

South Dakota Public Utilities Commission  
Docket EL14-062  
MidAmerican Energy Company  
Data Request No. 1-2

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1-2 Is the forecast for avoidable new generating capacity costs based on MidAmerican's own construction or purchases of completed projects?

**Response:**

Rather than using its own construction or purchase cost, MidAmerican utilizes generation capacity costs based upon MISO data and inputs for the MISO Planning Resource Auction. This includes near-term market price considerations followed by the MISO Independent Market Monitor's calculation of the cost of new generation located in the Iowa capacity pricing zone. The following description from the filing in Docket EL14-062 describes the methodology and the data relied upon for the calculation.

MidAmerican has used the economic carrying charges on a new combustion turbine to calculate its long-term avoidable capacity cost. Using this methodology, the annual cost in 2014 is \$85.83/kW. The installed cost of the combustion turbine unit with a summer capacity of 178 MW (210 MW nominal capacity rating) is \$867/kW based on the summer capacity rating and expressed in 2014 dollars. The determination by the Midcontinent Independent System Operator, Inc. (MISO) in its annual calculation of the Cost of New Entry (CONE) filed with the Federal Energy Regulatory Commission (FERC) is the basis for the avoided cost calculation.<sup>[1]</sup>

The calculation of economic carrying charges and annual revenue requirements is based upon a weighted-average capital cost of 7.5%, an after tax discount rate of 6.47%, a 15 year tax life, tax-depreciation basis of 100%, book life of 30 years, and fixed operation and maintenance cost of \$8.58/kW/year in 2014 escalating at 2.0% per year. The present value of revenue requirements for the new combustion turbine is estimated to be \$1,479.74/kW installed in 2014.

The capacity prices in 2014 and 2015 are based on opportunity market prices within MISO. The Independent Market Monitor (IMM) for MISO calculated those prices for

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<sup>[1]</sup>The capacity price for a combustion turbine is based on MISO's CONE for the Local Resource Zone 3 (LRZ 3) in the September 3, 2013 letter to the FERC regarding "Filing of Midcontinent Independent System Operator, Inc. Regarding LRZ CONE Calculation; FERC Docket No. ER13-2310-000." The capacity price for LRZ 3 is \$704.50 in 2014 dollars. That capacity price was converted to a summer-based capacity price.

the MISO 2014-2015 Planning Resource Auction based on PJM Interconnection, L.L.C.'s Reliability Pricing Model (RPM), a capacity-market model designed to create long-term pricing signals based on making capacity commitments three years ahead. The 2014-2015 Base Residual Auction (BRA) cleared 147,974.4 MW of capacity at the RTO Resource Clearing Price of \$125.99/MW-day. Based on a MW-weighted average of the BRA (\$125.99/MW-day) and three incremental auctions of \$0.03/MW-day, \$25.00/MW-day and \$25.51/MW-day, an opportunity cost of \$25.06/MW-day and an adjustment downward to reflect a delivery cost from MISO to PJM, MidAmerican has assigned a market value of capacity of \$52.15/kW in 2014. Using the 2014-2015 IMM methodology, the rate for 2015 was determined to be \$56.58/kW.

The avoidable new generation capacity costs are as follows.

Year	Avoidable New Generating Capacity Costs (\$/kW/yr.)
2014	\$ 52.15
2015	\$ 56.58
2016	\$ 89.30
2017	\$ 91.09
2018	\$ 92.91
2019	\$ 94.77