

Attachment B: PJM Request Cost Allocation Procedures

B.1 Purpose

One of the responsibilities of PJM as an RTO is to allocate the cost responsibility for all system reinforcement projects including projects required for Customer New Service Requests, baseline transmission reliability upgrades and market efficiency upgrades. The cost allocation procedures used by PJM to allocate costs due to requests are described below. Manual 14B addresses baseline-driven upgrade cost allocation procedures.

B.2 Scope

The RTEP encompasses two types of enhancements: Network Upgrades and Direct Connection Attachment Facilities. Network Upgrades can be required in order to accommodate the interconnection of a merchant project (generation or transmission) or to eliminate a Baseline problem as a result of system changes such as load growth, known transmission owner facility additions, etc. The PJM Cost Allocation Procedures are presented in two parts: “PJM Generation and Transmission Interconnection Cost Allocation Methodologies” discusses the cost allocation methodology for projects required for generator and transmission interconnections, below and: “Schedule 12 Cost Allocation Process for Baseline Transmission Reliability and Market Efficiency Upgrades” discusses the cost allocation process for baseline transmission reliability and market efficiency upgrade project requirements in Manual 14B. New Service Customers, other than those proposing Merchant Network Upgrades, may participate in Multi-Driver Approach projects identified by PJM. Further information is provided in Manual 14B.

The results of the System Impact Studies reveal Direct Connection Attachment Facilities required for new generation to “get to the bus”, Local and Network Upgrades to mitigate any “network impact” effects which the addition of such new generation or new transmission facilities may have on the power system itself.

- Each respective generator or transmission project bears the cost responsibility for Direct Connection Attachment facilities required for interconnection.
- The cost responsibility for Local and Network Upgrades identified through System Impact Study analysis is allocated among parties according to the following:
 - ~~For Local and Network Upgrades which are required due to overloads associated with the System Impact Studies of an individual New Services Queue, and have a cost less than \$5,000,000, the cost of the Local and Network Upgrades will be shared by all proposed projects which have been assigned a Queue Position in the New Services Queue in which the need for the Local and Network Upgrades was identified. The Load Flow Cost Allocation methods discussed in this manual, including cutoffs, still apply to the individual projects.~~
 - For Local and Network Upgrades which are required due to the overloads associated with the System Impact Studies of an individual New Services Queue, ~~and have a cost of \$5,000,000 or greater,~~ the cost of the Local and Network Upgrades will be allocated according to the order of the New Service Requests in the New Services Queue and the MW contribution of each individual **Interconnection New Service** Request for those projects which cause or contribute to the need for the Local or Network Upgrades. The

Load Flow Cost Allocation methods discussed in this manual, including cutoffs, still apply to the individual projects.

B.2.1 Definitions

- New Service Queue Close Date – The date on which a New Service Queue ends. Currently, in the PJM Open Access Transmission Tariff, the New Service Queue Close Dates are March 31st and September 30th.
- New Service Customer – The responsible party for a generator, merchant transmission, or other transmission upgrade project that is in the PJM New Service Queue.
- Queue Date – The date on which PJM receives a valid New Service Request from a New Service Customer.

B.3 PJM Generation and Transmission Interconnection Cost Allocation Methodologies

The cost allocation procedure will continue to be evaluated and modified, if required, as the interconnection process proceeds.

B.3.1 Load Flow Cost Allocation Method

New Service Customer requests are studied as a single study for all active projects in an individual New Services Queue. Network Upgrades are identified to maintain system reliability.

Individual Local & Network Upgrades which cost less than \$5,000,000

All New Service Customers with active New Service Requests in an individual New Services Queue will be allocated a cost for these Network Upgrades based upon the following criteria:

- The first New Service Customer to cause the facility identified in the study which exceeds 100% loading of the applicable rating and develops the need for the Network Upgrade will in all cases have some cost allocation.
- Contingent to the individual New Service Request contributing MW impact being greater than 5 MW AND greater than 1% of the applicable line rating OR (if its Distribution Factor (DFAX) on the facility is greater than 5% AND its MW impact on the facility's rating is greater than 3%), the contribution of a New Service Customer is determined by the voltage level of the facility that it impacts:
- For a transmission facility whose rated voltage level is below 500 kV, a New Service Customer will have some cost allocation if its Distribution Factor (DFAX) on the facility is greater than 5% OR if its MW impact on the facility's rating is greater than 5%.
- For a transmission facility whose rated voltage level is 500 kV or above, a New Service Customer will have some cost allocation if its DFAX on the facility is greater than 10% OR if its MW impact on the facility's rating is greater than 5%.
- For New Service Requests involving studies for Long Term Firm Transmission Service seeking to import power to PJM, or which otherwise have their source of power outside PJM, the New Service Customer will have some cost allocation towards upgrades associated with all PJM facilities, if its Distribution Factor (DFAX) on the facility is greater than 3% OR if its MW impact on the facility's rating is greater than 3%.

- Allocation of costs to New Service Customers for a Network Upgrade which has a cost of less than \$5,000,000 will not occur outside of the New Services Queue in which the need for the Network Upgrade was identified
- Allocation of costs to New Service Customers for a Network Upgrade which has a cost of less than \$5,000,000 will be based on the total MW impact on the facility requiring a Network Upgrade as determined in the System Impact Study

Individual Local & Network Upgrades which cost \$5,000,000 or greater

All New Service Customers after and including the New Service Customer under study, that contribute to the need for the Network Upgrade are identified and their MW impact on the need for the Network Upgrade is determined. The MW impact will be based on the condition that causes the need for a Network Upgrade.

- The first New Service Customer to cause the need for the Network Upgrade will in all cases have some cost allocation. The cost allocation for this New Service Customer will only consider the loading above the facility's capability.
- Contingent to the contributing MW impact being greater than 5 MW AND greater than 1% of the applicable line rating, the contribution of a New Service Customer following the first New Service Customer to cause the need for the Network Upgrade is determined by the voltage level of the facility that it impacts:
 - For a transmission facility whose rated voltage level is below 500 kV, a New Service Customer will have some cost allocation if its Distribution Factor (DFAX) on the facility is greater than 5% OR if its MW impact on the facility's rating is greater than 5%.
 - For a transmission facility whose rated voltage level is 500 kV or above, a New Service Customer will have some cost allocation if its DFAX on the facility is greater than 10% OR if its MW impact on the facility's rating is greater than 5%.
- For New Service Requests involving studies for Long Term Firm Transmission Service seeking to import power to PJM, or which otherwise have their source of power outside PJM, the New Service Customer will have some cost allocation towards upgrades associated with all PJM facilities, if its Distribution Factor (DFAX) on the facility is greater than 3% OR if its MW impact on the facility's rating is greater than 3%.
- New Service Customers will be assigned costs in proportion to their contributing MW impacts.

For purposes of allocation of Network Upgrade costs to future Queue Positions Network Upgrades with an "as-built" cost of \$5.0 million or greater, a New Service Customer will be responsible for allocated costs, within previously stated cost allocation guidelines, if their New Service Queue Close Date occurs less than 5 years following the execution of the first Interconnection Service Agreement or Upgrade Construction Service Agreement which identifies the need for this Network Upgrade.

No depreciation of the "as-built" Network Upgrade cost will be used when allocating costs between New Service Customers.

Cost allocation for the engineering design of Network Upgrades will terminate based on the completion of the applicable Facilities Study.

A complete list of Distribution Factors for all PJM modeled substations will be developed during System Impact Studies for each identified Network Upgrade. This Distribution Factor list will be used for all cost allocation pertaining to the identified Network Upgrade.

B.3.2 Short Circuit Cost Allocation Method

All New Service Customer projects are studied in queue order.

A New Service Customer will have some cost allocation if it results in a greater than 3% increase in fault current at the substation where a Network Upgrade is required.

A New Service Customer will be assigned costs in proportion to its fault level contribution or the fault level increase as a result of the inclusion of a new Network Upgrade required by that New Service Customer.

For Queue D and thereafter, the first New Service Customer to cause the need for a Network Upgrade due to increased fault current will in all cases have some cost allocation. The cost allocation for this New Service Customer will only consider the loading above the equipment's capability.

For purposes of allocation of Network Upgrade costs to future Queue Positions~~Network Upgrades with an "as-built" cost of \$5.0 million or greater~~, a New Service Customer will be responsible for allocated costs, within previously stated cost allocation guidelines, if their New Service Queue Close Date occurs less than 5 years following the execution of the first Interconnection Service Agreement, or Upgrade Construction Service Agreement which identifies the need for this Network Upgrade.

No depreciation of the "as-built" Network Upgrade cost will be used when allocating costs between New Service Customers.

Cost allocation for the engineering design of Network Upgrades will terminate based on the completion of the applicable Facilities Study.

PJM will consider application of an individual component cost vs. an aggregate cost when determining the cost allocation window.

B.3.3 Cost Allocation Method for Generator and/or Generator Step Up (GSU) Changes

The generator and generator step up transformer (GSU) characteristics provided by the Developer prior to the initiation of the System Impact Studies for a given queue will be used for all cost allocation during the System Impact Study phase. If a Developer changes the generator or GSU characteristics after initiation of the System Impact Studies, any additional system problems and any resulting reinforcements will be assigned completely to the Generation Interconnection project that made the changes. Future queued generation may share some cost allocation based on when the generator or GSU changes were provided to PJM.

- Example 1: Impact studies for Queue Z started on May 10, 2010. Five 230 kV breakers at substation Alpha were required to be replaced due to several projects in Queue Z. Project Z2 which had some cost allocation for the five 230 kV breakers provided new GSU data on May 25, 2010. The new GSU has higher impedance. If all five breakers are determined to still be needed with the new GSU impedance, the original cost allocation will not change. If only four breakers are now required, the cost allocation for the four breakers that are still required will not change.
- Example 2: Impact studies for Queue Z started on May 10, 2010. Five 230 kV breakers at substation Alpha were identified to be replaced due to several projects in Queue Z.