

Improvements to PJM Manual 14 Series

Revised 14A: "New Services Request Process"

New 14G: "Generation Interconnection Requests"

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Presented to Planning Committee
July 12, 2018



- Current Manual 14A mixes the process for application as a new service customer for any customer type with specific 'generator' customer interconnection requirements.
- Separate PJM Manual exists for 'Upgrade and Transmission Customers' (Manual 14E).
- No separate PJM Manual exists for the 'generator' customers specifically.



Revise 14A: "New Services Request Process"

General application, study, and agreement process for interconnecting any customer type.

Create New M14G: "Generation Interconnection Requests"

Application process, interconnection requirements, study/agreement process, and rights for **generator** customers.

M14A content will be preserved



Manual 14A and 14G Language Updates



Old M14A, Table 2-2-1 (Revised M14A, Table 5.2.1-1):

"System Impact Study costs"

Correction to the System Impact Study Cost table (consistent with Tariff):

Table 5.2.1-1: System Impact Study costs

Project size	Required deposit		Portion of	Maximum
	Fixed portion	Per MW Portion	deposit that is non-refundable	deposit
>20MW	None	\$500/MW	10%	\$300,000
>2MW and ≤20MW	\$10,000	None	10%	\$10,000
≤2MW	\$5000	None	10%	\$5,000



Old M14A, Section 2.1.2 (Revised M14A, Section 2.2.1)

"Interconnection (New Services) Requests and PJM Queue Position"

Queue window periods have been updated considering the "transitional queue" (which occurred between November 1, 2016 and March 31, 2017) is completed.

- The first queue window closes March 31st of the calendar year.
- The second queue window closes on September 30th of the same calendar year.
- Reference to "transitional queue" from November 1, 2016 to March 31, 2017 will be removed.



Old M14A, Section 3.1.4 (New M14G, Section 5.4.1):

"Expedited and/or Combined Study Analysis"

Updated language more specifically defines the conditions under which an accelerated analysis is not possible:

- If a secondary POI is requested to be considered, then a combined study is not possible.
- If the project is identified as needing stability analyses, light load analysis or causes or contributes to a system overload or is expected to contribute to winter analysis violations, then it cannot be accelerated.



Planning Committee 1st Read 6/7/2018 Markets & Reliability Committee 1st Read 6/21/2018

Planning Committee 2nd Read and Endorsement 7/12/2018 Markets & Reliability Committee 2nd Read and Endorsement 7/26/2018



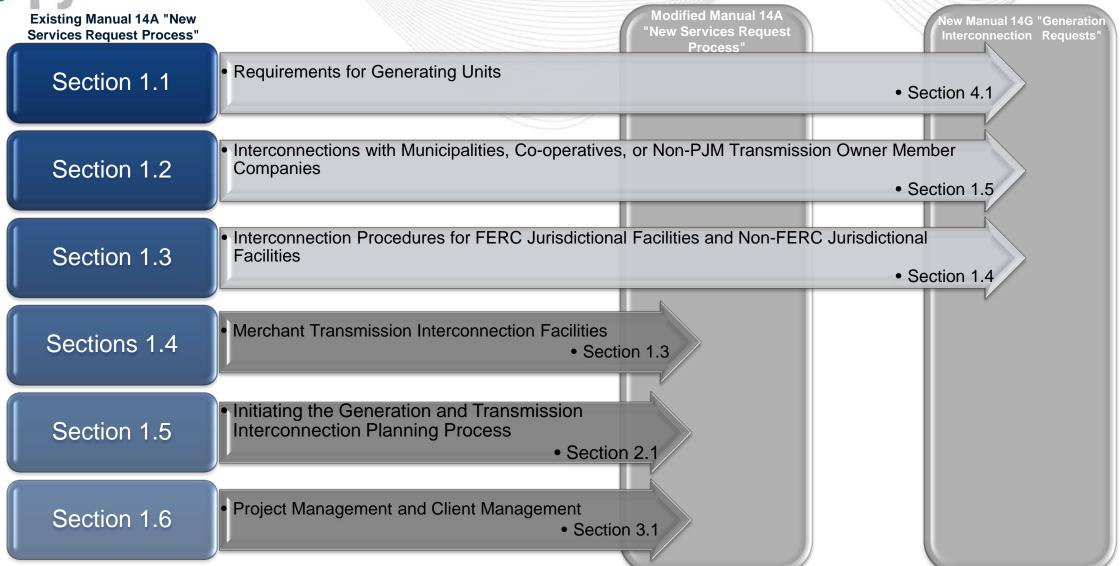
Appendix: M14A Content Transfer



Transfer of Content from Current M14A:

Section 1: Interconnection Process Overview

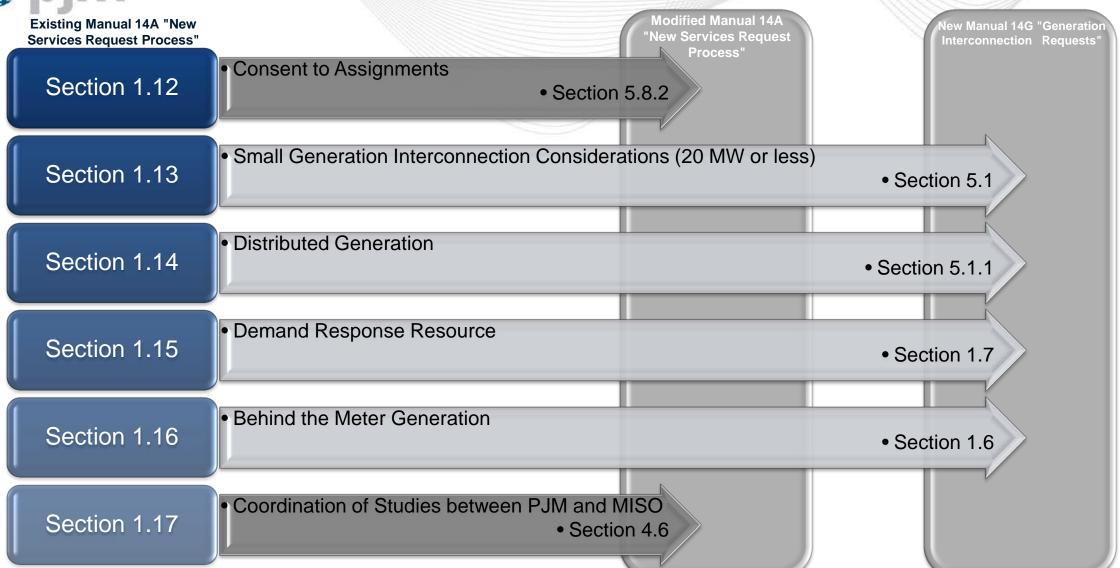




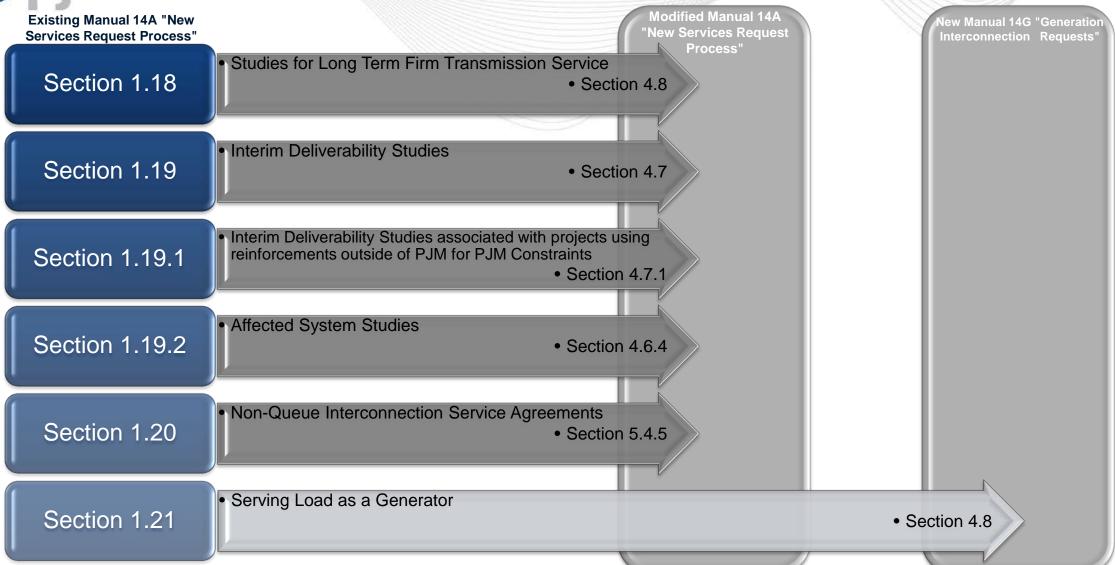


Modified Manual 14A Existing Manual 14A "New ew Manual 14G "Generation 'New Services Request **Services Request Process**" Electing Capacity Resource Status versus Energy Resource Status Section 1.7 Section 4.3 PJM Membership Section 1.8 Section 3.2 & modified Membership in NERC Regional Councils Section 1.9 • Section 3.3 The Interconnection Request Studies Section 1.10 Section 4.1 & modified Changes to Existing or Proposed Generation Section 1.11 Section 4.5







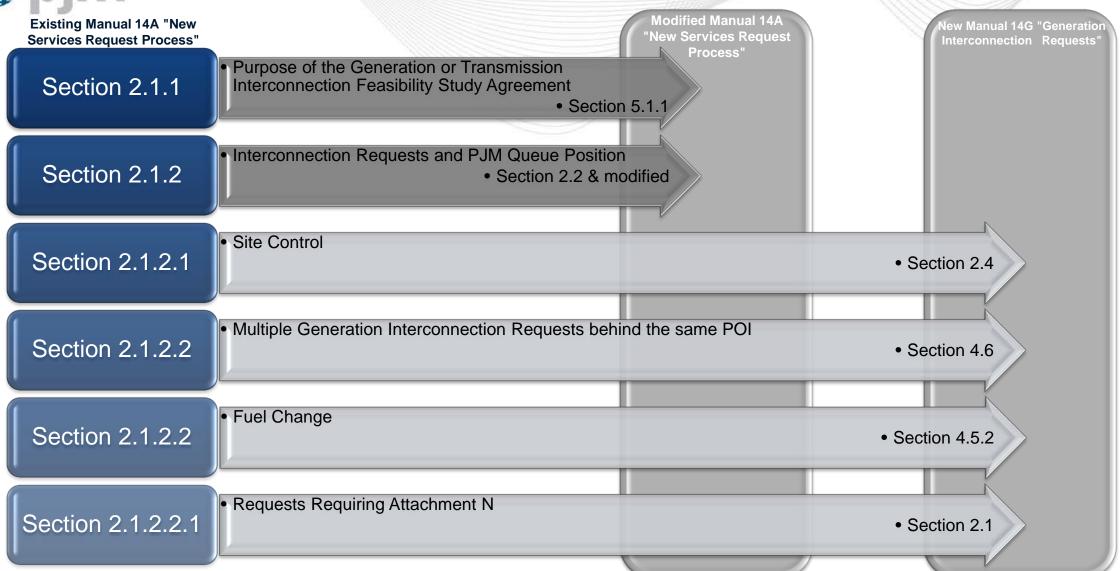




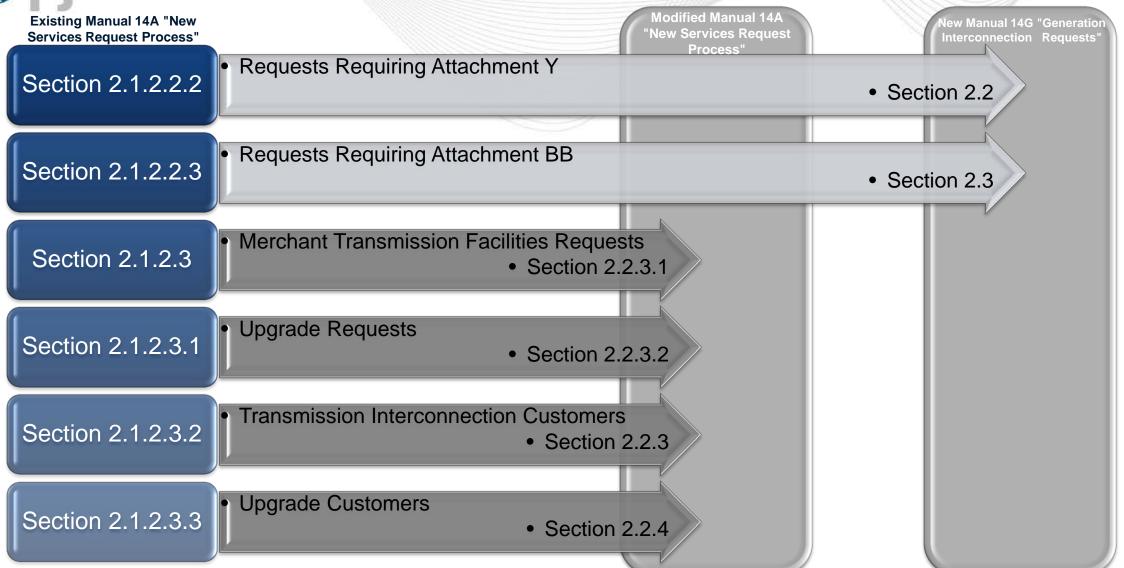
Transfer of Content from Current M14A:

Section 2: Generation and Transmission Interconnection Planning Process











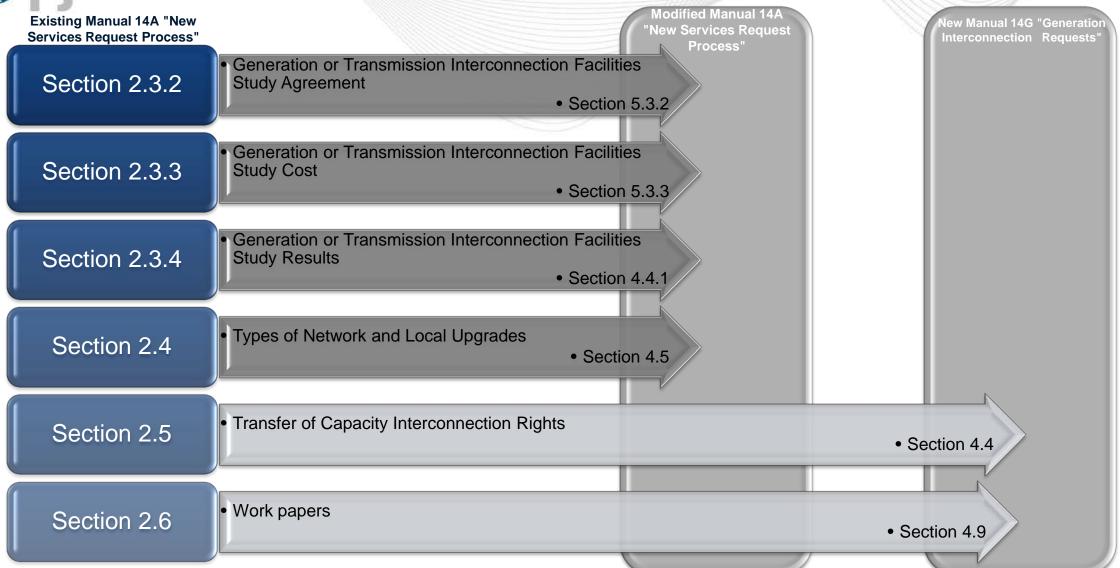
Modified Manual 14A Existing Manual 14A "New ew Manual 14G "Generation **New Services Request Services Request Process**" Process" Generation and Transmission Interconnection Section 2.1.3 Feasibility Study Cost Responsibility • Section 5.1.2 New Service Request deficiency reviews Section 2.1.4 • Section 2.3.1 Changes to Existing Generators and Transmission Facilities Section 2.1.5 Section 4.5 Generation and Transmission Interconnection Section 2.1.6 Feasibility Study Analysis and Results • Section 4.2



Modified Manual 14A **Existing Manual 14A "New New Services Request Services Request Process**" Process" Generation or Transmission Interconnection System Impact Study Section 2.2 Agreement Execution Analysis •Sections 4.3 and 5.2 Impact Study Agreement and Cost Section 2.2.1 •Section 5.2.1 & modified System Impact Study Analysis and Schedule Section 2.2.2 •Section 4.3.1 System Impact Study Results Section 2.2.3 •Section 4.3.2 Generation or Transmission Interconnection Facilities Study Section 2.3 Agreement Execution and Analysis •Section 4.4 and 5.3 •Queue Priority and final agreement issuance and determination of Section 2.3.1 security requirements for moving out of sequence •Section 5.3.1

New Manual 14G "Generation Interconnection Requests"





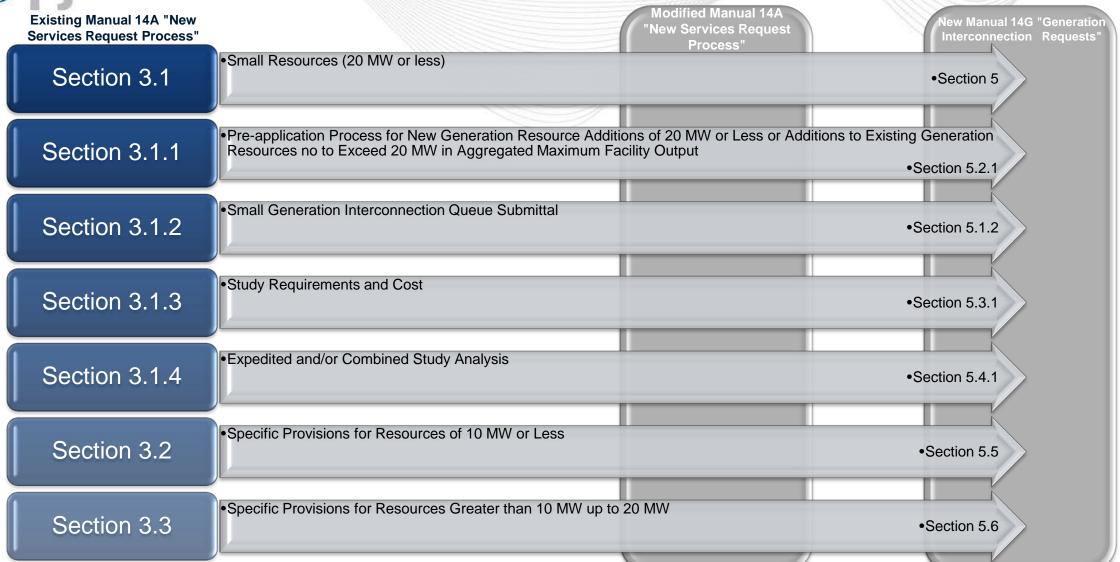


Transfer of Content from Current M14A:

Section 3: Small Resource Interconnection Process



Section 3: Small Resource Interconnection Process





Transfer of Content from Current M14A:

Section 4: Interconnection Service Agreement and Construction Service Agreement Execution and Other Agreements



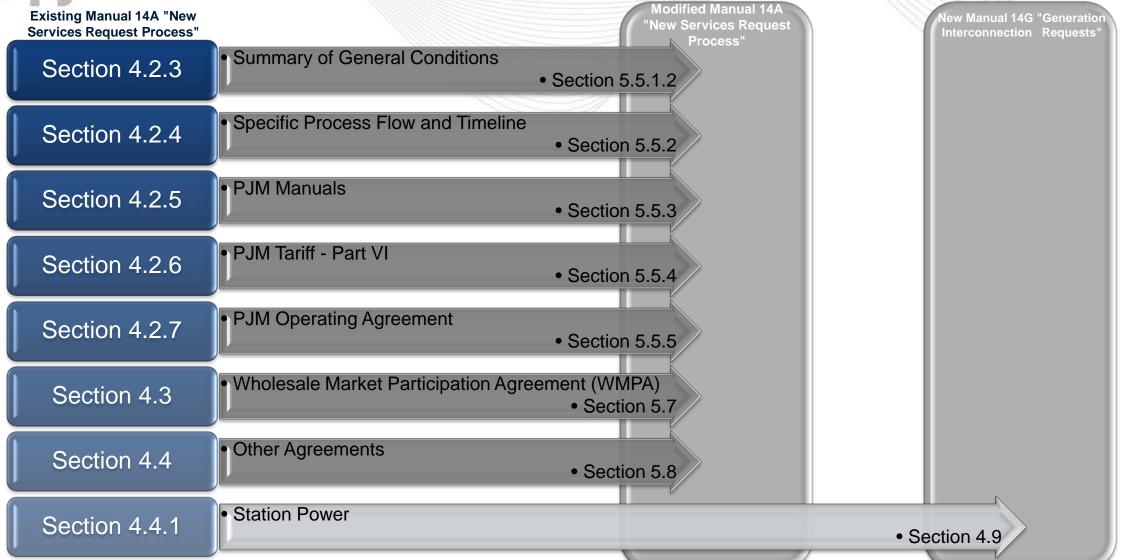
Section 4: Interconnection Service Agreement and Construction Service Agreement Execution and Other Agreements

Modified Manual 14A **Existing Manual 14A "New** New Services Request **Services Request Process**" Process' Interconnection Service Agreement Section 4.1 Section 54 Interim Interconnection Service Agreements Section 4.1.1 Section 5.4.1 Interim ISA vs. ISA with Interim Rights Section 4.1.2 Section 5.4.2 Security Requirements Section 4.1.3 • Section 5.4.3 Agreement Milestones Section 4.1.4 • Section 5.4.4 Interconnection Construction Service Agreement Section 4.2 Section 5.5 Option to Build Section 4.2.1 Section 5.5.1 **General Timeline** Section 4.2.2 • Section 5.5.1.1

New Manual 14G "Generation Interconnection Requests"



Section 4: Interconnection Service Agreement and Construction Service Agreement Execution and Other Agreements



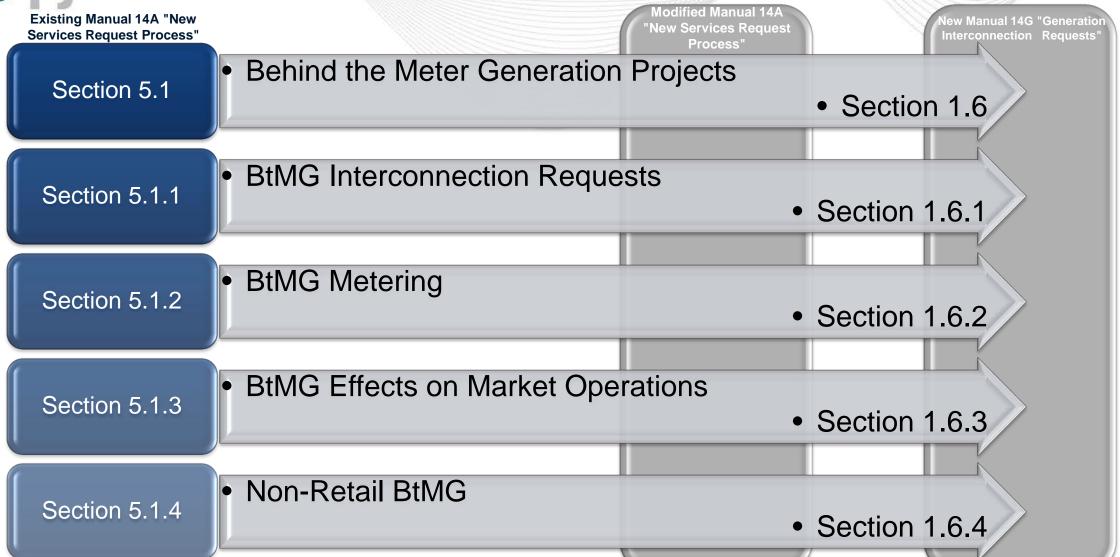


Transfer of Content from Current M14A:

Section 5: Additional Generator Requirements



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Section 5: Additional Generator Requirements

Modified Manual 14A Existing Manual 14A "New Manual 14G "Generation 'New Services Request **Services Request Process**" Process' Generator Power Factor Requirements Section 5.2 Section 4.2 Application of Power Factor Requirements to Increases of Existing Generation Section 5.2.1 Section 4.2.1 Wind or Non-Synchronous Generation Projects Section 5.3 Section 4.7 Wind or Non-Synchronous Generation Capacity Credit Rules Section 5.3.1 Section 4.7.1 Wind or Non-Synchronous Generation - Specific Technical Requirements Section 5.3.2 Section 4.7.2



Transfer of Content from Current M14A:

Attachments & Annex



Attachments & Annex

Modified Manual 14A Existing Manual 14A "New ew Manual 14G "Generation **New Services Request Services Request Process**" Process" A-1, and A-2: PJM Generation and Transmission Interconnection Planning Process Flow Diagram Attachment A Attachment A PJM Request Cost Allocation Procedures Attachment B Attachment B PJM Generation and Transmission Interconnection Planning Team Role Clarity Diagram Attachment C Attachment C General Description of Facilities Study Procedure Attachment D Attachment D • Small Generator (10 MW or Less) Technical Requirements and Standards Attachment E Attachment C



Attachments & Annex

Existing Manual 14A "New Services Request Process"

Modified Manual 14A 'New Services Request Process"

ew Manual 14G "Generation nterconnection Requests"

Attachment E-1

Small Generator (greater than 10 MW up to 20 MW) Technical Requirements and Standards

Attachment D

Attachment F

Generation Interconnection Feasibility Study Data

Attachment A

Attachment F-1

Feasibility Study Data Form

Attachment A-1

Attachment G

System Impact Study Data

Attachment B

Attachments & Annex

Existing Manual 14A "New Services Request Process"

Modified Manual 14A New Services Request Process"

New Manual 14G "Generation Interconnection Requests"

Attachment G-1

Dynamic Model Study Request Form

Attachment B-1

Attachment G-2

System Impact Data Form

Attachment B-2

Attachment H

Generator Reactive Deficiency Mitigation Process

Attachment E

Annex 1

SCADA Requirements by Transmission Owner Region

Attachment F



V1 – 6/XX/2018 – Original Slides Posted