

## OFFICE OF CONSUMER SERVICES QUESTION FOR STEP TECHNICAL CONFERENCE

### DOCKET NO. 16-035-36

#### Advanced Resiliency Management System (ARMS)

1. What is the Company's contingency plan if the meter manufacturer (Itron) is unable to successfully create an ERT Gateway system (fixed network) that can communicate with both newer RIVA meters and older C1SR meters?
2. As the Company works to determine the optimal locations for the ERT Gateway system, what size service territory and number of customers served does the Company anticipate during this initial trial?
3. Is this system only for what the Company refers to as critical customers, or will other types of customers be impacted?
4. Is the Company aware of any risks to this plan that will require the existing 764,000 C1SR meters to also be replaced in near future? What would full replacement of these meters with RIVA meters cost?
5. Beyond what the Company calls critical facilities, are there any other customers on the distribution system that will receive CFCl upgrades?
6. While the costs of the ARMS project are calculated over the 3 years of the project, the projected benefits are estimated over a 25-year period. This seems to be comparing apples and oranges. Please provide a cost benefit analysis matching the years of benefits with the years of costs e.g. 3 years of costs and 3 years of benefits or 25 years of costs and 25 years of benefits.
7. The Company states that the advanced outage management project will provide an estimated \$930,000 in annual O&M reductions following the first full year of implementation. Please itemize the O&M reductions that result in these annual savings.
8. Is the Company aware of any other utility across the country that has developed and deployed such a system whether it is with Itron or another manufacturer? If so, what are the outcomes from such relevant projects?

#### Intermodal Hub Project

1. The Primary Objective of the Project is to develop tools that can avoid oversizing infrastructure equipment by optimizing system design. Please explain how the Project meets the objective.
2. Please explain how the Project addresses the challenge of the high cost of grid infrastructure and operation and the associated need for high levels of utilization.
3. Please explain how the demand response software and hardware will operate.
  - a. Please explain what the Company means by "demand response" in regard to the Intermodal Hub
  - b. Please explain how and when demand response will be utilized.
4. Please clarify the following: UTA will have **three e-buses** in service by April 2019, with 3 e-bus routes: (1) Intermodal Hub to U of U with **five e-buses**, (2) rotator through downtown with **five e-buses**, and (3) a connector to Park City with **10 e-buses**. (3 e-buses UTA will have and the 20 buses identified).
  - a. Are the 3 e-buses to be in service by April 2019 actually in service now?
5. The Company states that future funding for expanded deployment could include installations at the airport, Park City, and the UTA Ogden and Orem Depots. Does the

Company envision “future funding” coming from STEP funds, other ratepayer funds or other sources?

6. “The project leverages expected UTA deployment of six 450+ kW chargers for electric buses; multiple 50-150 kW DC fast chargers, primarily targeting short-stop passenger vehicles, fleet vehicles, and ride hailing providers; Level 2 AC chargers for park –and-ride customers leaving SLC and interstate traffic visting SLC; and site planning and simulation for future expansion of megawatt electric truck charging.”
  - a. Is UTA paying for the chargers described above?
  - b. If the expected UTA deployment does not occur what effect will that have on the Intermodal HUB project?
7. What is the current situation at the Intermodal Hub in Salt Lake City, e.g. what chargers are available, who can use them, who pays, etc? Is the Intermodal Hub currently “state of the art” as the term is used by the Company in the filing?
8. UTA has **requested** an additional 27 electric buses... including Xcelsior Charge New Flyer electric buses with 454 kWh battery that will be the initial high power load at the site and 600 kWh buses all to be added during the project’s performance period.
  - a. In this context what does “requested” mean?
  - b. If Xcelsior is the initial high power load when will it be available for project testing?
9. At the conclusion of the project, who will own the software that is developed? Is there an annual fee associated with the use of the software?
10. The Company states that “the proposed approach uses controls, demand management, and intelligent scheduling to limit peak demand while maintaining high quality of service. Please explain this concept more fully. Please provide examples of how this will work.
11. Regarding the alternatives considered, has the Company performed a cost analysis of those alternatives?

### **Battery Demand Response Project**

1. Please provide additional background regarding the Soleil Lofts community:
  - a. When did/will construction begin? When will it be completed?
  - b. Where is it located?
  - c. What is the configuration of the community – apartment buildings, lofts, homes?
  - d. Will residents own their units or rent them?
  - e. Where will the solar panels be located (on roof or where)? How many kW of solar panels will be installed?
  - f. What is the probability that the Soleil Lofts will be constructed/completed? Are there any barriers to completing construction?
2. Who owns the batteries and solar panels? Are panels and batteries specifically assigned to each unit? Is electricity consumption metered for each unit? Is solar panel/battery usage metered for each unit?
3. Page 3 of Comeau testimony states that this project will create an opportunity for “behind-the-meter grid-optimized solar and battery storage”. Please explain how the project can be behind-the-meter and grid-optimized.
4. Page 3 of Comeau testimony states “current rates are not optimized for battery storage applications”. Please explain. What type of new rate structure would need to be developed?

5. Page 3 of Comeau testimony states that STEP funding is needed to make the batteries financially viable. Please explain how the STEP funding allows for financial viability.
6. Page 4 of Comeau testimony states that this project will reduce transmission congestion. Please explain what lines and where this transmission congestion would be reduced. Will approximately 5 MW of batteries provide a detectable and meaningful reduction in transmission congestion?
7. During sunny, low load days (Spring and Fall), will the output of the solar panels exceed the load of the Soleil community (including charging the batteries)? Will excess energy from the solar panels be exported to the grid? If so, under what rate schedule/compensation arrangements?
8. Who pays for the battery maintenance/replacements over their 20-year life? Are residents responsible for battery maintenance?
9. Why are there 621 individual small capacity batteries? Would one or more larger capacity batteries be a more effective solution?
10. Page 4 of Comeau testimony states “batteries will provide back-up power during grid power outages for each individual apartment”. Will the Soleil community have its own micro grid that can be disconnected from the grid? If so, how will this micro grid balance load and generation and will the output of the batteries be shared by all residents?
11. Page 3 of Exhibit WJC-1 states: “determine financial benefits and feasibility of battery demand response technology, including frequency response”. Please explain if this project will provide frequency response benefits. If so, on what level – local distribution system, transmission system or where? How important is the benefit of providing frequency response? Is this a common issue on the distribution system?