LFL-37

“Consider forecasting impacts of LFL co-locating with Generation Resources.”

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Large flexible loads are often co-locating with generation resources, including natural gas, wind, and solar facilities behind the meter. We will also consider the case of co-location with nuclear in this answer.

In many the instance of a natural gas facility, the generator doesn’t need to be forecast; instead the offer curve may change. For example, the generator’s short run marginal costs involve either producing power by burning natural gas, or potentially buying back energy from the co-located load to sell into the market at a higher price, effectively increasing the marginal cost per megawatt hour for the generator. For example, it is possible that a natural gas generator may have a call option to buy back its own energy at $250/MWh, because the load may be willing to be paid $250 from the generator instead of mining Bitcoin. In this case, the generator’s offer curve might reflect this cost. Mitigated offer curves and the Verifiable Cost Manual may have to be updated to reflect this change.

For wind and solar, the QSE should update the HSL to reflect not just the short term wind or solar forecast, but also the expected consumption of the load, over the 168-hour period included in COP statuses. Over time, ERCOT may want to develop its own price forecast for operations to better forecast this condition.

For nuclear, consider that a large flexible load behind the meter can give the generator an ability to “ramp down” to respond to net load conditions. While normally the generator may prefer to operate at full output, grid conditions may warrant curtailment in the future. Given the general desire to not ramp nuclear units up and down, a behind the meter flexible load can make an inflexible, non-dispatchable generator become dispatchable.