

**Service Level Agreement between
PJM Interconnection, L.L.C.
-and-
Monitoring Analytics, LLC**

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THIS SERVICE LEVEL AGREEMENT (the “SLA”) is made and entered into as of this 18th day of December, 2007 (the “Effective Date”), by and between PJM Interconnection, L.L.C., with offices at 955 Jefferson Avenue, Norristown, PA 19403 (“PJM”) and Monitoring Analytics, LLC, with offices at 2621 Van Buren Avenue, Valley Forge Corporate Center, Norristown, PA 19403 (“MMU”). Each of PJM and MMU may also be referred to individually hereinafter as a “Party”, and collectively as “the Parties.”

1. Purpose

The purpose of this SLA is to define and support the transfer, access to, exchange, retention and protection of data between PJM and the MMU, and the extent of the access by MMU to PJM's production, development and test environments during the term of the Market Monitoring Services Agreement dated December 18, 2007 entered into by and between PJM and MMU, as it may be amended from time to time ("MMS Agreement").

2. Scope of Services

PJM will provide the following to MMU:

- a. The data delineated in attached Appendix A and Appendix C from the sources referenced therein or from any additional or replacement sources.
- b. Real-time access to PJM's production systems for real-time data monitoring (read-only) via Virtual Private Network ("VPN") over a dedicated fiber optic connection to MMU's offices located at 2621 Van Buren Avenue, Valley Forge Corporate Center, Norristown, PA, as delineated in attached Appendix B.
- c. Regular and emergency support as outlined herein.
- d. Additional data, as and when requested by MMU, pursuant to the express terms, conditions and limitations of this SLA.

MMU will provide the following to PJM:

- a. The data delineated in attached Appendix E from the sources referenced therein or from any additional or replacement sources.
- b. Regular and emergency support as outlined herein.
- c. Additional data, as and when requested by PJM, pursuant to the express terms, conditions and limitations of this SLA.

3. Service Period

This SLA shall commence as of the Commencement Date defined in the MMS Agreement, and shall continue and be coterminous with the MMS Agreement.

4. SLA Review and Amendment

This SLA will be reviewed on at least an annual basis, or more frequently at the request of either MMU or PJM, to determine if changes are required. PJM and the MMU will meet annually, consistent with the timing of PJM's and MMU's planning cycles, to review the levels of support provided and the associated hardware and software and to determine whether the levels of support need to be increased to meet agreed to levels of performance. Any requested changes to this SLA must be submitted in writing to each of the following individuals for review:

- Market Monitor
- PJM Sr. Vice President - Reliability Services
- PJM ITS Executive Director

No amendment, modification, termination or attempted waiver of any provision of this SLA shall be valid unless it is in writing and signed by an authorized representative of both PJM and MMU. Any disagreements between the Parties with regard to the amendment, modification, termination or waiver of a provision of this SLA shall be determined pursuant to the terms of the dispute resolution provisions of the MMS Agreement.

5. Responsibilities of PJM

PJM will ensure that MMU has access to PJM's information, data and systems, as required by Attachment M of the PJM Open Access Transmission Tariff ("Attachment M"), that MMU needs in order to carry out its functions, duties and responsibilities under of the PJM Open Access Transmission Tariff ("Tariff"), and that the data is delivered according to the timeline and methods set forth in this SLA. PJM is not responsible for MMU's use, calculations or applications of the information and data.

PJM will provide access to data and systems to MMU via VPN over a dedicated fiber optic connection and through appropriate security permissions to PJM's production systems as such access is permitted or otherwise limited by the terms of this SLA.

6. Responsibilities of MMU

MMU will receive data in the format delineated in this SLA and will ensure the appropriate security and protection of any market sensitive and confidential data. MMU's ability to provide such data or any compilation or summary of such data shall be subject to Attachment M. MMU is responsible for any applications and/or uses of the data that reside at MMU's office location and that of its consultants, contractors and other agents. MMU shall ensure that its consultants, contractors or other agents abide by PJM's confidentiality and security requirements.

If NERC or a Regional Entity determines that MMU or any of its systems is subject to one or more of the NERC Critical Infrastructure Protection Standards, subject to appeal to the Federal Energy Regulatory Commission, MMU must comply with said standards.

7. Technical and Maintenance Support

PJM will provide technical and maintenance support to MMU related to MMU's use of the Data Exchange System set forth in Section 20 hereof ("Data Exchange System") and access to PJM's systems as set forth in this SLA. A manager level (or above) employee of PJM's IT Department will be identified as the business owner of the Data Exchange System. All support inquiries should be directed to the PJM Support Center at 610-666-8886.

MMU will provide technical support to PJM related to MMU's transfer of data in the event that MMU's feed to the Data Exchange System does not function properly. All support inquiries should be directed to MMU Manager, IT.

PJM will provide break-fix technical support, pursuant to Sections 16 and 17 of this SLA, and maintenance support at a threshold level of two thousand (2,000) hours per year, not to exceed 500 hours per calendar quarter, at no cost to MMU.

The cost of providing ad hoc data will be borne by MMU up to 250 person hours after which MMU may charge PJM at the rates listed in Appendix F as updated and agreed to by the Parties.

PJM and MMU will meet at least annually, consistent with the timing of PJM's and MMU's planning cycles, to review whether the number of hours needs to be increased to support the existing services provided to MMU or PJM. To the extent necessary to meet their obligations to provide support for the existing services to MMU or PJM, PJM and MMU will increase the total number of hours of technical support that each provides under this SLA at no cost to ensure that each is able to perform its obligations. If MMU or PJM requires additional support within a planning year or requires new services not previously agreed to, PJM may charge the MMU or MMU may charge PJM at PJM's current internal project labor rates used in its own project and support accounting as listed in Appendix F as updated and agreed to by the Parties.

Maintenance support shall be defined as processing MMU change requests, testing MMU code, modifying user access, or any other support required to keep the data exchange system functioning as a result of an MMU change. PJM will be responsible, and will not charge MMU, for maintaining the data exchange technical environment including software upgrades and patches. Any break-fix technical support provided to MMU by PJM that is driven by PJM's changing business needs or that is the result of a failure of PJM's systems shall not be billed to MMU.

8. Support Hours

PJM will provide technical support to MMU during PJM's core business hours from 8:00 a.m. to 5:00 p.m., Monday through Friday. After PJM's core business hours, on weekends and holidays, technical support shall be provided through PJM's IT Operations Center only on an on-call basis. MMU will provide technical support to PJM during the working hours of the relevant MMU staff.

Should MMU know in advance that it will require technical support outside of PJM's core business hours for more than one hour, MMU shall make a special request to PJM, giving at least 24 hours notice of thereof. In such case, PJM will extend the technical support hours to meet specific needs of MMU.

9. Availability

The Data Exchange System shall operate on a 24x7 schedule, except for a sixteen (16) hour period of time during which quarterly maintenance is expected to be performed on the system. The Data Exchange System will be available for 95% of the total hours in a year, minus the downtime for scheduled maintenance as described in Section 10 of this SLA.

(365 days per year x 24 hours per day = 8760 hours – 16 hours for quarterly maintenance = 8744 hours per year; 8744 hours per year x 0.05 = 437 hours of possible downtime per year.)

10. Scheduled Maintenance

PJM expects that the Data Exchange System will need four (4) hours of downtime per quarter for system upgrades and maintenance. Such downtime will typically be scheduled for Saturdays, and MMU will receive prior notification thereof. PJM shall use reasonable efforts to plan any such outages to minimize the impact on MMU.

If system maintenance is expected to take longer than the four hour window per quarter or takes the system below the 95% availability threshold, PJM shall contact MMU to so advise at least two (2) business days in advance for non-emergency maintenance. In such case, the Parties shall make an effort to come to mutual agreement as to the outage time, in advance, and in writing. The representatives of both parties for the purpose of resolving issues of the duration of system maintenance are:

Contact List:

MMU – Manager, IT

PJM – Manager, ITS IT Operations Center

11. Production System Access and Access Termination

MMU will be granted production access (read only) via VPN over a dedicated fiber optic connection. PJM and MMU will cooperate not to cause negative performance impacts on PJM's production systems resulting from MMU's access to or use of these systems, and to prevent access to such systems by non-MMU employees. In the event that MMU's access or use of these systems cause levels of performance degradation that are unacceptable to PJM, PJM will contact MMU to attempt to resolve the issue. For purposes of this SLA, negative performance impact is defined as a single Oracle call taking more than 5 minutes of CPU time. In such case, the MMU user will receive an Oracle error message stating that the query exceeds the allowed utilization. PJM reserves the right to terminate any session that results in a negative impact on the performance of a production system. When possible, PJM will communicate with MMU before terminating sessions and will work with MMU to schedule a time to re-establish sessions. Notwithstanding the foregoing, PJM reserves the right to terminate any session without notice to MMU in an emergency situation or for security reasons. In such a case, PJM will explain in writing to communicate with MMU why the session was terminated within one (1) business day from the date the session was terminated.

12. Development and Test System Access and Access Termination

PJM shall provide MMU with read only access to the same development and test systems that MMU has access to as of the Effective Date as specified in Appendix B of this SLA. Going forward, access to development and test systems shall be continued, granted or revoked on a need basis. Due to PJM's active use of development and test environments PJM reserves the right to create a specific MMU development or test environment if the need arises, in its sole discretion. If PJM determines that there is a need for such a MMU specific development and/or test environment, PJM will take reasonable efforts to create an environment that is the functional equivalent of PJM's development and test environment. MMU's read and write access to these MMU specific development and test systems shall be via VPN over a dedicated fiber optic connection. In addition, PJM shall provide MMU with dedicated test and development environments as part of the Data Exchange System, for purposes of developing and testing code used to populate the Data Exchange System.

PJM and MMU will cooperate not to cause any negative performance impacts on PJM's development and test systems resulting from MMU's access to or use of these systems, and to prevent access to such systems by non-MMU employees. In the event that MMU's access or use of these systems cause levels of performance degradation that are unacceptable to PJM, PJM will contact MMU to attempt to resolve the issue. For purposes of this SLA, negative performance impact is defined as a single Oracle call taking more than 5 minutes of CPU time. In such case, the MMU user will receive an Oracle error message stating that the query exceeds the allowed utilization. PJM reserves the right to terminate any session that results in a negative performance impact on the performance of a test or development system. When possible, PJM will communicate with MMU before terminating sessions and will work with MMU to schedule a time to re-establish sessions. Notwithstanding the foregoing, PJM reserves the right to terminate any session without notice to MMU in an emergency situation or for security reasons. In such a case, PJM will explain in writing to MMU why the session was terminated within one (1) business day from the date the session was terminated.

13. Incident Management

If an issue occurs MMU will contact PJM's Support Center and a ticket will be opened. PJM's Support Center will initiate problem resolution, and depending on the severity level (as described below), and if needed, contact a member of IT management. The Support Center will remain the point of contact and will take the appropriate action to escalate the ticket depending on severity level.

14. Problem Management

All tickets, regardless of severity, will be documented and tracked through resolution by PJM's Support Center.

15. Change Management; Enhancements and Upgrades

If MMU determines that it has the need for additional data, additional access or a change to the systems from what is specifically delineated in this SLA, MMU will provide detailed requirements to the PJM Liaison defined in Attachment M or such other representative appointed by PJM (both to be referred to herein as “PJM Liaison”), for the new data or system information that is now needed as part of the data exchange. The MMU will be responsible for providing Statistical Analysis Software (“SAS”) code and Oracle Data Definition Language (“DDL”) that will extract the needed data and load it into the Data Exchange System. PJM will be responsible for implementing changes to the Data Exchange System and placing the MMU code into production pursuant to the change management process set forth in Appendix D hereof. PJM will act as the tester and release coordinator for any change.

PJM shall take all reasonable steps to continue providing full data access during the transition to PJM system changes such as MSET (Settlements System) redesign and AC². PJM shall be responsible for providing full data access upon the implementation of PJM system changes such as MSET (Settlements System) redesign and AC². PJM will be responsible for keeping MMU fully informed of the changes required in order to ensure full access after the implementation of such system changes. MMU shall be responsible for designing and implementing extract and load (ETL) processes.

In the event that the MMU is unable to provide the code to extract and load the data to the Data Exchange System PJM will be available to provide this service. Any such request for the extraction and loading of additional data must be approved by PJM and MMU in writing and be signed by a PJM and MMU representative having authority to approve the request, and must include MMU’s agreement to pay for the associated costs at PJM’s internal project labor rate used in its own project and support accounting as listed in Appendix F as updated and agreed to by the Parties.

For any such approved data ETLs, Table 1 provides the timelines for coordination.

Table 1 - Timelines for Coordination

DATA EFFORT	PROVIDE ACKNOWLEDGEMENT TO MMU/PJM	STATUS UPDATES	COMPLETION TIMEFRAME
Data easily retrieved or available in PJM's or MMU's systems	Within 7 business days	Status updates provided daily at close of business	Completion timeframes will be mutually agreed upon by PJM and MMU
Data has to be transformed or does not exist	Within 7 business days	Status updates provided weekly	Completion timeframes will be mutually agreed upon by PJM and MMU

If PJM requests additional data from what is specifically delineated in this SLA, PJM will provide a detailed description of the data requested. Any request for additional data must be approved by PJM and MMU in writing and be signed by a PJM and MMU representative having authority to approve the request, and must include PJM’s agreement to pay for any costs associated therewith.

If MMU requests an upgrade or enhancement to be made to the Data Exchange System, it shall submit any such request in writing to the PJM Liaison. Within 7 days of receipt of any such request, PJM shall provide MMU with an estimate of the cost to put the requested upgrade or enhancement into operation. After receipt of the estimate, MMU shall advise PJM in writing whether it wants to implement the enhancement or upgrade. Any such upgrades or enhancements shall be at MMU's expense unless PJM otherwise agrees to bear the expense.

If PJM desires to implement an upgrade or enhancement to the Data Exchange System or to its computer systems that was not requested by MMU, or if PJM's business drives the need for a change to the Data Exchange System, or if such enhancements or upgrades are required in order to provide the level of support required under this agreement, the making of the upgrades or enhancements shall be at PJM's expense.

When revisions of PJM's computer systems are necessary as part of PJM's normal business (for example the addition of the loss component for LMP), PJM will use reasonable efforts to provide MMU notice of a planned system revision at least thirty (30) days prior to any revision to the data exchange format(s). There may be times when PJM determines, in its sole discretion, that a data exchange format needs to be modified in an emergency situation. In such case, PJM will provide notice immediately to MMU and will follow its change management process as set forth in Appendix D

When revisions of MMU computer systems are necessary as part of the MMU's normal business, MMU will use reasonable efforts to provide PJM notice of a planned system revision that affects the transfer of data to PJM at least (30) days prior to any revision to the data exchange format(s). There may be times when MMU determines, in its sole discretion, that a data exchange format needs to be modified in an emergency situation or on an expedited basis. In such case, MMU will follow its change management process as set forth in Appendix D.

16. Service Levels

All issues reported to PJM by MMU will be ticketed and assigned the appropriate severity level as described below. Such assignment will be as delineated in Section 17 of this SLA.

SEV1 - System or critical function down and not available and no work around.

- Multiple reports of a production system not available without a work around.

SEV2 - System available, non-critical function unavailable and no work around.

- Multiple reports of a non-critical function unavailable with no work around.
- A problem that is degrading the performance and reliability of the system but functions are still operational.
- If the problem is not addressed it could escalate to a SEV1.

SEV3 - System available, some functionality unavailable with a work around.

- A problem reported impacts one or more users but does not result in a stoppage of work.

SEV4 – Inquiry, access request, or other support request.

All issues regarding data transfers from MMU to PJM, reported by PJM to MMU, will be addressed by the MMU as soon as reasonably practical.

17. Target Time to Respond, Repair, Resolve (“TTR”)

At the time MMU makes a repair request to PJM, PJM shall determine the severity level of any such repair as set forth in Section 16. If MMU disagrees with the assigned level of severity, MMU shall have the option to request that PJM elevate a repair request to a higher level of severity. MMU will develop reasonable protocols to address TTR definitions and will communicate them to PJM.

Table 2 - Target Time to Respond, Repair, Resolve by Severity Level

SEVERITY LEVEL	PROVIDE ACKNOWLEDGEMENT TO MMU/PJM	STATUS UPDATES	RESOLUTION
Level 1	Within 30 minutes of reported issue to the PJM Support Center/MMU Manager, IT during normal support hours or by 9:00 a.m. the next day.	Every 2 hours while the problem exists, during all hours if reasonably practical. When it spans a day, no later than 9:00 a.m. each morning the problem exists.	Appropriate PJM, MMU and vendor resources committed to meet the critical deadline. Commitment is until problem resolution unless the Parties mutually agree to another timeframe.
Level 2	Within 30 minutes of reported issue to the PJM Support Center/MMU Manager, IT during normal support hours or by 9:00 a.m. the next day.	Every 4 hours during normal business hours. When it spans a day, no later than 9:00 a.m. each morning the problem exists.	Appropriate PJM, MMU, and Vendor resources are committed until problem is resolved within defined support hours unless the Parties mutually agree to another timeframe. Target a 24 hour turnaround time.
Level 3	Within 2 hours of the reported issue to the PJM Support Center/MMU Manager, IT during normal support hours or by 9:00 a.m. the next day.	Every 4 hours during normal business hours. When it spans a day, no later than 9:00 a.m. each morning the problem exists.	Appropriate PJM, MMU, and Vendor resources are committed until problem is resolved within defined support hours unless the Parties mutually agree to another timeframe. Target a 48 hour turnaround time.
Level 4	Within 8 hours of the reported issue to the PJM Support Center/MMU Manager, IT during normal support hours or by 9:00 a.m. the next day.	First report will be delivered within 2 working days. Subsequent reports based on timeframe negotiated during first report, but no less than once a week.	Resources assigned as available with a goal of problem resolution within 5 working days.

18. Resolution Escalation

The TTR will be in accordance with the severity levels. If for some reason PJM can not meet the severity level turnaround time, then MMU will be notified and the escalation procedure in Table 3 will be utilized:

Table 3 - Escalation Notification

Elapsed Time	Sev1	Sev2	Sev3	Sev4
Immediate	PJM IT Manager; PJM Liaison; MMU Manager, IT	PJM IT Manager; PJM Liaison; MMU Manager, IT	PJM IT Staff; PJM Liaison; MMU Manager, IT	PJM IT Staff; PJM Liaison; MMU Manager, IT
2 hours	PJM GM IT Integration; PJM Liaison; MMU Manager, IT	PJM GM IT Integration; PJM Liaison; MMU Manager, IT	PJM IT Manager; PJM Liaison; MMU Manager, IT	PJM IT Manager; PJM Liaison; MMU Manager, IT
4 hours	PJM Executive Director of IT; PJM Liaison; MMU Manager, IT	PJM GM IT Integration; PJM Liaison; MMU Manager, IT	PJM IT Manager; PJM Liaison; MMU Manager, IT	PJM IT Manager; PJM Liaison; MMU Manager, IT
8 hours	PJM Executive Director of IT; PJM Liaison; MMU Manager, IT	PJM Executive Director of IT; PJM Liaison; MMU Manager, IT	PJM GM IT Integration; PJM Liaison; MMU Manager, IT	PJM GM IT Integration; PJM Liaison; MMU Manager, IT
24 hours	PJM Vice President; PJM Liaison; MMU Manager, IT	PJM Executive Director of IT; PJM Liaison; MMU Manager, IT	PJM Executive Director of IT; PJM Liaison; MMU Manager, IT	PJM Executive Director of IT; PJM Liaison; MMU Manager, IT

19. Performance

The performance of the Data Exchange System is reliant on the speed of the link between PJM and MMU. A dedicated fiber optic connection and a dedicated back-up fiber optic connection will be provided to MMU, each having a speed of 1 Giga-bit per second. The performance of the dedicated fiber optic connection and dedicated back-up fiber optic connection will be reviewed on an annual basis to ensure that each is adequate for MMU to perform its obligations under Attachment M. PJM and MMU will meet at least annually, consistent with the timing of PJM's planning cycle, to review whether additional bandwidth is necessary in order to continue MMU data access at the performance levels specified in this SLA. PJM will provide increases in bandwidth, consistent with this planning process, at no cost to MMU, to continue performance at the levels specified in this SLA. If MMU desires improved performance or additional transfer capability, MMU will pay all costs for increasing the bandwidth, unless PJM otherwise agrees to bear the cost.

20. Data Transfer and Access

The data exchange contemplated under this SLA will allow for the unattended transfer of any electronic data format between MMU and PJM. PJM maintains processes to exchange files and data with MMU over a dedicated fiber optic connection. These files and data are either transformed and delivered or simply delivered to MMU, depending on the type of data. A detailed list of the data that will be transferred to MMU is documented in Appendix B. MMU shall also maintain processes to exchange files and data with PJM over a dedicated fiber optic connection.

Communications connectivity and security are provided for in the data exchange process. PJM supports and maintains secured servers and a database for providing files and data to MMU. The Parties shall perform the transfer of files and data in accordance with specifications set forth herein and as otherwise agreed upon by the Parties and in writing signed by a PJM and MMU representative having authority to approve and agree to an amendment to this SLA.

MMU will provide SAS extraction, transform and load (“ETL”) processes that will run in the PJM environment to transfer the data to the Data Exchange System. MMU will monitor and control the process execution through a control structure in the Data Exchange System.

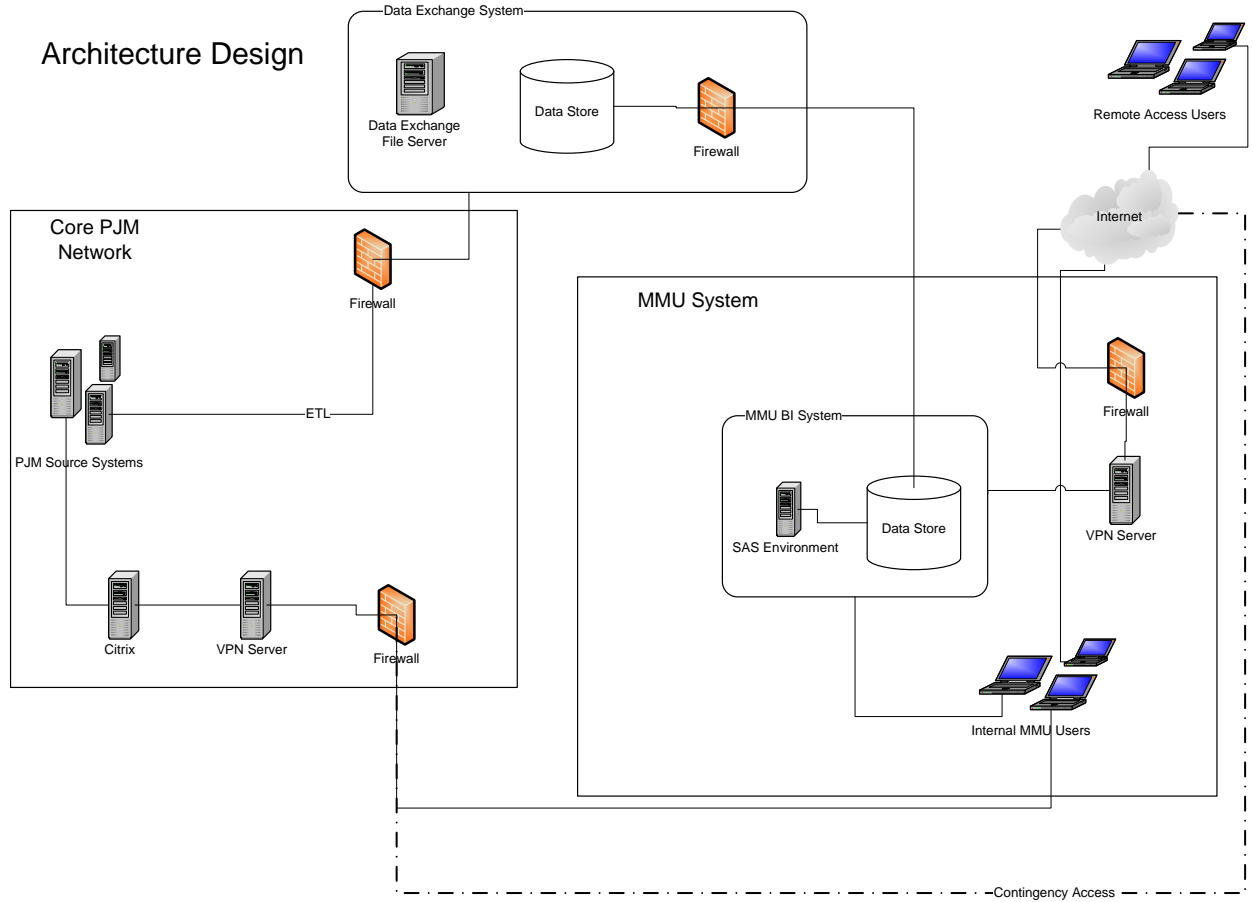
Each Party must provide application and database servers required to complete the data exchange at their office locations. Each Party shall provide its own application support necessary to complete the data exchange. Each Party shall also be responsible for detecting delivery deficiencies that it encounters during the transfer of data from the other Party’s computer systems and for taking appropriate action, including notifying the other Party.

Upon notification of any problems with file or data transfer, each Party will take steps to resolve any problems with its systems as outlined in this SLA. The Parties are not responsible for the availability and reliability of the systems that will ultimately receive the files. However, each Party will work with the other Party and/or the other Party’s consultants, contractors and other agents to resolve file transfer problems. Each Party will maintain records of the file transfers, including the file name, size, date and time of the transfer, and status of the transfer.

The Data Exchange System is independent of the production system access which is described in the next section. The dedicated fiber optic connection between MMU and PJM is used for both types of access. A high level technical design is shown in Figure 1.

Figure 1 – PJM/MMU Architecture Design

Architecture Design



21. Data Listing and System Access

The following is a description of the data that the MMU function currently retrieves from PJM and external sources. PJM shall continue to provide access to the same data to MMU for the duration of this SLA, as set forth herein. A detailed list of production, development and test system access is set forth in Appendix B. Each Party shall be responsible to obtain its own subscriptions for external data, each at its own expense.

Table 4 - MMU Data Retrieved from PJM Systems and External Sources

PJM Data Source	Source System	Target System	Frequency	Description
Market Settlements Information	MSETPRD	MSETARCP	Monthly	Billing quality financial data from selected tables that is older than the retention period defined by Market Settlements (12 to 18 months for most tables)

Market Settlements Information	MSETPRD	MMDSPRD	Daily for the last 45 days	Billing quality financial data from selected tables
Market Settlements Information	MSETPRD	MMDSPRD	Monthly	Billing quality load response data
Market Settlements Information	PJM.COM	MMDSPRD	Daily for the last 45 Days	Operating Reserves Deviation Charges
Market Settlements Information	Market Settlements Department	MMDSPRD	Quarterly	Station Service Rate
Markets Information	BIDPRD	MMDSPRD	Daily	Market Day Ahead Data
Markets Information	OPRPRD	MMDSPRD	Daily	Market Real-time and Dispatch data
Markets Information	BIDPRD	MMDSPRD	Daily	Market Unit and PNODE data with historical versioning
Markets Information	Markets Flat Files	MMDSPRD	Daily	LMP Component (CLMP), Shadow Market Price (SMP), Unit Participation Factor (UFP) and DFAX information Constraint and SMP data every 10 days
LPA Data	LPAPRD EMS	MMDSPRD	Daily	Real-time LMP data from LPAPRD and EMS flat files
FTR Data	EFTRPRD	MMDSPRD	Daily	FTR congestion data
RPM Data	EFTRPRD	MMDSPRD	Daily	RPM Capacity Data
Load Response	EFTRPRD	MSETARCP	Monthly	Load Response data from efrprd older than 1 month
EES Data	EESPRD	MMDSPRD	Daily	All transactions and audit table data
EES Data	EESPRD	MMDSPRD	Daily	Transaction and Settlement data with historical versioning to capture changes
Congestion Data	SRCM	MMDSPRD	Daily	Congestion Management (CM2) audit table data and flowgate hourly data
Outage Data	EDARTPRD	MMDSPRD	Daily	Outage data with historical versioning to capture changes
Outage Data	GADSPRD	MMDSPRD	Daily	Outage and Unit data with historical versioning to capture changes
Pool Tie Data	HISPRD	MMDSPRD	Daily	Pool Tie Data
Zonal Load		DWPRD	Daily	Zonal Loads

Geographical Information	Manual	DWPRD	Daily	Geographic longitudes and latitudes.
Weather	Flat Files	DWPRD	Daily	Weather Data
Fuel Pricing from PLATTS	Flat Files	MMDSPRD	Daily	Fuel Pricing Data
Evomarkets	Flat Files	MMDSPRD	Daily	Emissions Pricing Data from Evonmarkets
Nuclear Fuel Pricing from UXC	Flat Files	MMDSPRD	Daily	Nuclear Fuel Pricing Data from UXC
Company Information	Flat Files	MMDSPRD	As Needed	Company Annual Report, Unit and other financial data from Hoovers, PowerDat, RDI, EIA and additional ad-hoc research sources Unit to company mapping maintained manually

PJM may make ad hoc requests for data from MMU as defined in the MMS Agreement. MMU will use its best efforts to provide such requested data with one business day of the request. If, despite its best efforts, MMU is unable to provide the requested data within one business day, it shall provide within one business day an explanation of the reason it cannot provide the data and inform PJM when MMU, using its best efforts, will be able to provide the data. The cost of providing such data will be borne by MMU up to 250 person hours after which MMU may charge PJM at the rates listed in Appendix F as updated and agreed to by the Parties. The Data Exchange System will be utilized to enable the transfer of the requested data from MMU to PJM.

PJM may make requests to MMU that additional data tables be provided to PJM as defined in the MMS Agreement. MMU will use its best efforts to respond to such requests recognizing that such changes must follow PJM's and MMU's change management procedures. MMU may charge PJM for the cost of providing such additional tables at the rates listed in Appendix F as updated and agreed to by the Parties.

In addition to responding to the foregoing data requests, the following is a general description of the data that PJM currently receives from the MMU function. MMU shall continue to provide the same data to PJM for the duration of this SLA, as set forth in Appendix E of this SLA.

Table 5 - MMU Data

MMU Data Source	Source System	Target System	Frequency	Description
eCart	MMU's Data Store	Data Exchange System	As updated in MMU database	Congestion Data, hourly data provided on a daily basis
Data Transowner	MMU's Data Store	Data Exchange	As updated in MMU	Generation Bids

		System	database	
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Unit Participation Factors Aggregation	MMU's Data Store	Data Exchange System	As updated in MMU database	LMP calculation components, hourly data provided on a daily basis
Fuel Adjusted LMP	MMU's Data Store	Data Exchange System	As updated in MMU database	LMP data on an hourly basis provided daily
Estimated Cost Offers	MMU's Data Store	Data Exchange System	As updated in MMU database	Unit Cost information
Net Revenue	MMU's Data Store	Data Exchange System	As updated in MMU database	Revenue information
Unit Ownership – MMU	MMU's Data Store	Data Exchange System	As updated in MMU database	Unit ownership information as updated or tracked by the MMU
State Information	MMU's Data Store	Data Exchange System	As updated in MMU database	State bus location information as tracked and updated by the MMU
RPM Avoidable Cost Rate Information	ACR database	Data Exchange System		Avoidable cost information as calculated by MMU
Operating Reserves	MMU's Data Store	Data Exchange System	As updated in MMU database	Operating Reserve Costs
Frequently Mitigated Units	MMU's Data Store	Data Exchange System	As updated in MMU database	FMU
FTR Forfeiture	MMU's Data Store	Data Exchange System	As updated in MMU database	FTR candidates and forfeitures

22. Capacity Management

The Data Exchange System will be sized to maintain one year's worth of PJM Markets data on a rolling daily basis. If MMU requests that PJM Markets data older than the one year be provided to MMU, PJM will review the request, the data requirements, determine if the data exists in PJM's system, and within seven (7) days will advise MMU of the number of person hours required to provide the data to MMU and any cost associated with such requests. PJM will allocate 500 Gbs of space for ad hoc data requests in its Data Exchange System.

23. Contacts and Notice

Each Party will provide to the other Party with contact lists containing relevant personnel to whom inquiries or problems relating to this SLA should be addressed.

Notice to any Party hereto shall be in writing and shall be deemed to be delivered on the earlier of: (a) the date of personal delivery, (b) if deposited in a United States Postal Service depository, postage prepaid, registered or certified mail, return receipt requested, or sent by

24. Service Measurement Reporting

PJM will provide a monthly report to MMU of the open issues regarding the Data Exchange System, PJM's data requests to MMU, reported problems on MMU's system or MMU's access to PJM's production, test or development systems, the severity level and the TTR. This monthly report will also detail the performance of the dedicated fiber optic connection that provides MMU's direct access to PJM's systems. This report also will include the number of hours of technical and maintenance support set forth in Section 7 of this SLA provided by PJM to MMU.

25. Configuration Management

PJM will collaborate with MMU to develop a design document for the Data Exchange System that will provide technical implementation details. These details will provide necessary technical specifications and reference other technical documentation detailing how to connect to PJM's system, software version, data definitions, directory structure, and any other necessary information required by MMU to successfully integrate with the Data Exchange System. This design document will be updated to capture on-going maintenance items and approved requests by MMU for additional data. PJM will provide notice as required herein when outages are required to change, modify or upgrade the Data Exchange System.

MMU will provide a design document that will provide technical implementation details required by PJM to receive data from Data Exchange System. This design document will be updated to capture approved requests by PJM for additional data.

26. Crisis Management

In the event of an emergency such as a computer system failure, a potential breach of system security, a computer virus outbreak or another event that might force the services to be shutdown, each Party will notify the other Party as soon as possible. Within 24 hours of the service becoming unavailable due to such an event, the Party having the computer system problem will provide to the other Party an estimated time for service restoration and additional information, if available, regarding the cause of the event. The Party having the computer system problem will, in consultation with the other Party, develop a plan to provide any data that was not provided due to the system failure.

27. Service Continuity and Security

In order to ensure the protection of PJM's and its members' and market participants' market sensitive information, proprietary information, trade secrets and/or other confidential data, PJM requires that MMU implement and retain specific, detailed security controls. MMU must employ these security controls to ensure the physical security of such information and to restrict access to any such information only to individuals who have been specifically authorized by MMU and/or PJM to have access to such information. MMU shall be required to create and have in place, at a minimum, security policies and measures in place that address:

- Physical security access requirements, policies and procedures that are to be followed by all persons accessing MMU's facilities, including a requirement that visitors be escorted by badged personnel at all times while on MMU's premises.
- Requirement for physical security access control card key and video surveillance systems to control and produce data used to monitor access on MMU's premises.
- Issuance of card key access badges to individuals based on their job responsibility, specifically restricting access to MMU's computer room.
- Requirement that card key access badges must be displayed on all individuals, at all times, while on MMU's premises.
- Badge access to MMU's facilities only being made available on a time sensitive basis depending upon job responsibility.
- Deactivation of all MMU and PJM access badges immediately upon notification that the individual to whom the badge was issued no longer requires access to MMU's and/or PJM's facilities.
- Requirement that system "access denied" attempts, unauthorized access, and attempts to hack into or breach MMU's installed security features, must be recorded by MMU, shall be reviewed by MMU and investigated if deemed suspicious, and if deemed suspicious shall be reported to PJM immediately upon their discovery.

In addition, MMU and its employees, vendors, consultants and agents will be required to comply with PJM's Vendor Review Policy, Vendor Review Process – Vendor Compliance Standard, the consultant screening process contained in PJM's Employment Screening Policy and Employment Screening Procedure to receive physical or electronic access to PJM information, and the PJM Physical Security – Site Access Procedure when requiring access to the PJM campus. Such policy, procedure and standard may be

amended from time to time and PJM will provide notice and description of such changes, including electronic and paper copies of such initial documents and any modified documents. PJM shall give MMU prior notice of any proposed change to any of the above-referenced security policies, standards and procedures, and shall meet with MMU to discuss how the proposed change will affect MMU should MMU request such a meeting.

MMU will provide access to its offices for any security audits that PJM desires to perform, which security audits shall be conducted to ensure that PJM's security requirements are met. MMU shall cooperate with PJM to assist PJM or its designee in obtaining access to the offices of any of MMU's consultants, contractors or other agents for the purpose of conducting a security audit to ensure that PJM's security requirements are being met. PJM shall provide at least twenty four (24) hours prior notice to MMU of any such security audit. MMU acknowledges and understands that PJM shall not give MMU access to any of its data or systems until such time as PJM has had an opportunity to conduct an initial security review at MMU's site and of MMU's personnel to ensure that the security requirements are adequately being met. During the transition, no additional background or security checks will be required for current MMU employees who are in compliance with PJM's security policies. PJM may also require additional security audits to be conducted from time to time to ensure compliance with its minimum security requirements, including but not limited to a situation in which MMU relocates its offices.

PJM is responsible for maintaining data file security only while such files are under PJM's direct control. PJM shall notify MMU of any security issues related to the Data Exchange System or are otherwise relevant to MMU/PJM security issues.

28. Confidentiality

The data provided to MMU by PJM as delineated in this SLA includes market sensitive and confidential information. MMU and its employees and contractors shall comply with the confidentiality provisions set forth in Attachment M and the Amended and Restated PJM Operating Agreement of PJM Interconnection, L.L.C. (“PJM Operating Agreement”).

The data provided to PJM by MMU as delineated in this SLA may be market sensitive and confidential. PJM employees obtaining such data will be required to sign both data confidentiality and non-disclosure agreements, provided by MMU to PJM, acknowledging the confidential nature of said information and agreeing to maintain the confidentiality of that information. PJM and its employees and contractors shall comply with the confidentiality provisions set forth in the PJM Operating Agreement.

29. Access Rights and Changes

MMU shall provide a list of valid users and their contact information to PJM. PJM will follow its internal access authorization process to create accounts for the employees of MMU. MMU is responsible for notifying PJM of any required account changes as outlined in the Technical Support section of this SLA. In the case of account terminations, PJM will act as quickly as possible to terminate user access to its systems after having received notice from MMU.

Changes in MMU employees shall not be considered to be a change in data access under this SLA.

MMU shall also provide to PJM a list of its employees, consultants and contractors who shall need to have access to PJM's campus. PJM shall issue security badges to said employees, consultants and contractors, and shall provide physical access to PJM's campus between 0600 and 1800 hours. If MMU employees need physical access to PJM's campus during other hours, PJM will provide such access on a case by case basis.

30. Disaster Situations

In the event of a significant event affecting the operations of the PJM Control Center (“BCP event”), PJM’s primary focus is to maintain reliability of the electric power system. PJM will restore systems according to the priority assigned in PJM’s Business Continuity Plan(s) (“BCP”). Such BCP may be amended from time to time and PJM will provide notice and description of such changes, including electronic and paper copies of such initial documents and any modified documents. PJM will use reasonable efforts to restore the functionality of the Data Exchange System within sixty (60) days of the BCP event. Should this restoration process be expected to take longer than sixty (60) days, PJM shall give MMU notice thereof, which notice must include an expected timeframe for the completion of the restoration of the Data Exchange System. PJM shall provide MMU with VPN read only access to PJM’s production systems until such time as PJM has restored the Data Exchange System.

31. Cost for Provision of Data

To the extent that MMU is responsible for the payment of PJM's costs and expenses associated with the provision of access to PJM's data, information and systems to MMU, the costs and expenses shall be charged to MMU at PJM's actual cost, which for consultants and contractors shall be as invoiced and for work performed by PJM employees shall be per PJM's internal project labor rates.

MMU shall provide PJM the MMU data defined in Appendix E without charge. For any requested additional data, MMU shall have the option to bill PJM for its costs and expenses related to such request. MMU shall give PJM a written estimate of the cost to provide the data requested by PJM prior to MMU incurring any expenses associated therewith for which it will seek compensation from PJM. MMU may charge PJM for the cost of providing such additional tables at the rates listed in Appendix F as updated and agreed to by the Parties.

32. Access for Independent Auditors

MMU shall provide PJM's independent auditor(s) with access to MMU's employees, consultants, contractors and agents, as well as to MMU's relevant data and information pertaining to any work product that MMU provides to PJM in connection with the settlement and billing of PJM Members, for the purpose of the auditor's review and examination of PJM's billing processes for PJM's SAS 70 Type 2 audit, such as the revenue requirement calculation in the black start market and the development of Cost of New Entry (CONE) and the Energy & Ancillary Services Revenue Offset (E&AS) as it relates to the RPM market. MMU shall cooperate with PJM to provide any additional access to PJM's independent auditors should there be a change in the name, number or type of billing processes for which MMU's data and information is needed.

33. Disputes

Any and all disputes under this SLA shall be determined as set forth in the dispute resolution provisions of the MMS Agreement.

34. Historical Records

PJM shall effectuate a one time transfer to MMU of a copy of the following, all as of the day prior to the Commencement Date of this SLA: (a) all email of MMU employees; (b) the documents of current or former MMU employees and the documents of current or former MMU contractors located in the PowerDOCS system; (c) documents, data and files located on the hard drives of MMU employees' computers; (d) documents, data and files on servers shared by PJM and MMU; (e) selected portions of personnel records of MMU employees; and, (f) all tables and schema in MMDSPRD. The transfer process shall be developed by PJM and MMU together to ensure that data is transferred to the appropriate location in MMU systems and that appropriate confidentiality is ensured. MMU will continue to have access to the PowerDOCS system, as defined by PJM.

35. Entire Agreement

This SLA 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 SLA is intended to change or amend any terms or conditions of the MMS Agreement. Notwithstanding the foregoing, in the event the Parties mutually agree, or there is a judicial or regulatory finding, that there is a conflict between any provision of this SLA and the terms of the MMS Agreement, the MMS Agreement shall be controlling.

IN WITNESS WHEREOF, the parties have caused this SLA to be executed by their respective authorized officials, as of the Effective Date, first set forth above.

PJM Interconnection, L.L.C.

By: /s/Karl V. Pfirrmann Interim President & CEO 12/18/2007
Name Title Date

Printed name of signer: Karl V. Pfirrmann

Monitoring Analytics, LLC

By: _____ _____ _____
Name Title Date

Printed name of signer: _____

35. Entire Agreement

This SLA 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 SLA is intended to change or amend any terms or conditions of the MMS Agreement. Notwithstanding the foregoing, in the event the Parties mutually agree, or there is a judicial or regulatory finding, that there is a conflict between any provision of this SLA and the terms of the MMS Agreement, the MMS Agreement shall be controlling.

IN WITNESS WHEREOF, the parties have caused this SLA to be executed by their respective authorized officials, as of the Effective Date, first set forth above.

PJM Interconnection, L.L.C.

By: _____
Name Title Date

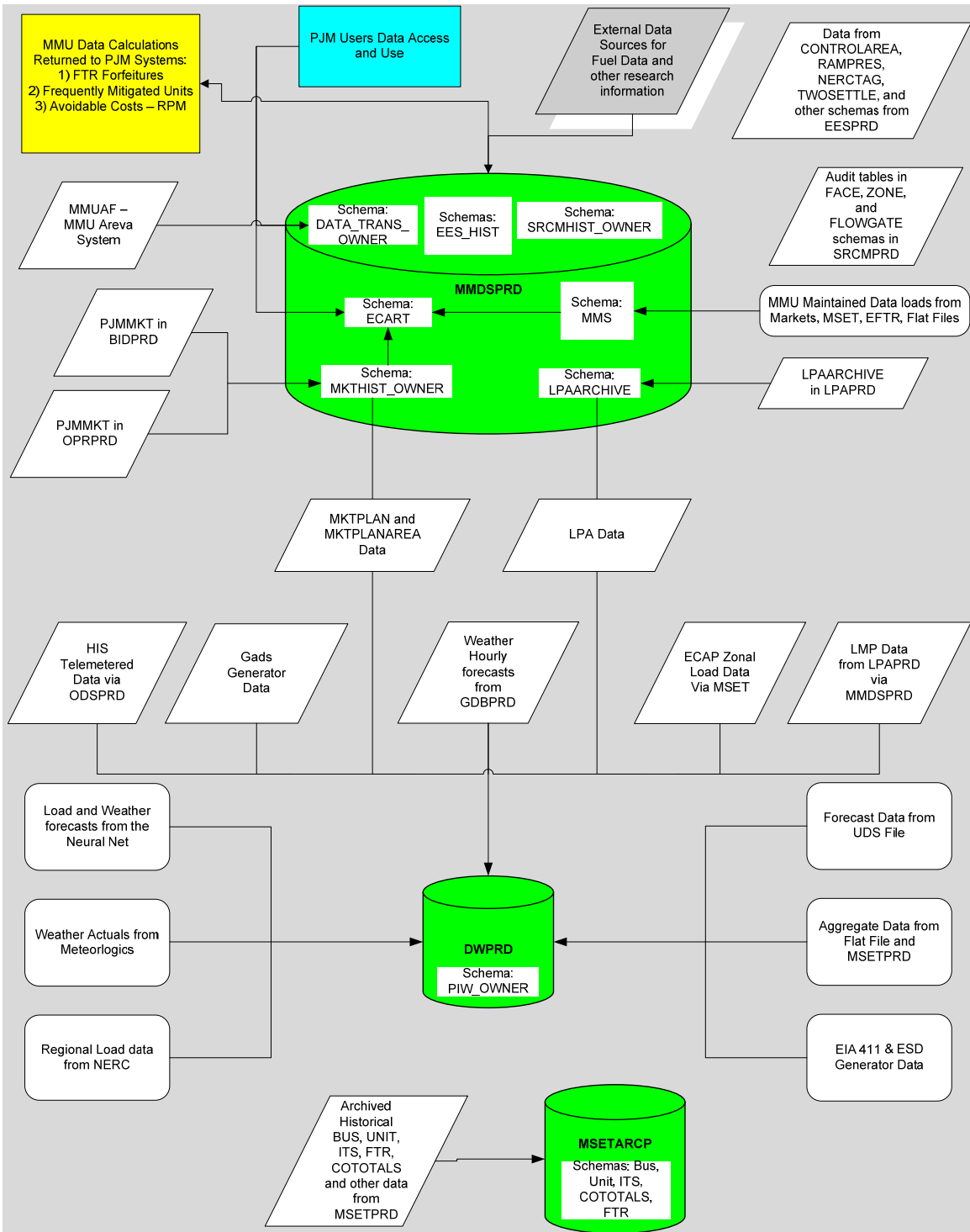
Printed name of signer: _____

Monitoring Analytics, LLC

By: /s/ Joseph E. Bowring Market Monitor 12/18/07
Name Title Date

Printed name of signer: Joseph E. Bowring

Appendix A: Data Flow Diagram. Current Architecture



Appendix B: End User Production Access

This access is provided to the internal Market Monitoring Unit.

Database Name	User Name	Role Granted	Data Description
BIDPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA GOCKLB HAASH KRAWIE MILLIM NIUH ONEILJ SCHEIP THOMPM WEBSTJ YOUX ZHANGW	JF_MARKET_MONITORING	eMarket Production Database This grants access to pnodes, units, bid data, dispatcher management tool data, market operator data, audit data, Areva calculation data, constraint information, day ahead lmps, day ahead transmission outages
BIDTST	BELLF BLAIR BOWRIJ GOCKLB KRAWIE MILLIM ONEILJ SCHEIP SCHEIP	JF_MARKET_MONITORING MILLIM – JF_TESTER SCHEIP – MKT_PJMMKT_DMT_READONLY	eMarket Test Database
CUSPG	BAZARK BELLF BLAIR BOWRIJ ENGLEA HAASH KRAWIE MILLIM NIUH ONEILJ SCHEIP THOMPM WEBSTJ ZHANGW	JF_MARKET_MONITORING	eSchedules Production Database This grants users access to Market settlement reports, transaction data No Development or Test Database Access
ECAPPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA GOCKLB	JF_MARKET_MONITORING	eCapacity Production Database This grants users read only access to pre-RPM capacity market data, capacity obligations, alm No Development or Test

	HAASH KRAWIE MILLIM NIUH ONEILJ SCHEIP THOMPM WEBSTJ YOUX ZHANGW		Database Access
EDARTPG	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA GOCKLB HAASH KRAWIE MILLIM NIUH ONEILJ SCHEIP THOMPM WEBSTJ YOUX ZHANGW	JF_MARKET_MONITORING	eDart Production Database Dispatcher tool information, demand side response data, emergency procedure notifications
EDARTTG	BELLF MILLIM ONEILJ	JF_MARKET_MONITORING MILLIM – JF_TESTER, EAST	eDart test database
EDARTDG	BELLF ONEILJ	JF_MARKET_MONITORING	eDart development database
EDATAPRD	BELLF BLAIR THOMPM WEBSTJ	JF_MARKET_MONITORING	eData Production Database LMPs, Loads, Tie Schedules, Dispatch Rates, ACE, Weather Data
EDATATG	MILLIM	JF_TESTER	eData test database
EESPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA GOCKLB HAASH KRAWIE MILLIM ONEILJ SCHEIP YOUX	JF_MARKET_MONITORING	EES Production Database Energy transaction, OASIS transactions, Ramp, NERC Tag data

EESTG	MILLIM	JF_TESTER	EES test database
EFTRPRD	BAZARK BELLF BLAIR BOWRIJ ENGLEA FUHRMC GOCKLB HAASH KRAWIE LEEL MILLIM NIUH ONEILJ SCHEIP THOMPM WEBSTJ YOUX ZHANGW		eFTR Production Database FTR bids and auction results, RPM data, Load Response data No Development or Test Database Access
EMETPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA GOCKLB HAASH KRAWIE MILLIM NIUH ONEILJ SCHEIP THOMPM WEBSTJ YOUX ZHANGW	JF_MARKET_MONITORING	eMeter Production Database Hourly meter data No Development or Test Database Access
EMPPRD	TBD	JF_MARKET_MONITORING	EMS Primitive Database: Generation Model data No Development or Test Database Access
EORGPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA FUHRMC GOCKLB HAASH	JF_MARKET_MONITORING	eSuite Authentication and Organization information Company Information No Development or Test Database Access

	KRAWIE LEEL MILLIM NIUH ONEILJ SCHEIP THOMPM WEBSTJ YOUX ZHANGW		
FUELPRD	BELLF KRAWIE MILLIM SMITHC YOUX	JF_MARKET_MONITORING	eFuel Production Database Generator Fuel Data
FUELTST	BELLF KRAWIE MILLIM MILLIM SMITHC YOUX	JF_ACR_READ_WRITE	eFuel test database
GADSPRD	BELLF BLAIR KRAWIE MILLIM	JF_MARKET_MONITORING	eGads Production Database Generator Outage Data No Development or Test Database Access
GDBPRD	TBD	JF_MARKET_MONITORING	EMS Generator Database: Real-time generator information No Development or Test Database Access
HISPRD	TBD	JF_MARKET_MONITORING	EMS Historical Database: Access to ICCP data No Development or Test Database Access
LPAPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA FUHRMC GOCKLB HAASH KRAWIE LEEL	JF_MARKET_MONITORING	LPA Database LMP results and LPA inputs

	MILLIM NIUH ONEILJ SCHEIP THOMPM WEBSTJ YOUX ZHANGW		
LPATST	BOWRIJ GOCKLB KRAWIE MILLIM	JF_MARKET_MONITORING MILLIM – JF_MARKETS_AND_OPERATIONS	LPA Test Database
LPADDEV	MILLIM	JF_MARKETS_AND_OPERATIONS	LPA Development Database
MSETPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA FUHRMC GOCKLB HAASH KRAWIE LEEL MILLIM NIUH ONEILJ SCHEIP THOMPM WEBSTJ YOUX ZHANGW	JF_MARKET_MONITORING	Market Settlements Production Data
MSETTST	BAZARK BELLF BLAIR BOWRIJ ENGLEA GOCKLB HAASH KRAWIE MILLIM ONEILJ SCHEIP	JF_MARKET_MONITORING	Market Settlements Test Database
MSETDEV	BELLF BLAIR BOWRIJ CAWLES ENGLEA HAASH KRAWIE NIUH ONEILJ YOUX	JF_MARKET_MONITORING	Market Settlements Development Database

MSGPPRD	TBD	JF_MARKET_MONITORING	Emergency Procedures Database, Dispatcher logging application (Smart Logs) No Development or Test Database Access
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MSRSPRD	BAZARK BELLF BLAIR ENGLEA GOCKLB HAASH KRAWIE MILLIM NIUH ONEILJ SCHEIP WEBSTJ YOUX ZHANGW	JF_MARKET_MONITORING	New Market Settlements Reporting System. RPM Reports
MSRSTST	BAZARK BELLF BLAIR ENGLEA GOCKLB HAASH KRAWIE MILLIM ONEILJ SCHEIP	JF_MARKET_MONITORING	Market Settlements Reporting System Test Database
MSTPREML	BELLF BOWRIJ ENGLEA	JF_MARKET_MONITORING	No Development or Test Database Access
NEWPRD1	BELLF BLAIR ENGLEA KRAWIE ONEILJ SCHEIP	JF_MARKET_MONITORING	Organization Information and historical constraint and transaction data No Development or Test Database Access
OASISPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA GOCKLB HAASH KRAWIE MILLIM NIUH ONEILJ SCHEIP YOUX ZHANGW	JF_MARKET_MONITORING	OASIS production database. Transmission reservations, ATC No Development or Test Database Access

ODMPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA GOCKLB HAASH KRAWIE MILLIM NIUH ONEILJ SCHEIP YOUX ZHANGW	JF_MARKET_MONITORING	No Development or Test Database Access
ODSPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA GOCKLB KRAWIE MILLIM NIUH ONEILJ THOMPM WEBSTJ ZHANGW	JF_MARKET_MONITORING	Data Mart No Development or Test Database Access
OPDMPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA GOCKLB HAASH KRAWIE MILLIM NIUH ONEILJ SCHEIP ZHANGW	JF_MARKET_MONITORING	Operations Data store Summary data from the HISPRD database
OPDMTST	BELLF BLAIR BOWRIJ ENGLEA ONEILJ	JF_MARKET_MONITORING	Test Database

OPDMDEV	ONEILJ	OATI_HIST_OWNER_READ_ONLY	Development Database
OPRPPRD	BAZARK BELLF BOWRIJ ENGLEA KRAWIE ONEILJ SCHEIP	JF_MARKET_MONITORING	
OPRPRD	BAZARK BELLF BLAIR BOWRIJ CAWLES ENGLEA FUHRMC GOCKLB HAASH KRAWIE LEEL MILLIM NIUH ONEILJ SCHEIP THOMPM WEBSTJ YOUX ZHANGW	JF_MARKET_MONITORING	UDS Production Database
OPRTST	BELLF BLAIR BOWRIJ GOCKLB KRAWIE MILLIM ONEILJ SCHEIP	JF_MARKET_MONITORING MILLIM – JF_TESTER SCHEIP – MKT_PJMMKT_DMT_READONLY	Test database for UDS information
SRCMPRD	BLAIR KRAWIE MILLIM ONEILJ	JF_MARKET_MONITORING	Super Regional Congestion Management Database ATC and Flowgate information
SRCMTST	MILLIM	JF_TESTER	Test database

Appendix C: Detailed table catalogue

This catalogue represents the current Market Monitoring data store database, as of the Effective Date of this SLA. It serves as the historical repository for Markets data as well as other PJM operational information. PJM will provide any updates to this catalogue in the design document described in Section 25 of this SLA.

MMDS – MMS Schema

TABLE_NAME
BID_MKTPNODEDEF
BID_MKTPNODEPNODE
BID_MKTUNIT
EDART_GENOUT_TICKET
EDART_REVISION
EES_MKTTRANSACTION
EES_MKTTRANSHOURLY_EXPORT
EES_SETTLE_ENERGY_SUM
EFTR_CUSTOMER
EFTR_CUSTOMER_CONTRACT_INFO
EFTR_CUSTOMER_REDUCTION
EFTR_FTRFTR
EFTR_PRICING_ZONE
EFTR_PRICING_ZONE_EDC_MAPPING
EFTR_REGISTRATION
EFTR_RPMAUCTIONOFFERCAPACITY
EFTR_RPMCAPACITYMOD
EFTR_RPMCASE
EFTR_RPMDEMANDRESOURCEMOD
EFTR_RPMMARKET
EFTR_RPMMARKETRESOURCE
EFTR_RPMORGDEF
EFTR_RPMORGRESOURCEFRR
EFTR_RPMORGRESOURCEPOSITION
EFTR_RPMRESOURCE
EFTR_RPMRESOURCEDEF
EFTR_RPMSOLUTIONRESOURCE
EFTR_RPMUNITSPECIFICCAPACITY
GADS_CARD95
GADS_UNITNAMES
MKT_PNODE_AGGREGATE
MSET_ACCOUNT_RATE

MSET_AGGREGATE
MSET_AGGREGATE_MEMBER
MSET_BUS
MSET_BUS_INTEREST
MSET_BUS_UNIT_MAPPING
MSET_CA_TOTAL
MSET_CONTRACT_BUS
MSET_CONTRACT_INTERFACE
MSET_CONTRACT_XMISSION_SERVICE
MSET_DAILY_BILL_DETERMINANT
MSET_EMS_NAME
MSET_ENERGY_PRICE
MSET_FTR_AUCTION
MSET_FTR_DAILY
MSET_FTR_SUMMARY
MSET_GENERATOR
MSET_HOURLY_CONGESTION
MSET_HOURLY_CONTRACT_XACTION
MSET_INTERFACE
MSET_LMP
MSET_LOAD_RESPONSE
MSET_LOAD_RESPONSE_DAILY
MSET_LOAD_RESPONSE_HOURLY
MSET_LOAD_RESPONSE_MONTHLY
MSET_LOAD_RESP_REGISTRATION
MSET_METER_ACCOUNT
MSET_MONTH_MET_CORRECT
MSET_MSORG_RELATIONSHIP
MSET_OPERATE_RESERV
MSET_ORGANIZATION
MSET_ORG_HRLY_ADJUSTED_LOAD
MSET_PART_XACT_INTEREST_ORGS
MSET_PJM_LMP_TOTAL
MSET_PT_PT_XMISSION
MSET_REAL_TIME
MSET_REGULATION
MSET_SETTLEMENT
MSET_SPIN_DSR_BID_DAILY
MSET_SPIN_DSR_HOURLY
MSET_SPIN_RESERVE
MSET_SPOT_MARKET

MSET_T1_HOURLY
MSET_TRANS_CONTRACT
MSET_TS_TRANSACTION
MSET_UNIT
MSET_UNIT_DAILY
MSET_UNIT_HOURLY
MSET_UNIT_SCHEDULE_DAILY
MSET_UNIT_SCHEDULE_HOURLY
MSET_UNIT_SPIN_HOURLY
MSET_XACTION_OPER_RESERVES
MSET_ZONE_HOURLY
POOL_TIE
POOL_TIE_VALUE

Data Files from PJM

Data	Description
Markets Flat Files: LPA Output - Original and Rerun Files	<p>The files are currently written to subdirectories in \\mmu01vwp\lmp:</p> <p>debuglpa_yyyymmdd_hh_xx debugpre_yyyymmdd_hh_xx drate_yyyymmdd_hh_xx gen_offer_yyyymmdd_hh_xx lct_yyyymmdd_hh_xx lmp_components_yyyymmdd_hh_xx lmp_config_yyyymmdd_hh_xx lpa_agg_prices_yyyymmdd_hh_xx lpa_ctg_input_yyyymmdd_hh_xx lpa_ctg_post_yyyymmdd_hh_xx lpa_data_yyyymmdd_hh_xx lpa_pb_results_yyyymmdd_hh_xx lpa_pre.output_yyyymmdd_hh_xx lpa_pre_data_yyyymmdd_hh_xx lpa_results_yyyymmdd_hh_xx lsteam_yyyymmdd_hh_xx pool_trans_yyyymmdd_hh_xx se_to_lpp_yyyymmdd_hh_xx uds_gen_yyyymmdd_hh_xx xferlmt_yyyymmdd_hh_xx</p> <p>where yyyy is the year, mm is the month, dd is the day of the month, hh is the hour, and xx is the interval within the hour.</p> <p>There will be 288 original files of each file type for each day. The number of rerun files varies by the number of rerun intervals.</p>

<p>Market Flat Files: Day Ahead CLMP and DFAX Files</p>	<p>The files are currently written to subdirectories in \\mmu01vwp\MMAF\pDFAXCalculator:</p> <p>MSS_<case_id>_0X_dd-mon-yyyy_hh.MMPNODESENS</p> <p>where case_id is the Markets case identifier, dd is the day of the month, mon is the month, yyyy is the year, and hh is the hour.</p> <p>There will be 24 files each day.</p>
<p>Market Flat Files: Day Ahead UPF Files</p>	<p>The files are currently written to subdirectories in \\mmu01vwp\MMAF\UPFCalculator:</p> <p>MSS_<case_id>_dd-mon-yyyy_hh.MMUPF</p> <p>where case_id is the Markets case identifier, dd is the day of the month, mon is the month, yyyy is the year, and hh is the hour.</p> <p>There will be 24 files each day.</p>
<p>Markets Flat Files: BIDPRD Savecase Files</p>	<p>The files are currently written to subdirectories in \\mmu01vwp\MO\bid_production:</p> <p>MSS_<case_id>_0X.ZIP</p> <p>where case_id is the Markets case identifier.</p> <p>There may be several cases per hour per day. Each hour has one approved case.</p>
<p>Markets Flat Files: SPREGO Savecase Files</p>	<p>The files are currently written to subdirectories in \\mmu01vwp\MO\opr_production\spr:</p> <p>MSS_<case_id>_0X.ZIP</p> <p>where case_id is the Markets case identifier.</p> <p>There may be several cases per hour per day. Each hour has one approved case.</p>
<p>Markets Flat Files: UDS Savecase Files</p>	<p>The files are currently written to subdirectories in \\mmu01vwp\MO\opr_production\uds:</p> <p>MSS_<case_id>_0X.ZIP</p> <p>where case_id is the Markets case identifier.</p> <p>There may be several cases per hour per day. Each hour has one approved case.</p>

Markets Flat Files: Real Time UPF Files	The files are currently written to subdirectories in \\mmu01vwp\UPF : Imp_upf_yyyymmdd_hh_xx where yyyy is the year, mm is the month, dd is the day of the month, hh is the hour, and xx is the interval within the hour. There will be 288 original files of each file for each day. The number of rerun files varies by the number of rerun intervals.
LPA Status Emails	The emails are currently sent to Andy Engle from Markets, and contain information about Markets manual updates to real-time CLMP, DFAX and UPF data.
\\vsdata2\special\common\performance\tlr2.mdb	TLR information provided by Performance Compliance.
Markets Day Ahead Summary Report	Co-ops manually make hard copies of the report daily.
Various Files Stored in DOCS Belonging to Other Departments	
Markets Copy Archive Files	Princeton Softech archive files from BIDPRD and OPRPRD on a daily basis.

MMDS - SRCM Data

TABLE_NAME
ADJ_HA_MARG_ZONE_PARTICP_AUD_T
ADJ_RT_MARG_ZONE_PARTICP_AUD_T
DA_FLOWGATE_VALUE_AUD_T
DYNAMIC_SCHEDULE_AUD_T
FIRM_IMPACT_COMPARE_AUD_T
FLOWGATE_CAPACITY_AUD_T
HA_FLOWGATE_VALUE_AUD_T
HA_MARG_ZONE_PARTICP_AUD_T
MESSAGE_AUD_T
NNL_CALC_FIRM_IMPACT_AUD_T
RT_FLOWGATE_VALUE_AUD_T
RT_MARG_ZONE_PARTICP_AUD_T
TOTAL_EXPORT_AUD_T
TOT_ALLOC_FIRM_IMPACT_AUD_T
TRD_ALLOC_FIRM_IMPACT_AUD_T
TRD_ALLOC_NFIRM_IMPACT_AUD_T
TRD_FIRM_IMPACT_AUD_T
SRCM_DATA_TABLES_CTL
SRCM_DATA_LOADS_CTL
SRCM_DATA_LOAD_TABLES_CTL
AVAIL_SHR_TOT_FLOWGATE_AUD_T
NNL_CALC_CUR_PTP_AUD_T

UNIT_COMMITMENT_AUD_T
HA_MARG_ZONE_PARTICP_ADJ_AUD_T
RT_MARG_ZONE_PARTICP_ADJ_AUD_T
UNIT_COMMITMENT_TRD_AUD_T
MON_RT_SETTLEMENTS_AUD_T
NONMON_RT_SETTLEMENTS_AUD_T
DA_SETTLEMENTS_AUD_T
MLOG\$_SRCM_DATA_TABLES_CTL
RUPD\$_SRCM_DATA_TABLES_CTL
MLOG\$_SRCM_DATA_LOAD_TABLE
RUPD\$_SRCM_DATA_LOAD_TABLE
MLOG\$_SRCM_DATA_LOADS_CTL
RUPD\$_SRCM_DATA_LOADS_CTL
ADJUSTMENT_AUD_T
V_DA_FLOWGATE_VALUE_AUD
V_RT_MARG_ZONE_PARTICP_AUD
V_DA_SETTLEMENTS_AUD
V_ADJ_HA_MARG_ZONE_PARTICP_AUD
V_ADJ_RT_MARG_ZONE_PARTICP_AUD
V_AVAIL_SHR_TOT_FLOWGATE_AUD_C
V_NNL_CALC_CUR_PTP_AUD
V_DYNAMIC_SCHEDULE_AUD
V_FIRM_IMPACT_COMPARE_AUD
V_FLOWGATE_CAPACITY_AUD
V_HA_FLOWGATE_VALUE_AUD
V_HA_MARG_ZONE_PARTICP_ADJ_AUD
V_HA_MARG_ZONE_PARTICP_AUD
V_MESSAGE_AUD
V_MON_RT_SETTLEMENTS_AUD
V_NONMON_RT_SETTLEMENTS_AUD_C
V_RT_MARG_ZONE_PARTICP_ADJ_AUD
V_TOT_ALLOC_FIRM_IMPACT_AUD_C
V_TOTAL_EXPORT_AUD
V_TRD_ALLOC_FIRM_IMPACT_AUD_C
V_TRD_ALLOC_NFIRM_IMPACT_AUD_C
V_TRD_FIRM_IMPACT_AUD
V_UNIT_COMMITMENT_AUD
V_UNIT_COMMITMENT_TRD_AUD
FLOWGATE_TYPE_T
FLOWGATE_T
RT_FLOWGATE_VALUE_T
SRCM_DATA_ARCHIVE_TABLES_CTL
SRCM_ARCHIVE_LOADS_CTL
SRCM_ARCHIVE_LOAD_TABLES_CTL
DA_TH_FLOWGATE_VALUE_AUD_T
HA_TH_FLOWGATE_VALUE_AUD_T
RT_TH_FLOWGATE_VALUE_AUD_T
V_ADJUSTMENT_AUD

MMDS - LPA Archive

OWNER	TABLE_NAME
LPA_TMP	SE_DATA_T
LPA_TMP	UDS_T
LPA_TMP	PREPROCESSOR_UNITS_T
LPA_TMP	MARGINAL_CONTROL_T
LPA_TMP	DISP_TRANS_INTERFACE_T
LPA_TMP	R_PREPROCESSOR_UNITS_T
LPA_TMP	LPA_PRE_DATA_T
LPA_TMP	PREPROC_OVERRIDE_UNITS_T
LPAARCHIVE	CONSTRAINT_T
LPAARCHIVE	FILE_LOAD_LOG_T
LPAARCHIVE	BUS_LMP_HOURLY_T
LPAARCHIVE	LPA_LOG_T
LPAARCHIVE	MARGINAL_T
LPAARCHIVE	OPERATOR_LOG_T
LPAARCHIVE	AGGREGATE_LMP_5MIN_T
LPAARCHIVE	PREPROC_VALID_T
LPAARCHIVE	PRICEBOUND_T
LPAARCHIVE	SE_DATA_T
LPAARCHIVE	CT_T
LPAARCHIVE	STEAM_T
LPAARCHIVE	AGGREGATE_LMP_HOURLY_T
LPAARCHIVE	UDS_T
LPAARCHIVE	UNIT_EXCLUDE_T
LPAARCHIVE	BUS_LMP_5MIN_T
LPAARCHIVE	DIAGNOSTIC_T
LPAARCHIVE	FILE_RELOAD_T
LPAARCHIVE	DRATE_T
LPAARCHIVE	STEAM_BIDS_T
LPAARCHIVE	AREA_T
LPAARCHIVE	BUS_TYPE_T
LPAARCHIVE	CT_STATUS_T
LPAARCHIVE	INTERFACE_T
LPAARCHIVE	STEAM_STATUS_T
LPAARCHIVE	TEMP
LPAARCHIVE	UNIT_TYPE_T
LPAARCHIVE	ZONE_T
LPAARCHIVE	BUS_T
LPAARCHIVE	DATA_LOAD_TYPES_CTL
LPAARCHIVE	DATA_TABLE_TYPES_CTL
LPAARCHIVE	DATA_TABLES_CTL
LPAARCHIVE	DATA_LOADS_CTL
LPAARCHIVE	DATA_LOAD_TABLES_CTL

LPAARCHIVE	DATA_LOAD_ERRORS_CTL
LPAARCHIVE	FILE_TYPE_T
LPAARCHIVE	UNIT_T
LPAARCHIVE	INTERFACE_UNIT_T
LPAARCHIVE	AGGREGATE_T
LPAARCHIVE	PARAMETERS_T
LPAARCHIVE	POOL_TRANS_T
LPAARCHIVE	UNIT_COST_CAPPED_T
LPAARCHIVE	UNIT_COMMISSIONED_T
LPAARCHIVE	ERROR_LOG_T
LPAARCHIVE	UNIT_COST_CAPPED_VALID_T
LPAARCHIVE	DATA_UPDATE_TABLES_CTL
LPAARCHIVE	PREPROCESSOR_UNITS_T
LPAARCHIVE	MARGINAL_CONTROL_T
LPAARCHIVE	DISP_TRANS_INTERFACE_T
LPAARCHIVE	ERROR_TYPE_T
LPAARCHIVE	PARSER_ERROR_LOG_T
LPAARCHIVE	PARSER_TYPE_T
LPAARCHIVE	FLAT_FILE_TABLE_SECTION_CTL
LPAARCHIVE	FLAT_FILE_TYPES_CTL
LPAARCHIVE	PARSER_FILE_LOAD_DATA_CTL
LPAARCHIVE	PARSER_LOAD_ERRORS_CTL
LPAARCHIVE	R_AGGREGATE_LMP_HOURLY_T
LPAARCHIVE	R_BUS_LMP_5MIN_T
LPAARCHIVE	R_BUS_LMP_HOURLY_T
LPAARCHIVE	R_CT_T
LPAARCHIVE	R_DRATE_T
LPAARCHIVE	R_PREPROCESSOR_UNITS_T
LPAARCHIVE	R_AGGREGATE_LMP_5MIN_T
LPAARCHIVE	R_PREPROC_VALID_T
LPAARCHIVE	R_PRICEBOUND_T
LPAARCHIVE	R_SE_DATA_T
LPAARCHIVE	R_STEAM_BIDS_T
LPAARCHIVE	R_STEAM_T
LPAARCHIVE	R_UDS_T
LPAARCHIVE	R_UNIT_EXCLUDE_T
LPAARCHIVE	TEMP_BUS_LMP_5MIN_T
LPAARCHIVE	O_AGGREGATE_AUDIT_T
LPAARCHIVE	O_BUS_AUDIT_T
LPAARCHIVE	O_UNIT_AUDIT_T
LPAARCHIVE	O_UNIT_COMMISSIONED_AUDIT_T
LPAARCHIVE	O_ZONE_AUDIT_T
LPAARCHIVE	AGGREGATE_AUDIT_T
LPAARCHIVE	BUS_AUDIT_T
LPAARCHIVE	UNIT_AUDIT_T
LPAARCHIVE	UNIT_COMMISSIONED_AUDIT_T
LPAARCHIVE	ZONE_AUDIT_T

LPAARCHIVE	PREPROC_OVERRIDE_UNITS_T
LPAARCHIVE	LPA_PRE_DATA_T
LPAARCHIVE	BUS_ML_5MIN_T
LPAARCHIVE	CT_UNIT_RELOAD_TEMP_TABLE_1
LPAARCHIVE	CT_UNIT_RELOAD_TEMP_TABLE_2
LPAARCHIVE	CT_UNIT_RELOAD_RESULTS
LPAARCHIVE	STEAM_UNIT_RELOAD_RESULTS
LPAARCHIVE	STEAM_UNIT_RELOAD_TEMP_TABLE_1
LPAARCHIVE	STEAM_UNIT_RELOAD_TEMP_TABLE_2

MMDS - EES Data

OWNER	TABLE_NAME
EESHIST_AUDIT_OWNER	DATA_TABLES_CTL
EESHIST_AUDIT_OWNER	DATA_LOADS_CTL
EESHIST_AUDIT_OWNER	DATA_LOAD_TABLES_CTL
EESHIST_AUDIT_OWNER	DATA_LOAD_ERRORS_CTL
EESHIST_CONTROLAREA	PRICING_AREA_T
EESHIST_CONTROLAREA	PRICING_AREA_AUD_T
EESHIST_CONTROLAREA	PRICING_AREA_MAPPING_T
EESHIST_CONTROLAREA	PRICING_AREA_MAPPING_AUD_T
EESHIST_CONTROLAREA	PRICING_POINT_MAPP_PREPATHWAY
EESHIST_CONTROLAREA	PRICING_PT_MAPP_PREPATHWAY_AUD
EESHIST_CONTROLAREA	PRICING_POINT_MAPPING_T
EESHIST_CONTROLAREA	PRICING_POINT_MAPPING_AUD_T
EESHIST_CONTROLAREA	ALLOW_PJM_PATH_SEGMENT_T
EESHIST_CONTROLAREA	CHECKOUT_AUDIT_T
EESHIST_CONTROLAREA	CHECKOUT_STATUS_T
EESHIST_CONTROLAREA	CHECKOUT_STATUS_AUD_T
EESHIST_CONTROLAREA	CHECKOUT_T

EESHIST_CONTROLAREA	CONTROL_AREA_INFO_T
EESHIST_CONTROLAREA	INTERCHANGE_LIMIT_T
EESHIST_CONTROLAREA	INTERFACE_CONTROL_AREA_T
EESHIST_CONTROLAREA	INTERFACE_T
EESHIST_CONTROLAREA	NEIGHBORS_T
EESHIST_CONTROLAREA	NERC_ACRONYM_TYPES_T
EESHIST_CONTROLAREA	ORG_NERC_REF_ACRONYM_TYPE_T
EESHIST_CONTROLAREA	ORG_NERC_REF_T
EESHIST_CONTROLAREA	PJM_CONTROL_AREA_T
EESHIST_CONTROLAREA	PJM_CONTROL_AREA_AUD_T
EESHIST_CONTROLAREA	PRICING_POINT_T
EESHIST_CONTROLAREA	PRICING_POINT_AUD_T
EESHIST_CONTROLAREA	RAMP_LIMIT_AUDIT_T
EESHIST_CONTROLAREA	RAMP_LIMIT_T
EESHIST_CONTROLAREA	INTERFACE_AUD_T
EESHIST_CONTROLAREA	ORG_NERC_REF_AUD_T
EESHIST_CONTROLAREA	ALLOW_PJM_PATH_SEGMENT_AUD_T
EESHIST_EES	RESTRICTED_ORGANIZATION_T
EESHIST_EES	TIME_CHANGE_T
EESHIST_EES	TIME_CHANGE_AUD_T
EESHIST_EES	TIMINGREQUIREMENT_T
EESHIST_EES	ACI_TRANSDYNAMICDATA_T
EESHIST_EES	ACI_TRANSSTATICDATA_T
EESHIST_EES	CURTAIL_GROUPING_T
EESHIST_EES	FERC_HOLIDAY_T

EESHIST_EES	FERC_HOLIDAY_T
EESHIST_EES	FERC_HOLIDAY_AUD_T
EESHIST_EES	OASISATCVALUE_AUDIT_T
EESHIST_EES	OASISATCVALUE_T
EESHIST_EES	PATHDECREMENTMATRIX_T
EESHIST_EES	PATH_T
EESHIST_EES	PATH_AUD_T
EESHIST_EES	PRODUCTDECREMENTMATRIX_T
EESHIST_EES	PRODUCT_T
EESHIST_EES	PRODUCT_AUD_T
EESHIST_EES	REQUEST_AUDIT_T
EESHIST_EES	REQUEST_INTERVAL_AUDIT_T
EESHIST_EES	REQUEST_INTERVAL_T
EESHIST_EES	REQUEST_T
EESHIST_EES	TIMINGREQUIREMENT_AUD_T
EESHIST_EES	TRANS_CAPACITY_TYPE_T
EESHIST_EES	TRANS_CAPACITY_TYPE_AUD_T
EESHIST_EES	CODE_T
EESHIST_EES	CODE_AUD_T
EESHIST_EES	CE_ONLY_HOLIDAY_T
EESHIST_EES	AUTHORITY_T
EESHIST_EES	RESTRICTED_ORGANIZATION_AUD_T
EESHIST_NERCTAG	SPECIAL_EXCEPTION_T
EESHIST_NERCTAG	SPECIAL_EXCEPTION_AUD_T
EESHIST_NERCTAG	TAGCP_T
EESHIST_NERCTAG	TAGLA_T
EESHIST_NERCTAG	TAGMISCINFO_T
EESHIST_NERCTAG	TAGPSSCHEDENTITIES_T
EESHIST_NERCTAG	TAGPS_T
EESHIST_NERCTAG	TAGTACP_T
EESHIST_NERCTAG	TAGTA_T
EESHIST_NERCTAG	TAG_PROCESSING_STATUS_T

EESHIST_NERCTAG	TAG_T
EESHIST_NERCTAG	ACTION_REQUIRED_LOG_AUDIT_T
EESHIST_NERCTAG	ACTION_REQUIRED_LOG_T
EESHIST_NERCTAG	CHANGE_REASONS_T
EESHIST_NERCTAG	CHANGE_REASONS_AUD_T
EESHIST_NERCTAG	FRP_APPROVAL_AUDIT_T
EESHIST_NERCTAG	FRP_APPROVAL_T
EESHIST_NERCTAG	FRP_AUTO_APPROVE_T
EESHIST_NERCTAG	FRP_AUTO_APPROVE_AUD_T
EESHIST_NERCTAG	GENERATOR_T
EESHIST_NERCTAG	GENERATOR_AUD_T
EESHIST_NERCTAG	NERC_OWNER_MAPPING_T
EESHIST_NERCTAG	NERC_OWNER_MAPPING_AUD_T
EESHIST_NERCTAG	REQAP_T
EESHIST_NERCTAG	REQCORRECTIONS_T
EESHIST_NERCTAG	REQLA_T
EESHIST_NERCTAG	REQPARTICIPANT_AUD_T
EESHIST_NERCTAG	REQPARTICIPANT_T
EESHIST_NERCTAG	REQTAAP_T
EESHIST_NERCTAG	REQTACP_T
EESHIST_NERCTAG	REQTA_T
EESHIST_NERCTAG	REQUEST_PJM_STATUS_T
EESHIST_NERCTAG	REQUEST_PJM_STATUS_AUDIT_T
EESHIST_NERCTAG	REQ_AUD_T
EESHIST_NERCTAG	REQ_T
EESHIST_NERCTAG	TAGMISCINFO_AUDIT_T
EESHIST_NERCTAG	TAGTA_AUDIT_T
EESHIST_NERCTAG	TAG_PROCESSING_STATUS_AUDIT_T
EESHIST_PATHWAY	DA_PATHWAY_LIMIT_T
EESHIST_PATHWAY	EXPECTED_PATHWAY_FLOW_T
EESHIST_PATHWAY	PATHWAY_FLOW_T
EESHIST_PATHWAY	PJM_ALLOCATION_CONFIRMATION_T
EESHIST_PATHWAY	PJM_PATHWAY_OASIS_T
EESHIST_PATHWAY	PATHWAY_LIMIT_T

EESHIST_PATHWAY	DA_EXPECTED_PATHWAY_FLOW_T
EESHIST_RAMP	RAMP_AUDIT_T
EESHIST_RAMP	RAMP_LIMIT_AUDIT_T
EESHIST_RAMP	RAMP_LIMIT_T
EESHIST_RAMP	RAMP_T
EESHIST_RAMPRES	COMMENT_LOG_T
EESHIST_RAMPRES	DIRECTION_TYPE_T
EESHIST_RAMPRES	DIRECTION_TYPE_AUD_T
EESHIST_RAMPRES	ENERGY_INTERVAL_AUDIT_T
EESHIST_RAMPRES	ENERGY_INTERVAL_T
EESHIST_RAMPRES	ENERGY_RATE_TYPES_T
EESHIST_RAMPRES	ENERGY_RATE_TYPES_AUD_T
EESHIST_RAMPRES	ENERGY_TOTAL_T
EESHIST_RAMPRES	PROFILE_AUDIT_T
EESHIST_RAMPRES	PROFILE_STATUS_T
EESHIST_RAMPRES	PROFILE_STATUS_AUD_T
EESHIST_RAMPRES	PROFILE_T
EESHIST_RAMPRES	RAMPRES_AUDIT_T
EESHIST_RAMPRES	RAMPRES_T
EESHIST_RTODEX	CA_RAMP_T
EESHIST_RTODEX	DIRECTION_TYPE_T
EESHIST_RTODEX	DIRECTION_TYPE_AUD_T
EESHIST_RTODEX	RAMP_TYPE_T
EESHIST_RTODEX	RAMP_TYPE_AUD_T
EESHIST_SCHEDULE	SCHEDULE_AUDIT_T
EESHIST_SCHEDULE	SCHEDULE_T
EESHIST_SCHEDULE	SPECIAL_EXCEPTION_T
EESHIST_SCHEDULE	SPECIAL_EXCEPTION_TYPE_T
EESHIST_SCHEDULE	ACTION_REQUIRED_LOG_AUDIT_T
EESHIST_SCHEDULE	ACTION_REQUIRED_LOG_T
EESHIST_SCHEDULE	ACTUAL_INTERVAL_AUDIT_T
EESHIST_SCHEDULE	ACTUAL_INTERVAL_T
EESHIST_SCHEDULE	BATCH_PROFILE_DESC_T
EESHIST_SCHEDULE	BATCH_PROFILE_T
EESHIST_SCHEDULE	BATCH_STATUS_T
EESHIST_SCHEDULE	BATCH_T
EESHIST_SCHEDULE	CHANGE_REASONS_T
EESHIST_SCHEDULE	COMMENT_LOG_T

EESHIST_SCHEDULE	DIRECTION_TYPES_T
EESHIST_SCHEDULE	ENERGY_CHANGE_LOG_T
EESHIST_SCHEDULE	ENERGY_CHANGE_LOG_TYPES_T
EESHIST_SCHEDULE	ENERGY_INTERVAL_AUDIT_T
EESHIST_SCHEDULE	ENERGY_INTERVAL_T
EESHIST_SCHEDULE	ENERGY_RATE_INTERVAL_T
EESHIST_SCHEDULE	ENERGY_RATE_TYPES_T
EESHIST_SCHEDULE	ENERGY_TOTAL_T
EESHIST_SCHEDULE	PATH_INTERVAL_T
EESHIST_SCHEDULE	PATH_PARTICIPANT_T
EESHIST_SCHEDULE	PROFILE_AUDIT_T
EESHIST_SCHEDULE	PROFILE_FLAGS_T
EESHIST_SCHEDULE	PROFILE_FLAG_TYPES_T
EESHIST_SCHEDULE	PROFILE_STATUS_T
EESHIST_SCHEDULE	PROFILE_T
EESHIST_SCHEDULE	RAMP_AUDIT_T
EESHIST_SCHEDULE	RAMP_T
EESHIST_SCHEDULE	SCHEDULED_NERC_TAG_T
EESHIST_SCHEDULE	TRANS_RES_INTERVAL_AUDIT_T
EESHIST_SCHEDULE	TRANS_RES_INTERVAL_T
EESHIST_STEAMLOG	STUDY_JOB_T
EESHIST_STEAMLOG	ACTUAL_OR_FORECAST_CONT_T
EESHIST_STEAMLOG	AMBIENT_TEMP_RATING_SET_T
EESHIST_STEAMLOG	ASSIGNMENT_COMMENT_T
EESHIST_STEAMLOG	ASSIGNMENT_TYPE_T
EESHIST_STEAMLOG	ASSIGN_COMMENT_TYPE_T
EESHIST_STEAMLOG	B3_T
EESHIST_STEAMLOG	CONTINGENCY_AGG_DFAX_T
EESHIST_STEAMLOG	CONTINGENCY_TITLE_EQUIPMENT_T
EESHIST_STEAMLOG	CONTINGENCY_TITLE_T

EESHIST_STEAMLOG	CURTAIL_CUTOFF_T
EESHIST_STEAMLOG	ELEMENT_T
EESHIST_STEAMLOG	EQUIPMENT_CHANGE_T
EESHIST_STEAMLOG	FACILITY_CONTINGENCY_T
EESHIST_STEAMLOG	FORECAST_CONTINGENCY_T
EESHIST_STEAMLOG	FORECAST_LAST_UPDATED_T
EESHIST_STEAMLOG	GENERATOR_CONTINGENCY_T
EESHIST_STEAMLOG	LINE_CONTINGENCY_T
EESHIST_STEAMLOG	LINE_CONTINGENCY_TYPE_T
EESHIST_STEAMLOG	LINE_GROUP_B3_T
EESHIST_STEAMLOG	LINE_GROUP_T
EESHIST_STEAMLOG	NEPEX_MARGIN_T
EESHIST_STEAMLOG	OFF_COST_ASSIGNMENT_T
EESHIST_STEAMLOG	OFF_COST_ASSIGNMENT_VALUE_T
EESHIST_STEAMLOG	OFF_COST_ASSIGN_TYPE_T
EESHIST_STEAMLOG	PAR_MOVE_T
EESHIST_STEAMLOG	TITLE_CONTINGENCY_T
EESHIST_STEAMLOG	ZONE_T
EESHIST_TRANSRES	RESERVATION_SHARING_T
EESHIST_TRANSRES	SPOT_TRANSMISSION_T
EESHIST_TRANSRES	TAG_USAGE_INTERVAL_AUDIT_T
EESHIST_TRANSRES	TAG_USAGE_INTERVAL_T
EESHIST_TRANSRES	DA_EXPECTED_PATHWAY_FLOW_T
EESHIST_TRANSRES	DA_PATHWAY_LIMIT_T
EESHIST_TRANSRES	EXPECTED_PATHWAY_FLOW_T
EESHIST_TRANSRES	PATHWAY_FLOW_T
EESHIST_TRANSRES	PATHWAY_LIMIT_T

EESHIST_TRANSRES	PJM_ALLOCATION_CONFIRMATION_T
EESHIST_TRANSRES	PJM_PATHWAY_OASIS_T
EESHIST_TRANSRES	TP_TRANSMISSION_USAGE_INT_T
EESHIST_TRANSRES	TRANSMISSION_PRIORITY_T
EESHIST_TRANSRES	TRANSMISSION_PRIORITY_AUD_T
EESHIST_TRANSRES	TRANSMISSION_USAGE_INTERVAL_T
EESHIST_TRANSRES	TRANSMISSION_USAGE_INTER_AUD_T
EESHIST_TRANSRES	RESERVATION_SHARING_AUD_T
EESHIST_TWOSSETTLE	SCHEDULE_AUDIT_T
EESHIST_TWOSSETTLE	SCHEDULE_T
EESHIST_TWOSSETTLE	SETTLE_ACTION_REQUIRED_LOG_T
EESHIST_TWOSSETTLE	SETTLE_ACTION_REQ_LOG_AUD_T
EESHIST_TWOSSETTLE	SETTLE_INTERVAL_AUDIT_T
EESHIST_TWOSSETTLE	SETTLE_INTERVAL_T
EESHIST_TWOSSETTLE	SETTLE_PROFILE_AUDIT_T
EESHIST_TWOSSETTLE	SETTLE_PROFILE_T
EESHIST_TWOSSETTLE	SETTLE_RESULT_INTERVAL_T
EESHIST_TWOSSETTLE	SETTLE_STATUS_TYPE_T
EESHIST_TWOSSETTLE	SETTLE_STATUS_TYPE_AUD_T
EESHIST_TWOSSETTLE	SETTLE_TRANSMISSION_RES_AUD_T
EESHIST_TWOSSETTLE	SETTLE_TRANSMISSION_RES_T
EESHIST_TWOSSETTLE	SETTLE_TYPE_T
EESHIST_TWOSSETTLE	SETTLE_TYPE_AUD_T
EESHIST_TWOSSETTLE	PROFILE_AUDIT_T

Appendix D: Change Management Process

PJM Change Management Process

PJM shall utilize its Non-EMS Change management Procedure, a copy of which shall be provided to MMU, to ensure that changes to its production systems are applied in a controlled and consistent manner and do not compromise the stability and/or security of any component of its information technology environment. Changes to PJM's production systems must be initiated by MMU by submitting a formal request via PJM's change control system, which request must be authorized by PJM management and implemented following the change management procedures. If the change management procedures are revised, PJM shall provide MMU notice of such revisions along with both a hard and electronic copy of the revised change management procedures.

As part of its change management procedures PJM has established a Change Control Review Board (CCRB) that meets on a weekly basis to review, coordinate and approve system changes. A representative of MMU will attend and participate in CCRB meetings. PJM will communicate the determinations of the CCRB to the MMU on a weekly basis to inform the MMU of pending changes. In addition to regularly scheduled changes, PJM may also make emergency changes to its systems if at least one of the following is at issue: (a) a significant financial impact to PJM; (b) failure of a mission-critical application; (c) inaccurate or incorrect reporting to a regulatory agency; and (d) the inability to meet a critical financial deadline.

In emergency change situations PJM staff will complete emergency change paperwork as soon as feasible after the change. The CCRB will notify MMU of changes that will impact the PJM systems that MMU accesses.

MMU Change Management Process

MMU shall develop change management procedures to be utilized to ensure that changes to its production systems are applied in a controlled and consistent manner and do not compromise the stability and/or security of any component of its information technology environment. MMU shall provide PJM with a copy of such change management procedures when they have been developed.

Appendix E: PJM Access to MMU Data and Systems

This access is currently provided to PJM by the internal Market Monitoring Unit.

Detailed Table List

Database Schema	Table
DATA_TRANS_OWNER	DA_DAILY_T
DATA_TRANS_OWNER	DA_HOURLY_T
DATA_TRANS_OWNER	RT_DAILY_T
DATA_TRANS_OWNER	RT_HOURLY_T
ECART	BAL_CNG_GEN_CREDITS
ECART	BAL_CNG_LOAD_PAYMENTS
ECART	BAL_EXPLICIT_CONGESTION
ECART	BAL_NETBILL_CONGESTION
ECART	DA_CNG_GEN_CREDITS
ECART	DA_CNG_LOAD_PAYMENTS
ECART	DA_EXPLICIT_CONGESTION
ECART	DA_FTR_TARGET_ALLOCATIONS
ECART	DA_NETBILL_CONGESTION
ECART	ECARTARRMARKET
ECART	RT_AFFECTED_LOAD
ECART	RT_ARR_MW
ECART	RT_CNG_GEN_CREDITS
ECART	RT_CNG_LOAD_PAYMENTS
ECART	RT_ECO_GEN
ECART	RT_EXPLICIT_CONGESTION
ECART	RT_GROSS_CONGESTION
ECART	RT_IMPLICIT_CONGESTION
ECART	RT_NETBILL_CONGESTION
ECART	RT_SPOT_CONGESTION
ECART	RT_UNHEDGEABLE_CONGESTION
ECART	RT_UNHEDGED_LOAD
MMS	AREA_UNDER_BID_CURVE_RT
MMS	BLACKSTART_REVENUE
MMS	CAP_DETAIL
MMS	DAILY_SUPPLY_CURVE
MMS	DA_BINDING_CONSTRAINTS
MMS	DA_CLMP_DFAX
MMS	DA_OPS_DAILY
MMS	DA_OPS_HOURLY
MMS	FMU
MMS	FMU_ASSOC_UNIT
MMS	FMU_CANDIDATE
MMS	FTR_FORFEITURE
MMS	FTR_FORFEITURE_CANDIDATE
MMS	GEN_5MIN

MMS	GRANDFATHER_TRANSACTIONS
MMS	MARGINAL_FUEL_POSTINGS
MMS	MMU_BUS_STATE
MMS	MMU_ESTIMATED_COST_OFFER
MMS	MMU_FUEL_ADJUSTED_LMP
MMS	MMU_NET_REVENUE
MMS	MMU_UNIT_REVENUE
MMS	MUST_RUN
MMS	OFFER_CAP
MMS	OFFER_CAP_STATISTICS
MMS	OPERATING_RESERVES
MMS	PJM_DA_LOAD_GEN
MMS	PJM_LMP_5MIN
MMS	PJM_LOAD_EMETER
MMS	PJM_LOAD_LMP
MMS	REG_CREDITS
MMS	REG_EST_COST_OFFER_POST2007
MMS	REG_EST_COST_OFFER_PRE2007
MMS	REG_OFFERED_PURCHASED
MMS	REG_OFFER_BIDS
MMS	RT_AGGREGATE_INTERFACE_FACTOR
MMS	RT_CONSTRAINTS
MMS	RT_CONSTRAINTS_LOOKUP
MMS	RT_HOURLY_CLMP_DFAX
MMS	RT_HOURLY_CONSTRAINTS
MMS	RT_HOURLY_SMP
MMS	RT_LMP_VERIFICATION
MMS	RT_OPS_DAILY
MMS	RT_OPS_HOURLY
MMS	RT_SMP
MMS	SPIN_CREDITS_HOURLY
MMS	SPREGO_ASAREA
MMS	SPREGO_CONTROLZONE
MMS	SPREGO_DAILY
MMS	SPREGO_HOURLY
MMS	SPREGO_RESERVEZONE
MMS	SPREGO_SPDOPTIONS
MMS	STATE_LOAD_LMP
MMS	STATION_SERVICE_RATE
MMS	TRANSACTION_HOURLY
MMS	TRANSACTION_NET_RT
MMS	UO_ENERGY_OUTPUT_OWNER
MMS	UO_ORGANIZATION_MARKETS
MMS	UO_ORGANIZATION_MSET
MMS	UO_UNIT_BIDDER
MMS	UO_UNIT_GENERATOR_MAP

MMS	UO_UNIT_OPERATOR
MMS	UPF
MMS	UPF_BUS_UNIT_CONTRIBUTION
MMS	UPF_CONSTRAINT_CONTROL
MMS	UPF_DA
MMS	UPF_UNIT_CONTRIB_HOURLY
MMS	ZONAL_LMP
MMS	ZONAL_LOAD_LMP

Appendix F: PJM 2007 Internal Project Labor Rates

PJM's internal project labor rates at which it may charge MMU for services provided to MMU and at which MMU may charge PJM, as set forth in this SLA shall be, until updated and agreed to by the Parties:

Estimated Hourly Labor Rates

	Band I	Band II	Band III	Band IV	Band V & VI
Regular Hours Charged	\$46	\$60	\$61	\$76	\$103
Time and a Half Hours Charged	\$55	\$74	\$76	\$97	\$132