Proposed Operating Parameter Definitions

Jeff Schmitt
Manager, Market Analysis
Market Implementation Committee
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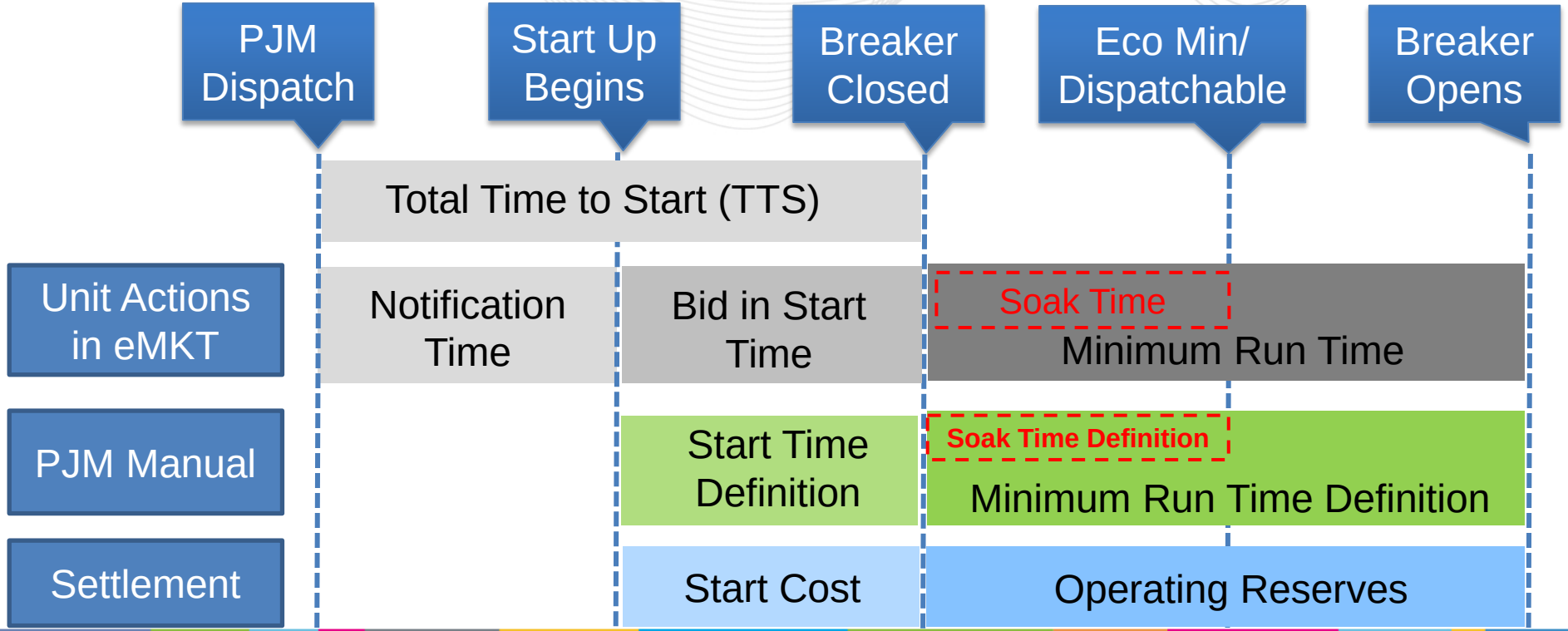
Why are we discussing?

A number of operating parameters that are only defined in the eMKT/Markets Gateway User's Guide have led to confusion among the members on what values should be entered into eMKT/Markets Gateway. PJM has also identified a few terms in Manual 15 that could be clarified.

List of Parameters

Parameter	Current Location	Likely Location
Soak Time (proposed new parameter)	New	M-11/15
Start-up Time	User Guide	M-11
Minimum Run Time	User Guide	M-11
Turn Down Ratio	User Guide	M-11
Minimum Down Time	New/User Guide	M-11
Maximum Daily Starts	User Guide	M-11
Maximum Weekly Starts	User Guide	M-11
Maximum Run Time	User Guide	M-11
Notification Time	User Guide	M-11
Cancellation fees (cancellation credit)	M-11/28	M-11/15
Start-up cost	M-15	M-15
No-load cost	M-15	M-15

Proposed Operating Parameter Relationship



Proposed Notification Time Definition

- Cold/Warm/Hot Notification Time (hour) — *The time interval between PJM notification and the beginning of the start sequence of a generating unit that is currently in its cold/warm/hot temperature state.*

Proposed Startup Time Definition

- Cold/Warm/Hot Startup Time (hour) — *The time interval, measured in hours, from the beginning of the start sequence to the generator breaker closure for a generating unit in its cold/warm/hot temperature state. For a Combined Cycle unit it is the time interval from the beginning of the start sequence to steam turbine generator breaker closure.*

Proposed Soak Time Definition

- Soak Time (hour) — *The minimum number of hours a unit must run, in real-time operations, from the time of generator breaker closure to the time the unit is at economic minimum or dispatch-able.*

Proposed Minimum Run Time Definition

- Minimum Run Time (hour) — *The minimum number of hours a unit must run, in real-time operations, from the time of generator breaker closure to the time of generator breaker opening (as measured by PJM's state estimator). For Combined Cycle units this is the time period between the first combustion turbine generator breaker closure and the steam turbine generator breaker opening.*

Proposed Maximum Run Time Definition

- Maximum Run Time (hour) — *The maximum number of hours a unit can run before it needs to be shut down, calculated as difference between the time of generator breaker closure to the time of generator breaker opening.*

User Guide Proposed Minimum Down Time Definition

- Minimum Down Time (hour) — *The minimum number of hours between unit shutdown and unit startup, calculated as the shortest time difference between the unit's generator breaker opening and the unit's generator breaker closure, as measured by telemetry available to PJM. For Combined Cycles units this is the minimum number of hours between steam turbine generator breaker opening and steam turbine generator closure.*

OC Proposed Minimum Down Time Definition

- Minimum Down Time (hour) —*The down time following a shutdown that may be needed for inspecting and securing equipment to ready the plant for a subsequent startup.*

Proposed Turn Down Ratio Definition

- Turn Down Ratio — *The ratio of a unit's economic maximum MW to its economic minimum MW. (Manual 11 section 2.3.4)*

Proposed Maximum Daily Starts Definition

- Maximum Daily Starts — *The maximum number of times that a unit can be started in a day under normal operating conditions.*

Proposed Maximum Weekly Starts Definition

- Maximum Weekly Starts — *The maximum number of times that a unit can be started in one week under normal operating conditions (168 hour period starting Monday 0001 hour).*

Proposed Cancellation Fees Definition

- Cancellation Fees ($) — *The actual costs incurred by a Market Seller, that are typically included in Start-up Costs, when PJM cancels a pool-scheduled generation resource's start and the resource has not yet synchronized to the grid. Cancellation Fees shall be capped at the appropriate Start-up Cost for the resource as specified in its offer data.*

**Referenced in M-11 and M-28 as "cancellation credit" and "cancellation fees"*

Proposed Start-up Costs Definition

- Start-up Costs ($) — *The costs incurred by a Market Seller to bring the boiler, turbine, and generator from shut-down conditions to the point of breaker closure and synchronization to the Transmission System and is determined based on the cost of start fuel, total fuel-related cost, performance factor, electrical costs (station service), start maintenance adder, and additional labor cost if required above normal station manning.*

Proposed No-load Costs Definition

- No-load Costs ($/hour) — *The hourly fixed cost of a Market Seller, expressed in $/hour, needed to create the starting point of a monotonically increasing incremental cost curve (offer curve) for a generating unit.*