Regional Resource Adequacy:
Load Forecasting
Stakeholder Working Group Call

June 22, 2016

Agenda

Time (PST)	Topic	Presenter
10:00 - 10:15 am	Welcome and Introduction	Kristina Osborne
10:15 - 11:00 am	Discuss stakeholder views & LF current practices/capabilities	Chris Devon
11:00 am - 12:00 pm	Coincidence peak forecasting approaches	Bob Emmert
12:00 - 1:00 pm	Lunch	
1:00 - 1:45 pm	Coincidence peak forecasting approaches (continued)	Bob Emmert
1:45 - 2:55 pm	Discuss outstanding items/questions/issues	Chris Devon
2:55 - 3:00 pm	Next Steps & adjourn	Kristina Osborne

Stakeholder comments on latest ISO proposal

- ISO received comments in support and opposed to the latest ISO proposal that would require LSE level submittal of hourly load forecasting
  - Some commenters explained there is potential inaccuracy that they perceive to be a significant downfall to hourly load forecasting a year forward
  - ISO is concerned that some smaller entities may not have this capability and potentially have not been involved in these discussions
- Comments raising questions and still some outstanding issues and details to be worked through

Discussion: Stakeholder views and load forecasting capabilities

- What are stakeholders current load forecasting practices and capabilities?
  - Any specifics about current practices that would be helpful, or any forecasting limitations or other details current load forecasting practices that LSEs want to explain to the WG?
- What issues are most important to stakeholders for this Regional RA load forecasting proposal?
- Any other considerations or issues stakeholders be the ISO needs to look into?
  - Issues, alternative options, considerations that stakeholders would suggest the ISO should explore further?

Monthly peak forecasts with coincidence factor method as an alternative option

- ISO is strongly considering revisiting the previously proposal to require only monthly peak submittals and apply a coincidence factor to LSEs unadjusted forecasts
- Potential to allow LSEs/LRAs to determine their own non-coincident peak forecasts and
  - Determine LSE's own specific coincident peak forecasts
  - Determine their own coincidence calculation
- Discuss coincidence factor method options:
  - MISO approach: LSE determined CF methodology
  - "Three year average" CF methodology

MISO approach: LSE conducted coincident peak forecasting methodology

- MISO provides some general guidance to the LSEs but allows individual LSEs to conduct their own coincident peak forecasts
- This approach is done for the yearly peak in MISO - not monthly peaks
- Would need to adjust this approach for a monthly RA construct where coincidence peak forecasts are required for each month

MISO approach: LSE conducted coincident peak forecasting methodology (continued)

- Pros:
  - Flexibility for LSE to choose coincidence method that fits their needs
  - Allows entities like CEC to continue to use their current methods but just apply them to the system wide peak
  - Possible solution for unique loads (water pumping, etc.)
- Cons:
  - Could cause potential for inaccuracy due to some inconsistency
  - May be difficult to make this approach work for monthly RA construct in the ISO
  - Would possibly need significant oversight & review process
  - Changing system peak hours due to DER could pose issues

Three year historic average CF method

- The ISO could calculate the coincidence factor for each LSE and apply the CF adjustment to the LSE submitted non-coincident forecasts
- ISO staff believe that a three year historic average CF formula is a good method to consider for the ISO to apply to load forecast submittals
  - Average of the CFs for each LSE at time of 3 highest peaks for each month
    - Could consider using just the CF at time of monthly peak
  - Average of monthly averages for most resent 3 historic years
    - 3-years would capture different weather patterns rather than potentially relying on a single observation that may be an anomalous year

Three year historic average CF method

- Pros
  - Consistency in Coincidence Factor method applied would reduce potential for error or inaccuracy associated with more flexibility like MISO style Coincidence Factor method
  - May be easier to apply a consistent method to all LF submittals to conduct the monthly LF construct
  - ISO in best position to deal with changing system peak hours due to DER
- Cons:
  - Removes flexibility for individual entities to determine Coincidence Factor method
  - LSE in best position to deal with changing local peak hours due to DER, appropriately dealing with potential DR and EE issues

Other open issues and questions

- Discuss the following outstanding items:
  - Load forecast updates: monthly updates for load migration
    - Need to align forecast updates with CRR; need to consider updating process with stakeholders – what works already?
  - Would smaller LSEs agree to defer their load forecasting to their PTO?
  - Flexibility for LSEs
  - Review criteria and process

Load forecasting flexibility

- ISO continues to believe flexibility for LF submittals is appropriate
  - Allow LSEs to treat assumptions and adjustments to LFs how they see fit and based on LRA policy (i.e., DR, EE, DG, etc.)
  - However ISO will require reporting of adjustment treatment and impact of adjustments to overall load forecast
  - Coincidence Factor method direction determined would likely provide impact on overall flexibility:
    - Additional flexibility if the LSEs can do the adjustments themselves

    -or-

    - Reduced flexibility if the ISO chooses a specific method and applies it to all LSEs LF submittals

Load forecasting review proposal

- ISO proposes ability to review entities forecasts
  - If forecast divergence that triggers review is considered appropriate the review would be concluded
  - May request LSE's make adjustments if forecasts diverge unreasonably from actual peak loads or historical usage
  - Safeguard against submission of unreasonable overall forecasts

Load forecasting review process

- If submitted forecast is outside of divergence band criteria would trigger ISO review ability
- ISO would discuss submittal under review with all involved parties – includes LSE and LRAs
- ISO may request LSE resubmit amended forecast or adjust submitted forecasts

Next Steps

- Stakeholders are encouraged to submit comments on this Load Forecasting Working Group by **July 12**
  - There will be a comment template posted subsequent to this working group call on ISO website at the following link: http://www.caiso.com/informed/Pages/StakeholderProcesses/RegionalResourceAdequacy.aspx

- Initiative Contact: Chris Devon – cdevon@caiso.com