Item 5.1: Backtesting Analysis for NPRR638

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Background

Background:

- NPRR 638, "Revisions to Certain Price Components of EAL," proposes a seasonal and settlement point-based exposure calculation methodology for elements of Day-Ahead Market and Real-Time Market credit exposures.

- The NPRR replaces recent market prices used in the current credit exposure calculation with historic settlement point prices averaged with a forward bias and risk adjustment. The purpose of the revision is to increase prices used in credit calculations prior to heading into summer months, rather than on a lagging basis as with existing methodology.

- NPRR638 is currently under review by CWG/MCWG, primarily to specify certain parameters used in the calculation.

- At its August 11, 2014 meeting, the F&A Committee requested ERCOT staff to back-cast NPRR638 over different price scenarios.
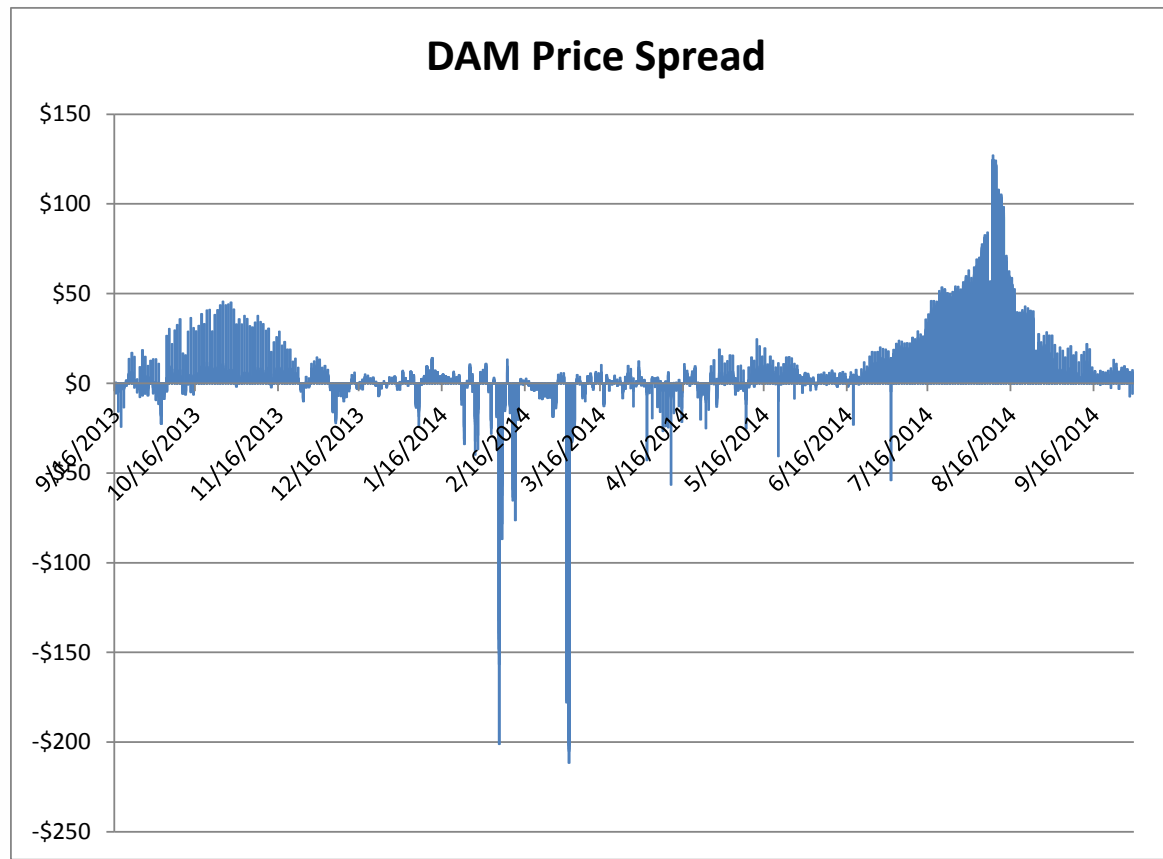
Back-Casting Model

Model Assumptions:

- Prices do not reflect replacement of historic price caps with current price caps which is in the NPRR.

- Model does not include the look-back of rolling averages over previous 40 days as proposed in the draft NPRR. This increases volatility of back-cast values.

- Model uses standard M1 extrapolation value. This will tend to understate back-tested credit exposure values.

- Prices do not include ORDC price adders.

- Back-cast prices do include the effect of August 2011.

Back-Casting Results – DAM Price Spread

DAM price spread was calculated as the difference between DAM Price Estimate based on NPRR 638 methodology and actual DAM Settlement Point Prices.
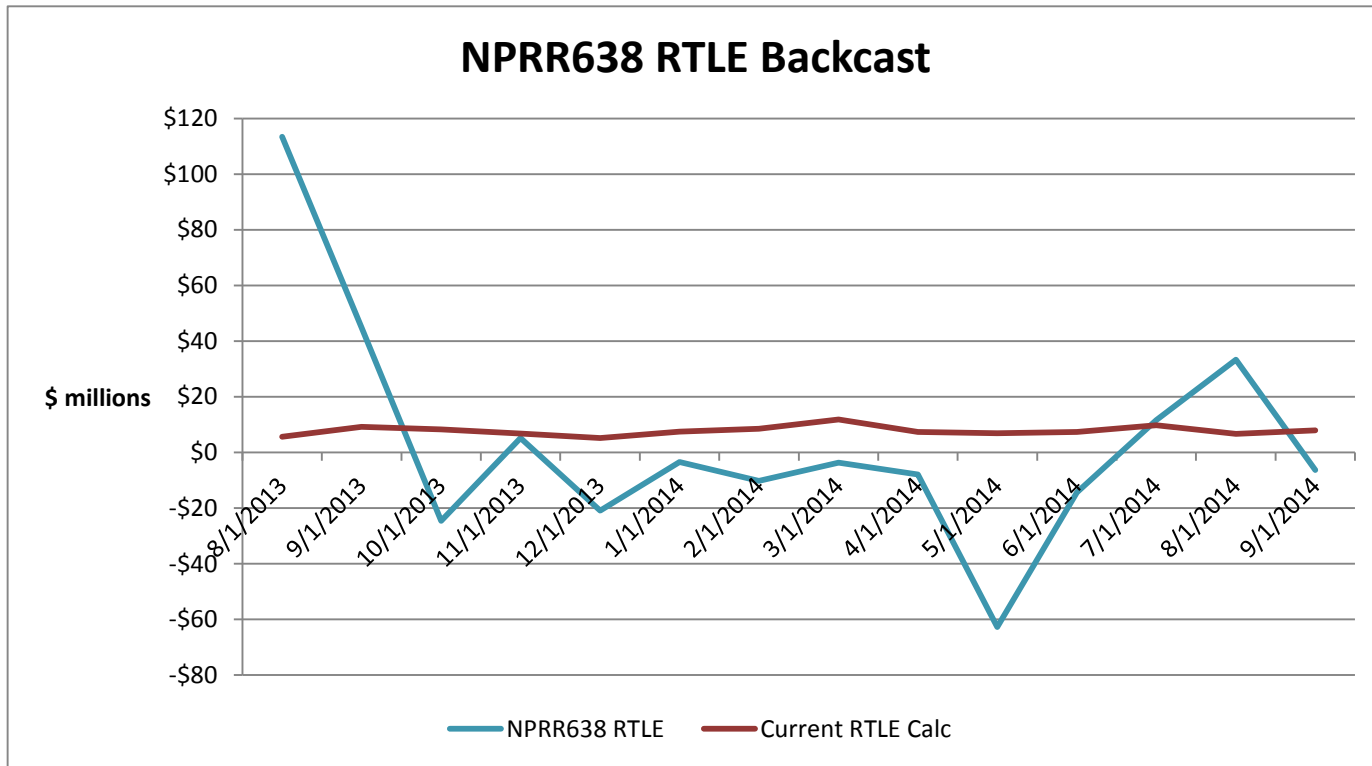

DAM Price Spread

Back-Casting Results – RTM Price Spread

RTM price spread was calculated as the difference between the RTM price estimate based on NPRR 638 and actual RTM Settlement Point Prices.   Summer prices are higher under NPRR 638.

RTM Price Spread

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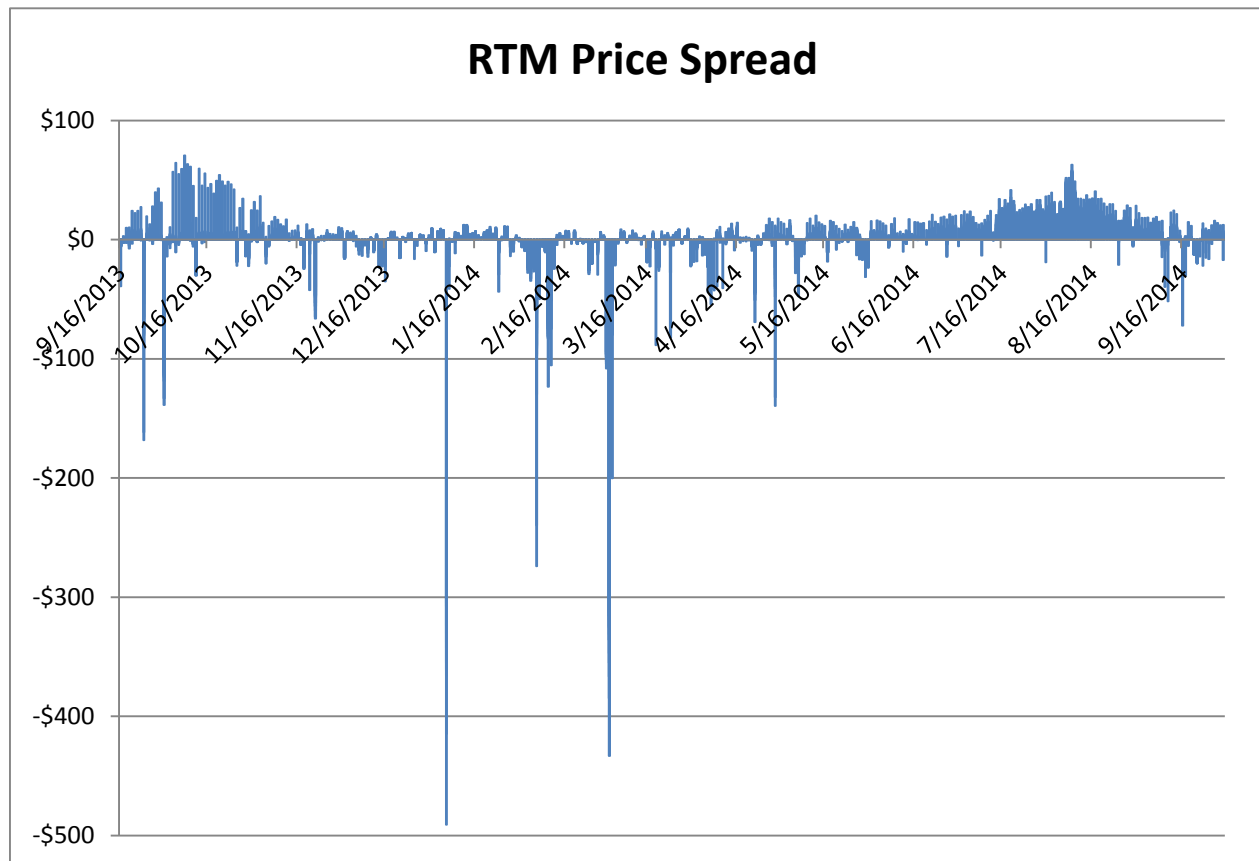
Back-Casting Results – RTLE comparison

RTLE (Real-Time Liability Extrapolated) based on NPRR 638 methodology compared with RTLE in current Protocol calculations.

Notes: Data points represent one day per month only.

Back-Casting - Summary

DAM and RTM spreads:

- DAM and RTM prices are materially higher during summer peaks
- DAM and RTM spreads generally follow seasonal patterns
- Methodology does not account for unexpected price spikes

RTLE comparison:

- Proposed methodology RTLE (Real-Time Liability Extrapolated) is higher during summer months and generally lower during non-summer months.
- Aggregated RTLE based on NPRR638 methodology appears more volatile than current methodology due to differential in look-backs, which is under review.
- Based on earlier back-testing, RTLE increases in the aggregate for a majority of Counter-Parties (decreases primarily for generators).

Questions