NPRR 206: Background – Day Ahead Market

- **Under the current Nodal Protocols:**
  - The exposure calculation in the Day Ahead Market ("DAM"):
    - Based on independent evaluations of bids and offers
      - » **Bids** – exposure calculated as - bid price x bid quantity
        - » Established to cover all possible liability
        - » Concern by some MPs: Collateral required would be very high for an entity pursuing a "price taker" strategy by bidding high
      - » **Offers** – exposure calculated as - offer quantity x the 95th percentile of the hourly difference of Real-Time Settlement Point Price and Day-Ahead Settlement Point Price over the previous 30 days for the hour
        - » Established to guard against potential arbitrage from selling in the DAM and buying in the RT market
        - » Concern by some MPs: Collateral is required for activity that will likely be a payment to an entity

- **Some market participants expressed concern that:**
  - The cost to collateralize at a "near zero" loss level is high
  - High collateral requirements may lower market participation in the DAM, which could lead to a lack of market liquidity

NPRR 206: Background – Day Ahead Market

- **Credit staff provided information about how exposure will be monitored in Nodal for an entity engaging in arbitrage between the DAM and RT market by selling in the DAM and buying in the RT**
  - Adequate collateral is expected for an energy purchase in the RT market *prior to* payment received for a sale in the DAM
    - Protects market by collateralizing arbitrage activity after it occurs
    - Will not prevent arbitrage from occurring

- **MPs considered numerous alternative ways to look at the collateral constraint**
  - TAC approved 02/04/10
  - Presented at Credit Working Group (CWG) on 02/12/10

NPRR 206: As approved by TAC

- **NPPR 206 specifies the following:**
  - **Bids** –
    - Collateral is required for all positive bids using a price level at which bids have recently cleared instead of the actual bid amount
      - Based on x% of 30 day historical prices
      - Percentages still to be set by TAC with approval by the Board of Directors
    - A *high* percentage level will set more conservative collateral requirements than a low percentage level
  - **Offers**
    - If likely to clear the market, will result in an exposure reduction
      - Based on y% of 30 day historical prices
      - Percentages still to be set by TAC with approval by the Board of Directors
    - A *low* percentage level will allow more conservative exposure reductions than a high percentage level

NPRR 206: As approved by TAC

- **NPPR 206 specifies the following:**
  - Incorporates entity-specific exposure adjustment variables to be set by ERCOT:
    - Activities to which the entity-specific adjustment variables may be applied
      - All DAM Energy Bids
      - "In the money" DAM Energy Only Offers
      - Not "out of the money" DAM Energy Only Offers
      - Not Three-Part Offers
    - TAC, with approval of the BOD, to provide guidelines for how to set variables
    - Allows exposure calculation to increase to something close to current Nodal Protocols on an entity by entity basis

- **NPRR 206 creates *a new structure* for collateralizing DAM activity**
  - Specific *credit policy within that structure* is still to be set by:
    - Establishing the percentages to be used
    - Establishing the types of activity for which entity specific collateral escalation might be done

Current Nodal Protocols – "near zero loss" approach to clearing transactions in the DAM

- However, the current Nodal Protocols will not necessarily prevent losses from arbitrage activity around DAM offers when prices in the RT are extreme since collateral is based on historical prices

NPRR 206

- Moves from a "near zero loss" approach to a more moderate approach to clearing transactions in the DAM
  - To obtain better market efficiency
  - Will increase, to some extent, the risk of loss
- Addresses 1 - 4 days of exposure in the DAM; it does not impact the primary collateral mechanisms in Section 16
  - Allows "in the money" offers to reduce exposure for activity that is likely to occur

ERCOT Analysis

NPRR206

- Variables and processes that will drive the additional level of risk are still to be determined
  - It will be important that variables and processes be set consistent with risk to be effective
- For DAM Energy Bids and “in the money” DAM Energy Only Offers
  - Provides some flexibility to ease or tighten credit requirements for entities based on specific criteria (“e” factors)
    - If needed, exposure calculation may be increase to something close to current Nodal Protocols on an entity by entity basis
- For “out of the money” DAM Energy Only Offers and Three-Part Offers
  - No exposure reduction allowed; however, no collateral required for potential arbitrage activity
  - No flexibility to tighten credit requirements (e.g. no “e” factor)

“Out of the money” DAM Energy Only Offers

- **Concern has been expressed about lack of collateral requirement for “out of the money” DAM Energy Only Offers in arbitrage situations**
  - While ERCOT will be able to monitor for and seek collateral *after* an operating day, it won’t be able to prevent arbitrage activity

- **There are several possible options to address concern**
  1. Leave NPRR 206 “as is” and monitor for activity
  2. Develop a new mechanism to address risk
  3. Expand the “e3” factor used for “in the money” DAM Energy Only Offers for usage on “out of the money” offers

- **ERCOT believes it is reasonable to address the concern through option 2 or 3**
  - Since the mechanism has already been evaluated, option 3 would be the easiest to implement . ERCOT believes it can expand the “e3” factor without material increase in cost estimates and within existing timeline

Next Steps

- **Obtain BOD approval for NPRR 206** (with edits, if desired)

- **Establish variables and “e” factors**
  - MCWG meeting on February 19th

6 (b) For each MW portion of a DAM Energy Only Offer:

(i) That has an offer price that is less than or equal to the "a"th percentile of the Day-Ahead Settlement Point Price over the previous 30 days either (A) or (B) shall apply:

(A) Credit exposure will be:

(1) Reduced (when the Settlement Point Price is positive). The reduction shall be the quantity of the offer multiplied by the "b"th percentile of the Day-Ahead Settlement Point Price over the previous 30 days times "e2"; or

(2) Increased (when the Settlement Point Price is negative). The increase shall be the quantity of the offer multiplied by the "b"th percentile of the Day-Ahead Settlement Point Price over the previous 30 days

(B) Credit exposure will be increased by the product of the quantity of the offer times the 95th percentile of any positive hourly difference of Real-Time Settlement Point Price and Day-Ahead Settlement Point Price over the previous 30 days for the hour times (when the Settlement Point Price is positive) "e3."

(ii) That has an offer price that is greater than the "a"th percentile of the Day-Ahead Settlement Point Price over the previous 30 days, either (A) or (B) shall apply:

(A) ~~the c~~Credit exposure will be zero~~.~~

(B) Credit exposure will be increased by the product of the quantity of the offer times the 95th percentile of any positive hourly difference of Real-Time Settlement Point Price and Day-Ahead Settlement Point Price over the previous 30 days for the hour times (when the Settlement Point Price is positive) "e3."