The Project Finance Coalition, consisting of PJM members CPV Maryland, LLC and CPV Shore, LLC (collectively “CPV”), Moxie Freedom LLC (“Moxie”), and Panda Power Funds (“Panda” and together with CPV and Moxie, the “Coalition”), provide these comments in response to PJM’s Capacity Performance Proposal (the “Proposal”).1 Together, relying on project financing, the Coalition has developed 2,980 MW of natural gas combined cycle capacity resources, a large majority of the natural gas generation facilities that have gone to construction in PJM over the last two years. CPV is constructing two 725 MW projects: one in New Jersey and one in Maryland; while Panda is constructing two 765 MW projects in Pennsylvania that were initially developed by affiliates of Moxie. In addition, CPV, Moxie and Panda (either directly or through their affiliates) currently have 6 additional natural gas combined cycle projects in development within PJM that would bring an additional 5,180 MW of generation resources to PJM. In total, then, the Coalition is responsible for ten combined cycle projects and over 8,000 MW of capacity.

While very large companies might have several financing options when adding generation projects to their existing fleet, new entrants like the Coalition rely exclusively on non-recourse project financing for their projects. New entrants play an important role in ensuring both reliability and competitive market outcomes. Clearly, market outcomes will be less competitive if development were pursued only by the few large companies. Competition is

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1 PJM Capacity Performance Updated Proposal (Oct. 7, 2014).
enhanced when there are many sellers. New entrants also provide important benefits in
determining the location and timing of investment. Companies with a large generation portfolio
will consider the potential reduction in revenues for their existing fleet when deciding where and
when to develop new projects. While this is a rational commercial consideration for such
companies, it can result in delays in pursuing generation additions in constrained regions where
such companies already maintain a large market share, even though prices are signaling the need
for added generation. New entrants, on the other hand, will be incentivized to locate in
constrained areas, where price signals indicate the need for new supply, without reference to any
potential for reduced revenues across an existing portfolio.

For these reasons, PJM must be careful to ensure that its market rules do not create risks
that will deter project financing options. Obviously, the availability and the cost of project
financing would be significantly affected by the adoption of rules that create the potential for
unpredictable or catastrophic penalties required to be paid within a very short time frame. The
Coalition appreciates that some of the modifications PJM is now proposing will provide
important benefits to project financed resources. In particular, the Coalition believes that PJM’s
Multi-Year Investment Signal proposal which would limit the downside change in clearing
prices from year to year of Capacity Performance resources will reduce the uncertainty of boom
and bust clearing price cycles that has affected the Reliability Pricing Model ("RPM") in the
past.\(^2\) And PJM’s willingness to ensure that mitigation metrics, such as those pertaining to going
forward costs above the Net Cost of New Entry ("Net CONE"), that take into account the costs

\(^2\) Proposal at 14.
generators incur in order to obtain firm fuel deliveries are important modifications to the Proposal.3

However, the Coalition recommends that PJM further modify its proposal in two areas that are critical to ensuring both the viability of existing project financed generators and that new entrants can continue to rely on project financing for future projects. Project financing is possible only when lenders and equity investors can reasonably assess the risks that revenues will cover costs over the term of the investment. While absolute certainty is not expected, the risk of any material revenue shortfall must either be fairly predictable within a range of market conditions or must be mitigated from the outset, e.g., by creating a cash reserve large enough to withstand a reasonable downside scenario. In order not to deter the use of project financing for generation projects, the Proposal must be modified so as avoid the need for cash reserves so large as to negate any commercially reasonable access to such financing. The Coalition focuses on two of these risks in its comments.4

A. Penalty Provisions

1. Timing of Penalty Payments

PJM should not require a nonperforming resource to pay unreasonably large penalty amounts immediately following a penalty event. Instead, penalties should be recovered by simply forfeiting capacity revenues as they would otherwise be paid. This is essential for a project financed company because lenders typically require that borrowers maintain certain monthly and quarterly debt service coverage ratios. The imposition of tens of millions of dollars

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3 Id. at 31.
4 CPV, Moxie and Panda also support the comments submitted by the Gas Unit Owner’s Coalition (of which all three companies also are members) which identify other modifications that are essential to ensure that project financing remains a viable development option.
in penalties that must be paid in as short a time period as one month could easily push the short-
term ratios below requirements (even if long-term ratios could still meet the lender’s
requirements), causing a project to go into default under its credit agreements without sufficient
time to work with its lenders to negotiate a path forward. Hence, any penalty structure that
imposes this type of risk will have the perverse result not only of jeopardizing the ability of the
generator to maintain its business operations, but its ability to support PJM’s reliability needs as
well.

Furthermore, it could create a significant barrier for new generation resources receiving
construction financing to enter the market. One way to mitigate such liquidity issues from the
existing proposal, which has already been discussed with some project lenders, is that new
project financed resources would have to create a cash reserve account large enough to withstand
a downside penalty scenario. However, under the current structure and timing of penalty
payment, this liquidity reserve would be so large as to make project financing economically
infeasible. For example, if a 725 MW project costs approximately $800 million to build and
raises 50% debt, it will raise approximately $400 million. If the capacity clearing price equals
Net CONE of $351/MW-day, the liquidity reserve may have to be as large as $135 million.5
This means that, of the debt raised, 33% would be used to sit in cash for reserves for the capacity
penalty alone and only $265 million could be used for construction financing, making a project
financing practically infeasible.

Another potential liquidity risk that may be created if penalty revenues must be paid in
cash immediately is that it could cause a default under hedge agreements. A commodity hedge

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5 725 MW multiplied by (1 – 3% EFOR) to determine UCAP of 703 MW. And then 703 MW multiplied
by $351/MW-day x 365 Days x 1.5 maximum penalty.
agreement is often utilized, and usually required by lenders, in order to reduce the risk and volatility of energy market revenues. The hedge provider assumes the risk of energy price volatility by swapping a fixed payment for the actual energy revenues. If generators are unable to make hedge payments (i.e., pass through the energy revenues received from PJM’s energy markets) because their energy revenues are forfeited to PJM in order to cover capacity penalty amounts that exceed the capacity revenues that are able to be forfeited in the month when the performance failure occurs, this could cause a default under the hedge agreement. A default under the hedge agreement in a project financed project can then cause a default under the lending agreements. Furthermore, because of the non-payment risk to the hedge provider due to energy revenues from PJM being in essence pledged to cover capacity penalties before payment to the project, the hedge provider will likely require adequate assurance from the project. This means, for example, the hedge provider will require its own cash reserve to be provided to cover the potential non-payment under its hedge from capacity penalties. This again creates an additional liquidity drain making project financing new construction projects under the existing PJM proposal practically infeasible.

It also is important to note that the generator cannot expect to be able to borrow or reserve monies at the time of the penalty occurrence in order to cover these short term liquidity issues. As a practical matter, it would not be possible to arrange such borrowings to protect the energy revenue shortfall and, therefore, the liquidity reserves would likely have to be in place at all times during the project’s life. The Coalition does believe that these fatal flaws for a project financed project could be remedied by slight modifications to PJM’s proposal.
Penalties should be due from capacity revenue only. For these reasons, the Coalition requests that the Proposal be modified to clarify that penalties will be recovered through the forfeiture of capacity revenues that would otherwise be paid to the generator in succeeding months. The Coalition recognizes that this mechanism assumes that the generator will be receiving capacity revenues over a period that is long enough to cover such penalties. However, PJM will know at the time the penalty is incurred whether the generator will continue to receive RPM capacity payments over the next three years. In the unusual circumstance where the generator will not be an RPM supplier over a sufficient period, e.g., the unit is being deactivated during the next three years, the Proposal could accelerate the payment recovery even if that means using energy revenues that would be due to the generator during the period when it is still operating.

2. Stop Loss Mechanisms

The Proposal provides that the overall penalty applied to a committed Capacity Performance resource for any Delivery Year cannot exceed 1.5 times the Delivery Year Net CONE for the CONE region in which the resource is located.\(^6\) Additionally, the revised cap also includes a stop-loss provision whereby the penalty to be applied for any single outage event cannot exceed an escalating value based upon the maximum duration of that single event, during which a Capacity Performance resource is unable to meet its Capacity Performance obligations.\(^7\) For example, for an event with a duration of 30 days or less, the cap is set at 25% of the annual capacity revenues the supplier would receive during the Delivery Year, while an event lasting for

\(^6\) Proposal at 28.
\(^7\) Id. at 28-29.
120 days or more has a cap set at 100% of such annual revenues. Certain specified shortage pricing events occurring during the relevant outage can escalate these percentages up to 100% of the revenues received in shorter timeframes.

While the Coalition appreciates PJM’s decision to add stop loss provisions, the proposed stop loss mechanism is not sufficient to ensure that companies do not face multiple escalating penalties within a short time frame. As proposed, each penalty will be tied to an outage covering a certain period, e.g., with the initial penalty cap step (25% of annual revenues) applied to any event which has a duration of 1 to 30 days. This does not account for the fact that there might be multiple outages during such 30 day period, each of which would be subject to separate 25% caps. For example, assuming a $351/MW-day RPM clearing price and a 725 MW generation unit experiencing two outages over a single month, the 25% cap (about $22.5 million) applied twice would result in a penalty capped at $45 million for that month. These penalties could easily cause a default under lending agreements and jeopardize the project’s continued viability to operate, having adverse impacts not just on the project but on PJM’s reliance on that project to operate to meet PJM’s needs.

It is important to understand that the likelihood of two outages over a short period reflects the reality that the penalties, while rightly intended to insure that generators return their units to operation as quickly as possible, also will rightly create incentives for generators to take whatever steps might be needed to return them to service without the full outage period that might be needed to identify all consequences of the project failure that caused the first outage. It is often the case that, once a failure has been assessed and an initial identification of causes has

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8 Id.
been made, additional issues may not be identified until the project goes back into operation. Or it may simply be the case that the generator believes that there is a high probability, but not a certainty, that specific corrective measures that can be taken immediately will be sufficient to allow the generator to continue operating during the immediate scarcity condition. In these circumstances, PJM’s stop loss mechanism creates additional risks for the generator taking these reasonable, but not riskless, efforts to support PJM during scarcity conditions. At the same time, under the Proposal, the generator has the assurance that if it takes additional time to ensure that it has greater certainty that a second trip will not occur, its penalties remain capped at the same level for the first 30 days of the outage. In other words, the stop loss mechanism perversely incents greater caution in returning a unit to service too quickly.

For these reasons, PJM should modify its stop loss mechanism to apply the caps to multiple outages occurring in the relevant period, e.g., 25% for all outages that occur over a 30 day period. This will ensure that, should PJM experience multiple scarcity conditions in a short period, as happened during the recent polar vortex in January 2014, generators have no disincentive to returning their units to service as quickly as possible even though a full root cause analysis may not be able to be performed that quickly. Instead, generators will be motivated by the price signals received during scarcity conditions to make a best-efforts attempt to restore the unit to service, taking perhaps temporary measures without the full certainty that a second trip will not occur.

Finally the Coalition echoes the Gas Unit Owner’s Coalition’s filing that the penalties contemplated are overly punitive and the hourly penalty structure should be tied directly to the Capacity Performance resource’s RPM clearing price and not Net CONE. Lenders need to
understand the linkage between liability and revenue associated with these resources, and linking the penalty directly to the revenue helps accomplish this comprehension. The Coalition further supports the Gas Unit Owners Coalition’s recommendation that the shortage pricing penalty being eliminated entirely.

B. Exceptions for Events Outside of Management Control

As currently drafted, the updated Proposal contains insufficient exemptions for matters outside of management control or force majeure events. At a minimum, there must be exceptions in circumstances where the resource is available, but is unable to be dispatched due to a force majeure event that could not reasonably be prevented. The addition of an exception for when the electric transmission and/or distribution facilities necessary to allow the generator to deliver energy to the PJM system are physically unavailable such that the generator cannot operate is a sound one. However, there are other events over which management has no control and no ability to take steps to avoid which also should be exceptions to the penalty rule.

For instance, a generator might have contracted for firm transportation or firm gas supply, incurring annual costs that can easily involve many millions of dollars per year. But during the scarcity condition, the pipeline compressor fails and, therefore, gas cannot be delivered to the generator. The generator has no ability to prepare for and mitigate for this event, i.e., while a generator can manage a generator part failure by maintaining a spare in inventory, the generator cannot maintain and install a spare compressor on the pipeline’s system. The Coalition believes that PJM must view failures of pipelines in the same manner as it will view failures in transmission. Both are delivery systems critical to PJM reliably meeting load. In both circumstances, the service providers operate and maintain their systems to meet best practices
and do not install completely redundant systems in order to avoid all risk of nonperformance (installations that would not be cost effective for ratepayers in any event). Both can be affected by events outside of PJM’s or the pipeline’s control. Indeed, one of the comments filed in response to the August 20 Proposal illustrates this well. Under the Proposal, nonperformance would be excused if a sinkhole formed beneath some portion of the electric transmission facilities serving their facility, but the same generator would not be exempted if the sinkhole instead formed beneath the gas compressor serving them. Neither instance can be reasonably predicted nor prevented by the generator through reasonable investment in infrastructure improvements, and any distinction between such circumstances is arbitrary.

While it is reasonable to hold resources accountable for matters which they have the ability to control, it is not reasonable to expose them to such large penalties for matters where they lack any ability to manage the risks. If PJM’s goal is to ensure that resources take all necessary contractual and investment steps to ensure that they are available to be dispatched during scarcity events, there is no basis for penalizing resources that have, indeed, taken such steps and are ready, able and willing to meet PJM’s needs. To the extent that PJM is concerned that force majeure might be interpreted broadly to include certain risks that it seeks to shift to generators, e.g., the risk of extreme weather preventing resources from operating at maximum levels or starting up in the required timelines, PJM can clarify those circumstances that would not be considered force majeure.