DR Representation Models
(Base Scheduling vs Participating Resource)

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June 17th, 2025 – CAISO DDEMI Working Group Session

PGE's preferred future state

Establishing a new participation model for DR resources:

Allowing for current and future programs to receive RSE credit and be responsive to price signals

- Formal DR agreement for WEIM entities, similar to traditional participating resources:
  - An NRI process
  - A SQMD plan or equivalent agreement between CAISO and the WEIM entity
    - Entity would provide details of how each program's performance will be evaluated
- New functionality to scale individual DR programs as the customer base changes
- Option for WEIM entities to aggregate programs >10 MWs without telemetry, at the BA's discretion
- Allowing for operational flexibility:
  - Ability to accurately reflect the dynamic variability of the resources in bids, hourly profiles, and outage cards (if derates are needed)
- Implementing logical telemetry options (for EDAM and WEIM) that can feed back into the load forecast
- Allowing WEIM entities to provide manual adjustments to DR forecasts and logical telemetry (similar to existing VER forecasts)

Potential Interim Solution
Allowing automation of existing DRs under the LFA requirements

Create a Non-Participating Model for DRs – new specific resource model

- Preserving LFA minimalistic requirements:
  - Attestation/written agreement between CAISO and WEIM Entity
- Allowing entities to Base Schedule the resource – (allows for automation)
- Using the Base Schedule as Logical Telemetry back to ALFS
- Adding functionality for WEIM entities to provide manual adjustments to the DR forecasts (similar to VER forecasting)

Comparison of Options

	Base Schedule (non-participating)	New Participation Model
Market Participation – price dispatching	❌	✔️
Easily scalable with customer enrollment/changes	✔️	❓
Automation of event scheduling	✔️	✔️
Potential DR Forecast Feedback into Load Forecasts	✔️	✔️
Improved transparency, including representing event in balancing tools (BSAP position matches test results)	✔️	✔️
Potential to enable EIM Entities the ability to adjust the resource schedule (like VER Forecast Adjustment)	✔️	✔️
Settlements Data	❌	✔️
Works with all PGE's Customer Programs	✔️	❌ ❓
No additional work needed for PEMS	✔️	❌
EDAM	❓	✔️

Portland Summer 2024 - High Temps

PGE

Jun-24

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
						74
2	3	4	5	6	7	8
63	65	69	75	82	86	83
9	10	11	12	13	14	15
77	80	76	74	76	72	67
16	17	18	19	20	21	22
66	66	74	87	91	82	88
23	24	25	26	27	28	29
74	77	89	72	70	81	84
30						
81						

Jul-24

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5 - Event	6
	82	77	82	92	99	99
7	8 - Event	9 - Event	10	11	12	13
100	102	104	93	86	88	94
14	15	16	17	18	19	20
92	86	97	88	90	91	94
21	22	23	24	25	26	27
80	77	83	83	77	85	82
28	29	30	31			
77	71	83	87			

Aug-24

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				99	91	86
4	5 - Event	6	7	8 - Event	9	10
93	87	79	88	96	85	88
11	12	13	14	15	16	17
83	73	73	80	79	81	84
18	19	20	21	22	23	24
80	80	80	76	71	69	70
25	26	27	28	29	30	31
79	87	75	79	93	96	99

Sep-24

| Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5 - Event	6 - Event	7
88	70	77	91	102	95	88
8	9	10	11	12	13	14
85	83	81	70	70	74	74
15	16	17	18	19	20	21
69	78	65	70	75	73	78
22	23	24	25	26	27	28
80	83	94	70	72	75	75
29	30					
69	76					

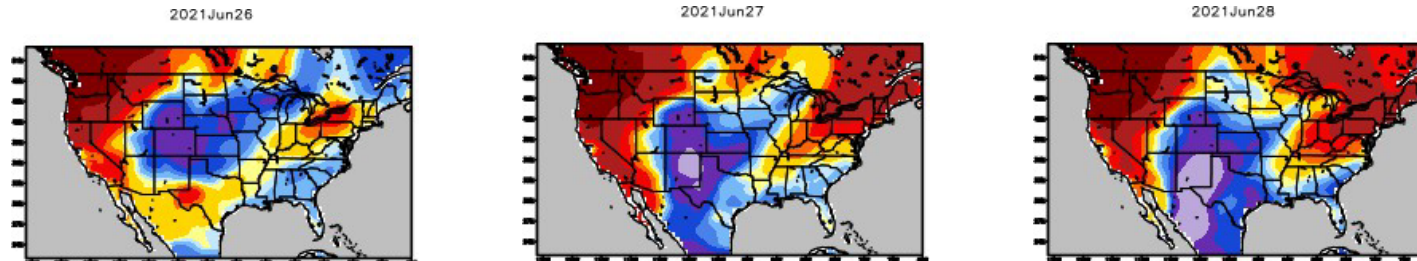# June 26th-28th 2021

U.S. Station Surface Max Temperature (°F)

June 28th (peak KPDX heat) Max Temperatures

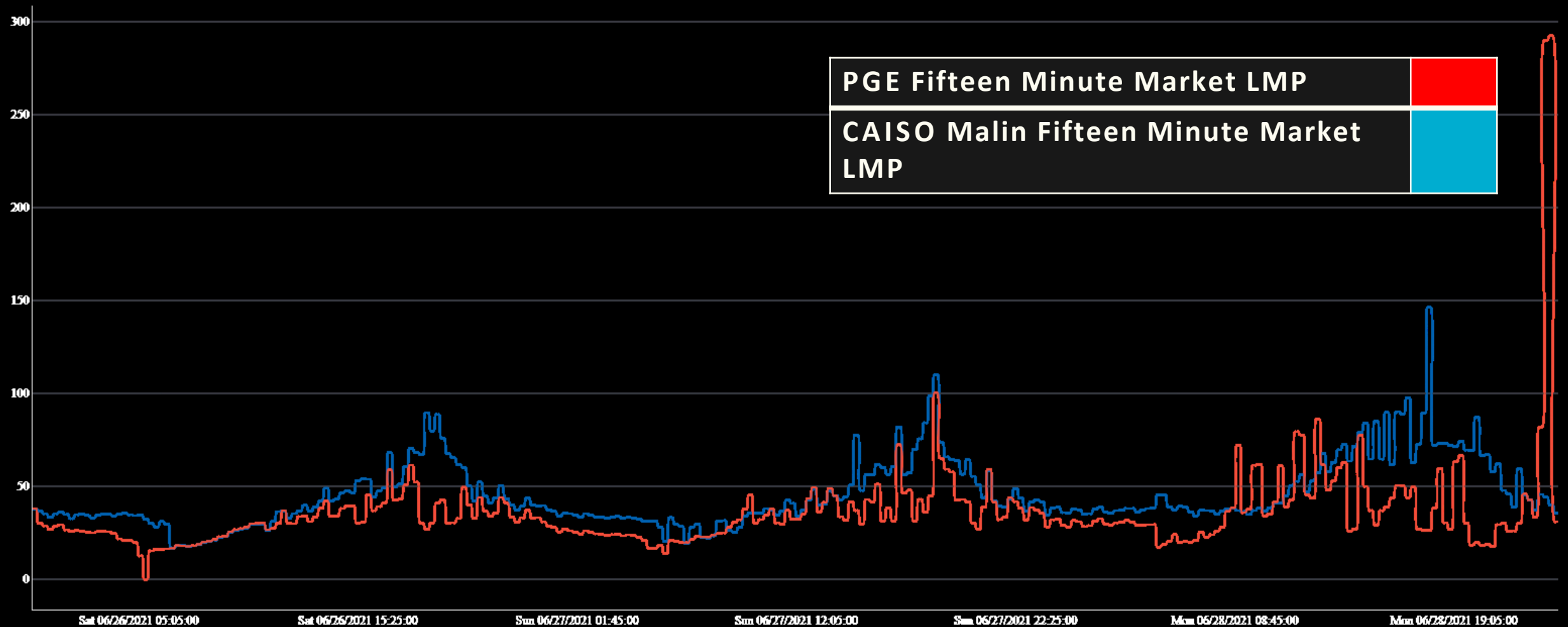U.S. Station Surface Max Temperature (°F) anomaly
(1991-2020 Climatology)
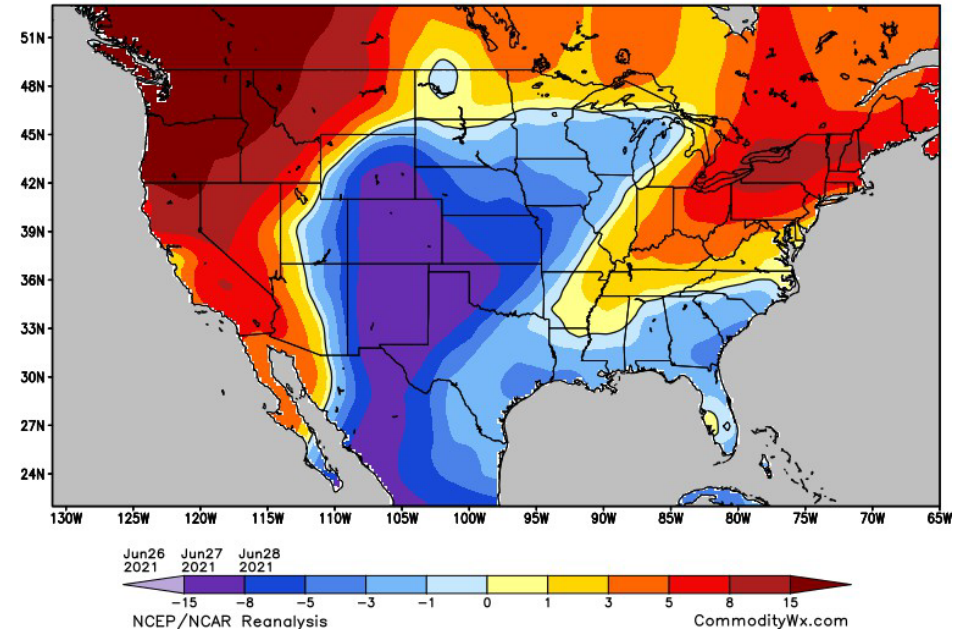
High Temperature Anomaly 3-day Composite
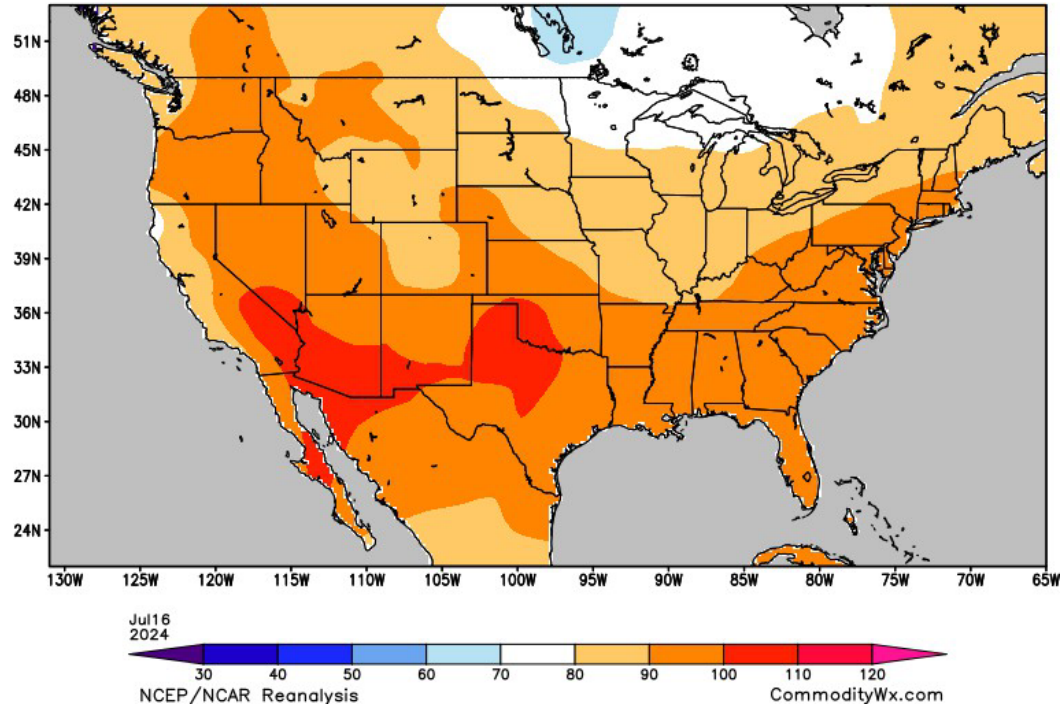
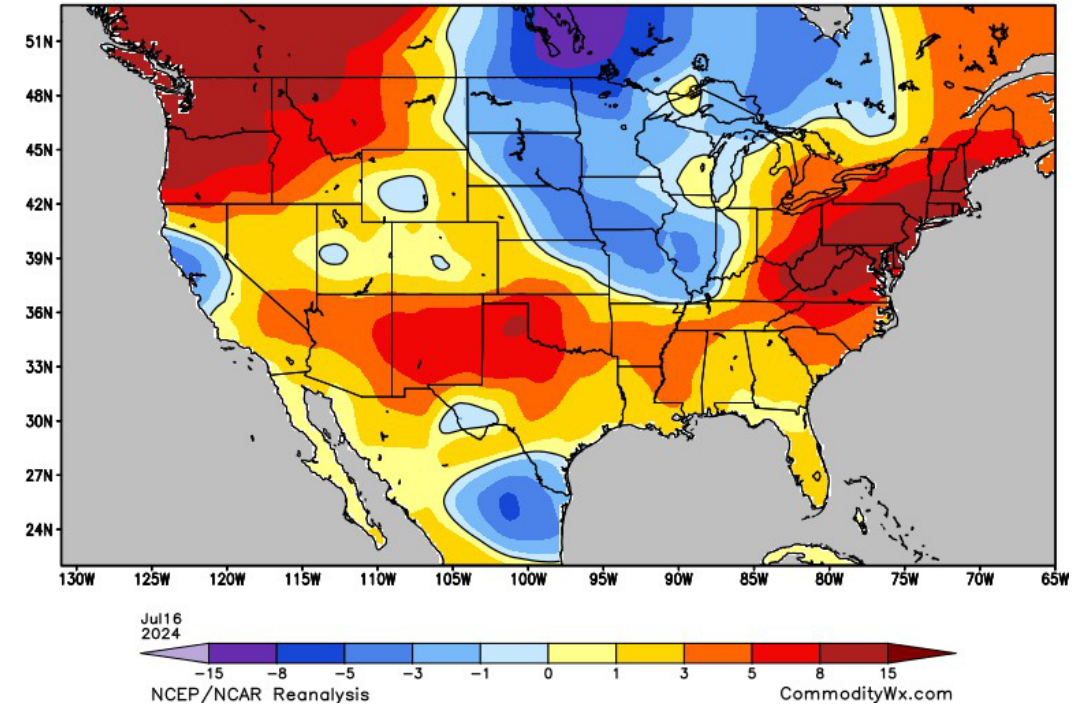Daily Average Temperature Anomaly

June 26th-28th 2021

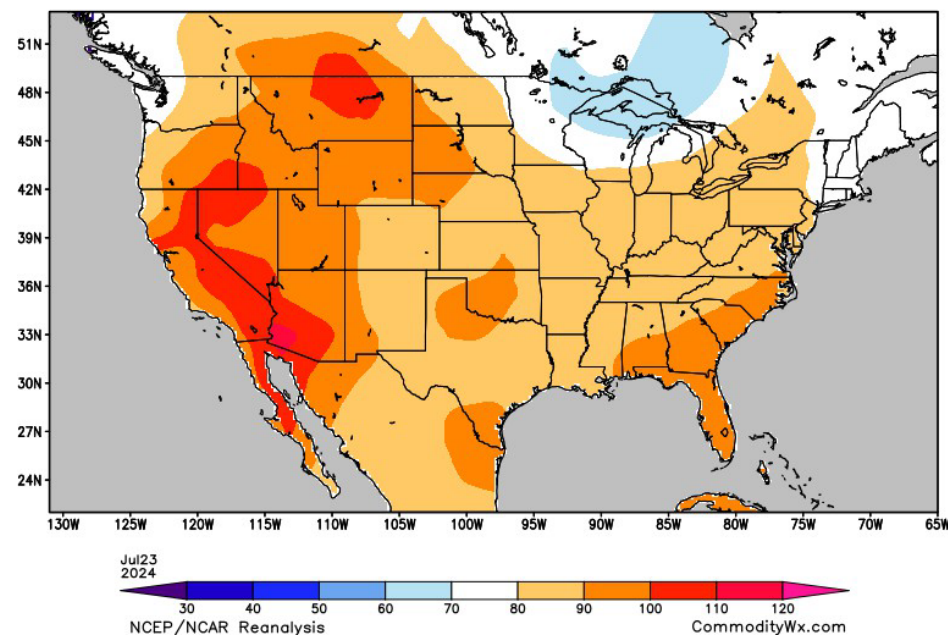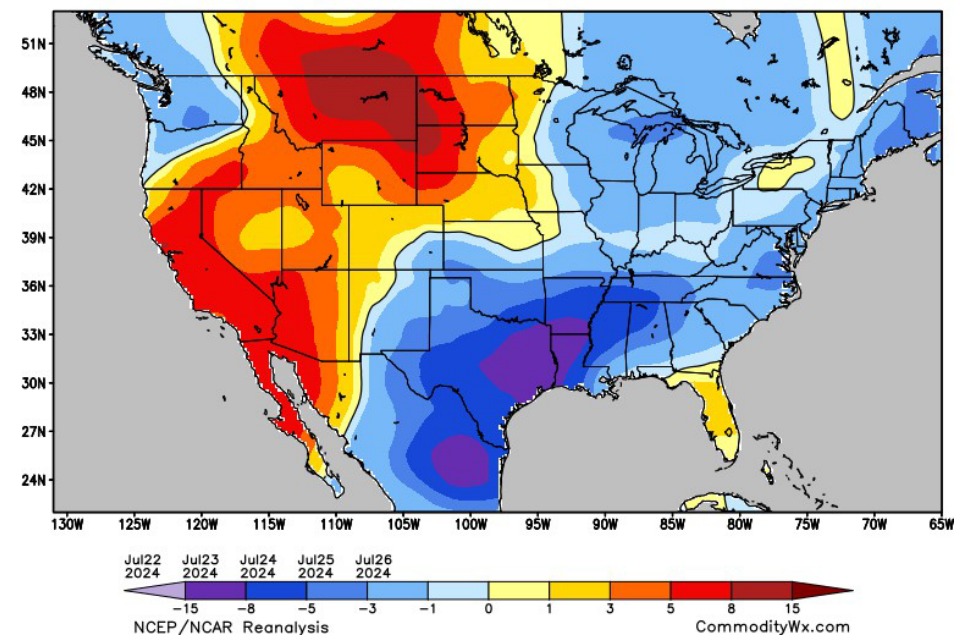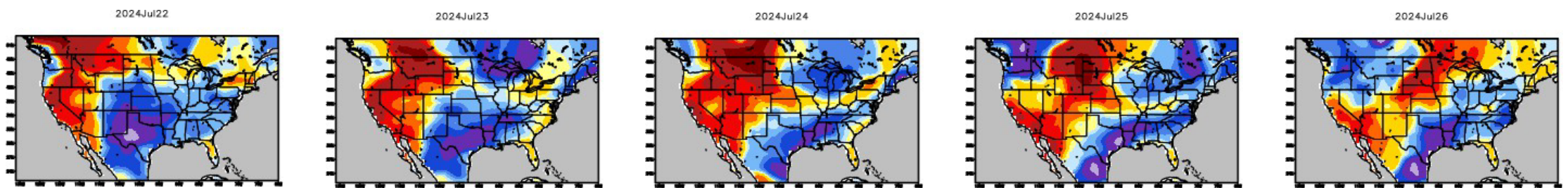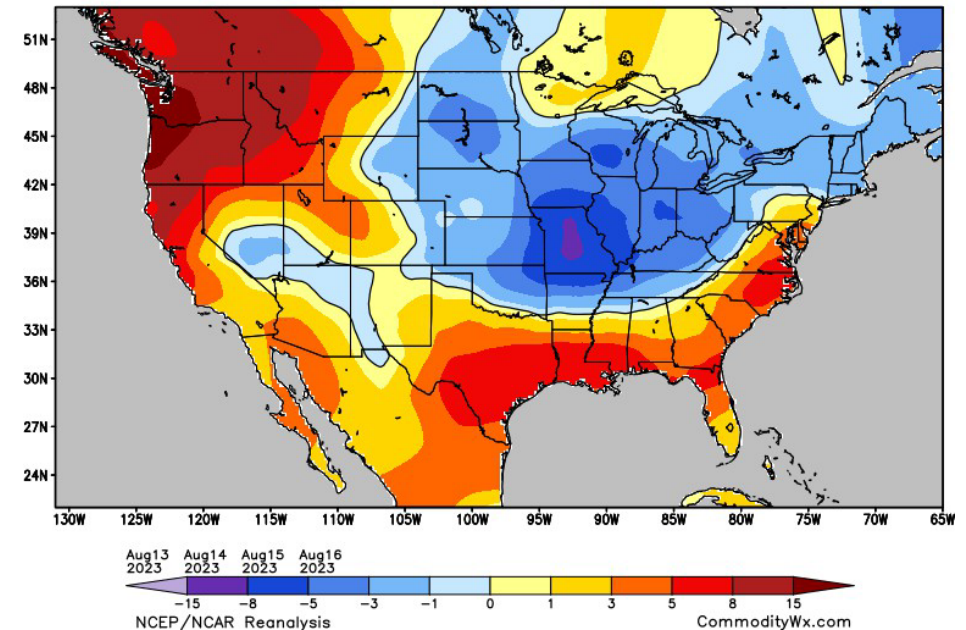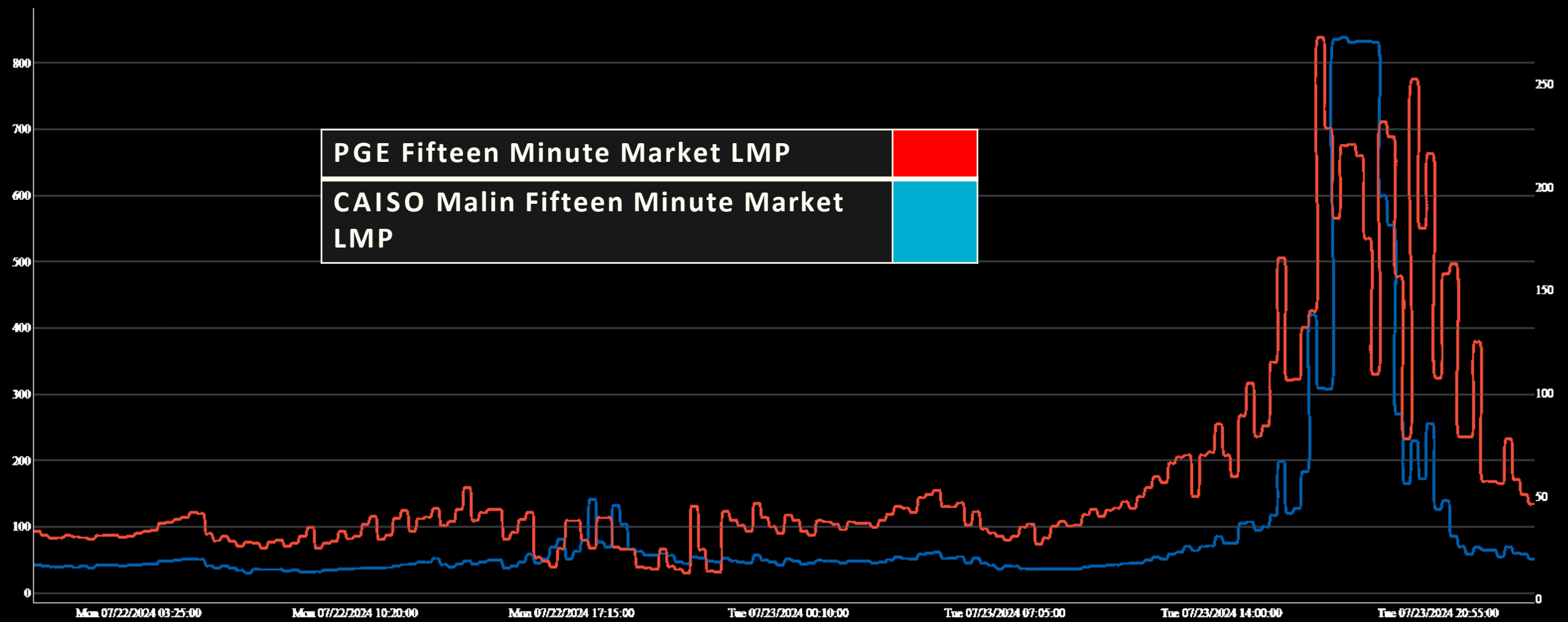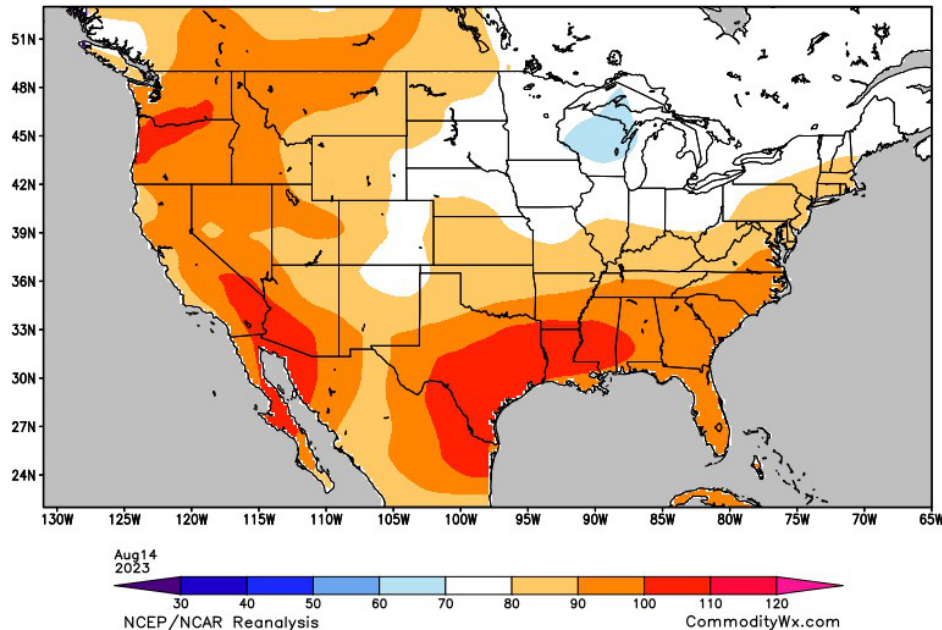# July 16th, 2024

July 16th Max Temperatures

High Temperature Anomaly

July 16ᵗʰ 2024

July 22ⁿᵈ-26ᵗʰ 2024

July 23ʳᵈ (peak CAISO heat) Max Temperatures

High Temperature Anomaly 5-day Composite

Daily Average Temperature Anomaly

July 22nd-26th 2024

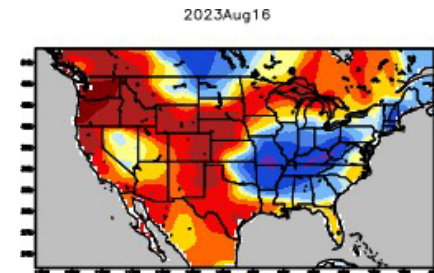# August 13th-16th 2023
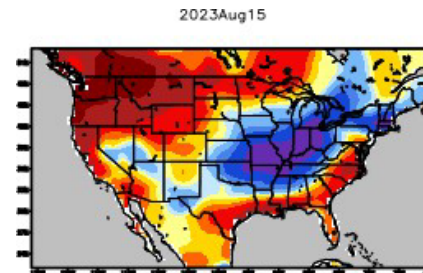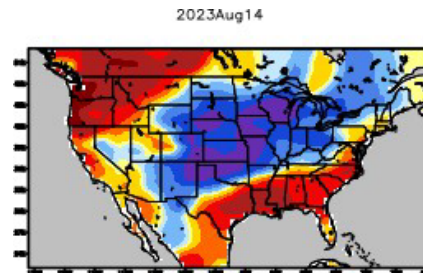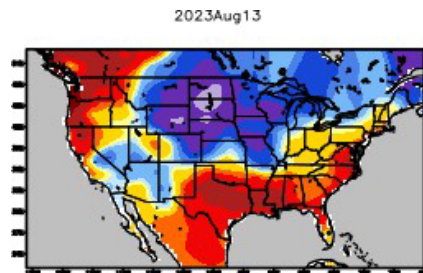

U.S. Station Surface Max Temperature (°F)

August 14th (peak KPDX heat) Max Temperatures

U.S. Station Surface Max Temperature (°F) anomaly
(1991–2020 Climatology)

High Temperature Anomaly 4-day Composite

Daily Average Temperature Anomaly

August 13th-16th 2023

PGE Fifteen Minute Market LMP

CAISO Malin Fifteen Minute Market LMP