Settlement of Emergency Load Response and Emergency Energy Billing

Market Settlements Subcommittee

July 22, 2014

Emergency Energy and Emergency Load Response Charge Allocation Overview

- Emergency Energy charges and/or credits and Emergency Load Response Charges are allocated pro-rata based on participant's share of Real-time net interchange deviations from day-ahead net interchange versus the total deviations across PJM.
- Day-ahead net interchange equals the sum of a participant's:
  - Cleared DA demand and/or DEC bids

    minus Cleared DA Generation and/or Increment offers

    adjusted for all DA energy transactions in which the customer is involved

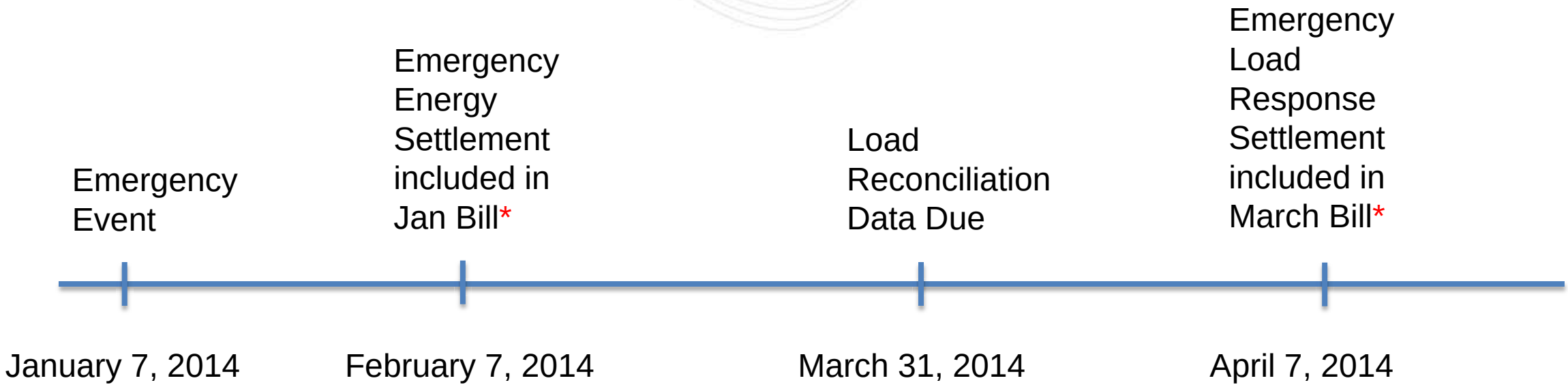
Real-time Net Interchange

- Real-time net interchange equals:
  - Participant's hourly metered flows
    minus any ownership of metered generation
    adjusted for all real-time energy transactions*

*(including any load obligations [de-rated for transmission losses] or generation modeled by InSchedule transactions, and including any InSchedule transactions that were priced day-ahead) in which the customer account is involved.

- Real-time net interchange is calculated using submitted initial Load values, which may be updated as part of the existing reconciliation process.

Current Timing

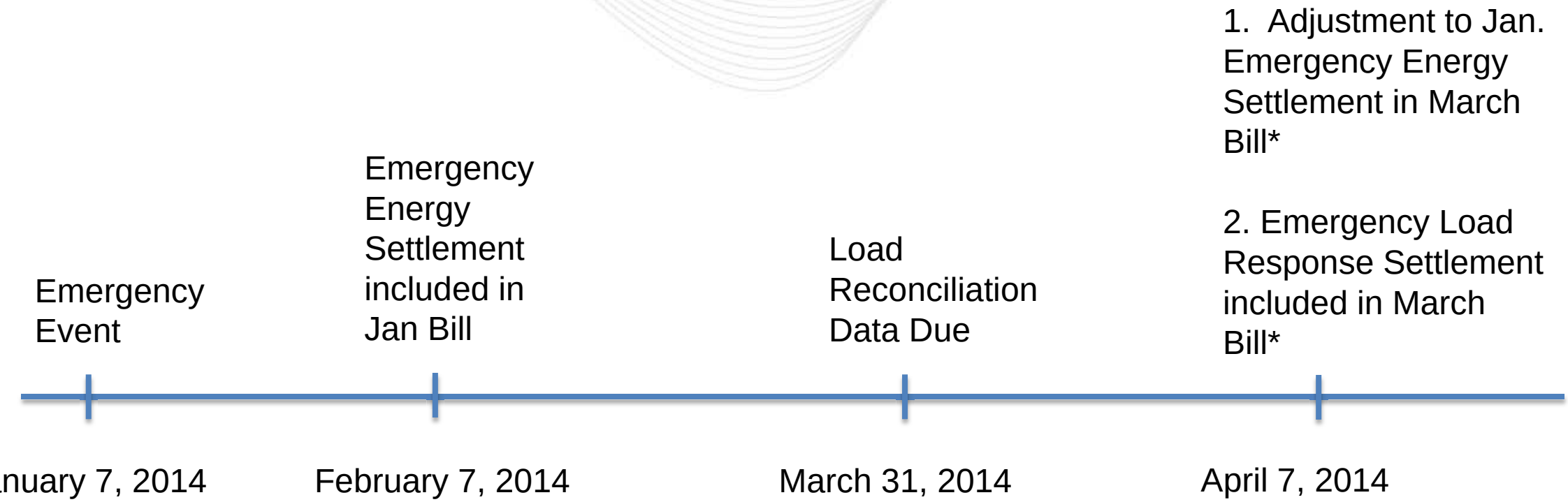


*Does not consider Load Reconciliation data in allocation of credits/charges

Proposal

- Emergency Energy Charges/Credits:
  - Recalculate participants' real-time net interchange to consider Load Reconciliation data
  - Adjust original charge/credit allocation using recalculated interchange 2 months after original billing
  - Load Reconciliation would change the total deviations and therefore impact all participants
- Emergency Load Response Charges:
  - Calculate participants' real-time net interchange to consider Load Reconciliation data
  - No impact to existing bill timing

Proposed Timing



*Considers Load Reconciliation data in allocation of charges/credits

Emergency Load Response Charge Allocation Example

Assume:

- Total PJM Emergency Load Response Energy Credits to be allocated = $500,000
- Total PJM Bal Positive Interchange = 10,000 MW

Participant Specific Parameters:

Day-Ahead:

Cleared DA Demand Bid: 200 MW
Cleared Decrement Bid: 10 MW
Cleared DA Gen Offer: 100 MW
Cleared Increment Offer: 10 MW
Total DA Net Interchange: 100 MW

Real-Time:

RT Load: 600 MW
Gen Actual Generation: 100 MW
Real Time Net Interchange: 500 MW

Participant's Calculated Real-Time Deviation from Day-Ahead = 500 MW – 100 MW
= **400 MW**

Emergency Load Response Charge Allocation Example (cont.)

- Participant's Share of Emergency Load Response Charges =

  Total PJM Emergency Load Response Energy Credits *

  (Participant's Positive Bal Net Interchange /

  Total PJM Bal Positive Interchange)

  = $500,000 * (400 MW / 10,000 MW)

  = $20,000

- Suppose the original RT Load value of 600 MW was updated using PJM's existing reconciliation process to 400 MW.

Emergency Load Response Charge Allocation Example Using Reconciliation

Credits Stay Same, Total PJM Interchange is Affected by Recon data:

- Total PJM Emergency Load Response Energy Credits to be allocated = $500,000
- Updated Total PJM Bal Positive Interchange = ~~10,000 MW~~ 9,800 MW
- Updated Participant Specific Parameters (Reconciled Load = 400 MW)

Day-Ahead:

Cleared DA Demand Bid: 200 MW
Cleared Decrement Bid: 10 MW
Cleared DA Gen Offer: 100 MW
Cleared Increment Offer: 10 MW
Total DA Net Interchange: 100 MW

Real-Time:

RT Load: ~~600 MW~~ 400 MW
Gen Actual Generation: 100 MW
Real Time Net Interchange: ~~500 MW~~ 300 MW

Participant's Calculated Real-Time Deviation from Day-Ahead = 300 MW – 100 MW
= **200** MW

Emergency Load Response Charge Allocation Example (cont.)

- Participant's Share of Emergency Load Response Charges using Reconciled Data =

  Total PJM Emergency Load Response Energy Credits *

  (Participant's Positive Bal Net Interchange /

  Total PJM Bal Positive Interchange)

  = $500,000 * (200 MW / 9,800 MW)

  = $10,204.08

- The participants charge allocation taking reconciled load values into consideration is ~$10,000 less than the amount using RT (unreconciled) load.