The PJM ARR/FTR Design: LEI and IMM Observations

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LEI: The Purpose of the ARR/FTR Design

- **Based on a review of the history of ARR/FTRs LEI concludes that the purpose of the ARR/FTR construct is to:**
  - **Return congestion (caused by LMPs) to load (at 3,5)**
    - Congestion is the surplus caused by differences in LMP in a transmission constrained system.
    - Load should get congestion back to in order to get market results similar to pre-LMP market.
    - Load should get congestion returned because load pays for the transmission system and pays congestion charges.
  - **Supports self supply and bilateral supply (at 4,5,10,14-16)**
    - Path specific product allows price discovery and supports secondary market activity.

IMM: The Purpose of the ARR/FTR Design

- **Based on a review of the history of ARR/FTRs the purpose of the ARR/FTR construct is to:**
  - **Return congestion (caused by LMPs) to load**
    - Congestion is the surplus is caused by differences in LMP in a transmission constrained system.
    - Load should get the congestion back because load pays the congestion and because load pays for the transmission system.
  - **Supports self supply and bilateral supply**
    - If congestion is returned to load, this result follows
      - **Do not need path based FTRs to get this result**
    - Price discovery is dependent on well defined property rights
      - **There is an issue with the assignment of rights**

LEI: Is the ARR/FTR Design Working?

- **LEI: the current ARR/FTR construct is working reasonably well, but it could be improved (7, 8, 11-14, 17-19, 56, 85)**
  - **Load cannot claim all the congestion paid (at 58)**
  - **Limited ability of load to participate as the supply side in the ARR/FTR construct**
    - **Cannot set reserve prices**
    - **Binary sell decisions**
  - **Profits by third party purchaser of FTRs**
  - **ARR holders cannot claim all FTR paths, misalignment of rights relative to network use**

LEI: Improving the ARR/FTR Design

- **LEI: To correct for the misalignments of rights and unclaimed paths(22-23, 111)**
  - **Align source and points more in line with actual network use by ARR holders**
  - **Expand eligible source points to include all point available to FTR paths**
- **LEI: To improve the value of the ARR rights (at 22, 111-112) give ARR holders more control over how the rights are sold:**
  - **Introduce seasonal, monthly and/or peak and off peak ARR**
  - **Allow ARR reserve prices on the ARR paths in the FTR auctions**

IMM: Is the ARR/FTR Design Working?

- **IMM: The failure to return congestion to load is caused by a misalignment of ARR path based rights relative to actual congestion paid.**
- **IMM: Path based congestion rights cannot be modified such that actual congestion is returned to load.**
- **IMM: Path based rights are a premarket concept that cannot match actual congestion in a dynamic network.**
- **IMM: Recognize load's right to congestion based on actual network use**

IMM: Improving the ARR/FTR Design

- **IMM: The ARR/FTR design inappropriately limits the ability of load to participate as the supply side of the FTR market.**
- **The ARR/FTR design provides the load the option to swap a variable payment based on congestion for a fixed payment.**
- **Load should have the ability to retain or sell their rights to congestion.**
- **Load should have the ability to set prices for the sale of their rights to congestion.**

Benefits of Network Based Rights

- **A network based congestion right would return congestion paid back to the load that paid it.**
  - **Perfect alignment of actual network use and congestion rights**
  - **The network right is a perfect hedge of actual congestion.**
  - **Load has the rights to all the congestion paid by load, on a locational basis.**
  - **No leakage and no cross subsidies**
  - **No need to undersell the system to guarantee funding**

Benefits of Network Based Rights

- **Reduced risk of default relative to current construct**
  - **Congestion revenues always available**
- **No underfunding**
- **No cross subsidies**
- **No negative rights**
  - **Congestion is never negative**

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