Definitions Relevant Chapter 045

RTO means regional transmission operator.

Smart grid means an intelligent, autobalancing, self-monitoring power transmission and distribution grid that accepts any source of fuel and transforms it into a consumer's end use with minimal human intervention. It is a grid that has the ability to sense when a part of its system is overloaded and reroute power to reduce that overload and prevent a potential outage situation; a grid that enables real time communication between the consumer and utility to allow the customer's energy usage to be optimized based on environmental and/or price preferences. A smart grid is characterized by:

(A) Increased use of digital information and controls technology to improve reliability, security, and efficiency of the electric grid.

(B) Dynamic optimization of grid operations and resources, with full cyber-security.

(C) Deployment and integration of distributed resources and generation, including renewable resources.

(D) Development and incorporation of demand response, demand-side resources, and energy-efficiency resources.

(E) Deployment of `smart' technologies (real-time, automated, interactive technologies that optimize the physical operation of appliances and consumer devices) for metering, communications concerning grid operations and status, and distribution automation.

(F) Integration of `smart' appliances and consumer devices.

(G) Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.

(H) Provision to consumers of timely information and control options.

(I) Development of standards for communication and interoperability of appliances and equipment connected to the electric grid, including the infrastructure serving the grid.

(J) Identification and lowering of unreasonable or unnecessary barriers to adoption of smart grid technologies, practices, and services.

[KCPL: have alternate definition of Smart Grid.
The term Smart Grid refers to a modernization of the electricity delivery system so it monitors, protects and automatically optimizes the operation of its interconnected elements based on grid, consumer, market and environmental conditions – from central and distributed generator through the high-voltage network and distribution system, to industrial users and building automation systems, to energy storage installations and to end-use consumers and their thermostats, electric vehicles, appliances and other household devices.

The Smart Grid will be characterized by two-way flow of electricity and information to create an automated, widely distributed energy delivery network. It incorporates into the grid the benefits of distributed computing and communications to deliver real-time information and enable the near-instantaneous balance of supply and demand at the device level. A Smart Grid is characterized by:
- (characterization as above)

DNR: tie of definition to stimulus funds