UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection L.L.C.) Docket No. ER24-99-000

COMMENTS OF THE PJM POWER PROVIDERS GROUP

Pursuant to the October 13, 2023, Combined Notice of Filings #1, issued by the Federal Energy Regulatory Commission ("FERC" or "Commission") in the above-captioned proceeding, The PJM Power Providers Group ("P3")[1] respectfully submits these comments[2] in response to PJM Interconnection, L.L.C.'s ("PJM") October 13, 2023 filing,[3] pursuant to section 205 of the Federal Power Act ("FPA"),[4] regarding key reforms to the Reliability Pricing Model ("RPM") and related rules in the PJM Open Access Transmission Tariff ("Tariff") and Reliability Assurance Agreement Among Load Serving Entities ("RAA") designed to enhance PJM's resource adequacy risk modeling and capacity accreditation processes and enhance testing requirements of Capacity

[1] P3 is a non-profit organization dedicated to advancing federal, state and regional policies that promote properly designed and well-functioning electricity markets in the PJM Interconnection, L.L.C. ("PJM") region. Combined, P3 members own over 83,000 MWs of generation assets and produce enough power to supply over 63 million homes in the PJM region covering 13 states and the District of Columbia. For more information on P3, visit www.p3powergroup.com
[2] The comments contained herein represent the position of P3 as an organization, but not necessarily the views of any particular member with respect to any issue.
[3] P3 timely submitted a doc-less Motion to Intervene on October 18, 2023.
[4] 16 U.S.C. § 824d (2000).

Resources[5] ("PJM Capacity Market Reforms").[6] PJM's Capacity Market Reforms in this proceeding compliment the reforms PJM is proposing in its companion FPA section 205 filing in Docket No. ER24-98-000. P3 is also submitting comments in that companion docket.

PJM requests that its proposed Capacity Market Reforms become effective within 60 days of its October 13, 2023, filing, on December 12, 2023. PJM states that such an effective date will provide sufficient notice to Market Participants in advance of all pre-auction deadlines for the Base Residual Auction ("BRA") associated with the 2025/2026 Delivery Year. For the reasons described herein, P3 urges the Commission to approve PJM's Capacity Market Reforms.

I. INTRODUCTION

PJM highlights that its proposed Capacity Market Reforms in this and its companion Section 205 filing are needed in the wake of a significant transformation in its resource mix coupled with increasing reliability risks during that transition. P3 agrees with these assessments and its members have been active participants in the stakeholder meetings over the last two years to discuss the various changes that will be needed to ensure continued confidence in the PJM wholesale competitive market and prices consistent with reliability requirements. P3 has expressed serious concerns with both the changing resource mix as well as regulatory decisions that have hampered, rather than supported, PJM's historically robust competitive markets. As further set forth in P3's introductory comments in Docket No. ER24-98-000, the difficult, but undeniable, facts include the following:

---

[5] For the purpose of these P3 Comments, capitalized terms not defined herein shall have the meaning as contained in the PJM's Tariff, Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. ("Operating Agreement"), or the RAA.

[6] *PJM Interconnection, L.L.C.*, Docket No. ER24-99-000, *Capacity Market Reforms to Accommodate the Energy Transition While Maintaining Resource Adequacy*, filed October 13, 2023 ("PJM Capacity Market Reforms" or the "filing").

- In the last three auctions capacity prices cleared at historic lows;[7]
- Capacity market participation is shrinking significantly as the last three auctions have shown a steady decline in resources seeking capacity obligations;[8]
- Capacity auctions that once cleared nearly 6,000 MWs of new generation, cleared a mere 328 MWs in the last auction;[9]
- Investments driven by subsidies have overtaken those financed by merchant capital;[10]
- The number of constrained zones, a sign that local resource needs are not being met, is increasing;[11]
- Starting with the 2026/2027 delivery year, as a result of regulatory changes proposed by PJM and approved by the Commission, the capacity market reference resource will change from a peaking plant to a natural gas combined cycle plant that will be more dependent on less predictable energy revenues;
- The lack of a meaningful MOPR means that anyone investing in PJM will do so knowing that there are effectively no protections against the exercise of buy side market power;
- The decision to re-run the auction results in the last BRA in DPL South has undercut confidence that markets will operate in a transparent and nondiscriminatory fashion and resulted in prices that were not consistent with reliability needs in DPL South;[12]
- Performance risk in the PJM capacity market has resulted in variable and intermittent resources eschewing participation in the PJM capacity market; and
- Winter Storm Elliott is a recent reminder that being a capacity resource in PJM comes with potentially billions of dollars of exposure to penalties.

These real and distressing facts call for the urgent action that PJM requests here and in its companion Section 205 filing.

---

[7] *See*, https://www.pjm.com/-/media/library/reports-notices/special-reports/2023/energy-transition-in-pjm-resource-retirements-replacements-and-risks.ashx

[8] *See*, https://pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2024-2025/2024-2025-base-residual-auction-report.ashx at 2.

[9] https://pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2024-2025/2024-2025-base-residual-auction-report.ashx

[10] *See*, https://ieefa.org/resources/private-equity-pjm-growing-financial-risks

[11] In the 2024/2025 auction there were five constrained zones as opposed to three in the 2023/2024 auction.

[12] Former FERC Chairman Joseph Kelliher referred to the decision as, "politicized decision-making, ends-result oriented decision-making, rather than a commitment to market integrity, and raises concerns about PJM's commitment to capacity market rules that encourage generation entry and capital investment." *See*, https://www.p3powergroup.com/siteFiles/News/101345A3E8C1164BE3B1C65C460DD177.pdf

While these proposed reforms are important and a step in the right direction, additional changes are needed to ensure PJM achieves the goals these reforms are starting to address so that they create a robust capacity market that delivers reliability at the least cost to PJM consumers.

Notably, as PJM acknowledges at several different points in these filings, these proposed capacity reforms are an initial step that will require "further refinement for these approaches in the near future."[13] Further reforms are no doubt going to be needed in order to more fully address PJM's well-stated concerns of the need to preserve system reliability given more frequent extreme weather and the energy transition.

With PJM's stated commitment to continue the needed work ahead for the necessary reform of the capacity markets, P3 urges Commission approval of PJM's proposed Capacity Market Reforms as the first step for necessary reforms required for reliability at the least cost to consumers.

II. COMMENTS

A. P3 Supports PJM's Transition to Marginal Accreditation.

PJM proposes to switch from average effective load carrying capability ("ELCC") for intermittent resources to marginal ELCC for all resources, other than Energy Efficiency Resources. P3 supports this important change.[14] As P3 has stated in the past, P3 is supportive of marginal accreditation for ELCC resources and has been open to ELCC applying to all resources.[15] P3 is supportive of rigorous accreditation because it is important that all capacity resources be effectively evaluated to determine each resource's ability to contribute energy at times of peak

[13] PJM Capacity Market Reforms at p. 16.
[14] *Id*. at p. 56.
[15] *See*, P3 March 7, 2023, letter to Board of PJM Interconnection L.L.C. at p. 5, https://pjm.com/-/media/about-pjm/whowe-are/public-disclosures/20230307-p3-letter-regarding-critical-issue-fast-path-process-addressing-the-capacitymarket.ashx

demand. P3 supports PJM's proposal to put in place a more granular level of accreditation that specifically reflects the ability of individual capacity resources to contribute to reliability. As P3 has emphasized, it is important that the accreditation be fair and transparent, allowing PJM and the resource owner to develop an agreeable capacity accreditation prior to the auction. PJM and the Commission need confidence that the cleared capacity is sufficient to maintain resource adequacy at system peak.[16] While P3 supports PJM's proposal and urges Commission approval of it, P3 notes that open questions remain as to what accreditation means and more direction will be required following FERC's approval and upon PJM's implementation of these changes.

PJM proposes to add the following ELCC Classes for Unlimited Resources: Nuclear Class, Coal Class, Gas Combined Cycle Class, Gas Combustion Turbine Class, Gas Combined Cycle Dual Fuel Class, Gas Combustion Turbine Dual Fuel Class, Diesel Utility Class, Steam Class, and Other Unlimited Resource Class. For a resource to qualify for a dual fuel ELCC Class, the resource must be capable of "start[ing] and operat[ing] independently on an alternate, onsite fuel source up to its maximum capacity level during the winter season of the applicable delivery year in which it is providing capacity, and capable of operating on the alternate fuel for two 16-hour periods over two consecutive days at its maximum capacity level."[17] Furthermore, PJM will use an hourly interval in performing the ELCC analysis, "compar[ing] expected hourly load levels (based on historical weather)" with the expected output of the "expected future resource mix" for each hour to "identify the relative marginal resource adequacy value of each individual ELCC Class compared to an Unlimited Resource with no outages."[18] While moving from average to marginal accreditation, the determination of a Variable Resource's and Limited Duration Resource's

[16] P3 Tech-Conference Comments, PJM Capacity Market Forum, Docket No. AD23-7-000, at p. 7, August 4, 2023.
[17] PJM Capacity Market Reforms at p. 39.
[18] *Id.* at p. 42.

capacity accreditation (i.e., "Accredited UCAP") generally follows the same formula used to determine the Accredited UCAP under the current ELCC approach, with the only difference being that the Accredited UCAP value for such resource being capped at "the lesser of the resource's Capacity Interconnection Right or the product of" the resource's Effective Nameplate Capacity, its ELCC Class Rating, and its resource-specific performance adjustment. For Unlimited Resources, PJM also proposes to cap the output of an Unlimited Resource in any hour of the year at "greater or" the resource's Capacity Interconnection Rights or the resource's "transitional system capacity."[19]

While P3 supports these changes, P3 highlights that there remain issues related to the accreditation of non-dual fuel gas units that must be addressed following the Commission's approval. PJM will need to provide more parameters for these units, which it has said it will do in its manuals which are not currently available or subject to Commission approval. P3 believes that more direction and specificity will be required from PJM regarding different fuel arrangements and how those arrangements impact accreditation. While the Commission should accept PJM's proposal to move to marginal accreditation and develop more granular views of unit capability, the Commission should signal to PJM that more specificity will be required coincident with implementation.

B. P3 Agrees with PJM's Proposal to Update the Risk Modeling to Evaluate Risk on a More Granular, Hourly Level.

In order to complement PJM's adoption of an accreditation methodology, PJM is proposing to use an hourly model to determine the PJM system's resource adequacy risk. PJM is proposing the adoption of expected unserved energy ("EUE") in the Reserve Requirement Study. P3 agrees with this change. P3 agrees with PJM that the adoption of EUE in the Reserve Requirement Study

[19] *Id*. at p. 52.

appropriately and necessarily tracks the changing resource mix. The current 1-day-in-10-years LOLE reliability criterion "does not fully represent the three typical reliability dimensions: magnitude (MW), duration (hours) and frequency (number of events/time period)."[20]

However, EUE contrastingly provides a more granular metric that measures the average amount of energy shortfalls in both duration and number of megawatts versus only the number of days with shortfalls. EUE allows the resource adequacy analysis to clearly differentiate among events and better identify the scope of loss of load risk throughout the year. The changing resource mix which increasingly will be composed of greater hourly performance variability with wind and solar resources further supports the need to include EUE in resource adequacy risk modeling. P3 supports incorporating the EUE metric into PJM's analysis.

C. Other Qualitative Reforms To Support Resource Adequacy.

1. P3 Supports PJM's Proposal to Require All Capacity Market Sellers of Any Planned Generation Capacity Resource to Provide A Binding Notice of Intent In Order To Be Included In The Relevant BRA.

In order to further enhance resource adequacy, PJM proposes to amend Attachment DD, section 5.5, of its Tariff in order to require all Capacity Market Sellers of any Planned Generation Capacity Resource to provide a binding notice of intent if such resource will be offered into in the relevant RPM Auction before the auction parameters are posted.[21] Existing Generation Capacity Resources that are not subject to the capacity must offer requirement would not be included in this requirement.

PJM describes in detail why it proposes to change its approach for how it models Planned Generation Capacity Resources in the calculation of the Locational Deliverability Area ("LDA") reliability requirement. While PJM explains that its current approach has worked in the past, there

---

[20] *Id*. at p. 61.
[21] *Id*. at p. 72.

are occasions in which it would need to revise the LDA Reliability Requirement based on excluding Planned Generation Capacity Resources that are not offered into the RPM Auction when a materiality threshold is reached. In order to avoid the situation that PJM faced in DPL South during the December 2022 BRA, the changes more appropriately reflect the reliability needs of an LDA without having to recalculate the reliability requirement during the conduct of the RPM Auction in violation of the filed rate doctrine.[22]

PJM states that these proposed changes are necessary so that PJM has adequate time to model Planned Generation Capacity Resources in the ELCC/RRS model, which is used in the calculation the Locational Deliverability Area Reliability Requirement. Planned Generation Capacity Resources that are the subject of such binding notice of intent would then be required to be offered into the applicable RPM auction. Conversely, Planned Generation Capacity Resources that are not the subject of a binding notice of intent to participate would not be allowed to be offered as capacity into the relevant RPM auction.

PJM also proposes to add an enforcement mechanism to this new, earlier notice of intent approach. Thus, for any Planned Generation Capacity Resource that is associated with a notice of intent to offer, but is not offered into the auction, such resource will not be allowed to be offered in each of the subsequent incremental auctions associated with that delivery year.

P3 supports PJM's proposed new notice of intent approach for Planned Generation Capacity Resources that intend to be included in the relevant BRA.[23] Such a notice will allow

[22] 182 FERC ¶ 61,1099 (February 21, 2023). P3 currently is appealing this order at the United States Court of Appeals for the Third Circuit.
[23] Note that P3 proposed a similar idea to PJM and the Commission earlier this year. See https://www.p3powergroup.com/siteFiles/News/101345A3E8C1164BE3B1C65C460DD177.pdf at pp. 46 – 50. "As Dr. Shanker explains, this is the true source of the LDA Reliability Requirement forecast risk that PJM has identified, and there is a straightforward, elegant solution for eliminating this risk. Dr. Shanker's proposal is "simply to require that any seller/supplier of capacity with an option not to participate in the upcoming BRA must formally execute that option in advance of the BRA, through a binding declaration to either offer or not offer in that BRA."

PJM to appropriately set the reliability requirement ahead of the auction and remove some of the uncertainty associated with the current process. The Commission should approve this positive change.

2. P3 Continues to Have Concerns Related to the Recently-Approved Changes to the VRR Curve.

Without changing its shape, PJM proposes to update the inputs used in determining the VRR curve. Specifically, the inputs used in determining the VRR curve would be changed in two ways: (1) by bringing forward by a year the use of set percentages that are applied directly against the Reliability Requirement rather than against the Installed Reserve Margin and (2) for the determination of the point on the y-axis, PJM proposes to discontinue using a percentage based on "one minus the pool-wide EFORd" as the factor to convert the net CONE price from a $/MW-day on an installed capacity basis to be on an unforced capacity basis.[24] In its place, PJM proposes to use the reference resource's ELCC class rating.

PJM explains that these VRR curve changes will allegedly simplify and provide stability to the curve, as well as more concisely define the PJM Region Reliability Requirement percentage as a direct percentage as opposed to a formula, based on Installed Reserve Margin, that yields the same PJM Region Reliability Requirement percentage.

As noted above, P3 strenuously opposed PJM's revisions to the VRR curve. Problematically, these reforms to the VRR curve will negatively impact the capacity auctions for resources seeking to enter or remain in the market at same time that PJM is predicting energy shortages in the region (delivery years between 2026 to 2030). P3 believes that it was an error for PJM, knowing it was facing reserve margins in the single digits, to change the reference resource, adjust the VRR shape and move to a forward-looking EAS offset, all of which will introduce

[24] PJM Capacity Market Reforms at p. 77.

instability and uncertainty into an already troubled capacity construct.

While P3 made these arguments and was ultimately rebuffed by PJM and the Commission, the concerns remain. Moreover, as result of this filing, PJM is making significant revisions to the calculation of the Installed Reserve Margin and the resulting Forecasted Pool Requirement. The Forecast Pool Requirement is applied to the region's forecast peak load to develop the VRR curve. As demonstrated in the Rocha-Garrido Affidavit, the Forecast Pool Requirement ("FPR") may be less than one (1) and result in a target procurement less than the region's load forecast.[25] This potential outcome is concerning to P3 and should be concerning to the Commission, as well. In approving this filing, the Commission should make it clear to PJM that it should be procuring sufficient capacity to meet peak demand in the base residual auction.

3. P3 Supports PJM's Proposed Revisions to Its Sell Offer Requirements to Align with Its Proposed ELCC/Modeling Changes.

PJM proposes to modify its Sell Offer requirements to require Generation Capacity Resources to specify their Accredited UCAP Factor, beginning with the 2025/2026 delivery year.[26] PJM states that this is consistent with its proposal to discontinue use of EFORd in favor of PJM's proposed marginal ELCC approach to determine each Generation Capacity Resource's capacity accreditation.

The Accredited UCAP Factor will be established by PJM prior to the applicable RPM Auction and will be multiplied by the ICAP offered to convert the ICAP offered into the UCAP offered. The Accredited UCAP Factor determined by PJM will also apply to a committed resource as Self-Supply.

[25] PJM Capacity Market Reforms, Affidavit of Dr. Patricio Rocha-Garrido on Behalf of PJM Interconnection, L.L.C., Attachment E, dated October 13, 2023 ("Rocha-Garrido Affidavit") at p. 17.
[26] *Id.* at p. 79.

P3 supports PJM's Proposed revisions to its Sell Offer Requirements and agrees that the changes will more properly align with its other proposed ELCC/modeling changes.

D. Proposed Revisions To The Capacity Performance Construct.

1. P3 Supports PJM's Proposals Regarding Stronger Generator Resource Capacity Tests But Cautions That PJM Should Not Create A "Testing Trap" For Certain Resources.

A key proposal included in PJM's Capacity Market Reforms filing is that of enhanced testing of all Capacity Resources, with the exception of Variable Resources, in order to ensure that the resource in question is capable of responding during Performance Assessment Intervals ("PAI").[27] The proposed new testing requirements for Capacity Resources that are committed through an RPM Auction or included in a Fixed Resource Requirement ("FRR") Plan include:

- adding a requirement for such resources to physically perform a capability test in both the winter and summer seasons;
- effective with the 2025/2026 delivery year, assessing any testing shortfalls, in the form of capacity test failure charges, for each day of the season by comparing the seasonal test value against the resource's daily committed installed capacity, rather than the average seasonal committed installed capacity;
- creating a new test, referred to as the Generator Operation Test, to test resource capability and operating parameter accuracy prior to periods of the year where PJM may experience extreme weather conditions; and
- conforming the testing requirements for Demand Resources and to clarify how failure charges apply to Demand Resources that fail to perform.

PJM witness Adam Keech discusses at length that the need for these enhanced Generator Resource Capacity tests were brought to light by the recent Winter Storm Elliot and are aimed to "better balance the financial incentives for performance conveyed through Capacity Performance

[27] *Id*. at p. 80.

with actual demonstrations of capacity resource capability prior to the Performance Assessment Intervals where Non-Performance Charges and bonus payments may apply."[28]

P3 supports PJM's proposed enhancements and changes to its Generator Resource testing requirements and agrees that they will increase reliability by better testing the physical capabilities of committed resources, incentivizing resources to maintain their operational status and gaining better confidence that committed resources are physically capable of performing when called upon during an emergency.

However, P3 requests that the Commission direct PJM to not use a "one-size fits all" approach to its new testing program and acknowledge that different generators have real-world conditions that should be considered before testing. For example, PJM's proposed test schedule should take into consideration the natural gas nomination cycle, giving resources that would not normally purchase gas under the market circumstances during which the test is scheduled the opportunity to do so prior to testing; just as those resources would purchase gas ahead of any indicator that they would be called upon to perform and ensure reliability. Failure to do so will merely amount to a "testing trap" for certain resources and would be inconsistent with the FERC-approved gas pipeline tariffs and NAESB standards. Finally, but importantly, generator testing will come at an additional cost that should be allowed to be reflected in capacity and/or energy market offers.

[28] PJM Capacity Market Reforms, Affidavit of Adam Keech on Behalf of PJM Interconnection, L.L.C., dated October 13, 2023 ("Keech Affidavit"), P 21.

2. P3 Supports PJM's Proposal to Reduce the Stop-Loss Limit.

PJM proposes to revise how the stop-loss limit is determined by changing the index price from Net CONE to the BRA clearing prices in the relevant delivery year.[29] The change in the index price would result in a reduction of the stop-loss limit in years that the capacity prices fall below Net CONE, which PJM states has been the case in recent history. As the Commission and PJM point out, the stop-loss provision essentially is a balancing mechanism between providing the appropriate incentive for each resource to respond during an emergency, while providing some protection for resources against exceedingly large penalties resulting from an unforeseen event.

PJM's proposed changes to the stop-loss limit are appropriate given the recent years' decline in capacity prices, the restrictions imposed by the current Market Seller Offer Cap and the risk that the current Capacity Performance rules would make it uneconomic for otherwise willing market sellers to accept the obligations – and associated risks – of taking on a capacity obligation. PJM lists several reasons why the proposed stop-loss limit will not affect resource performance during emergency conditions, including the fact that PJM is not making any changes to the Non-Performance Charge Rate, is now operating under the Commission-approved refined definition of Emergency Action that will limit the likelihood of actually exceeding the stop-loss limit by more narrowly defining the event that triggers a PAI, and is otherwise proposing modifications to Capacity Resource accreditation and risk modeling, among others.

However, like other aspects of this filing, P3 is concerned about the administration of this change and the implications of this change for the markets. In the context of the broader filing, P3 supports this change; however, in doing so, P3 recognizes that the stop-loss and associated penalty rates may need to be refined as the market implications are better understood.

---

[29] PJM Capacity Market Reforms at p. 92.

E. P3 Supports PJM's Proposed FRR Revisions.

PJM proposes revisions in the FRR shortfall charges to provide the correct financial incentive for FRR Entities that balances ensuring that the charges are not punitive, but also ensuring that FRR Entities continue to be incentivized to meet the target levels of reliability.[30] Therefore, PJM proposes that any potential capacity shortfall rates should be equal to the RPM clearing price if RPM was facing a capacity shortfall. PJM proposes to start applying this rate to determine the Insufficiency Charge for FRR Plans beginning with the 2029/2030 delivery year and includes two transition mechanisms for FRR Entities.

P3 supports PJM's proposed FRR revisions in this proceeding and appreciates that it is responsive to the PJM's Board's direction to synchronize the rules between FRR and RPM resources. While the newly-proposed FRR shortfall charges are a step in the right direction, more needs to be done to ensure that there is fair treatment in the capacity market for all resources, regardless of whether they operate within an FRR or RPM framework. Specifically, moving forward, PJM should continue its work on the FRR provisions to ensure that FRR Entities are not able to lean on the system and are required to commit resources at the same reserve level as the RPM BRA.

III. CONCLUSION

The proposed Capacity Market Reforms in this filing, and the companion Section 205 filing in Docket No. ER24-98-000 that proposes reforms to better align the Market Seller Offer Cap with the risks of committing a Capacity Resource, while also aligning bonus eligibility to match the risks and obligations of resources that take on a capacity obligation, are a good first step in what

[30] *Id*. at p. 98.

must be viewed as a longer-term commitment to serious reforms of PJM's capacity market. PJM's two Section 205 filings are not perfect. Various market participants, interested parties and stakeholders will most probably find fault in one or more of the many proposed reforms in these proceedings, just as P3 has found. But time is of the essence and "perfect" is not the standard against which FPA section 205 filings are judged. PJM is working in haste to address resource adequacy issues that continue to grow in the wake of a changing resource mix and extreme weather events, and the reforms PJM has placed before the Commission are material improvements upon which PJM can and must build. P3 therefore supports Commission approval of PJM's proposed Capacity Market Reforms as presented in this filing but urges the Commission to require PJM to continue to work with stakeholders to present additional, needed capacity market reforms in the near future.

Respectfully submitted,

On behalf of The PJM Power Providers Group

/s/ Glen Thomas

By: Glen Thomas
Laura Chappelle
Diane Slifer
GT Power Group
101 Lindenwood Drive, Suite 225
Malvern, PA 19355
gthomas@gtpowergroup.com
610-768-8080

Dated: November 9, 2023

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document on each person designated on the official service list compiled by the Secretary of the Federal Energy Regulatory Commission in this proceeding.

Dated at Washington, D.C., this ninth day of November, 2023.

On behalf of the PJM Power Providers Group

By: *Diane Slifer*

Diane Slifer
GT Power Group
101 Lindenwood Drive, Suite 225
Malvern, PA 19355
gthomas@gtpowergroup.com
610-768-8080