National Grid
Development of LSE Load Requirements (TOL File)

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Development Process

- NG retail billing system ("CSS") has "flags" for each of our 1.5 million retail delivery customers indicating;
  - Subzone (NG has customers in 6 of 24 subzones)
  - Commodity Supplier: Load Serving Entity, LSE
    - Utility, ESCO, municipal
  - Voltage level connection.
- NG has approximately 280 SC-3A (+2 MW peak demand) customers with interval metering. NG uses these hourly reads to develop those customers LSE hourly requirement.
- NG has 750 of its 4000 SC-3 customers with interval metering.
- Customers with NYPA Power for Jobs, Economic Development Program, Expansion, or Replacement allocations are calculated from NG CSS.
- Hourly meter-read data for developing NYPA municipals comes from NYPA.

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Development Process

- **NG has 1.5 million customer with monthly non-interval metering. NG applies these reads to load shapes to develop hourly LSE requirements.**
  - **Load shapes based on sampling**
  - **Load shapes are by class**
  - **Load shapes are updated annually**

Load Modifiers

- **Small generators not defined to the NYISO market are defined as Load Modifiers. NG subtracts any energy from Load Modifiers from LSE's load requirements if the LSE demonstrates a Power Purchase Agreement.**

Distribution Losses

- **NYISO OATT defined LSE requirement as point where distribution meets NYISO transmission.**
- **NG has four distribution gross up factors defined in NG Retail Access Tariff (Rule 39)**
  - **1.0267% Over 60 kV**
  - **1.053% 22kV – 59 kV**
  - **1.069 2.3 kV – 21 kV**
  - **1.092% 240 V – 2.2 kV**
- **All factors include transmission losses for circuits not modeled by NYISO transmission loss calculations.**

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Uncounted Energy

- **The NYISO establishes the wholesale load each hour for each subzone as;**
  - **Actual Subzone Load = Sum(Gen) +/- Sum(SZ Ties – Losses**
  - **Actual Subzone Load is synonymous with “M Load”**
- **NYISO requires the sum of each LSE load requirement from the TO to equal the actual subzone.**
- **The sum of the LSE’s load requirements based on retail load measurements (bottom up) does not exactly equal the NYISO actual subzone load as measured by generation and subzone tie metering (top down). The reasons include load shapes, NYISO calculation of transmission losses, TO calculations of distribution factors, retail and wholesale meter problems, theft of service.**

Unaccounted Energy

- **The difference between the NYISO Actual Subzone load and the sum of the LSE loads is referred to as unaccounted energy.**
- **For NG six subzones, the average unaccounted across all six subzones is very close to zero on a monthly basis. There is a significant variance by subzone.**
- **NG retail access tariffs allow us to allocate unaccounted energy to all LSEs.**
- **NG calculates a 4-Month rolling average of unaccounted energy based on the last four months settled by the NYISO and applies those to the current month and applies that exact unaccounted factor in our commodity rate. To the extent that the sum of the LSE's then do not equal the NYISO M Load, NG takes the disproportionate swings in its LSE busses. This process is in our PSC approved retail access tariffs.**

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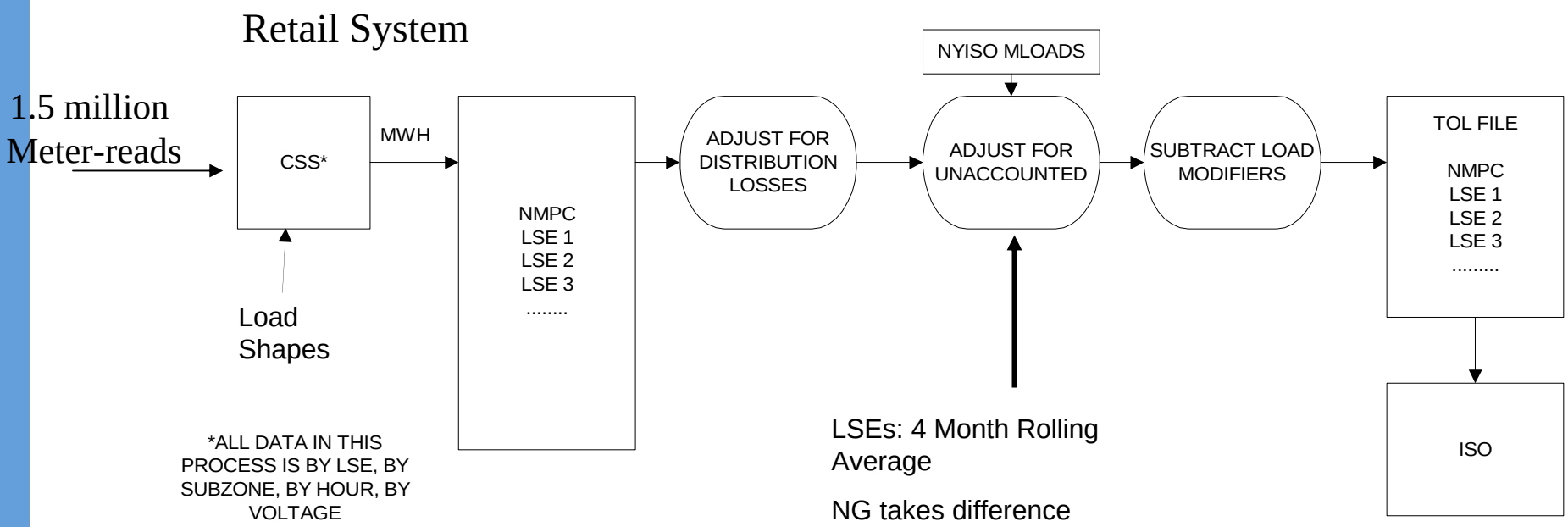
NYISO LSE Load Requirement Reporting for NYISO Settlement



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