



# Fuel Cost Policy Enhancements PJM Primary and Alternate Proposals

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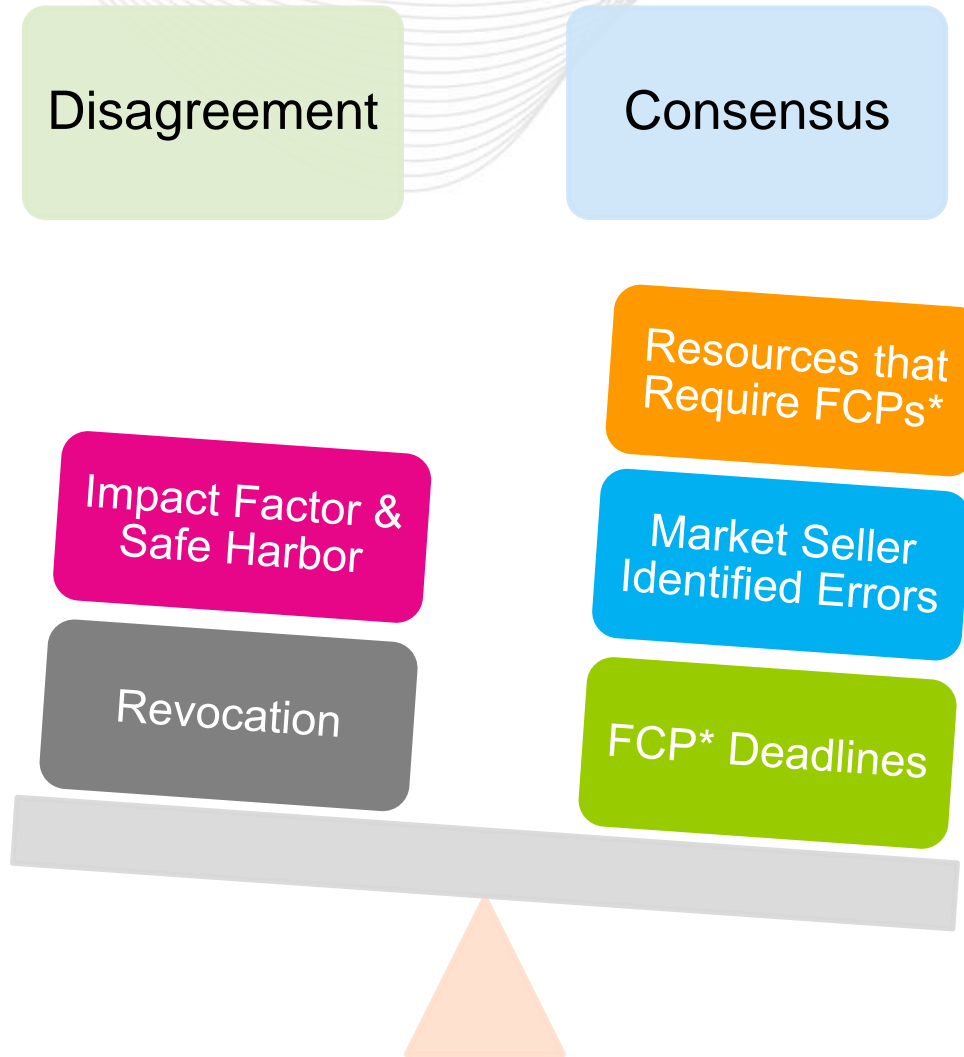
November 13, 2019

**Alleviate the administrative burden of the Annual Review**

**Reevaluate penalty structure for non-compliant cost-based offer**

**Determine if there is a better way to address mitigated offers**

# PJM Primary Package Focuses on Consensus



\*Fuel Cost Policy (FCP)

A green circle with a white center, connected to a green line that extends upwards and to the left.

Annual Review Modifications

A blue circle with a white center, connected to a blue line that extends upwards and to the left.

Fuel Cost Policies for Non-Zero Resources

An orange circle with a white center, connected to an orange line that extends upwards and to the left.

Submission & Review Deadlines

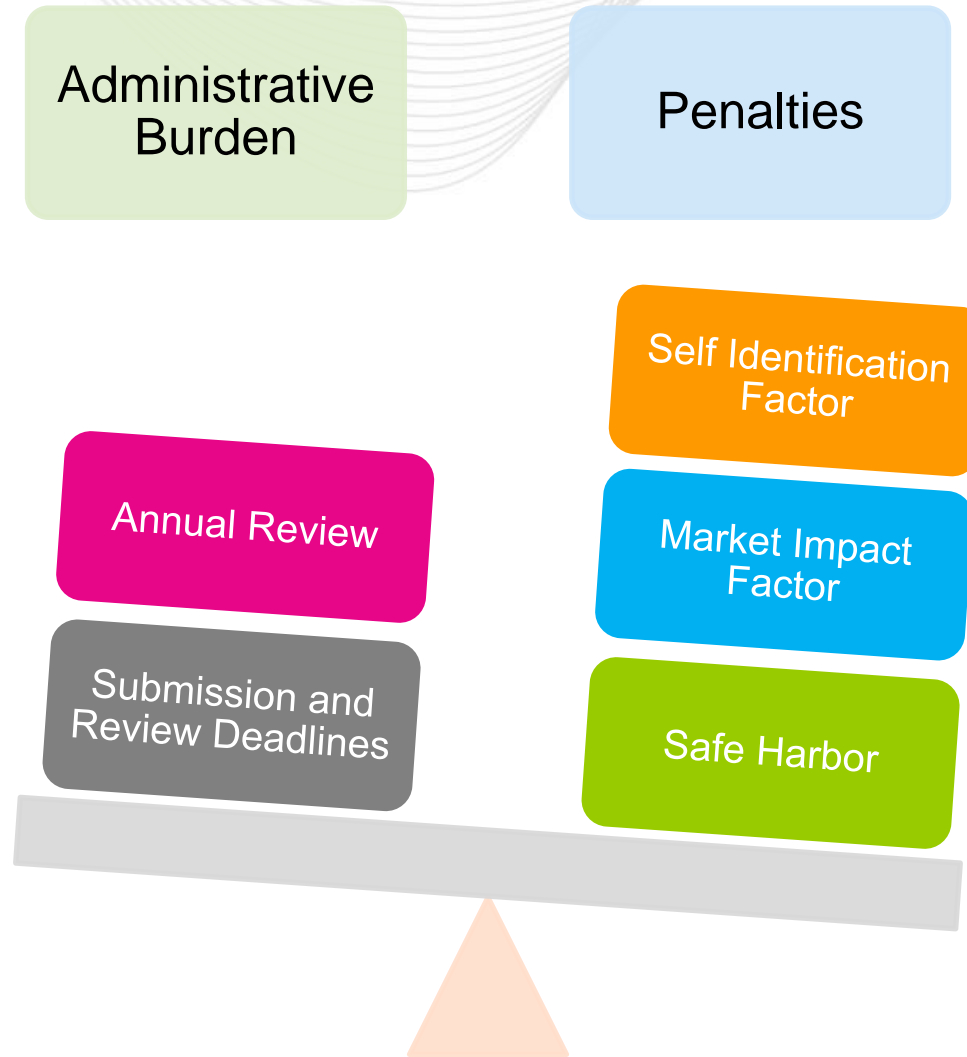
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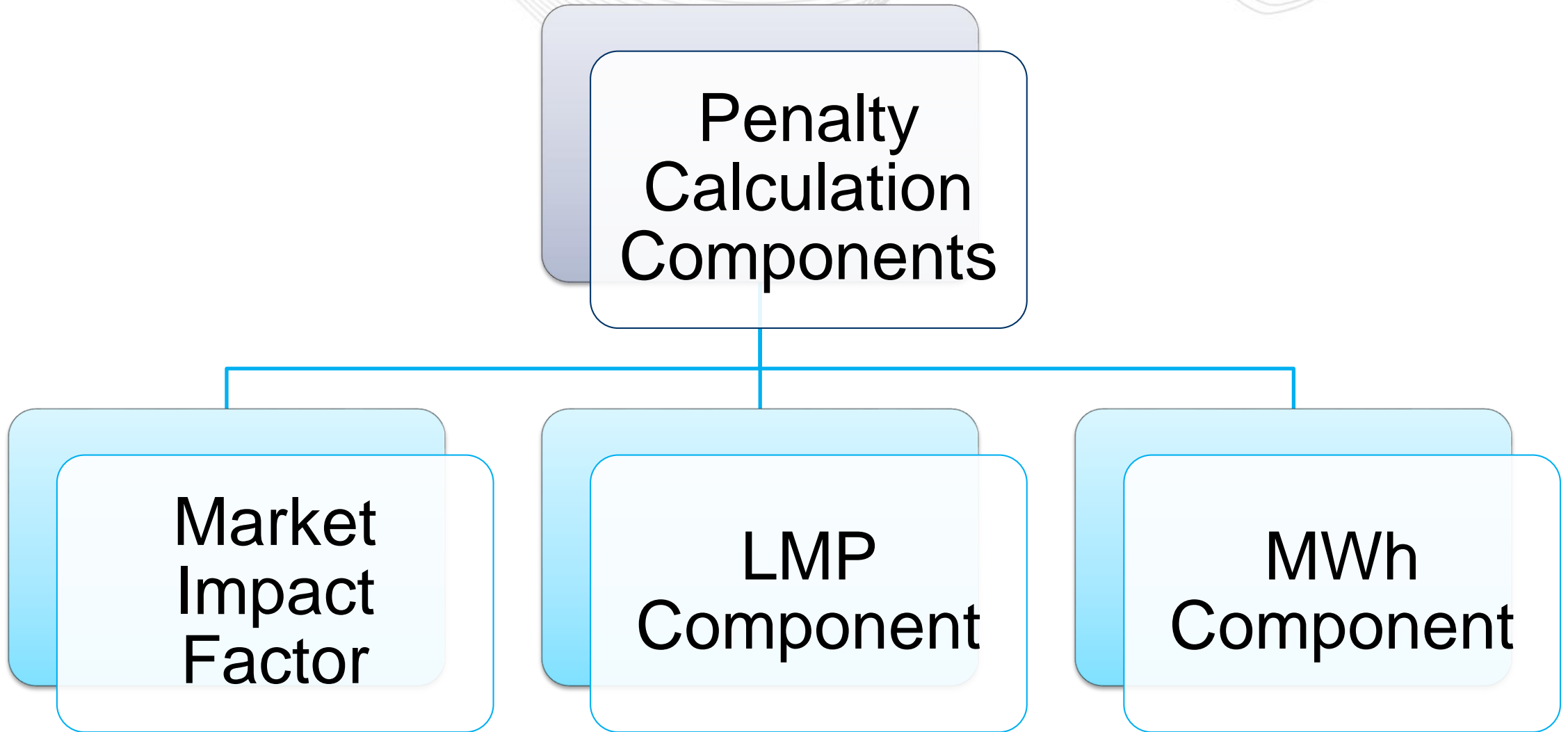
Market Seller Identified Error Factor

- Annual Review Modifications
  - Market Sellers who extend approved Fuel Cost Policies (FCP) will automatically be approved for next policy year
  - Ensures Market Sellers are keeping policies current
- Fuel Cost Policies for Resources with Non-Zero Cost Offers
  - Units without approved policies will be required to submit \$0 for cost offer
  - Status quo requires all units to have an approved FCP, even if offering zero

- **Submission and Review Deadlines**
  - Remove FCP deadlines for Market Sellers
    - Keep 90 day provisional policy for new & transferred units
  - Established PJM/IMM review timeline
    - IMM review 10 business days
    - PJM review 20 business days after IMM
- **Market Seller Identified Error Factor**
  - 50% reduction in penalty
  - No further changes to penalty calculation

# PJM's Understanding of Stakeholder Priorities







## Package Includes:

- Same components as PJM Primary
  - FCP process
    - i.e. annual review modifications, deadlines, units requiring policies
  - Market Seller Identified Error Factor
- PJM Alternate package additions
  - LMP & MWh components of penalty calculation
    - Average hourly LMP & available MWh across entire duration of incorrect offer

## Package Includes:

- Impact Factor

- Impact Factor = 1 when any of the three occur :

- unit clears in DA or runs in RT on cost-based offer

OR:

- Unit fails TPS test

OR:

- Incremental or composite offer is greater than \$1,000/MWh

- Else, Impact Factor = 0.1 for only one day, then it defaults to 1 if error is not corrected

## Does Not Include:

- Safe Harbor
  - Creates incentive to provide less detailed policies
    - PJM works with Market Sellers during Annual Review to address illiquid scenarios
- Revocation
  - Concern with 90 day implementation timeline
    - Would allow for bad offer to continue to be submitted

## Does Not Include:

- Evaluation Period for Penalty Calculation
  - Last day of incorrect offer for:
    - Calculating LMP component
    - Determining if penalty reduction should apply
- Temporary Fuel Cost Policies
  - Status quo allows for policy to be submitted with just heat rate and pricing hub



# Penalty Calculation Example

Package	Day1	Day2	Day3	Day4	Day5
<b>Available MW Utilized</b>	<b>Available MW</b>	<b>Available MW</b>	<b>Available MW</b>	<b>Available MW</b>	<b>Available MW</b>
Status Quo/PJM Primary					<b>X</b>
Joint Stakeholder	Average MW across period of invalid offer				
IMM	Average MW across period of invalid offer				
PJM Alternate	Average MW across period of invalid offer				
<b>LMP Utilized (Average)</b>	<b>LMP</b>	<b>LMP</b>	<b>LMP</b>	<b>LMP</b>	<b>LMP</b>
Status Quo/PJM Primary					<b>X</b>
Joint Stakeholder					<b>X</b>
IMM	Average LMP across period of invalid offer				
PJM Alternate	Average LMP across period of invalid offer				
<b>Evaluation Period</b>	<b>Market Impact</b>	<b>Market Impact</b>	<b>Market Impact</b>	<b>Market Impact</b>	<b>NO Market Impact</b>
Status Quo/PJM Primary	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Joint Stakeholder					<b>X</b>
IMM	Market Impact evaluated over the length of invalid offer				
PJM Alternate	Market Impact evaluated over the length of invalid offer				

Status Quo	PJM Primary	PJM Alternate
No MS Identified Error Factor	Market Seller (MS) Identified Error Factor	
No Impact Factor	$.10 \geq \text{Impact Factor} \leq 1$	
Continue Annual Review		

# Appendix

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
100 MW	100 MW	100 MW	100 MW	100 MW	100 MW	100 MW	100 MW	100 MW	30 MW
\$20	\$20	\$20	\$20	\$20	\$10	\$10	\$10	\$10	\$10
Market Impact	Market Impact	Market Impact	Market Impact	Market Impact	Market Impact	Market Impact	Market Impact	Market Impact	NO Market Impact

## Joint Stakeholder Package

LMP = On last day of invalid offer = \$10  
 MW = Average across period of invalid offer = 93  
 Market Impact Factor based on last day of offer = 0.1  
 Self identified Factor = .25  
 Penalty =  $(93 \times \$10 \times 0.1 \times .25) / 20 = \$1.16$

## PJM Alternate Package

LMP = Average across period of invalid offer = \$15  
 MW = Average across period of invalid offer = 93  
 Market Impact = 1 (market impact anytime during period)  
 Self identified Factor = .5  
 Penalty =  $(93 \times \$15 \times 1 \times .5) / 20 = \$11.62$

## Status Quo

LMP = On last day of invalid offer = \$10  
 MW = On last day of invalid offer = 30  
 Market Impact = 1 (N/A)  
 Self identified Factor = 1 (N/A)  
 Penalty =  $(30 \times \$10 \times 1 \times 1) / 20 = \$1.50$

Assume notification of penalty is made after error is corrected.  
 Only 1 hour shown for simplification



Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
100 MW	100 MW	100 MW	100 MW	100 MW	100 MW	100 MW	100 MW	100 MW	30 MW
\$20	\$20	\$20	\$20	\$20	\$10	\$10	\$10	\$10	\$300
Market Impact	Market Impact	Market Impact	Market Impact	Market Impact	Market Impact	Market Impact	Market Impact	Market Impact	NO Market Impact

## Joint Stakeholder Package

LMP = On last day of invalid offer = \$300  
 MW = Average across period of invalid offer = 93  
 Market Impact Factor based on last day of offer = 0.1  
 Self identified Factor = .25  
 Penalty =  $(93 \times \$300 \times 0.1 \times .25) / 20 = \$34.88$

## PJM Alternate Package

LMP = Average across period of invalid offer = \$44  
 MW = Average across period of invalid offer = 93  
 Market Impact = 1 (market impact anytime during period)  
 Self identified Factor = .5  
 Penalty =  $(93 \times \$44 \times 1 \times .5) / 20 = \$102.3$

## Status Quo

LMP = On last day of invalid offer = \$300  
 MW = On last day of invalid offer = 30  
 Market Impact = 1 (N/A)  
 Self identified Factor = 1 (N/A)  
 Penalty =  $(30 \times \$300 \times 1 \times 1) / 20 = \$450$

Assume notification of penalty is made after error is corrected.  
 Only 1 hour shown for simplification

# Penalties Issued April 2017- August 2019

