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ELCC Data Availability and Results Validation Recommendations

2016-11-08

Summary of Recommendations

1. Input data and detailed results should be available to stakeholders

2. ELCC results should resolve specific shortcomings of the exceedance methodology including the exceedance methodology gap issue.

3. Implementation details need to be developed with significant stakeholder input.

Input data is a large driver of ELCC results and should be available to stakeholders.

Comparison of marginal ELCC values for different solar shapes:

(results from SCE's NLP-ELCC tool for example purposes only)

Month	Fixed Tilt Solar Shape Marginal ELCC	Tracking Solar Shape Marginal ELCC
July 2017	31%	43%

Switching from a fixed tilt to tracking solar production shape significantly affects the ELCC value.

Load, Wind, and Solar (magnitude and hourly shapes) should specifically be published since they are key drivers of ELCC results.

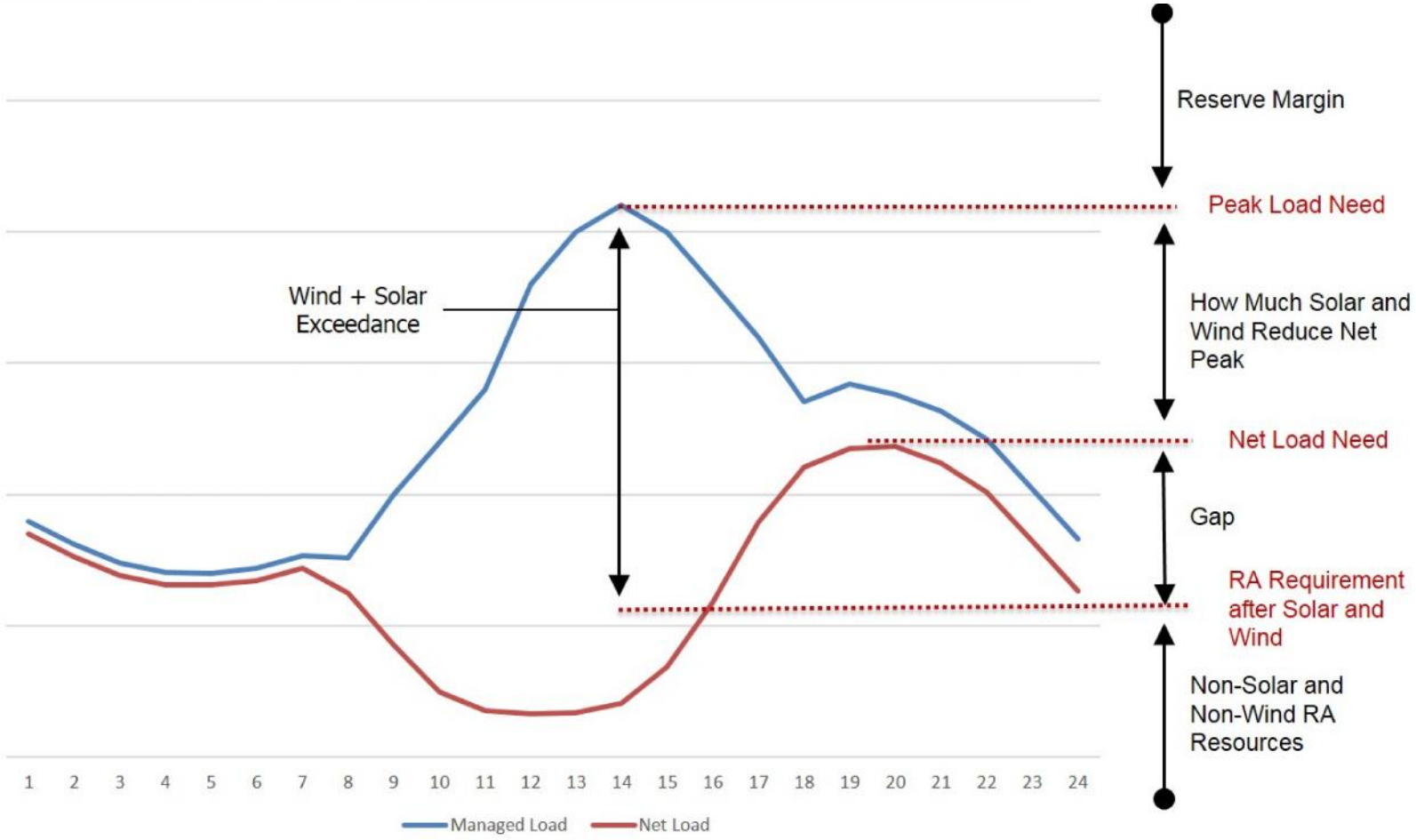
Detailed modeling results should be published to help stakeholders understand ELCC modeling and results.

1. LOLE Distributions
2. LOLE Causes
3. Modeling Constraint Activity
4. Net Load Peak Distributions
5. Curtailments / Dump Energy / Exports
6. Generation Supply
7. LOLE Day Snapshots

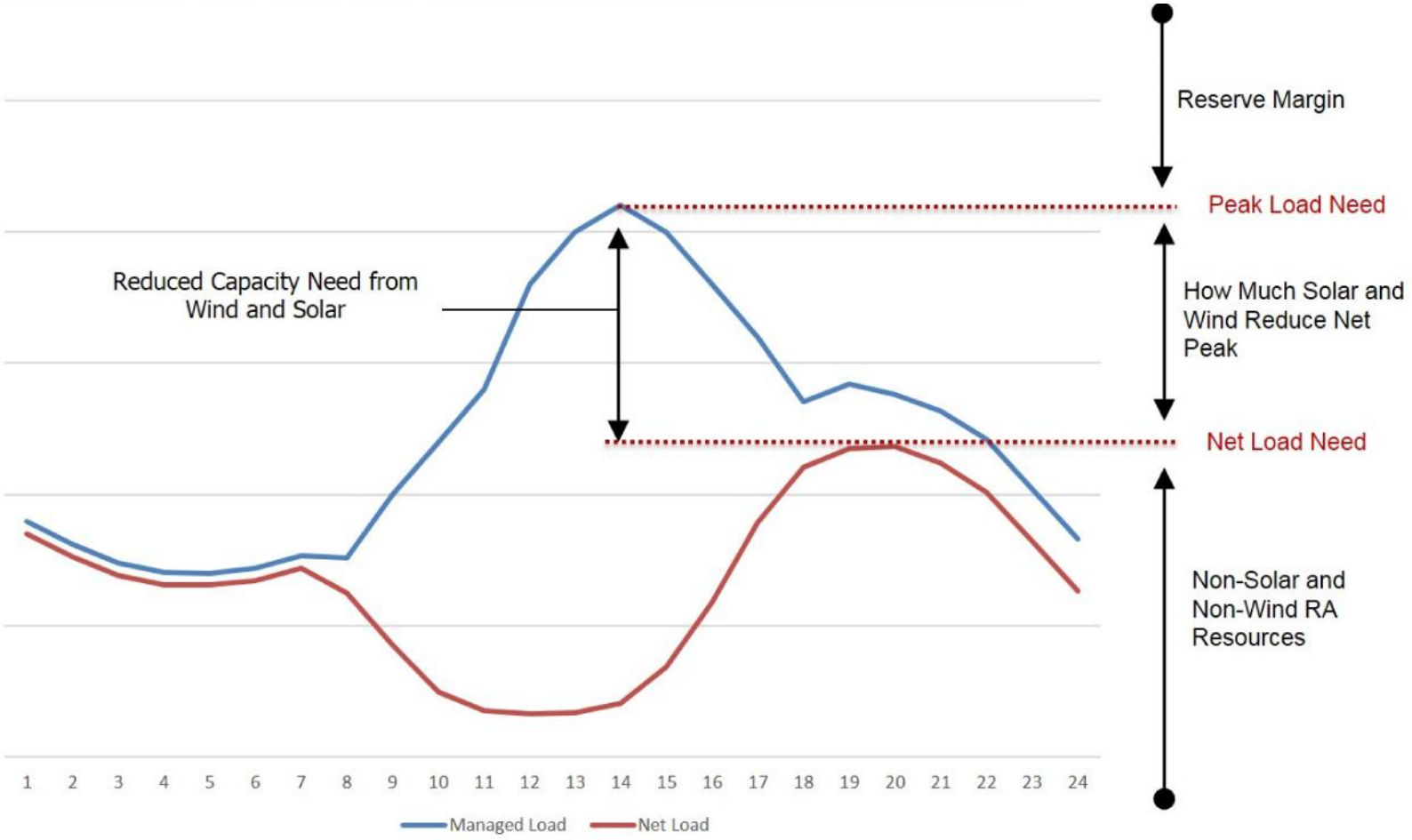
Distributions should be provided by month and hour of day.

The CPUC has outlined production simulation results reporting guidelines in R.16-02-007 that could be useful to guide ELCC reporting metrics.

The exceedance methodology can create a gap between RA resources and load when the measurement hours diverge from the Net Load Peak.



It should be verified that ELCC values eliminate the gap problem in an average year before ELCC results are implemented.



The NLP-ELCC is designed to eliminate the exceedance methodology gap problem and can be used to help validate ELCC results.

- SCE proposes to use a Net Load Peak based ELCC (NLP-ELCC)* to verify that ELCC results solve the gap problem created by exceedance methodology.

- The NLP-ELCC uses non-priority tool with minimal inputs that can be reviewed and replicated by other stakeholders.

- SCE has updated the methodology since the March 25th, 2016 white paper to account for multiple load, wind, and solar shapes in addition to other improvements.

* SCE has published a white paper explaining the methodology behind the NLP-ELCC and has made the analysis tool public to interested parties. See Appendix C of SCE's March, 25th, 2016 RA Proceeding comments for the white paper.

Implementation details need to be developed with significant stakeholder input.

1. Monthly RA Construct Application

2. Location and Technology Specific ELCC Values

3. Transition Mechanism

4. Future Update Process and Frequency

5. Treatment of Existing and Future Resources

Recommendations

1. Input data and detailed results should be available to stakeholders

2. ELCC results should resolve specific shortcomings of the exceedance methodology including the exceedance methodology gap issue.

3. Implementation details need to be developed with significant stakeholder input.