LI Reserve Modeling

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Agenda

- Background
- Analysis
- Conclusion

Background

Background

- The NYISO implemented a limit to the amount of reserve held on LI with the implementation of Comprehensive Shortage Pricing on the November 4, 2015 market day
- This change increased the likelihood that reserve procured on LI would be deliverable to the rest of the NYCA

NYISO Review

- The NYISO continuously reviews many aspects of its operational procedures to ensure reliability
- Recent retirements on Long Island and shifting of load led the NYISO to reevaluate the LI reserve limitation
- The NYISO concluded that no change to the LI reserve modeling is necessary

Current LI Reserve Limitation/ Reserve Requirements

Hour Beginning	LI Reserve Limitation (Requirement)
HB00	324
HB01	270
HB02	270
HB03	270
HB04	270
HB05	270
HB06	374
HB07	378
HB08	432
HB09	432
HB10	486
HB11	486
HB12	486
HB13	486
HB14	486
HB15	486
HB16	540
HB17	540
HB18	540
HB19	540
HB20	540
HB21	486
HB22	432
HB23	378

Analysis

Analysis

- Resource Energy production on LI can be increased to offset imports into LI over Y50/Y49/901 & 903, and thus deliver LI 30 minute reserve.
- The NYISO considered 660 MW a reasonable amount to evaluate as a possible new limitation to LI reserve

Analysis

- **The NYISO analyzed a data set for the time period of 1/1/2017 to 9/1/2017.**
- **This evaluation showed the current on peak* LI 30 minute reserve limitation, ranging from 378 MW to 540 MW was, on average, deliverable 75.7% of the time**
  - The off peak reserve limitation, ranging from 270 MW to 378 MW was, on average, deliverable 92.9% of the time.
- **Increasing the LI reserve limitation to 660 on peak would mean the reserve was deliverable on peak only 46% of the time**
  - Increasing the LI reserve limitation to 660 off peak would mean the reserve was deliverable off peak only 44.5% of the time

*On peak was defined as HB07 to HB22
Off peak was defined as HB23 to HB06

Analysis Summary

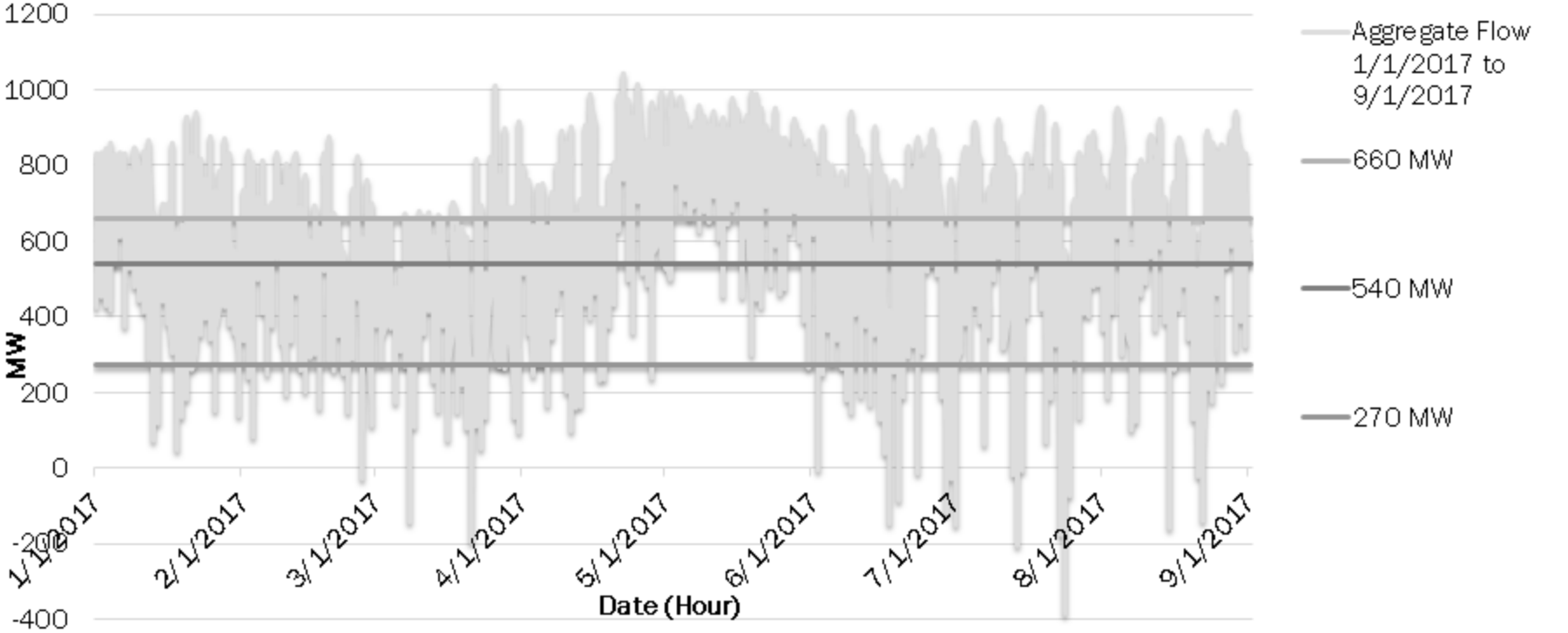
- This table shows the percent of the time the respective reserve limitation is deliverable in the given data set.

	Reserve Limit	Percent of Time Deliverable
On Peak	660	46.0%
Off Peak	660	44.5%

	Reserve Limit Range	Average Percent of Time Deliverable
On Peak	378 through 540	75.7%
Off Peak	270 through 378	92.9%

Note: On peak was defined as HB07 to HB22
Off peak was defined as HB23 to HB06

Aggregate LI Flows 1/1/2017 to 9/1/2017



Conclusion

Conclusion

- If the LI reserve limitation were to be increased, then more reserve would often be held on LI than was actually deliverable to the NYCA.

- The NYISO will continue to use the LI reserve limitation of 270 MW to 540 MW, depending upon the hour, that is currently in effect.
  - This limitation is equal to the reserve requirement that is in effect for each hour.

- The NYISO will continue to monitor LI operating reserve deliverability to the rest of the NYCA

The Mission of the New York Independent System Operator is to:

- Serve the public interest and
- Provide benefit to stakeholders by
  - Maintaining and enhancing regional reliability
  - Operating open, fair and competitive wholesale electricity markets
  - Planning the power system for the future
  - Providing factual information to policy makers, stakeholders and investors in the power system

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