Resource Sufficiency Evaluation Enhancements discussion

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Market Policy and Performance

Market Surveillance Committee Meeting

General Session

August 27, 2021

Bid Range Capacity Test – Uncertainty Update
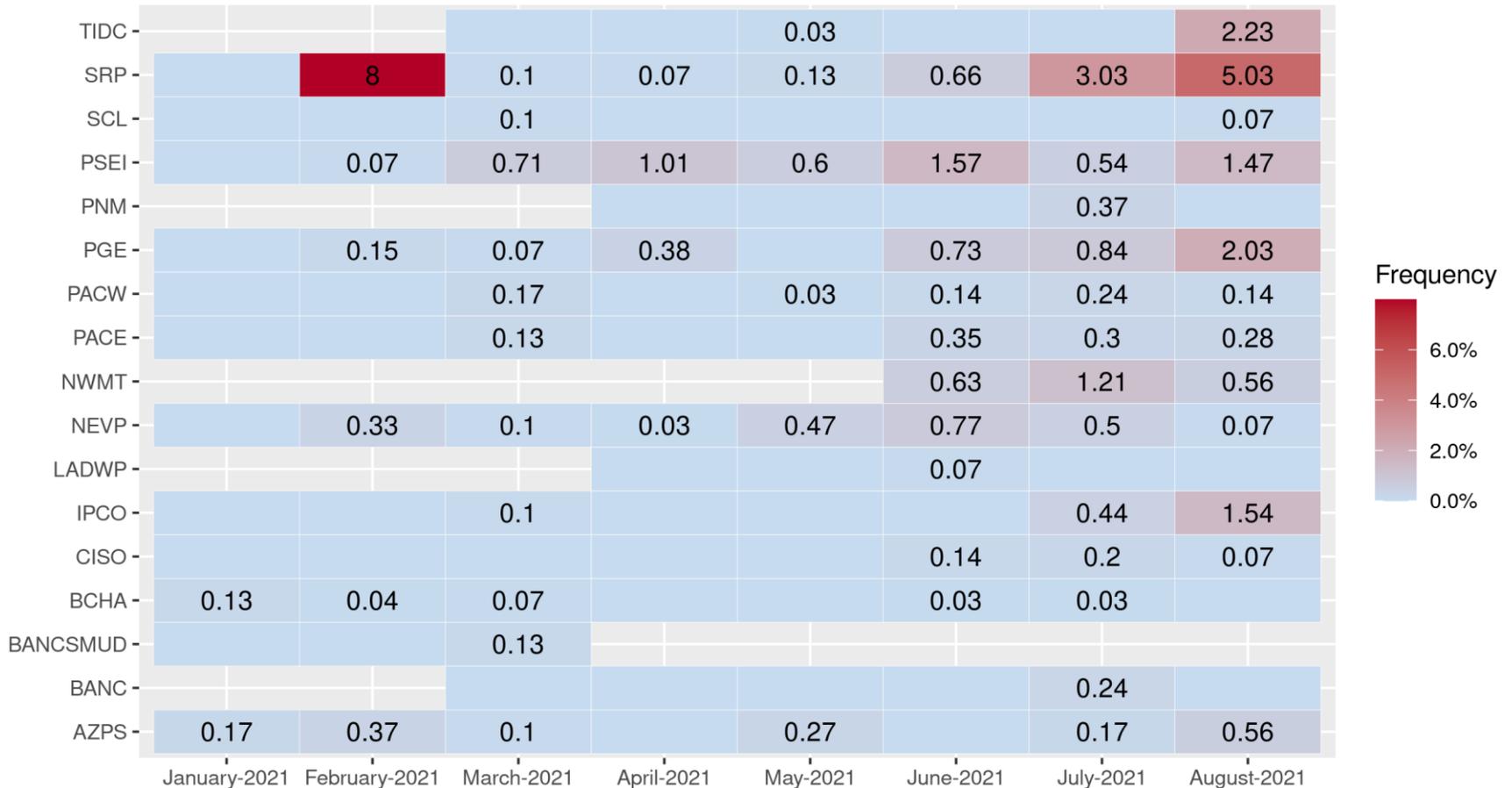
Test purpose

- To ensure each EIM BAA has sufficient bid in capacity to meet fifteen-minute demand forecast (less net schedule interchange)

- Sufficient bid-in capacity to meet uncertainty in net-scheduled interchange

Summer 2021 Enhancement

- Sufficient bid-in capacity to meet net load uncertainty after factoring in diversity benefit
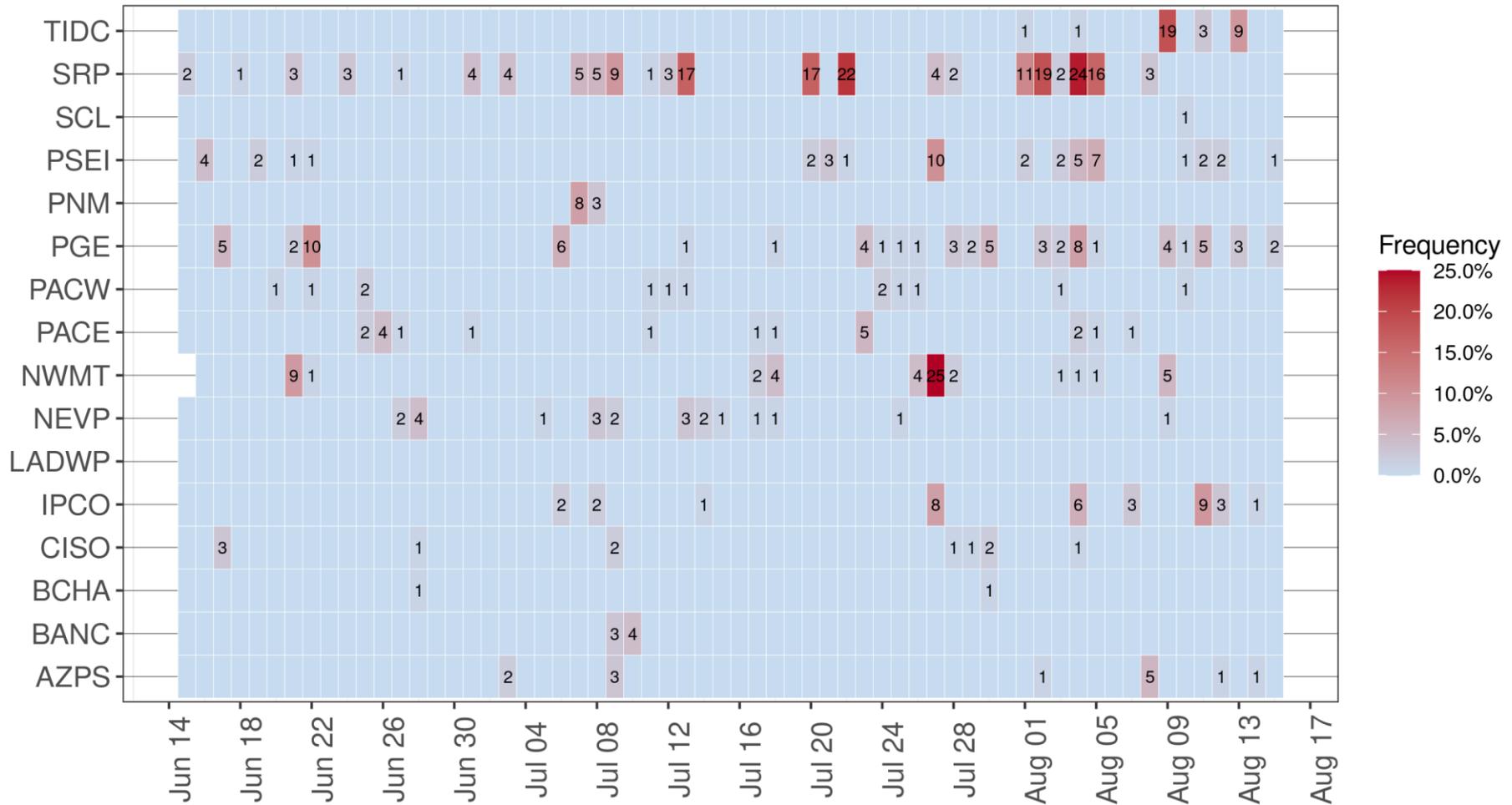
Monthly Average Bid Range Capacity Test Up failure increased since June 2021

Summer 2021 enhancement was implemented on June 15, 2021

	January-2021	February-2021	March-2021	April-2021	May-2021	June-2021	July-2021	August-2021
TIDC					0.03			2.23
SRP		8	0.1	0.07	0.13	0.66	3.03	5.03
SCL			0.1					0.07
PSEI		0.07	0.71	1.01	0.6	1.57	0.54	1.47
PNM							0.37	
PGE		0.15	0.07	0.38		0.73	0.84	2.03
PACW			0.17		0.03	0.14	0.24	0.14
PACE			0.13			0.35	0.3	0.28
NWMT						0.63	1.21	0.56
NEVP		0.33	0.1	0.03	0.47	0.77	0.5	0.07
LADWP						0.07		
IPCO			0.1				0.44	1.54
CISO						0.14	0.2	0.07
BCHA	0.13	0.04	0.07			0.03	0.03	
BANCSMUD			0.13					
BANC							0.24	
AZPS	0.17	0.37	0.1		0.27		0.17	0.56

Frequency

6.0%
4.0%
2.0%
0.0%

California ISO

Frequency of Daily Capacity Test Up failure
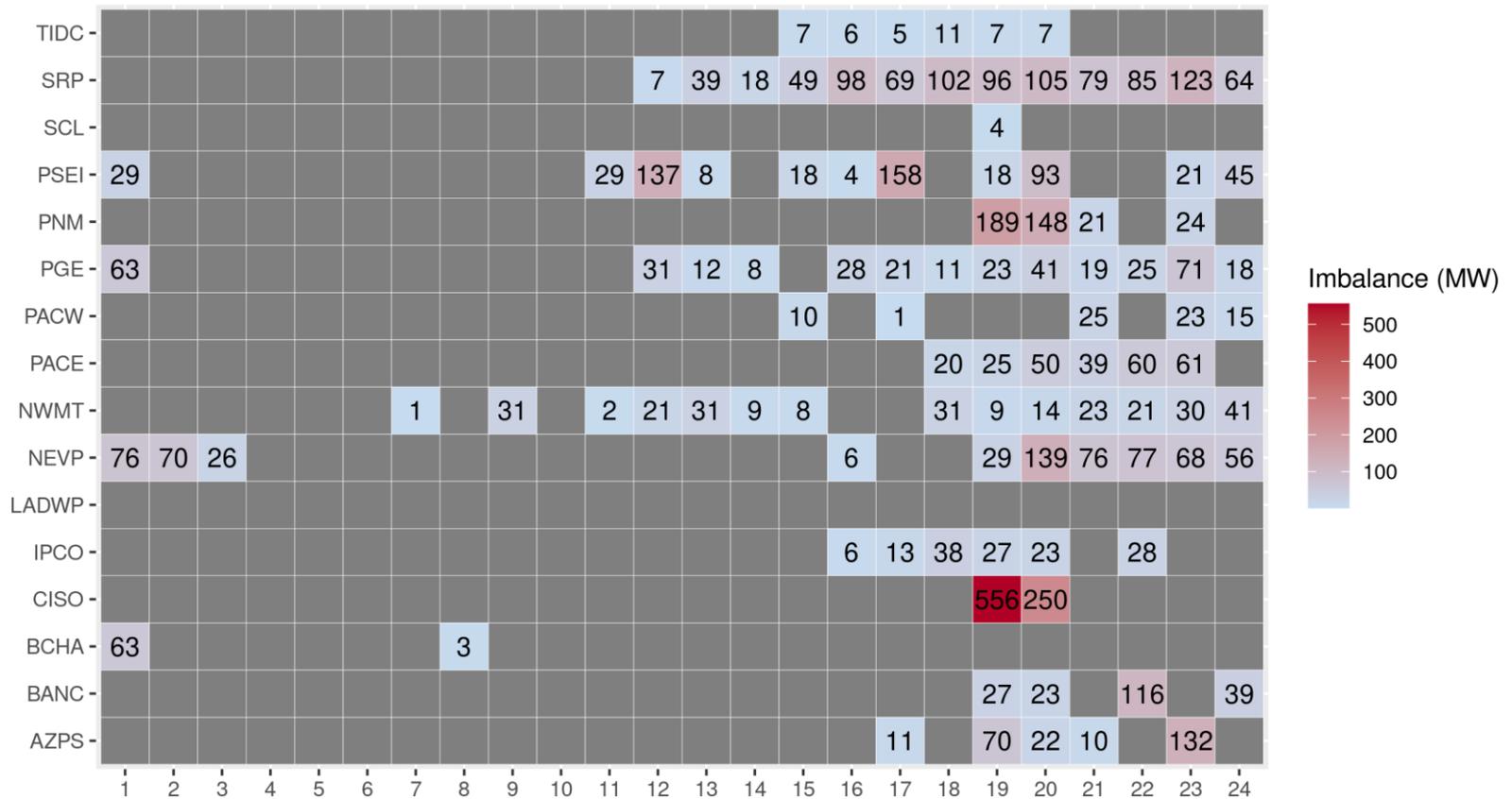## June 15 - August 15

Majority of failures are concentrated in peak hours
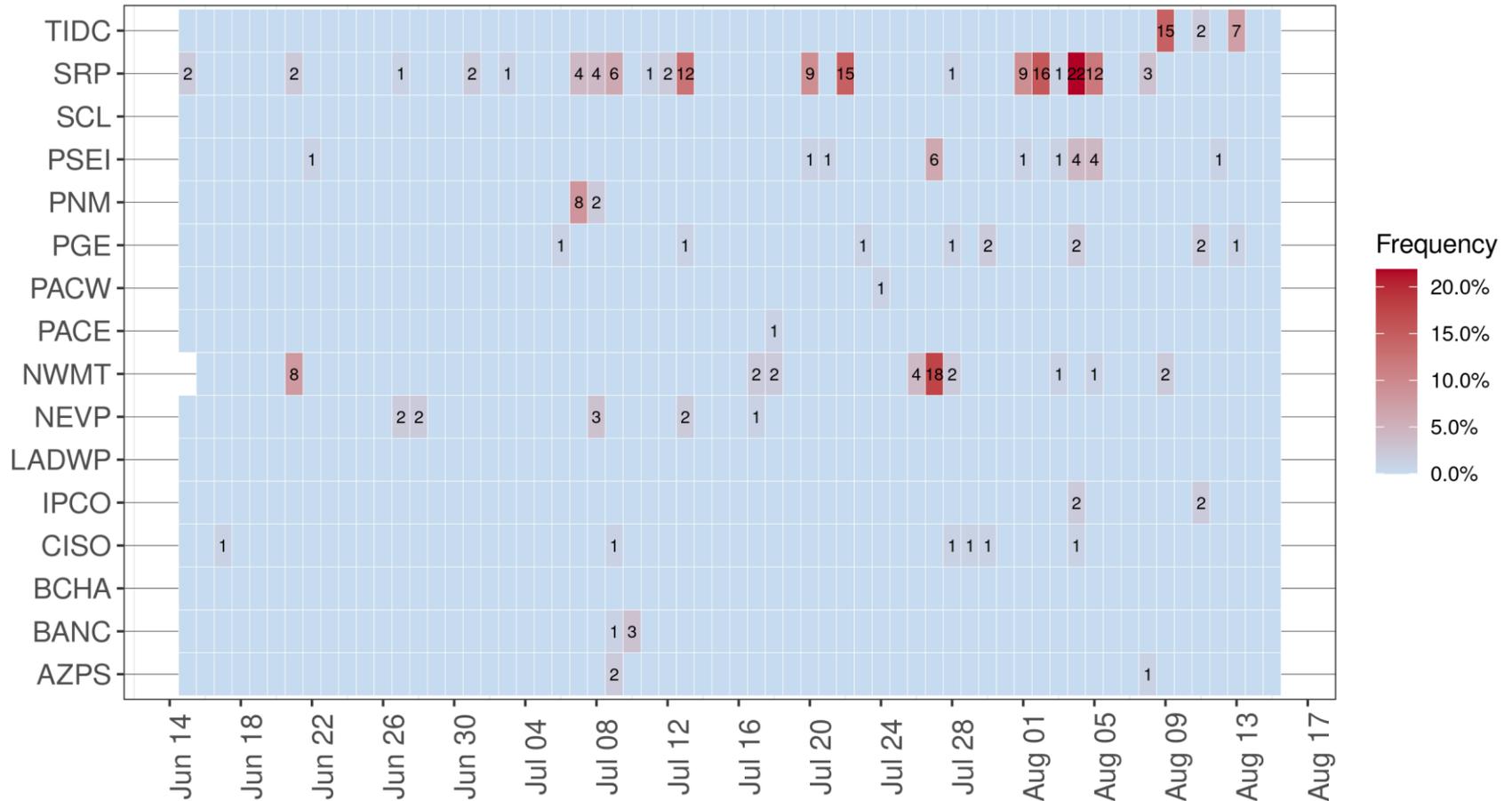## June 15, 2021 – August 15, 2021
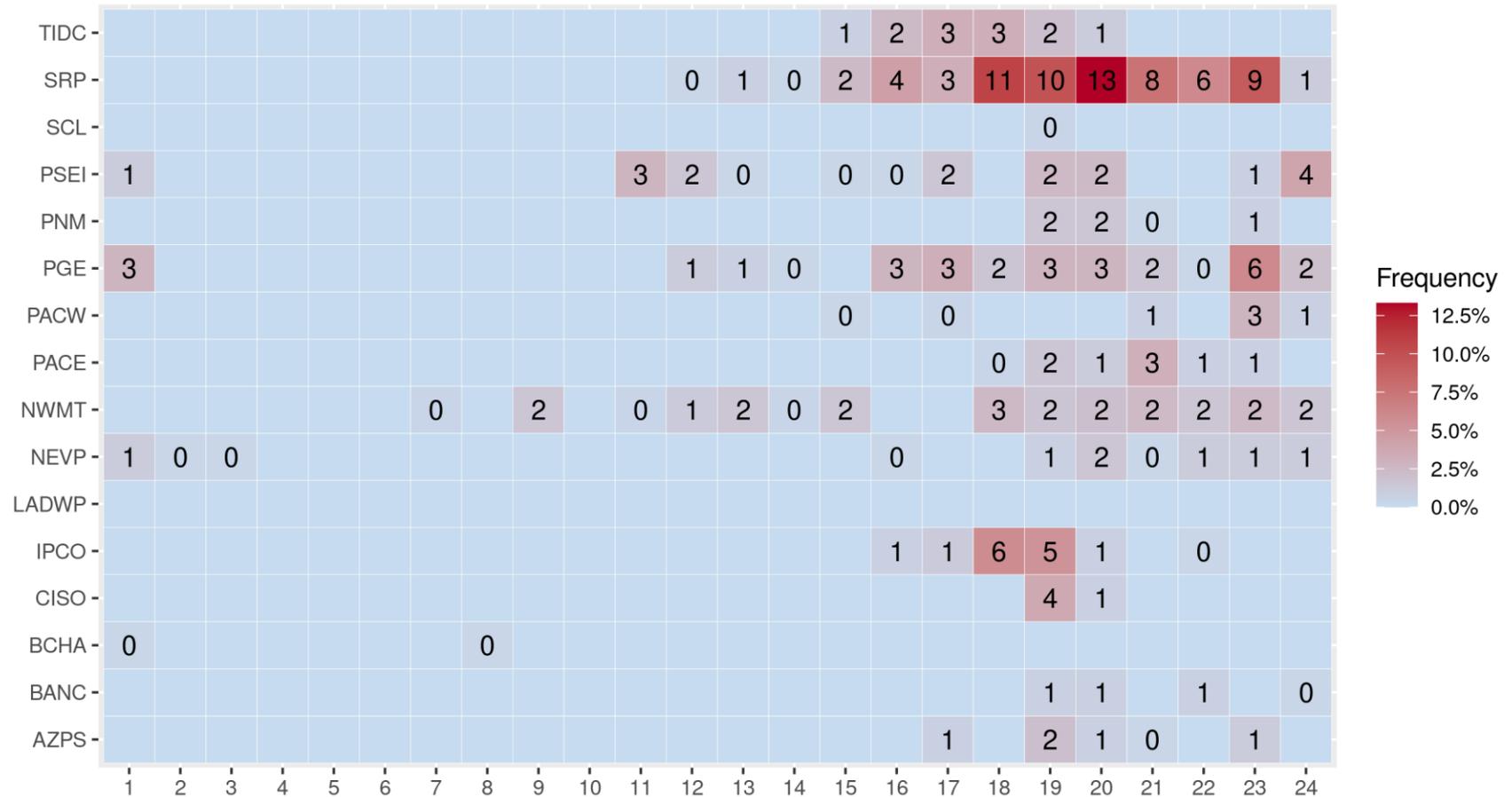
Hourly Average Capacity Test Up Shortfall- MW

Average imbalance MW is calculated using only those intervals with capacity test up failure
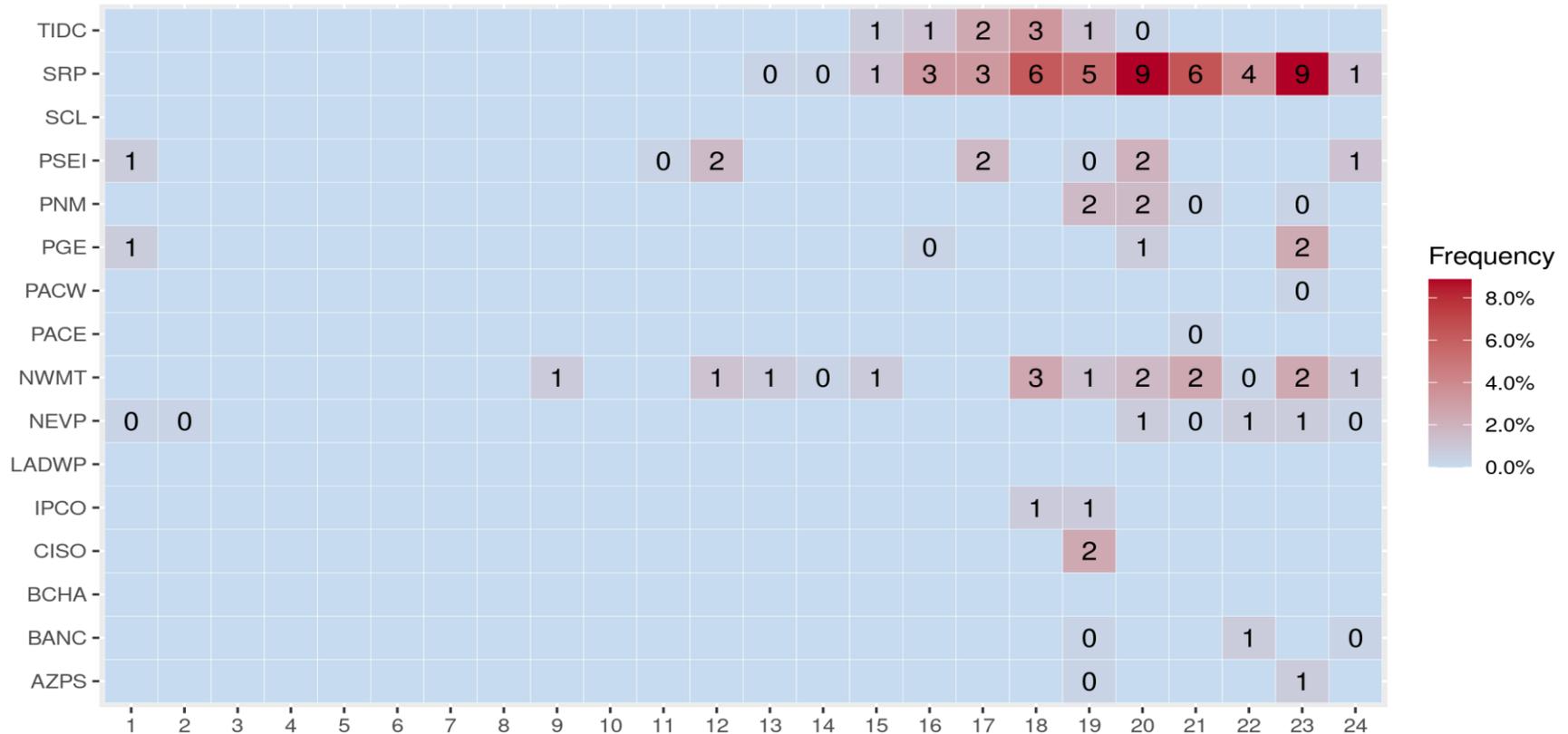
Incremental frequency of Capacity Up Test or Flexible Ramp Up Test Failure

Failure Interval show those intervals in which the BAA failed the capacity test after removing net load uncertainty component or failed the flexible ramp up sufficiency test

Incremental frequency of Capacity Up Test or Flexible Ramp Up Test Failure

Failure Interval shows that interval in which the BAA failed the capacity test after removing net load uncertainty or failed the flexible ramp up sufficiency test

Net Intertie Uncertainty Calculation

- Intended to account for deviation between T-40 and T-20
- Uses a 95% confidence interval. Uses 97.5% and 2.5% for calculation for a high and low percentile
  - Between 15th day of third month prior and 15th day of current month

- $Relative\ Deviation = \dfrac{Net\ Actual - Net\ Scheduled}{Net\ Scheduled}$

- $Absolute\ Deviation = Net\ Actual\ - Net\ Scheduled$

- $Additional\ Upward\ requirement = \min(-1 *$ $Relative\ Low\ deviation * net\ scheduled, -absolute\ low\ percentile)$

Net Uncertainty Calculation Example

Relative Low Deviation = -0.03

Absolute Low Deviation = - 50 MW

Example 1 – 1000 MW Interchange

Additional requirement = min (-1*-0.03*1000, -1*-50) = 30 MW

Example 2 – 2500 MW Interchange

Additional requirement = min (-1*-0.03*2500, -1*50) = 50 MW

No bigger then 2.5% under delivery, the relative deviation calculate scales to transfer sizes

The proposed ability to adjust an EIM entitles demand forecast is intended to allow their programs that are not able to be modeled as proxy demand resources or don't fit the narrow ISO reliability demand response resources model, to be included

The CPUC Emergency Load Reduction Program has been raised as potentially warranting similar treatment

- While the emergency load reduction program has demand quantities signed up, there is only compensation for demand reduction (no performance = no pay). No financial mechanism to force expected demand reduction
- The proposed EIM design is based on the expected demand reduction, with charges such as uninstructed imbalance energy and under scheduling for failure to deliver

California ISO