

STEP Technical Conference

Substation Metering & Commercial Line Extension

December 06, 2016



Substation Metering



Program Overview

- Traditional substation metering does not meet the needs of the future grid
- This program provides enhanced monitoring of power flow, loading levels and load profiles to support interconnection studies and research related to distributed energy resources (DER)

Year	Number of Meters	Estimated Spend
2017	20	\$500,000
2018	18	\$350,000
2019	12	\$250,000
Total	50	\$1.1 million



Potential Benefits for DER

- Enhance the evolution of making the grid smarter
- Create greater visibility of the impacts of DER on system
- Lower delays in servicing interconnection requests on circuits with large numbers of DER units installed
- Identify power quality and load imbalance issues
- Reduce the cost burden on interconnection customers





Project Scope and Plan

- Develop a process to utilize data to improve interconnection processes and system planning
- Identify distribution circuits throughout Utah with limited communications
- Install meters with remote communications capabilities
- Install a data management system for data collection and interpretation





Metered Data Requirements







Customer Impact



The DER installation that causes the total connected DER to exceed the calculated minimum daylight loading may be required to pay the cost to install or upgrade the substation metering.



Submitted Questions

- Please explain in more detail what advanced metering is, what information it provides, and what the equipment entails?
- Please explain in more detail where in the system the advanced metering is likely to be installed?



Commercial Line Extension Pilot Program



for non-residential developments



Program Overview

- Fund a portion of primary backbone costs inside commercial developments
 - STEP funds 20%
 - Developer funds 80%
- Promote Electrical Vehicle (EV) use
 - Require developer to install conduit from sources of power to potential charging locations
 - 2% of parking spaces accessible to EV chargers



Primary Backbone for Commercial



Program Funding

- Requesting \$2.5 million funding for program
 - Estimated annual expenditure varies from \$300k/year to \$1M/year
- 20% funding applied until fully used or five years
- Application addressed in new Regulation 13





Implementation

- Unique liability account established auditing and reporting.
- The credit will be applied to each commercial development request.
- Will use commercial development contracts that have been modified to address 20% cost share & EV charging accommodation.
- Uses standard estimating system for design.



Submitted Questions Utah Division of Public Utilities

- 1. Do Regulation 12, Section 3 and the new Regulation 13 overlap in providing allowance to non-residential developments? Please explain in detail how the incentives provided to non-residential developments from Regulation 12, Section 3 and Regulation 13 are different.
- 2. Is there any overlap or relation to the EV charging infrastructure STEP initiative?
- 3. How did the Company determine the allocation of the \$2.5 million over the five year period to be as follows: \$1 million in 2017, \$1 million in 2018, and \$500,000 in 2019? Why not distribute the funds evenly, i.e., \$500,000 over five years?
- 4. What happens if there are not enough developers that subscribe to Schedule 13 and the \$2.5 million is not used? Will it go into the Innovative Utility Program buckets for other programs?
- 5. Will there be a limit to how much a developer is allocated? How will you prevent developers from gaming the program, i.e., taking one project and breaking it up into five phases in order to get \$50,000 for each phase of her development?
- 6. Would the proposed Schedule 13 tariff also apply to a redevelopment, as well as a new development?



Submitted Questions Utah Public Service Commission

1. The testimony of F. Robert Stewart, page 6, lines 134-137, states: "For those developers that also request service to a commercial building, there is a provision in the Line Extension Pilot, Regulation 13, for those developers to provide conduit to parking areas for EV charging, in order to be eligible for the 20 percent backbone allowance."

Proposed Electric Service Regulation No. 13, STEP, Provisions of Service states: "Developers that are building on lots *may* be required to install conduit from either Company or Developer primary voltage power source(s) to future electrical vehicle charge locations on their property."

Robert Stewart's testimony appears to infer that service to commercial buildings **must** include EV charging ports to qualify for the allowance, however, Regulation No. 13 states that a developer **may** be required to install conduit to future electrical vehicle charge locations on their property. Please clarify the conditions under which a developer would need to provide conduit to parking areas for EV charging, in order to be eligible for the 20 percent backbone allowance.









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