

## **OCS Data Request 7.2**

At line 103, Mr. Meredith states, “These energy measurements would be computed in real time and would not rely upon a specific interval period such as a 15 minute or hourly interval.”

- (a) Given this, why did the Company’s spreadsheet response to OCS 4.1 provide an example that is explained in terms of 15 minute intervals? In other words, the Company explained its Proposed Schedule 137 (See columns B and C) using an analysis based on 15 minute intervals.
- (b) Provide a technical explanation of how the meters that the Company will use work such that energy measurements will be computed in “real time”.
- (c) Isn’t it true that typical residential meters that have been in use by electric utilities for many years, have measured energy using an induction motor that effectively utilizes voltage and current in an electromechanical process that causes a wheel to turn in an amount that is proportional to the power (current times voltage) drawn by the customer? Then, isn’t it true that power is converted to energy (power use over time) by integrating the power over some interval period?
- (d) Please correct any misunderstandings and explain what interval period the older meters integrated over to derive the energy measurement that the meter recorded on the dials that meter readers would read.
- (e) Please explain how the electronic meters operate, how power is derived in the meter, how the power measurement is converted to the energy measurement, what time interval the energy is integrated over, and finally explain what the Company means by in “real time”, which “would not rely upon a specific interval period”.

## **Response to OCS Data Request 7.2**

- (a) The Company used an example which showed each 15-minute period for illustrative purposes and to be responsive to the request so that the way the Company proposes using total values for delivered and exported energy for Schedule 137 could be compared to a 15-minute interval netting as is done for Schedule 136 billing. Billing Schedule 137 would not rely upon this granularity, but would simply require total quantities for the two different time of use periods (on-peak and off-peak) for delivered and received energy during the monthly billing cycle.
- (b) The meter continuously samples the current and voltage signals and updates to the delivered and export registers every second. While not instantaneous, this is as close to real time as possible with the current meter technology.

17-035-61 / Rocky Mountain Power

April 20, 2020

OCS Data Request 7.2

- (c) Rocky Mountain Power does not install electro-mechanical meters with an induction motor or meter dials. The digital meters operate as explained in 7.2.b above.
- (d) See response to 7.2.b and 7.2.c above.
- (e) See response to 7.2.b above.