Transmission Expansion Advisory Committee Market Efficiency Update

March 09, 2017
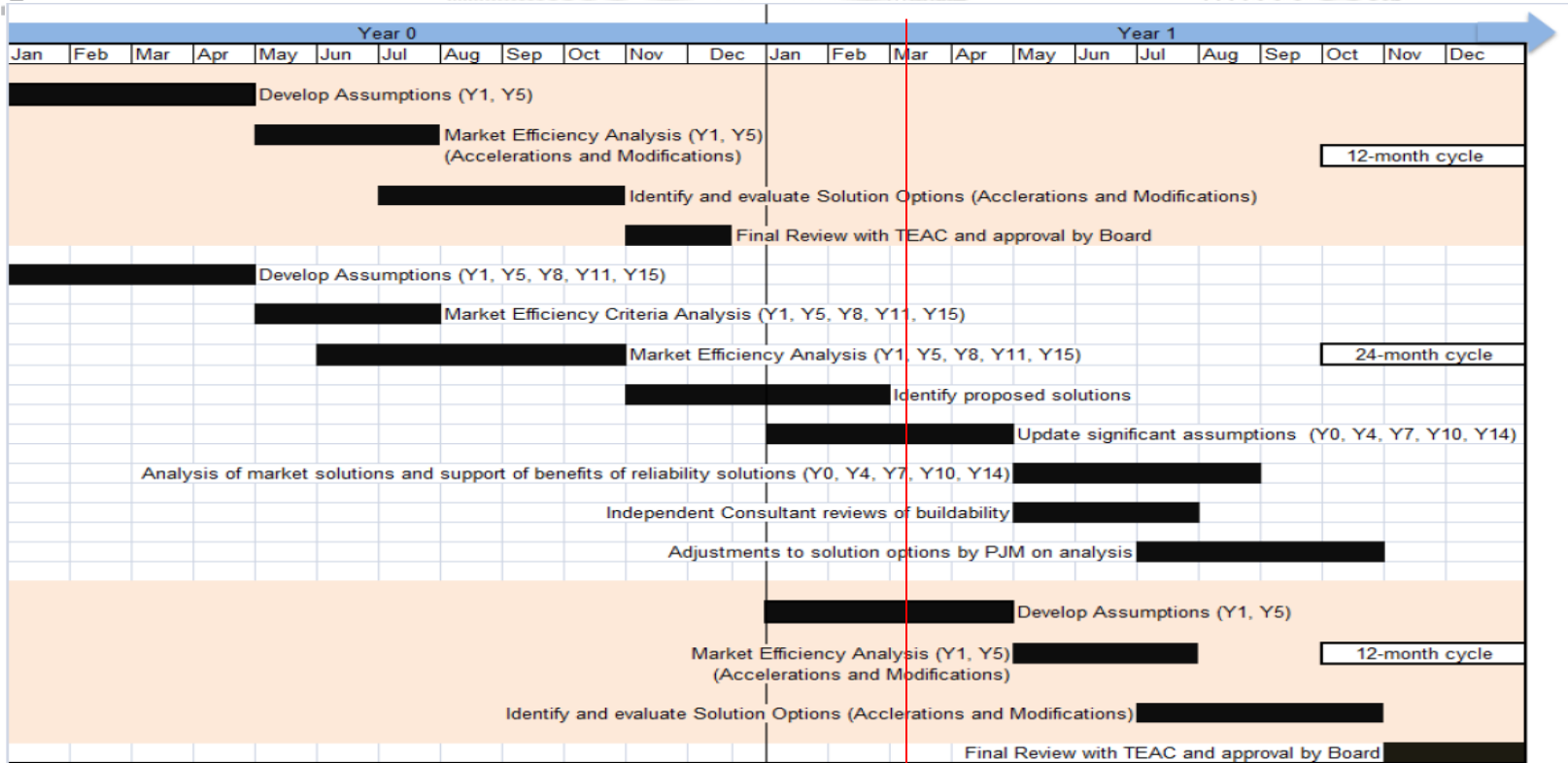
- 96 market Efficiency Proposals
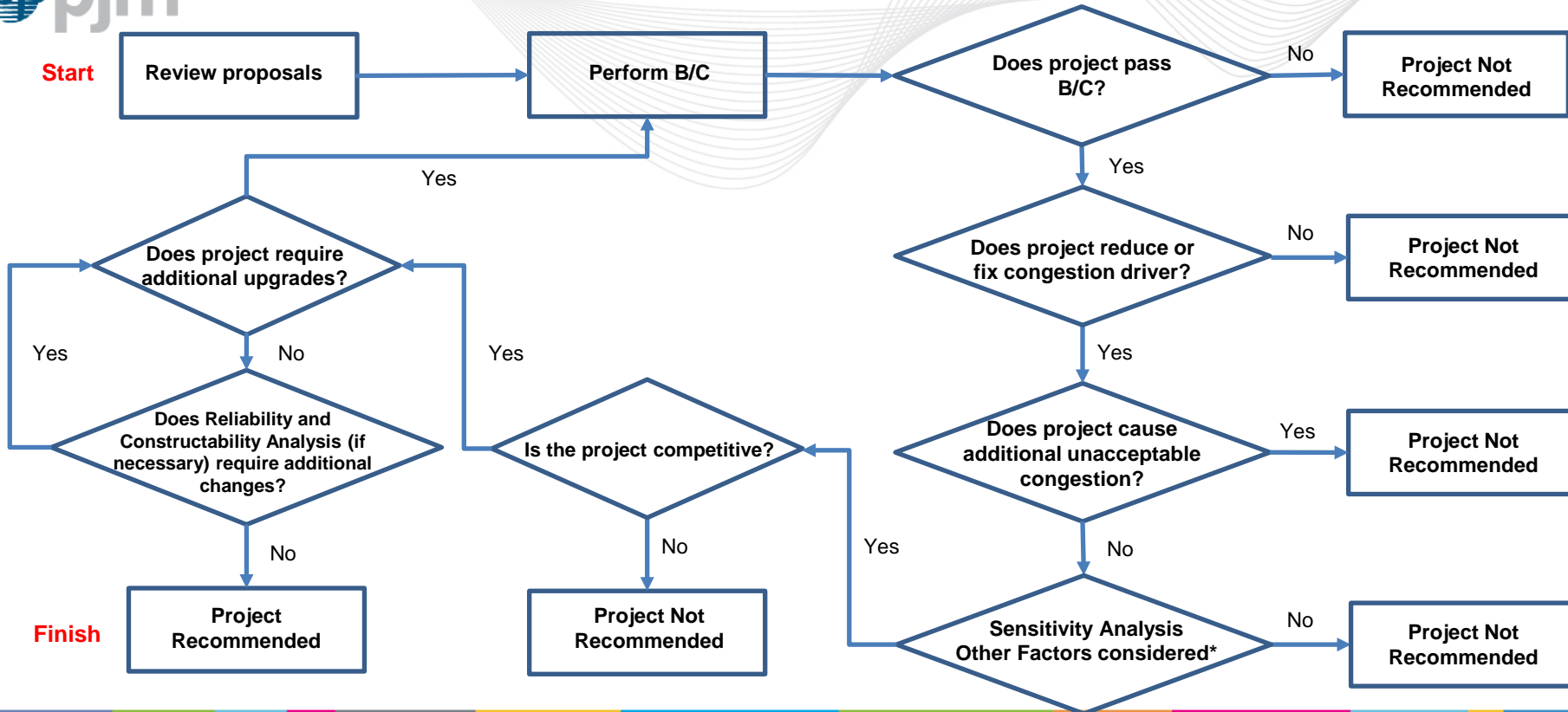 - 52 Greenfield
    - $15.8M - $371.3M
  - 44 Upgrades
    - $0 - $192.07M

- 20 proposing entities (including 6 combinations of joint proposals)

- 8 Interregional proposals
  - 5 Greenfield
  - 3 Upgrades

2016/17 Long Term Proposal Window – Study Approach

- Step 1: Review projects
  - PJM will contact proposer if need clarification of modeling.
  - Approved base line reliability projects may eliminate need for several projects.

- Step 2: First pass of project evaluations assuming proposer supplied data.

- Step 3: Determine if there are any obvious optimal projects in focused areas.
  - Areas with quick fixes or lower cost reinforcements

- Step 4: Detailed Analysis in areas with many project submissions

Market Efficiency Project Selection – Multiple Proposals per Congestion Driver

Start

Review proposals → **Perform B/C** → **Does project pass B/C?**

Does project pass B/C? — No → **Project Not Recommended**

Does project pass B/C? — Yes ↓

Does project reduce or fix congestion driver? — No → **Project Not Recommended**

Does project reduce or fix congestion driver? — Yes ↓

Does project cause additional unacceptable congestion? — Yes → **Project Not Recommended**

Does project cause additional unacceptable congestion? — No ↓

Sensitivity Analysis Other Factors considered* — No → **Project Not Recommended**

Sensitivity Analysis Other Factors considered* — Yes → **Is the project competitive?**

Is the project competitive? — No → **Project Not Recommended**

Is the project competitive? — Yes → **Does project require additional upgrades?**

Does project require additional upgrades? — Yes → Perform B/C

Does project require additional upgrades? — No ↓

Does Reliability and Constructability Analysis (if necessary) require additional changes? — Yes → Does project require additional upgrades?

Does Reliability and Constructability Analysis (if necessary) require additional changes? — No ↓

Finish

Project Recommended

*Other factors considered such as PJM Overall Production Cost, load Payments, and congestion

2016-2017   24-Month Market Efficiency Cycle

- Long term proposal window: Nov 2016 - Feb 2017

- Mid-cycle update of major assumptions: Jan 2017 – Apr 2017
  - Load forecast, Fuel prices, Generation expansion, Network topology
  - Only updating the most significant changes, not full update.

- Analysis of proposed solutions: May 2017 - Oct 2017
  - Independent consultant review of cost and ability to build
  - Review of analysis with TEAC: Jun 2017 - Nov 2017

- Determination of final projects: Dec 2017
  - Final review with TEAC and Board approval
  - Projects may be approved earlier if analysis and review complete

Appendix
2017 Market Efficiency Overall Schedule

Milestone	Schedule 2017
Reevaluation approved Market Efficiency projects	February – May 2017
Base Case Mid-Cycle Update Significant Assumptions	January – April 2017
Analyze Submitted Proposals	May – October 2017
Acceleration Analysis	May – October 2017
Final TEAC Review and Board Approval	December 2017

Questions?

Email: RTEP@pjm.com