Guidelines for Market Efficiency Projects Selection Process

Schedule 6 section 1.5.8 (e) of the PJM Operating Agreement discusses Market Efficiency criteria used in considering the inclusion of Market Efficiency projects in the recommended plan. This document provides 'bright line' primary and 'other' secondary consideration criteria that could be utilized as guidelines in order to facilitate the recommendation process.

'Bright line' Primary Considerations –

1) Congestion Mitigation:
   Consistent with the Operating Agreement (OA) Schedule 6 section 1.5.7 (b) (iii) and OA Schedule 6 section 1.5.8 (e), a Market Efficiency proposal will relieve one or more economic constraint(s). If a proposal is submitted to mitigate one congestion driver, then in order to meet this criteria the proposal shall relieve projected congestion on the driver by at least $1. Similarly, if a proposal is submitted to address multiple congestion drivers, then in the order to meet this criteria the proposal shall relieve projected congestion on all the drivers by at least $1.
2) Benefit/Cost (B/C):
   Consistent with the OA Schedule 6 section 1.5.7 (d), a Market Efficiency proposal addressing one or more target congestion driver(s) must meet a B/C ratio threshold of at least 1.25:1, calculated over the first 15 years of the life of the proposal. The B/C ratio is calculated using the procedure described in Manual 14B, section 2.6.5. The Market Efficiency Discount Rate and Fixed Carrying Charge Rate are subject to change for any given 24-month Market Efficiency cycle. Therefore, during every cycle, these values are published along with other Market Efficiency input assumptions. Rates published during the 2016/17 cycle are documented in the appendix.
3) Cost Estimate Review:
   Consistent with the OA Schedule 6 section 1.5.7 (g), for a Market Efficiency proposal with costs in excess of $50 million, an independent review of such costs will be performed.

A proposal that does not meet the minimum B/C ratio test will not proceed further in the analysis to address the specific congestion constraint(s) for which it was submitted. However, the proposal will not be necessarily rejected because, the proposal, or a portion of the proposal, could be combined with other proposal(s) or a portion of other proposal(s) to address specific congestion issue(s) or other congestion issues as part of an overall plan to address congestion issues.

Similarly, a proposal that meets the minimum B/C ratio test will not proceed further in the analysis to address the specific congestion constraint(s) for which it was submitted if the proposal does not relieve the specific constraint(s) congestion. However, the proposal will not be necessarily rejected because, the proposal, could relieve system level congestion and as a result it could relieve congestion on some other congestion constraint(s) in the system.

'Other' Secondary Considerations –

When primary considerations do not clearly identify a cost effective solution, differentiate between proposals, or if PJM decides that further analysis is required to address potential constructability and reliability consequences, then the following secondary factors may be considered in the Market Efficiency projects selection process. (For example, a project with a high 10:1 B/C ratio is clearly cost effective, but a project with a lower or marginal B/C ratio closer to 1.25:1 may require other considerations to be addressed)

1) Zonal/Total Savings:

Consistent with the OA Schedule 6 section 1.5.7 (e), a Market Efficiency proposal with zonal/total benefits such as production cost savings, load payments (net and gross) reductions, Auction Revenue Rights (ARR) credits, total system congestion savings, capacity market savings (capacity market cost savings and load capacity payments savings) may be considered during the final selection process.

2) Risk Evaluation:

Cost escalation risks, schedule delay risks, and project development risks, such as siting and permitting, may be considered during the final selection process.

Cost escalation risks can be addressed with cost containment provisions that may be included by the project sponsor in the proposal. In such cases, PJM will evaluate the risk mitigation of the cost containment provisions by a subjective analysis of the potential for cost escalation and the ability of the cost containment proposal to address the risk for those aspects of the project for which the cost containment provisions apply. To the degree that the analysis confirms risk mitigation benefits, the proposal with cost containment will be given preference in the overall selection process.

3) Sensitivity Evaluation:

Consistent with the OA Schedule 6 section 1.5.3, sensitivities of future conditions shall be considered within the Market Efficiency project selection process in order to mitigate the potential for inappropriately including or excluding Market Efficiency projects. Some of these future sensitivities may include but are not limited to load forecast uncertainty, transfer level variations, fuel cost variations, generator retirements, and uncertainties as a result of constructability evaluation. PJM typically will study future sensitivity impacts on load forecast variations and fuel (gas) cost variations for eligible proposals. While the sensitivities may vary based on expected volatility, a reasonable range for load and gas sensitivities is documented in the appendix. For example, given the scenario where multiple projects are proposed to address the same congestion driver, all other factors being equal, PJM may select the proposal that exceeds 1.25:1 B/C for all the sensitivities considered in its selection process compared to other projects that did not consistently meet the 1.25:1 B/C for all the sensitivities considered in the selection process.

4) Reliability Impacts:

Prior to recommending a Market Efficiency project for board approval, PJM will perform a reliability impact study to ensure the proposed project will not create any reliability violations requiring additional reliability upgrades or expansions in addition to the proposed solution. Any reliability violations and resulting upgrade and expansion costs to mitigate those violations will be considered added costs to the initially proposed solution and will trigger a holistic evaluation effort including primary and other considerations. Such additional evaluation efforts may impact the overall performance evaluation of the project. For example, given the scenario where multiple projects are proposed to address the same congestion driver, all other factors being equal, PJM may select the proposal requiring no additional reliability based upgrades/expansions compared to other projects requiring additional reliability based upgrades/expansions.

Recommending RTEP market efficiency proposals –

Consistent with the OA Schedule 6 section 1.5.6(h), based on aforementioned primary and other considering factors, PJM will ultimately recommend proposals (for board approval) with the most "overall benefits" in an effort to encourage innovative solutions that are robust and efficient for the overall benefit of the customers who bear embedded costs associated with unresolved congestion.

Appendix:

Rates	Values based on 2016/17 cycle
Discount Rate	7.4%
Fixed Carrying Charge Rate	15.3%

Table 1 – Discount and Fixed Carrying Charge Rates

Sensitivity	Range based on 2016/17 cycle
Load	Plus or Minus 2%
Gas	Plus or Minus $1

Table 2 – Sensitivity Ranges

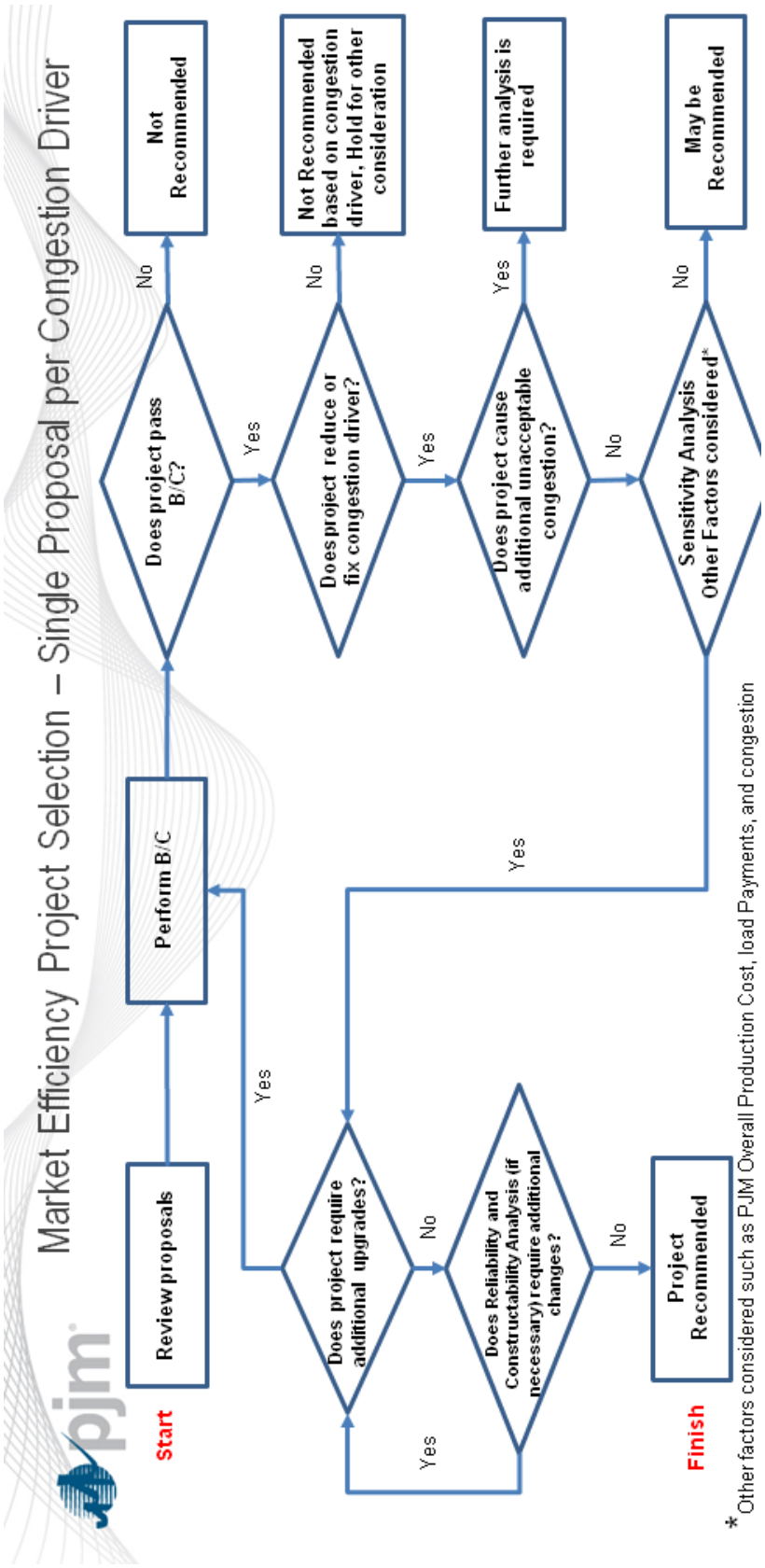

Figure 1 – Project Selection Decision Tree for Single Proposal

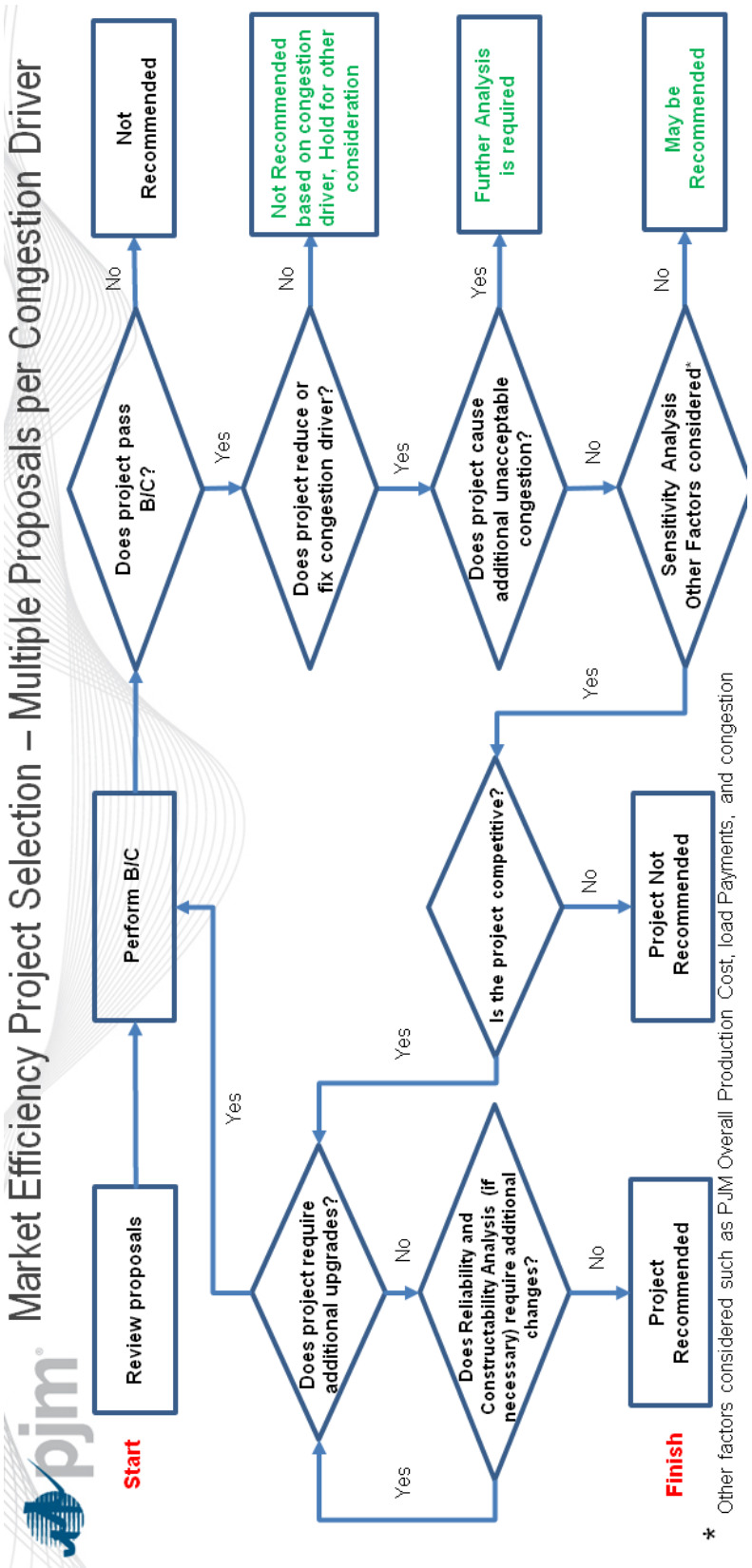

Figure 2 – Project Selection Decision Tree for Multiple Proposals