PJM Uplift Proposals
• Phase 1
  – Package A
    • Keep DA OR
    • Make LOC changes
  – Package B
    • Remove DA OR and make whole based on actual operating costs
    • Make same LOC changes
  – PJM is dropping package B
    • Very similar to IMM proposal. PJM can support the IMM’s proposal should the members want to move forward with it.
• **Phase 2**
  
  - **Package G will be dropped**
    - Package G goes with Package B which PJM is also dropping
    - PJM can support the IMM allocation that removes DA OR should members support the removal of it in Phase 1.
      - May need to work on 2x allocation to UTCs
  
  - **Package H (tweaks to current allocation) will remain**
    - Include UTC as a DA vs. RT deviation (1x)
    - Allocate hourly LOC and make whole charges to loads
      - Not including CT LOC
    - Eliminate IBT netting
Common Themes From Poll (> 60% support)

- The fee for uplift should be variable (76%)
- Retain the concept of DA vs. RT deviations (75%)
- Keep the deviations and reliability buckets (72%)
- Allow some type of supply and demand netting (96%)

- Allow wheel transactions to net (63%)
- Treat UTCs as one transactions using the same rate (61% - 62%)
- Uplift rate should be regional or zonal, not RTO-wide (63%)
Netting Discussion Questions

• Should physical and virtual be able to net?
  – Ex., physical generator netted against virtual demand

• At what level of granularity should different things net?
  – Power balance is solved system-wide
  – Transmission flows are solved nodally

• How broadly?
  – Single participant
  – Corporate affiliates

• The more netting that is permitted the smaller the denominator becomes and the higher and more volatile the rate becomes. Is that desirable?
• Current model does not recognize the impacts of different types of deviations which makes netting difficult to bolt on

• Assume zonal level netting…
  – A UTC across a transmission constraint whose source and sink are in the same zone would net out and not receive a charge even though it impacted dispatch and potentially commitment
  – On an unconstrained system, an INC and a DEC in adjacent zones would not net out even though they should since they had no impact on power balance or congestion

• Netting more broadly fixes the INC/DEC issue but magnifies the UTC problem
• The MISO model splits these apart into power balance and transmission flow deviations
  – Power balance nets on a system-wide basis
  – Transmission flows net nodally
• MISO model relies heavily on distribution factors and flow contributions to allocate uplift on an hourly basis
  – FERC approved model
  – Significant increase in allocation complexity
  – Rate cutoffs
  – More precise…but is it accurate if causality is the goal?
• Are we willing to tackle this significant of a change?
• DA Uplift (No change from today)
  – Allocate system-wide to DA withdrawals
    • Cleared Demand, Price-sensitive demand, DECs, Exports
    • No netting
• RT Uplift (not related to conservative operations)
  – Allocate uplift costs for resources NOT committed for transmission via a power imbalance charge
    • System-wide net energy position in DA versus net energy position in RT
  – Allocate uplift costs for resources committed for transmission via a transmission imbalance charge
    • Demand and supply deviations netted nodally
    • UTCs are both a supply and demand transaction and therefore would receive an allocation for each end
• Generators deemed to be not following dispatch based on today’s metrics will be assessed both a power and transmission imbalance charge
• Wheel transactions and UTCs would receive a transmission imbalance for the source and sink but not a power imbalance charge
• Reactive and Blackstart allocations remain the same
• LOC for reliability reductions allocated same as reactive
• Remove netting of IBTs
• Congestion denominator is the largest as it includes all DA to RT deviations netted nodally and generator deviations in RT.

<table>
<thead>
<tr>
<th>Allocation</th>
<th>Total Dollars Allocated</th>
<th>% of Total</th>
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<tbody>
<tr>
<td>2013</td>
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<td></td>
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<tr>
<td>Power Balance</td>
<td>$51,319,296</td>
<td>17.4%</td>
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<tr>
<td>BOR to Units That Cleared DA</td>
<td>$59,518,595</td>
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<tr>
<td>Congestion</td>
<td>$171,427,608</td>
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<td>Reliability (RT Load + RT Exports)</td>
<td>$12,688,582</td>
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<td>$294,954,081</td>
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<td>2014</td>
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<tr>
<td>Power Balance</td>
<td>$83,307,612</td>
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<tr>
<td>BOR to Units That Cleared DA</td>
<td>$50,735,803</td>
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<tr>
<td>Congestion</td>
<td>$127,199,203</td>
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<tr>
<td>Reliability (RT Load + RT Exports)</td>
<td>$366,018,158</td>
<td>58.4%</td>
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<tr>
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<td>$627,260,775</td>
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• Current DA uplift allocation is to DA withdrawals
• ERPIV approved changes to commit long lead time units in the DA market
  – If the units were previously called on in RT only for transmission-related issues or to meet load + reserves, their uplift costs were allocated to deviations
    • Now a portion if not all of their uplift is allocated to DA withdrawals
  – If the units were previously called on for conservative operations, their uplift costs were allocated to RT load
    • Now a portion if not all of their uplift is allocated to DA withdrawals
• This will significantly reduce the reliability bucket in favor of DA uplift.