

- Poll participation
 - Voting members – 69
 - Affiliate members – 134
 - State Commission – 1
 - TOTAL = 204 votes

1. Do you think it is important for PJM to monitor fuel/energy/resource security needs?

- Yes – 94%
- No – 6%
- Maybe – 0%

2. Do you think that existing PJM market, operational, or planning mechanisms provide sufficient incentives to ensure fuel/energy/resource security?

- Yes – 51%
- No – 35%
- Maybe – 13%

3. Do you think that market, operational, or planning changes are needed to ensure current or future fuel/energy/resource security?
 - Yes – 35%
 - No – 48%
 - Maybe – 17%

4. Do you think PJM should implement changes for fuel/energy/resource security ONLY if NERC or FERC provides orders, guidelines, or standards?
 - Yes – 16%
 - No – 54%
 - Maybe – 30%

5. Do you support Path 1 as follows? Status Quo: PJM continue to monitor and re-visit with stakeholders if risk increases. Include as part of stakeholder work plan with guidelines for study provided and allow stakeholder feedback.
- Yes – 74%
 - No – 26%
 - Maybe – 0%
6. If you think that market, operational, or planning changes are needed to ensure current or future fuel/energy/resource security, beyond status quo, do you support: Path 2: Pre-defined Criteria: PJM and stakeholders develop criteria, but do not develop solution until criteria is met
- Yes – 24%
 - No – 47%
 - Maybe – 30%

7. If you think that market, operational, or planning changes are needed to ensure current or future fuel/energy/resource security, beyond status quo, do you support: Path 3: Solution Developed: Stakeholders develop a solution mechanism to automatically be triggered based on an embedded criteria
 - Yes – 19%
 - No – 65%
 - Maybe – 17%

8. If you think that market, operational, or planning changes are needed to ensure current or future fuel/energy/resource security, beyond status quo, do you support something other than the identified paths? Please use the comments box to define this alternative.
 - See comments

9. Please rank the Paths in priority order. (Path 1, Path 2, Path 3)

- Path 1 as priority 1 – 134 votes
- Path 2 as priority 1 – 16 votes
- Path 3 as priority 1 – 54 votes
- Or, by order:
 - Order #1 – 1,2,3 – 134 votes
 - Order #2 – 3,2,1 – 38 votes
 - Order #3 – 2,1,3 – 16 votes
 - Order #4 – 3,1,2 – 16 votes

9. Please rank the Paths in priority order. (Path 1, Path 2, Path 3)

- Path 1 as priority 1 – 134 votes
- Path 2 as priority 1 – 32 votes
- Path 3 as priority 1 – 38 votes
- Or, by order:

	Path 1	Path 2	Path 3	Total Votes
Order 1	1	2	3	134
Order 2	3	2	1	38
Order 3	2	1	3	16
Order 4	3	1	2	16

Comments



1. Do you think it is important for PJM to monitor fuel/energy/resource security needs?

<p>PJM should have a sense of its resource adequacy, and let market mechanisms define the fuel mix. They should be providing information to the marketplace so that market participants can decide what to invest in and what to shut down, so that the market can do its job.</p>
<p>PJM should continue to monitor fuel security using similar analysis to that conducted in the fuel security study and over the last year in the FSSTF. In addition, Members should be alerted to material changes in the risk of reliability disruptions resulting from fuel delivery limitations.</p>
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<p>To the extent that monitoring is done, it should be a background activity given the lack of imminent threat under current conditions.</p>
<p>Yes. Although it appears PJM has adequate diversity now, that will change over time.</p>
<p>Monitor through winter periods</p>
<p>PJM should routinely provide stakeholders with information regarding its analysis and, as needed, discuss with members whether issue/solution development needs to be explored. Talen proposes that PJM and stakeholders memorialize an on-going process to provide current monitoring information to stakeholders. For example, quarterly reports should be provided by PJM staff responsible for monitoring and address assumptions/methodology (including any changes), results, FERC or NERC developments, and a recommendation from PJM as to whether or not the initiation of solution development conversations are necessary.</p>
<p>This work is squarely within PJM's mission to operate a reliable system.</p>
<p>Emphasis on "monitor"</p>
<p>While it is important for PJM to monitor fuel/energy/resource security needs, it is equally if not more important for PJM not to take any actions that would needlessly increase PJM consumer costs with little customer benefit in return without the buy-in/support of an overwhelming majority of PJM stakeholders, especially when PJM itself has already declared that no imminent need currently exists.</p>
<p>It is important for PJM to monitor fuel/energy/resource security needs so that they can stay ahead of potential issues in the future.</p>
<p>PJM should continue to be fully aware and monitor issues/drivers that impact risks related to the reliable delivery of power across its market footprint</p>



2. Do you think that existing PJM market, operational, or planning mechanisms provide sufficient incentives to ensure fuel/energy/resource security?

PJM's study concludes that the grid is currently energy secure, so demonstrably the right incentives are in place. There are significant changes to PJM's energy and capacity market at FERC that will change the operating dynamics of the grid. It seems premature to draw a conclusion about the right incentives at this time.

Yes, PJM's fuel security study demonstrates that the existing mechanisms provide sufficient incentives. With that said, we recognize there will be changes to fuel/energy/resource availability and needs moving forward.

The extreme and extremely unlikely scenarios that PJM has studied, and under which it has found there may be gaps, do not convince us that there are gaps in market, operational or planning mechanisms that need to be addressed.

- PJM's fuel security study demonstrates that the existing mechanisms provide sufficient incentives. (e.g. capacity performance requirements and the current high cleared capacity reserve margin).

PJM's fuel security study demonstrates that the existing mechanisms provide sufficient incentives. (e.g. capacity performance requirements and the current high cleared capacity reserve margin).

But fuel security should not necessarily be supported by market incentives. This is a bias that PJM has brought to the table.

In general they do. Generators will keep enough fuel on hand to be able to meet their energy obligations. However, there may be insufficient fuel storage or delivery capability to perform during a sustained cold weather event.

As demonstrated in PJM's fuel security study, the current high cleared capacity reserve margin substantially impacts the economics of the fuel security evaluation decision for generators. CP Penalty and lost revenue costs will increase if the cleared capacity reserve margin declines and scarcity pricing and PAI events become more prevalent. This will change the economics of fuel security measures (e.g. dual fuel, multiple pipeline connections) relative to these potential costs.

Enhancements and/or additional incentives should be discussed in 2020. Sufficient pricing and products to encourage valuable baseload resources that provide fuel security are a necessity. Talen appreciates that PJM has a series of energy and reserve market pricing reforms pending before the FERC. However, those reforms should be coupled with an evaluation of additional efforts to appropriately compensate fuel and resource security.

We support status quo, as long as the status quo includes monitoring for future resilience risks. PJM should remain vigilant if any further potential issues develop.

Capacity Performance has helped, and PJM believes it has the authority to take certain actions like requiring changes in pipelines used for gas procurement. There has not been an incident since the 2014 Polar Vortex and CP implementation.

Current PJM Capacity Performance rules provide sufficient incentive for PJM generators to ensure grid reliability in times of extreme conditions.

PJM should continue to monitor fuel/energy/resource security needs and make recommendations to stakeholders and regulators, as to necessary, to maintain a reliable and resilient bulk power system.

Existing incentives may need to be strengthened or new incentives may need to be added to ensure continued security.

Need a capacity construct that recognizes firmer fuel supply

No monetary funds to allow a facility to test a secondary fuel sources. sources should be compensated to maintain secondary fuel readiness.

If the objective is to deliver a reliable grid using rational economic drivers, then the current mechanisms seem to be providing for that objective.



3. Do you think that market, operational, or planning changes are needed to ensure current or future fuel/energy/resource security?

We support PJM defining the reliability needs and implementing market design that incentivizes the production to meet those needs in the future, including capacity performance and ORDC improvements.

PJM is currently fuel secure. It is premature to develop changes that 'ensure' a future state. However, that should not foreclose the opportunity for incremental changes to enhance fuel security.

Not at this time. However, PJM should continue to evaluate fuel security.

Not at this time. PJM should continue to evaluate fuel security.

Not at this time.

Per our response to Question 2, we believe there is no need to take action based upon current market conditions and note that expected future conditions do not require current action on either the market, operational, or planning fronts.

It is possible that all three -- market, operational, planning -- changes are needed. But it is not necessary to make immediate changes in the existing structure.

Some changes may be required to recognize the limitations of certain generators in the event of a sustained cold weather event.

PJM and stakeholders should engage in discussions regarding potential enhancements or changes to promote fuel security. As the grid evolves to include more distributed and variable resource types, ensuring an adequate amount of fuel secure and baseload resources are available for dispatch is essential to maintaining reliability during all operating conditions.

PJM should continue to evaluate fuel security reporting to PJM members annually of their findings.

Per the answers to #1 & #2, PJM itself has already declared that no imminent need currently exists to justify making market, operational, or planning changes are needed to ensure current or future fuel/energy/resource security.

PJM's mechanisms do provide some incentives, but it has not been proven that they are sufficient to maintain a reliable and resilient system – absent outside actions and the possibility of other incentives.

Market rules for battery storage participation are too restrictive, to the detriment of the market.

Currently, PJM markets, operations and planning criteria do not explicitly consider fuel/energy/resource security, despite demonstrated risks. PJM and stakeholders should continue these prospective efforts to address the demonstrated risks

Capacity Market changes to recognize firmer gas resources compared to less firm gas resources.

Future drivers or objectives may cause the need for evolving or changing the approach in market constructs, planning criteria, and operational implementation.

Fuel security issues are masked by the rarity of sustained winter weather and pipeline events, and high reserve margins in PJM and the FSSTF work should continue to further study the impacts that the entry of renewables and future retirements will have on the grid further than 5 years in the future.



4. Do you think PJM should implement changes for fuel/energy/resource security ONLY if NERC or FERC provides orders, guidelines, or standards?

PJM has unique insight into its own system, and as the ISO, we think PJM has the ability to observe and define a need for its system.

It is appropriate for PJM to enhance its markets and operations without FERC/NERC guidance.

PJM should make its own fuel security evaluation and act accordingly. FERC/NERC orders, guidelines, or standards should be followed as is prudent; however, PJM may choose to work with stakeholders if it finds reliability is substantially jeopardized by fuel security issues.

If we were to identify a credible issue in the future, we would not necessarily require that NERC or FERC act first before addressing that issue.

PJM should make its own fuel security evaluation and act accordingly. FERC/NERC orders, guidelines, or standards should be followed as is prudent; however, PJM may choose to act independently if it finds reliability is substantially jeopardized by fuel security issues.

Guidelines would help define a structure. But these guidelines may be too generic to help with PJM-specific challenges.

However, PJM must compensate through the markets for generators expanding their fuel assurance actions.

The purpose of this fuel security effort as communicated by PJM and its Board of Directors in early 2019 was to develop a strategy for addressing fuel security, resource security, and reliability risks that could appear in the future, beyond the contingencies that PJM plans for today. While we appreciate that PJM must be responsive to any NERC or FERC requirements, it is incumbent on PJM to identify what it needs to be fuel secure and engage with stakeholders to ensure the necessary processes and/or market changes are in place to provide it.

PJM should seek to propose changes independently if studies indicate reasonable cause for concern about fuel security; however, NERC is an appropriate touchstone in the determination.

PJM should monitor changes that could conflict with its rules and comment as appropriate.

Given the increasing politicization of FERC & NERC, there is concern that any orders, guidelines, or standards provided by them could be based on faulty assumptions.

NERC and FERC may provide minimum guidelines and standards, but it can be necessary to have additional measure to address regional differences.

PJM should look at existing NERC criteria and consider whether they could be interpreted differently for fuel security purposes like New England is doing. PJM should follow the guidance of the draft NERC Guideline on Fuel Security and begin discussing criteria and potential solutions before an imminent problem exists.

PJM should be proactive to prevent orders that would be less than ideal.

NERC's work in this area is at early stages based on education presented and FERC has not given guidance. It is too early to say for certain what level of guidance NERC or FERC will give in this area. It is reasonable that PJM should wait for further guidance since there is no urgent problem in PJM based on our interpretation of the research PJM conducted.

It would certainly be beneficial to have some level of guidance and standards provided to NERC or FERC that PJM could utilize as the fuel/energy/resource security is assessed. A clear objective is always helpful when trying to evaluate and craft a solution.



5. Do you support Path 1 as follows? Status Quo: PJM continue to monitor and re-visit with stakeholders if risk increases. Include as part of stakeholder work plan with guidelines for study provided and allow stakeholder feedback.

PJM has real problems it needs to fix, and those should take priority over this not-well defined problem.

Monitoring changing conditions is part of PJM's normal role and should be continued.

In the event risk increases in the future and it becomes necessary to re-visit, we feel it is imperative that the following points are heeded: - that any potential future changes result in market-based solutions; - that any potential future changes or criteria for their implementation be subject to stakeholder review and approval.

This seems most prudent.

This is an important topic and should be monitored. The initiative has been on a rather slow and deliberate path to date. The real impacts of inadequate fuel security will not likely be felt until the 2025-26 timeframe which is consistent with the timing of this effort. However, the mechanisms for incenting the right actions and behaviors have to be established before that time horizon so that they are in place when needed.

PJM should certainly continue to monitor, however, a formal stakeholder process regarding fuel security updates should be established to require PJM to routinely report on its analysis to members. Such reports shall include, at a minimum, assumptions and methodology (including any changes), additional analysis (previously studied scenarios or new ones), results, recent federal interactions (i.e. FERC or NERC) and a recommendation as to whether or not stakeholder discussions should begin in earnest on market enhancements and/or changes to address fuel security. PJM should provide this information quarterly to the MIC. A Stakeholder Work Plan could be used to memorialize the process.

Recommend annual or biennial reporting mechanism.

This is the most prudent path to follow given that PJM itself has already declared that no imminent need currently exists.

Path 1 misses the opportunity for effective planning in advance of an event or an issue. Resilience-based events cannot be averted by market-based solutions developed after-the-fact.

We agree in general with Path 1. We would have concerns with dedicating stakeholder time to this issue in 2020 based on the recent analysis done. We would suggest keeping it as a placeholder in work plan but not dedicate time to it until/if risks increase.

This may be a valid path to consider as the problem and objective is not well defined at this time and is subject to an ever changing landscape.



6. If you think that market, operational, or planning changes are needed to ensure current or future fuel/energy/resource security, beyond status quo, do you support Path 2?

Path 2 - Pre-defined Criteria: PJM and stakeholders develop criteria but do not develop solution until criteria is met

We don't think the market rules today are perfect for the next 20 years, but we see this as contained within other reasonable work streams rather than as a sole focus. General improvement to market rules would help this issue.

We can support the idea of criteria, but would need to be careful how the criteria is selected. It is important that we do not specify a resource mix. We agree that the solution and criteria should not be developed at the same time. It's foolish to craft solutions to problems that do not yet exist.

The concept of developing criteria is intriguing but we do not feel it is advisable at this time. For example, without more real-time information about the impact of CP procedures and requirements it is hard to determine where to start and what could be needed.

More information needed. For example, without more real-time information about the impact of CP procedures and requirements it is hard to determine where to start and what could be needed.

It would not hurt to talk about criteria for fuel security. But we are hesitant to endorse the need for creating market and planning rules at this point.

We support this from the perspective that establishing pre-defined criteria will keep the dialogue on this topic alive. However, we are concerned that criteria discussions without solution development would be inefficient. As such, Path 3 is preferred and triggering criteria could certainly be part of the discussion under that Path 3.

We do not believe changes are currently needed.

The work of the FSSTF should continue and not be suspended. PJM's Fuel Security studies analyzed the 2023/2024 Planning Year. In less than a month, 2023 will be only three years in the future. PJM's resource mix is slowly evolving. PJM should study further into the future, considering 5-10 years forward. We support path 2 because while the fuel security and resilience threats may be immediate, and solution development may be premature while NERC/FERC are working to provide guidance, which when provided will inform a solution.

Notwithstanding our ranked choice below (#9), we do not support Path 2.

Depends on criteria; criteria that is too prescriptive could lead to inefficient results.

Yes, Path 2 offers a measured, pro-active approach to addressing identified future fuel/energy/resource security risks. It is prudent to establish pre-defined criteria to address system risk in advance of a significant event. There is less risk that a solution mechanism is not in place before an event when compared to Path 1.

I support this as a secondary option if PJM decides not to be proactive, but prefer proactive option.

I believe this path is preferable and quite likely this evaluation of criteria needs to have regular and periodic review. We are trying to solve an issue that is impacted by continually changing landscape.



7. If you think that market, operational, or planning changes are needed to ensure current or future fuel/energy/resource security, beyond status quo, do you support Path 3?
Path 3 - Solution Developed: Stakeholders develop a solution mechanism to automatically be triggered based on an embedded criteria

The questions seem backward. You're asking if we should design a solution to a problem, but we have yet to see a credible problem demonstrated. We would need a metric to evaluate this by.

We should not develop solutions to a problem that may not materialize.

N/A is the appropriate answer since we do not think changes are needed. However, N/A is not available so we chose "No" as the closest appropriate answer.

It is premature to aggressively pursue a solution at this time.

This is a worthy goal and should be pursued. If stakeholders are willing to work diligently and objectively to develop a solution set inclusive of adequate market compensation, we would certainly support that effort. The challenge of this path will be that the future market design will not yet be known and the impacts of changes like the PJM's reserve filing upon whatever solutions the stakeholders agree upon today will be significant. All of these initiatives need to work in concert.

We support continued discussions of viable market, operations or planning enhancements to promote fuel security. We further agree that triggering criteria should be a part of the dialogue.

We do not believe changes are currently needed.

Notwithstanding our ranked choice below (#9), we do not support Path 3.

Can't develop a solution without a specific problem to solve for

This is unnecessary per the answer to #5 above.

We support Path 3 which, like Path 2, offers a measured, pro-active approach to addressing identified future fuel/energy/resource security risks. Stakeholders can be engaged in developing both a trigger and a solution in a measured fashion under this option.

It seems folly to craft a series of automatic mechanisms when there is a great amount of uncertainty as to the magnitude of the issue or the main drivers for the issue.



8. If you think that market, operational, or planning changes are needed to ensure current or future fuel/energy/resource security, beyond status quo, do you support something other than the identified paths? Please use the comments box to define this alternative.

We think that general reform of market rules would improve this issue. E.g., ORDC, fast-start pricing, capacity market reform would bolster market pricing and responsibilities.
Specific, tailored improvements should be brought forward in the course of typical stakeholder process. A portfolio of reasonable improvements is a better option than drastic change.
N/A
We don't see a need to make changes at this time.
None.
We do not believe that there is any current need to go beyond the status quo.
Good with identified paths.
We don't think market, operational, or planning changes are needed to ensure current or future fuel/energy/resource security beyond status quo.
No at this time
???
Nothing further to offer at this stage.
no comment
For any future energy security endeavors, zero-carbon resources must be able to fulfill the requirement. States should be able to select their desired resource mix to provide energy security, as well as assurance for blackstart resources. States would fund the incremental cost of these additional requirements.
nothing at this time.
None
While we support both paths 2 and 3, it is also important that PJM bring forward their Phase 3 analysis to stakeholders as soon as practicable. There is a whole area of risk that has been yet to be considered by stakeholders in advance of the December MRC decision point on fuel security.
No
PJM needs to monitor and forecast fuel security. Market mechanisms may need to be created or modified to accomplish effective levels of future resilience. Saying that we don't have a problem today is not a solution.
monetary funds to allow a facility to test a secondary fuel sources. sources should be compensated to maintain secondary fuel readiness.
N/A. None needed.
yes - CBIR could identify other possibilities
We would support keeping the FSSTF or some other process open to periodically review and determine a need to ramp up efforts. It would afford the opportunity to continue the review process in some sort of orderly fashion.
Yes, at a minimum continue with education phase to examine recent material reductions in pipeline operational flexibility that has been observed as a result of recent upcoming tariff changes and model appropriately in scenario analysis.