

Minimum Run Times and Reliability

Background

The NYISO market rules state that minimum run time is honored within a 24-hour evaluation period but requirements across midnight are not recognized. This requirement is due to the design of the SCUC program, which commits resources for a one day time period. The bid production cost guarantee is a supplemental payment that is made to generators that were committed by the ISO when their revenues do not exceed their bid cost. This guarantee, as well as minimum run time, expires at midnight. A large generator with a long startup time and a 24 hour minimum run time that receives a day ahead contract beginning at 1200, is only guaranteed for ½ of its required min run time. If the generator is not accepted in the next day ahead market, the unit must “self schedule” to meet its minimum run time and be at the risk of the real time market LBMP. The unit can also choose to shut down and suffer the additional O&M costs and risks associated with “cycling”. Although the direct costs associated with unit cycling are the responsibility of the generation owner, the risks associated with cycling are ultimately a reliability concern for the NYISO.

ISO-NE

There are no minimum run time restrictions. A generator is not eligible for uplift if the sum of the minimum run time and minimum down time exceeds 24 hours unless it can be proven to be the physical limits of the generation unit by historical data. If so, the generator receives the higher of its bid or the clearing price.

Conclusion

Cycling has been shown to increase a unit's forced outage rate, which ultimately will affect the reliability of the NYCA. While the PJM ISO currently has a 24-hour minimum run time in place, it, too, will experience the same reliability problems as the result of this rule. In addition, ISO-NE has no minimum run time restrictions. Thus, accordingly, the SCUC software should be modified to allow the NYISO minimum run time market rules to be adjusted to increase the reliability of the NYCA. The proposed change in the day ahead market closing and posting times will increase the minimum run time problem causing more units to cycle. The minimum run time restrictions should be eliminated prior to a change in the posting and closing time of the day ahead market.