



Enhancing CIR Transfer Efficiency – Solution Package

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Interconnection Analysis Department
Markets & Reliability Committee
November 21, 2024

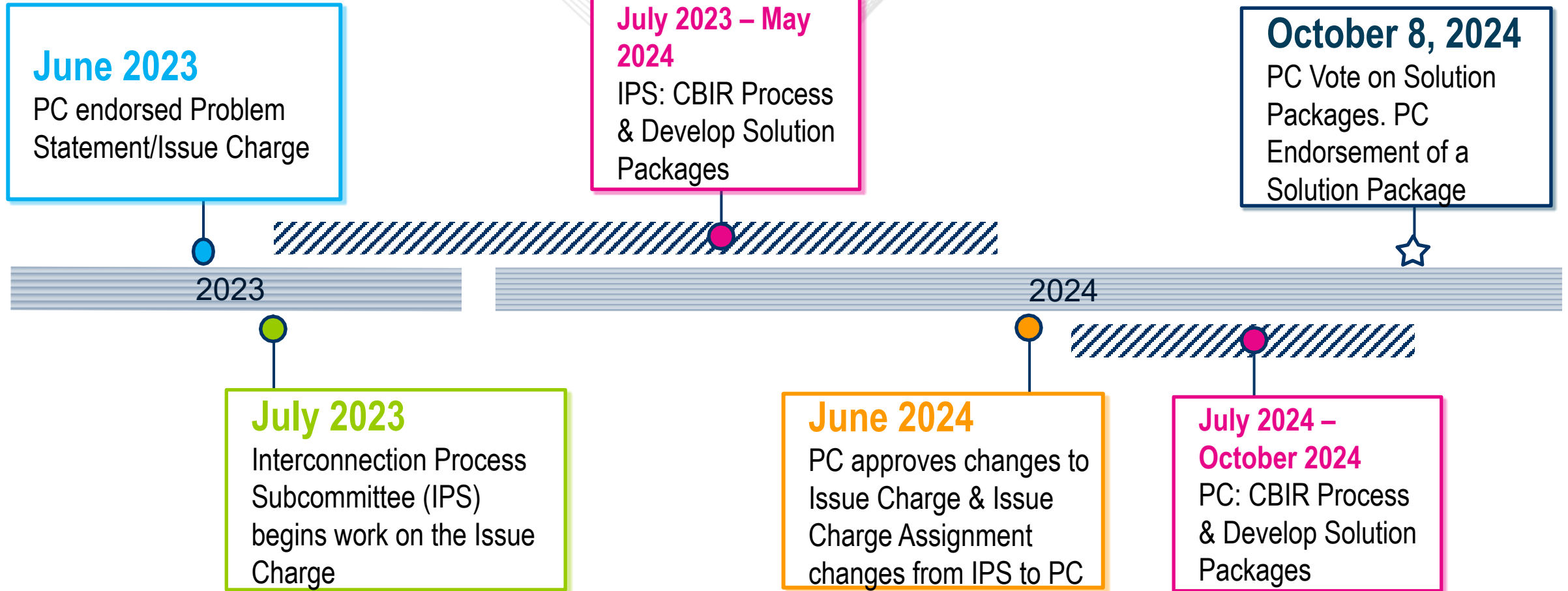
Issue Source

East Kentucky Power Cooperative and Elevate Renewable Energy

Key Work Activities and Scope

1. Education on PJM’s process (including the reliability analysis PJM must perform and responsibility for transmission reinforcements that may be needed) for transferring CIRs from deactivating generation resources to replacement resources.
2. Develop a solution that enhances PJM’s process for transferring CIRs from deactivating resources that both improves the efficiency of the process and clarifies that it applies to all energy-injecting capacity resource types.

Enhancing CIR Transfer Efficiency - Background



<p>Question 1: Do you endorse the IMM proposal addressing CIR transfer efficiency?</p> <p>No Count 240, (89%)</p> <p>Yes Count 30, (11%)</p> <p>Abstentions: 5</p>	<p>Question 2: Do you prefer the IMM proposal over status quo?</p> <p>No Count 239, (89%)</p> <p>Yes Count 30, (11%)</p> <p>Abstentions: 6</p>	<p>Question 3: Do you endorse the Coalition's (Elevate's) proposal, as amended, addressing CIR transfer efficiency?</p> <p>No Count 131, (48%)</p> <p>Yes Count 141, (52%)</p> <p>Abstentions: 3</p>	<p>Question 4: Do you prefer the Coalition's (Elevate's) proposal, as amended, over status quo?</p> <p>No Count 129, (48%)</p> <p>Yes Count 138, (52%)</p> <p>Abstentions: 7</p>	<p>Question 5: Do you endorse the PJM proposal addressing CIR transfer efficiency?</p> <p>No Count 152, (59%)</p> <p>Yes Count 104, (41%)</p> <p>Abstentions: 19</p>	<p>Question 6: Do you prefer the PJM proposal over status quo?</p> <p>No Count 96, (40%)</p> <p>Yes Count 143, (60%)</p> <p>Abstentions: 7</p>
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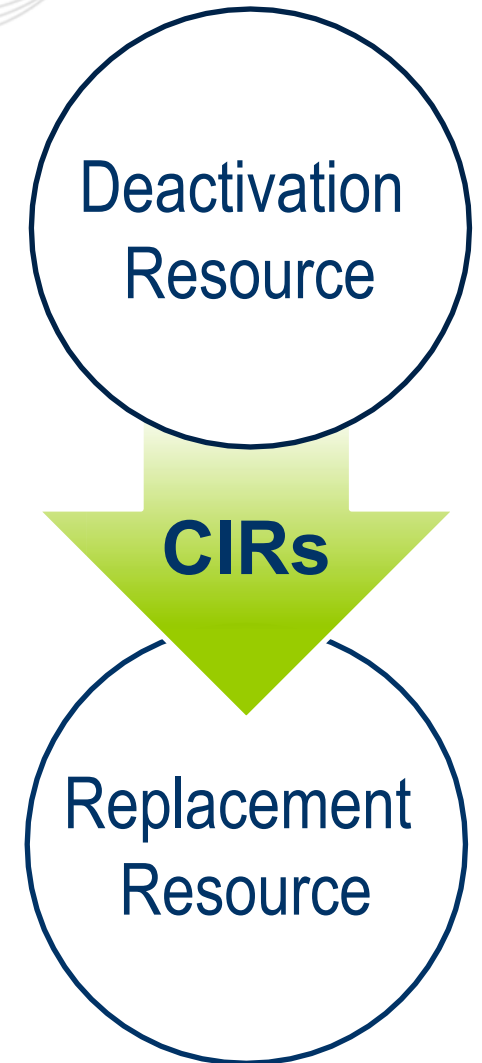
Enhancing CIR Transfer Efficiency – PC Endorsed Solution Package

- No substantive changes to the Solution Package, as presented at the 10/30/24 MRC 1st Read
- There was a Special MRC Page Turn on 11/14/24 to review the proposed Tariff revisions which support this Solution Package
- A few updates made to the Solution Package slides as compared to the October 30, 2024 MRC slides that are clarification based:
 - Slide 11 – added clarifying details to help illustrate how queue priority would be established between Cycles and Replacement Generation requests
 - Slide 13 – Solution Package endorsement timeline – added the Special MRC Page Turn on 11/14/24 & the December MC date.
 - Slide 15 – Appendix 1 (Matrix Clarifications) – added one additional clarification for Matrix DC #30

Solution package proposes to create a new expedited interconnection process for transferring CIRs from a Deactivating Generation Resource to a Replacement Resource.

This proposed Replacement Generation Interconnection Process would be standalone outside of the PJM Cycle Process and operate in parallel to the Cycle Process

- Better allows for the alignment of timing of de-energizing deactivating resource and energizing of replacement resource
- Expedited timing allows replacement resources to execute GIA sooner and allows for inclusion in RTEP models sooner to support reliability studies





Eligibility & Application Requirements – Replacement Generation Interconnection Process

Requires an official Deactivation Notice, or Notice of Intent to Deactivate sent to PJM

CIRs claimed prior to expiring which is 1 year after the Actual Deactivation Date, via a Replacement Generation Interconnection Application submission

A Notice of Intent to Transfer CIRs form must be submitted to confirm the holder of the CIRs.

The form confirms the owner/Transferor of the CIRs and the Transferee to whom the CIRs are being transferred to (which may be the same entity or a different entity)

- **Point of Interconnection (POI)** - Replacement resource must connect at the same voltage level at same interconnection substation as the Deactivation resource
- **MW Requirements** – Replacement resource’s CIRs and MFO cannot exceed the Deactivation resource
- **Replacement Resource Fuel Type** – all fuel types eligible, including storage, if requesting CIRs

Any Generation Interconnection request seeking a CIR transfer that does not meet the eligibility criteria for the Replacement Generation Process can submit an application for the Cycle Process

Replacement Generation Interconnection Process

Application Phase (60 days)

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| 1. Submit Replacement Gen Application | 4. All Site Control Requirements | 7. Deficiency review period |
| 2. Notice of Intent to Transfer CIRs Form, Notice of Intent to Deactivate Form | 5. Project Data | 8. PJM assigns Replacement Gen Request # |
| 3. Study Deposit – \$60K | 6. PJM performs application review and confirms eligibility requirements met | 9. Scoping meeting with PJM, Project Developer, TO |

Impact Study Phase (180 days)

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| 1. PJM runs any needed thermal/voltage, short circuit, stability analyses | 2. Use most recent Phase 2 (or Phase 3) study models from Cycle Process | 3. If any reliability criteria is violated (material adverse impact), Developer may amend project to mitigate such criteria violation. |
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4. TO completes Facilities Study

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| a) Identify new interconnection facilities required, metering, relaying, etc. | b) Identify scope with cost estimates & time estimates to construct any new interconnection facilities & any new reliability driven network upgrades, if required. |
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PJM issues Replacement Generation Interconnection Study report to Developer along with draft GIA

GIA Negotiation Phase (60 days)

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| 1. Developer Decision: Post 100% Security in 30 days | 2. PJM to review draft GIA comments, revise and re-issue as appropriate | 3. Execution of GIA |
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Total time: ~10 months



Replacement Generation Interconnection Process

Replacement Generation applications:

1. Can be submitted to PJM at any time. There are no defined Replacement Generation application windows.
2. Are prioritized serially, in the order each application is received by PJM.

After the Application Phase:

- No site control changes or other project changes such as Fuel Type, MW size
- Equipment changes (Permissible Technological Advancement changes only) can occur via Necessary Study after GIA execution

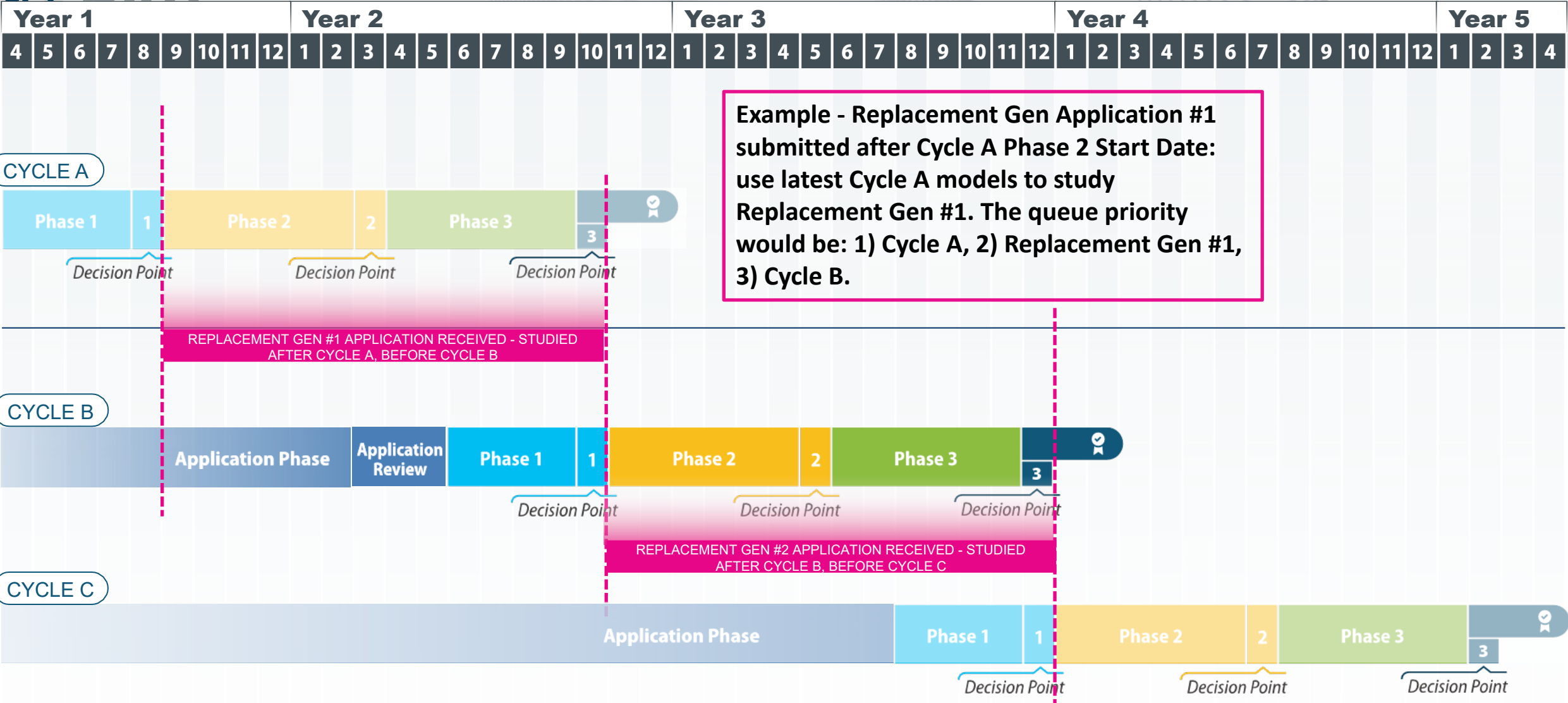
Note: if reliability criteria is violated, project may be amended during study phase

Cost Allocation – Replacement Generation resource is responsible for 100% of all identified required network upgrades. No cost sharing with other Replacement Generation projects or Cycle projects

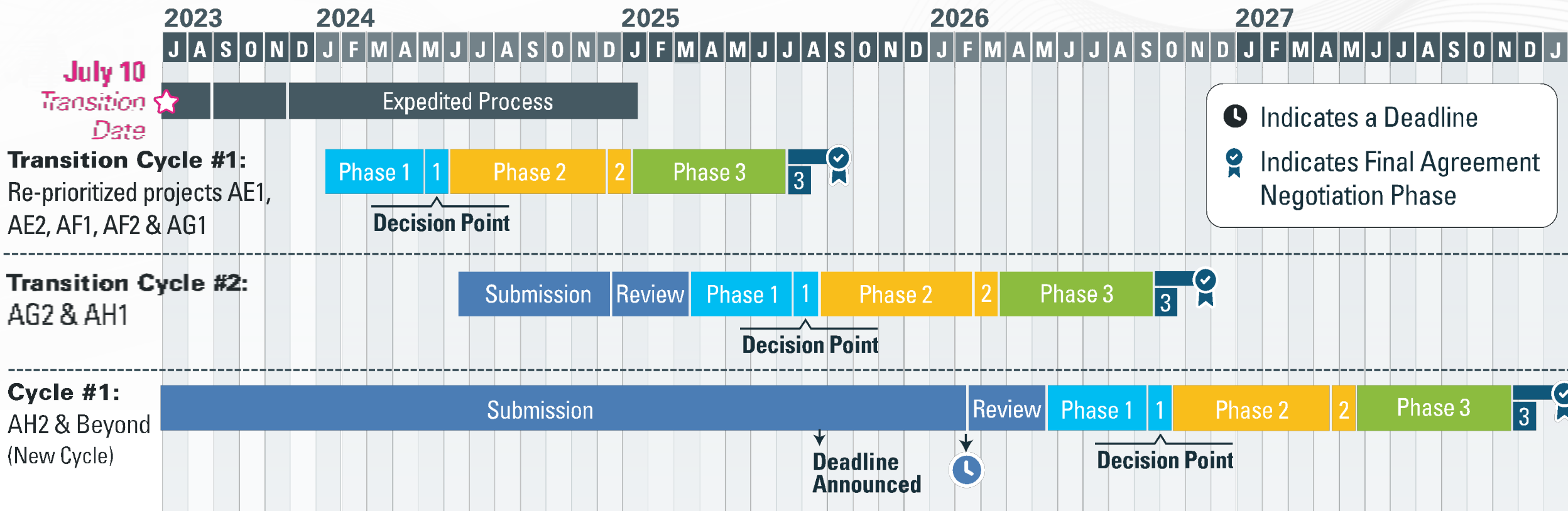
GIA Requirements – similar to GIAs issued to interconnection requests in the Cycle Process

Specific Commercial Operation Date (COD) Requirements for Replacement Generation requests:

- Replacement Resource cannot commercially operate prior to the Actual Deactivation Date of the Deactivation Resource
- COD no more than 3 years from the date of cessation of operation of the Existing Generating Facility or signed execution of the GIA, whichever occurs last. Milestone dates eligible for waiver/extension.

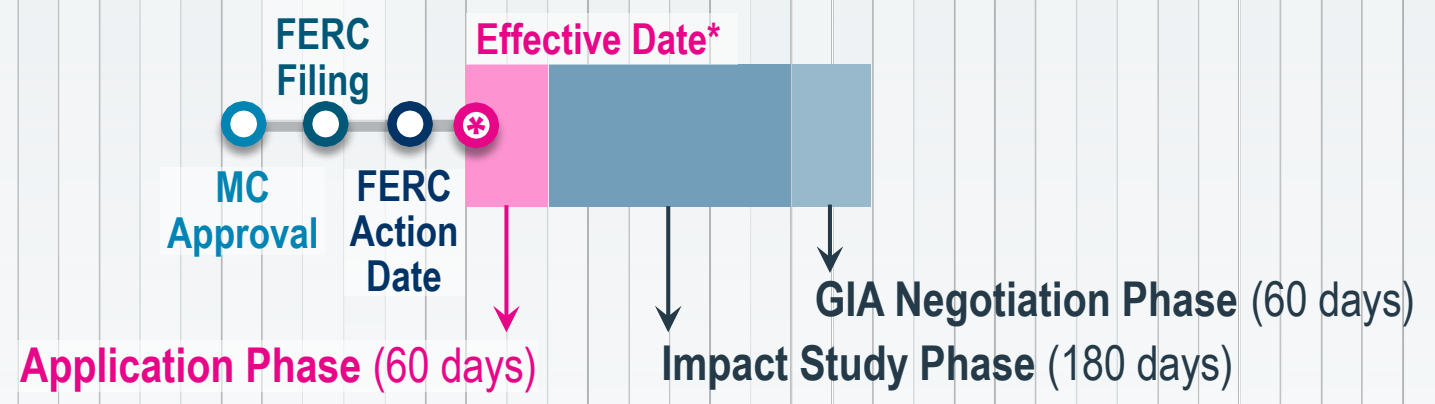


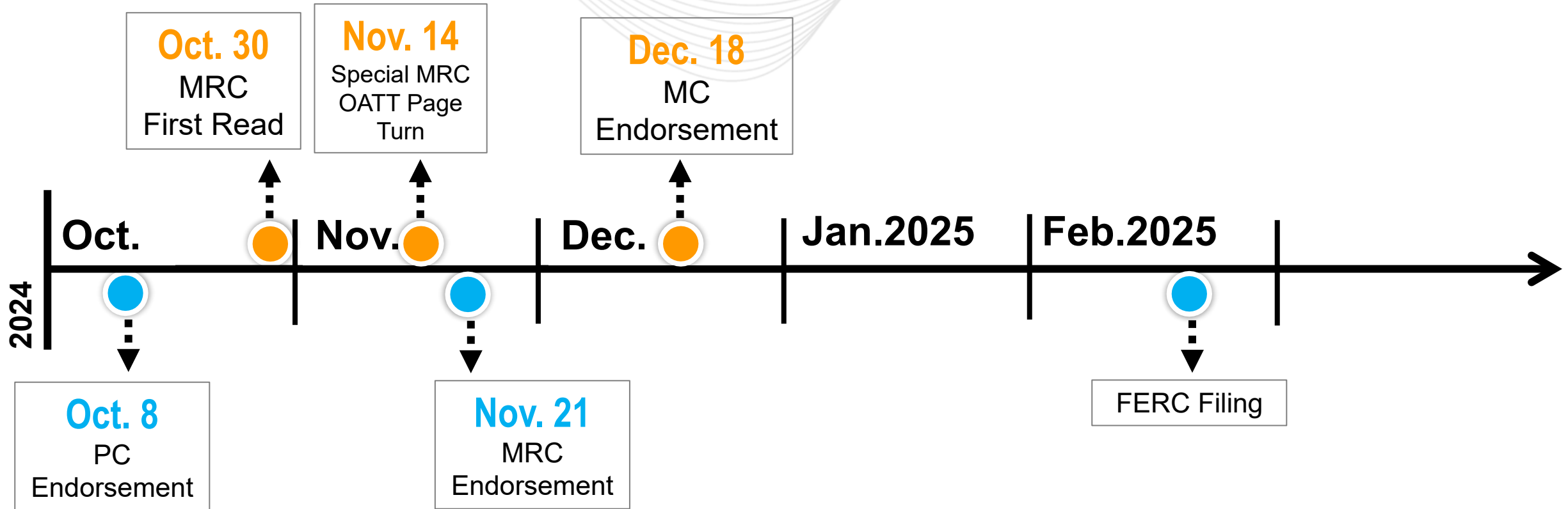
Example - Replacement Gen Application #1 submitted after Cycle A Phase 2 Start Date: use latest Cycle A models to study Replacement Gen #1. The queue priority would be: 1) Cycle A, 2) Replacement Gen #1, 3) Cycle B.



Proposed Replacement Generation Process

Estimated timeline – subject to change.





Appendix

- 10/8/24 PC amendment to package (details of Commercial Operation Date), posted under 10/8/24 PC materials, now reflected in Matrix Design Component (DC) #9
- Package slides posted under 10/8/24 PC materials contains an update to the package to have the same scope of reliability studies as performed in the Cycle Process. Matrix DC #20 captured this update. Other Design Component updates were needed to reflect this change as well and are now reflected in Matrix DC #10, DC #11, DC #13, DC #19, DC #25.
- Matrix DC #14 – clarified in Matrix that the required \$60K deposit to also be used for PJM consultant services to assist in the study process.
- Matrix DC #11 – 10/8/24 PC package slides state the Replacement Generation Process should take 9 months or less. 10/8/24 Matrix shows an Impact Study Phase (90 Days) and a Facilities Study Phase (180 Days). Clarified in Matrix that the intent of this Matrix entry was that the Impact Study and Facilities Study phases intended to be done in parallel and total 180 days as outlined in posted 9/12/24 PC slides. Application Phase and GIA Phase remain unchanged with each being 60 Days.
- Matrix DC #13 & DC #24 – clarified in Matrix that project changes during study process only allowed if material adverse impacts are identified, else no project changes allowed as stated in DC #24.
- Matrix DC #19 – states which study models to use. Added additional clarification in Matrix to use a most recent Phase 3 study model (if available).
- Matrix DC #30 – clarified in Matrix if Replacement Gen request is found to not meet requirements of Replacement Process after the CIR expiration date, PJM to notify the Developer, and Developer will need to submit a Cycle Process interconnection application within 60 days of receiving such notice to retain the CIRs.

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Enhancing CIR Transfer Efficiency - Solution Package



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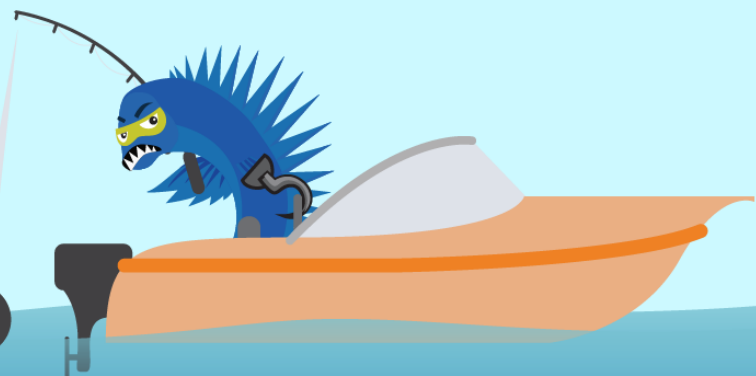
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POWER GRID**

**THINK BEFORE
YOU CLICK!**



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MALICIOUS PHISHING
EMAILS**



**Report suspicious email activity to PJM.
Call (610) 666-2244 or email it_ops_ctr_shift@pjm.com**