

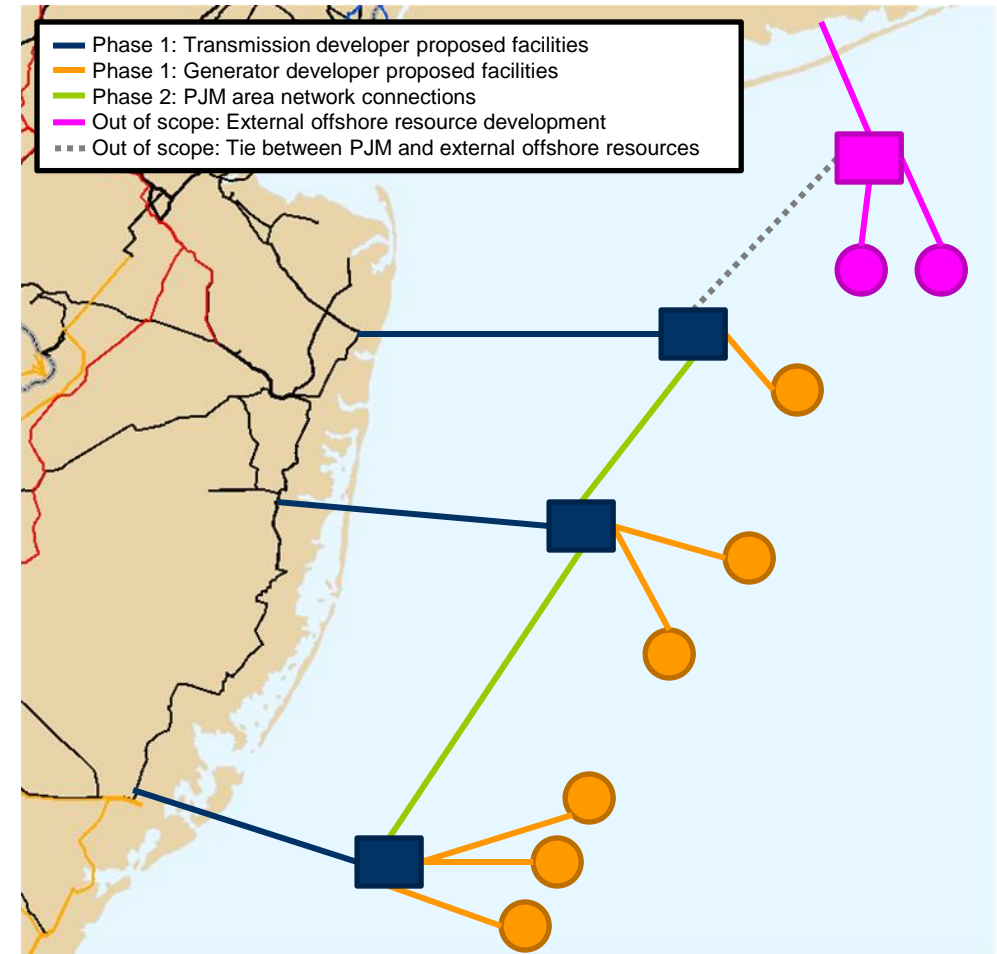
Connecting Offshore Resources Interconnection Process Options

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Special PC: Merchant
Transmission & Offshore Wind
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- Status quo
 - Separate transmission and generation developer
 - Partnered transmission and generation developer
- New packages
 - Solution A: MTx/Gen requests with new “XCIRs”
 - Solution B: MTx/Gen requests with new “XCIRs” using generic gen data
 - Solution C: Modified Gen request
- Details included in options matrix

- Application and scope of request
- Queue priority
- Site control requirements
- Identification of “real” generating data
- Planned duration in the queue
- Analysis requirements
- Size reductions and Material Modification
- Cost responsibility for network upgrades
- ISA security requirements
- Incorporation into base case

- Phase 1 efforts focus on radial transmission and connected generation (blue and orange)
- Phase 2 efforts focus on networking the radial facilities (green)
- External interconnections out of scope to these Special PC efforts (pink and grey)



Solution	Solutions Details
Status Quo: Separate transmission and generation developers	Transmission: Attachment S requesting POI Generation: Attachment N requesting CIRs
Status Quo: Partnered transmission and generation developers	Partnership: Attachment N requesting POI and CIRs
Solution A: Transmission for XCIRs then Generation request	Transmission: Attachment S requesting POI and XCIRs Generation: Attachment N identified quantity of XCIRs to be transferred from source project
Solution B: Transmission for XCIRs and generic generator data then Generation request	Transmission: Attachment S requesting POI and XCIRs Generation: Attachment N identified quantity of XCIRs to be transferred from source project
Solution C: Modified Generation process	Transmission: Attachment N requesting POI and CIRs

Solution	Solutions Details
Status Quo: Separate transmission and generation developers	Transmission: Priority of POI Generation: CIRs
Status Quo: Partnered transmission and generation developers	Partnership: POI and CIRs
Solution A: Transmission for XCIRs then Generation request	Transmission: POI and XCIRs Generation: Based on XCIRs
Solution B: Transmission for XCIRs and generic generator data then Generation request	Transmission: POI and XCIRs Generation: Based on XCIRs
Solution C: Modified Generation process	Transmission: POI and CIRs

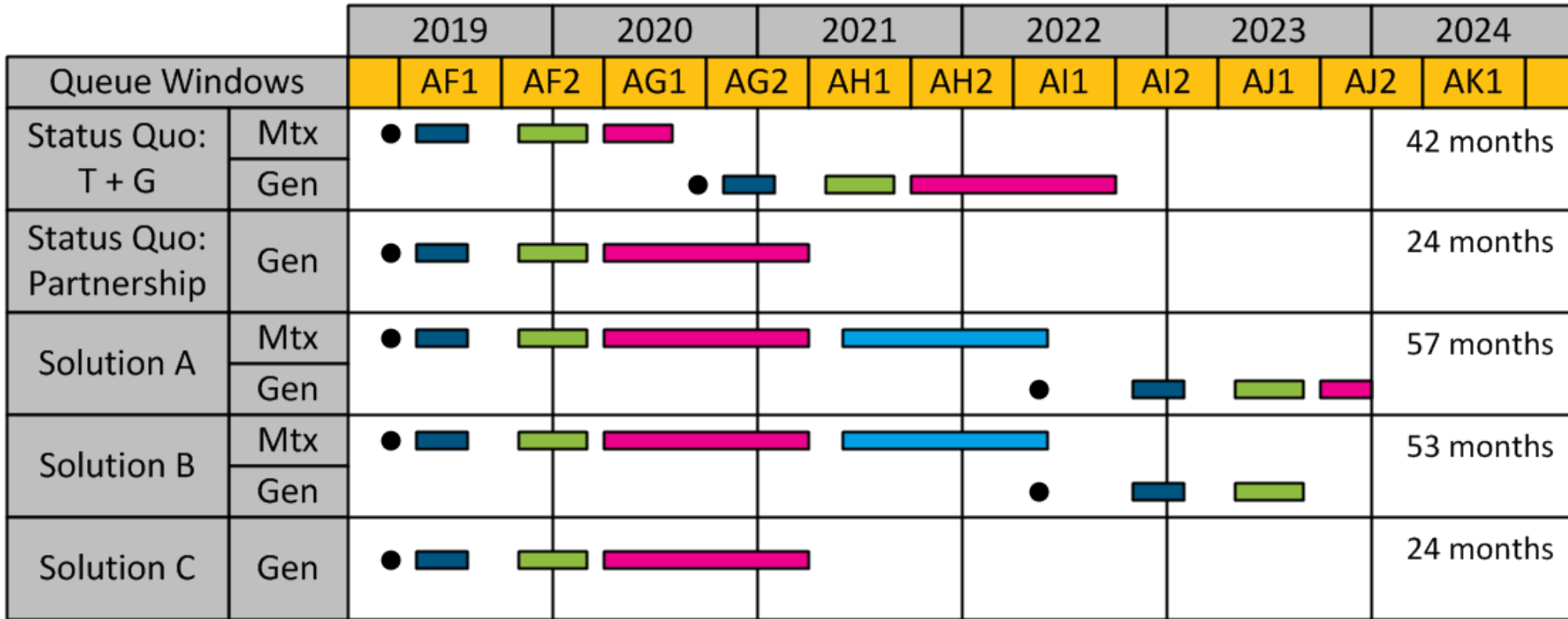
Solution	Solutions Details
Status Quo: Separate transmission and generation developers	Transmission: Control of site at POI Generation: Control of site where generators are located
Status Quo: Partnered transmission and generation developers	Partnership: Control of site where generators are located
Solution A: Transmission for XCIRs then Generation request	Transmission: Control of site at POI Generation: Control of site where generators are located
Solution B: Transmission for XCIRs and generic generator data then Generation request	Transmission: Control of site at POI Generation: Control of site where generators are located
Solution C: Modified Generation process	Transmission: Control of site where generators are located. Offshore developers may demonstrate they have reached out to applicable regulatory entities

Solution Comparison

Identification of “Real” Generation Data

Solution	Solutions Details
Status Quo: Separate transmission and generation developers	Transmission: No requirement for generator data Generation: Submitted with Attachment N
Status Quo: Partnered transmission and generation developers	Generation: Submitted with Attachment N
Solution A: Transmission for XCIRs then Generation request	Transmission: Limited to MW output of anticipated generation Generation: Submitted with Attachment N
Solution B: Transmission for XCIRs and generic generator data then Generation request	Transmission: Generic generation data based on anticipated fuel Generation: Submitted with Attachment N
Solution C: Modified Generation process	Generation: Generic data for Feasibility and Impact Studies, “real” data submitted during Facilities Study phase (approx. 14-20 months after Attachment N is submitted)

Solutions Comparison Planned Duration in Queue



- Assumptions:
- No delays in study completion
 - 12 month Facilities Studies
 - 2nd request enters queue at last possible date

● Interconnection Request ■ Feasibility Study ■ Facilities Study
 ■ System Impact Study ■ Retention of XCIRs

Solution	Solutions Details
Status Quo: Separate transmission and generation developers	Transmission: No analysis Generation: Thermal, short circuit and stability
Status Quo: Partnered transmission and generation developers	Generation: Thermal, short circuit and stability
Solution A: Transmission for XCIRs then Generation request	Transmission: Thermal Generation: Short circuit and stability
Solution B: Transmission for XCIRs and generic generator data then Generation request	Transmission: Thermal, generic short circuit and generic stability Generation: Updated short circuit and stability
Solution C: Modified Generation process	Generation: Thermal, short circuit and stability

Solution Comparison Size Reductions and Material Modifications

Solution	Solutions Details
Status Quo: Separate transmission and generation developers	Transmission: No CIRs therefore nothing to reduce Generation: 60% at Feasibility, 15% at Impact, 5% at Facilities
Status Quo: Partnered transmission and generation developers	Generation: 60% at Feasibility, 15% at Impact, 5% at Facilities
Solution A: Transmission for XCIRs then Generation request	Transmission: 60% at Feasibility, 15% at Impact, 5% at Facilities Generation (all or a portion of XCIRS): 60% at Feasibility, 15% at Impact, 5% at Facilities
Solution B: Transmission for XCIRs and generic generator data then Generation request	Transmission: 60% at Feasibility, 15% at Impact, 5% at Facilities Generation (all or a portion of XCIRS): 60% at Feasibility, 15% at Impact, 5% at Facilities
Solution C: Modified Generation process	Generation: 60% at Feasibility, 15% at Impact, 5% at Facilities



Solution Comparison

Cost Responsibility for Network Upgrades

Solution	Solutions Details
Status Quo: Separate transmission and generation developers	Transmission: POI work (Attachment Facilities) Generation: Network Upgrades
Status Quo: Partnered transmission and generation developers	Partnership: POI work and Network Upgrades
Solution A: Transmission for XCIRs then Generation request	Transmission: POI work and Network Upgrades for thermal violations Generation: Network Upgrades for short circuit or stability violations
Solution B: Transmission for XCIRs and generic generator data then Generation request	Transmission: POI work and Network Upgrades Generation: No PJM work
Solution C: Modified Generation process	Transmission: POI work and Network Upgrades

Solution	Solutions Details
Status Quo: Separate transmission and generation developers	Transmission: 3-month cost for POI work Generation: 100% cost of Network Upgrades
Status Quo: Partnered transmission and generation developers	Partnership: 3-month cost for POI work + 100% cost of Network Upgrades
Solution A: Transmission for XCIRs then Generation request	Transmission: 3-month cost for POI work + 100% cost of Network Upgrades for thermal issues Generation: 100% cost of Network Upgrades for short circuit and stability issues
Solution B: Transmission for XCIRs and generic generator data then Generation request	Transmission: 3-month cost for POI work + 100% cost of Network Upgrades Generation: No costs
Solution C: Modified Generation process	Transmission: 3-month cost for POI work + 100% cost of Network Upgrades

Solution	Solutions Details
Status Quo: Separate transmission and generation developers	Transmission: Radial line added after ISA Generation: Generator, upgrades and CIRs added after ISA
Status Quo: Partnered transmission and generation developers	Partnership: Generator, upgrades and CIRs added after ISA
Solution A: Transmission for XCIRs then Generation request	Transmission: Radial line, upgrades and XCIRs added after ISA Generation: Generator added after ISA
Solution B: Transmission for XCIRs and generic generator data then Generation request	Transmission: Radial line, upgrades and XCIRs added after ISA Generation: Generator added after ISA
Solution C: Modified Generation process	Transmission: Generator, upgrades and CIRs added after ISA