

DOCKET U-090222
DISCUSSION DRAFT
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WAC 480-100-XXX – Smart Grid Technology Report

(1) Purpose. The purpose of this section is to establish requirements for each electric utility to submit periodic reports to the commission of the utility's evaluation of smart grid technologies and any plans for implementing smart grid technologies.

(2) Definitions.

(a) "Smart grid technology report" or "report" means a report describing the utility's evaluation of, and any implementation plans for, smart grid technologies.

(b) "Smart grid technologies" means any technology intended to improve the reliability or efficiency, or to reduce the operating costs, of electrical transmission and distribution systems by enabling one or more smart grid functions. Smart grid technologies include, without limitation, measurement devices, communication equipment, information processing equipment and software, and control devices.

(c) "Smart grid function" means one or more of the following:

- i. The ability to develop, store, send and receive digital information concerning electricity use, costs, prices, time of use, nature of use, storage, or other information relevant to management of the electricity grid, utility operations, or customer energy use.
- ii. The ability to sense local disruptions or changes in power flows on the electricity grid and to communicate such information instantaneously and automatically for purposes of enabling automatic protective responses or to inform the utility to make manual changes to sustain reliability and security or improve efficiency of grid operations.
- iii. The ability of the utility to deliver signals, measurements or communications to allow an end-use load device to respond automatically or in a manner programmed by its owner or operator without human action.
- iv. The ability to use digital information to operate functions on the electricity grid that were previously electro-mechanical or manual.
- v. The ability to use digital controls to manage and modify electricity demand, enable congestion management, assist in voltage control, provide operating reserves, or provide frequency regulation.
- vi. The ability to enable customer demand response programs.
- vii. The enabling of service to new end-uses, such as charging electric vehicles.
- viii. The ability to interconnect and integrate power generated from customer-owned power facilities.

(3) Reporting Requirement

(a) Each electric utility must file with the commission a smart grid technology report no later than September 1, 2010, and a subsequent report no later than September 1 of each even numbered year thereafter through September 2016.

(b) Unless otherwise ordered by the Commission, this reporting requirement shall expire after the filing of the report due September 1, 2016.

(4) Content. At a minimum, the smart grid technology report must include:

(a) A description of the smart grid technologies the utility has considered for integration into its system, and the utility's evaluation of such technologies, which shall contain details as to the:

- i. Goal or purpose of the smart grid technologies described in the report.
- ii. Total costs of the deployment and use of smart grid technologies including meter or other equipment costs, installation costs, and any incremental administration costs including data storage, processing and billing systems;
- iii. Operational savings associated with meter reading or other utility functions;
- iv. Effects on system capability to meet or modify energy or peak loads;
- v. Effects on service reliability including storm damage response and recovery, outage frequency and duration and voltage quality;
- vi. Effects on integration of new utility loads, such as recharging batteries in electrically powered vehicles;
- vii. Cyber and physical security of utility operational information;
- viii. Cyber and physical security of customer information and effects, if any, on existing consumer protection policies.
- ix. Interoperability and upgradability of technology and compliance with applicable national standards;
- x. Customer acceptance and behavioral response;
- xi. Tariff and rate design changes necessary to implement the technology;
- xii. Non-quantifiable societal benefits, if any;
- xiii. Economic considerations recognizing the above-listed factors; and
- xiv. Any other factors considered by the utility.

(b) Identification of any smart grid technologies that may be cost-effective and available for the utility and its customers during the subsequent 10-year period.

(c) A description of the utility's plans and timeline for implementing any smart grid technologies during the two years following submission of the report.

(d) After the first report, all subsequent reports should include information on the utility's progress on any smart grid technologies scheduled for implementation as stated in its previously filed reports and any smart grid pilot the utility has undertaken.

(5) The report may also include the utility's assessment of the risk of investment in smart grid technologies and any recommendations for regulatory treatment, supported by the utility's rationale for such treatment.

- (6) Utilities required to file reports under this section should consult with commission staff, who will assist utilities in producing clear and comprehensive reports.
- (7) The commission may consider the information reported in the smart grid technology report when it evaluates, in rate and other appropriate proceedings, the performance of the utility and its investments in transmission, distribution and metering infrastructure.