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## Alternative Approaches To Load Serving Entity Metering

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# **Current Design Implications**

- Provides Opportunities For Market Participants To Under- Or Over-state Consumption In The Initial Invoice, Creating A Potential Credit Risk Until Settlements Are Trued Up Some 4-Months Later
- Potential Credit Risk From Under- Or Over-statement Of Consumption Being Mitigated Through Labor Intensive LSE Load Forecast Monitoring Process
- Requires Hourly Retail Metering Data Which May Be Materially Skewed From Actual Periods Of Consumption Due To Retail Tariff-Based Load Profiling
- Retail Metering True-up Processes Are Labor Intensive & Present An Impediment To Wholesale Market Settlement Finality & Price Certainty



## **Current Process Facts**

- Majority Of Load Serving Entity Buses [LSE] Do Not Have Metering That Permit Hourly Billing Quality Withdrawals To Be Available For Initial Invoicing
- Current Design Uses LSEs' Hourly Load Forecasts To Allocate Sub-zonal Withdrawals To Each Non-Metered LSE Within The Sub-zone For Initial Invoicing
- Hourly Load Forecasts Submitted By LSEs Are Not Constrained To Trends, Collateral, Nor Realistic Values, Creating Opportunities To Shift Financial Responsibility For Load To Other LSEs Until Trued Up 4 Months Later With Metered Consumptions
- LSEs May Update Their Hourly Forecasts By Noon The Day After The Transaction Day, Presenting An Opportunity To Further Skew Sub-zonal Load Allocations



### Current Process: NYISO Determines Sub-zonal Withdrawal





### Current Process [continued]: Total Sub-zonal Withdrawal Allocated To LSEs

#### Step 1: LSE Forecasts Submitted Day-Ahead

LSE 1\* Forecast: 250 MW LSE 2 Forecast: 50 MW LSE 3 Forecast: 100 MW LSE 4 Forecast: 75 MW LSE 5 Forecast: 10 MW "\*" - Submits Hourly Billing Quality Metered Withdrawals By Noon The Day After The Transaction Day



#### Step 2: Metered LSE MW Removed From Allocation

Total Sub-zonal Load = 560 MW - Metered LSE MW = 250 MW Sub-zonal Load To Be Allocated = 310 MW

#### Step 3: Non-Metered LSEs Allocated Sub-zonal Load Based Upon The Ratio Of Their Forecasts

 $\begin{array}{r} \mbox{310 MW x} & \underline{\mbox{Non-Metered LSE Forecast MW}} \\ \Sigma \mbox{ Non-Metered LSE Forecast MWs} \end{array}$ 

Sub-zone E LSE Loads Used In Initial Invoice

LSE 1\*: Metering Submitted = 250.00 MWLSE 2:  $310 \text{ MW} \times 50/235 = 65.96 \text{ MW}$ LSE 3:  $310 \text{ MW} \times 100/235 = 131.91 \text{ MW}$ LSE 4:  $310 \text{ MW} \times 75/235 = 98.94 \text{ MW}$ LSE 5:  $310 \text{ MW} \times 10/235 = 13.19 \text{ MW}$ Total Sub-zonal Load = 560.00 MW



# An Example Of A Potential Alternative Retail Metering Process Design



## **Alternative Process Assertions**

- Leverages The Hourly Billing Quality Metering That Is Available Next Day To Settle Those Accounts On Actual Withdrawal Data
- Provides An Incentive To Install Metering Systems To Circumvent Potential Skewing Of Their Consumption By Retail Load Profiling
- Eliminates Credit Exposure From Misstated Load Forecasts
- Virtually <u>Eliminates Need For Metering True-ups</u>, Providing For Significant Shortening Of The Settlement Cycle & Price Certainty
- Provides Daily Visibility Of ESCOs' Sub-zonal Market Activity, Which Could Enhance UCAP & Collateral Monitoring



# **Alternative Process Design**

- Some Elements Of The Current Process Would Be Retained
  - ✓ NYISO Will Compute Sub-zonal Load As Detailed In Slide 4
  - ✓ Sub-zonal Load Will Be Allocated To Non-Metered LSEs
  - ✓ LSEs With Hourly Billing Quality Metering Will Be Settled On Actual Withdrawals
- Alternative Process Leverages Transmission Owners' [TO] Visibility & Knowledge Of Their Retail Tariffs
  - ✓ TOs Know What Retail Loads Are Served By Any Energy Services Company [ESCO] Operating In Their Transmission Districts [a.k.a. Sub-zones]
  - TOs Could Derive & Report To The NYISO The Percentage Of Load Served By Any ESCO In Their Sub-zones On A Day-To-Day Or Hour-To-Hour Basis
  - ✓ Non-metered LSE Loads Would Be Allocated Sub-zonal Load Based Upon The Percentages Provided By The TOs In Lieu Of Profiled Hourly Metering
  - ✓ TOs' Submissions May Be Allowed To Lag A Day To Incorporate Any Weatherbased Load Profiling Augmentation As May Be Required By Their Retail Tariffs



### **Alternative Process Implementation**

Step 1: TO Submits ESCO Concentrations

LSE 1\*: 44.642858% LSE 2: 11.778571% LSE 3: 23.555357% LSE 4: 17.667857% LSE 5: 2.355357%

"\*" – Submits Hourly Billing Quality Metered Withdrawals By Noon The Day After The Transaction Day Step 2: Non-Metered LSEs Allocated Sub-zonal Load Based Upon Their Sub-zonal Concentration %

LSE 1: *Metering Submitted* = 250.000000 MW LSE 2: 560 MW x 11.778571% = 65.959998 MW LSE 3: 560 MW x 23.555357% = 131.909999 MW LSE 4: 560 MW x 17.667857% = 98.309999 MW LSE 5: 560 MW x 2.355357% = 13.189999 MW Total = 559.369995 MW

Step 3: Unaccounted For Energy [UFE] Allocated Based Upon Non-metered Concentration Shares

UFE = 560 MW - 559.369995 MW = 0.630005 MW

LSE 1\*: n/a

LSE 2: UFE x 11.778571% ÷ 55.357142% = 0.134322 MW LSE 3: UFE x 23.555357% ÷ 55.357142% = 0.268623 MW LSE 4: UFE x 17.667857% ÷ 55.357142% = 0.200200 MW LSE 5: UFE x 2.355357% ÷ 55.357142% = 0.026860 MW Step 4: Loads As Invoiced In Initial Invoice

Load Invoiced = Sub-zonal Allocation + UFE Allocation

LSE 1: *Metering Submitted* = 250.000000 MW LSE 2: 65.959998 MW + 0.134322 MW = 66.094320 MW LSE 3: 131.909999 MW + 0.268623 MW = 132.178622 MW LSE 4: 98.309999 MW + 0.200200 MW = 98.510199 MW LSE 5: 13.189999 MW + 0.026860 MW = 13.216859 MW Total Sub-zonal Load = 560.000000 MW



### **Alternative Design Considerations**

- Discussion Of Other Design Alternatives
- Issues To Consider
- Next Step(s)

