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DEPARTMENT OF COMMERCE
Office of Consumer Services

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Director

To: Public Service Commission

From: Office of Consumer Services
Michele Beck, Director
Gavin Mangelson, Utility Analyst

Date: June 1, 2015

Subject: Docket 15-035-T07

In the Matter of: Rocky Mountain Power's Proposed Revisions to Electric Service Schedule 110, New Homes Program

Background

On May 15, 2015 Rocky Mountain Power Company (Company) filed with the Public Service Commission (Commission) a proposal to make revisions to Schedule 110, New Homes Program; the Company filed this request with supporting exhibits and proposed tariff sheets. The Commission posted a Notice of Filing and Comment Period the same day.

Preliminary drafts of the filing were circulated to the Demand-Side Management (DSM) Steering Committee prior to the filing. Several lengthy discussions were held regarding the proposed changes.

Electric Service Schedule 110 provides incentives to developers to equip new homes with energy saving technologies. The proposed revisions to Schedule 110 include new measures for high efficiency furnaces equipped with electronically commutated motors, and air source heat pumps capable of providing homes with both heating and cooling. The proposal introduces an alternative efficient lighting requirement of 60% Energy Star lighting in a new home. The Company also seeks to align the application deadline with other programs by extending the time limit from 120 to 180 days.

Discussion

The Office of Consumer Services (Office) has been working closely with the Company and members of the Steering Committee in advance of this filing. The Office has reviewed the materials filed with the Commission, and has analyzed the proposed changes.

During Steering Committee discussions the Office requested supplemental information regarding the alternative threshold for efficient lighting in new homes and regarding the proposed measures for air source heat pumps.

Efficient Lighting Threshold

Trends in the new homes market have resulted in the continued and increased use of canned lighting fixtures; which are fixtures that are recessed into the ceiling and require a flood lamp style bulb. Unlike some of the standard lighting fixtures and bulbs, LED technology for these recessed fixtures has remained especially expensive; and in many cases prohibitively expensive. Typical compact fluorescent alternatives for recessed lighting continue to exhibit many of the historical weaknesses of CFL bulbs, such as the need to warm up in order to provide sufficient light. These flood style CFL bulbs have also been reported to have shorter functioning lives than expected. These drawbacks have led most developers to continue installing incandescent flood lamps in recessed lighting fixtures. The continued use of incandescent lamps in that manner makes many homes ineligible for the efficient lighting incentives.

The Office is familiar with the limitations of current CFL flood lamps and the high market prices of LED flood lamps and fixtures. The Office further understands that developers unable to qualify for a higher lighting percentage due to incandescent canned lighting may rely on available inexpensive incandescent bulbs for the remaining standard fixtures as well. Shock resistant incandescent bulbs are still manufactured for purposes requiring a more robust lamp, however, despite their intended application these bulbs may still be installed in common household lighting fixtures. The Office therefore supports the addition of the 60% lighting threshold in order to continue incentivizing developers to install Energy Star lamps in the remaining standard fixtures of new homes.

Air Source Heat Pumps

The Office does not support the proposed measures for air source heat pumps in new homes with a natural gas service line. The Office does not question the assertion that an air source pump may provide an efficient source of climate control. However, when analyzing any candidate measure for the DSM portfolio the Office considers the effect of said measure on system load and peak.

Air source heat pumps function by drawing available warmth from outside air and condensing it, then circulating it in order to warm a space. The same concept can be used on a cooling cycle in order to cool the same space. In the case of the proposed heat pumps in a home with natural gas, the pumps will function as the primary heating source as long as the outside temperature remains above approximately 40 degrees Fahrenheit; thereby displacing gas heat with electric heat. This heating cycle requires additional electricity during instances that would otherwise have been unnecessary through the use of natural gas. Despite the estimated advantages of this technology it must be acknowledged that the result of such a measure would be load building, or the use of levels of electricity that otherwise would not have been required.

Typically, DSM programs have been designed to save energy or shave the peak. The heating cycle on an air source pump would result in negative energy savings, in other words increased rather than reduced load. Page four of the tariff cover letter states that *“where natural gas is available at the property line, only savings for cooling will be claimed.”* This is an inappropriate methodology because the heating savings being discounted are in fact the aforementioned negative energy savings. Thus, the Company is proposing to ignore the increases in energy consumption caused by this program by offering to only claim the savings associated with cooling. Existing measures available in the New Homes program offer efficient air conditioning and related energy savings without these potential negative energy savings, and may even provide a better value.

The Office further rejects the Company's claim on the bottom of page four of the tariff cover letter where it states that *“adding incentives for air source heat pumps... complements the incentives for heat pumps... that were added to the HES Program in 2014.”* The heat pump measures for the Home Energy Savings program are available only as upgrades to homes with existing electric heat; these measure incentives are not available for home owners wishing to switch from natural gas to electric heat and

are therefore not complements to the current proposal. As the Office stated in Comments for docket 15-035-T04¹ funds collected through the DSM surcharge should not be used to facilitate fuel switching. Though the proposed measure applies to new construction, it is still easily associated with the principle of fuel switching.

The Office asserts that air source heat pumps installed in homes with a natural gas line should not be eligible for a DSM incentive. Such a measure could potentially compromise the integrity of the DSM portfolio and the perception of rate payers by allowing a load building measure to be funded by money collected for the purposes of load reducing and peak shaving. Further, this Commission should not approve any DSM programs that result in load building² or fuel switching, without at least first conducting a robust analysis of the appropriate analytical basis for evaluating whether the program's benefits are significant enough to justify the load building and/or fuel switching aspects of the program.

The Office recommends that the Commission reject the measures for air source heat pumps where natural gas is available as they result in negative energy savings, relate to issues of fuel switching, and energy efficient cooling measures are already available. The Office supports the heat pump measures for homes in locations that do not have available natural gas.

Application Deadlines

The Office also supports the amended incentive application deadline of 180 days; this time period is currently being employed for several other DSM programs including those offered by Questar Gas Company. Utilizing the same timeline as other programs is an effective way to integrate clarity and consistency to the benefit of participants.

¹ Filed with the Commission April 14, 2015.

² The Office notes that some Class 1 DSM (i.e. peak shaving programs such as Cool Keeper and the Irrigation Load Control Program) may result in some increased energy usage as they are designed to specifically manage peak demand rather than to decrease overall energy usage. This is a different issue than having an energy efficiency program result in increased energy usage.

Recommendation

The Office recommends that the Commission take the following action:

- Reject the measures involving air source heat pumps where natural gas is available.
- Approve the remaining revisions to Schedule 110.

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