



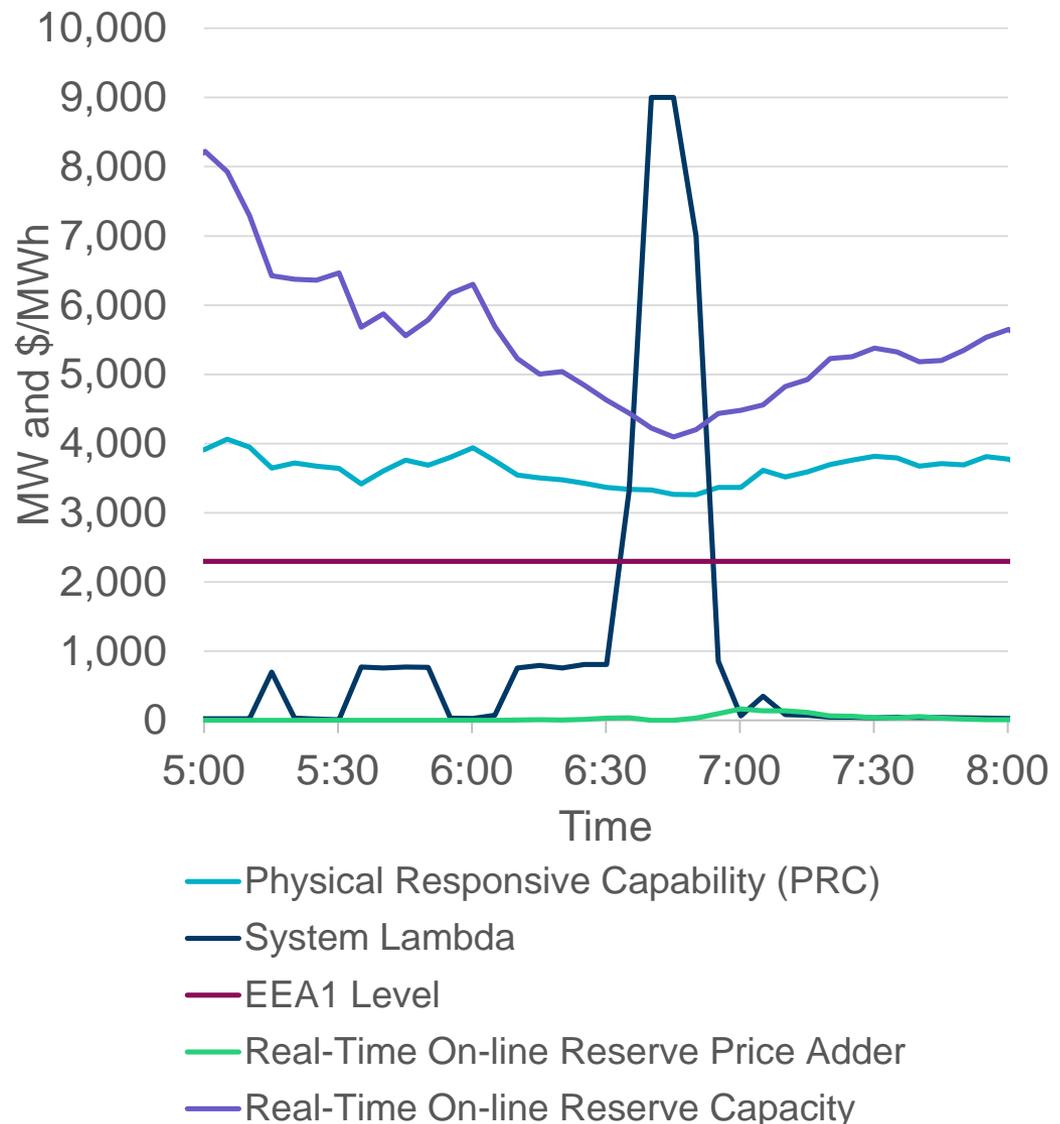
January 23rd Real-Time Market Prices

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January 31, 2018

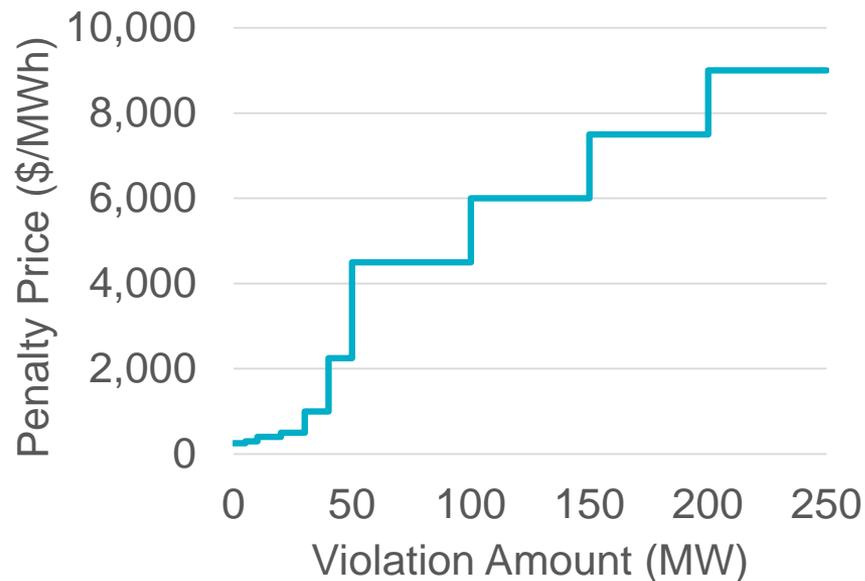
Overview

- ERCOT reserves were well above EEA1 level
 - Ramping demands resulted in prices being set by the Power Balance Penalty Curve at \$9,001/MWh for ~10 minutes
 - PRC was ~3,260 MW when the price was \$9,001/MWh
- Prices were above \$500/MWh for a total of 15 SCED intervals, or about 75 minutes, during this window
- The maximum Online Reserve Price Adder was about \$168/MWh



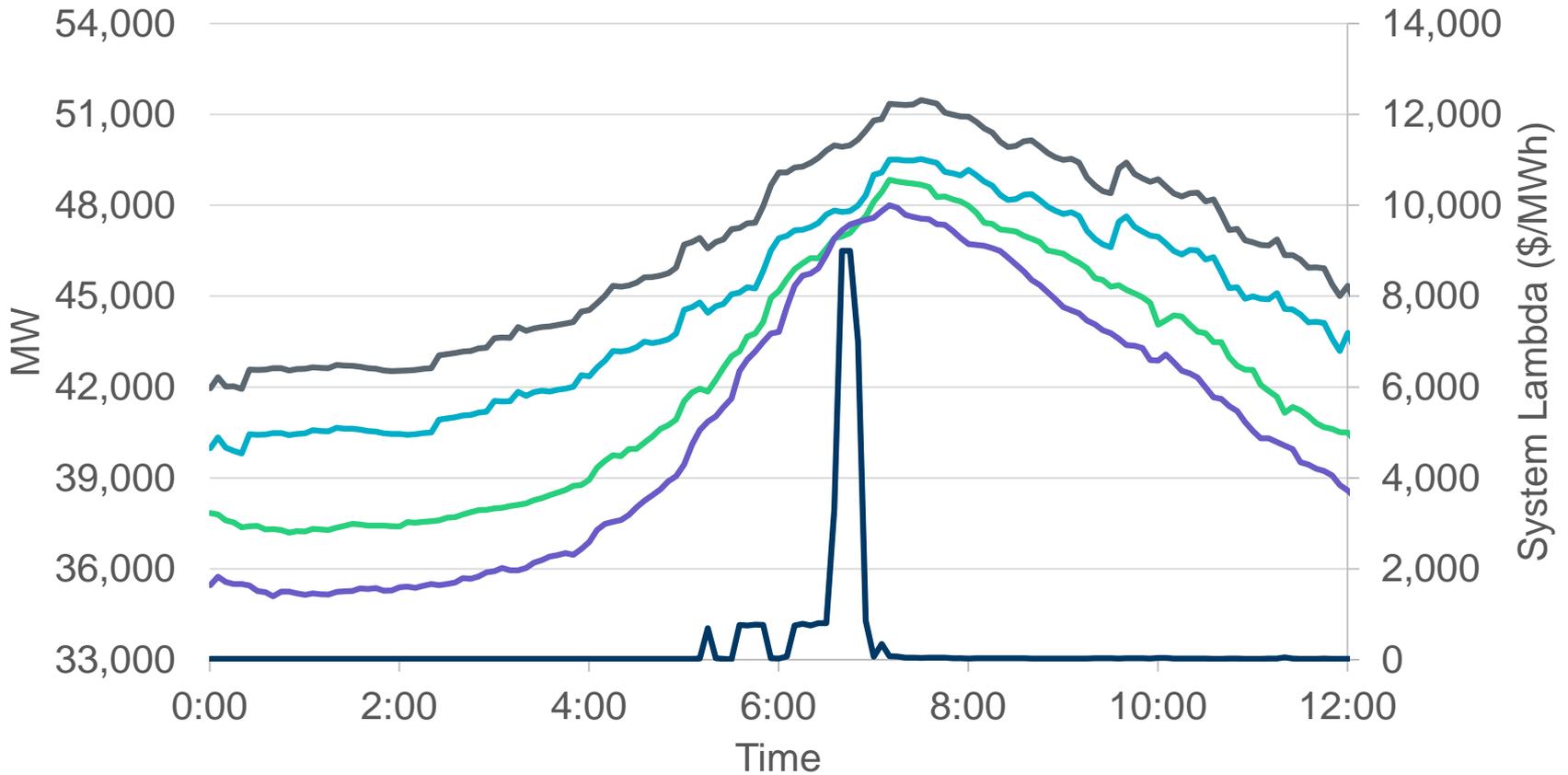
The Power Balance Penalty Curve

MW Violation	Penalty Value (\$/MWh)	# of SCED intervals
≤ 5	250	
$5 < \text{to } \leq 10$	300	
$10 < \text{to } \leq 20$	400	
$20 < \text{to } \leq 30$	500	11
$30 < \text{to } \leq 40$	1,000	
$40 < \text{to } \leq 50$	2,250	1
$50 < \text{to } \leq 100$	4,500	
$100 < \text{to } \leq 150$	6,000	1
$150 < \text{to } \leq 200$	7,500	
200 or more	9,001	2



- 2 SCED intervals had price at \$9,001/MWh
- With a single value of \$9,001/MWh instead of a curve, there would have been 3 SCED intervals at \$9,001/MWh

Resource Limits and Generation To Be Dispatched (GTBD)



— High Sustained Limit (HSL)

— High Dispatch Limit (HDL)

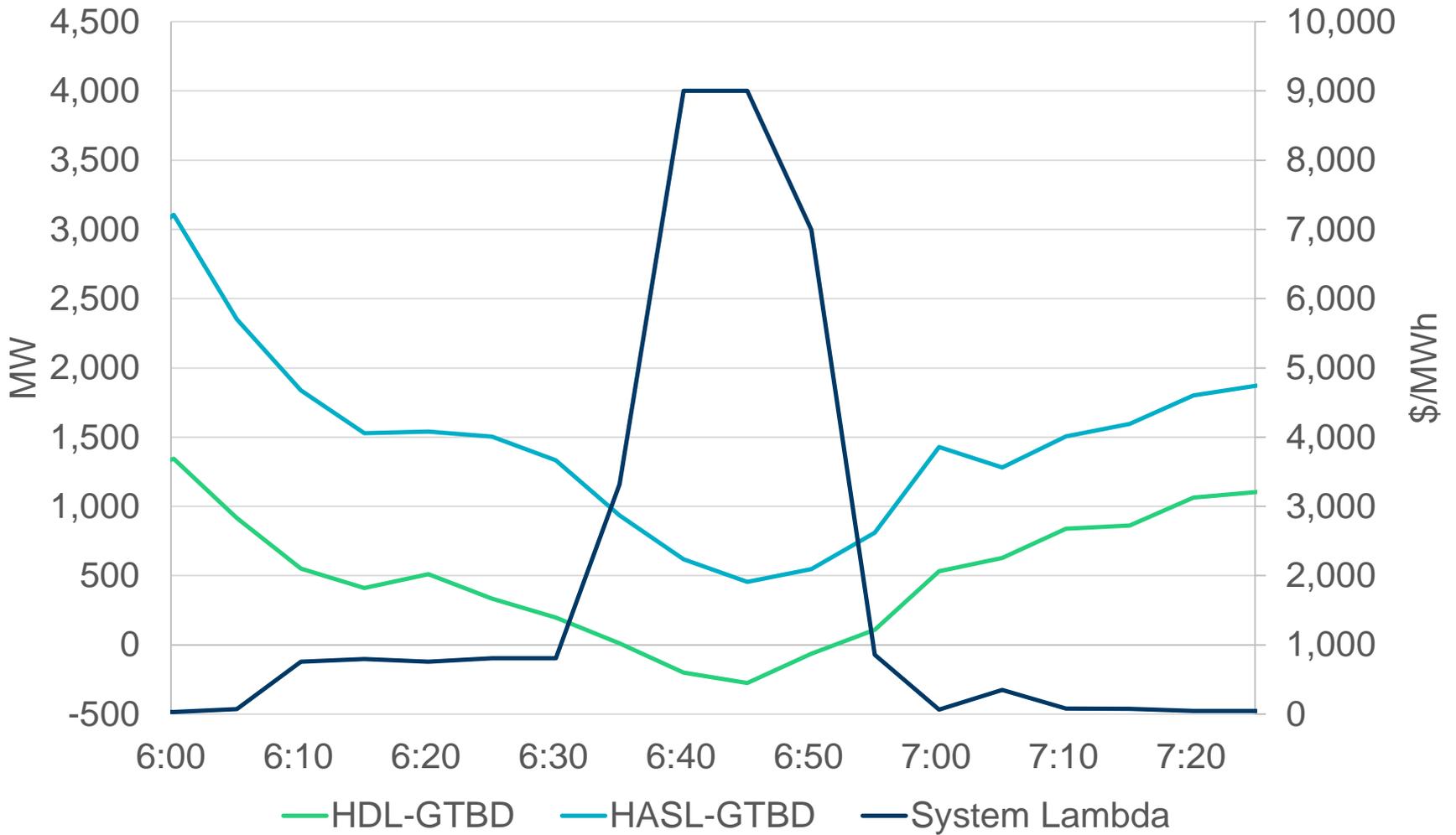
— System Lambda

— High Ancillary Service Limit (HASL)

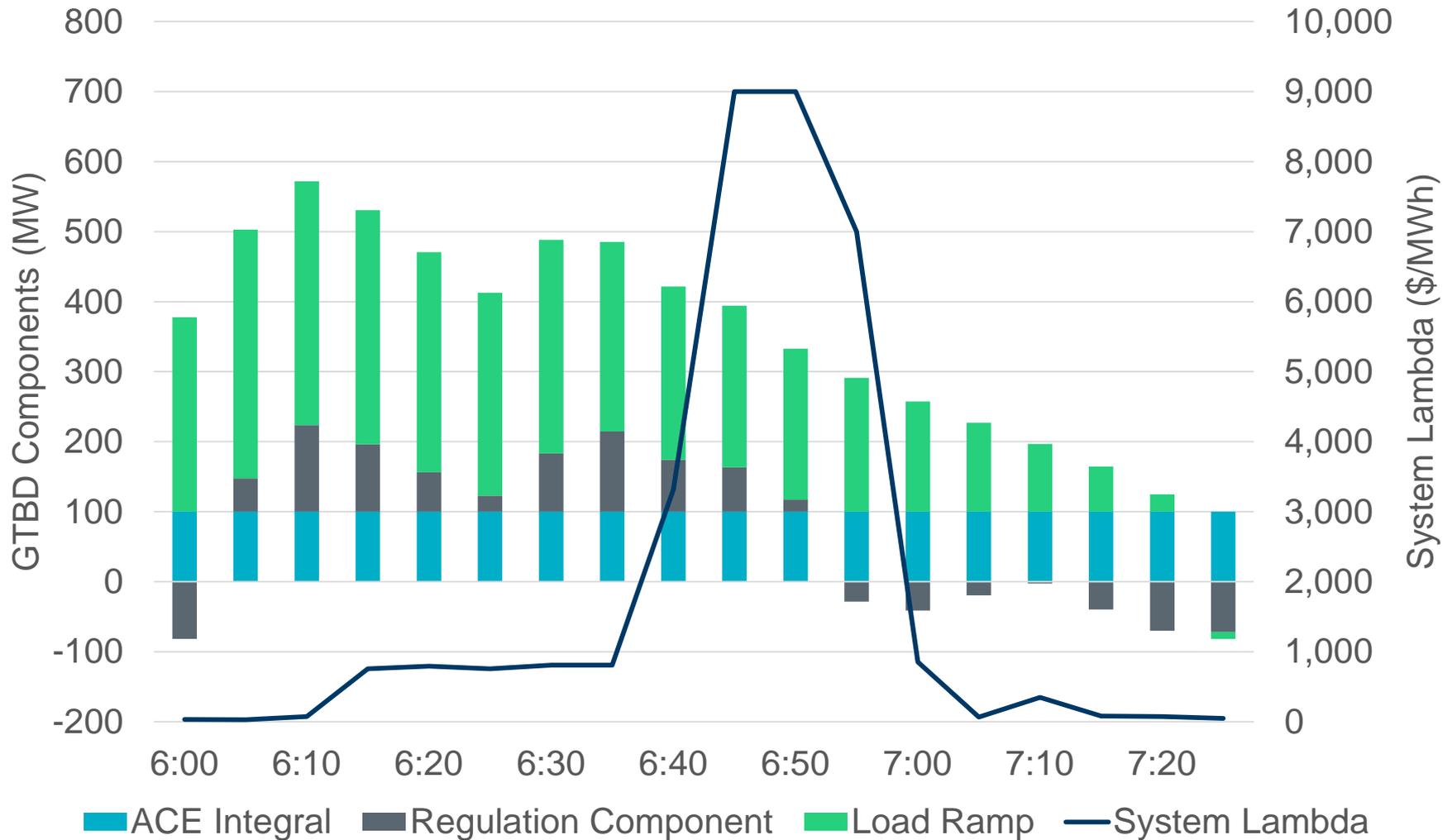
— GTBD



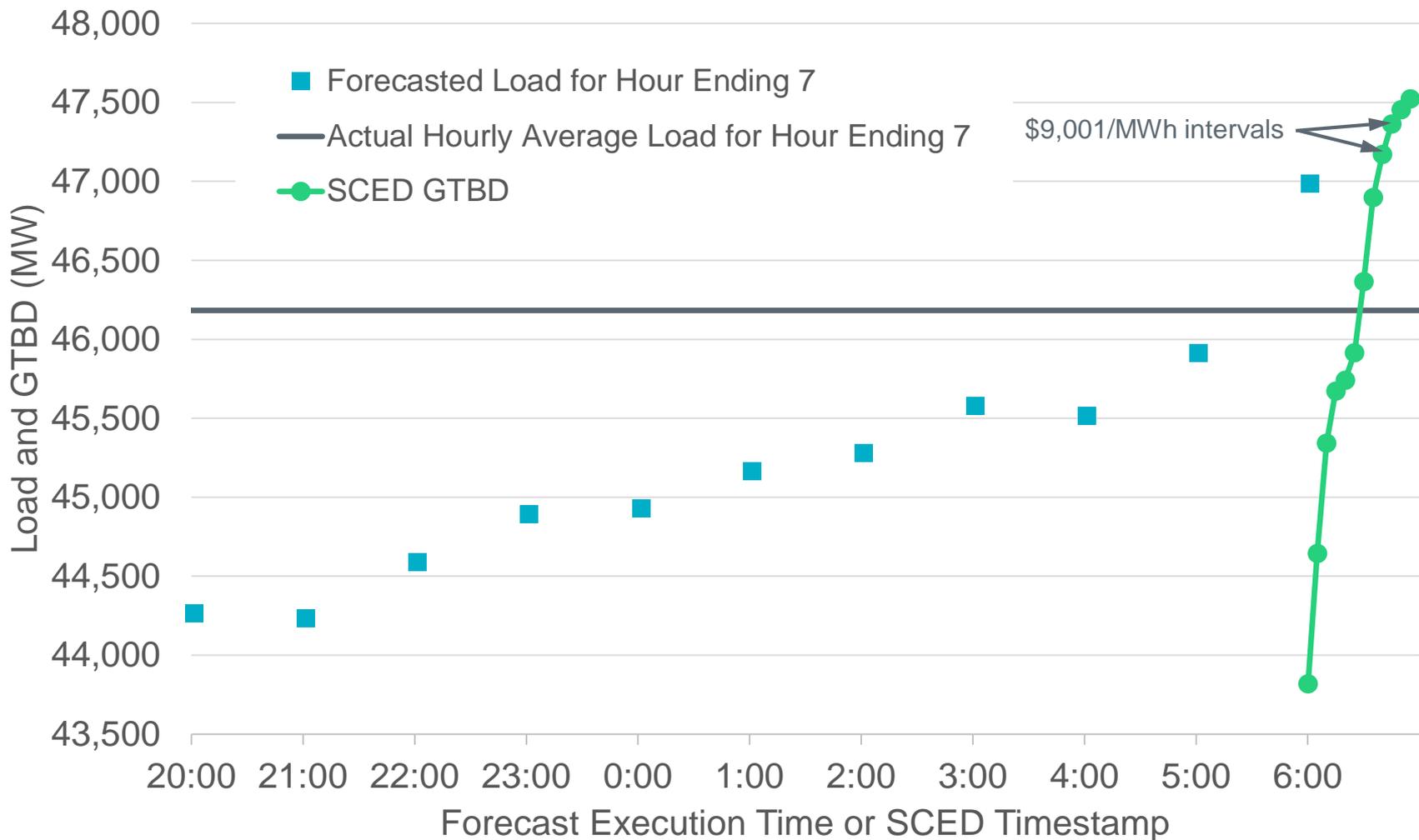
Resource Limits and GTBD



GTBD Components



Load Forecast Evolution During the Morning



Ancillary Service Requirements

