



PJM Regional Transmission Expansion Planning (RTEP) Process

IPSAC
June 4, 2021

Planning Committee (PC)

- <http://www.pjm.com/committees-and-groups/committees/pc.aspx>

Transmission Expansion Advisory Committee (TEAC)

- <http://www.pjm.com/committees-and-groups/committees/teac.aspx>

Interregional Planning

- <http://www.pjm.com/planning/interregional-planning.aspx>

Services and Requests

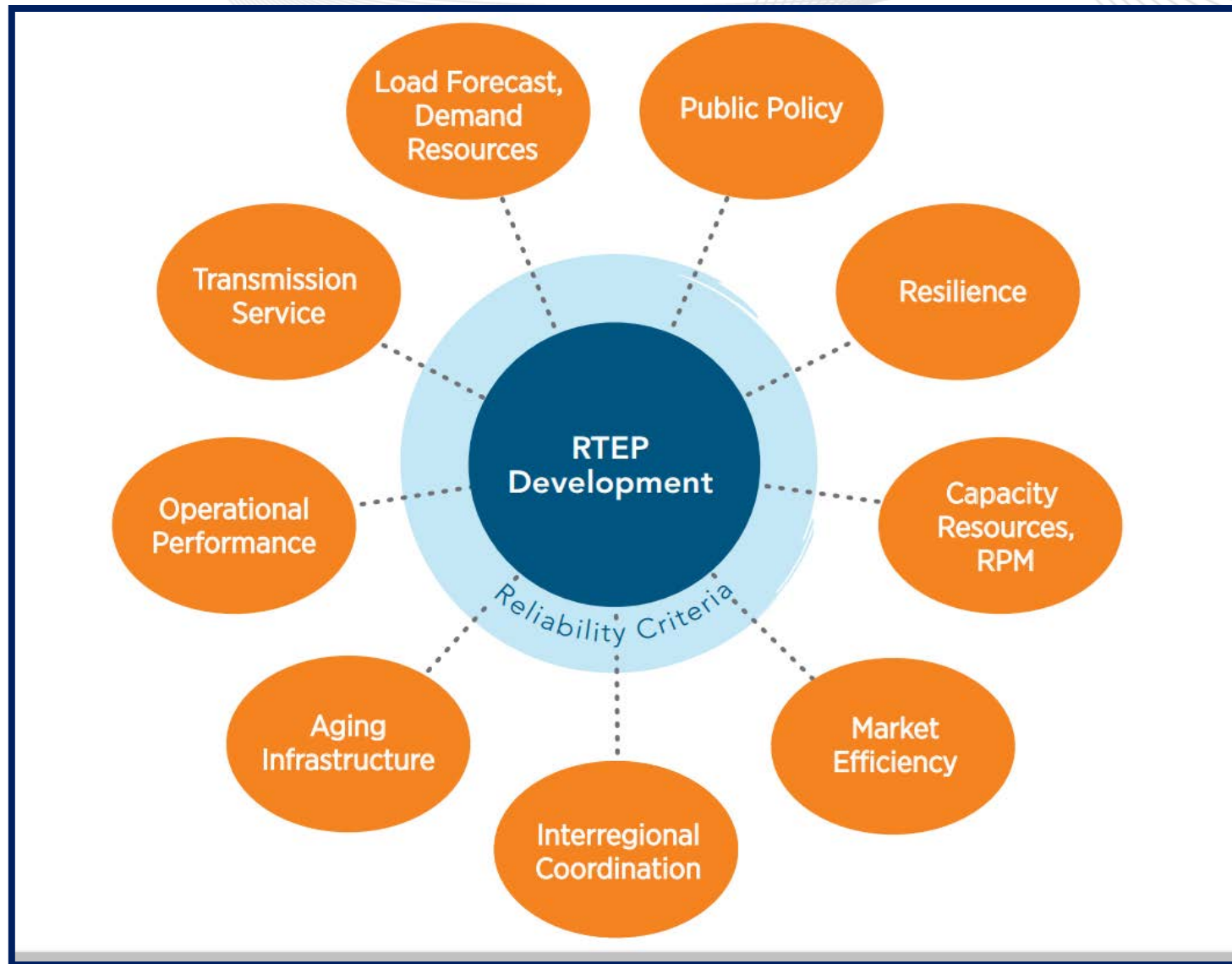
- <http://www.pjm.com/planning/services-requests.aspx>

RTEP Development

- <http://www.pjm.com/planning/rtep-development.aspx>

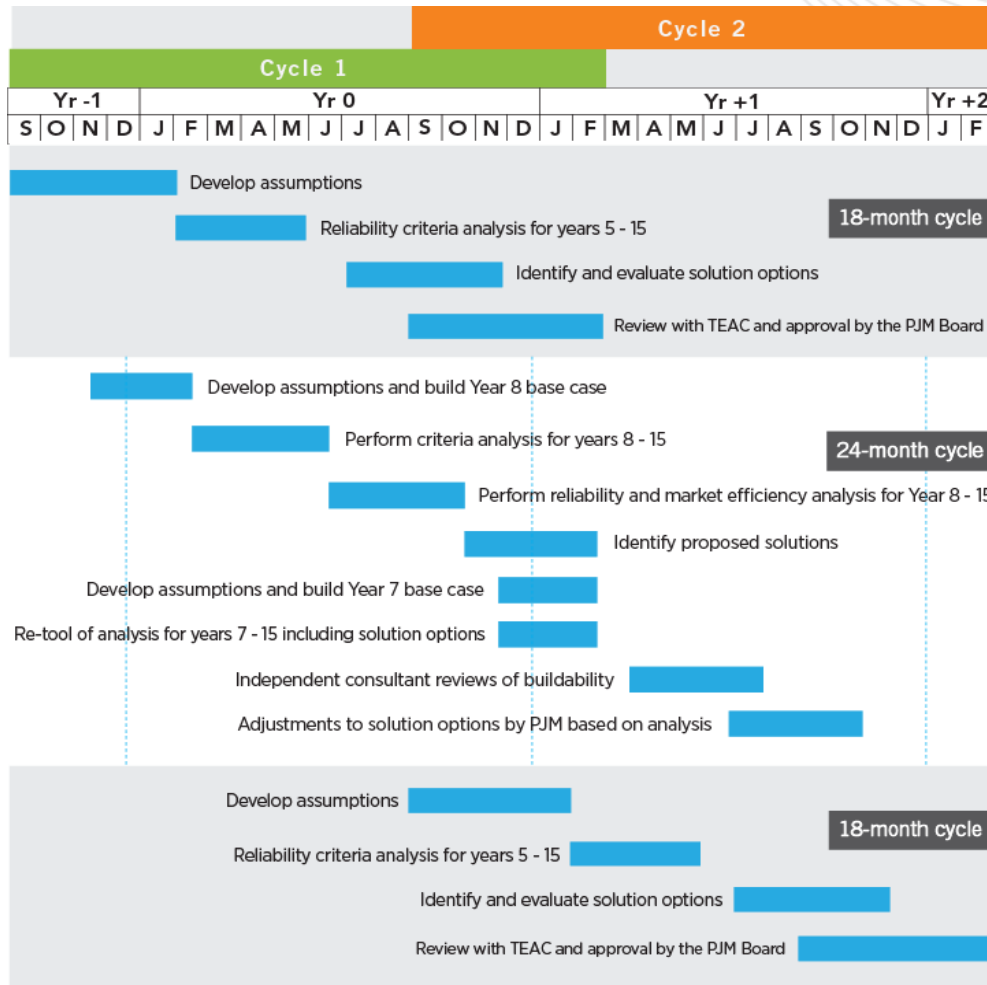
Manual 14B

- <http://www.pjm.com/-/media/documents/manuals/m14b.ashx>

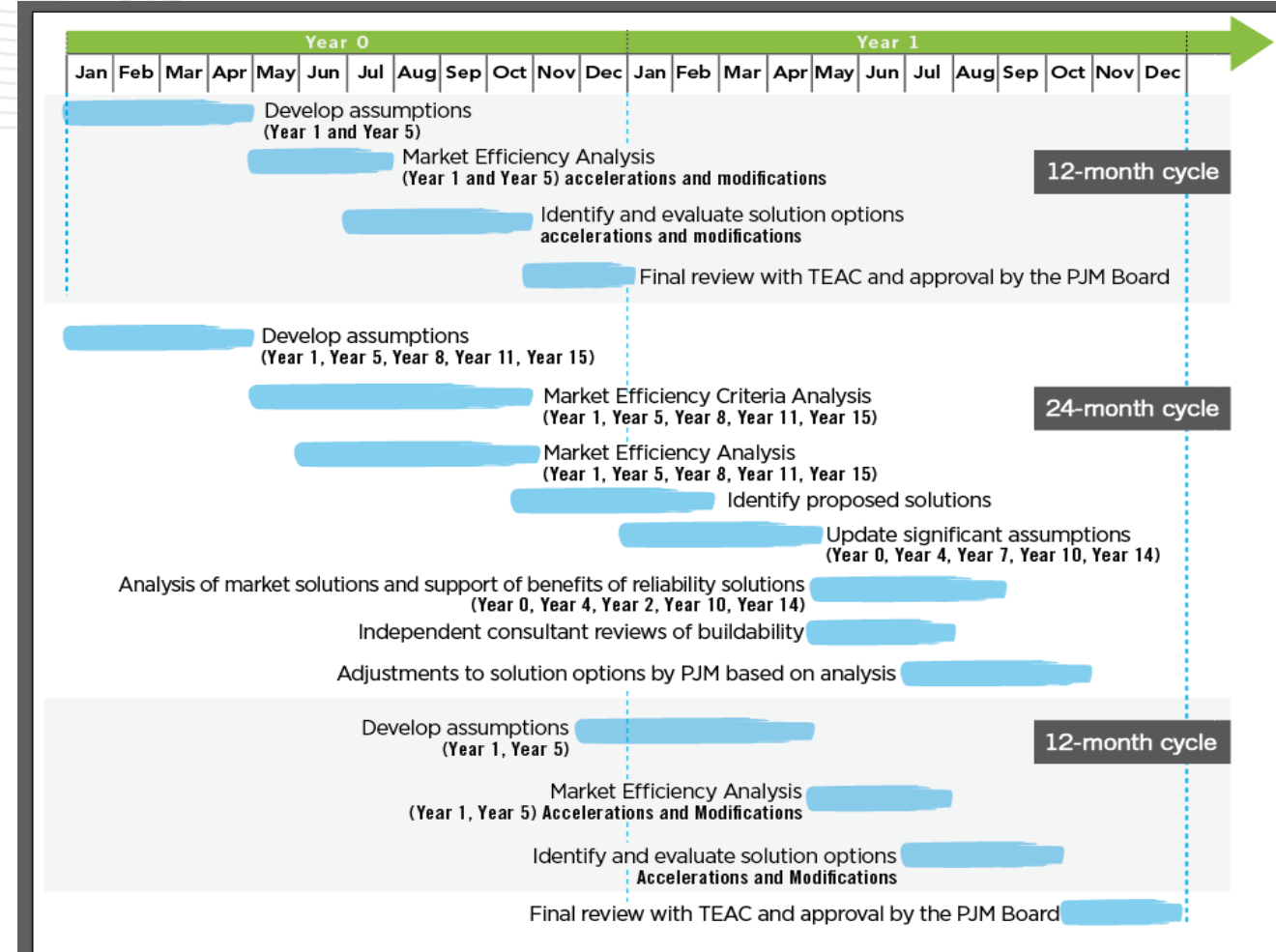




PJM's 2-year Reliability



PJM's 2-year Market Efficiency



PJM 2021 RTEP Assumptions

- PJM annually presents the assumptions at the beginning of each year. See the link below for details of the presentation.
- <https://www.pjm.com/-/media/committees-groups/committees/teac/2021/20210209/20210209-item-09a-2021-rtep-assumptions.ashx>

- PJM/NYISO Interface
 - B & C cables will be modeled out of service consistent with NYISO modeling
- Linden VFT
 - Modeled at 330 MW
- HTP
 - Modeled at 0 MW

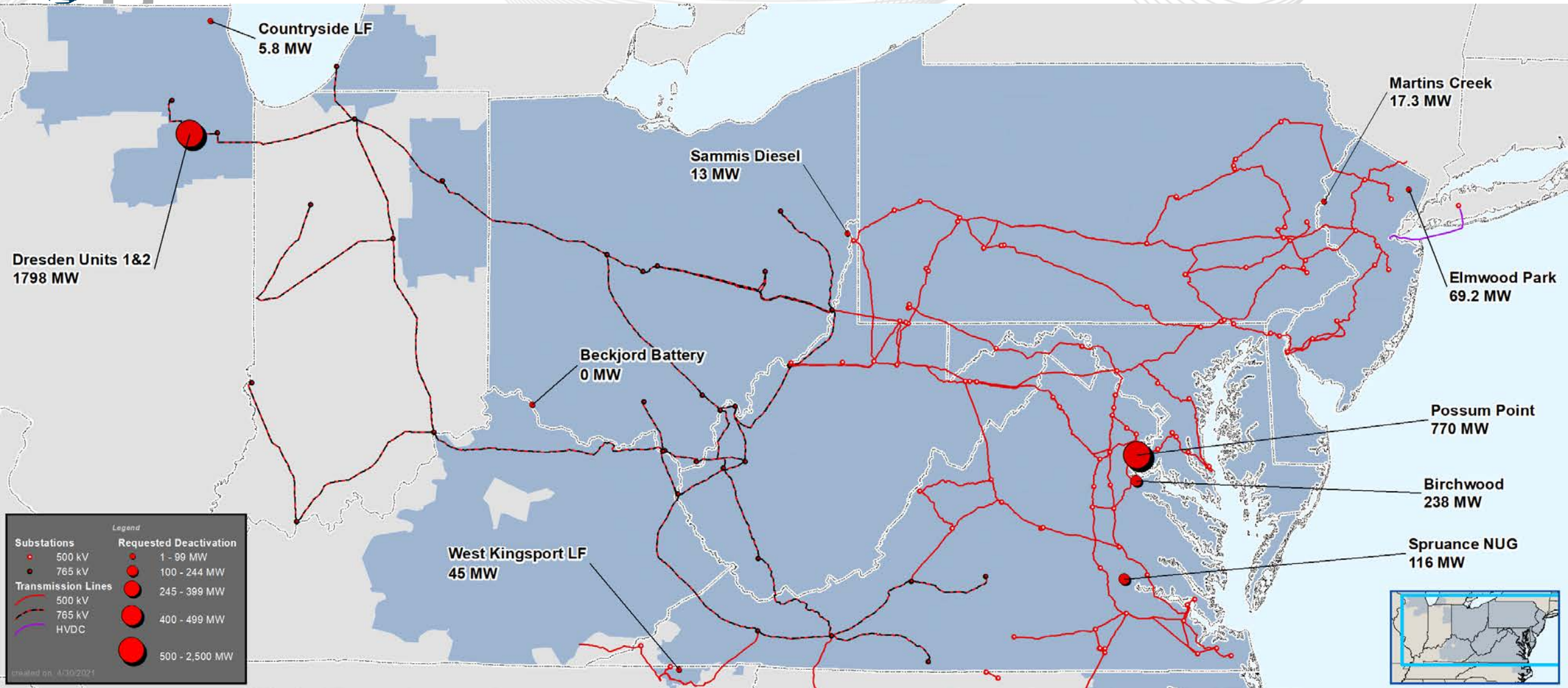
- Queue projects with an FSA or ISA but are not included in 2021 Series RTEP cases
 - Y3-092 (MTX)
 - 1000 MW Capacity Transmission Injection Rights
 - 500 MW Firm Transmission Withdrawal Rights and 500 MW Non-Firm Transmission Withdrawal Rights

- As part of the 24-month RTEP cycle, a year 7 (2028) base case will be developed and evaluated as needed as part of the 2021 RTEP
- The year 7 case will be based on the 2026 Summer case that will be developed as part of this year's 2021 RTEP
- Purpose: To identify and develop longer lead time transmission upgrades

- Similar to the 2020 RTEP and per the PJM Operating Agreement, a proposal window will be conducted for all reliability needs that are not Immediate Need reliability upgrades or are otherwise ineligible to go through the window process.
- FERC 1000 implementation will be similar to the 2020 RTEP.
 - Advance notice and posting of potential violations
 - Advance notice of window openings
 - Window administration

- June/July 2021
 - Open competitive proposal window
 - Post modeling assumptions changes and corrections for and begin mid-year retool of 2021 RTEP baseline analysis
 - Accounts for major new modeling assumption changes and corrections not previously considered.
 - Basic assumptions such as planning criteria and ratings methodology that changed after February will not be considered until the 2022 RTEP.
- July/August 2021
 - Close competitive proposal window
 - Finalize mid-year retool
- August to October 2021: Evaluate proposals
- October to December 2021: Approve proposals

Generation Deactivation Notification Update (Between 11/1/2020 and 4/1/2021)



Unit(s)	Fuel Type	Transmission Zone	Requested Deactivation Date	PJM Reliability Status
Martins Creek CT 4 (17.3 MW)	Natural Gas	PPL	5/31/2022	Reliability analysis complete. No violation identified
Dresden 2 (902.5 MW)	Nuclear	ComEd	11/8/2021	Reliability analysis complete. No violation identified
Dresden 3 (895.5 MW)	Nuclear	ComEd	11/29/2021	Reliability analysis complete. No violation identified
West Kingsport LF (45 MW)	Biomass	MetEd	5/31/2022	Reliability analysis Underway.

Unit Name	Fuel Type	Transmission Zone	Actual Deactivation Date	PJM Reliability Status
Elmwood Park Power (69.2 MW)	Natural Gas	PSEG	3/12/2021	Reliability analysis complete; no impacts identified
Birchwood Plant (238 MW)	Coal	Dominion	3/1/2021	Reliability analysis complete; upgrades expected to be completed in future, but interim operating measures identified and unit can deactivate as scheduled
Beckjord Battery Unit 2 (0 MW)	Storage	DEOK	2/3/2021	Reliability analysis complete; no impacts identified
Countryside Landfill (5.8 MW)	Methane	ComEd	1/27/2021	Reliability analysis complete; no impacts identified
Spruance NUG 1 (116 MW)	Coal	Dominion	1/12/2021	Reliability analysis complete; no impacts identified
Possum Point 5 (770 MW)	Oil	Dominion	12/30/2020	Reliability analysis complete; no impacts identified

Unit(s)	Fuel Type	Transmission Zone	Withdrawn Deactivation Date	PJM Reliability Status
Sammis Diesel (13 MW)	Oil	ATSI	2/16/2021	Reliability analysis complete and upgrades expected to be completed in time for unit to deactivate as scheduled.

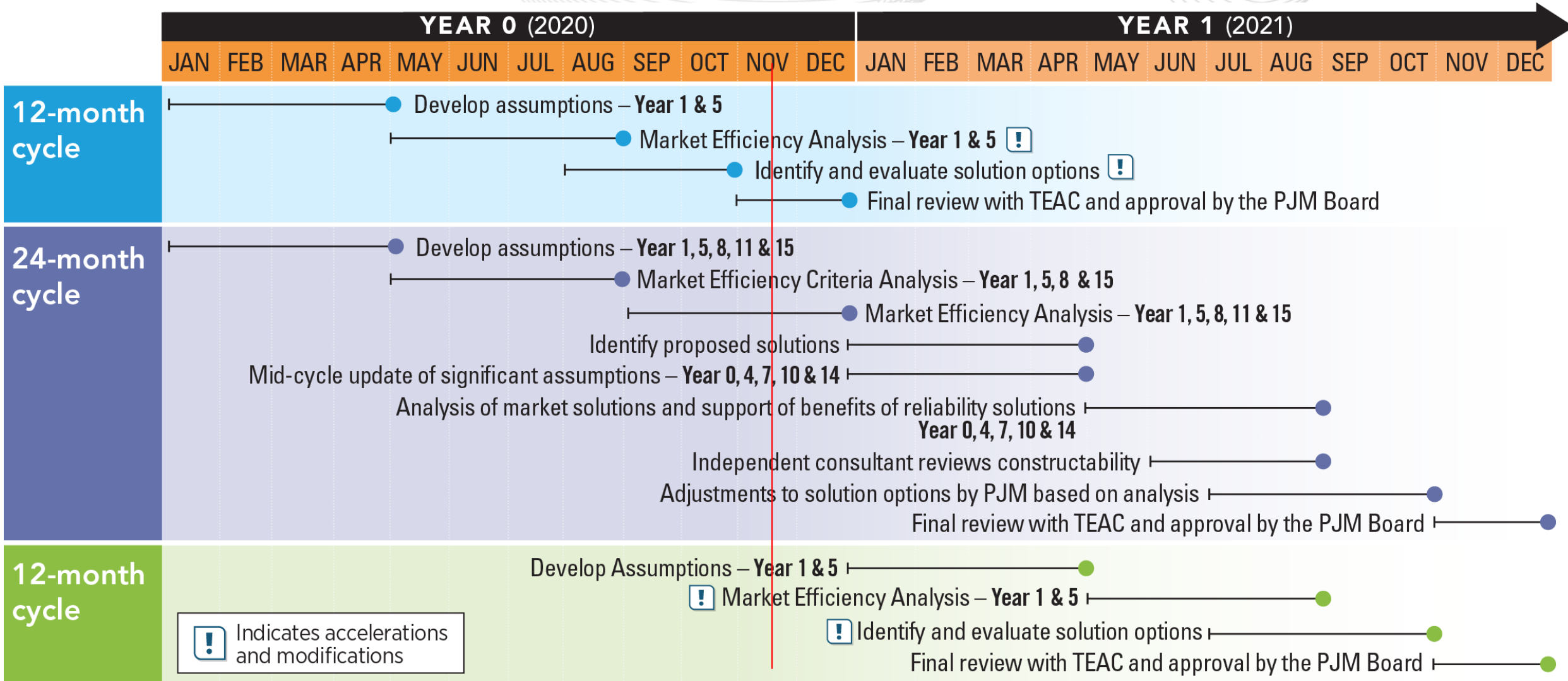
Generation Deactivation link:

<https://www.pjm.com/planning/services-requests/gen-deactivations>

PJM Market Efficiency Update

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2020/2021 Long-Term Window



- Market Efficiency Input Assumptions presented at TEAC meetings June through August
 - 20/21 Market Efficiency Analysis Assumptions [whitepaper](#) was shared with the PJM board for consideration at the September Board meeting and posted with the October TEAC materials
- Market Efficiency Training, available [here](#) completed October 20th
- Window process and registration presented at the [Special TEAC – Market Efficiency](#) on December 23rd, 2020

Long-Term Market Efficiency Window (120 days)

2020/21 Long-Term Window started January 11, 2021 and will close May 11, 2021

Problem statement and target congestion drivers are posted on the [Competitive Planning Process](#) page

- Updated Market Efficiency Economic Models posted on the [Market Efficiency Secure Page](#)
- Includes updated market efficiency base case files for all study years, PROMOD input files and benchmark test cases and results.
- To access the information, stakeholders required to have CEII confirmation (for both PJM and MISO) and PROMOD vendor (ABB) confirmation.



2020/21 RTEP Market Efficiency Window Congestion Drivers*

2020/21 RTEP Market Efficiency Window Eligible Energy Market Congestion Drivers* (Updated 04-05-2021)				ME Base Case (Annual Congestion \$million)		ME Base Case (Hours Binding)		Is Line Conductor Limited?	Conductor Ratings**	Comment
FG#	Constraint	FROM AREA	TO AREA	2025 Simulated Year	2028 Simulated Year	2025 Simulated Year	2028 Simulated Year			
ME-1	Kammer North to Natrium 138 kV	AEP	AEP	\$ 2.13	\$ 5.89	71	157	Yes		Internal Flowgate
ME-3	Junction to French's Mill 138 kV	APS	APS	\$ 6.78	\$ 9.49	215	233	No	SN/SE=221/268 MVA WN/WE=250/317 MVA	Internal Flowgate
ME-5	Charlottesville to Proffit Rd Del Pt 230 kV	DOM	DOM	\$ 3.96	\$ 5.34	125	122	Yes		Internal Flowgate
ME-6	Plymouth Meeting to Whitpain 230 kV	PECO	PECO	\$ 3.36	\$ 3.48	117	95	No	SN/SE=463/578 MVA WN/WE=521/639 MVA	Internal Flowgate
ME-7	Cumberland to Juniata 230 kV***	PLGRP	PLGRP	\$ 8.11	\$ 6.11	204	185	Yes		Internal Flowgate

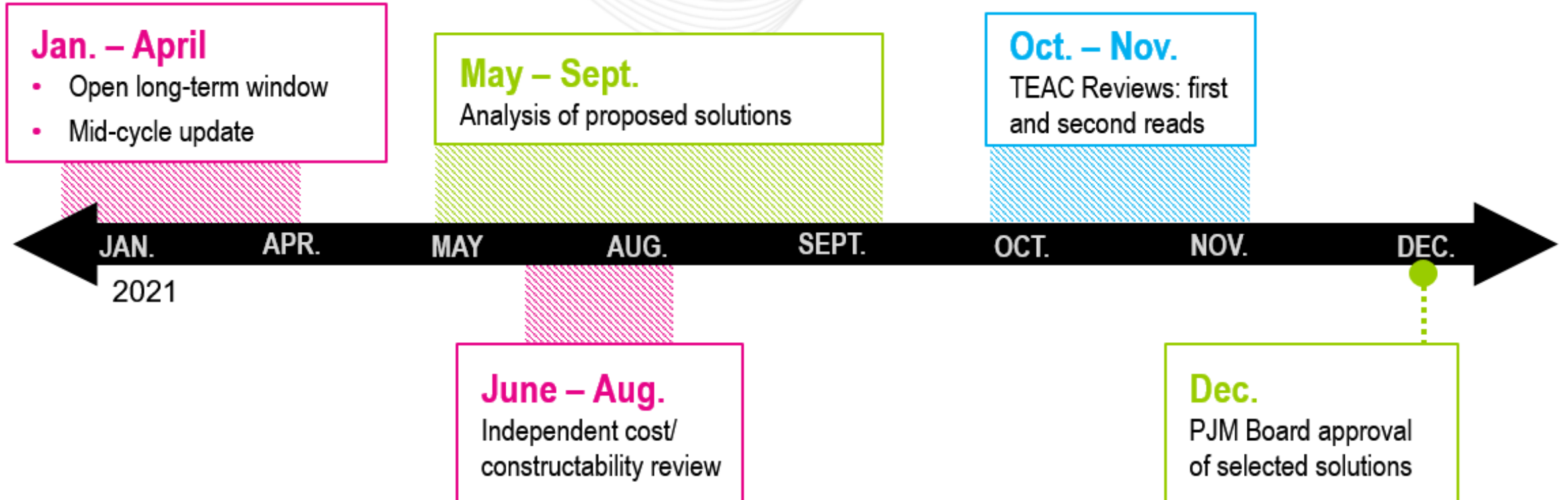
Notes:

* ME-2, ME-4, ME-8, ME-9, and ME-10 constraints no longer eligible congestion drivers (updates to the model reduced congestion below the eligibility threshold).

** Conductor ratings provided by TOs for congestion drivers that are limited by station equipment.

*** Cumberland – Juniata congestion driver may be impacted by DLR (Dynamic Link Rating) projects (Expected in-service date 06/01/2021).

2020/21 Long-Term Window Schedule (Year 2021)



Questions?

