



Item 4: Periodic Report on Credit Work Group Activity

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ERCOT Public

August 11, 2014

Credit Work Group Update

Credit Methodology

Determination of required collateral

- **Total Potential Exposure (TPE) $TPE = TPEA + TPES$**

- $TPEA = \text{Max} [0, MCE, \text{Max} [0, (\sum_q EAL_q + CRRA * \sum_a EAL_a)]]$
- $TPES = \text{Max} [0, (1 - CRRA) * \sum_a EAL_a] + \text{Max} [0, \sum_a FCE_a] + IA$

Credit Work Group Update

Credit Methodology

Minimum Current Exposure

Designed to supply a minimum level of collateral

- $MCE = \text{Max}\{ \{ [L_{o,i,d,k} * T2 - G_{o,i,d,k} * (1-NUCADJ_o) * T3] * RTSPP_{i,d,k} * SAF \} + [RTQQNETES_{o,i,d,k} * T1] / n \}, \{ [G_{o,i,d,k} * NUCADJ_o * T1 * RTSPP_{i,d,k} * SAF] / n \}, \{ DARTNET_{o,i,d,k} * T4 / n \}$

SAF = 2 July 15, 2014

SAF = 3 for August 1, 2014

SAF = 1.5 September 1, 2014

SAF = 1 October 1, 2014

Credit Work Group Update

Credit Methodology

Estimated Aggregate Liability (EAL)

Determine collateral from historical activity

- $EAL_q = \text{Max} [(IEL_q \text{ during the first 40-day period} + DALE_q), (\text{Max}\{RTLE_q \text{ during the previous 40-day period}\} + DALE_q), (RTLF_q + DALE_q)] + \text{Max}[RTLCNS_q, \text{Max}\{URTA_q \text{ during the previous 40 day period}\}] + OUT_q + PUL_q$

Credit Work Group Update

Credit Methodology

Adequacy of current credit rules

- **Successes**
 - No substantial uplift to the market in the Nodal era
 - Behaves well under stable market conditions
- **Limitations**
 - Backward looking, a market event can set collateral requirements for up to 40 days
 - Does not perform well in the presence of price spikes

Credit Work Group Update

Credit Methodology

Future Enhancements

- **NPRR 638 addresses the “backward looking” limitation of the current methodology**
- **Credit Insurance**
 - CWG is still pursuing credit insurance as a method to mitigate the risk posed by random price spikes
- **CWG will continue investigating methods to better align collateral with risk**