



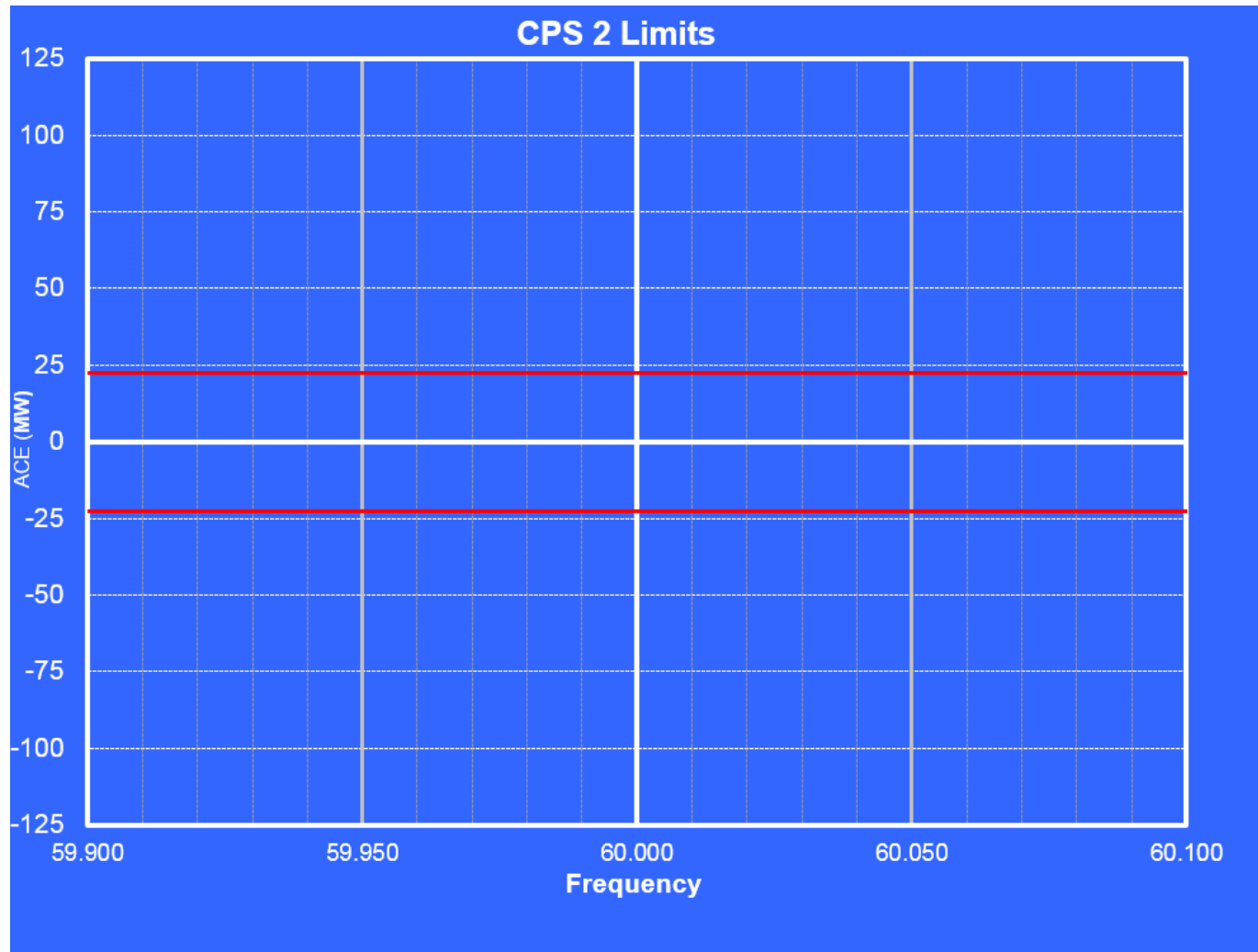
- Background
 - Bal-001-2 Real Power Balancing Control Performance became effective 7/1/16
 - CPS2 was replaced with RBC
 - NorthWestern participated in a Field Trial from March 7 to June 30. This gave us the opportunity to control to RBC (rather than CPS2) without penalties for violating the standard



- Key differences between CPS2 and RBC
 - CPS2 limits are constant, regardless of the frequency in the interconnection
 - RBC limits vary based on frequency
 - CPS2 requires being within the limits in 90% of the 10-minute periods in a month.
 - RBC requires moving back within the limits in 30 minutes or less.

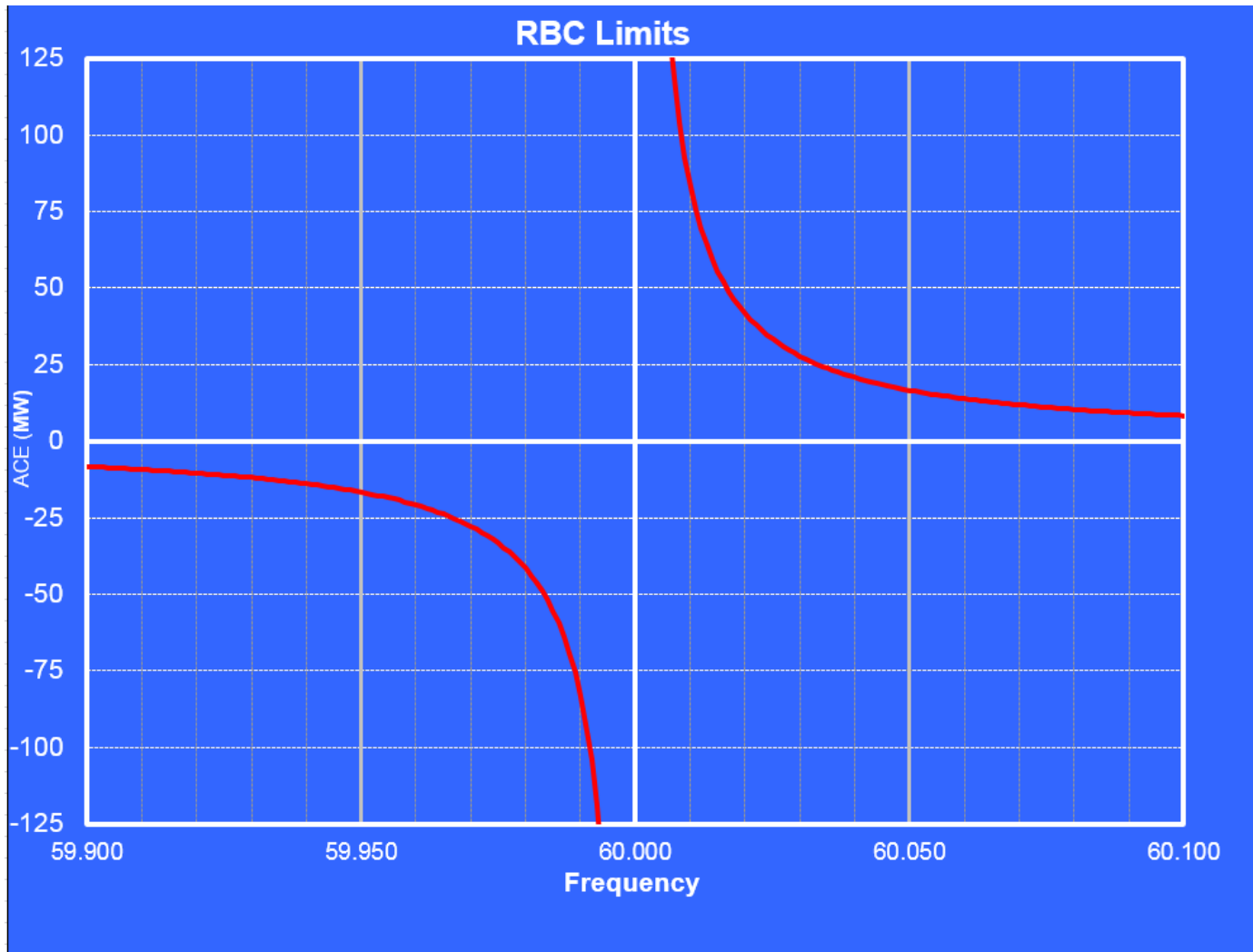


CPS1 and CPS2



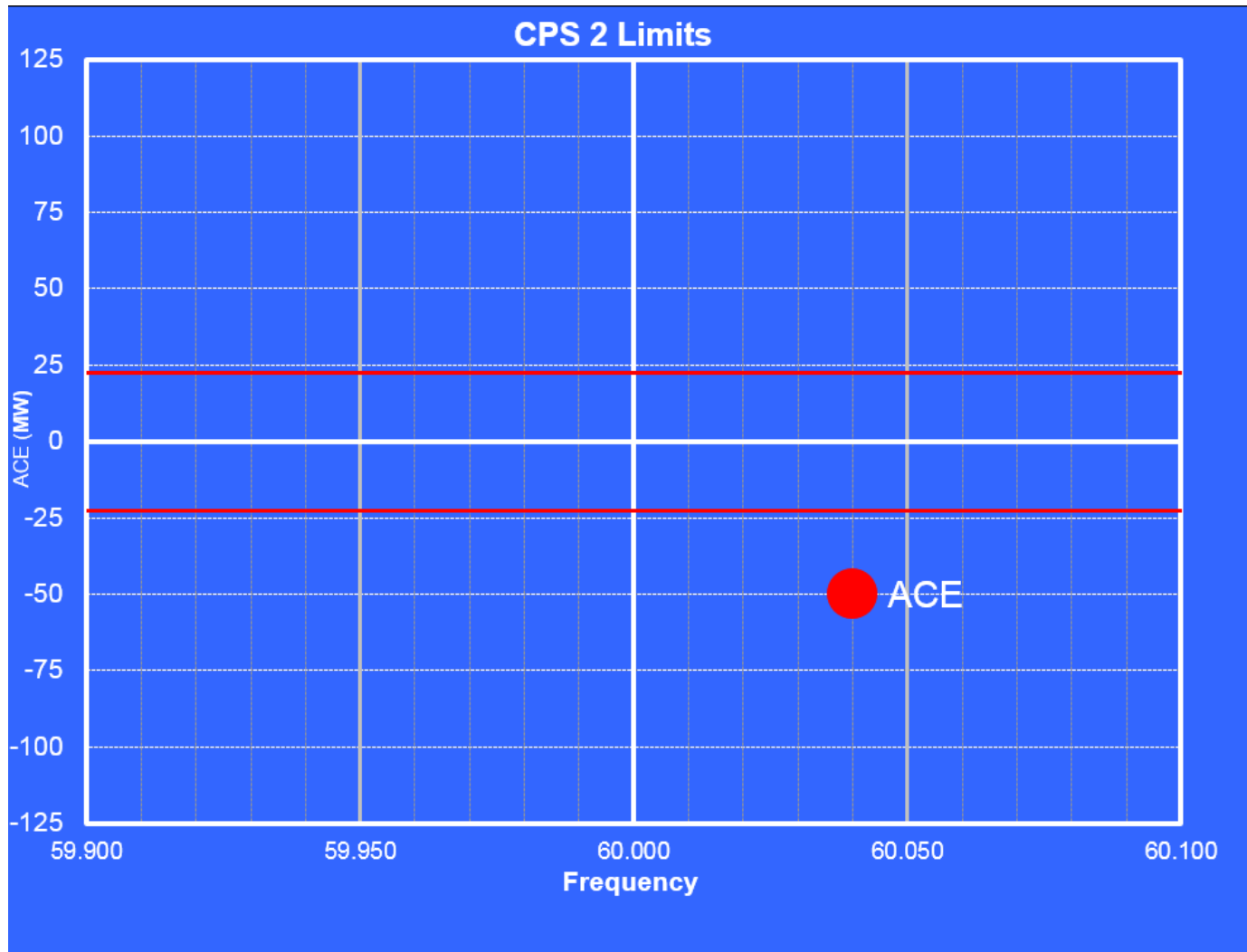


CPS1 and CPS2



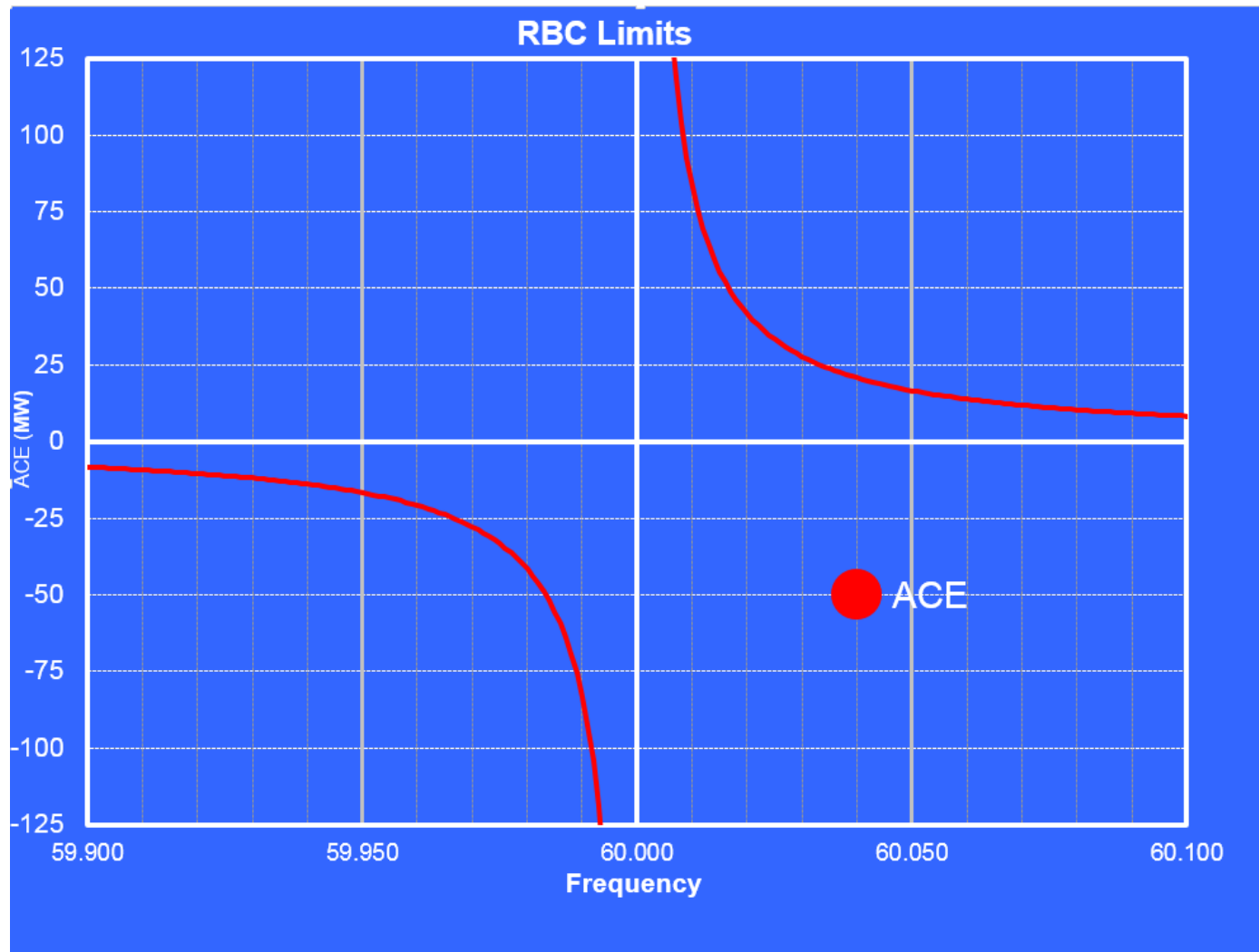


CPS1 and CPS2



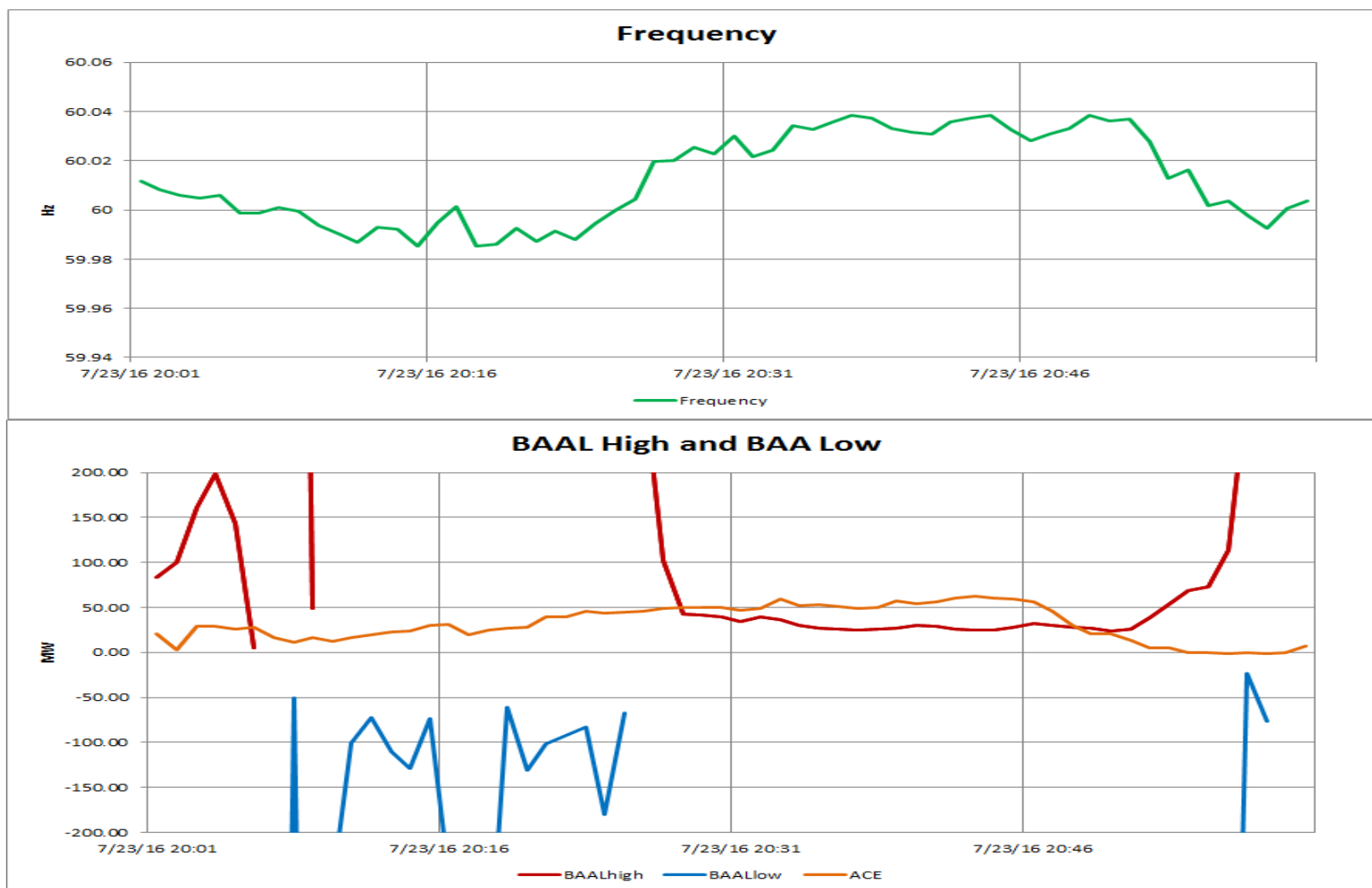


CPS1 and CPS2



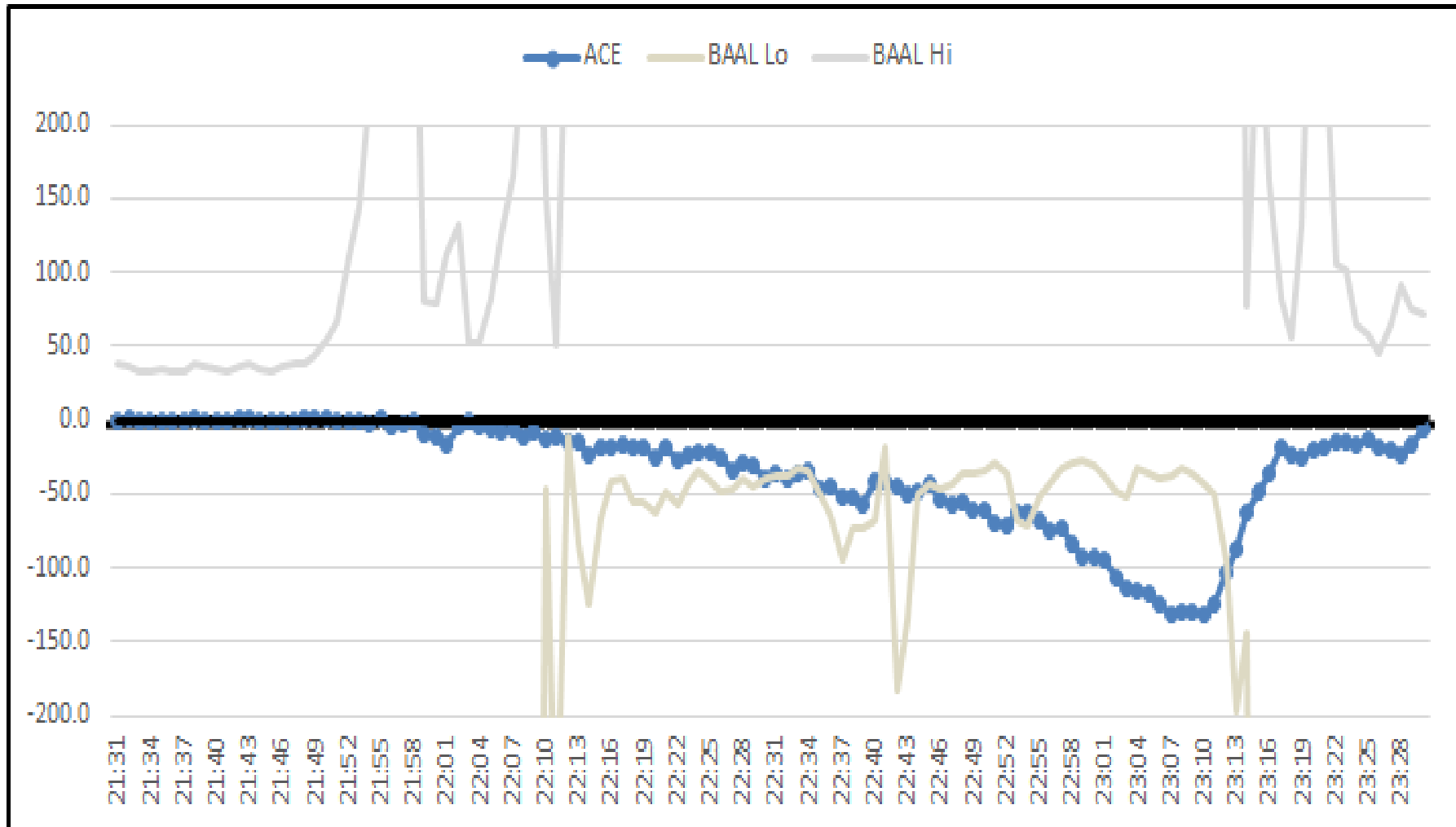


BAA Limits Vary with Frequency



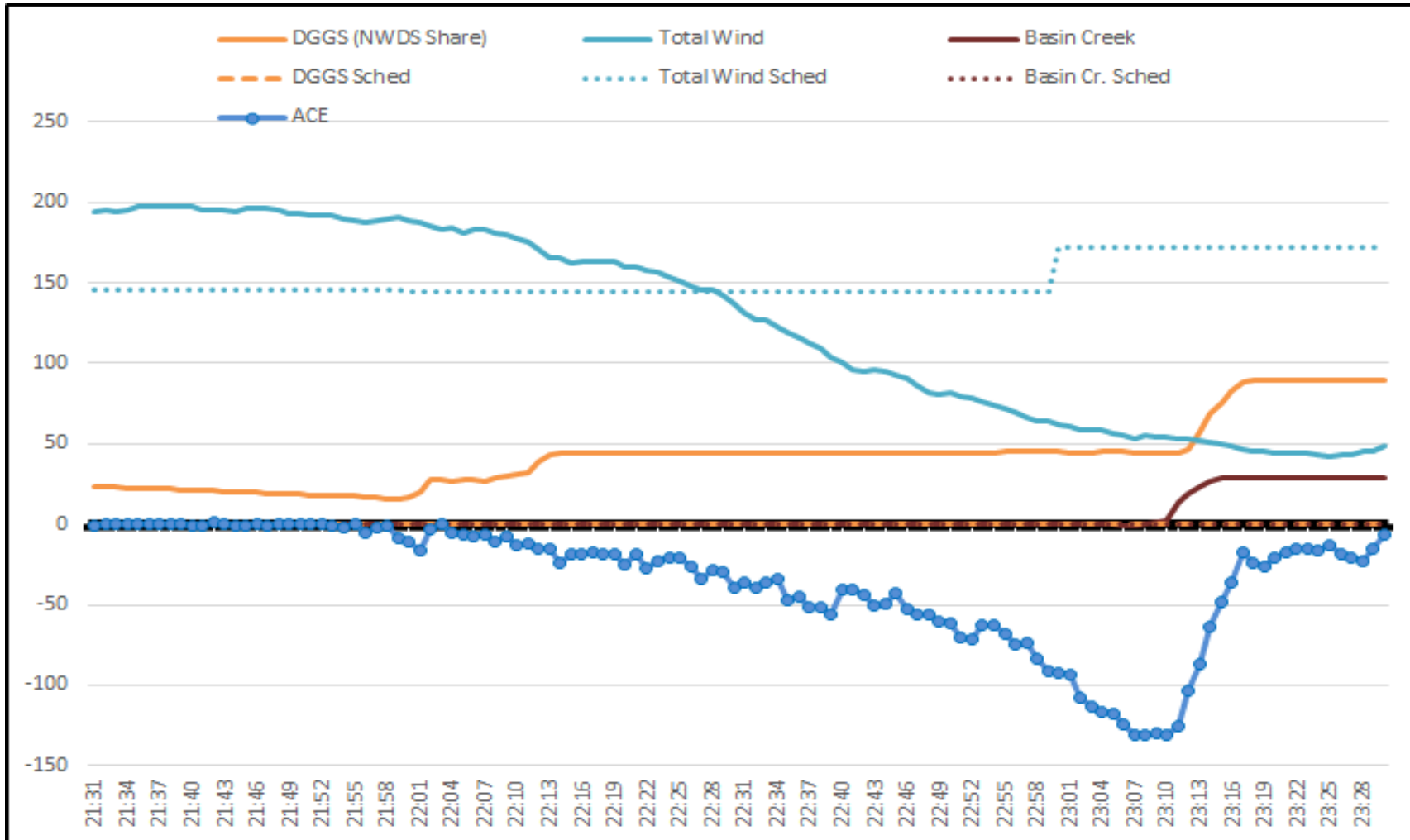


Examples





Examples





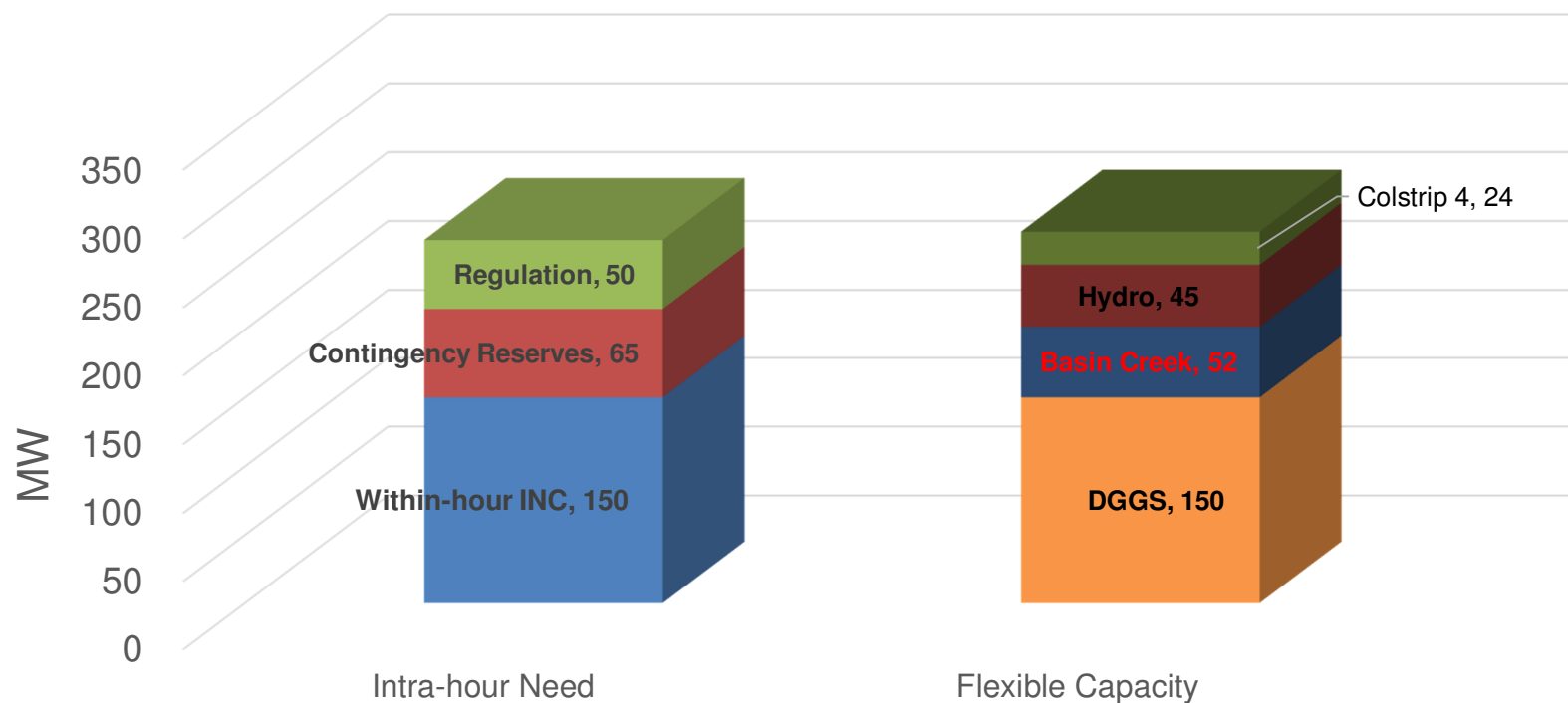
RBC INC and DEC Dispatches

March '16 through February '17			
Dispatch Instances			
	Number	Max Qty.	
INC	57	122	
DEC	73	166	
Total	130		



Current Flexible Capacity Need

Flexible Capacity Need vs. Resources

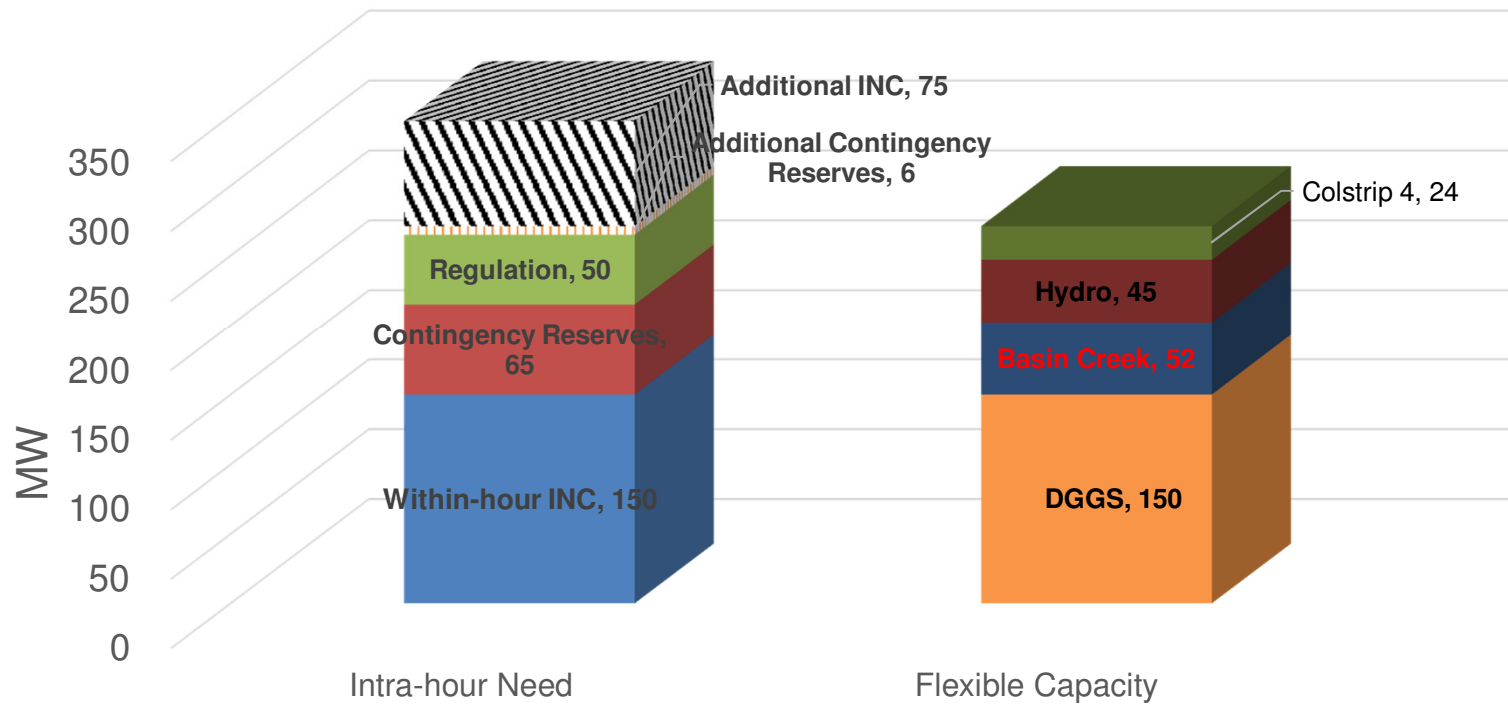


■ Within-hour INC ■ Contingency Reserves ■ Regulation ■ DGGs ■ Basin Creek ■ Hydro ■ Colstrip 4



Near Future Flexible Capacity Need

Flexible Capacity Need vs. Resources



- Within-hour INC
- Contingency Reserves
- Regulation
- Additional Contingency Reserves
- Additional INC
- DGGs
- Basin Creek
- Hydro
- Colstrip 4