

**Action Item #4&5 – Metering/Smart Meter Penetration.** Narrative on Smart Meter penetration data for utilities.

**Smart Meter Narrative-**

Electric providers are building a smarter and more resilient energy infrastructure that allows for better energy delivery by utilities and enabling greater flexibility of energy use by customers. The building of this infrastructure spans all aspects of the power grid, from advanced customer meters and upgraded substation equipment to improved operational control through automated distribution and transmission system devices. An energy infrastructure that can communicate with advanced “smart meters” allows for better outage tracking and restoration and can improve the reliability of the power grid. Communication with smart meters allows for the collection of hourly energy use data, enabling electric providers to more effectively study and design services that give customers better control over their energy costs.

South Carolina electric providers are well on their way in the development of a smarter energy infrastructure. The 2016 Smart Meter survey captures an important aspect of energy infrastructure development by reporting on the level of smart meter penetration in the power grid. Higher penetration levels of smart meters can allow utilities to run equipment more efficiently and more optimally plan their generation, transmission and distribution systems for the benefit of South Carolina’s electric consumers.

**Total Number of Meters:** Total number of customer meters that a utility serves.

**Manually Read Meters:** Customer meters that require personnel to be physically present in order to extract energy use data.

**AMR Meters:** Automatic Meter Reading meters are customer meters that communicate data about a customer’s energy use and/or outage status to electric providers by sharing information over power lines or to collection equipment nearby through radio frequencies. Typically these meters only communicate data one way: from the customer’s meter to the utility’s collection equipment.

**AMI Meters:** Advanced Metering Infrastructure meters are more advanced than AMR meters and enable two-way data communication. This system allows for better outage reporting, remote disconnection of service, the installation of load management devices, and a finer resolution of energy use. This finer resolution of energy use allows utilities to provide information and services that give customers better control over their energy costs by capturing hourly energy use and demand data.

**Number of Meters Time of Use Ready:** This metric shows how many meters are ready to be used for time-variant rates. Not all AMI metering systems are TOU ready since time variant rates require energy use data down to an hour interval or less. Some AMI systems do not allow that level of resolution and some utility data collection systems do not yet perform VEE - validating, editing, estimating – down to the hour or less.

**Number of Meters Implementing Time of Use Rates:** This metric is a subset of the previous and captures the number of metering accounts that are currently on time-of-use or time-variant rates.