

Manitoba Hydro Undertaking #113

Manitoba Hydro to provide an explanation of the risk matrix and how the cal of 950 points was derived. Explain where tier 2 fits within the broader spectrum of risk for this particular unit. (This is to get a better sense of how many tiers of risks, which is the highest, how is the tier of risk determined and what is the source of the 950 points).

The Business Case Tier methodology is used by the Transmission Business Unit to rank electric Major and Non-blanket projects using common criteria. The ranking assists management in making decisions for allocating capital dollars and resources but is not intended to assess technical merit or project justification.

The calculated score and tier ranking is based upon an assessment of the project in relation to the following goals:

- Safety (Applicable only when project is justified, in whole or part, on safety concerns)
- Service and Reliability
- Financial Impact
- Transfer Capability
- Environment (Applicable only when project is justified, in whole or part, on environmental concerns)

Each goal impacted by the project is assigned a score based upon the probability of the event occurring or being realized - multiplied by the consequence of the event - and then multiplied by a weighting factor assigned to each goal. Projects that have both a high probability and a high consequence are the ones that will score the maximum points under a goal. The sum of the score for each goal determines the Matrix score, and subsequently the Tier as shown in the following table:

<u>Matrix score</u>	<u>Ranking</u>
≥ 1,200	Tier 1
850 – 1,199	Tier 2
550 – 849	Tier 3
200 – 549	Tier 4
< 200	Tier 5

Bipole III was calculated at 950 points and a Tier 2 ranking based upon Financial, Service & Reliability, and Transfer Capability Goals. The ranking rationale is summarized as follows:

- Financial (500 points) – There is certainty of financial impact in terms of avoided outage costs of greater than \$250,000 annually as a consequence of this project. It is awarded the maximum points in this category.
- Service and Reliability (200 points) – The maximum points that may be awarded in this category is 1000, for projects that have both a high probability and a high consequence. There is a low probability of the occurrence of the simultaneous loss of both HVdc Bipoles I & II, which limits the score that can be awarded to this project under this goal. The highest consequence allowed for within this goal is loss of 100 MW or greater of capacity or load, with the majority of our projects not reaching that threshold. Loss of Bipole 1 and 2 would exceed 3350 MW; however, there is no allowance within the tool to award additional points for this very extreme consequence.
- Transfer Capability (250 points) – Bipole III will provide transfer capability during normal outages of Bipole 1 and 2 and it is therefore awarded the maximum points.