

ITS Alternative MP Based Method

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Basics of the Younger-Scheidrich Proposal

- **Intra-hour Transactions (IT)**
 - ITs are 30 minute notice price takers in the participating markets.
 - Each IT is of 15 minutes duration.
 - ITs are feasible in an environment where desired flow is determined by a means (such as price convergence logic) other than hourly transactions competing based upon priced energy offers because ITs destroy the economics of the hourly real-time scheduling process. If we schedule hourly transactions based on offer prices and upon expected prices determined by a level of supply and demand then substantially increase supply or demand through intra-hour transactions, we will have distorted the financial basis for the hourly transaction scheduling. This applies to real-time hourly transactions not DA transactions that will have been settled at DAM prices.
 - ITs are offered with a:
 - Designated direction of flow
 - \$/MW indicating desire to flow (not an indication of energy price sensitivity). According to the submitted proposal, the per MW \$bids indicate only a desire to flow, are not used to determine the price of energy at the proxy and we will simply choose the number of megawatts of flow needed to move as close as possible to equalized proxy prices given the directional MW available from MP bids. The Bid values are not utilized to set prices simply to give the ISOs a means to establish bid priorities for the privilege of flowing and settling at RT prices. As proposed, there is not yet a description of what to do with the money paid by the successful bidders for the privilege of flowing. (What happens to the money?)
 - MW indicates “up to” flow limit if chosen by the ISOs This means that all or a portion of the number of MW bid can be selected to flow for the period offered. If they were the marginal IT and we only needed a portion of their offer to equalize prices then we would only schedule a portion. If they were infra-marginal we would schedule all of it.
- **Process implied by the Younger-Scheidrich Proposal**
 - ISOs receive and stack in economic order by direction ITs of (15?) minute periodicity submitted by MPs at least 30 minutes before the target period.
 - ISOs schedule DAM hourly transactions per the current hourly process. (Is price sensitive Ham bidding still practical?)
 - Each 15 minutes – ITS software will:
 1. Compute the amount and direction of energy flow incremental to hourly scheduled flow necessary to level prices during each 15 minute period for the next 15 minute segment starting at t+30

minutes. (recommended flow levels will respect all reliability and ramp constraints)

2. Select in decreasing price order from the ITs bid in for that period and for the desired incremental flow direction, the amount of energy offered up to the amount determined in step 1 for the target 15 minute period(s) beginning at T+30. (T = the starting minute of the 15 minute period in which the ITS software is running)
 - Flows will be automatically (or by operator permissive means) adjusted each $\frac{1}{4}$ hour reflecting the flows determined by the ITS scheduling process.
- **MPs will settle ITs** scheduled by the ITS
 - at the actual real-time prices at the respective proxy buses.
 - ITs will pay all applicable export charges
 - ITs will pay the scheduling fee (determined by the marginal IT bid price) for each MW scheduled.

Issues – A starter list

1. ITS transactions scheduled after the normal hourly economic RTC scheduling process will alter the economics of the hourly evaluation. This may create circumstances where the hourly transactions scheduled will lose money as a result of ITS transaction schedules.
Today, all scheduling is economic and as such can be said to benefit load. Conditions that cause substantial RT shifts in proxy prices are generally due to system events and when they occur will result in a BPCG payment to the transmission customer.
 - Will these trades still benefit load and should the BPCG remain in place for imports at borders employing an ITS methodology?
 - Are hourly economically evaluated transactions even practical in such an environment?
2. What happens to the money collected from the successful ITs?
3. Under what circumstances would ISO to ISO (VRD like) transactions be scheduled?
 - When insufficient ITs exist to equilibrate prices.
 - When needed to supplement available ITs at a level sufficient to ensure that net flow is intuitive and inter-proxy price differential is within some tolerance.
 - Never.
 - Other.Choosing an alternative that will not equilibrate prices will ensure that the Alternate ITS solution is inferior to the VRD solution with regard to economic efficiency.
4. What should be the expected duration of an individual IT?
 - 15 Minutes
 - 30 Minutes – to allow for ramp time
 - Other
5. What should be the priority of IT transactions relative to hourly transactions?
 - With regard to curtailment in-hour?
 - With regard to hourly transaction scheduling? Depending upon IT scheduling frequency and duration this may be a non-issue. For instance, if all ITs were 30 Minutes in duration and IT start and stop times were the top and bottom of the hour, this problem would not occur and hourly scheduling would occur as it does now without regard for the expected ITs. This of course means that the hourly scheduling would NOT evaluate based upon an expected leveling of prices.
6. We must therefore determine to what degree we are going to enforce price leveling.
7. For how many periods (IT transaction minimum duration) forward should the scheduling of ITs be examined?

