



CHP  
TECHNICAL ASSISTANCE  
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# MidAmerican Energy's Standby Rate Benefits Iowa CHP Customers

## Policy Description

In October 2014, the Iowa Utilities Board gave final approval to MidAmerican Energy's new rate book, which contained a revised standby rate for distributed generation technologies, including combined heat and power (CHP). The regulatory docket, RPU-2013-0004, began in 2013 with MidAmerican looking to consolidate and update its three Iowa tariff books in one unified rate book. Last updated in 1995, MidAmerican's standby rates reflected an energy market and regulatory environment that no longer existed.



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As interveners, the Iowa Environmental Council (IEC) and the Environmental Law and Policy Center (ELPC) called upon the Energy Resources Center (ERC) at the University of Illinois at Chicago to be an expert witness on standby rate issues in the docket. Through testimony and several meetings with MidAmerican staff, the ERC provided educational assistance on updating the standby rate in ways that would be less prohibitive toward future CHP development. The new standby rate, Rider SPS, incorporates many of the successful approaches to standby power as presented in the State and Local Energy Efficiency Action Network's (SEE Action's) "Guide to the Successful Implementation of State Combined Heat and Power Policies," published by the U.S. Department of Energy. Rider SPS is a significant improvement over MidAmerican's previous standby rates and will help current and future CHP projects throughout MidAmerican's territory achieve financial viability.

## Quick Facts

**LOCATION:** Iowa

**MARKET SECTOR:** All market sectors

**Policy Type:** Revised standby rates

**Geography:** MidAmerican Iowa territory

**Policy Start:** 2015

## Policy Development

Before this docket consolidated MidAmerican's pricing zones, the energy company had three separate rate books (from the Eastern, Northern, and Southern pricing zones), including three separate and disparate standby rates. Though these rate books were radically different from one another, they all created financial barriers to otherwise technically feasible CHP projects.

To gauge the financial impact of MidAmerican's standby rates, the ERC analyzed the "avoided rate" as the primary metric. The avoided rate is a ratio between the price per kilowatt-hour that a customer avoids having to pay the utility when generating electricity and the fully burdened kilowatt-hour price the customer pays when purchasing power. Because a utility must provide backup and maintenance service for onsite generation, utilities almost always assess a CHP customer monthly reservation charge, even though that customer might not take any electric service in a given period. Therefore, a standby customer can rarely, if ever, avoid 100% of the fully burdened electric rate. According to the U.S. Environmental Protection Agency CHP Partnership's report *Standby Rates for Consumer-Sited Resources*, standby rates that avoid at least 90% of the fully burdened electric rate are not considered financial barriers to project implementation.<sup>1</sup>



<sup>1</sup> [https://www.epa.gov/sites/production/files/2015-10/documents/standby\\_rates.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/standby_rates.pdf)

The ERC found that MidAmerican’s previous standby rates had an avoided rate of 80% or less. Such a low avoided rate signified that standby rates posed a financial barrier to CHP implementation in MidAmerican’s territory.

## Summary of Policy Results and Outcomes

Over the course of several productive meetings with MidAmerican staff, the ERC outlined the burdensome rate mechanics in current standby rates while supporting the interveners in possible modifications. Using the SEE Action Guide and other examples of successful standby rates throughout the United States, the IEC and ELPC were able to reach an agreement with MidAmerican on how to structure the new rate.

The three most notable differences—the incorporation of a dynamic reservation rate, the incorporation of a daily demand charge, and the use of clear and precise mechanics—are described below.

- The new, dynamic reservation rate separately prices the generation, transmission, substation, and distribution components to more accurately reflect the cost to provide service. In addition, the generation and transmission components are calculated using a customer’s forced outage rate (FOR), which reflects the portion of time a generating unit is removed from service. This provides financial incentive for a customer to reduce its FOR to decrease the monthly reservation charge.

- The demand charge for maintenance events is now priced on a daily, rather than monthly, basis. The daily demand rate is calculated by dividing the monthly supplemental demand rate by 30 and subtracting the distribution and substation components already included in the monthly reservation rate. This allows standby customers to save money if they can reduce the duration of a maintenance outage. (See example in the table.)

	Needed Standby Capacity	Rate	Outage Duration (Days)	Cost of Outage (Capacity Only)
Priced using Monthly Demand Rate	2,000 kW	\$4.37 /kW	N/A	\$8,740.00
Priced using Daily Demand Rate	2,000 kW	\$0.146 /kW/day	30	\$8,740.00
	2,000 kW	\$0.146 /kW/day	15	\$4,370.00
	2,000 kW	\$0.146 /kW/day	5	\$1,456.67
	2,000 kW	\$0.146 /kW/day	1	\$292.00

### Comparison of previous monthly demand charge to new daily demand charge

(Source: ERC analysis)

- Lastly, unlike the rate mechanics in MidAmerican’s previous standby tariffs, which were difficult to understand and model, the rate mechanics in Rider SPS are clearly delineated and stipulated. This allows potential standby customers to more accurately determine what their bills will look like before the installation of a CHP project.

As modeled by the ERC, Rider SPS averages an avoided rate of ~89%, far greater than the previous standby rates. The new standby rates no longer pose a significant regulatory barrier for CHP customers within MidAmerican’s Iowa service territory.

---Previous---	---Previous---	---Previous---	---Current---
East	North	South	Rider SPS
74%	80%	80%	89%

(Source: ERC analysis)

## Lessons To Share

- Providing analysis in a regulatory proceeding that compares standby rates on the common basis of “avoided rate” helps the parties understand the degree to which a standby rate is a barrier to CHP.
- Resources such as the SEE Action Guide that provide examples of successful standby rates help provide credibility needed to improve utility standby rates.
- Educating utilities and regulators on standby rate best practices can be critical to the success of utility commission interveners’ efforts to improve standby rates.

### Resources

**Rider SPS**  
<https://www.midamericanenergy.com/media/pdf/iowa-electric-tariffs.pdf> (pages 436-449)

**SEE Action Guide to the Successful Implementation of State Combined Heat and Power Policies**  
<https://www4.eere.energy.gov/seeaction/publication/guide-successful-implementation-state-combined-heat-and-power-policies>

**U.S. Environmental Protection Agency CHP Partnership: Standby Rates for Customer-Sited Resources**  
<https://www.epa.gov/chp/standby-rates-consumer-sited-resources>

**Central CHP Technical Assistance Partnership**  
<https://betterbuildingsolutioncenter.energy.gov/chp/central-chp-technical-assistance-partnership>

## For More Information

### U.S. DOE CENTRAL CHP TECHNICAL ASSISTANCE PARTNERSHIP

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Date produced: 2020