

Dual Dispatch Pricing

The dual dispatch was implemented in SCD to solve the problems caused by the block loading of uneconomic and marginal GT units in the physical dispatch and their impact on the physical dispatch of the flexible resources on the system. When uneconomic GTs are blocked on in the physical dispatch flexible resources are backed down so that generation and load continue to balance. Sometimes the flexible resources are backed down so far that in the subsequent dispatches they are unable to reach the pricing dispatch level the unit reached in the previous pricing dispatch

e.g., a 300 MW unit actually generating at 150 with a 2 MW/minute ramp rate can be dispatched in SCD anywhere between 140 MW ($150 - (5 \text{ minutes} * 2)$) and 160 MW ($150 + (5 \text{ minutes} * 2)$). If all 300 MW of the unit are in merit the pricing dispatch will attempt to ramp the unit up as fast as possible and will use a 160 MW basepoint in the price setting or ideal dispatch. If this steam unit is the most expensive flexible capacity online and there is 20 MW of uneconomic GT capacity that needs to be blocked on, the final basepoint actually communicated to the unit would be 140 MW ($160 - 20$). In the next dispatch the limits on this steam unit would be set at 130 ($140 - (5 * 2)$) and 150 ($140 + (5*2)$). In a period of increasing prices this economic steam unit is unable to contribute additional MW to the dispatch and in this case is forced to reduce its output.

The dual dispatch instead allows the limits for flexible units backed down because of block loaded GTs to be set from the previous pricing or ideal dispatch basepoint rather than the previous final basepoint communicated to the unit.

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We plan to implement dual dispatch pricing in RTC, RTD and RTD-CAM.

Hybrid Pricing

The hybrid pricing approach was implemented to ensure that the capacity of online, uneconomic, minimum run-time constrained gas turbines was blocked on in the pricing dispatch that sets real-time settlement energy prices.

The key element of hybrid pricing is the two pricing dispatches.

The first pricing dispatch consists of a least cost dispatch that treats all GTs as flexible regardless of their minimum runtime status.

The second pricing dispatch consists of a least cost dispatch that blocks on at maximum capacity any minimum run-time constrained GTs identified as uneconomic in the first pricing dispatch and calculates prices with all other on-line or dispatchable GTs treated as flexible.

We plan to implement hybrid pricing in RTC, RTD and RTD-CAM.