
STAFF MEMORANDUM

TO: COMMISSIONERS AND ADVISORS

FROM: JOSEPH REZAC & AMANDA REISS

RE: NG17-016 - In the Matter of the Filing by Montana-Dakota Utilities Co. for Approval of Its South Dakota Natural Gas Conservation Portfolio Plan for 2018-2020

DATE: December 15, 2017

OVERVIEW

On November 9, 2017, Montana-Dakota Utilities (MDU or company) filed its proposed Natural Gas Conservation Portfolio (Portfolio) for years 2018 through 2020. The company plans to start the new Portfolio of energy efficiency measures on January 1, 2018. The Portfolio contains programs and rebate incentives similar to those in the currently approved Portfolio for 2015-2017, with a few minor changes. Discussed within this memo are MDU's proposed changes to the Portfolio, the proposed budgets for the Portfolio, and the cost-effectiveness of the proposed Portfolio. Also included in this memo is Staff's recommendation.

PROGRAM CHANGES TO THE 2015-2017 PORTFOLIO

MDU proposes one change to its Portfolio of programs to be offered in 2018-20. This change involves revising its programmable thermostat program to offer two tiers including a new Wi-Fi connected offering. With the newly proposed \$60 rebate for Wi-Fi connected thermostats (Tier 2), MDU is proposing to lower the incentive for Energy Star programmable thermostats (Tier 1) from \$20 down to \$15. The higher rebate for a Wi-Fi thermostat is due in part to the increase in expected energy savings associated with it. Staff would agree that these units would likely result in higher energy savings for customers when compared to a more basic programmable thermostat offering that is offered as in Tier 1 of this program. Wi-Fi connected thermostats often have geofencing abilities that sense when someone is home by using an individual's cell phone location. When no one is

home, these thermostats can be programmed to prevent the furnace from heating the home when no one is around. The new tier will better incentivize residents to move up to a higher price tiered thermostat which can often retail for around \$170-\$250 for the likes of a Nest or ecobee thermostat, depending upon on model.

PROPOSED BUDGETS FOR THE 2018-20 PORTFOLIO

For its 2018-20 Portfolio, MDU proposes a slight increase in the Portfolio’s budget based on the budgets originally approved by the commission in docket NG14-007. Table 1 provides the proposed budgets for 2018 through 2020. The approved budget for MDU in the current 2017 Portfolio is \$198,300 which illustrates that the proposed portfolio is not a major shift. Staff believes the budgets proposed for the 2018-20 Portfolio are reasonable based on the demand for programs MDU experienced in prior years. As such, Staff recommends the commission approve the proposed budgets for the 2018-2020 Portfolio.

Table 1

Programs	2018 Cost	2019 Cost	2020 Cost
Residential Program			
Furnaces - 95+% AFUE - New	64,498	67,706	70,914
Furnaces - 95+% AFUE - Repl.	93,522	96,723	99,925
Programmable Thermostats - Tier 1	1,774	1,612	1,451
Programmable Thermostats - Tier 2	7,095	8,383	9,670
Residential Energy Assessments	24,187	24,181	24,175
Total Residential	191,076	198,605	206,135
Commercial Program			
Furnaces - 95+% AFUE - New	1,612	1,612	1,612
Furnaces - 95+% AFUE - Repl.	4,837	5,159	5,480
Custom Efficiency	3,225	3,224	3,223
Total Commercial	\$9,674	\$9,995	\$10,315
Total Programs	\$200,750	\$208,600	\$216,450

TOTAL RESOURCE COST TESTS FOR THE 2018-20 PORTFOLIO

Within docket NG17-016, MDU provided cost-benefit analysis of its 2018-20 Portfolio. Cost-benefit analysis of the program included the Total Resource Cost (TRC) test, Ratepayer Impact test, Participant test, Utility test, and Societal test. Table 2 provides MDU’s forecasted TRC test results

for each program. Historically, Staff has used the TRC test to determine if energy efficiency programs are cost-effective and continues to do so with MDU's proposed portfolio. Staff recommends that the commission approve MDU's proposed portfolio given that all programs are forecasted to have a TRC greater than 1.0. That is, the Portfolio's forecasted benefits are expected to outweigh the Portfolio's forecasted costs. Notice that the Residential Energy Assessments do not report an individual TRC associated with it, instead these costs are added into the TRC calculation at the total portfolio level.

Table 2

Program	RIM	Utility	Societal	Participant	Total Resource Cost
Total Portfolio	1.36	2.22	1.81	3.01	1.17
<u>Residential</u>					
Furnace (95+%) - New	0.68	0.85	2.29	5.83	1.49
Furnace (95+%) - Replacement	1.72	3.47	1.81	2.65	1.16
Programmable Thermostats - Tier 1	2.18	5.70	3.87	4.90	2.95
Programmable Thermostats - Tier 2	1.32	2.11	1.65	2.76	1.27
Residential Energy Assessments	0.00	0.00	0.00	0.90	0.00
<u>Commercial</u>					
Furnace (95+%) - New	0.73	0.86	2.31	5.44	1.51
Furnace (95+%) - Replacement	1.97	3.46	1.81	2.40	1.16
Custom Efficiency	2.91	7.75	2.37	2.19	1.64

OTHER DISCUSSION

As the Commission is aware MDU and Black Hills Energy (BHE) co-sponsor energy assessments in their overlapping service territory's and share the cost of those. In BHE's energy efficiency docket EL17-026, there was some discussion regarding potential elimination of this program but due to the program being shared by utilities there was concerns of adverse effects due to the timing of approval for the two utilities. Although there is still the timing concern still present in this docket, Staff feels as though this docket would be an appropriate time to make changes to the program should the Commission so chose. Although Staff would not recommend making changes to the program at this time.

STAFF RECOMMENDATION

In summary, Staff would recommend the Commission approve MDU's 2018-2020 proposed Portfolio and proposed budgets to be effective January 1, 2018.