**4CP/DC Tie Protocol References**

***9.17.1 Billing Determinant Data Elements***

(2) Average 4-CP is defined as the average Settlement Interval coincidental MW peak occurring during the months of June, July, August, and September.

(3) Settlement Interval coincidental MW peak is defined as the highest monthly 15-minute MW peak for the entire ERCOT Transmission Grid as captured by the ERCOT Settlement system, excluding Block Load Transfer (BLT) of Load to the ERCOT Control Area that are not reflected in a Non-Opt-In Entity’s (NOIE’s) 4-CP calculation, Direct Current Tie (DC Tie) exports, and Wholesale Storage Load (WSL).

***Direct Current Tie (DC Tie) Schedule***

An energy schedule between ERCOT and a non-ERCOT Control Area and is represented by a corresponding Electronic Tag (e-Tag) that contains the physical transaction information such as the Settlement Point energy amount (MW), the associated DC Tie, and the buyer and seller.

***4.4.4 DC Tie Schedules***

(9) ERCOT shall use the DC Tie e-Tag MW amounts for Settlement. The DC Tie operator shall communicate deratings of the DC Ties to ERCOT and other affected regions and all parties shall agree to any adjusted or curtailed e-Tag amounts.

***11.4.6 Unaccounted for Energy Calculation and Allocation***

(1) The DAS shall adjust the net loss adjusted Load for each aggregated retail Load group for UFE. The Data Aggregation process will calculate the difference between net loss adjusted Load for the entire ERCOT System, which has been adjusted for Distribution Losses and Transmission Losses, and the total system Load (generation) in order to determine the total UFE. The calculated UFE for each Settlement Interval is then allocated to Loads. For the purpose of the UFE calculation, scheduled flow out of ERCOT on a Direct Current Tie (DC Tie) will be deemed as Load, and scheduled flow into ERCOT on a DC Tie will be deemed as generation.

11.4.6.1 Calculation of ERCOT-Wide Unaccounted For Energy

(1) The DAS will calculate ERCOT-wide UFE as the difference between the total ERCOT generation and the total Load, adjusted for losses in ERCOT during each Settlement Interval. UFE may be positive or negative in any single Settlement Interval.

UFE *i* (MWh) = ERCOT Generation *i Total*– ERCOT Net Loss Adjusted Load *i Total*

The above variables are defined as follows:

|  |  |  |
| --- | --- | --- |
| Variable | Unit | Description |
| UFE i | MWh | Total ERCOT system UFE per interval. |
| ERCOT Generation *i Total* | MWh | Total ERCOT internal generation plus sum of approved ERCOT DC Tie imports. |
| ERCOT Net Loss Adjusted Load *i Total* | MWh | Total ERCOT load plus Block Load Transfer (BLT) exports plus sum of approved DC Tie exports, adjusted for distribution and transmission losses. Exports associated with Oklaunion exempt QSEs do not receive distribution or transmission losses. |
| i |  | Interval |