



Reliability Limited Generation Compensation Task Force (RLGCTF) Final Proposal Report

December 12, 2012

The Market Implementation Committee (MIC) approved the creation of the Reliability Limited Generator Compensation Task Force (RLGCTF) at the February 17, 2012 meeting to address the issue of limit compensation for generating resources operating outside of their defined reliability limits.

[Issue Charge](#)

The RLGCTF further defined the issue to be focused on examining and addressing, if appropriate, the issue of generator compensation due to transmission system stability restrictions.

The RLGCTF consensus proposal described below is recommended for endorsement and approval by the member of the Markets and Reliability Committee (MRC) and the Members committee (MC) to resolve this issue. This report will further document additional considerations that were discussed by the RLGCTF members under the "Alternate Design Components Considered". Consensus was achieved using the Tier 1 decision making method of the PJM stakeholder process. Tariff, Operating Agreement and manual language revisions proposed resulting from the RLGCTF efforts are as indicated below.

1. Recommended Proposal

The RLGCTF focused on a single design component of what level Lost Opportunity Cost (LOC) should be compensated. The RLGCTF recommends that the generators will be paid Lost Opportunity Cost (LOC) to the lesser of the Economic Maximum or Maximum Facility Output (MFO) of the generator. PJM has provided a document on the current PJM Process for Handling Stability Issues to clarify some task force members concerns and also to provide an update to the Markets Implementation Committee (MIC) on transmission outages that limit generating resources due to stability restrictions when applicable.

2. Additional Design Components Considered

The following additional design components and options were considered by the task force. The majority of the task force members voted to maintain status quo for these components. The status quo of these design components can be found in the document of the [Current PJM Process for Handling Stability Issues](#).

1. Method for reflecting stability constraint once interface has been defined
 - a. Create the same interface in DA and RT markets to allow generator to set LMP based on bid price. PJM predefines interfaces associated with known stability problems [Status Quo]
 - b. Interface would not be used in DA/RT markets. Generators will be paid the Lost Opportunity Cost (LOC) to the lesser of the Economic Maximum of Maximum Facility Output (MFO) of the unit
2. Communicating mechanism for the interface definitions

- a. Communication to the market through the PJM website when the interface constraint binds [Status Quo]
 - b. PJM would verbally notify the generator of the interface definitions
3. Communication timing for notification of stability limit
- a. PJM shall communicate the stability limit to the generation owner no later than 09:00 AM EPT [Status Quo]
4. Compensation after the interface is available
- a. The current market rules – the generator will be paid as currently defined in the tariff when a transmission constraint is in effect [Status Quo]
 - b. Generation owner has the obligation to reduce if the stability limit is know at the time of interconnection as documented in Manual 3, Section 5. Otherwise, they would be paid Lost Opportunity Cost (LOC) to the lesser of the Economic Maximum or Maximum Facility Output (MFO). PJM will not define an interface in the Day Ahead Market and PJM will ask generators to reduce in real time below the stability limit.

One additional design component discussing the long term resolution of the stability concern was examined. After PJM Planning presented the current PJM Planning/Operations processes on the identification and correction of stability issues, the task force members were satisfied with the current processes and agreed to remove this design component.

3. Stakeholder Process Summary

The RLGCTF was chartered with the following responsibilities:

- Provide education on certain stability limitations that could cause generator output to be limited.
- Consider whether such provisions need to be made with the Tariff, Operating Agreement, and manual language that would modify compensation.

The RLGCTF Charter is attached via hyperlink in Appendix 1. These responsibilities were accomplished through several phases of the stakeholder process including education, proposal development, and decision-making during 12 task force meetings that took place from May 2012 thru November 2012.

The education phase continued throughout the meetings and included an overview of generator stability, an overview of reliability limits, differences between generator maximum facility output (MFO) and Capacity Interconnection Rights (CIR), and PJM transmission planning and operations for stability issues. During the early educational phase, PJM also discussed the frequency of these issues within the last 5 years being less then 1% of all outages within PJM, with approximately 18% of the 1% requiring a reduction day ahead. There is a potential for



any unplanned circumstances (ie. Tornadoes, snow storms, or other natural event, etc.) resulting in transmission outages to require a generator reduction due to stability concerns. These stability issues usually only affect one or two generators in the area.

The RLGCTF members participated in a formal interest identification, design component development, option development, and proposal package development process, including rounds of polling to ultimately agree to focus on the single design component. The RLGCTF reached a Tier 1 Consensus Package which is described in the report above.

4. Appendix I: Supplemental Documents

[RLGCTF Charter](#)

[Current PJM Process for Handling Stability Issues](#)

[Proposed OA/Tariff Changes](#)

[RLGCTF Options/Package Matrix](#)

Educational Presentations:

[PJM Stability Analysis Overview](#)

[Reliability and Stability of Transmission System](#)

[Maximum Facility Output vs. Capacity Interconnection Rights](#)

[Unit Stability Due to Transmission Outages](#)

[PJM Planning/Operations Stability Studies](#)

5. Appendix II: Stakeholder Participation

LAST	FIRST	COMPANY
Ainspan	Malcolm	Energy Curtailment Specialists, Inc.
Anders	David	PJM Interconnection
Applebaum	David	NextEra Energy Power Marketing, LLC
Batta	Michael	Virginia Electric & Power Company
Berner	Aaron	PJM Interconnection
Bolan	Martin	FirstEnergy Solutions Corp.
Bonner	Charles	Dominion Virginia Power
Brodbeck	John	Potomac Electric Power Company
Bryson	Mike	PJM Interconnection



Burner	Robert	Duke Energy Carolinas, LLC
Citrolo	John	PSEG Energy Resources and Trade, LLC
Dharmadhikari	Janhavi	Dominion Energy Marketing, Inc.
Dirani	Rami	PJM Interconnection
Dugan	Bill	Monitoring Analytics
Eichorn	Sarah	PJM Interconnection
Ellis	Jeff	Edison Mission Marketing and Trading, Inc.
Esposito	Patricia	NRG Power Marketing, LLC
Fabiano	Janell	PJM Interconnection
Fecho	Thomas	AEP Energy Partners, Inc.
Filomena	Guy	Customized Energy Solutions, Ltd.
Flaherty	Dale	Duquesne Light Company
Ford	Adrien	PJM Interconnection
Greening	Michele	PPL Energy Plus, LLC
Hamilton	T.L.	Platts
Hastings	David	DhastCo, LLC
Hebert	Damase	Covanta Energy Group, Inc.
Hoag	Richard	Allegheny Power (Warrior Run)
Hoatson	Tom	Riverside Generating, LLC
Horstmann	John	Dayton Power & Light Company (The)
Hyzinski	Thomas	PPL Energy Plus, LLC
Jennings	Ken	Duke Energy Business Service
LaFalce	Michael	Public Service Electric & Gas Company
Lieberman	Steven	Old Dominion Electric Cooperative
Lindeman	Tony	FirstEnergy Solutions Corp.
Luna	Joel	Monitoring Analytics
Mabry	David	McNees Wallace & Nurick LLC
Marton	David	FirstEnergy Corporation
Maucher	Andrea	Division of the Public Advocate of State of Delaware
Mccabe	Jim	PBF Power Marketing, LLC
McDonald	Steve	Customized Energy Solutions, Ltd.
Meekins	Alan	Virginia Electric and Power Company
Miller	Don	FirstEnergy Solutions Corporation
Norton	Chris	American Municipal Power, Inc.
O'Connell	Robert	JPMorgan Ventures Energy Corporation
Ondayko	Brock	Appalachian Power Company (AEP Generation)
Palcic	Ronald	FirstEnergy Solutions Corp.
Peterson	Mark	Virginia Electric and Power Company
Pratzon	David	GT Power Group
Reiter	Heather	PJM Interconnection
Riding	MQ	NAEA Ocean peaking Power, LLC



Schmitt	Jeff	PJM Interconnection
Schofield	William	Customized Energy Solutions, Inc.
Sechrist	Erin	PJM Interconnection
Siegrist	Hal	GenOn Energy Management, LLC
Sims	Mark	PJM Interconnection
Slade	Louis	Dominion Virginia Power
Souder	David	PJM Interconnection
Stadlmeyer	Rebecca	Exelon Generation Co., LLC
Tam	Simon	PJM Interconnection
Walker	Wes	Virginia Electric & Power Company
Walter	Laura	PJM Interconnection
Weber	Sharon	PPL Energy Plus, LLC
Weghorst	Bradley	PPL Energy Plus, LLC
Wisersky	Megan	Madison Gas & Electric Co.

6. Standing Committee Results

The Markets Implementation Committee (MIC) endorsed the proposal by acclamation with 37 against and 14 abstentions on December 12, 2012.