

MidAmerican Energy Company
Methodology To Determine Total Flowgate Capability

MISO utilizes the Available Flowgate Capability (“AFC”) method and does not utilize the Total Transfer Capability (“TTC”) method for assessing transmission capabilities. As a MISO Transmission Owner, MidAmerican Energy provides facility ratings from which Total Flowgate Capability (“TFC”) values are established for SOL flowgates (thermal limits). All other AFC components, including TFC for IROL flowgates (stability limits) are calculated by MISO.

MidAmerican Energy Company, the Transmission Owner, provides the following information concerning its TFC calculation methodology:

For TFC, a Transmission Provider (or Transmission Owner) shall: (i) explain its definition of TFC; (ii) explain its TFC calculation methodology; (iii) list the databases used in its TFC assessments; and (iv) explain the assumptions used in its TFC assessments regarding load levels, generation dispatch, and modeling of planned and contingency outages.

With respect to requirement (i), MidAmerican Energy defines TFC for MidAmerican Energy SOL flowgates as follows,

The TFC is defined as the seasonal emergency facility rating of the limiting facility. The seasonal emergency facility rating is determined in accordance with the MidAmerican Energy Company Transmission Facility Ratings Methodology (as posted on the MidAmerican Energy OASIS page on MISO’s OASIS node).

With respect to requirement (ii), MidAmerican Energy’s TFC calculation methodology for MidAmerican Energy flowgates is such that the TFC is set to be equal to the seasonal emergency facility rating of the limiting facility. The seasonal emergency facility rating is determined in accordance with the MidAmerican Energy Company Transmission Facility Ratings Methodology (as posted on the MidAmerican Energy OASIS page on MISO’s OASIS Node).

The methodologies and studies used to determine TFC and AFC for each flowgate in MISO are described in MISO’s ATCID, CBMID and TRMID documents posted on their OASIS node under “Midwest ISO ATC Information”.

With respect to requirement (iii), the databases used in MidAmerican Energy’s TFC assessments are:

For thermal limitations, the seasonal normal and emergency facility ratings are documented in internal spreadsheets and provided to MISO, MidAmerican Energy’s Regional Transmission Organization and Reliability Coordinator, for real-time operations and long-term planning and model development purposes.

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For stability limitations, MISO maintains a database of generator modeling data which are used in stability simulations. None of the MidAmerican Energy flowgates are related to stability limitations.

MidAmerican Energy considers the information in these databases to be Critical Energy Infrastructure Information (“CEII”).

With respect to requirement (iv), MidAmerican Energy provides thermal ratings used to establish TFC for SOL flowgates. The assumptions used in TFC assessments regarding load levels, generation dispatch, and modeling of planned and contingency outages for SOL flowgates are not relevant because the TFC is only dependent on the facility rating. Load levels, generation dispatch and planned and contingency outages are not considered in determining the TFC for SOL flowgates.

Assumptions for load, generation, and modeling of planned and contingency outages may impact TFC calculated for IROL flowgates. MISO calculates such limits, and as such, the study assumptions used to develop these limits can be found in MISO’s ATCID, CBMID, and TRMID documents. Currently, no MidAmerican flowgates are related to stability limitations.