Joint and Common Market

4. A - FIRM FLOW ENTITLEMENT (FFE) BASICS
• Traditional TLR Process
• Development of Market-Based Operating Entity and their expansion
  - Reduced Data and Loss of Granularity
• Congestion Management Process
  - Market Flows
  - Historic Firm Flows
  - Flowgate Allocations
  - Firm Flow Entitlements
• **Historic Firm Flows** are the Firm Flows that would have occurred if all Control Areas maintained their historic configuration and continued to serve their native load and import/export energy.

• **Flowgate Allocation** refers to splitting up the Flowgate capacity among all the impacting entities based on the Historic Firm Flows.
Flowgate allocation reflects an entity’s firm rights based on historical usage.

Firm Flow Entitlements captures an entities entitled usage during congestion based on net scheduled use of transmission service.

Or

Firm Flow Entitlements reflect firm limit on the net market flows that a market entity can have for a Reciprocal Flowgate.
Flowgate Rating = 1200

<table>
<thead>
<tr>
<th>Flowgate Allocations</th>
<th>Allocation</th>
<th>Firm PTP Schedule Impacts</th>
<th>Firm Flow Entitlements</th>
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<tr>
<td>MISO 400</td>
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<td>PJM 500</td>
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<tr>
<td>Other Entities 300</td>
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<td>200</td>
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*Note: Actual calculation uses directional values. FFE is derived from a combination of forward and reverse allocations and flows.
FFE CALCULATIONS AND APPLICATIONS

• FFEs are calculated in Real-Time every 15 minutes using:
  - Daily Allocation values
  - Hourly Historical Gen-to-Load Impacts
  - Firm Schedule impacts

• 15 minute FFE values are integrated into Hourly FFE values and used in Market-to-Market (M2M) Settlements.

• FFEs are also used as limits in Forward Processes
  - Day-Ahead
  - FTR
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