregator** – “the entity that aggregates one or more distributed energy resources for purposes of participation in the capacity, energy and/or ancillary service markets of the regional transmission organizations and/or independent system operators.” *Order 2222 -* ¶118 (Aggregations that look like this definition are already being defined in other standards. Need to look at all standards before making decision. Example: Aggregated Demand Resource, Asset Group, Baseline Type – II (Non-Interval Metered), Demand Resource, Resource, Response Method Aggregation) (Used in standards WEQ-015 (Measurement and Verification of Wholesale Electricity Demand Response), WEQ-016 (Specifications for Common Electricity Product and Pricing Definition), WEQ-017 (Specifications for Common Schedule communication Mechanism for Energy Transaction), WEQ-018 (Specifications for Wholesale Standard Demand Response Signals), WEQ-020 (Smart Grid Standards Data Elements Table))

**Distributed Energy Resource Aggregation** – One or more DER(s) for participation in the ISO/RTO markets (Same as stated above in Distributed Energy Resource Aggregator)

**Transmission System** - “[t]he facilities owned, controlled or operated by the Transmission Provider or the Transmission Owner that are used to provide transmission service under the Tariff.” (When defining this term need to be careful on how the usage is being used in all the standards.)

**Distribution System** - as “[t]he Transmission Provider’s facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges with higher voltage transmission networks which transport bulk power over longer distances. The voltage levels at which Distribution Systems operate differ among areas.” (need to be careful on using this term on how the usage is being used in all the standards. Example: Utility Distribution Operator (UDO), Distribution Company, Participant, P-Node, Premise, Service Location, Service Provider (SP), Transmission/Distribution Service Provider (TDSP), Utility Customer (UC)) (Used in standards WEQ-016 (Specifications for Common Electricity Product and Pricing Definition), WEQ-017 (Specifications for Common Schedule communication Mechanism for Energy Transaction), WEQ-018 (Specifications for Wholesale Standard Demand Response Signals), WEQ-019 (Customer Energy Usage Information Communication), WEQ-020 (Smart Grid Standards Data Elements Table),

**Heterogeneous Aggregation** - An aggregation of more than one DER utilizing differing resources within an aggregation. (Same as stated above in Distributed Energy Resource Aggregator)

**Homogeneous Aggregation** - An aggregation of more than one DER utilizing identical resources within an aggregation. (Same as stated above in Distributed Energy Resource Aggregator)

**Aggregation Metering Types** (I think that these are breaking down the definition of Distributed Energy Resource Aggregator more granular)

Type I – Aggregation at single transmission connection to the grid with revenue quality meter at point of connection.

Type II – Aggregation at single transmission connection to the grid with calculated metering based upon individual resources.

Type III – Aggregation across multiple transmission connections to the grid with revenue quality metering at each connection location.

Type IV- Aggregation across multiple transmission connections with calculated performance based upon calculated meter data.

**Heterogeneous Aggregation Classes** (I think that these are breaking down the definition of Distributed Energy Resource Aggregator more granular)

Class 1 – ESR (stationary and mobile) with Demand Response

Class 2 – ESR with Generator (aka hybrid resource)

Class 3 – Demand Response with Generator

Class 4 – Demand Response, distributed generator, ESR (stationary and mobile)

Class X – Any other combination of resource types

Grid Services (definition only) (I think that these services are already defined in WEQ-016 (Specifications for Common Electricity Product and Pricing Definition), WEQ-018 (Specifications for Wholesale Standard Demand Response Signals), WEQ-020 (Smart Grid Standards Data Elements Table). If not might could expand these standards to include.)

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| Service Name | Usage |
| Supply reactive power | Voltage control |
| Up ramping | Frequency control |
| Down ramping | Frequency control |
| Regulation service | Area control error (ACE) management (frequency response) |
| Capacity service |  |
| Energy service | Providing active power |
| Reserve service | Demand response |
| Blackstart service | System restoration |
| Synthetic inertia  | Stability/ride through |
| Fast frequency response | Frequency control |
| Primary frequency response | Frequency control |
| Operating reserves | Contingency |
| Voltage ride through |  |
| Frequency ride through |  |
| Load consumption | Capacity that can be provided to increase load consumption |