MIDWEST CHP Technical Assistance Partnerships

POLICY PROFILE

Addressing Barriers in DTE Energy's Standby Service

Policy Description

Rates charged for standby service are intended to help a utility recover costs related to reserving and providing backup electricity during scheduled and unscheduled outages of a customer's combined heat and power (CHP) system.[1]

On May 2, 2019, the Michigan Public Service Commission (MPSC) issued its order in DTE Energy's 2018 rate case (No. U-20162) addressing, among other topics, the design of the company's tariff, labeled "Rider 3," for standby service and apportionment of power supply demand costs for standby customers. In its order, the MPSC affirmed several features of Rider 3 that may be helpful in reducing barriers to the development of CHP projects:

- Calculation of the reservation fee with reference to the Rider 3 customer class best forced outage rate (FOR)
- Pro-ration of power supply demand charges to better align with standby service customers' limited use of generation resources
- Calculation of the on-peak daily power supply demand charge rates based on a fraction of the full requirements monthly power supply demand charge rate, and a maintenance on-peak demand charge rate set at 50% of the unscheduled rate
- Allocation of Rider 3 power supply capacity costs with reference to the full requirements primary distribution rate, which is based on customer demand coinciding with the four highest system peak demands

The reservation fee is not unique to DTE Energy's Rider 3; it is a common feature in many standby rate designs, though the ways in which these fees are calculated vary widely among utilities. DTE Energy's reference to FOR, which assumes that any one customer is unlikely to use standby service in any given month, is in line with rate design best practices, reflecting a minimum required contribution toward fixed power supply costs. Similarly, in its order in DTE's prior rate case (No. U-18255), the MPSC directed that power supply demand charges should be pro-rated to reflect standby service customers' "partial and infrequent use of generation resources."

Policy Development

The MPSC's Standby Rate Working Group (SRWG) held meetings from January 2016 through February 2017; participants included representatives of DTE Energy, alongside a variety of stakeholders. The SRWG's goal was to ensure that standby service tariffs were based on the cost to serve self-generation standby customers. Two DTE Energy rate cases immediately followed the conclusion of the working group: Case No. 18255 (filed on April 19, 2017) and Case No. 20162 (filed on July 6, 2018). Recommendations from the SRWG formed the backdrop against which the MPSC approved changes to DTE's Rider 3 in these cases.

Stakeholder Engagement

In addition to staff from MPSC, interveners in Case No. U-20162 included the Michigan Department of Attorney General, Energy Michigan, Environmental Law & Policy Center, Association of Businesses Advocating for Tariff Equity (ABATE), Institute for Energy Innovation (IEI), Michigan Environmental Council (MEC), and Michigan Energy Innovation Business Council (Michigan EIBC). IEI and Michigan EIBC sponsored testimony and briefs specifically related to Rider 3 and CHP, stating, "Among Michigan EIBC members who are active in CHP, standby rates are a significant priority for improvement."

[1] For more information on standby rates, see "Chapter 2: Design of Standby Rates" from the SEE Action *Guide to the Successful Implementation of State Combined Heat and Power Policies*. https://www.energy.gov/sites/default/files/2021-07/see_action_chp_policies_guide.pdf

Summary of Policy Results and Lessons Learned

Cost allocation refers to the task of dividing a utility's revenue requirement among customer classes. Rate design follows cost allocation and refers to calculating rates for each customer class to reach the allocated revenue requirement based on assumptions about usage levels. Both cost allocation and rate design are relevant to CHP system owners concerned about the impact of standby rates on project economics. In Case No. U-20162, there was some debate over power supply capacity cost allocation for Rider 3 customers, which are technically a subset of the full requirements customer class (labeled "D11" customers) and not a separate, standalone customer class.

Because power supply capacity costs are recovered through rates based on actual usage in a given month, standby service customers can make efforts to avoid these charges through smart, proactive maintenance of their systems. Standby customers' "partial and infrequent use of generation resources" can translate into a reduced ability to recover desired revenue through rates. One response might be to increase the cost allocation to standby service customers; Case No. U-20162 argued for this approach (unsuccessfully), noting that standby service/Rider 3 customers show more load diversity than full requirements customers. In response, MPSC Staff Witness Kevin Krause, an auditor in the Regulated Energy Division, Rates and Tariff Section, explained:

> *Any smaller group of customers is going to show more variance than the entire class. Therefore, the selection of any group of D11 [full requirements] customers will show more variance than the entire group of D11 [full requirements] customers. This is the nature of diversity. The larger the group of customers, the smoother the total load shape is going to be, and the less variance you will see. … The appropriate question is not whether or not there is more variance; it is, "Is there more variance than would be expected for a subgroup of D11 [full requirements] customers of similar size?"*

In agreement, the MPSC affirmed that the method of allocating Rider 3 power supply capacity costs should match that of full requirements customers, allowing standby service/Rider 3 customers to avoid high charges through smart operation of their CHP systems. Similarly, the MPSC affirmed Rider 3's method of measuring customer demand to coincide with the four highest system peak demands, signaling to customers that they can reduce standby charges by avoiding outages at these times of high system stress.

Success Story

The CHP system at Washtenaw Community College in Ann Arbor, Michigan, is served under DTE's revised Rider 3 for standby service. The system generates 130 kW of electricity, 800,000 BTU/hour of hot water, and 50 tons of chilled water for the college. Excess heat is utilized to provide air conditioning to the buildings, and the system reduces the college's carbon footprint by 889 metric tons of greenhouse gas emissions annually.

The CHP system at Washtenaw Community College reduces the college's carbon footprint.
Source: Rudolph Libbe Group

For More Information

U.S. DOE MIDWEST CHP TECHNICAL ASSISTANCE PARTNERSHIP (CHP TAP)
www.mwchptap.org

Date produced: 2020

MICHIGAN PUBLIC SERVICE COMMISSION RENEWABLE ENERGY SECTION
Julie Baldwin, Manager
517-284-8318
Baldwinj2@michigan.gov