

**State of Minnesota
Before the Public Utilities Commission**

Nancy Lange	Chair
Dan Lipschultz	Commissioner
Matt Schuerger	Commissioner
John Tuma	Commissioner
Katie Sieben	Commissioner

In the Matter of Xcel’s Residential Time of
Use Rate Design Pilot

Docket No. E002/M-17-775

Initial Comments of the Citizens Utility Board of Minnesota

The Citizens Utility Board of Minnesota (CUB) respectfully submits these initial comments regarding Xcel Energy’s residential time of use rate design pilot. CUB appreciates Xcel Energy’s leadership on this new rate design and the time and resources Xcel committed to gathering feedback from and sharing information with stakeholders. CUB supports Xcel’s proposed pilot, tariff, and accounting treatment. We recommend that the Commission define clear objectives and reporting requirements for the pilot. We also recommend that privacy-protected data collected through the pilot process be made available so that parties like us may better evaluate the pilot as well as consider alternative rate designs and other options.

I. CUB supports Xcel’s opt-out time of use rate pilot as a step toward implementing a time of use rate for all residential customers.

CUB believes that a time of use (TOU) rate is likely to result in lower system costs, savings for participating and non-participating customers, and lower emissions. We discussed this in detail in our comments in Docket No. E002/M-16-662 (In the Matter of an Alternative Rate Design Stakeholder Process for Xcel Energy). Briefly, we believe a properly designed TOU rate will increase overall system efficiency and reduce costs by encouraging customers to shift usage away from times when energy is expensive to times when energy is inexpensive. This shift is likely to also reduce emissions, as CUB expects a relatively high proportion of the energy supplied during low-price periods to be from renewable sources. Moreover, CUB believes that an opt-out TOU rate will result in greater financial and emissions savings than an opt-in rate, and can be done without putting customers at risk.¹

¹ CUB Initial Comments, 3/31/17, Docket No. 15-662, at 1-5.

As we noted in our previous filing, a TOU pilot may not be necessary. Xcel can learn from the experiences of numerous utilities in other jurisdictions that have implemented TOU rates. Shadow billing can help customers understand the impacts of a shift to a TOU rate far enough in advance of any change to prepare, and modeling at the customer class level can show the anticipated impacts on overall bills and utility revenues.²

However, CUB agrees that there may be benefits to pursuing a pilot. It appears that the implementation of a three-tier TOU rate will require significant new hardware and software, and the utility may benefit by launching those upgrades on a smaller scale before considering system-wide rollout. A pilot can also help Xcel and other stakeholders identify the customers who are most likely to see bill increases from a shift to TOU rates and the kinds of interventions that will be successful in helping those customers bring their bills down.

CUB appreciates the bill protections proposed by Xcel. We believe it is particularly important to identify low-income participants through the pre-survey and grant those low-income customers a higher level of bill protection than what is proposed for participants on the whole.

The five-hour on-peak period proposed by Xcel (3:00 to 8:00 p.m. on weekdays) is longer and later in the evening than is ideal. We believe that customers would be more able to shift their usage away from a peak period that is shorter and earlier in the evening. However, a pilot with bill protections is an appropriate time to test the effect that this will have on customers' usage and bills, and we offer no changes to the proposed rate design at this time.

II. The Commission should define clear objectives and reporting requirements for the pilot.

Xcel Energy stated that its objectives for this pilot are to learn about “the effectiveness of price signals at encouraging customers to shift energy outside of designated periods of peak system demand,” “explore and identify effective customer engagement strategies,” “understand customer impacts by segment,” “support the achievement of the Company’s demand response goals,” and “gain experience executing a new TOU rate pilot and providing a significant increase in customer usage information.”³

CUB largely agrees with these objectives. In particular, we believe that it will be important to understand the effects of the TOU rate on different types of residential customers, to quantify the costs

² CUB Initial Comments, 3/31/17, Docket 15-662, at 7.

³ Xcel Initial Filing, 11/1/17, Docket No. 17-775, at 14-15.

and benefits of the TOU rate, and to measure the impact of specific interventions in helping customers shift their load and reduce their bills.

Retaining participants on the TOU rate will be especially important to the success of this pilot. The TOU rate will give customers greater ability to control their bills, and to reduce bills below what they would be on a flat rate. However, some customers will see bill increases under the TOU rate if they do not change their usage, and customers who do not understand the opportunities to save money under the new rate may be motivated to opt out. Customers will be more likely to remain on the TOU rate if they understand the rate and their options to shift energy use.

Xcel's filing has few details about the customer engagement strategies it will employ, though determining effective strategies is one of the pilot objectives. It would be unnecessary and probably counter-productive for the Commission to specify engagement strategies that Xcel may pursue. However, for the reason outlined above and because a TOU rate that reduces peak demand works against the utility's business interest in capital investment, the Commission may wish to consider setting targets around the retention of customers on the TOU rate.

While CUB applauds Xcel's efforts to increase demand response, it is not clear from the Company's filing that the time of use rate itself will "enable demand response activities." Time of use rates and demand response are complementary in that both are intended to shift customer demand and that both can be enabled by some of the same technologies. However, a TOU rate is distinct from and can operate independently of demand response programs.

At a minimum, CUB recommends that the Commission direct Xcel to report on the following indicators in mid-point and final reports:

- Participation metrics, including the number of customers who have opted out of the TOU rate.
- Customer bill impacts.
- Customer satisfaction indicators.
- Total peak demand savings achieved by participating customers, and incremental load curve data at an hourly or sub-hourly level.
- Greenhouse gas emission intensity of the energy supplying power to TOU customers versus customers in the control group.
- Measurements of the effectiveness of the customer engagement strategies that Xcel has employed.

- Indicators of the impact of specific interventions in helping customers shift their load and reduce their bills.
- The above indicators should be reported in correlation with customers' ZIP+4 and the household characteristics identified through participant surveys, including income level and household size.

III. Privacy-protected customer usage and associated data should be made available.

A large amount of new data will be generated through this pilot. This data will be valuable not only to Xcel and to the individual customers seeking to control their own bills but also to parties like CUB as we seek to identify the best rates, programs, and policies to serve the public interest. The data generated through Xcel's metering and software improvements as well as the customer surveys that will be conducted would enable parties to better understand the impacts of rate and program options on various customer segments, to and explore additional opportunities to reduce costs and emissions.

Third parties may be able to identify rate designs that would result in reduced capital investment needs – and therefore greater savings to ratepayers – that the utility does not itself propose. As noted above, the utility's incentive is not always in alignment with the public interest, so it is reasonable to believe that third parties may identify more effective options to reduce peak demand.⁴ Alternatively, advocates sometimes assume that utilities' proposed rate changes would be harmful to customers, and detailed analysis may show the opposite. Finally, this increased data will be generated because of ratepayer investments, so it should be made available to the public and parties to utility proceedings.

CUB recommends that anonymized, individual customer usage data from pilot participants be made available in increments of one hour or smaller and associated with each customer's ZIP+4 as well as income, household size, and any additional characteristics that will be learned through pilot surveys.

IV. Xcel should plan to transition from pilot to full implementation of a TOU rate.

CUB agrees that this pilot should be undertaken with the assumption that, if it is successful, a TOU rate would be rolled out to all residential customers. We believe that Xcel's mid-point pilot report will be an important opportunity to evaluate the rate and consider whether adjustments will be

⁴ See also CUB Initial Comments, 8/21/17, Docket 15-556, at 9.

necessary for a smooth and speedy rollout. The pilot will also help to identify which customers are likely to see bill increases from a switch to a TOU rate, so that they may be targeted with outreach regarding energy efficiency and demand response options. Additionally, the pilot may show that a TOU rate is not appropriate for certain types of customers, and Xcel could help those customers opt out of a future TOU rate. This does not presuppose decisions on metering, software, and other investments that will be necessary to enable full implementation of a TOU rate. Rather, the pilot should provide useful data on the expected costs and benefits of a TOU rate at full scale, which the PUC should take into consideration alongside other factors regarding infrastructure and investments.

V. Conclusion

TOU rates hold great potential to save customers money and reduce greenhouse gas emissions, and CUB supports the pilot proposed by Xcel. We recommend that the Commission:

- Approve Xcel's proposed pilot, tariff, and accounting treatment.
- Define clear objectives for the pilot and adopt CUB's recommended reporting requirements.
- Order that privacy-protected customer data collected through the pilot be made available to the public.

Thank you for the opportunity to comment on this matter.

Respectfully submitted,

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