PJM Manual 14D:
Generator Operational Requirements
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Revision 44 (6/01/2018):

- **Added** Section 2.2: Transfers of a Generation Facility and Name Changes of Generation Owners and Interconnection Customers
  - Section 2.2.1 – describes guidance, expectations and required information associated with a generation transfer from the generator owner
  - Section 2.2.2 – describes the process that must occur to disclose that a generator or Interconnection Customer has changed its name
  - Section 2.2.3 – links Section 2.2 with the actual generation transfer process described in Section 5.7
- **Added** Section 5.7.1 to describe the overall method that a Member must initiate a request for a generation transfer
- **Added** Section 5.7.2 to provide a general overview of the various type of information needed to effectuate a generation transfer
- **Added** Section 5.7.3 to provide guidance surrounding various timeframes and deadlines that may occur during a generation transfer
- **Revised Section 11 Generator Data Confidentiality Procedures to clarify wording and included parameter data to be provided to a Transmission Owner for system restoration planning purposes**
  - Revised Exhibit 11 therein
- **Revised Attachment J: Generator Data Release Matrix to reflect changes in Section 11**
  - Added column for generator parameters

Revision 43 (02/26/2018):

- **Revised Section 11 Generator Data Confidentiality Procedures to clarify wording and included parameter data to be provided to a Transmission Owner for system restoration planning purposes**
  - Revised Exhibit 11 therein
- **Revised Attachment J: Generator Data Release Matrix to reflect changes in Section 11**
  - Added column for generator parameters
- **Revised Sections 10.2, 10.3.2 and 11.1: References to Manual 33 updated**
Welcome to the Responsibilities of Generation Owners section of the PJM Manual for Generator Operational Requirements. In this section you will find the following information:

- A listing of significant obligations of Generation Owners in the PJM Balancing Authority (see “Generator Owners’ Responsibilities”).

### 2.1 Generator Owners’ Responsibilities

A Generation Owner in PJM is a Member that owns or leases with rights equivalent to ownership facilities for the generation of electric energy that are located within the PJM Balancing Authority. Membership in PJM entails execution of the Operating Agreement and satisfaction of the data requirements, operational and market coordination, committee support and financial obligations contained within the agreement.

The responsibilities for a Generator Owner within PJM that are defined below are required to maintain the safe and reliable operation of the PJM Interconnection. The generator owner under PJM’s direction takes all actions possible to maintain PJM Interconnection reliability. The responsibilities identified below are consistent with the NERC Reliability Functional Model and NERC Reliability Standards.

This list is a collection of significant operational responsibilities and obligations of a Generator Owner that are included in the PJM OA, PJM RAA, PJM West RAA and the PJM Procedure manuals. It is not intended to be an all-inclusive list of every responsibility and obligation of a Generator Owner.

A Generator Owner:

- Is subject to applicable code of conduct and other applicable confidentiality agreements. (PJM OA Schedule 1, Section 1.7.4a)
- Takes action to maintain local reliability and public safety. (PJM OA Schedule 1, Section 1.7.4a)
- Operates generation system facilities under the direction of PJM. (PJM OA Schedule 1, Section 1.7.4f,g)
- Operates generation facilities in accordance with all federal and state regulations and PJM procedures. (PJM OA Schedule 1, Section 1.7.4f)
- Maintains generation facilities in accordance with good utility practice and PJM standards. (PJM OA Schedule 1, Section 1.7.4h)
- Establishes capability of its generation facilities and provides this information to PJM if the facilities are designated PJM capacity resources. (PJM Manual M-21)
- Provides annual baseline and real time updates of fuel limited generating units to PJM during emergency conditions. (PJM Manual M-13, Section 6.4 and Section 7.3.5 of this manual)
- Complies with the data information and metering requirements established by PJM. (PJM Manual M-14D, Section 4 and PJM Manual M-01)
• Maintains assigned voltage schedules and responds promptly to specific requests and
directions of the PJM dispatcher or the Transmission Owner (TO) dispatcher in event
of low/high voltage situations. (PJM Manual M-12, Section 5 and PJM Manual M-03,
Section 3)

• Follows directions from the TO for switching interconnection points.

• Helps maintain a reliable transmission system by providing reactive capability curve
information to PJM as soon as the information is available. (PJM Manual M-14D,
Attachment D and Attachment E)

• Complies with procedures called for by PJM or the TO in event of operating limit
violations and other emergency conditions. (PJM Manual M-13)

• Provides real-time operations information to PJM in compliance with PJM procedures.
(PJM Manual M-14D, Section 4 and PJM Manual M-01)

• Provides information about planned, maintenance and unplanned outages of generation
facilities to PJM. (PJM Manual M-10, Section 2)

• Supplies engineering data for generating unit models to PJM. (PJM Manuals M-14A and
14B)

• Develops, documents, and communicates operator guidance, as necessary. (PJM
Manual 40)

• Plans and coordinates generation outages. (Manual M-10, Section 2)

• Works with PJM to mitigate identified reliability concerns for planned generation outages.
(PJM Manual M-10, Section 2)

• Large generating plant owners with market operations centers (MOCs) must maintain
continuous staffing and meet all of the communication and information system
requirements defined by PJM. (PJM Manual M-01 and PJM OA Schedule 1, Section
1.7.5)

• Personnel Requirements (PJM Manual M-40)

• Generation Dispatchers shall:
  o Be competent and experienced in the routine and abnormal operation of generators
    within interconnected systems.
  o Be accountable to take any action required to maintain the safe and reliable
    operation of the generation facility.
  o Have thorough knowledge of PJM procedures and their application.
  o Have a working knowledge of NERC Reliability Standards and how they coordinate
    with PJM manuals.
  o Have an understanding of routine protection schemes for PJM generation facilities.
  o Have knowledge of how to evaluate desired system response to actual system
    response.
o Have knowledge of and be able to evaluate and take action on equipment problems in generation facilities.

o Have knowledge of the general philosophy of system restoration and the philosophy and procedures of their company as well as that of the pool.

o Have initial and continuing training that addresses the required knowledge and competencies and their application in system operations.

o Have current PJM Generation Dispatcher Certification

• Plant Personnel should have a working knowledge of switching and tagging procedures for the generation facility.

o Develops, documents, and maintains switching and tagging procedures. (OSHA 29 CFR Part 1910.269)

o Is accountable for directing station forces in generation system switching activities.

o Follows up on significant system events with an investigative process to analyze, document and report on operating abnormalities. (PJM Manual M-13)

o Generator owners providing black start services will follow procedure outlined by PJM. (PJM Manual M-10, Section 2, PJM Manual M-12, Section 4 and PJM Manual M-36)

2.2 Transfers of a Generation Facility and Name Changes of Generation Owners and Interconnection Customers

2.2.1 Transfers of a Generation Facility

Each Generation Interconnection Customer (for a new generation facility or an existing generation facility) and Generation Owner (collectively referred to herein as “Generation Owner”) seeking to, directly or indirectly, transfer all or part of its ownership interests in its generation facility must notify PJM and initiate the processes as set forth herein. This provision applies to an asset transfer of a generation facility, the transfer of an entity that owns or controls a generation facility (which shall mean 10% or more of voting interest of the entity), and to upstream transfers of ownership interests (10% or more voting interests) in such an entity (collectively referred to herein as “Change-in-ownership Transactions”). These requirements apply to upstream transfer of ownership because service agreements an ancillary documentation associated with the entity owning the generation facility often contain information relating to the holding company including contact persons and addresses. In addition, because of various obligations under its Tariff, PJM must maintain accurate agreements and clarity of ownership, including upstream ownership, of generation facilities. These requirements apply to a corporate reorganizations unless such corporate reorganization is governed by the blanket authorization for internal corporate reorganizations set forth in FERC’s regulations promulgated pursuant to Section 203 of the Federal Power Act (18CFR 824b) and as such the transaction is not subject to review by FERC.

It is the obligation of such Generation Owners to comply with the terms and conditions of all applicable service agreements including those governing the interconnection of their generation to the PJM Transmission System and/or participation in the PJM’s wholesale markets regarding
any assignments, consents, updates or notices. The requirements set forth herein are in additions to and not in substitution of any contractual or PJM Tariff obligations.

One objective of PJM’s review of a contemplated Change-in-ownership Transaction is to ensure that the correct legal entity is properly identified on all service agreements related to the generation facility and to ensure that such service agreements are updated promptly with the correct entity, name and contact information after the closing of the Change-in-ownership Transaction. PJM service agreements related to the generation facility may include construction service agreements, cost responsibility agreements, Interconnection Service Agreements, transmission service agreements, Wholesale Market Participation Agreements and/or dynamic transfer agreements. PJM’s objective is to be able to accomplish any necessary assignments or amendments to the service agreements that are necessary or appropriate to accomplish the Change-in-ownership Transaction so that those changes can be effective upon the closing of the transaction. PJM has a form of an agreement to amend and/or consent to assignment agreement on PJM’s website. Any other updates to service agreements relating to the transaction (i.e., contact persons, addresses, etc.) must be provided to PJM no later than ten (10) days following the closing of the Change-in-ownership Transaction.

Any Generation Owner involved in or aware of a Change-in-ownership Transaction involving a generation facility shall satisfy the requirements as stated below. PJM expects that the parties involved with the Change-in-ownership Transaction will work together to provide the required information to PJM. PJM may extend or waive any of these requirements if it determines that a Generation Owner’s compliance is not commercially practical:

1. When an application for authorization of the Change-in-ownership Transaction involving a generation facility in the PJM Region is filed with the Federal Energy Regulatory Commission pursuant to Section 203 of the Federal Power Act, a copy of the publicly available application should be served promptly on the General Counsel of PJM and the General Counsel of IMM (Monitoring Analytics);

2. No later than ten (10) days after an application for authorization of the Change-in-ownership Transaction is filed with the Commission pursuant to Section 203 of the Federal Power Act, or if a Section 203 application is not required, then no later than ten (10) days after the binding transaction documents are executed (even if those documents contain conditions or contingencies), The Generator Owner shall use commercially reasonable efforts to provide to PJM’s Client Management Department the following supplemental information:
   a. Any service agreements relating to the generation facility including but not limited to any construction service agreement, cost responsibility agreement, Interconnection Service Agreement (or pre-PJM interconnection agreement), Wholesale market Participation Agreement, and any other PJM service agreement involving the Generation Owner related to the subject generation facility;
   b. The facility’s name, location, street address, points of interconnection, maximum facility output, name(s) of the facility owner(s) (i.e., the legal entities that own the facility), PJM Market’s Gateway Unit ID, PJM-assigned commercial name(s) developed in accordance with Section 1.2 of this Manual, if applicable;
   c. A brief description of the transaction including the names of the parties to the transaction;
The marketing entity that is currently responsible for the generation facility and Declaration of Authority to such marketing entity; and

If as a result of the transfer, Generation Owner will become affiliated with or controlled by a different PJM Member, the name of such PJM Member and simplified organization chart illustrating the expected relationship between: (1) the Generation Owner; and (2) such PJM Member.

Prior to the three (3) business days of the requested effective date of the transfer within the PJM systems, which can be different than the closing of the Change-in-ownership Transaction, the Generation owner shall provide the PJM Client Management Department with an executed PJM-accepted Declaration of Authority for the generation facility authorizing a new third-party marketer to interface with PJM, if applicable; and

In the event of a direct sale or transfer of a generation facility, the Generation Owner shall, provide the PJM Client Management Department with the documents or information specified below no later than five (5) business days prior to the closing of the Change-in-ownership Transaction:

A letter to the currently-effective President and CEO of PJM Interconnection, L.L.C. on the entity’s letterhead identifying the new company name and the anticipated closing date;

A certificate of good standing from the acquiring entity’s state of organization;

A listing of the current officers of the acquiring entity; and

An IRS Form W9 for the acquiring entity

2.2.2 Generator Owner or Interconnection Customer Name and/or contact information Changes

A Generation owner that changes its corporate name and/or contact information shall notify PJM and upon receipt from PJM, execute an agreement to amend to updates its PJM service agreements, and provide a provide PJM with the following documents within 30 days of the change: (i) a letter to the currently-effective President and CEO of PJM Interconnection, L.L.C. on the company letterhead giving the new company name and the requested effective date of the change; (ii) a copy of the name change filing certified by the Secretary of State form the state of organization; (iii) an updated affiliate disclosure form reflecting the new company name; and (iv) an updated IRS Form W9 reflecting the new company name. The documents should be mailed to:

PJM
Knowledge Management Center
Attn: Megan MCLaverty
2750 Monroe Boulevard
Audubon, PA 19403
2.2.3 Transfer of Certain Member Rights and Obligations Pertaining to a Generator to Other Members
Section 5.7 pertains to a Member’s transfer of specific rights or obligations associated with its generation facility. A member may transfer specific rights or obligations associated with its generation facility only to extent permissible under the applicable service agreements, the PJM Tariff, other PJM governing documents, and manuals.
Authority reliability requirements. RSC will enforce physical resource-specific constraints that are specified in the generation offer data and generic transmission constraints that are entered by the Market Operator.

2. Scheduling, Pricing and Dispatch (SPD)—Performs security-constrained economic dispatch using the commitment profile produced by RSC. SPD calculates hourly unit generation MW levels and LMPs for all load and generation buses for each hour of the next operating day.

3. Study Network Analysis (STNET)—Creates a powerflow model for each hour of the next operating day based on the scheduled network topology, the generation and demand MW profile produced by SPD and the scheduled Tie Flow with adjacent Balancing Authorities. STNET performs AC contingency analysis using the contingency list from PJM EMS and creates generic constraints based on any violations that are detected.

After the close of the generation re-bidding period at 1415, the RSC is the primary tool used to determine any change in steam unit commitment status. Commitment changes are based on minimizing the additional startup costs and costs to operate steam units at economic minimum, as well as providing sufficient operating reserves to satisfy the PJM Load Forecast.

The purpose of this second phase of resource commitment is to ensure that PJM has scheduled enough generation in advance to meet the PJM Load Forecast for the next operating day and for the subsequent six days. CT units are included in the scheduling process and are scheduled in the Day-Ahead Market. However, the decisions concerning actual operation of pool-scheduled CT units during the operating day are not made until the current operating hour in real-time dispatch.

5.7 Generation Transfer Process

In the event that a generation resource changes ownership via transfer or sale, or a generation resource has a transfer of responsibilities, PJM Member Relations shall be contacted in advance of the change by initiating the Generation Transfer process through the PJM Member Community: http://www.pjm.com/markets-and-operation/stools/member-community.aspx
https://pjm.force.com/Member/co/

PJM’s client managers will facilitate the generation transfer process for members in order to effectuate the changes in PJM. Generation Transfer documentation shall be finalized and approved by impacted parties at least three (3) complete business days prior to the requested transfer effective date of the transfer within the PJM systems in order to maintain operation continuity within be implemented in PJM’s systems and tools. Once the transfer has entered into those three (3) business days, the transfer cannot be rescinded.

Questions on the process should be directed to PJM Member Relations via http://pjm.com/about-pjm/who-we-are/contact-us.aspx

A Member may seek to permanently transfer all or some rights and obligations, including financial rights and obligations, associated with a particular generation resource to a separate Member or within a different account of their own. The following are examples of typical generation transfer scenarios that should follow the Generation Transfer process; however, this is not a fully exhausted list:

• Member to Member
• Member to Non-Member/Agent
• Within a Member (transferring generator to a new billing subaccount but the PJM Member/owner does not change)
• Corporate separation (unregulated to regulated)
• Joint Ownership Changes
• Functional responsibilities change (dispatch agent, telemetry provider, energy market agent, eDART reporting, etc.)

All generation transfers require PJM to ensure all data is accurate within the systems, all legal agreements are approved, and the appropriate contact information is provided to dispatch. When a transfer is occurring between separate parties, PJM expects that these parties will, in good faith, cooperate with PJM and the other entity.

5.7.1 Initiate Process
In order to initiate a request for a generation transfer, a Member must submit a Request Generation Transfer through the PJM Member Community: [http://www.pjm.com/markets-and-operations/etools/member-community.aspx](http://www.pjm.com/markets-and-operations/etools/member-community.aspx)

The Generation Transfer Request User Guide is located in the Member Community to provide step-by-step instructions on how to obtain the required information needed to submit the request. It is important for both the Transferor ("from" Member) and Transferee ("to" Member/Company) to consider the timeline requirements detailed in Section 5.7.3 before determining the requested effective date of the transfer within the PJM systems. PJM requests the submittal on Member Community requesting a generation transfer to occur at least 45 days prior to the requested effective date of the transfer within the PJM systems. This submittal starts the PJM internal process to review the submitted information and determine what else may be needed to ensure the generation transfer can occur on the requested effective date of the transfer within the PJM systems.

Once the form is submitted, a PJM Client Manager will contact the entity within two (2) business days. The PJM Client Manager may require more information from the current Member to facilitate the generation transfer process. The potential additional information needed is listed in Section 5.7.2.

5.7.2 Information Required
Since a Generation Transfer may occur for various scenarios, the required information may be different for each scenario to complete the transfer. Further discussions between the Client Manager and the entities will help determine what additional information is required.

5.7.2.1 Legal and Administrative Agreements
Refer to Section 2.2 of this Manual for further guidance.

5.7.2.2 Membership
The Transferee or an agent representing the Transferee must either be a current active PJM Member or become a PJM Member at least three (3) business days prior to the requested
effective date of the transfer within the PJM systems. The Operating Agreement, Section 11.6 describes the requirements an entity must meet to qualify for Membership. The PJM Tariff, Attachment Q describes the credit policy and requirements. The application form and process can be found in the Become a Member section on PJM.com.

5.7.2.3 Fuel Cost Policy
All Market Sellers who submit cost-based offers must have submitted to PJM a Fuel Cost Policy 45 days prior to the requested effective date of the transfer within the PJM systems or an alternative date agreed to by PJM as stated in Manual 15, Section 2.3.1.2. The fuel cost policy requirements are detailed in Manual 15, Section 2.3. All concerns or discussions should be addressed with the Fuel Cost Policy Team at FuelCostPolicyAnalysis@PJM.com.

5.7.2.4 Markets Gateway
Markets Gateway is the system that PJM Market Participants use to participate in the Day-Ahead Energy Market, Real-Time Energy Market, Synchronized Reserve Market and Regulation Market. Members will submit generation offers into Markets Gateway. PJM must ensure the proper entity has access to Markets Gateway and that entity has access to Market Gateway on the approved appropriate day. The Generation Transfer Request User Guide located on the Member Community webpage provides additional guidance regarding election of price or cost-based startup and no load parameters and transferring rights of historical generation data to the Transferee.

5.7.2.5 Dispatching Company
The Transferee must indicate to PJM if the dispatching company is changing. If a change is occurring, then PJM must receive the new dispatch company name, company contact name, and all call phone numbers. The All Call Form can be found in Manual 14D, Attachment C or in the Member Forms section on PJM.com. Additionally, a Member that transfers dispatch rights or obligations associated with its generation facility to a third party must provide PJM with a Declaration of Authority effective prior to the requested effective date of the transfer within the PJM systems. The Declaration of Authority agreement shall specify the rights and obligations and of the third party and new generator owner with regard to conducting business with PJM, and shall be in a form reasonably acceptable to PJM.

5.7.2.6 Member Training and Certification
PJM has training and certification requirements in place for individuals who:

- Operate or dispatch on the PJM system;
- Are in direct communication with the PJM System Operator, and
- Perform daily operations-related functions at the direction of the PJM System Operator during normal, emergency and/or system restoration states

These requirements are outlined in Manual 40. Due to their interaction with PJM control room and potential impact on system reliability, applicable training and certification requirements must be met, in accordance with the manual, prior to the new entity beginning operations. If the dispatch agent responsibility is changing, then the new generation resource owner will provide the Member Training Liaison contact information to PJM.
5.7.2.7 eRPM account
The Reliability Pricing Model (RPM) conducts various auctions prior to the Delivery Year. Therefore, specific transaction and processes must be followed to ensure the transfer of the resources and obligation are done properly. Depending on how the Transferor structured its capacity will determine how many transactions are required to move each resource from the Transferor to the Transferee. Coordination and agreement between the Transferor and Transferee is required for the entire process. Contact the Capacity Group at RPM Hotline@PJM.com to initiate this step.

5.7.2.8 Telemetry and Telecommunications
PJM must ensure that the electronic and voice links between PJM and the Transferee meet PJM standards as listed in Manual 14D. The following sections within Manual 14D describe these standards in further detail:

- Control Centers and Voice Communications – Section 3
- Data exchange & Metering – Section 4
- Pre-Operational requirements – Section 6

The Transferee must determine if the provider of real-time telemetry is changing. If the provider is changing, and depending on current communication protocol setup for the new provider, then additional time may be required to ensure proper communication between PJM and the new provider prior to the requested effective date of the transfer within the PJM systems.

5.7.2.9 Ancillary Services
Regulation, Reserves and Black Start are ancillary services that PJM must coordinate and communicate participation among multiple internal groups. Therefore, the Transferee must notify PJM if the generation resource will be participating in any of these three (3) services.

- Regulation – re-qualification business rules can be found in Manual 12, Section 4.5. Resources will not be qualified to offer regulation until they successfully complete the re-test.
- Reserve – confirmation of resource within PJM systems
- Black Start – contact name and number(s) for testing notifications and restoration events must be on file with PJM, as further described in Manual 12, Section 4.6.

5.7.2.10 PJM Tools
PJM utilizes online tools to help facilitate the communication of specific data between PJM and the resource. Depending on the type of market activity the Transferee decides for the resource, will determine the required online tool(s) access. Descriptions and details about specific online tools are found in the Generation Transfer Request User Guide located on the Member Community webpage.

5.7.2.11 PJM Settlements and Billing Items
PJM settlement and billing will be based on which PJM account/subaccount the resource is located. However, there are few other items that PJM must know to ensure proper billing:

- Reactive Credits – at least 90 days prior to the requested effective date of the transfer within the PJM systems, or such shorter period authorized by a FERC order, a resource
must either (1) submit to the FERC the appropriate filings; or (2) provide to the Transmission Provider and file with the FERC an informational filing, as further described in PJM’s Tariff, Schedule 2

- Operating Reserves – PJM needs to determine if the resource has a relationship with another resource that they should be considered a ‘single bus’ and able to offset one another as further described in Manual 28, Section 5.3

5.7.2.12 Resource Tracker
Resource Tracker supports the maintenance of ownership information and provides the user the ability to review all sources of ownership information. In accordance with the Resource Tracker User Guide, Section 1.3, during an ownership transfer, when applicable, registered users will receive an automated email from the Resource Tracker System alerting them that confirmation of this resource is due within two (2) business days of notification.

5.7.3 Process Timeline
All Generation Transfer documentations shall be finalized and approved by impacted entities at least three (3) complete business days prior to the requested effective date of the transfer within the PJM systems. Once the transfer has entered into those three (3) business days, the transfer cannot be rescinded. Since a Generation Transfer may occur for different reasons, each timeline will vary. The following items should be considered when determining a requested effective date of the transfer within the PJM systems:

- Membership – Obtaining a PJM membership can take up to 60 days after all the required paperwork has been signed and received by PJM.
- Legal – provided all documentation as described in Section 2.2 of this Manual
- Fuel Cost Policy – submit a policy to PJM at least 45 days prior to the requested effective date of the transfer within the PJM systems or on such alternative date agreed to by PJM
- Initial Training and certification – Generation owners may contract with dispatching companies that already meet PJM requirements or have their own personnel dispatch. Depending on the experience of the individuals involved, it may take several months to get a new generation dispatcher qualified.
- Telemetry and Communication Protocol for new Members – may take up to three (3) months
- Telemetry and Communication Protocol for existing Members – may take up to 30 days
- Reactive Credits – file with the Transmission Provider and/or the FERC Commission at least 90 days prior to the requested effective date of the transfer within the PJM systems unless a waiver of the 90-day notice requirement is granted by FERC