

# **ERCOT Collateral Requirements**

## **Current Nodal Protocol and Revisions 347 & 400**

**2012-04-30**



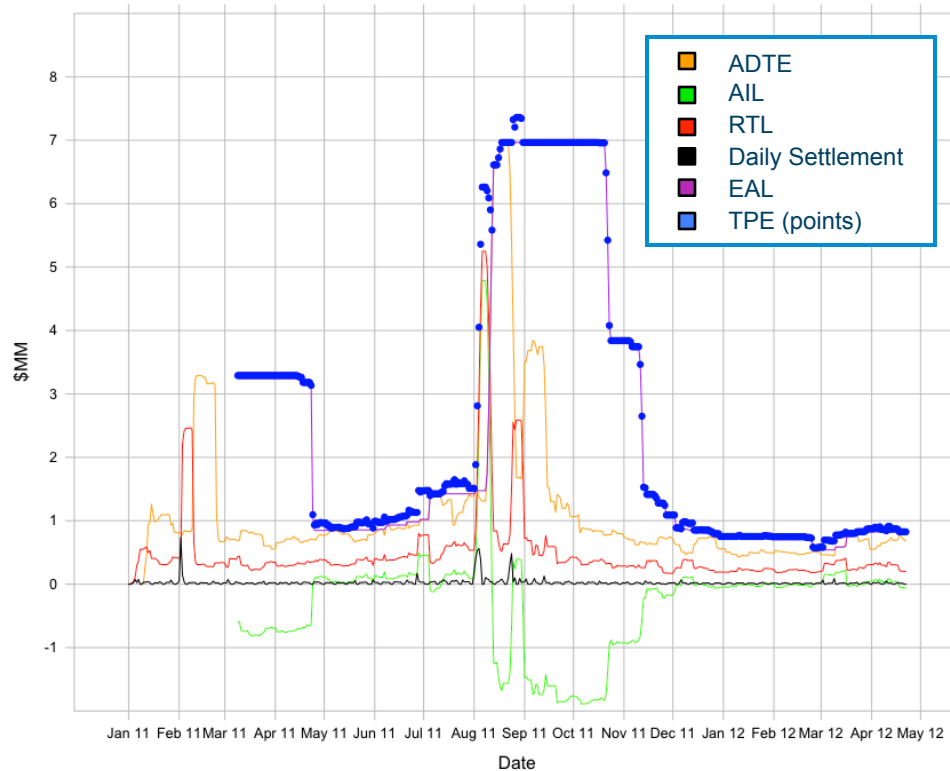
50 MWh during on-peak hours at average LMP would have required ~\$7MM of collateral through Oct 11.

## Current ERCOT Collateral Requirements

– 50 MWh On-peak hours –

### TPE and Components

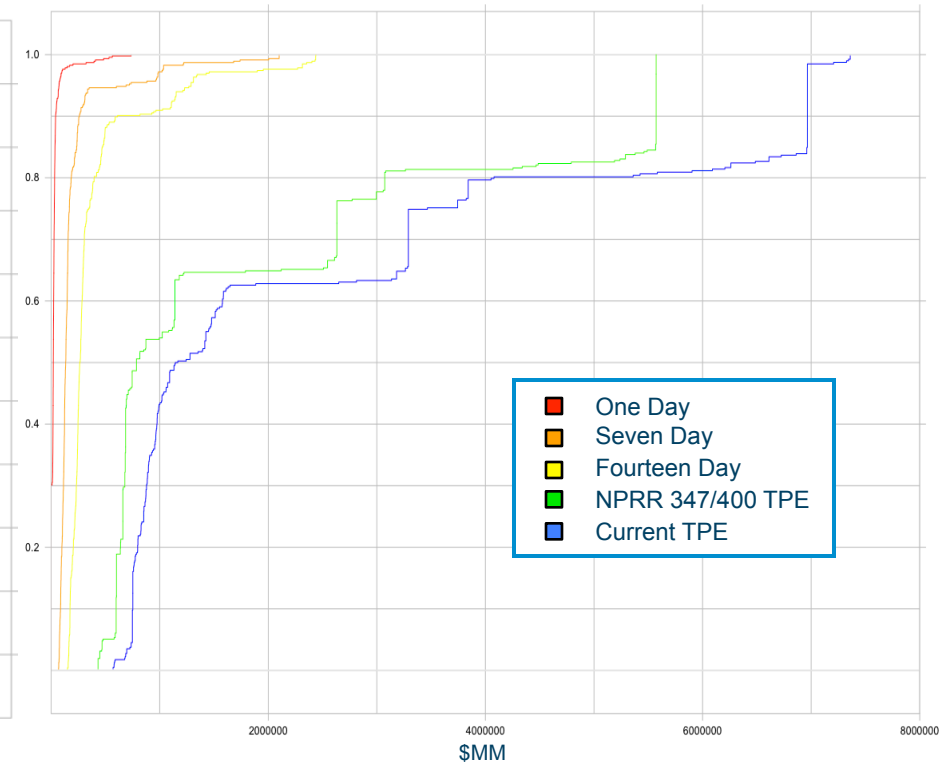
– Jan 2011 through April 2012 –



TPE is mostly comprised of EAL in this paradigm. EAL is max 60 day ADTE which is 40 times recent average settlements. TPE deviates from EAL where AIL is positive (i.e. RTL > normalized ADTE).

### CDF of Settlements and TPE

– Jan 2011 through April 2012 –



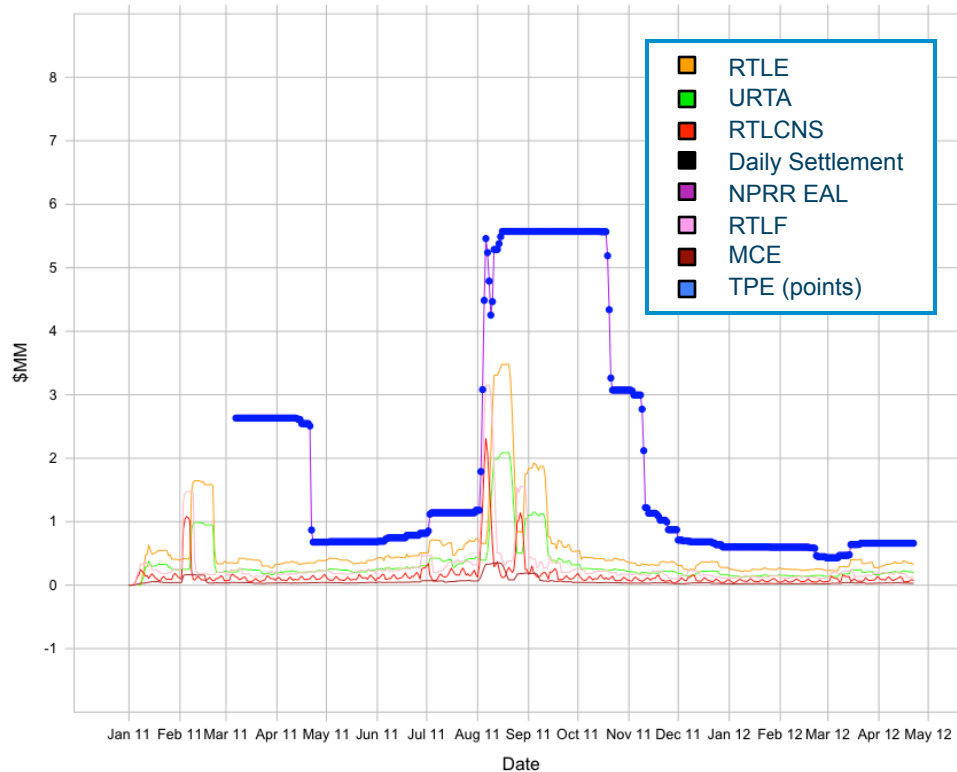
The one, seven, and fourteen day views represent the sum of consecutive days' settlements. Even at the 90<sup>th</sup> percentile a two week settlement is still less than the median collateral requirement.



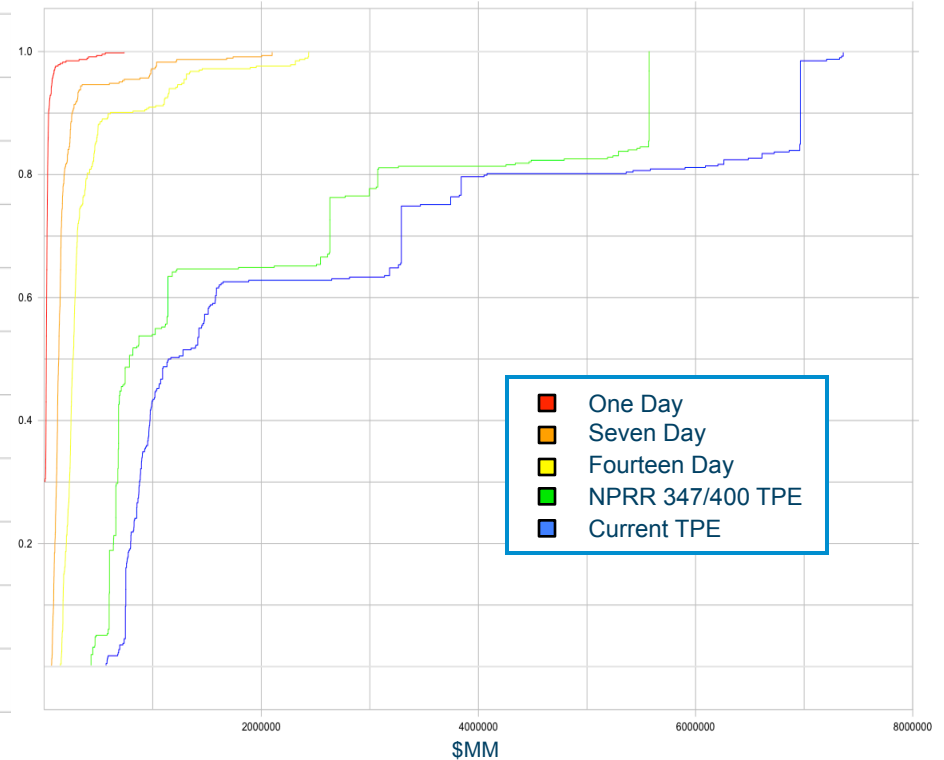
# Even at reduced collateral requirements under NPPR 347/400, CDF shows TPE mostly in excess of worst 14-day settle.

## ERCOT NPPR 347/400 – 50 MWh On-peak hours –

**TPE and Components**  
– Jan 2011 through April 2012 –



**CDF of Settlements and TPE**  
– Jan 2011 through April 2012 –



TPE is always comprised of EAL here. EAL is usually the sum of the max 60 day RTLE (unless RTLF is greater) and the max 60 day URTA (unless RTLCNS is greater).

NPPR 347/400 reductions to EAL factors (primarily M1 (20), M2 (12) vs. the '40 day' multiplier in the current ADTE) significantly reduce peak TPE from their current mark.

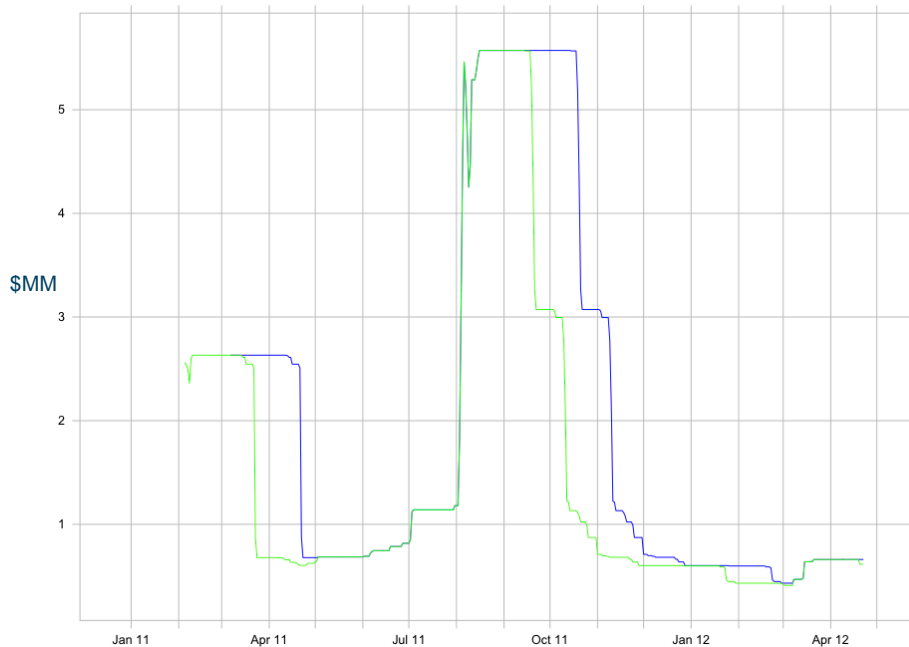


Reducing the EAL lookback window does nothing to TPE peaks; high end multipliers (M1, M2) should still be addressed.

**ERCOT NPRR 347/400**  
– 50 MWh On-peak hours –

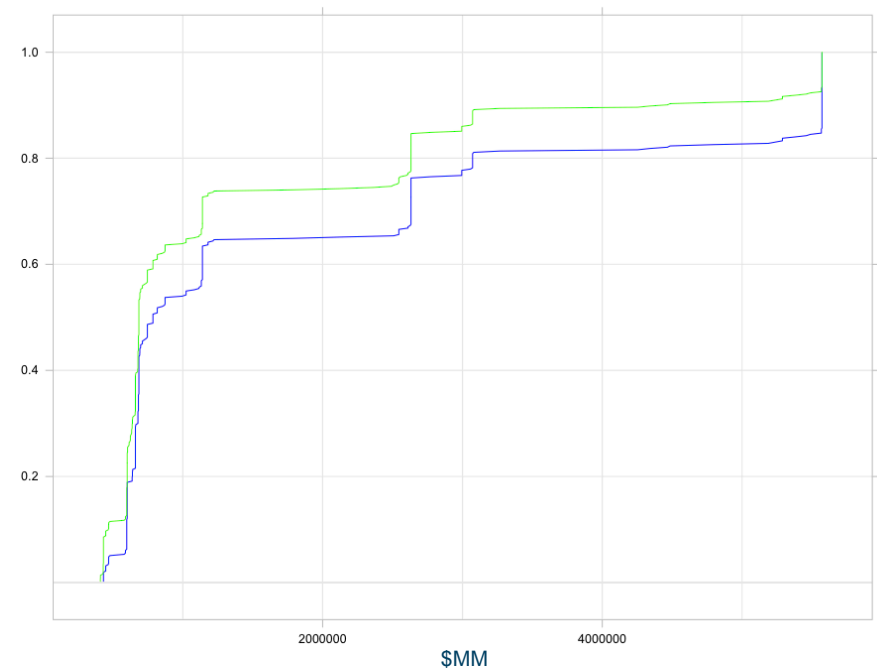
**TPE Timeseries**

– 60 vs. 30 day lookback –



**CDF of TPE**

– 60 vs. 30 day lookback –

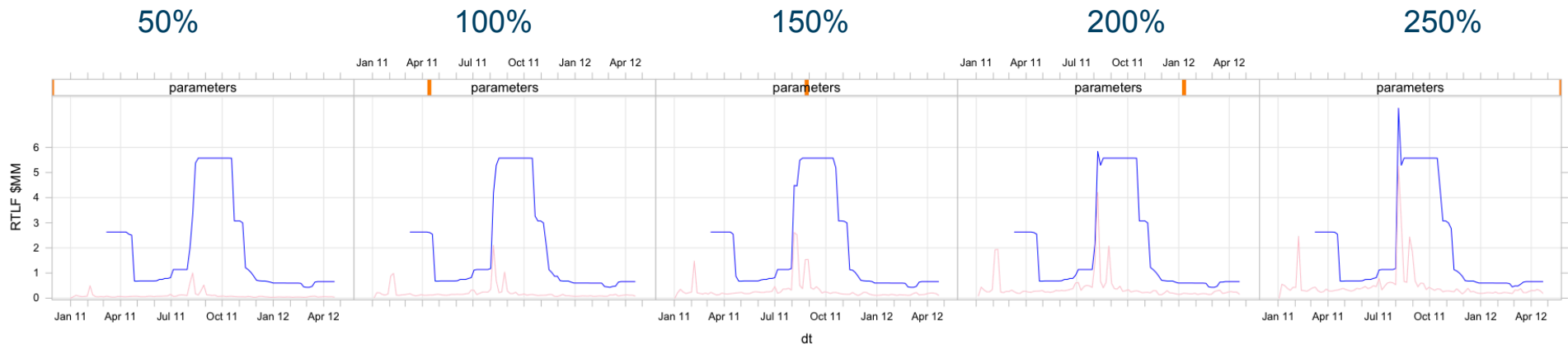


***The average collateral requirement (TPE) is reduced by 25% (\$2.0 MM -> \$1.5MM) by shrinking the EAL look back window in NPRR 347/400 from 60 days to 30 days.***

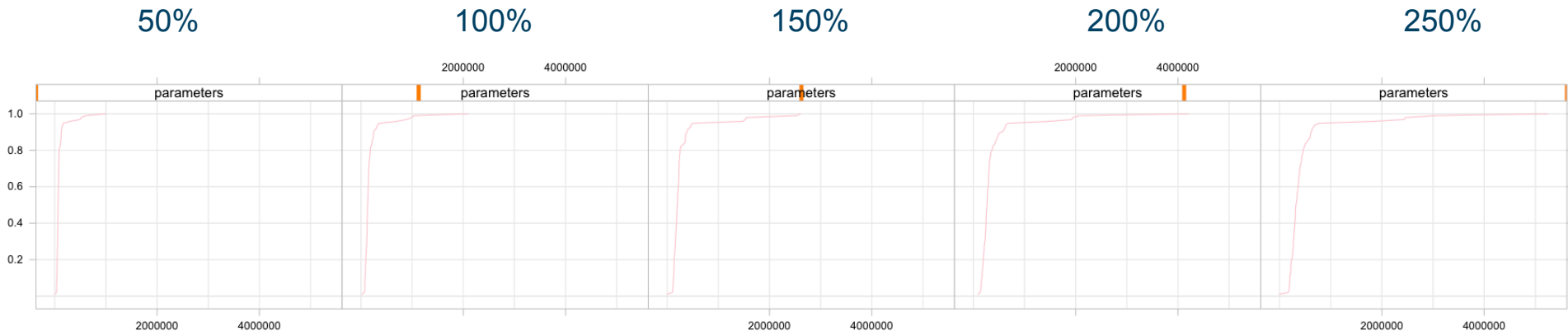


The percentage multiplier of the RTLF component can be significant at high levels, but is only a minor contributor to TPE.

### RTLF effects on TPE



### CDF of RTLF



***RTLF reacts quickly to price spikes but is not the driving component of TPE in the long term. It only has influence during the window in which a recent price spike has not entered RTLE calculation.***