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| PGRR Number | [105](https://www.ercot.com/mktrules/issues/PGRR105) | PGRR Title | Deliverability Criteria for DC Tie Imports |
| Date Posted | April 17, 2023 |
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| Requested Resolution  | Normal |
| Planning Guide Sections Requiring Revision  | 4.1.1.1, Planning Assumptions4.1.1.7, Minimum Deliverability Criteria |
| Related Documents Requiring Revision/Related Revision Requests | None |
| Revision Description | This Planning Guide Revision Request (PGRR) adds Direct Current Tie (DC Tie) Resources to the list of Resources for which the minimum deliverability condition applies. |
| Reason for Revision |  Addresses current operational issues. Meets Strategic goals (tied to the [ERCOT Strategic Plan](https://www.ercot.com/files/docs/2018/12/13/ERCOT_Strategic_Plan_2019-2023.pdf) or directed by the ERCOT Board). Market efficiencies or enhancements Administrative Regulatory requirements Other: (explain)*(please select all that apply)* |
| Business Case | During Winter Storm Uri, DC Tie imports played an important role in reducing the amount of Load that needed to be shed. DC Ties were importing power into ERCOT at near their maximum capacity throughout most of the winter storm. In order to ensure that such an important Resource is utilized when needed most for reliability, this PGRR modifies the reliability criteria used in evaluating the need for transmission system improvements to limit the planning assumption for DC Tie curtailment to exports, and adds DC Tie Resources to the list of Resources that have a minimum delivery condition. |

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| Market Segment | Not applicable |

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| Proposed Guide Language Revision |

4.1.1.1 Planning Assumptions

(1) A contingency loss of an element includes the loss of an element with or without a single line-to-ground or three-phase fault.

(2) A common tower outage is the contingency loss of a double-circuit transmission line consisting of two circuits sharing a tower for 0.5 miles or greater.

(3) Unavailability of a single generating unit includes an entire Combined Cycle Train, if no part of the train can operate with one of the units Off-Line as provided in the Resource Registration data.

(4) The contingency loss of a single generating unit shall include the loss of an entire Combined Cycle Train, if that is the expected consequence.

(5) The following assumptions may be applied to the SSWG base cases for use in planning studies:

(a) Reasonable variations of Load forecast;

(b) Reasonable variations of generation commitment and dispatch applicable to transmission planning analyses on a case-by-case basis may include, but are not limited to, the following methods:

(i) Production cost model simulation, security constrained optimal power flow, or similar modeling tools that analyze the ERCOT System using hourly generation dispatch assumptions;

(ii) Modeling of high levels of intermittent generation conditions; or

(iii) Modeling of low levels of or no intermittent generation conditions.

(6) Assumed Direct Current Tie (DC Tie) exports will be curtailed as necessary to meet reliability criteria in planning studies.

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| ***[PGRR098: Insert paragraph (7) below upon system implementation:]***(7) Manual System Adjustments shall not increase the amount of consequential Load loss following a common tower outage, or the contingency loss of a single generating unit, transmission circuit, transformer, shunt device, FACTS device, or DC Tie Resource or DC Tie Load, with or without a single line-to-ground fault. |

4.1.1.7 Minimum Deliverability Criteria

(1) In conducting its planning analyses, ERCOT and each TSP shall ensure that an ERCOT-defined minimum percentage of capacity of each Resource described in paragraph (3) below can be delivered to serve peak system Load while meeting the following reliability criteria:

(a) Category P0, P1, P2-1, P3, and P7 planning events from the NERC Reliability Standard addressing Transmission System Planning Performance Requirements; and

(b) The ERCOT-specific reliability performance criteria included in Section 4.1.1.2, Reliability Performance Criteria.

(2) The minimum percentage of capacity referenced in paragraph (1) above shall be applied to each Resource’s applicable Seasonal Net Max Sustainable Rating submitted through the Resource Registration process.

(3) The minimum deliverability condition described in paragraph (1) applies to the following Resources:

(a) Any Generation Resource utilizing combined cycle, steam turbine, combustion turbine, hydro, or reciprocating engine technology;

(b) Any Energy Storage Resource (ESR) meeting an ERCOT-defined minimum duration threshold; or

(c) Any DC Tie Resource.

(4) Resources other than those described in paragraph (3) above may be redispatched as necessary to meet the requirements of this Section.

(5) ERCOT-proposed revisions to the minimum percentage of capacity or minimum duration threshold for ESRs used to implement the requirements of this Section will be recommended by the Technical Advisory Committee (TAC) and approved by the ERCOT Board.

(a) ERCOT will post the current values approved by the ERCOT Board pursuant to paragraph (5) above on the ERCOT website.