

## 4.8 Credit Requirements

The purpose of the RPM credit requirement is to encourage future physical performance, but not necessarily fully guarantee financial obligations related to Capacity. Credit requirements for participating in the RPM, therefore, may be different from the other requirements established separately in the PJM Credit Policy, which are intended for other activities and general financial obligations to PJM.

These business rules are intended to be descriptive of the credit requirements for participants in the RPM, but if any conflict arises between provisions in these rules and provisions in the PJM Operating Agreement or PJM Open Access Transmission Tariff (which includes the PJM Credit Policy as Attachment Q), then the provisions in the Operating Agreement and/or Tariff shall govern.

Since LSE payments due to PJM are included in monthly PJM bills, LSE payment obligations are considered to already be measured and covered by provisions of PJM's Credit Policy. Accordingly, no separate credit requirement will be imposed on LSEs under the RPM.

Participants offering into an RPM Auction existing resources (whether generators, demand resources, energy efficiency resources, or external generation resources with firm transmission), are not required to establish credit for the RPM Auctions.

Participants offering into an RPM Auction any Planned Demand Resource, Planned Energy Efficiency Resource, Planned Generation Resource **(including External and Financed)**, Qualified Transmission Upgrade, or external capacity without firm transmission (these four together considered herein to be Resources Requiring Credit for RPM) must establish an RPM Credit Limit prior to an RPM Auction

Participants nominating PRD in advance of a BRA or Third Incremental Auction (for use in RPM Auction or FRR) must establish an RPM Credit Limit before submitting the PRD Plan in advance of the BRA or Third Incremental Auction.

### 4.8.1 RPM Credit Limit

Acceptable sources of credit for the RPM Credit Limit may be either of the following:

- Any unsecured credit or collateral available, according to provisions of the PJM Credit Policy, which has not already been designated or required for financial obligations under the Credit Policy or for other financial obligations within PJM.
- For RPM credit purposes only, if a supplier has a history of being a net seller into PJM, on average, over the past 12 months, then PJM will count as available unsecured credit twice the average of that participant's total net PJM bills over the past 12 months.
- A supplier may combine more than one source of credit for RPM credit purposes. Credit provided for RPM must be non-cancelable until at least 10 days after payment is due for the last month for which a committed financial obligation could be created or owed.

For Resources Requiring Credit for RPM, credit requests should be made to PJM's Treasury Department at least two weeks prior to an RPM Auction. For price responsive demand requiring credit, credit requests should be made to PJM's Treasury Department at least two

weeks prior to the deadline for submitting the PRD Plan. Credit previously established with PJM for general market activity will not be available for RPM unless the participant specifically makes such a request to the PJM Treasury Department.

Although credit provided by a participant may be administratively separated for RPM (or FTR, etc.), all credit supplied by a PJM member or customer, whether or not designated for RPM (or FTR, or any other PJM obligation), may be utilized to cover any PJM financial obligation, should the member or customer default.

PJM will return or release RPM credit provided by participants upon request, as long as such release would not cause a participant's RPM Credit Requirement and/or Price Responsive Demand Credit Requirement to exceed its RPM Credit Limit. Furthermore, PJM reserves the right to establish a maximum frequency of such returns or releases, but no less frequent than once per calendar quarter.

A participant must, at all times, maintain its RPM Credit Limit at least sufficient to meet its RPM Credit Requirement and/or Price Responsive Demand Credit Requirement. If a participant's RPM Credit Requirement and/or Price Responsive Demand Credit Requirement ever exceeds its RPM Credit Limit, PJM may exercise any of the remedies afforded by the Credit Policy, Tariff, Operating Agreement, or other agreements, business rules or manuals, including demand for additional credit and/or declaration of default. Failure to exercise a remedy at any given time shall not preclude PJM from exercising such remedy at a later time.

#### 4.8.2 RPM Credit Requirement

An RPM Credit Requirement will be established for all participants that are offering into an RPM Auction or have already committed into RPM any Resources Requiring Credit for RPM. The RPM Credit Requirement will be equal to the sum of the individual credit requirements for such resources. The credit requirement for a given resource offered into an RPM auction will be a fixed Auction Credit Rate times the unforced MW offered, times an RPM Credit Adjustment Factor. However, the credit requirement for Planned Financed Generation Capacity Resources and Planned External Financed Generation Capacity Resources shall be one half of the product of the RPM Auction Credit Rate, as provided in Section IV.D, times the megawatts to be offered for sale from such resource in a Reliability Pricing Model Auction (though for Planned External Financed Generation Capacity Resources, this reduction may be limited subject to limits based on firm transmission secured, as further explained herein). The credit requirement for a given resource committed into RPM will be a fixed Auction Credit Rate times the unforced MW committed, times an RPM Credit Adjustment Factor.

##### RPM Credit Adjustment Factor

- The RPM Credit Adjustment Factor for a given resource depends on its status in becoming a fully qualified resource as follows. The Credit Adjustment Factor for all Resources Requiring Credit for RPM will be one ("1") except as follows:
- For Planned Demand Resources, the Credit Adjustment Factor will be  $(1-X)$ , where "X" is the Nominated DR that is certified through an Emergency Load Response Registration divided by the Nominated DR value in the DR Modification for the planned demand resource.

- For Planned Energy Efficiency Resource, the Credit Adjustment Factor will be  $(1-X)$ , where “X” is the Nominated EE Value that is confirmed through a PJM approved Post-Installation M&V Report divided by the Nominated EE value in the EE Modification for the planned energy efficiency resource.
- For existing external generation resources without firm transmission service, the Credit Adjustment Factor will  $(1-X)$ , where “X” is the MWs of firm transmission service that has been secured for the complete transmission path divided by the MWs of existing external generation resource offered/committed and shall be zero if the Participant has demonstrated that firm transmission service for the complete transmission path has been ~~procured~~secured.
- For Planned generation resources (internal and external, financed and non-financed), the Credit Adjustment Factor please see with the incremental reduction and associated credit milestones in Section 4.8.6 will be 0.5 (50%) if a full (not provisional) Interconnection Service Agreement has been successfully executed but Interconnection Service has not yet begun, and will be zero on or after the start date of Interconnection Service.
- ~~For Planned external generation resources, the Credit Adjustment Factor will be reduced to 0.5 (50%) once the equivalent of an Interconnection Service Agreement has been successfully executed and 50% or more MWs of firm transmission service has been secured. The Credit Adjustment Factor will be reduced to zero when the resource commences Interconnection Service and 100% of the MWs of firm transmission service for the complete transmission path has been secured.~~
- For Qualifying Transmission Upgrades, the Credit Adjustment Factor will be 0.5 (50%) if a full (not provisional) Interconnection Service Agreement has been successfully executed but Interconnection Service has not yet begun, and will be zero on the date the Qualifying Transmission Upgrade is placed in service.
- PJM will consider credit adjustment factors other than these on a case-by-case basis.

If a Participant offers a Resource Requiring Credit for RPM into an RPM auction, but the Participant's RPM Credit Limit is insufficient for the participant's RPM Credit Requirement including the new offer, then the offer will be rejected. If the offer was made as part of a sell offer upload file (multiple resources offered simultaneously), then the entire file upload will be rejected. Previous offers made and accepted into an auction will not be rejected solely because a subsequent offer was rejected.

A participant that has procured capacity in an Incremental Auction may incur a change in credit requirement if the cost of the procured capacity differs from the cost of the originally-committed capacity.

### 4.8.3 Auction Credit Rate

An Auction Credit Rate is calculated prior to each RPM Auction for such Delivery Year:

- Prior to the posting of the BRA results, the RPM Credit Rate for all planned capacity resources other than planned Capacity Performance Resources is equal to the greater of (i) \$20/ MW-day or (ii) .3 times applicable Delivery Year's Net

CONE for the RTO (-in \$/MW-day), times the number of days in the Delivery Year.

- Prior to the posting of the BRA results, RPM Credit Rate for planned Capacity Performance Resources is equal to the greater of (i) \$20/MW-day or (ii) 0.5 times applicable Delivery Year's Net CONE for modeled LDA where the resource resides (in \$/MW-day), times the number of days in the Delivery Year. If the resource does not reside in a modeled LDA, the RTO Net CONE will be used in the determination of the RPM Credit Rate.
- Upon posting the BRA clearing results, the RPM Credit Rate used for planned resource commitments in the BRA other than planned Capacity Performance commitments is equal to the greater of (i) \$20/MW-day or (ii) .2 times the Capacity Resource Clearing Price for the LDA and resource product type (i.e., limited, extended summer, and annual for 2014/2015 through 2017/2018 Delivery Years and base for 2018/2018 and 2019/20120 Delivery Years) that applies to the planned resource<sup>4</sup>, times the number of days in the Delivery Year.
- Upon posting the BRA clearing results, the RPM Credit Rate used for planned Capacity Performance commitments in the BRA is equal to the greater of [(i) \$20/MW-day, (ii) .2 times the Capacity Performance Resource Clearing Price for the LDA that applies to the planned Capacity Performance resource, or (iii) the lesser of (a) 0.5 times Net CONE for modeled LDA where the resource resides for such Delivery Year (in \$/MW-day) or (b) 1.5 times Net CONE (stated in installed capacity terms as \$/MW-day) for the modeled LDA where the resource resides for such Delivery Year minus the Capacity Performance Resource Clearing Price for the LDA that applies to the planned Capacity Performance Resource], times the number of days in the Delivery Year. If the resource does not reside in a modeled LDA, the RTO Net CONE will be used in the determination of the RPM Credit Rate.
- For any planned resource not previously committed for a Delivery Year that participates in an Incremental Auction, the Auction Credit Rate for all planned capacity resources other than planned Capacity Performance Resources is equal to the greater of (i) 0.3 times the applicable Delivery Year's Net CONE for the RTO (in \$/MW-day) or (ii) 0.24 times the Capacity Resource Clearing Price in the BRA for the applicable Delivery Year for the LDA and resource product type (i.e., limited, extended summer, and annual for 2014/2015 through 2017/2018 Delivery Years and base for 2018/2019 and 2019/2020 Delivery Years ) that applies to the planned resource or (iii) \$20 per MW-day, times the number of days in the Delivery Year.
- For any planned resource not previously committed for a Delivery Year that participates in an Incremental Auction, the Auction Credit Rate for all planned Capacity Performance Resources is equal to the greater of (i) 0.5 times RTO Net CONE (in \$/MW-day) or (ii) \$20 per MW-day, times the number of days in the Delivery Year.
- Upon posting the results of an Incremental Auction, the Auction Credit Rate used for planned resources committed in the Incremental Auction other than Capacity

<sup>4</sup>Resource product types are effective with the 2014/2015 Delivery Year.

Performance commitments is equal to the greater of (i) \$20/MW-day or (ii) 0.2 times the Capacity Resource Clearing Price in such Incremental Auction for the LDA and resource product type (i.e., limited, extended summer, and annual for 2014/2015 through 2017/2018 Delivery Years and base for 2018/2019 and 2019/2020 Delivery Years) that applies to the planned resource, but no greater than the pre-clearing Incremental Auction Credit Rate for such Incremental Auction times the number of days in the Delivery Year.

- Upon posting the results of an Incremental Auction, the Auction Credit Rate used for planned Capacity Performance commitments is equal to the greater of [(i) \$20/MW-day, (ii) 0.2 times the Capacity Performance Resource Clearing Price in such Incremental Auction for the LDA that applies to the planned resource, or (iii) the lesser of (a) 0.5 times Net CONE for the modeled LDA where resource resides for such Delivery Year (in \$/MW-day) or (b) 1.5 times Net CONE (stated in installed capacity terms as \$/MW-day) minus the Capacity Performance Resource Clearing Price in such Incremental Auction for the LDA that applies to the planned capacity Performance Resource], times the number of days in the Delivery Year. If the resource does not reside in a modeled LDA, the RTO Net CONE will be used in the determination of the RPM Credit Rate.
- One rate is calculated for each Auction, binding LDA, and resource product type, and applied according to the Auction, LDA, and resource product type in which the capacity was committed.
- For Qualified Transmission Upgrades, the Auction Credit Rate applied will be based on the Locational Deliverability Area in which such upgrade was to increase the Capacity Emergency Transfer Limit (CETL).

#### 4.8.4 Credit-Limited Offers in RPM Auctions

A Sell Offer based on a Planned Generation Capacity Resource, Planned Demand Resource, or Energy Efficiency Resource may be submitted as a Credit-Limited Offer. A Market Seller electing this option shall specify a maximum amount of Unforced Capacity, in megawatts, and a maximum credit requirement (i.e., Maximum Post-Auction Credit Exposure), in dollars, applicable to the Sell Offer. A Credit-Limited Offer shall clear the RPM Auction in which it is submitted (to the extent it otherwise would clear based on the other offer parameters and the system's need for the offered capacity) only to the extent of the lesser of: (i) the quantity of Unforced Capacity that is the quotient of the division of the specified maximum credit requirement by the post-auction Auction Credit Rate; and (ii) the maximum amount of Unforced Capacity specified in the Sell Offer. If the RPM Credit Adjustment Factor for a planned capacity resource is less than one, the maximum credit requirement specified in the Sell Offer may exceed the RPM Credit Limit of the resource in order to account for a post-auction credit requirement for the resource that will be based on the product of the post-auction Auction Credit Rate times the RPM Credit Adjustment Factor.

For a Market Seller electing this alternative, the RPM Auction Credit Requirement applicable prior to the posting of results of the auction shall be the maximum credit requirement specified in its Credit-Limited Offer (i.e., Maximum Post-Auction Credit Exposure) except for the case where the RPM Credit Adjustment Factor applicable to the resource is less than one in which case the Maximum Post-Auction Credit Exposure may be specified by the



seller as the RPM Auction Credit Requirement divided by the RPM Credit Adjustment Factor. The RPM Auction Credit Requirement subsequent to posting of the results will be the Auction Credit Rate times the amount of Unforced Capacity from such Sell Offer that cleared in the auction times the appropriate RPM Credit Adjustment Factor. The following business rules apply to Credit-Limited Offers:

- A supplier must notify PJM prior to the opening of the RPM Auction bidding window if they intend to submit a credit-limited offer. A supplier must further notify PJM of the maximum credit requirement (i.e., Maximum Post-Auction Credit Exposure) to be specified in the credit-limited offer and whether the maximum credit requirement to be specified will exceed the seller's RPM Credit Limit assigned to the sell offer in order to account for an RPM Credit Adjustment Factor less than one.
- A Maximum Post-Auction Credit Exposure is assigned separately to each Planned Resource.
- The sum of the Maximum Post-Auction Credit Exposure nominated for each Planned Resource may not exceed the party's total available credit, except for the case where the RPM Credit Adjustment Factor associated with the planned capacity resource is less than one.
- Coupled Demand Resource Offers may not utilize the Credit Limited Offer functionality.

#### 4.8.5 Price Responsive Demand Credit Requirement

A PRD Provider seeking to commit PRD in the Base Residual Auction, Third Incremental Auction, or the FRR Alternative, and for which there is a materially increased risk of non-performance for such PRD, must satisfy the Price Responsive Demand Credit Requirement prior to the deadline for submitting the PRD Plan.

The Price Responsive Demand Credit Requirement shall be based on the maximum Nominal PRD Value in the PRD Plan \* Forecast Pool Requirement\*Price Responsive Demand Credit Rate. For a PRD Provider, the maximum Nominal PRD Value in the PRD Plan may be reduced by the amount of existing PRD that is currently registered and approved in eLRS system by such PRD Provider on January 1 in advance of the PRD Plan submittal deadline.

Prior to the posting of the results of a Base Residual Auction for a Delivery Year, the Price Responsive Demand Credit Rate shall be (the greater of (i) 0.3 times Net Cone for the PJM Region for such Delivery Year or (ii) \$20/MW-day) times the number of days in such Delivery Year.

After the posting of the Base Residual Auction results, the Price Responsive Demand Credit Rate used for on-going credit requirements for price responsive demand committed in the Base Residual Auction or to the FRR Alternative, shall be the (greater of (i) \$20/MW-day or (ii) 0.2 times the Capacity Resource Clearing Price for an Annual Resource (prior to 2018/2019 Delivery Year) or for a Capacity Performance Resource (effective with 2018/2019 Delivery Year) in such auction for the LDA within the PRD load is located-) times the number of days in the Delivery Year times a final price uncertainty factor of 1.05.

For any additional PRD that seeks to commit in a Third Incremental Auction or seeks to commit PRD to reduce the final unforced capacity obligation of an FRR Entity, the Price

Responsive Demand Credit Rate shall be the same rate that is used after posting of the Base Residual Auction results.

After the posting of the Third Incremental Auction results, the Price Responsive Demand Credit Rate used for on-going credit requirements for all Price Responsive Demand, shall be (the greater of (i) \$20/MW-day or (ii) 0.2 times the Final Zonal Capacity Price for the zone in which the price responsive demand is located) times the number of days in such Delivery Year, but no greater than the post BRA Price Responsive Demand Credit Rate.

#### **4.8.6 Credit Milestones for Planned Generation Capacity Resources**

For Planned Generation Capacity Resources, Planned External Generation Capacity Resources and Planned Financed Generation Capacity Resources<sup>2</sup>, the RPM Credit Requirement shall be reduced by applying the appropriate Incremental Credit Reduction from the table below as the resource attains the stated milestones. The incremental credit reductions are summed cumulatively to get the total credit reduction from the achieved milestones. To obtain a reduction in RPM Credit Requirement (except for “ISA effective date” and “Commencement of Interconnection Service”), the Capacity Market Seller must submit a sworn, notarized certification of an independent engineer in a form acceptable to PJM, certifying that the engineer has personal knowledge, or has engaged in a diligent inquiry to determine, that the milestone has been achieved and that, based on its review of the relevant project information, the independent engineer is not aware of any information that could reasonably cause it to believe that the Capacity Resource will not be in-service by the beginning of the applicable Delivery Year. The standard certification form can be found on the PJM website. The Capacity Market Seller must, if requested by PJM, supply to PJM on a confidential basis all records and documents related to the independent engineer’s certification. PJM may accept a certification by a Professional Engineer in lieu of a certification by an independent engineer. For Balance sheet financed resources a notarized officer certification of financial close can be used instead of an independent engineer certification of financial close.

The cumulative reduction in credit requirements for planned external resources and planned financed external resources, including the initial 50% reduction for financed resources, shall never be greater than the quotient of the division of firm transmission MW by offered (or cleared)MW.

<b>Credit Reductions (%) for Planned Financed Generation Capacity Resources and Planned Financed External Generation Capacity Resources</b>	
<b>Credit Milestones Certified by an Independent Engineer (where applicable)</b>	<b>Incremental Credit Reduction from Initial Credit Requirements</b>
<b>Full Notice to Proceed</b>	<b>50%</b>
<b>Commencement of construction (e.g. footers or</b>	<b>15%</b>

<sup>2</sup> Planned Financed Generation Capacity Resource” shall mean a Planned Generation Capacity Resource that has executed an Interconnection Service Agreement and has completed the Financial Close milestone prior to the 2015 Base Residual Auction (“2015 BRA”). “Planned External Financed Generation Capacity Resource” shall mean a Planned External Generation Capacity Resource that has executed the equivalent of an Interconnection Service Agreement and has completed the Financial Close milestone prior to the 2015 BRA.

foundation poured)	
Main power generating equipment delivered	10%
Commencement of Interconnection Service	25%

The initial credit requirement for Planned Financed Generation Capacity Resources and Planned External Financed Generation Capacity Resources incorporates an initial 50% reduction, with reductions shown in the table being applied to that reduced initial amount. At the time of commencement of interconnection service, once all milestones are met the credit requirement will be zero.

Credit Reductions (%) for Planned Generation Capacity Resources and Planned External Generation Capacity Resources	
Credit Milestones Certified by an Independent Engineer (where applicable)	Incremental Credit Reduction from Initial Credit Requirements
Effective date of ISA for Planned Generation Capacity Resources or agreement equivalent to ISA for Planned External Generation Capacity Resources	50%
Financial Close	15%
Full Notice to Proceed and Commencement of construction (e.g. footers or foundation poured)	5%
Main power generating equipment delivered	5%
Commencement of Interconnection Service	25%

- “Effective Date of ISA” shall be as defined in the relevant ISA.
- “Full Notice to Proceed” means that all material third party contractors have been given the notice to proceed with construction by the Capacity Market Seller or its agent, with a guaranteed completion date backed by liquidated damages.
- “Commencement of construction” means the beginning of major construction of the customer facility or customer interconnection facility.
- “Main power generating equipment delivered” means the main power generating equipment has been delivered to the site.
- “Financial Close” shall mean the resource demonstrated, as supported by a sworn, notarized certification of an independent engineer, certifying that the engineer has personal knowledge, or has engaged in a diligent inquiry to determine, that the Capacity Market Seller or its agent has completed the act of executing the material contracts and/or other documents necessary to (1) authorize construction of the project and (2) establish the necessary funding for the project under the control of an



independent third-party entity. For resources that do not have external financing, PJM may accept instead a sworn, notarized certification by an officer of the company that the project has full funding available, specifying that the project has been duly authorized to proceed with full construction by the appropriate governing body of the company.

- All milestones refer to activities materially related to the delivery of electricity or electric services related to the resource's commitment in the RPM auction.
- Example 1: A Planned Generation Capacity Resource that has committed 10 MW in a Base Residual Auction with an Auction Credit Rate of  $\$36,500/\text{MW-year}$  would have an initial RPM credit requirement of \$365,000. After the effective date of an executed ISA, the RPM credit requirement would be \$182,500 (50% reduction). After Financial Close the credit requirement would be reduced to \$127,750 (65% reduced). Once the Full notice to proceed and Commencement of construction milestone is met then the credit requirement would be \$109,500 (70% reduced). Once the Main Power Generating Equipment Delivered milestone is met, the RPM credit requirement would be \$91,250 (75% reduced). Upon Commencement of Interconnection Service, the credit requirement would be zero.
- Example 2: A Planned External Financed Generation Capacity Resource with no firm transmission secured that has committed 20 MW in a Base Residual Auction with an Auction Credit Rate of  $\$36,500/\text{MW-year}$  would have an initial RPM credit requirement of \$730,000 (the full Auction Credit Rate since no firm transmission has been secured). Upon securing 10 MW (50%) of firm transmission, the RPM credit requirement would drop to \$365,000. After Full Notice to Proceed, the RPM credit requirement would drop to \$182,500, provided 15MW of firm transmission had been secured. After Commencement of Construction and Main Power Generating Equipment Delivered, the RPM credit requirement would be \$91,250 (12.5% of \$730,000), provided 17.5 MW of firm transmission had been secured.