Welcome (10:00 – 10:05)

1. Jim Gluck, PJM, reviewed the agenda and provided an overview for the Tech Change Forum – Day 1 – Product Preparedness session. He stated that all feedback should be sent to techchangeforum@pjm.com.

Past Meeting Issue Review (10:05 – 10:25)

2. Past meeting issues were reviewed with individual updates listed below.

   A. Ginger Quintavalla, PJM, provided an update on the feedback process. Ms. Quintavalla stated that PJM has reached out to members via in-person site visits and has received over 120 different items from those visits. This feedback has been provided to the product teams that will be working on enhancements and features requested. She mentioned that PJM is creating a new process to track this information.

   David Pratzon, GT Power Group, questioned which method is the most effective way to contact PJM when people have small issues. Ms. Quintavalla stated the normal methods all lead back to the same feedback tracker such as reaching out to client managers, contacting the PJM hotline or via the Tech Change Forum.

   Mr. Pratzon followed up regarding the Member Community as well as the Customer Service email for PJM and if there is any preference to use. Ms. Quintavalla indicated the Member Community is the best place to view the information. The Member Community provides a location for members to access knowledge articles for self-help features as well as the ability to create and view cases created with PJM.

   B. Jim Gluck, PJM, identified feedback provided during the July info session on ways PJM can better coordinate changes by working with members to identify outage windows for applications. This document is currently being worked on to create and process outage windows.

   David Pratzon, GT Power Group, questioned which systems will be identified in this document. Mr. Gluck stated that any and all updates or changes that may cause an outage will be identified. He indicated if there is a way PJM can coordinate changes to better timeframes then it is the best for members to plan and act on them.

   C. Jim Gluck, PJM, stated a formal post implementation review as requested previously will be added to the Day 1 agenda to request feedback based on recent product updates.

Initiative Roadmap Updates (10:25 – 10:40)

3. PJM subject matter experts reviewed roadmaps for PJM initiatives through 2017.
A. Carla Thew, PJM, presented on the 5-Minute Settlements initiative with the project kicking off due to FERC Order 825. She indicated this initiative will begin with a compliance filing during 1Q2017 with a Train implementation in 4Q2017 along with a production go live in 1Q2018.

David Pratzon, GT Power Group, asked if there is a particular schedule for the MRC and Market Settlements groups. He indicated how various changes will impact the market participants and the business rule development must be done before agreeing on the technical development. Rebecca Stadelmeyer, PJM, stated that internal PJM groups are meeting at least weekly to figure out all the changes. A presentation will be held at the September 28 MIC meeting discussing this information. She indicated that discussions to implement the rules will be held in Q2 and Q3 of 2017.

Mr. Pratzon expressed concerns that discussions will be held while development and testing are in process based on the timeline. He would like to ensure the feedback and decisions are made before designing the system. Ms. Stadelmeyer stated the information will be reviewed and discussed at the MIC on how to make the changes prior to designing the system. She anticipates discussions to begin December 2016/January 2017.

Ms. Thew indicated that with these changes there plan to be new reports in MSRS, changes to accept five minute meter data in Power Meter as well as the new Market Settlement Calculation System.

Robbie Staples, Old Dominion Electric Cooperative, asked if users are required to submit the five minute meter data. Ms. Stadelmeyer stated that although it would be great if everyone submitted the five minute meter data it is not required.

B. Carla Thew, PJM, provided an overview of Intraday Offers. She indicated that Intraday Offers will be made available in Train in 1Q2017. Ms. Thew stated that login information will be provided to begin utilizing the applications to provide feedback. Continued development, testing as well as user training will be made available in 3Q2017 and 4Q2017.

David Pratzon, GT Power Group, requested what stakeholders would be able to do in Train. Ms. Thew stated that documentation is currently being drafted.

Ron Slagel asked for a target implementation of Intraday Offers. Ms. Thew stated we are targeting 4Q2017, November 1st.

Alicia Battaglino, Exelon Generation Co., LLC, requested the location of requirements according to real time as to what should be followed for changes. Ms. Stadelmeyer stated the information has not been released yet. It is planned to be part of the update to Markets Gateway Train environment where more information is expected as well as an education session prior to the release along with a user guide.

Ms. Battaglino also requested if there is a list of applications impacted by this and how will the members know as well as if any internal changes would be required such as XML changes. Ms. Stadelmeyer indicated that the list will be provided 4Q2016 and documentation will include any changes required on the member side.

Mr. Pratzon emphasized the need to know what data formats are and what members need to do electronically with PJM. He stated the sooner market participants get the information the better for testing in the Train environment. Mr. Gluck stated the forum exists to ensure there is alignment with
technical changes and dates required for members. The Train environment of intraday will help with the length of testing available for users before intraday goes live. As this is a current initiative it will be discussed during every Tech Change Forum meeting until go live.

Ms. Thew indicated impacted systems regarding updates to Intraday Offer are Markets Gateway, ExSchedule and Market Settlement Reporting System.

C. Ginger Quintavalla, PJM, provided an overview of Coordinated Transaction Scheduling with MISO. She indicated one already exists with NYISO. Ms. Quintavalla indicated systems impacted in regards to CTS would be ExSchedule, with the creation of a new portal for bid entry as well as a new markets SCED engine and updates to Data Exchanges.

David Pratzon, GT Power Group, questioned if the portal would be the same as NYISO. Ms. Quintavalla stated this will be a new portal specifically for MISO-CTS.

She also stated the go-live for CTS will be October 3, 2017.

Jared Price, American Municipal Power, Inc., asked if this will allow members to exchange data with PJM via ICCP versus a separate connection or only for settlements. Ms. Quintavalla stated this is not related to EMS and is only for bidding through ExSchedule.

Product Roadmap Updates (10:40 – 12:00)


A. Gerry McNamee, PJM, presented roadmaps for DR Hub (eLRS replacement), InSchedule, Power Meter, Member Voting, eDataFeed, and Data Viewer. The DR Hub application is scheduled for a release to the Train environment in late September with a user interface release in October. A minor release is expected for the Data Viewer application in October. The release will contain advertising and name changes in the interface. The eDataFeed application recently released a new area for users to capture Solar Generation data.

David Pratzon, GT Power Group, stated it would be helpful to understand what changes stakeholders would need to make with the recent updates. Mr. McNamee stated most of the information provided was for awareness. The only member facing changes would be the new data points for eDataFeed as well as advertising changes within Data Viewer. Mr. Pratzon requested where the new eDataFeed data points could be found. Sushma Hegde, PJM, stated the values are available on the solar generation chart on the PJM.com Markets & Operations web page.

Alicia Battaglino, Exelon Generation Co., LLC, requested that links to specific releases be placed on the roadmap as well full details on the changes. Jim Gluck, PJM, stated the information will be placed in the release notes for each application release. The release notes will be linked from the roadmaps as well as application web pages.

Mr. McNamee stated at this time there are no plans in 2017 for the applications. The product teams meet on a quarterly basis to review and prioritize the various release information. If releases are not intended the diamond will be removed from the roadmap.
Robbie Staples, Old Dominion Electric Cooperative, asked if the quarterly changes would be piecemeal and when the 5-Minute Settlements initiative would be live. Mr. McNamee stated various areas could be updated for the quarterly updates based on performance, feedback, etc. The 5-Minute Settlements initiative changes will be released all at once when available. Mr. Gluck stated the teams will review changes and updates throughout the Tech Change Forum to provide the latest updates to members.

Mr. Pratzon asked what the pathway would be for market participants to learn of newly added features and enhancements. Mr. Gluck stated information will be provided at the Tech Change Forum as well as communication via the TechNotify subscription list. Specific groups that currently use their own process will continue via those paths (e.g. eDART Users Group).

B. Jennifer Conn, PJM, presented roadmaps for eRPM and FTR Center. She emphasized how FTR Center, the eFTR replacement application, has been live in Production since July, 2016 and in Train since February, 2016. eFTR will be retired on October 13, 2016, in Production and the Train environments. [Note the eFTR retirement date has since been updated to November 2, 2016]

Ms. Conn discussed the creation of the refreshed application for eRPM, Capacity Exchange. She stated a new URL will be provided to all users once available. The Capacity Exchange project is in the process of conducting participant interviews and plans to go into parallel operations in late 2017 with a release to Train in 2Q2017.

David Pratzon, GT Power Group, was curious what the current market participant interviews addressed. Tawnya Luna, PJM, stated the interviews are held to meet with current users and understand how they currently use eRPM as well as identify shortcomings, additional features and overall issues with the current system to improve Capacity Exchange.

Mr. Pratzon requested that the interview results be provided to all market participants and for the data formats to be documented and released prior to the updates in Train. Jim Gluck, PJM, stated the details will be provided as part of the Tech Change Forum - Product Preparedness afternoon session.

Chris Werner, Appalachian Power Company, requested to be part of the interview list. Ms. Conn will include Chris for the interviews.

C. Ian Mundell, PJM, presented roadmaps for Gen Model, Queue Center, and Planning Web. He provided an overview of Gen Model and its implementation plan for 2017 to include feedback from customers regarding field validation and placement updates.

Mr. Mundell discussed the creation of Queue Point, the replacement for the current Data Sheet application on PJM.com for planning queue forms. The new application is being created in the new java framework to utilize the same technology as other PJM applications.

He also reviewed the updates for the Planning web pages on PJM.com containing generation queue details. The data is currently in grid format and not user friendly. Mr.
Mundell indicated the pages will be redesigned in the same style as the Issue Tracking section of PJM.com. The redesign will provide ease of use and viewability to this section.

D. Beth Schweser, PJM, presented roadmaps for ExSchedule and OASIS. She indicated ExSchedule is planned for a database upgrade in 4Q2016 where the Train environment will be unavailable on Thursday, October 6th. Ms. Schweser stated that PJM will be soliciting member feedback for the OASIS refresh beginning 1Q2017.

E. Chidi Ike-Egbuonu, PJM, presented the roadmap for eDART. She stated that the eDART team handles quarterly releases with the information available on the eDART Users Group web page. The latest release was held on September 28 with the 4th quarter release scheduled for December 14.

Ms. Ike-Egbuonu reviewed the multi-year eDART refresh project to begin with design and requirements in 2017. A plan for the eDART refresh will be reviewed during the next OC meeting. Additional rewrites and updates will be made in 2017 regarding RRC, voltage limits, transformer tap changer and blackstart.

F. Rich Brenton, PJM, presented the roadmap for Emergency Procedures. He indicated a minor enhancements release has been released on September 29 with a 4Q2016 release anticipated for mid-November regarding Tier 1 Spinning.

G. Kevin Bonner, PJM, presented the roadmaps on Account Manager and Tools Security. He reviewed the update for system ID restriction via user interface (UI) as well as the update of single sign on for legacy applications.

Robbie Staples, Old Dominion Electric Cooperative, asked if two accounts will be required to utilize browserless and UI. Mr. Bonner stated that a separate user account will be needed if a system ID account is currently in use.

Mr. Bonner reviewed the Tools Switchover to the Milford Data Center where critical applications will be available to use where other refreshed applications will not be available. The switchover will occur on October 4 with a 6 p.m. start time.

He provided an overview of the geo-location security feature implementation. He stated users will receive a notification stating if access from outside the United States and Canada has been made. The member action required would be to ensure the email address on user accounts is valid and up to date.

Mr. Bonner highlighted updates that will be made to Account Manager specifically for CAMs regarding multi-factor authentication where users will require a second authentication method for enhanced security.

David Pratzon, GT Power Group, asked what was necessary for the second authentication. Mr. Bonner stated an email will be sent to users with a one-time password that will need to be entered.

Alicia Battaglino, Exelon Generation Co., LLC, asked if current CAMs are aware of this change. Mr. Bonner stated this update has been announced in previous security
communications with a live update during today's Tech Change Forum. PJM is now beginning to develop the solution.

Ms. Battaglino asked if PJM will be reaching out to CAMs. Mr. Bonner stated that PJM will gather a full list of CAMs and create a communication plan to provide details directly to CAMs as well as additional information to the TechNotify subscription list. Once implemented in Train, a demonstration will be provided. Risa Holland, PJM, stated communication will also be sent out to account managers so they are aware ahead of time. Jim Gluck, PJM, indicated further updates will be made available via the Tech Change Forum.

Phil Cox, Appalachian Power Company, questioned if the initial soft token is a one-time or every time occurrence that will be required. Mr. Bonner stated it will not be required on every login attempt and the team is currently working on the requirements. Once the requirements are complete PJM will provide details to users and discuss during the October Tech Change Forum.

Foluso Afelumo, PJM, and Mr. Bonner reviewed the active tool session threshold of a max 25 sessions for each user account. Numerous questions came up regarding the amount of sessions to browserless activity to user interface access. PJM is looking into various ways to increase notifications to CAMs and which users exceed the max session limit. Further details can be found in the Day 2 – Technical Implementation presentation and minutes.

H. Sushma Hegde, PJM, presented the roadmap for PJM.com. She reviewed the timeline for the documents section redesign as well as the search enhancements updates to gain better results on the PJM.com search functions. Ms. Hegde also provided an overview of the updated feedback feature on PJM.com to gain instant feedback from users. The PJM.com 2017 roadmap will be available for the October Tech Change Forum meeting.

David Pratson, GT Power Group, and Alicia Battaglino, Exelon Generation Co., LLC, indicated that the information provided were at such a high level and lacked context. They would appreciate details such as provided by the eDART and Account Manager product teams. The full details would be more helpful. Jim Gluck, PJM, state further details have been documented and are in the process of being posted to the PJM.com web site. He indicated this feedback is helpful and will make the Tech Change Forum more valuable.

Robbie Staples, Old Dominion Electric Cooperative, requested how items can be added to the agenda of the Tech Change Forum where members feel more discussion is required. Mr. Gluck stated all feedback can be provided to techchangeforum@pjm.com. He also mentioned that all information is available on PJM.com and the goal is to provide the data in advance to prepare for the meetings.

Lunch (12:00 – 12:45)
Recent Technical Production Issue Review (12:45 – 13:05)

5. Todd Keech, PJM, presented analysis around the day-ahead posting times. Mr. Keech provided an overview of the situation and is seeking for feedback regarding the best option for members. He reviewed the availability of results posted prior to 4/1/16 as well as post 4/1/16 in regards to the timing changes.

Mr. Keech provided an overview of how day-ahead results are posted with the current state. He indicated the day-ahead market results are currently available on Markets Gateway, Data Miner, PJM.com, eDataFeed and Data Viewer. Mr. Keech reviewed the options to either (1) synchronize all the data with a potential to delay the result posting or (2) to establish a posting order where participants may need to implement system changes.

David Pratzon, GT Power Group, stated the numerous tasks required by market participants once the results are posted and was leaning towards the second option. He requested that Markets Gateway be made available first. Adrien Ford, PJM, stated these options should go back to the stakeholder body to get feedback and decide on the right posting criteria.

6. Jim Gluck, PJM, reviewed the most recent production technical issues. He stated a time synch issue prevented access for the login failures via single sign-on that happened on July 30th. Mr. Gluck indicated that process changes were implemented so the network outage that happened on August 16th will not happen again. On September 13th there was a delay to the day-ahead posting. The delay was caused by a defect in the development solution where the vendor has been made aware and currently working on a fix.

Product Feature Announcement / Design (13:05 – 13:50)

7. Foluso Afelumo, PJM, presented on the new web policy created to ensure equitable access to PJM systems for members. Focus was set on the protection from unsupported usage patterns. Mr. Afelumo indicated there will be two separate approaches on ensuring equitable access to PJM: limit to 25 concurrent sessions and enforcing usage rates.

He provided details regarding usage and how PJM will be monitoring accounts for secure areas as well as tracking down to the Internet Protocol (IP) level for public pages. Several questions came up during this discussion with confusion regarding the separate approaches. Mr. Afelumo will provide an updated slide deck and description during the Day 2 – Technical Implementation meeting.

David Pratzon, GT Power Group, was curious on the process in place if someone were to overuse and get blocked. Mr. Afelumo stated the PJM technical teams are working with the PJM member relations group to contact the individual and reach out based on the request. Jim Gluck, PJM, stated the plan is to reach out before blocking an individual.

Mr. Pratzon questioned about cases where the overuse happens late night on a weekend, if the company is really blocked until Monday morning or if there is a temporary access for after hours. Mr. Gluck emphasized the steps in place to reach out and contact before blocking as well as the situational awareness of the overuse. Ginger Quintavalla, PJM, stated the user can contact the PJM Customer Hotline after hours and someone will be available to assist.
Jeremy Pober, Power Costs Inc, requested a slide with all applications and their terms of usage. Mr. Afelumo stated there is ongoing analysis for the applications not listed. Once that information is set in place PJM will communicate to the Tech Change Forum and publish that information.

8. Tom Zadlo, PJM, provided a high-level Data Miner 2 plan on implementation and functionality. Mr. Zadlo reviewed the existing Data Miner tool features as well as potential enhancements for Data Miner 2. He stated the goal is to have more data available as well as increase reliability, performance and ease-of-use.

Mr. Zadlo also stated that Data Miner 2 will become the central source for PJM public data where PJM will retire the flat file postings from PJM.com. Once Data Miner 2 is live there will be one year for users to shift to the new way of retrieving data before retiring the files from PJM.com.

Robbie Staples, Old Dominion Electric Cooperative, was curious if Data Miner 2 will go into sandbox first or directly into Production. Mr. Zadlo stated there will be a beta with production data but quite hard to allow testing for users in the Train environment with no information available to test.

9. Jim Reynolds, PJM, provided an update to the MSRS PDF security settings. He mentioned this change was made in response to member requests that came via the hotline especially new members with sub-accounts having issues combining information on the PDFs. Mr. Reynolds reviewed the updates to the security settings and how they will help users consolidate data.

David Pratzon, GT Power Group, was curious when this was implemented. Mr. Reynolds stated this update went live in early June and was communicated to the members that made the request for these updates.

10. Ginger Quintavalla, PJM, discussed the feature prioritization for Markets Gateway and Data Viewer. She stated that based on member feedback PJM will share the enhancements list for Markets Gateway and Data Viewer. The data will be posted on PJM.com and feedback can be sent to techchangeforum@pjm.com.

Future Meeting Announcement (13:50 – 13:55)


General Feedback (13:55 – 14:00)

Future Forum Topics

Future Forum Dates

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<thead>
<tr>
<th>Date</th>
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<tr>
<td>October 26, 2016</td>
<td>9:00 a.m.</td>
<td>PJM Conference &amp; Training Center/ WebEx</td>
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<tr>
<td>December 1, 2016</td>
<td>10:00 a.m.</td>
<td>PJM Conference &amp; Training Center/ WebEx</td>
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<tr>
<td>January 24, 2017</td>
<td>10:00 a.m.</td>
<td>PJM Conference &amp; Training Center/ WebEx</td>
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<tr>
<td>February 27, 2017</td>
<td>10:00 a.m.</td>
<td>PJM Conference &amp; Training Center/ WebEx</td>
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Author: Monica Burkett
Visit learn.pjm.com, an easy-to-understand resource about the power industry and PJM's role.