

PJM Interconnection, L.L.C.  
Rate Schedule FERC No. 46

**Market Monitoring Services Agreement  
By And Between  
PJM Interconnection, L.L.C.  
And  
Monitoring Analytics, LLC**

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**By And Between**  
**PJM Interconnection, L.L.C. And Monitoring Analytics, LLC**  
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## Market Monitoring Services Agreement

This Market Monitoring Services Agreement (“Agreement”) is entered into as of this 8th day of July, 2013, by and between PJM Interconnection, L.L.C. (“PJM”), a Delaware limited liability company with an address at 2750 Monroe Boulevard, Audubon, PA 19403 and Monitoring Analytics, LLC (“IMM”), a Pennsylvania limited liability company with an address at P.O. Box 768, Southeastern, PA 19399-0768. PJM and IMM shall be referred to herein individually as a “Party” and collectively as “the Parties.”

### RECITALS:

WHEREAS, PJM is a regional transmission organization (“RTO”) that provides grid operations and reliability functions and administers wholesale markets for energy, capacity and energy-related services in portions of the Mid-Atlantic, Southeastern and Midwest United States pursuant to the PJM Open Access Transmission Tariff, Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“Operating Agreement”) and other documents and rules;

WHEREAS, PJM is required to provide independent market monitoring of its markets and operations affecting market outcomes;

WHEREAS, independent market monitoring plays a critical role in ensuring PJM’s wholesale electricity markets operate competitively and fairly;

WHEREAS, IMM is a Pennsylvania limited liability company that provides market monitoring services to PJM and has informed PJM about its capabilities to provide such services to PJM as more fully detailed in this Agreement;

WHEREAS, PJM, through the PJM Board, having considered the information provided by IMM, the qualifications presented by IMM, and IMM’s history in providing market monitoring services to PJM, has concluded that IMM has demonstrated strong technical proficiency to provide the services sought, and accordingly, desires to engage IMM, pursuant to the terms and conditions of this Agreement, as an independent contractor to perform the market monitoring services set forth in PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix;

WHEREAS, IMM desires to undertake the performance of such Services, pursuant to the terms and conditions of this Agreement;

WHEREAS, the Parties acknowledge that PJM, its Members, and Authorized Government Agencies are entitled to strong, robust and independent market monitoring, including the functions and responsibilities set forth in PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix and the following core functions included in the Commission’s regulations: (i) evaluating existing and proposed market rules, tariff provisions and market design elements and recommending proposed rule and tariff changes, (ii) evaluating, reviewing and reporting on the performance of the wholesale

markets, (iii) monitoring the conduct of PJM market participants to identify anomalous or suspect behavior that evidence a scheme to manipulate prices, distort market outcomes, or avoid the intended application of market rules and (iv) monitoring PJM's implementation of the PJM Market Rules and operation of the PJM Markets;

WHEREAS, the Parties further acknowledge and agree that their mutual obligations under this Agreement are to be performed in a dispassionate, fair and open manner;

WHEREAS, the Parties further acknowledge and agree that both PJM management and staff and IMM will undertake their respective functions and their mutual interactions with professionalism and appreciation by each group for the important functions of the other;

WHEREAS, the PJM Board of Managers is independent of PJM management and staff and has the responsibility of overseeing their activities;

WHEREAS, the PJM Board of Managers has the responsibility of overseeing the implementation of the contractual arrangements with the IMM; and

WHEREAS, the Parties are committed to acting in good faith and understand the importance of their acting in good faith to all stakeholders.

NOW, THEREFORE, in consideration of the premises, covenants and agreements contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned parties, intending to be legally bound, hereby agree as follows:

## 1. Definitions

Terms capitalized and not otherwise defined herein shall have the meanings set forth in Tariff, Attachment M and PJM Tariff, Attachment M-Appendix. For purposes of this Agreement, the following terms shall have the following meanings:

**1.1 “Agreement”** means this Market Monitoring Services Agreement between PJM and IMM.

**1.2 “Commission”** means the Federal Energy Regulatory Commission.

**1.3 “Confidential Information”** means (i) in the case of information provided by PJM to IMM, any documents, data or other information where confidentiality is protected under the Operating Agreement, PJM Tariff, Attachment M or PJM Tariff, Attachment M-Appendix as applied by PJM or other information that PJM advises is confidential; and (ii) in the case of information provided by IMM to PJM, any documents, data or other information that IMM advises is confidential.

**1.4 “Commencement Date”** means January 1, 2020.

**1.5 “Interested Party”** has the meaning set forth in PJM Tariff, Attachment M, section XI.

**1.6 “IMM or Independent Market Monitor”** has the meaning set forth in the first paragraph of this Agreement and shall have the same meaning as “Market Monitoring Unit” or “MMU” as set forth in PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix and as those terms are used elsewhere in the PJM Tariff.

**1.7 “Market Monitor”** means the head of the IMM.

**1.8 “Party” or “Parties”** has the meaning set forth in the first paragraph of this Agreement.

**1.9 “PJM Board”** means the independent Board of Managers of PJM Interconnection, L.L.C. exclusive of any members of PJM Management.

**1.10 “PJM Liaison”** has the meaning set forth in Tariff, Attachment M.

**1.11 “PJM Member”** means a member of PJM Interconnection, L.L.C.

**1.12 “PJM Region”** shall have the meaning set forth in PJM Tariff, Part I.

**1.13 “PJM Tariff”** means the PJM Open Access Transmission Tariff

**1.14 “Plan”** means the PJM market monitoring plan set forth in PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix.

**1.15 “Principals”** means the Market Monitor, the IMM’s Chief Economist (or closest equivalent), the IMM’s Chief Information Officer (or closest equivalent), the IMM’s General Counsel (or closest equivalent) and such other IMM personnel as the Market Monitor designates as a Principal.

**1.16 “Services”** has the meaning set forth in section 6 hereof.

## **2. Responsibility For Administering Contract.**

Any question or issue arising out of the performance of this Agreement, or the respective rights and obligations of the Parties ultimately shall be administered by the PJM Board or a subcommittee thereof, on behalf of PJM, and by the Market Monitor, on behalf of IMM. Notwithstanding the foregoing, any dispute arising out of the performance of this Agreement that the above-described counterparty representatives are unable to resolve shall be subject to resolution by the Commission in accordance with its applicable procedures, except as provided for in this Agreement, section 12.

**3. Term.**

The term of this Agreement shall be from the Commencement Date until December 31, 2025 and terminating as provided in this Agreement, section 4.



**4. Termination.**

Any termination of this Agreement shall be in accordance with the provisions regarding termination set forth in PJM Tariff, Attachment M.

**5. Payment.**

## **5.1 Rate.**

In payment for the Services to be performed by IMM under this Agreement, effective upon the Commencement Date, and subject to adjustment as set forth in PJM Tariff, Schedule 9-MMU, PJM shall collect from Market Participants and pay IMM the rate established pursuant to the budgeting process described in PJM Tariff, Attachment M.

## **5.2 Schedule 9-MMU.**

PJM shall collect and pay to IMM the rate set forth in section 5.1 of this Agreement pursuant to PJM Tariff, Schedule 9-MMU.

### **5.3 Expenses and Capital Expenditures.**

For the Services it is rendering to PJM, IMM shall pay for all of its expenses, including capital expenditures, office overhead, administrative support, rent, utilities and other support services, out of the rate referenced in section 5.1 of this Agreement.

#### **5.4 Taxes.**

PJM shall not withhold any amounts for payment of any local, state or federal taxes from the compensation of IMM hereunder. IMM shall be responsible for all taxes arising from compensation and other amounts paid under this Agreement, and shall be responsible for all payroll taxes, and payment for the provision of fringe benefits to its employees. IMM understands that it is responsible to pay, according to law, IMM's taxes and IMM shall, when requested by PJM, properly document to PJM that any and all federal and state taxes have been paid.

## **5.5 Loan.**

PJM has provided loans to IMM to cover certain capital expenditures consisting of information and technology costs, build-out costs and other infrastructure costs. The loans will be repaid to PJM, with interest (at an interest rate consistent with PJM's cost of borrowing), over a period consistent with the depreciable lives of the assets, as set forth in executed loan agreements. PJM has also provided loans to cover working capital needs, which are repaid, with interest (at an interest rate consistent with PJM's cost of borrowing), on a rolling basis. PJM may continue to provide such loans subject to the loan agreements.

**6. General Statement of Services.**

In accordance with FERC Order No. 719 and Commission rules and policies for market monitoring, IMM shall exclusively perform the market monitoring functions set forth in PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix, and have only the responsibilities set forth in PJM Tariff, Attachment M, including PJM Tariff, Attachment M-Appendix (“Services”).



**7. Location and Physical Access.**

IMM shall retain office space located in close proximity to the main PJM campus.

**8. Data Access.**

## **8.1 IMM Data Access.**

IMM shall have access to data and information from PJM as set forth in PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix, which access will be implemented in accordance with the separate service level agreement. Providing data access to the IMM under this section shall not be construed to provide IMM any ownership rights to data owned by PJM.

## **8.2 PJM Data Access.**

Upon request, IMM shall share all IMM data and analysis with the PJM Board and PJM as reasonably required to understand the IMM's conclusions, analyses, findings or recommendations regarding the PJM markets or operations, including PJM's administration of its markets or actions as a system operator or system planner.

**9. Informal Communications.**

IMM may communicate informally (e.g. via email, telephone, or face-to-face communications) with any PJM personnel as reasonable to implement the Plan. IMM shall communicate informally and cooperate with PJM regarding IMM concerns about market participant behavior. PJM personnel shall communicate informally and cooperate with the IMM, including alerting the IMM to potential concerns about market participant behavior.

**10. Staffing.**

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## **10.1**

Consistent with IMM's status as an independent contractor, the Market Monitor shall have the full authority and responsibility to manage IMM without PJM's involvement, including but not limited to making all human resources decisions, hiring of employees, firing of employees, and determining the compensation of employees of IMM.

## **10.2**

IMM shall maintain a staff , and provide for subcontractors as necessary, with the necessary expertise to perform the Services.



## **11. IMM Representations**

## 11.1 Representations.

IMM represents as follows:

(a) One or more of IMM's Principals have technical knowledge of complex, rule-defined organized wholesale electric energy markets

(b) One or more of IMM's Principals have an understanding of the transmission operation, planning and interconnection services functions of an RTO sufficient to evaluate how practices and behaviors in those environments can lead to non-competitive, unfair or discriminatory market outcomes.

(c) One or more of IMM's Principals have experience working with or testifying before regulatory agencies.

(d) One or more of IMM's Principals have experience in developing and analyzing economic models.

(e) One or more of IMM's Principals have experience in gathering and objectively and methodically (forensically) analyzing large data sets and in the use of sophisticated software for such analyses, including ability to examine such data sets to identify anomalous patterns of participant behavior or suspect market outcomes in order to uncover fraudulent, manipulative or otherwise undesirable conduct by participants in PJM markets, operations, and planning environments.

(f) IMM's Principals have written and oral communication skills for both technical and for lay person reports.

(g) IMM's Principals have a high degree of professional integrity and have no conflicts of interest in undertaking to provide the Services under this Agreement.

(h) IMM's Principals have advanced degrees (M.S., J.D. or Ph.D.) in economics, statistics, law, information technology or related fields.

(i) One or more of IMM's Principals have experience and/or academic training in financial markets, such as capital formation, market risk assessment and management, and investment evaluation or decision-making, particularly in the electric power sector.

(j) One or more of IMM's Principals have experience in identifying, investigating, or enforcing matters related to illegal, fraudulent, or unethical/manipulative market participant behavior.

(k) One or more of IMM's Principals have experience in analyzing and proposing market rules designed to promote competitive market outcomes in wholesale power markets.

(1) One or more of IMM's Principals have experience participating in RTO stakeholder processes to promote competitive market designs.

## **11.2 Qualifications.**

IMM has provided to PJM resumes of each of its Principals, and IMM represents that the information in such resumes is fair and representative of the skills, experience, and training of its Principals.

### **11.3 Budget Estimates.**

In accordance with PJM Tariff, Attachment M, by no later than September 15 of each year, IMM shall provide a budget for the subsequent year, including total labor compensation, non-employee labor expense, current full-time employee and contractor head count, depreciation expense, interest expense, technology expense, other expense, and capital spending, including a level of supporting detail consistent with that provided by PJM in its annual budget review to the Finance Committee. In addition, not later than September 15 of each year, IMM shall inform the PJM Board of the key drivers of potential increases and decreases in the budget, and estimates of such increases and decreases, for the subsequent two years.

#### **11.4 No Conflicts.**

IMM represents that (a) it has made full disclosure in writing of any business relationships with PJM personnel or business relationships with any PJM members or their personnel, (b) no relationship between IMM and PJM or a PJM market participant or its affiliates exists that would contravene the Code of Ethics set forth in PJM Tariff, Attachment M, section XI, and (c) no relationship between IMM and PJM or a PJM market participant or its affiliates will be established that would contravene the Code of Ethics set forth in PJM Tariff, Attachment M, section XI during the term of this Agreement.

### **11.5 No Prohibited Engagements.**

IMM has provided to PJM a complete list of its present engagements on behalf of or against any Interested Party. IMM represents that (a) it is not presently engaged in any prohibited activity described in PJM Tariff, Attachment M, section XI, (b) it will not engage in any prohibited activity as described in PJM Tariff, Attachment M, section XI, and (c) it has fully informed PJM of any engagement on behalf of or against an Interested Party, as required by PJM Tariff, Attachment M, section XI.

## **12. Dispute Resolution.**

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## **12.1 Applicability.**

This Section 12 shall apply to any disputes between IMM and PJM under PJM Tariff, Attachment M, section V.A and PJM Tariff, Attachment M, section V.E and any provisions of this Agreement implementing these sections of PJM Tariff, Attachment M.

## 12.2 Procedures.

For any dispute between IMM and PJM for which section 12 of this Agreement is applicable, the Parties shall use the procedures set forth in this section 12.2.

(a) The Parties shall refer any continuing dispute between IMM and PJM to the PJM Liaison. The PJM Liaison shall attempt to facilitate resolution of such dispute by facilitating discussions among appropriate PJM employees and management and IMM.

(b) If the PJM Liaison is unable to facilitate the resolution of any continuing dispute to the satisfaction of either IMM or PJM within 7 business days, or such other time as the Parties may agree, then either Party may refer on a non-public, confidential basis any continuing dispute to the Commission's Dispute Resolution Service and request that the dispute resolution service attempt to mediate the dispute.

(c) If the Commission's Dispute Resolution Service is unable to resolve any continuing dispute to the satisfaction of either IMM or PJM within 15 business days, or such other time as the Parties may agree, then either Party may refer such dispute to the PJM Board or a designated committee of the PJM Board for assistance in resolving the dispute. The PJM Board or designated committee shall have the opportunity to attempt to resolve the dispute within 15 business days or such other time as the Parties may agree.

(d) No formal proceeding may be commenced with the Commission regarding any dispute for which section 12 of this Agreement is applicable without first exhausting the procedures set forth in the foregoing sections 12.2(a)-(c).

### **12.3 Data Preservation.**

Upon the initiation of the procedures set forth in section 12.2 above, the Parties shall preserve any data or information that is the subject of such dispute pending resolution of such dispute.

### **13. Independent Contractor.**

Nothing herein shall be construed to create an employer-employee relationship between PJM and IMM or any of IMM's employees. IMM is an independent contractor and not an employee of PJM or any of its subsidiaries or affiliates. The consideration set forth in section 5 of this Agreement shall be the sole consideration due to IMM for the Services rendered hereunder. IMM and IMM's employees will not represent to be or hold themselves out as employees of PJM. No workers' compensation insurance shall be obtained by PJM covering IMM or IMM's employees.

#### **14. IMM Employee Benefit Plans.**

PJM has converted its 401(k) to a multiple employer plan that makes coverage available to both PJM and IMM employees, and IMM has adopted such plan as a participating employer. PJM and IMM will each be responsible for the employer contribution costs for their respective employees, and PJM and IMM will arrange an equitable sharing of the administrative costs for such jointly-sponsored plan.

## **15. Budgeting and Auditing.**

The procedures for the submission and approval of budgets and for independent financial auditing shall be as set forth in PJM Tariff, Attachment M.

The IMM will, on an annual basis, have an attest engagement conducted by a reputable and experienced accounting firm in accordance with attestation standards developed by the American Institute of Certified Public Accountants, and have such firm issue an Agreed-Upon Procedures Report that addresses whether the IMM follows procedures and controls in place relating to the IMM's determinations regarding Frequently Mitigated Unit status, Associated Unit status, affiliate mapping for the three pivotal supplier test, net Avoidable Cost Rates, Fuel Cost Policies, and all components of cost-based energy market offers.

## **16. Shared Services.**

IMM may request that PJM provide shared services to IMM, such as janitorial support, help desk support, human resources, security and payroll support. In such case, if PJM agrees to provide said services to IMM, it shall be pursuant to the terms, conditions, and pricing set forth in a separate contract.

**17. Branding.**

IMM shall have no authority to use the PJM name, logo, trademarks, service marks, copyrights or other branding on any material that it creates. Notwithstanding the foregoing, IMM may hold itself out publicly as “the Independent Market Monitor” or “IMM” for PJM, the “Market Monitoring Unit” or the “MMU” for PJM. The IMM publishes an annual and quarterly “State of the Market Report.” PJM shall not use the title “State of the Market Report” for any of its publications.

**18. Conflicts of Interest.**



## **18.1 Code of Ethics.**

The IMM shall comply with the Code of Ethics provisions set forth in PJM Tariff, Attachment M, section XI, including informing the PJM Board of engagements on behalf of or against an Interested Party as defined in PJM Tariff, Attachment M.

**19. Mutual Non-Solicitation.**

(a) Neither Party shall solicit the employment of the employees of the other Party either directly or indirectly.

(b) Notwithstanding paragraph (a), neither Party shall be prohibited from giving consideration to any application for employment submitted by an employee of the other Party, in the absence of solicitation under paragraph (a).

(c) Should an employee of one Party, in the absence of solicitation under paragraph (a) by the other Party, seek or begin employment with the other Party, then PJM and IMM shall establish a reasonable transition period for the Party losing the employee to restore the functionality that would be lost as a result of the employee's departure.

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**20. Confidentiality.**

IMM and its employees and contractors shall comply with the confidentiality provisions set forth in PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix.

## **21. Intellectual Property.**

PJM and IMM shall jointly own all intellectual property that the PJM Market Monitoring Unit developed prior to August 1, 2008. During the term of this Agreement, PJM and IMM shall have reciprocal licenses to use, without charge, each other's intellectual property in connection with, in the case of IMM, its rights and obligations under PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix and, in the case of PJM, its rights and obligations as an RTO. The Parties shall execute a reciprocal license agreement to implement this paragraph. After the term of this Agreement, at its election, PJM may continue to license the use of any IMM intellectual property developed predominantly in connection with the provision of the Services to PJM since August 1, 2008; such continuing license shall be provided by IMM to PJM at a mutually agreed fair and reasonable market price, or, in the absence of agreement, at a fair and reasonable market price determined by a mutually agreed third party qualified to make such determination.

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## 22. Security.

The Parties agree that physical and cyber security is of utmost importance and critical to the operations of PJM. Accordingly, the Parties agree to the following security provisions:

(a) Upon reasonable notice and during normal business hours, PJM (or a contractor acting on PJM's behalf) shall have the right to go onto IMM's property or web site to evaluate IMM's physical and logical security annually or as reasonably necessary. IMM shall provide information reasonably necessary for PJM (or a contractor acting on PJM's behalf) to complete its security evaluation.

(b) At PJM's expense, IMM shall comply and demonstrate compliance with any reasonable written recommendations resulting from PJM's physical and logical security evaluation of IMM's site.

(c) IMM is required to immediately notify PJM of all known attempted and/or successful breaches to IMM's security by any unauthorized third party(ies) that has or reasonably may result in access to or exposure of PJM's data or IMM's performance of the Services. IMM agrees to take commercially reasonable efforts to detect any unauthorized access attempts.

(d) IMM's use of the service of any person who is not an employee of IMM or of the service of any entity or organization in the performance of the Services is subject to the requirements of this Agreement, including the confidentiality requirements and required security provisions for entities, persons, or organizations that may have access to PJM information.

(e) PJM reserves the right to have a background investigation performed on any employee, representative or subcontractor of IMM who will be performing Services for PJM, regardless of location, prior to commencement of, or during, such engagement. Such background investigation shall be performed in the same manner and using the same disqualification standards as PJM uses for similarly situated PJM employees or contractors that have access to comparable information or perform similar functions. If any employee, representative or subcontractor of IMM is disqualified from working on an engagement as a result of a finding in the background investigation, IMM will be immediately notified. PJM shall disclose to a single human resources employee of IMM, as designated by IMM, the details of any background investigation that results in a disqualification, which information shall not be shared with any other person, excepting IMM counsel, unless required in the course of the resolution of a dispute under this Agreement, in connection with legal process, or as otherwise required by law; otherwise, PJM shall not be obligated to disclose to IMM any specific details of the background investigation findings which resulted in the disqualification. Within a commercially reasonable period of time after receiving written notification of disqualification, IMM shall be responsible for replacing such disqualified employee, representative or subcontractor with a suitable replacement candidate, subject to the reasonable approval by PJM based on the required background investigation.

**23. Force majeure.**

Neither Party shall be considered to be in default in the performance of its obligations under this Agreement to the extent that the performance of any such obligation is prevented or delayed by any cause which is beyond the reasonable control of the affected party.

## **24. Liability.**

The provisions limiting liability to third parties set forth in PJM Tariff, Attachment M shall apply with respect to this Agreement, and shall include and apply to the IMM's officers, employees, representatives, advisors, contractors, and consultants. Any monetary liability as between PJM and IMM shall be limited in amount to the rate paid to IMM as set forth in Section 5 of this Agreement. This limitation on damages shall not affect either Party's rights to obtain equitable relief as otherwise provided in this Agreement. The provisions limiting liability shall continue in full force and effect notwithstanding the expiration or termination of this Agreement with respect to events that occurred prior to such termination.

## **25. Indemnification.**

Each Party shall indemnify and hold harmless the other Party, and the other Party's employees, from and against any and all loss, liability, damage, cost or expense to third parties, including damage and liability for bodily injury to or death of persons, or damage to property or persons (including reasonable attorneys' fees and expenses, litigation costs, consultant fees, investigation fees, penalties or fines, and any such fees and expenses incurred in enforcing this indemnity or collecting any sums due hereunder) (collectively, "Loss") to the extent arising out of, in connection with, or resulting from the negligence or willful misconduct of the indemnifying Party or its contractors, including but not limited to any claims arising under any employment law; provided, however, that no Party shall have any indemnification obligations under this section 25 in respect of any Loss to the extent the Loss results from the negligence or willful misconduct of the Party seeking indemnity.

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**26. No Third Party Beneficiaries.**

The Parties do not intend to create in any other individual or entity the status of third party beneficiary, and this Agreement shall not be construed so as to create such status. The rights, duties and obligations contained in this Agreement shall operate only between the Parties to this Agreement, and shall inure solely to the benefit of the Parties to this Agreement. The provisions of this Agreement are intended only to assist the Parties in determining and performing their obligations under this Agreement. The Parties to this Agreement intend and expressly agree that only Parties signatory to this Agreement shall have any legal or equitable right to seek to enforce this Agreement, to seek any remedy arising out of a Party's performance or failure to perform any term or condition of this Agreement, or to bring an action for the breach of this Agreement.

## **27. Adequate Performance Under PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix.**

It is critical that IMM independence be maintained and that the IMM be accountable to the PJM Board as stated in PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix and delineated here.

Pursuant to its authority and responsibility in PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix, the PJM Board evaluates whether IMM is adequately performing its functions. The PJM Board has the authority and responsibility to determine the adequacy of the performance of the independent market monitoring function, but has no authority to manage or direct the activities of such independent function.

To enable this authority and responsibility, the PJM Board or a committee of the PJM Board and IMM shall meet periodically, not less than annually, to review the IMM's performance under this Agreement (Performance Meetings). The PJM Board or a committee of the PJM Board may increase such reviews to semi-annually. Upon request, IMM also shall meet with the PJM Board (and any outside advisors it may retain) to explain its methods, systems, analyses, findings, conclusions, and work product and shall cooperate and respond to questions regarding the same.

Review of the IMM's performance referenced in this section 27 may include, but not be limited to, the following:

1. Maintaining independence. In order for the PJM Board to ensure IMM is adequately performing the functions and responsibilities under the Agreement, the PJM Board will review and evaluate whether IMM is providing the Services in an independent manner, without improper influence from PJM management, PJM staff, market participants, state commissions, or other stakeholders. The PJM Board expects IMM to keep it, the Commission, stakeholders and the public fully informed and that IMM will express its professional opinions, consistent with its independence, even where such positions differ from the positions of PJM management, PJM staff, market participants, state commissions, or other stakeholders.

2. Promoting competitive and efficient PJM markets. The PJM Board expects that the IMM will be a vigorous and competent advocate for competitive and efficient PJM markets, and that it will protect the integrity of PJM markets. In evaluating whether the IMM performs adequately, the Board shall consider, among other things, the level and quality of the IMM's efforts to promote (i) efficient and accurate pricing; (ii) a competitive market structure, or, to the extent that the structure is not competitive, effective mitigation rules and the proper application of such rules; (iii) market rules that promote competition and efficiency and that are transparent and non-discriminatory; and (iv) compliance with market rules and their purpose and proper implementation of such rules. The Board shall also consider whether the IMM has taken adequate steps to detect and call attention to actual or attempted market manipulation, the exercise of market power, physical and economic withholding, and faulty operation of the markets.

3. IMM's prioritization and performance of its functions and responsibilities under PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix. In order for the PJM Board to ensure the IMM is adequately performing the functions and responsibilities under PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix, the Board may review the IMM's prioritization of its activities. The IMM shall keep the Board informed of its activities through regular meetings, including apprising the PJM Board and PJM of any referrals of suspected market violations to the Commission. The PJM Board and PJM shall keep confidential such referrals. In advance of the Performance Meetings, IMM shall prepare for the PJM Board a description of its activities since the last Performance Meeting, identifying the potential impacts upon market outcomes of particular activities to the extent possible, the prioritization of its activities, and the bases for the prioritization. The PJM Board shall not direct the prioritization of IMM activities, which the IMM shall determine independently, but the PJM Board may comment on the prioritization and discuss with IMM the PJM Board's views of whether IMM's prioritization constitutes adequate performance of the IMM's functions.

4. IMM's timeliness and responsiveness. In order for the PJM Board to ensure IMM is adequately performing the functions and responsibilities under PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix, the PJM Board may review: IMM's timeliness in meeting Tariff-specified deadlines; IMM's timeliness and consistency in responding to the FERC, PJM and other stakeholders; IMM's timely performance of commitments it makes to the FERC, PJM and other stakeholders; the IMM's satisfaction of the needs of the FERC and its enforcement staff; and the timeliness and completeness of IMM's submissions of its annual itemized budget to the PJM Finance Committee and its annual audited financial statements. The PJM Board shall not direct the management of IMM activities, which the IMM shall determine independently.

5. State of the Market reports. In order for the PJM Board to ensure IMM is adequately performing the functions and responsibilities under PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix, the PJM Board may review the timeliness of IMM's annual and quarterly State of the Market reports. The IMM shall consider in good faith comments the PJM Board may offer regarding the clarity, completeness, materiality and priority of any recommendation.

6. Market Design. In order for the PJM Board to ensure IMM is adequately performing the functions and responsibilities under PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix, the PJM Board may review the quality of IMM's review and recommendations related to PJM market design and PJM's implementation of market operations. IMM's recommendations regarding market design and PJM operations shall include its rationale for its proposals, its analyses of the materiality of the issues addressed by the proposals, the risks PJM's market faces from inaction or action on IMM's recommendations, and its prioritization of the recommendations. The PJM Board shall not direct the IMM's decisions about market design recommendations.

7. Stakeholder interaction. In order to ensure IMM is adequately performing the functions and responsibilities under PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix, the PJM Board may review IMM's interaction with PJM and stakeholders to encourage IMM to maintain an atmosphere of trust and respect consistent with IMM's duties to monitor PJM and stakeholders. The PJM Board shall not direct the IMM's interactions with PJM and stakeholders.

The PJM Board shall notify IMM at the Performance Meetings pursuant to this paragraph if it determines that IMM has acted in a manner that the PJM Board believes is adequate performance of the IMM's functions set forth in the Plan ("adequate performance"). The PJM Board shall notify IMM at the Performance Meetings pursuant to this paragraph if it determines that IMM has acted (or failed to act) in a manner that the PJM Board believes is not adequate performance of the IMM's functions set forth in the Plan ("inadequate performance"). The notice shall specify in detail the nature of the alleged inadequate performance and be documented in writing to IMM following the Performance Meeting. At the Performance Meeting and at the next following Performance Meeting, the PJM Board and IMM shall discuss and evaluate (i) whether, after review, the Board believes that performance was not adequate (ii) whether the alleged inadequate performance arose from causes beyond IMM's control or without fault or negligence on IMM's part; (iii) the efforts that IMM proposes (if any) to make to remedy the alleged inadequate performance; and (iv) the procedures which IMM should implement to avoid future inadequate performance of the type alleged in the notice.

## **28. Communication and Cooperation.**

In order to facilitate communication and to help ensure that the PJM Board is aware of IMM concerns and that the IMM is aware of PJM Board concerns, the PJM Board, or a subcommittee thereof, and the IMM will meet at each PJM Board meeting during the year and at additional times if requested by the PJM Board. PJM Board members may call the Market Monitor at any time with questions about the positions of the IMM or any other matter of concern to the PJM Board.

The PJM Board, or a subcommittee thereof, and IMM shall meet periodically, not less than annually, to review whether any changes to the Agreement are necessary or desirable.

In order to continue cooperative interaction between PJM and IMM, the Parties have jointly drafted a document setting out the Parties' intent, "Protocol for Improved Interaction," which has been posted on the PJM and IMM websites. The Parties are committed to continuing to communicate effectively.

**29. Notice Procedures.**

Notice to any party hereto shall be in writing and shall be delivered by email. Receipt shall be deemed as of noon on the first business day after the email is received:

If to IMM: *joseph.bowring@monitoringanalytics.com*

If to PJM: *ott@pjm.com*

**30. Disputes.**

Any controversy or claim arising out of or relating to this Agreement, or breach thereof, shall be presented to the Commission for resolution, subject to any applicable requirements of this Agreement, section 12. IMM shall provide all Services under this Agreement and PJM shall make all payments under this Agreement until the Commission orders otherwise.

**31. Expression of Professional Opinion.**

IMM's public expression of its professional opinion in the performance of its duties as set forth in the Plan, including any criticism or comment as to PJM market rules, market design, mitigation, or operations, shall not be grounds for termination, threatening termination, or holding back or impeding payment under this Agreement, section 5.



### **32. Entire Agreement.**

This Agreement constitutes the entire agreement of the parties with regard to the subject matter hereof, and replaces and supersedes all other agreements or understandings, whether written or oral. Notwithstanding the foregoing, it is the express understanding of the Parties that nothing in this Agreement is intended, nor shall it be deemed, to change or amend any terms or conditions of the PJM Tariff. Furthermore, in the event of a conflict between any provision of this Agreement and the terms of the PJM Tariff, in particular PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix, the PJM Tariff shall in all events be controlling.

**33. Assignment.**

(a) This Agreement shall be binding upon and shall inure to the benefit of and be enforceable by each Party hereto and its respective successors and permitted assigns. Neither this Agreement, nor the duties to be performed hereunder, shall be assigned, delegated or otherwise disposed of by either Party without the prior written consent of the other Party. Any assignment of this Agreement without PJM's written consent is unlawful and shall be deemed to be void.

(b) The Parties expect that Joseph Bowring will be the Market Monitor during the term of this contract. IMM shall establish, maintain and share with the Board a succession plan describing an organization structure for IMM that would go into effect if Joseph Bowring no longer was the Market Monitor. If, for reasons beyond the control of either Joseph Bowring or IMM, Joseph Bowring will no longer be the Market Monitor, the IMM shall provide as much notice as is feasible in the circumstances. Following such notice, the Board shall evaluate the performance of the IMM organization, including the successor Market Monitor, for a period of no less than 6 months. After this period, the Board shall have the option, conditioned on having identified deficiencies or failures in performing the terms of this Agreement, to implement the Term and Termination provisions of PJM Tariff, Attachment M. If instead, the Board is satisfied that the IMM organization has performed satisfactorily the terms of this Agreement, then this Agreement will continue in full force and effect through its Term.

**34. Governing Law.**

This Agreement shall be governed and construed in accordance with applicable federal law and the laws of the Commonwealth of Pennsylvania without regard to its principles of conflict of laws.

### **35. Severability.**

If any provision of this Agreement shall be held to be illegal, invalid or unenforceable by a court of competent jurisdiction because of present or future laws or any rule or regulation of any governmental body or entity, effective during its Term, such provision shall be enforced to the maximum extent possible so as to effect the intent of the Parties, and the validity, legality and enforceability of the remaining provisions of this Agreement shall not in any way be affected or impaired thereby.

**36. Modification.**

Except as stated in PJM Tariff, Attachment M and PJM Tariff, Attachment M-Appendix, no amendment, modification, termination or attempted waiver of this Agreement, or any provision thereof, shall be valid unless agreed to by the Parties in writing. Any such modification shall be provided to the OPSI Advisory Committee, MMU Advisory Committee, and PJM members.

**37. Compliance with Commission Regulations.**

To the extent that the Commission issues any new rule or regulation, or modifies any existing rule or regulation, the parties shall negotiate in good faith to conform this agreement to such Commission rule or regulation.

**38. No Waiver.**

The waiver by a Party of any instance of another Party's noncompliance with any obligation or responsibility of this Agreement must be in writing and signed by the waiving Party to be effective as a waiver, and shall not be deemed a waiver of any other instances of such other Party's noncompliance.

**39. No Agency or Joint Venture.**

This Agreement shall not constitute any Party as a legal representative or agent of the other Party, nor shall a Party have the right or authority to assume, create or incur any liability or any obligation of any kind, express or implied, against or in the name of or on behalf of the other party unless expressly permitted by such Party. Nothing herein is intended, or to be construed, to create a joint venture or partnership between the Parties.



**40. Counterparts.**


This Agreement may be executed in one or more counterparts with the same effect as if the signatures thereto and hereto were upon the same instrument.

IN WITNESS WHEREOF, this Agreement is effective as of the date first written above.


PJM INTERCONNECTION, L.L.C.

MONITORING ANALYTICS, LLC

By:

  
\_\_\_\_\_  
Andrew Ott  
President and CEO

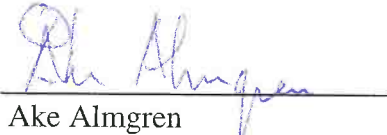
By:

  
\_\_\_\_\_  
Joseph Bowring  
President

Date: August 1, 2018

Date: August 1, 2018

By:

  
\_\_\_\_\_  
Ake Almgren  
Chairman

Date: August 1, 2018

