

Proposed Non-Regulatory Opportunity Cost Component (NROCC) Procedure

1. OVERVIEW

Opportunity costs are the value of an opportunity that is lost or sacrificed when the choice of one course of action requires that another course of action must be given up. This cost may result when a generation unit has a limitation, is operating for a constraint, and is offer capped by PJM. Opportunity costs are the net revenues from a higher price hour that is lost as a result of being required to run at PJM's request during a lower price hour. The opportunity cost component is designed to provide a market signal when a generator has a limitation. A typical example would be a restriction on run hours in a given calendar year. If a unit is frequently run cost-capped, it may exceed the limit and be forced to shut down prior to peak load periods when most needed for reliability. This could have reliability impacts on the system, and limits the ability of the owner to manage their unit within limitations.

If a PJM member owns or controls a generating unit with limited run hours or starts in a period, the Non-Regulatory Opportunity Cost Component (NROCC) is the mechanism by which the member can choose to reflect in their energy offer the limited availability of their resource while ensuring their unit is operated consistent with economic dispatch. A typical example is a restriction on run-hours in a given period. If a unit is frequently dispatched and mitigated, it may exceed the run-hour limit and be forced to shut down prior to peak load periods when its output is most needed for reliability.

NROCCs reflect the net revenues that are forfeited by a generator with a limitation on run-hours, as a result of being required to run at PJM's direction during a lower priced hour. NROCCs are only applicable when a member's unit faces run-hour or start limits for a limited period that result from situations meeting defined eligibility criteria.

2. DEFINITION

Non-Regulatory Opportunity Cost Components (NROCCs) are equal to the expected value of the expected forgone net revenues of a unit when requested to operate at a lower real time LMP in the current hour giving up the opportunity to earn a higher net revenues at a higher real time LMP in a subsequent hour.

3. APPLICABILITY

This cost occurs when a generation unit meets all of the following criteria:

1. The unit has an eligible limitation. See NROCC Procedure Section 4 (below).
2. The unit is offer capped by PJM.
 - a. A unit is offer capped when it is running for a constraint **and** fails the Three Pivotal Supplier Test.
 - b. Units are offer-capped at lesser of their cost-based or price-based schedules, including start-up and no-load components. Specific details regarding determination of cost-based offers may be found in PJM Manual M-15 (Cost Development Guidelines) and Section 6.4.2 of the PJM Operating Agreement.
3. A generation unit cannot receive NROCCs for more than three similar events in a rolling five-year period.

4. ELIGIBILITY CRITERIA

Physical equipment limitations:

Restrictions due to an Original Equipment Manufacturer (OEM) recommendation and/or insurance carrier restrictions. Only physical limitations that cause the unit to experience a restriction in the number of starts or run-hours would be eligible for NROCCs.

5. PROCESS:

A. REQUIRED DOCUMENTATION

Documentation must be provided to the Market Monitor with a copy to PJM at the time of the request and no NROCC can be applied until this documentation is received. PJM and the Market Monitor will determine the method and format for submittal. Such documentation must be sufficient for a third party to audit the procedures. The Market Monitor shall notify the PJM Member and PJM if it is dissatisfied with the documentation provided.

The PJM member who owns or controls a generating unit must provide the following:

- a. Request- the PJM member who owns or controls a generating unit must submit a formal, written document to PJM with a copy to the MMU requesting NROCCs. That request must address the following items:
 - i. Unit identification
 - ii. Description of the issues that are restricting the unit in addition to any supporting documentation available.
 - iii. A mitigation plan identifying what steps will be used to remedy the situation.
 - iv. An expected resolution to the problem with milestone events.
- b. Other documentation relevant to the nature of the limitation must be included in support of the request if available or applicable.

Physical equipment limitations

- i. Attestation from management that the problem was not due to substandard practices
- ii. Corporate Policy on inventory management
- iii. OEM notices or bulletins
- iv. Insurance carrier notifications
- v. Engineering analysis and available metallurgical reports
- vi. Manufacturer parts availability including specialty equipment availability
- vii. Labor availability including shop schedules limits when available
- viii. Material and/or specialized equipment transportation schedules

Contractor and/or manufacturer field support availability

B. CALCULATION

Upon receipt of satisfactory documentation of opportunity costs from the PJM Member, the Market Monitor shall calculate an opportunity cost component of the Offer Price Cap in accordance with the method specified in the PJM Tariff and the Manuals and attempt to obtain agreement with the PJM Member that such opportunity cost component has been correctly calculated. If the PJM Member agrees, the PJM Member shall not include an opportunity cost component in its Offer Price Cap higher than the agreed upon value. In the event that a PJM Member and the Market Monitor cannot agree, PJM shall make its own determination of the calculation of such opportunity cost component based on the requirements of the Tariff and the PJM Manuals. If PJM accepts an opportunity cost component that the Market Monitor has determined was not properly calculated, the Market Monitor may exercise its powers to inform Commission staff of its concerns and request a determination, on an expedited basis, directing such PJM Member not include an opportunity cost component in its Offer Price Cap higher than the approved value, and for other appropriate relief pursuant to Attachment M.

6. REPORTING

When submitting cost-based offers to PJM, PJM members who own or control generation units must itemize the amount of the cost offer that is NROCC.

7. SCHEDULING

To remain eligible for NROCCs the PJM member who owns or controls the generation unit(s) are not permitted to self-schedule the affected unit(s) and must run solely at the direction of PJM. However, exceptions may be granted to PJM members who own or control a unit by PJM when the units are required to perform environmental compliance testing, capacity, black start, reactive or other PJM, State, Federal, Local Jurisdiction or NERC required testing, or for diagnostic testing. The PJM member who owns or controls the generation unit must notify PJM before such testing will occur. PJM will determine the method and format for submittal.

8. CALCULATION METHOD

Development of NROCCs must be consistent with the calculation of environmentally run limited opportunity cost: as defined in Section 8, Manual 15 Cost Development Guidelines. This calculator requires the period requested for opportunity cost to be greater than 30 days.

9. STAKEHOLDER REVIEW

PJM and the Market Monitor shall discuss and make recommendations on the requests and approvals for NROCCs at an appropriate stakeholder venue on a regular basis to allow all stakeholders access to information regarding the historic application of NROCCs in the PJM Energy markets. Based on the aforementioned review, PJM and the Market Monitor shall discuss and may make recommendations for improvements to the Opportunity Cost rules to the CDTF. If the rules governing the ability to make market-based offers change this policy will be re-evaluated.

10. INELIGIBILITY

PJM members that employ NROCCs in their cost-based offers and are ineligible to do so according to the eligibility criteria above shall be a subject to investigation by the Market Monitor and may be referred by the Market Monitor to FERC for further adjudication.