



Proposed FTR Credit Requirement Changes For Planned Transmission Upgrades

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- Transmission upgrades in congested areas may reduce congestion such that the FTR credit calculation using historical values might no longer provide adequate risk coverage for prevailing flow paths into those areas
- PJM is proposing a change to FTR credit requirements to reflect potential congestion changes from transmission upgrades

- PJM is proposing to use results from PJM's PROMOD model to modify FTR credit requirements
- Credit requirements would increase only for paths significantly impacted by planned transmission changes
- The fundamental credit calculation framework would not change
 - Only historic path values would be adjusted based on PROMOD results

- Separate PROMOD cases are used to simulate transmission upgrades for each year
- PJM would use both actual historical and PROMOD information in the credit requirements
 - Congestion changes between PROMOD cases applied to actual historical nodal values to create adjusted values
 - Reduces impact of slight variations in cases
- Historical LMP values (both actual and adjusted) used in credit calculations would be posted prior to auctions to allow members to calculate their own FTR credit requirements

- Credit requirements would be calculated using path values that consider both actual and adjusted historical LMPs
 - Adjusted path values would use adjusted LMPs but discard first 10% of difference from actual historical path values
 - 10% deduction ensures that credit requirements change only for paths with significant upgrades
 - Credit requirements for prevailing flow and counterflow FTRs paths would use path value (actual or adjusted) that gives the higher credit requirement
 - Other aspects of credit calculation unchanged
 - Including subsequent 10% adjustment of historical values

- No incremental credit exposure to the membership since new credit requirements would never be lower than current credit requirements
 - Credit requirements for members will increase if they bid on impacted paths and if bidding does not reflect change in expected congestion
- 10% deduction would let credit requirement changes:
 - Target only major network changes
 - Eliminate noise in simulation runs

- Proposed effective date Spring 2018
 - Use for annual LTFTR credit requirement update
 - Use for 2018-2019 annual auction
 - Use for 2019-2023 LTFTR auction
- Historical values would normally be adjusted once each spring
 - Just as they are now
 - Tariff would include provision to allow for additional adjustments for significant additional transmission changes



Example – Historical Value Adjustments Based on PROMOD Results

-3	-2	-1	0	1	2	3
CY 2015	CY 2016	CY 2017	FTR 18/19	FTR 19/20	FTR 20/21	FTR 21/22
Hist. 20%	Hist. 30%	Hist. 50%	Annual Auction	LTFTR Year 1	LTFTR Year 2	LTFTR Year 3
PROMOD Results:		\$20	\$19	\$16	\$16	\$14
PROMOD Congestion Change:			-5%	-10%	-20%	-40%
Deduction:			10%	10%	10%	10%
Used percentage change:			0%	0%	-10%	-30%
Actual (50/30/20) Path Value = \$25		Adj. Values* =	\$25	\$25	\$22.50	\$17.50
Prevailing flow paths use:			\$25	\$25	\$22.50	\$17.50
Counterflow paths use:			\$25	\$25	\$25	\$25

Proposed adjusted historical values for all FTR years (years 0 through 3) would use PROMOD percent changes from the Year “-1” case and apply changes above deduction to the actual 50/30/20 historical values

Example – Impact of Bidding on Credit Requirements

	Bidding Does Not Consider Transmission Change * ¹	Bidding Does Consider Transmission Change * ²
Path Type	Prevailing Flow	Prevailing Flow
Historical Path Value	50	50
"Expected" Path Value <small>Reduced due to transmission change</small>	20	20
Price	40	15
Profit (Loss) at Historical Value	10	35
Profit (Loss) at Expected Value	(20)	5
Current Credit Requirement	0	0
Proposed Credit Requirement	22	0

- Transmission change reduces expected path value
 - *¹ price considers transmission change
 - No change to credit requirement
 - *² price considers only historical value
 - FTR would incur a net loss exceeding current credit requirement
 - Proposed credit requirement would cover loss