

CT/CC Overhaul Recovery Manual 15 Changes History

MIC

July 25, 2017

Joel Romero Luna
Catherine Tyler



Monitoring Analytics

CT/CC Overhaul Recovery

- **PJM has commented that combustion turbines and combined cycles are the only units that have to exclude major overhauls and inspections from the VOM calculation. The IMM does not agree.**
- **The problem statement that excluded these costs from CTs and CCs specified that the purpose was to align CTs and CCs with other units. Not to treat CTs and CCs differently.**



CDS Proposal

- **In October 2011, a problem statement was presented at the CDS to “Eliminate Conflicting Language in Manual 15’s Treatment of Capital Expenses for CT’s and ACR Eligibility”.**
- **In November 2011, the CDS sent proposed Manual 15 language to the MRC.**
- **In December 2011, the MRC endorsed the recommendations from the CDS.**

2011 Proposal Description

- “This proposal brings forward manual language changes for Manual 15: Cost Development Guidelines to remove the inclusion of overhaul and inspection costs from CTs and CCs in the variable operating and maintenance cost **aligning the treatment of these types of units with other generation types.**”



Supporting Attachments

- **December 21, 2011, CDS Tier 2 Proposal Report: CTs and CCs Overhaul Cost Recovery.**
- **December 21, 2011, Proposed Manual 15 Language.**
- **December 21, 2011, MRC Meeting Minutes.**



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DRAFT
Minutes
PJM Interconnection
Markets and Reliability Committee
The Chase Center on the Riverfront, Wilmington, DE
December 21, 2011
9:30 a.m. – 4:00 p.m.

Chair/Secretary:

Kormos	Michael	PJM Interconnection, LLC	Not Applicable
Anders	David	PJM Interconnection, LLC	Not Applicable

Voting Members Present:

Last Name	First Name	Company	Sector
Batta	Mike	Virginia Electric & Power Company	Transmission Owner
Bearden	Joel	Cargill Power Markets LLC	Other Supplier
Breidenbaugh	Aaron	EnerNOC, Inc.	Other Supplier
Brodbeck	John	Shell Energy North America (US), LP	Other Supplier
Bruce	Susan	Rep.'g Air Liquide Industrials U.S., L.P.	End Use Customer
Bruce	Susan	Rep.'g Air Products & Chemicals, Inc.	End Use Customer
Bruce	Susan	Rep.'g Castlebridge Energy Group, LLC	Other Supplier
Bruce	Susan	Rep.'g Gerdau Ameristeel Energy, Inc.	Other Supplier
Bruce	Susan	Rep.'g Industrial Energy Users-Ohio	Other Supplier
Bruce	Susan	Rep.'g Kimberly-Clark Corporation	Generation Owner
Bruce	Susan	Rep.'g Lehigh Portland Cement Company	End Use Customer
Bruce	Susan	Rep.'g Letterkenny Industrial Development Authority - PA	Electric Distributor
Bruce	Susan	Rep.'g Linde LLC	End Use Customer
Bruce	Susan	Rep.'g MeadWestvaco Corporation	End Use Customer
Bruce	Susan	Rep.'g Praxair, Inc.	End Use Customer
Bruce	Susan	Rep.'g Procter & Gamble Paper Products Company (The)	End Use Customer
Bruce	Susan	Rep.'g RG Steel Sparrows Point LLC	End Use Customer
Bruce	Susan	Rep.'g Sunoco, Inc. (R&M)	End Use Customer
Bruce	Susan	Rep.'g The Trustees of the University of Pennsylvania, a Pennsylvania Non-Profit Corporation d/b/a University of Pennsylvania	End Use Customer
Bruce	Susan	Rep.'g Wellsboro Electric Company	Electric Distributor
Campbell	Bruce	Energy Curtailment Specialists, Inc.	Other Supplier
Campbell	Bruce	Rep.'g Comperio Energy LLC dba ClearChoice Energy	Other Supplier
Campbell	Bruce	Rep.'g EnergyConnect Group, Inc.	Other Supplier
Campbell	Bruce	Rep.'g MidAtlantic Power Partners, L.L.C.	Other Supplier
Coulbeck	Rob	ENBALA Power Networks Inc.	Other Supplier
Ellis	Jeff	Edison Mission Marketing and Trading, Inc.	Generation Owner
Erbrick	Michael	EDF Trading North America, LLC	Other Supplier
Esposito	Pat	NRG Power Marketing, L.L.C.	Generation Owner



Evrard	David	Pennsylvania Office of Consumer Advocate	End Use Customer
Fitch	Neal	GenOn Energy Management, LLC	Generation Owner
Flaherty	Dale	Duquesne Light Company	Transmission Owner
Fuess	Jay	PBF Power Marketing LLC	Generation Owner
Garg	Rishi	Office of the People's Counsel for the District of Columbia	End User Customer
Gates	Kenneth	Rep.'g Atlantic Grid Operations A, LLC	Other Supplier
Gates	Kenneth	Rep.'g Primary Power LLC	Other Supplier
Gill	Richard	UGI Utilities, Inc.	Transmission Owner
Horstmann	John	Dayton Power & Light Company (The)	Transmission Owner
Horton	Dana	Appalachian Power Company	Transmission Owner
Huis	Diane	North Carolina Electric Membership Corporation	Electric Distributor
Huntoon	Stephen	NextEra Energy Power Marketing, LLC	Generation Owner
Jablonski	James	Rep.'g Borough of Butler, Butler Electric Division	Electric Distributor
Jablonski	James	Rep.'g Borough of Lavallette, New Jersey	Electric Distributor
Jablonski	James	Rep.'g Borough of Park Ridge, New Jersey	Electric Distributor
Jablonski	James	Rep.'g Borough of Seaside Heights, New Jersey	Electric Distributor
Jablonski	James	Rep.'g Borough of South River, New Jersey	Electric Distributor
Jablonski	James	Rep.'g Vineland Municipal Electric Utility	Electric Distributor
Jennings	Kenneth	Duke Energy Business Services LLC	Generation Owner
Jeremko	Steven	New York State Electric & Gas Corporation	Other Supplier
Johnson	Carl	Long Island Lighting Company dba LIPA	Other Supplier
Lee	George	BJ Energy, LLC	Other Supplier
Long	Scott	BJ Energy, LLC	Transmission Owner
Maye	Shelly-Ann	North America Power Partners LLC	Other Supplier
Miller	Donald	FirstEnergy Solutions Corp.	Transmission Owner
Minalga	Jason	Invenergy LLC	Generation Owner
Norton	Chris	American Municipal Power, Inc.	Generation Owner
O'Connell	Robert	J.P. Morgan Ventures Energy Corporation	Other Supplier
Plante	Matthieu	H.Q. Energy Services (U.S.), Inc.	Other Supplier
Pratzon	David	PECO Energy Company	Transmission Owner
Quinlan	Pamela	Rockland Electric Company	Transmission Owner
Rainey	Frank	PEI Power Corporation	Generation Owner
Schoefield	William	Rep.'g Blue Ridge Power Agency, Inc.	Electric Distributor
Schoefield	William	Rep.'g Borough of Chambersburg	Electric Distributor
Schoefield	William	Rep.'g Buckeye Power, Inc.	Electric Distributor
Schoefield	William	Rep.'g Central Virginia Electric Cooperative	Electric Distributor
Schoefield	William	Rep.'g City of Dover, Delaware	Electric Distributor
Schoefield	William	Rep.'g Delaware Municipal Electric Corporation	Electric Distributor
Schoefield	William	Rep.'g Easton Utilities Commission	Electric Distributor
Schoefield	William	Rep.'g Energy Cooperative Association of Pennsylvania (The)	Other Supplier
Schoefield	William	Rep.'g Galt Power Inc.	Other Supplier
Schoefield	William	Rep.'g Hagerstown Light Department	Electric Distributor
Schoefield	William	Rep.'g Illinois Municipal Electric Agency	Electric Distributor
Schoefield	William	Rep.'g Indiana Municipal Power Agency	Generation Owner
Schoefield	William	Rep.'g Madison Gas & Electric Company	Other Supplier
Schoefield	William	Rep.'g Northern Virginia Electric Cooperative - NOVEC	Electric Distributor
Schoefield	William	Rep.'g Town of Williamsport (The)	Electric Distributor
Schoefield	William	Rep.'g WPPI Energy	Other Supplier



Scoglietti	Barbara	Tangent Energy Solutions, Inc.	Other Supplier
Simms	Chris	Downes Associates, Inc.	Other Supplier
Smith	Thomas	City of Cleveland, DPU, Div of Cleveland Public Pwr	Other Supplier
Trayers	Barry	Citigroup Energy, Inc.	Other Supplier
Venette	Fred	PBF Power Marketing LLC	Generation Owner
Wadsworth	Joe	Vitol Inc.	Other Supplier
Webster	John	Icetec.com, Inc.	Other Supplier
Wolfe	Samuel	Viridity Energy, Inc.	Other Supplier

Non - Voting Members Present:

Last Name	First Name	Company	Sector
Ainspan	Malcolm	Energy Curtailment Specialists, Inc.	Other Supplier
Applebaum	David	NextEra Energy Power Marketing, LLC	Generation Owner
Bainbridge	Thomas	FirstEnergy Solutions Corporation	Transmission Owner
Berlinski	Mike	Beacon Power Corporation	Other Supplier
Binder	Gerry	SESCO Enterprises LLC	Other Supplier
Black	Terry	NRDC/FERC Project	Not Applicable
Bloom	David	Baltimore Gas and Electric Company	Transmission Owner
Burns	Wil	Burns Law Firm	Not Applicable
Carretta	Kenneth	Public Service Electric & Gas Company	Transmission Owner
Chu	Ron	Exelon Generation Co., LLC	Transmission Owner
Collier	Anita	Aces Power Marketing	Not Applicable
Crystle	Gil	UGI Development Company	Transmission Owner
De Geeter	Ralph	PSC of Maryland	Not Applicable
Donovan	Brendan	Northern Indiana Public Service Company	Other Supplier
Dugan	William	Monitoring Analytics, LLC	Not Applicable
Durand	Janine	H-P Energy Resources LLC	Other Supplier
Elliott	Tia	Indiana Utility Regulatory Commission	Not Applicable
Everngam	Scott	The Federal Energy Regulatory Commission	Not Applicable
Fernandes	John	Baltimore Gas and Electric Company	Transmission Owner
Filomena	Guy	Customized Energy Solutions, Ltd.*	Not Applicable
Fraiture	Christian	Royal Bank of Canada	Other Supplier
Freeman	Allan	Michigan Public Service Commission	Not Applicable
Gilani	Rehan	ConEdison Energy, Inc.	Other Supplier
Giles	Steven	Allegheny Electric Cooperative, Inc.	Transmission Owner
Godson	Gloria	Potomac Electric Power Company	Electric Distributor
Guler	Teoman	J. Aron & Company	Other Supplier
Hamilton	T.L.	Platts	Not Applicable
Hanson	Mark	Illinois Commerce Commission	Not Applicable
Hastings	David	DhastCo, LLC	Not Applicable
Heizer	Fred	Ohio PUC	Not Applicable
Hoatson	Tom	Riverside Generating, LLC	Other Supplier
Holt	Jonathan	OATI	Not Applicable
Howatt	Robert	Maryland Energy Administration	Not Applicable
Hsieh	Eric	A123 Systems	Not Applicable
Hurwich	Mark	Elliott Bay Energy Trading, LLC	Other Supplier
Hyzinski	Tom	PPL EnergyPlus, L.L.C.	Transmission Owner



Jacobs	Michael	Xtreme Power	Not Applicable
Jain	Adarsh	ConEdison Energy Inc.	Other Supplier
Johnston	David	Indiana Utility Regulatory Commission	Not Applicable
Kathpal	Praveen	AES Energy Storage, LLC	Generation Owner
Kerecman	Joseph	EcoGen Advisors, LLC	Not Applicable
Kimmel	Elizabeth	Kimmel Energy Associates	Not Applicable
Kopon	Owen	Brickfield, Burchette, Ritts & Stone, P.C.	Not Applicable
Krauthamer	Michael	Public Service Commission of Maryland	Not Applicable
Laios	Takis	American Electric Power	Transmission Owner
Logan	Sharon	The Federal Energy Regulatory Commission	Not Applicable
Lopez	Johny	Public Service Electric & Gas Company	Transmission Owner
Manning	James	North Carolina Electric Membership Corporation	Electric Distributor
Marchand	Michael	Direct Energy Business, LLC	Other Supplier
Marinelli	Richard	PSEG Energy Resources and Trade LLC	Transmission Owner
Marmon	Gregory	Dominion Resources	Not Applicable
Martin	Valerie	The Federal Energy Regulatory Commission	Not Applicable
Marton	Dave	FirstEnergy Solutions Corporation	Transmission Owner
Maucher	Andrea	Division of the Public Advocate of the State of Delaware	End-Use Customer
McDonald	Steve	Southern Maryland Electric Cooperative, Inc.	Electric Distributor
Miller	John	Commonwealth Edison Company	Transmission Owner
Misback	Bob	Altair Energy Trading, Inc.	Other Supplier
Moore	John	The Sustainable FERC Project	Not Applicable
Ondayko	Brock	AEP	Transmission Owner
Patrylo	Bob	H-P Energy Resources LLC	Other Supplier
Patty	Sandra	MD DNR	Not Applicable
Philips	Marji	Hess Corporation	Other Supplier
Rajan	Abhijit	Dominion Resources	Not Applicable
Riding	MQ	NAEA Ocean Peaking Power, LLC	Generation Owner
Rushing	Nathan	CPV Maryland, LLC	Generation Owner
Schwartz	Desiree	Rockland Electric Company	Transmission Owner
Scott	Charles	DC Energy, L.L.C.	Other Supplier
Seymour	Melissa	IBERDROLA RENEWABLES, Inc.	Generation Owner
Shanker	Roy	H.Q. Energy Services (U.S.), Inc.	Other Supplier
Siegrist	Hal	GenOn Energy Management, LLC	Generation Owner
Sillin	John	The Federal Energy Regulatory Commission	Not Applicable
Singh	Harry	J. Aron & Company	Other Supplier
Sircar	Pradeep	Office of Utility Consumer Counselor of Indiana	Not Applicable
Stadelmeyer	Rebecca	Exelon Generation Co., LLC	Transmission Owner
Stein	Ed	FirstEnergy Solutions Corporation	Transmission Owner
Stuchell	Jeff	FirstEnergy Solutions Corporation	Transmission Owner
Swalwell	Brad	Tangent Energy	Other Supplier
Tigue	John	New York State Electric & Gas Corporation	Other Supplier
Toups	Stephanie	Tenaska Power Services	Generation Owner
Toups	Stephanie	Tenaska Power Services Co.	Generation Owner
Valerie	Martin	The Federal Energy Regulatory Commission	Not Applicable
White	John	The Federal Energy Regulatory Commission	Not Applicable
Wiedl	Denise	Demand Response Partners, Inc.	Other Supplier



Wilson	James	Wilson Energy Economics	Not Applicable
Wisersky	Megan	Madison Gas & Electric Company	Other Supplier

PJM Present:

Last Name	First Name	Company	Sector
Anders	Dave	PJM Interconnection, LLC	Not Applicable
Austin	Larry	PJM Interconnection, LLC	Not Applicable
Benner	Scott	PJM Interconnection, LLC	Not Applicable
Bresler	Stu	PJM Interconnection, LLC	Not Applicable
Bryson	Michael	PJM Interconnection, LLC	Not Applicable
Burlew	Jim	PJM Interconnection, LLC	Not Applicable
Coyne	Suzanne	PJM Interconnection LLC	Not Applicable
Daugherty	Suzanne	PJM Interconnection LLC	Not Applicable
Dillon	Lisa	PJM Interconnection, LLC	Not Applicable
Dirani	Rami	PJM Interconnection LLC	Not Applicable
Egan	Amanda	PJM Interconnection, LLC	Not Applicable
Eichorn	Sarah	PJM Interconnection, LLC	Not Applicable
Ennis	Brad	PJM Interconnection, LLC	Not Applicable
Fabiano	Janell	PJM Interconnection, LLC	Not Applicable
Falin	Thomas	PJM Interconnection, LLC	Not Applicable
Foley	Pauline	PJM Interconnection, LLC	Not Applicable
Foley	Sheila	PJM Interconnection, LLC	Not Applicable
Hartung	Dean	PJM Interconnection LLC	Not Applicable
Hauske	Thomas	PJM Interconnection LLC	Not Applicable
Hendrzak	Chantal	PJM Interconnection, LLC	Not Applicable
Herling	Steven	PJM Interconnection, LLC	Not Applicable
Horger	Tim	PJM Interconnection, LLC	Not Applicable
Horning	Lynn	PJM Interconnection LLC	Not Applicable
Hugee	Jacquelynn	PJM Interconnection, LLC	Not Applicable
Kimmel	David	PJM Interconnection LLC	Not Applicable
Kormos	Michael J.	PJM Interconnection, LLC	Not Applicable
Langbein	Pete	PJM Interconnection, LLC	Not Applicable
Loomis	Harold	PJM Interconnection, LLC	Not Applicable
McGlynn	Paul	PJM Interconnection, LLC	Not Applicable
Ogburn	Ruston	PJM Interconnection, LLC	Not Applicable
O'Neill	Jack	PJM Interconnection LLC	Not Applicable
Rocha	Patricio	PJM Interconnection LLC	Not Applicable
Schleiden	Jeanine	PJM Interconnection LLC	Not Applicable
Sotkiewicz	Paul	PJM Interconnection, LLC	Not Applicable
Souder	Richard	PJM Interconnection, LLC	Not Applicable
Ulmer	David	PJM Interconnection, LLC	Not Applicable
Walter	Laura	PJM Interconnection LLC	Not Applicable
Weiss	Glenn	PJM Interconnection LLC	Not Applicable



Williams	Jeff	PJM Interconnection LLC	Not Applicable
Williams	Stan	PJM Interconnection, LLC	Not Applicable
Withrow	David	PJM Interconnection LLC	Not Applicable

1. **ADMINISTRATION**

A. Ms. Bruce requested that the last sentence Item 12 be stricken. There were no objections.

Minutes of the November 16, 2011 Markets and Reliability Committee (MRC) meeting were

approved as amended by acclamation with no objections or abstentions.

B. Mr. Anders discussed changes to scheduling/agendas to take effect with the January 2012

cycle of meetings. These changes were developed in GAST Phase IIB and result in a

combined meeting day for both the Members Committee (MC) and the MRC.

2. **PJM MANUALS**

A. Mr. McGlynn presented draft PJM Manual 14B revisions to:

- add additional detail to the NERC Category C3 “N-1-1” section;
- create a NERC Category C3 “N-1-1” stability section;
- add references to Duke Energy Ohio/Kentucky; and
- add additional detail to the NERC Standard PRC-023 Transmission Relay Loadability section.

Item 2A was **endorsed** by acclamation with no objections or abstentions.

B. Mr. McGlynn presented proposed PJM Manual 14B revisions regarding the amount of

generation scaled by the PJM Generation Deliverability Test.



- C. Ms. Foley discussed language changes to PJM Manual 14E regarding Market Solutions.
- D. Mr. Foley discussed changes to PJM Manual 14A regarding unit output.
- E. Mr. Bryson reviewed revisions to M-13 for day-ahead scheduled reserve (DASR) percentage. He noted that consideration of the M-13 revisions for implementation of demand response sub-zonal dispatch and product-specific dispatch under item 9. Following discussion, proposed changes to the DASR percentage were **endorsed** by acclamation with no objections and two abstentions.

The committee will be asked to endorse the proposed 2.B-2.E revisions at its next meeting.

- F. Mr. Bresler noted that proposed manual revisions associated with implementation of Price Responsive Demand had been posted with the materials for the meeting. He also noted the recent FERC order related to PRD, and that since additional FERC action will be expected in the future, the committee will be asked to review and endorse the proposed manual revisions at a future meeting.

3. OA, TARIFF AND RAA REVISIONS

- A. Mr. Burlew presented proposed revisions to the Tariff, Operating Agreement (OA) and Reliability Assurance Agreement (RAA) to delete obsolete references. Following brief discussion, the proposed revisions were **endorsed** by acclamation with no objections or abstentions. Mr. Kormos noted that this would be placed on the consent
- B. Ms. Hugee presented proposed errata revisions to the Tariff and OA to correct Section 3.2.2(d) to accurately reflect how opportunity costs for Regulation are calculated. She noted that these revisions would be filed with the FERC in the near future.



4. REGULATION PERFORMANCE SR. TASK FORCE (RPSTF)

Mr. Ogburn discussed results of KEMA's system benefits study. He noted that discussion of the benefits would be held at future MC Webinars. He presented proposed Tariff and Operating Agreement revisions to support the RPSTF endorsed Two-Phase Proposal in response to FERC Order 755 - Frequency Regulation Compensation in the Organized Wholesale Power Markets. He highlighted the fact that Order 755 requires the elimination of make-whole payments for the regulation market which would be accomplished through a five minute co-optimization and pricing of the regulation product as provided in the Shortage Pricing filing at FERC. If FERC does not approve the Shortage Pricing compliance filing prior to PJM's filing of the Order 755 compliance filing, PJM will include the co-optimization component of the Shortage Pricing filing in the Order 755 compliance filing in order to ensure compliance with the after-the-fact opportunity cost requirement in Order 755. He also noted that supporting business rule revisions in Manuals 11, 12 and 28 will be voted on at a later MRC, but were available on the RPSTF page for review. Dr. Bowring discussed concerns related to opportunity cost, and suggested revisions to the proposal to address these concerns. Mr. Siegrist opposed this being a friendly amendment. Mr. Bresler noted that PJM intended to bring a problem statement to a future MRC meeting to address the calculation of opportunity cost. Following discussion the proposed Tariff and OA revisions were **endorsed** by acclamation with no objection and one abstention.

5. REGIONAL PLANNING PROCESS TASK FORCE (RPPTF), INTERCONNECTION PROCESS SR. TASK FORCE (IPSTF), AND FERC ORDER 1000

Mr. Herling provided an update on the stakeholder process related to PJM's compliance filing in response to FERC Order 1000. He also presented OA and Tariff revisions to implement recommendations of the RPPTF and IPSTF. Following discussion the MRC **endorsed** the IPSTF proposed revisions by acclamation with no objections and one abstention. Following discussion,



the MRC **endorsed** the proposed RPPTF revisions by acclamation with one objection and three abstentions. Mr. Herling noted future RPPTF and IPSTF action, including an educational webinar on cost allocation mechanics to be held on December 28, 2011. He noted that the webinar would be recorded and posted on pjm.com, so that stakeholders could review the information again in the future.

6. COST DEVELOPMENT SUBCOMMITTEE (CDS) RECOMMENDATIONS

Mr. Williams presented recommendations from the CDS regarding Cost Development Manual 15 Revisions to implement FERC's approval of Non-Regulatory Opportunity Costs, and No Load and CT & CC Overhaul Cost Recovery cost definitions. He noted that the CDS had reached consensus on the Non-Regulatory Opportunity Costs, and No Load cost definition proposals. Following discussion, the MRC **endorsed** these two proposals by acclamation with one objection and 12 abstentions. Mr. Williams noted that the CDS did not reach consensus on a single proposal related to the CT & CC Overhaul Cost Recovery cost definition, but had developed two proposals. Following discussion, the MRC **endorsed** the proposal by the CDS to recover CT and CC Overhaul Costs through ACR in a sector-weighted vote with 4.73 in favor.

7. MINIMUM RESOURCE REQUIREMENT

Mr. Falin presented revisions to the Tariff and Manual 20 regarding the procedure to determine the minimum resource requirement. Following discussion, Ms. Bruce moved to table voting on the proposed Tariff revisions until the next MRC meeting. The motion received the required five seconds. The motion to table **failed** in a sector-weighted vote with 3.29 in favor. The MRC endorsed the proposed Manual 20 revisions by acclamation with five objections and 15 abstentions. The proposed Tariff revisions **failed** in a sector-weighted vote with 2.68 in favor.

8. DIRECT BILLING FOR LATE TRANSMISSION OUTAGES



Mr. R. Souder presented proposed Tariff and OA revisions to allow direct billing of Transmission Owners for late transmission outages that result in off-cost operations on market facilities. The MRC **endorsed** the proposed revisions by acclamation with one objection and one abstention.

9. DEMAND RESPONSE DISPATCH

Mr. Langbein reviewed proposed OA, Tariff and manual revisions to address load management (DR/ILR) sub-zonal and product-specific dispatch. Following discussion, the MRC **endorsed** the proposed product-specific dispatch related OA and Tariff revisions by acclamation with no objections or abstentions. The sub-zonal dispatch OA and Tariff revisions main motion **failed** in a sector-weighted vote with 2.52 in favor. Mr. Barker moved and Ms. Bruce seconded the Demand Response Subcommittee “CSP (Voluntary)” proposal. Mr. Schofield proposed a friendly amendment to change the “most granular dispatch instructions” for the transition period from “location” to “registration”. Mr. Barker and Ms. Bruce considered this amendment to be friendly, and therefore it was incorporated into motion. The MRC **endorsed** this motion by acclamation with one objection and one abstention. The committee will be asked to endorse associated manual revisions at its next meeting.

10. SMALL GENERATOR INTERCONNECTION PROCEDURE

Mr McGlynn presented changes to the Tariff Part 4 Subpart G (Small Generator Interconnection Procedure). The MRC **endorsed** the proposed Tariff revisions by acclamation with no objections or abstentions.

11. FTR REVENUE ADEQUACY

Mr. Horger discussed the initial charge and work of the FTR Task Force (FTRTF), including the various proposals developed by the group. He then presented proposed Tariff and OA revisions to implement recommendations of the FTRTF. The committee will be asked to endorse the revisions



at its next meeting.

12. RESIDUAL ZONE PRICING

Ms. Morelli presented the packages being proposed for residual zone pricing, as well as draft Tariff and OA revisions. The committee will be asked to vote on the proposed packages at its next meeting.

13. RPM RELATED ISSUES

Mr. Anders discussed a draft problem statement and charge related to longer-term RPM associated issues submitted by stakeholders for consideration in future stakeholder process activities. He noted that additional work will be performed with the issue submitters to refine the issue list and move from issues to problem statements. Additionally, polling of MRC members may be conducted to assist in refining the issue list. The committee will be asked to approve problem statements and charges at a future meeting.

14. DEMAND RESPONSE REGULATION ISSUES

Mr. Langbein reviewed proposals developed by the DRS to address demand response regulation issues. The Committee will be asked to vote on these proposals at its next meeting.

15. 60 DAY COMPLIANCE FILING FOR DEMAND RESPONSE CAPACITY MEASUREMENT AND VERIFICATION CHANGES

Mr. Langbein reviewed the order on demand response capacity measurement and verification, outlined the approach expected to be taken in the compliance filing, and solicited input from stakeholders regarding the 60 day compliance due on January 5, 2012. He noted that the MRC would be asked to endorse previously deferred issues (comparable day calculation, determining GLD method during registration process, and non-regression GLD calculations) at its next meeting.

16. TARIFF AND OPERATING AGREEMENT CREDIT REVISIONS



Mr. Loomis presented credit-related draft Tariff and Operating Agreement changes identified through the PJM Quality Project and other internal reviews related to credit requirements. He noted that these draft revisions were being vetted by the Credit Subcommittee, and that the committee would be asked to endorse the proposed revisions at its next meeting.

17. BROADER REGIONAL MARKETS SOLUTIONS TO LAKE ERIE LOOP FLOW

Mr. Williams provided an informational update on Inter-Regional Coordination and Broader Regional Markets efforts to develop solutions to address seams issues and Lake Erie Loop Flows. He discussed market-to-market, interface pricing and inter-regional interchange scheduling efforts with the New York ISO, and interchange scheduling optimization and capacity portability considerations with the Midwest ISO.

18. BEHIND THE METER INTERCONNECTION REQUEST

Ms. Foley discussed Tariff requirements and procedures regarding the modification of an interconnection request for behind the meter generation seeking capacity. She introduced proposed Tariff revisions and indicated that the committee would be asked to endorse these revisions at its next meeting.

19. WEB BROWSER COMPATIBILITY ASSESSMENT

Mr. Fernandez provided an update on eTool changes being made as a result of the web browser assessment conducted by PJM. He noted the results of the browser compatibility assessment and discussed the issue remediation and technology roadmaps. He indicated that the remediation plan would be completed in the first quarter of 2012, and that additional reporting on progress on the technology roadmap would be provided later in the first quarter of 2012.

20. TRANSMISSION CONSTRUCTION PROJECT INFORMATION SHARING



This item was deferred to the next meeting of the MRC.

21. REPORTS

The following reports were posted for information and were not presented at the meeting. There was opportunity for questions on the reports.

- A. Eastern Interconnection Planning Collaborative (EIPC)
- B. Duke Energy Integration Report
- C. Transmission Expansion Projects
- D. Cost Development Subcommittee (CDS)
- E. Operating Committee (OC)
- F. Market Implementation (MIC)
- G. Planning Committee (PC)

22. FUTURE AGENDA ITEMS

Mr. Pakela requested a future report regarding implementation of new newly promulgated EPA regulation.

23. FUTURE MEETINGS

2011

January 26, 2012	9:00 AM	Wilmington, DE
February 23, 2012	9:00 AM	Wilmington, DE
March 29, 2012	9:00 AM	Wilmington, DE
April 26, 2012	9:00 AM	Wilmington, DE
June 28, 2012	9:00 AM	Wilmington, DE
July 26, 2012	9:00 AM	Wilmington, DE
September 27, 2012	9:00 AM	Wilmington, DE
October 25, 2012	9:00 AM	Wilmington, DE
November 29, 2012	9:00 AM	Wilmington, DE

Author: D.A. Anders
 DMS Document Number: 678199, v4



Cost Development Subcommittee **Tier 2 PROPOSAL REPORT**

CTs and CCs Overhaul Cost Recovery

12/21/2011

This report updated to reflect CDS discussions on November 14, 2011.

This proposal brings forward manual language changes for Manual 15: Cost Development Guidelines to remove the inclusion of overhaul and inspection costs from CTs and CCs in the variable operating and maintenance cost aligning the treatment of these types of units with other generation types.

The proposal described below is not a consensus proposal by the Cost Development Subcommittee This report was developed in accordance with procedures documented in Section 7 of the PJM Stakeholder Process Manual (Manual 34).

1. Proposal

At the October 17, 2011 CDS Hal Siegrist, Genon, brought a Problem Statement to “Eliminate Conflicting Language in Manual 15’s Treatment of Capital Expenses for CT’s and ACR Eligibility”

Manual 15 details the standards recognized by PJM for determining cost components for markets where products or services are provided to PJM at cost-based rates. Currently in the PJM Cost Development Guidelines, CTs and CCs may recover some overhaul and inspection costs in Variable and Operating Maintenance (VOM), a component of the cost based offer, under certain specific criteria and when it is approved by the Independent Market Monitor. Manual 15 does not allow other types of units to include overhaul and inspection costs in VOM. Current policy reflects the market philosophy prior to the existence of the PJM RPM capacity market. Since overhaul and inspection costs for CTs and CCs are recoverable in VOM, it cannot be considered for inclusion in the Avoidable Cost Rate (ACR), the offer into the Capacity Market per the PJM Tariff, as other types of units can.

CDS has developed proposed manual language that deletes the ability for CTs and CCs to include overhaul and inspection costs in VOM to address the conflict between Manual 15 and the tariff rules making their treatment similar to other types of units. CDS was addressing VOM ([Issue Tracking](#)) definition, but after extensive discussions the group does not believe consensus will be reached and the issue has been tabled.

Necessary Timeline for Completion prior to next BRA:

CDS endorsement:	November 14, 2011 done
MRC informational:	November 16, 2011 done
MRC vote:	December 21, 2011
MC informational:	November 22, 2011 done
MC vote:	January 26, 2012
PJM Board:	February 7, 2012



2. Stakeholder Process Summary

CDS reviewed proposed manual language and the collaborative solution matrix at the November 14, 2011 meeting but was unable to come to a consensus proposal. CDS is forwarding proposed manual language to the MRC as a Tier 2 Proposal. CDS members were polled on the proposed manual language; 15 were in favor, 4 were against, and 0 abstained. CDS members were also polled on leaving the manual as is; 3 were in favor, 9 were against, and 0 abstained. The IMM supported the proposed changes.

The proposal met the threshold of support from three voting members belonging to two different sectors, therefore the proposal is being sent to the MRC for consideration.

3. Appendix II: Stakeholder Participation

A list is provided here of the task force or subcommittee members who participated at the meeting where the final vetting of options/alternatives was completed.

MEMBERS IN ATTENDANCE:

Zadlo, Thomas (Acting Chair)	PJM Interconnection	Not Applicable
Gomez, Luis	Exelon Generation Co., LLC	Transmission Owner
Lopez, Johny	PSEG Energy Resources and Trade LLC	Transmission Owner
Hauske, Tom (Acting Secretary)	PJM Interconnection	Not Applicable

ALSO IN ATTENDANCE:

Dugan, William	Monitoring Analytics, LLC	Not Applicable
Bowring, Joe	Monitoring Analytics, LLC	Not Applicable

IN ATTENDANCE VIA WEB EX / TELECONFERENCE:

Burner, Bob	Duke Energy Carolinas, LLC	Generation Owner
Hoag, Richard	FirstEnergy Solutions Corp.	Transmission Owner
Fee, George	PSEG Company	Not Applicable
Penwell, Julie	Appalachian Power Company	Generation Owner
Carretta, Ken	PSEG	Transmission Owner
Siegrist, Hal	GenOn Energy Management, LLC	Generation Owner
Ciampaglio, Tony	Constellation Energy Commodities Group, Inc.	Other Supplier
Filomena, Guy	Customized Energy Solutions, Ltd.*	Not Applicable

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DOCS #: 672891



Working to Perfect the Flow of Energy

PJM Manual 15:
Cost Development Guidelines

Revision: ~~4718~~

Effective Date: ~~June 1, 2011~~

Prepared by
Cost Development Subcommittee
DOCS# 671007

Section 5: Combined Cycle (CC) Cost Development

5.6 Maintenance Cost

Note: The information in Section 2.6 contains basic Maintenance Cost information relevant for all unit types. The following additional information only pertains to combined cycle units.

Combined Cycle - Maintenance Adder – The dollars per unit of fuel (or heat) as derived from FERC Accounts 512, 513, and 553. If submitting as a simple cycle combustion turbine, use total dollars from FERC Account 553 divided by Equivalent Service Hours (ESH).

~~Combustion Turbine and Combined Cycle Plant major inspection and overhaul costs categories include but are not limited to the following:~~

- ~~• Combustion Turbine Generator Inlet Air System~~
- ~~• Inlet Air Filter Replacement~~
- ~~• Evaporative cooling system media replacement~~
- ~~• Mechanical inlet air cooling chiller and pump inspection and overhaul~~
- ~~• Fuel System~~
- ~~• Fuel Gas Compressors Inspection and Overhaul~~
- ~~• Distillate Fuel Pumps Inspection and Overhaul~~
- ~~• Water Treatment~~
- ~~• Resin Replacement~~
- ~~• RO Cartridges Replacement~~
- ~~• Environmental~~
- ~~• SCR and/or CO Reduction Catalyst Replacement~~
- ~~• Combustion Turbine Generator ("CTG")~~
- ~~• Combustion Inspections including Parts, Labor, Rentals and Specialized technical expertise and support~~
- ~~• Hot Gas Path Inspection including Parts, Labor, Rentals and Specialized technical expertise and support~~
- ~~• Major Overhauls including Parts, Labor, Rentals and Specialized technical expertise and support~~
- ~~• Electric Generator Inspection and Overhaul including Parts, Labor, Rentals and Specialized technical expertise and support~~
- ~~• Heat Recovery Steam Generator ("HRSG")~~
- ~~• Chemical Cleaning or Hydro Blasting of Heat Transfer Surfaces~~

- ~~BFW Pump Inspection and Overhaul~~
- ~~Heat Transfer Surface Replacements~~
- ~~Casing Repair and Replacements~~
- ~~Steam Turbine Generator ("STG") Major Overhaul including Parts, Labor, Rentals and Specialized technical expertise and support~~
- ~~Surface Condenser~~
- ~~Chemical Cleaning or Hydro-Blasting of Heat Transfer Surfaces~~
- ~~Condensate Pump Inspection and Overhaul~~
- ~~Heat Transfer Surface Replacements~~
- ~~Cooling Tower~~
- ~~Circulation Pump Inspection and Overhaul~~
- ~~Cooling Tower Fan Motor and Gearbox Inspection and Overhaul~~
- ~~Replacement of Cooling Tower Fill and Drift Eliminators~~

5.6.1 Combined Cycle / Combustion Turbine Long Term Service Contract Cost Recovery

A generation owner that has a currently in effect Long Term Service Contract (LTSA) with a third party vendor to provide overhaul and maintenance work on a Combustion Turbine (CT) either as part of a Combined Cycle (CC) plant or as a stand-alone CT, may file with the PJM MMU or PJM for inclusion of any variable long term maintenance costs in cost based offer bids pursuant to the Cost Methodology Approval Process, if the following conditions are met:

- The included variable long-term maintenance costs are consistent with the definition of such costs in the Cost Development Guidelines
- And the dollar value of each component of the variable long-term maintenance costs is set specifically in the LTSA.

5.6.2 Long Term Maintenance Expenses

Long Term Maintenance Expenses - Combustion Turbine and Combined Cycle Plant major inspection and overhaul expenses may not be included in variable maintenance expenses ~~regardless of accounting methodology if they meet specific criteria.~~

In order to be included in variable maintenance expenses, these costs must represent actual expenditures that are due to incremental degradation of generating equipment directly related to generation, starts or a combination of both. Expenditures that are not directly related to such operation may not be included in variable maintenance expense. ~~It must be clear that these costs would have been included in the appropriate FERC Accounts as described in this section. A detailed listing of all proposed long term maintenance costs must be submitted to the PJM MMU for evaluation and final approval pursuant to the Cost and Methodology Approval Process.~~

Long Term Maintenance Expenses cannot be counted if they are included elsewhere in VOM as part of the cost based energy offer. Previously approved Long Term Maintenance

Expenses may be included in-will be removed from the maintenance history as of June 1, 2015.

Combustion Turbine and Combined Cycle Plant major inspection and overhaul costs categories include but are not limited to the following:

- ~~Combustion Turbine Generator Inlet Air System~~
- ~~Inlet Air Filter Replacement~~
- ~~Evaporative cooling system media replacement~~
- ~~Mechanical inlet air cooling chiller and pump inspection and overhaul~~
- ~~Fuel System~~
- ~~Fuel Gas Compressors Inspection and Overhaul~~
- ~~Distillate Fuel Pumps Inspection and Overhaul~~
- ~~Water Treatment~~
- ~~Resin Replacement~~
- ~~RO Cartridges Replacement~~
- ~~Environmental~~
- ~~SCR and/or CO Reduction Catalyst Replacement~~
- ~~Combustion Turbine Generator ("CTG")~~
- ~~Combustion Inspections including Parts, Labor, Rentals and Specialized technical expertise and support~~
- ~~Hot Gas Path Inspection~~
- ~~Major Overhaul~~
- ~~Electric Generator Inspection and Overhaul~~
- ~~Heat Recovery Steam Generator ("HRSG")~~
- ~~Chemical Cleaning or Hydro Blasting of Heat Transfer Surfaces~~
- ~~BFW Pump Inspection and Overhaul~~
- ~~Heat Transfer Surface Replacements~~
- ~~Casing Repair and Replacements~~
- ~~Steam Turbine Generator ("STG")~~
- ~~Surface Condenser~~
- ~~Condensate Pump Inspection and Overhaul~~
- ~~Cooling Tower~~
- ~~Circulation Pump Inspection and Overhaul~~
- ~~Cooling Tower Fan Motor and Gearbox Inspection and Overhaul~~
- ~~Replacement of Cooling Tower Fill and Drift Eliminators~~

Section 6: Combustion Turbine (CT) and Diesel Engine Costs

6.6 Maintenance Cost

Note: The information in Section 2.6 contains basic Maintenance Cost information relevant for all unit types. The following additional information only pertains to CT and diesel engine units.

Combustion Turbine - Maintenance Adder – The total dollars from FERC Account 553 divided by Equivalent Service Hours (ESH).

Industrial Combustion Turbine – This is a combustion turbine developed specifically for power generation.

Aircraft - Type Combustion Turbine – These are combustion turbines originally designed for aircraft and modified for power generation.

Diesel - Maintenance Adder – The total dollars from FERC Account 553 divided by total fuel burned (in MBTUs).

Combustion Turbine Start – For calculating combustion turbine maintenance cost, only the number of successful starts to synchronization shall be used. Successful starts should include those at the direction of PJM and for company tests.

Long Term Maintenance Expenses – Combustion Turbine and Combined Cycle Plant major inspection and overhaul expenses may not be included in variable maintenance expenses ~~regardless of accounting methodology if they meet specific criteria.~~

In order to be included in variable maintenance expenses, ~~these~~ costs must represent actual expenditures that are due to incremental degradation of generating equipment directly related to generation, starts or a combination of both. Expenditures that are not directly related to such operation may not be included in variable maintenance expense. ~~It must be clear that these costs would have been included in the appropriate FERC Accounts as described in this section. A detailed listing of all proposed long term maintenance costs must be submitted to the PJM MMU for evaluation and final approval pursuant to the Cost and Methodology Approval Process. Previously approved Long Term Maintenance Expenses may be included in will be removed from the maintenance history as of June 1, 2015.~~

~~Combustion Turbine and Combined Cycle Plant major inspection and overhaul costs categories include but are not limited to the following:~~

~~Combustion Turbine Generator Inlet Air System~~

~~Inlet Air Filter Replacement~~

~~Evaporative cooling system media replacement~~

~~Mechanical inlet air cooling chiller and pump inspection and overhaul~~



~~Fuel System—~~

~~Fuel Gas Compressors Inspection and Overhaul~~

~~Distillate Fuel Pumps Inspection and Overhaul~~

~~Water Treatment~~

~~Resin Replacement~~

~~RO Cartridges Replacement~~

~~Environmental~~

~~SCR and/or CO Reduction Catalyst Replacement—~~

~~Combustion Turbine Generator ("CTG")———~~

~~Combustion Inspections including Parts, Labor, Rentals and Specialized technical expertise and support~~

~~Hot Gas Path Inspection———~~

~~Major Overhaul———~~

~~Electric Generator Inspection and Overhaul—~~

~~Cooling Tower~~

~~Circulation Pump Inspection and Overhaul~~

~~Cooling Tower Fan Motor and Gearbox Inspection and Overhaul~~

~~Replacement of Cooling Tower Fill and Drift Eliminators~~