

|                   | Cı | Current |           | m YD | Δ from 7D<br>Avg |      |
|-------------------|----|---------|-----------|------|------------------|------|
| Nat Gas<br>Prompt | \$ | 6.80    | <b>\$</b> | 0.11 | <b>\$</b>        | 0.56 |

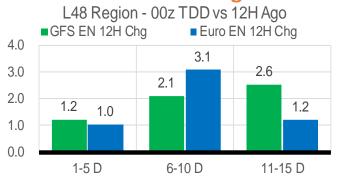
|               | <u> </u> | urront | Δ from YD        | Δ from 7D  |       |  |  |
|---------------|----------|--------|------------------|------------|-------|--|--|
|               | C        | urreni |                  | A          | vg    |  |  |
| WTI           | æ        | 02.00  | <b>*</b> (2.22)  | <b>—</b> Φ | (7.0) |  |  |
| WTI<br>Prompt | Ф        | 93.90  | <b>\$</b> (2.32) | • Φ        | (7.9) |  |  |

|        | _   | urrant | Δ from YD          | Δ from 7D  |       |  |  |
|--------|-----|--------|--------------------|------------|-------|--|--|
|        | Cur | urreni | םו וווטוו ב        | A          | vg    |  |  |
| Brent  | Φ   | 07.43  | <b>*</b> \$ (2.14) | <b>-</b> ¢ | (7 1) |  |  |
| Prompt | Ψ   | 91.43  | Ψ (2.14)           | ΨΨ         | (7.1) |  |  |

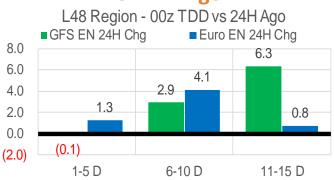
#### Page Menu

Short-term Weather Model Outlooks
Lower 48 Component Models
Regional S/D Models Storage Projection
Weather Model Storage Projection
Supply – Demand Trends
Nat Gas Options Volume and Open Interest
Nat Gas Futures Open Interest
Price Summary

### Vs. 12H Ago



### Vs. 24H Ago



|                      | Current | Δ from YD     | Δ from 7D<br>Avg |
|----------------------|---------|---------------|------------------|
| US Dry<br>Production | 95.2    | <b>-</b> 0.34 | <b>▼</b> -1.08   |

|               | Current | Δ from YD     | Δ from 7D<br>Avg |
|---------------|---------|---------------|------------------|
| US<br>ResComm | 8.6     | <b>-</b> 0.05 | <b>0.26</b>      |

|                    | Current | Δ from YD     | Δ from 7D<br>Avg |  |
|--------------------|---------|---------------|------------------|--|
| Net LNG<br>Exports | 11.4    | <b>a</b> 0.07 | <b>a</b> 0.28    |  |

|                   | Current | Δ from YD      | Δ from 7D<br>Avg |  |  |
|-------------------|---------|----------------|------------------|--|--|
| US Power<br>Burns | 42.4    | <b>▼</b> -2.02 | <b>▼</b> -0.20   |  |  |

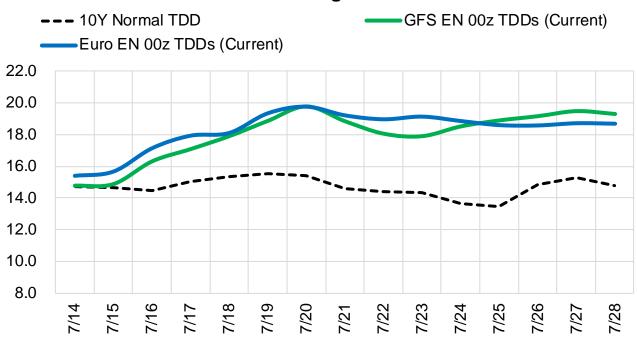
|                     | Current | Δ from YD     | Δ from 7D<br>Avg |  |  |
|---------------------|---------|---------------|------------------|--|--|
| Canadian<br>Imports | 6.6     | <b>a</b> 0.21 | <b>0.63</b>      |  |  |

|                    | Current | Δ from YD | Δ from 7D<br>Avg |  |  |
|--------------------|---------|-----------|------------------|--|--|
| Mexican<br>Exports | 7.2     | ▼ -0.29   | <b>a</b> 0.28    |  |  |

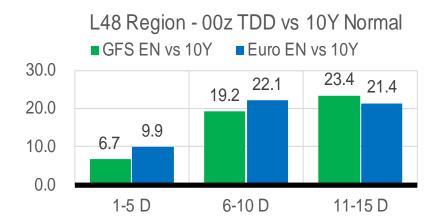


### Short-term Weather Model Outlooks (00z)

### L48 Region



### Vs. 10Y Normal



Source: WSI, Bloomberg



### Lower 48 Component Models

#### **Daily Balances**

|  | 8-Jul | 9-Jul | 10-Jul | 11-Jul | 12-Jul | 13-Jul | 14-Jul | DoD           | vs. 7D       |
|--|-------|-------|--------|--------|--------|--------|--------|---------------|--------------|
| Lower 48 Dry Production  | 97.0  | 96.4  | 96.6   | 96.5   | 95.3   | 95.5   | 95.2   | ▼ -0.3        | ▼ -1.1       |
| Canadian Imports   | 6.0   | 5.5   | 5.6    | 5.8    | 6.3    | 6.4    | 6.6    | <b>0.2</b>    | <b>0.6</b>   |
| L48 Power  | 43.4  | 39.4  | 38.7   | 43.4   | 45.2   | 44.4   | 42.4   | <b>▼</b> -2.0 | <b>a</b> 0.0 |
| L48 Residential & Commercial   | 8.3   | 8.0   | 8.0    | 8.4    | 8.6    | 8.7    | 8.6    | ▼ 0.0         | <b>0.3</b>   |
| L48 Industrial   | 19.9  | 19.9  | 19.8   | 19.9   | 19.9   | 20.2   | 20.4   | <b>0.3</b>    | <b>0.5</b>   |
| L48 Lease and Plant Fuel   | 5.3   | 5.2   | 5.2    | 5.2    | 5.2    | 5.2    | 5.1    | ▼ -0.1        | <b>-</b> 0.1 |
| L48 Pipeline Distribution  | 2.8   | 2.5   | 2.5    | 2.8    | 2.9    | 2.8    | 2.7    | ▼ -0.1        | <b>0.0</b>   |
| L48 Regional Gas Consumption   | 79.7  | 75.0  | 74.2   | 79.7   | 81.7   | 81.3   | 79.3   | ▼ -2.0        | <b>0.7</b>   |
| Net LNG Delivered  | 11.27 | 11.06 | 10.85  | 11.00  | 11.01  | 11.30  | 11.37  | <b>0.1</b>    | <b>0.3</b>   |
| Total Mexican Exports  | 6.9   | 6.6   | 6.6    | 6.9    | 7.2    | 7.5    | 7.2    | ▼ -0.3        | <b>0.3</b>   |
| Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error | 5.1   | 9.3   | 10.5   | 4.8    | 1.7    | 1.8    | 3.9    |               |              |
| Daily Would Elloi  |       |       |        |        |        |        |        |               |              |

### **EIA Storage Week Balances**

**Monthly Balances** 

|   | 3-Jun        | 10-Jun      | 17-Jun       | 24-Jun       | 1-Jul       | 8-Jul | WoW        | vs. 4W        |
|---|--------------|-------------|--------------|--------------|-------------|-------|------------|---------------|
| Lower 48 Dry Production                               | 97.2         | 96.9        | 96.7         | 96.7         | 97.0        | 97.0  | ▼ -0.1     | <b>△</b> 0.1  |
| Canadian Imports                                      | 4.8          | 5.5         | 6.1          | 5.6          | 5.7         | 5.6   | ▼ -0.1     | ▼-0.1         |
| L48 Power   | 30.3         | 32.3        | 37.8         | 37.7         | 40.2        | 41.3  | <b>1.1</b> | <b>4.3</b>    |
| L48 Residential & Commercial                          | 9.1          | 8.6         | 8.3          | 8.7          | 8.2         | 8.3   | <b>0.1</b> | <b>▼</b> -0.2 |
| L48 Industrial  | 21.4         | 21.3        | 21.5         | 20.1         | 21.0        | 20.2  | ▼-0.8      | ▼-0.8         |
| L48 Lease and Plant Fuel                              | 5.2          | 5.2         | 5.2          | 5.2          | 5.3         | 5.3   | <b>0.0</b> | <b>0.0</b>    |
| L48 Pipeline Distribution                             | 2.2          | 2.2         | 2.5          | 2.5          | 2.6         | 2.6   | <b>0.0</b> | <b>0.2</b>    |
| L48 Regional Gas Consumption                          | 68.3         | 69.7        | 75.3         | 74.2         | 77.3        | 77.7  | <b>0.4</b> | <b>3.5</b>    |
| Net LNG Exports                                       | 12.8         | 12.3        | 10.7         | 10.6         | 10.6        | 11.2  | <b>0.6</b> | <b>0.1</b>    |
| Total Mexican Exports                                 | 7.1          | 7.1         | 7.2          | 7.0          | 7.0         | 6.8   | ▼ -0.3     | ▼-0.3         |
| Implied Daily Storage Activity                        | 13.9         | 13.2        | 9.6          | 10.5         | 7.8         | 7.0   | -0.8       |               |
| EIA Reported Daily Storage Activity Daily Model Error | 14.6<br>-0.6 | 13.1<br>0.1 | 10.6<br>-1.0 | 11.7<br>-1.2 | 8.6<br>-0.8 |       |            |               |

|  | • |  | 2Yr Ago | LY     |     |
|--|---|--|---------|--------|-----|
|  |   |  | Jul-20  | Jul-21 | Mar |
|  |   |  |         |        |     |

| -  | 2Yr Ago | LY     |        |        |        |        | MTD    |            |              |
|--|---------|--------|--------|--------|--------|--------|--------|------------|--------------|
|  | Jul-20  | Jul-21 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | MoM        | vs. LY       |
| Lower 48 Dry Production  | 89.0    | 93.5   | 93.4   | 95.2   | 96.2   | 96.8   | 96.6   | ▼-0.2      | <b>3.1</b>   |
| Canadian Imports   | 4.4     | 5.2    | 5.2    | 5.8    | 5.1    | 5.7    | 5.8    | <b>0.1</b> | <b>0.6</b>   |
| L48 Power  | 43.8    | 39.7   | 25.4   | 24.7   | 28.8   | 36.8   | 41.8   | <b>5.0</b> | <b>2.1</b>   |
| L48 Residential & Commercial   | 7.9     | 8.1    | 31.5   | 22.5   | 12.3   | 8.5    | 8.3    | ▼-0.2      | <b>0.2</b>   |
| L48 Industrial   | 20.1    | 20.8   | 19.7   | 21.5   | 21.1   | 20.8   | 20.1   | ▼-0.7      | <b>-</b> 0.7 |
| L48 Lease and Plant Fuel   | 4.9     | 5.1    | 5.2    | 5.2    | 5.2    | 5.2    | 5.2    | <b>0.0</b> | <b>0.2</b>   |
| L48 Pipeline Distribution  | 2.6     | 2.5    | 2.9    | 2.6    | 2.3    | 2.5    | 2.7    | <b>0.2</b> | <b>0.1</b>   |
| L48 Regional Gas Consumption   | 79.3    | 76.2   | 84.7   | 76.6   | 69.8   | 73.8   | 78.1   | <b>4.3</b> | <b>1.9</b>   |
| Net LNG Exports  | 3.3     | 10.8   | 12.9   | 12.3   | 12.5   | 11.2   | 11.1   | ▼ 0.0      | <b>0.3</b>   |
| Total Mexican Exports  | 5.9     | 7.1    | 6.5    | 6.7    | 7.0    | 7.1    | 6.8    | ▼-0.2      | ▼-0.2        |
| Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error | 4.9     | 4.6    | -5.4   | 5.4    | 12.0   | 10.5   | 6.3    |            |              |

Source: Bloomberg, analytix.ai



# **Daily** Average Generation Data

#### **Nuclear Generation Daily Average - GWh (NRC)**

|                               | 6-Jul | 7-Jul | 8-Jul | 9-Jul | 10-Jul | 11-Jul | 12-Jul | DoD  | vs. 7D |
|-------------------------------|-------|-------|-------|-------|--------|--------|--------|------|--------|
| NRC Nuclear Daily Output      | 91.1  | 91.4  | 91.8  | 91.0  | 91.3   | 91.8   | 91.6   | -0.2 | 0.2    |
| NRC Nuclear Max Capacity      | 104.9 | 104.9 | 104.9 | 104.9 | 104.9  | 104.9  | 104.9  | 0.0  | 0.0    |
| NRC Nuclear Outage            | 13.8  | 13.5  | 13.1  | 13.8  | 13.6   | 13.1   | 13.3   | 0.2  | -0.2   |
| NRC % Nuclear Cap Utilization | 92.6  | 92.9  | 93.4  | 92.6  | 92.8   | 93.4   | 93.2   | -0.2 | 0.2    |

#### Wind Generation Daily Average - MWh (EIA)

|            | 6-Jul | 7-Jul | 8-Jul | 9-Jul | 10-Jul | 11-Jul | 12-Jul | DoD | vs. 7D |
|------------|-------|-------|-------|-------|--------|--------|--------|-----|--------|
| CALI Wind  | 2048  | 2048  | 2048  | 2048  | 2048   | 2048   | 2048   | 0   | 0      |
| TEXAS Wind | 22879 | 22879 | 22879 | 22879 | 22879  | 22879  | 22879  | 0   | 0      |
| US Wind    | 63443 | 63443 | 63443 | 63443 | 63443  | 63443  | 63443  | 0   | 0      |

#### **Generation Daily Average - MWh (EIA)**

EIA 930 data is not being updated. EIA experiencing some issues.

|               | 6-Jul  | 7-Jul  | 8-Jul  | 9-Jul  | 10-Jul | 11-Jul | 12-Jul | DoD | vs. 7D |
|---------------|--------|--------|--------|--------|--------|--------|--------|-----|--------|
| Genscape Wind | 38704  | 30219  | 30526  | 28862  | 35417  | 42460  | 42460  | 0   | 8095   |
| US Solar      | 19728  | 19728  | 19728  | 19728  | 19728  | 19728  | 19728  | 0   | 0      |
| US Petroleum  | 1333   | 1333   | 1333   | 1333   | 1333   | 1333   | 1333   | 0   | 0      |
| US Other      | 9775   | 9775   | 9775   | 9775   | 9775   | 9775   | 9775   | 0   | 0      |
| US Coal       | 119543 | 119543 | 119543 | 119543 | 119543 | 119543 | 119543 | 0   | 0      |
| US Nuke       | 90696  | 90696  | 90696  | 90696  | 90696  | 90696  | 90696  | 0   | 0      |
| US Hydro      | 39690  | 39690  | 39690  | 39690  | 39690  | 39690  | 39690  | 0   | 0      |
| US Gas        | 220700 | 220700 | 220700 | 220700 | 220700 | 220700 | 220700 | 0   | 0      |

See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai



US Hydro

**US Gas** 

**Nuclear Generation Weekly Average - GWh (NRC)** 

# **Storage Week** Average Generation Data

| Nuclear Generation Weekly A   | rcrage - O | WII (IVIC | "      |        |        |              |           |                        |
|-------------------------------|------------|-----------|--------|--------|--------|--------------|-----------|------------------------|
|                               | 3-Jun      | 10-Jun    | 17-Jun | 24-Jun | 1-Jul  | 8-Jul        | WoW       | WoW<br>Bcf/d<br>Impact |
| NRC Nuclear Daily Output      | 86.2       | 88.3      | 88.2   | 89.0   | 88.9   | 90.6         | 1.7       | -0.3                   |
| NRC Nuclear Max Capacity      | 104.9      | 104.9     | 104.9  | 104.9  | 104.9  | 104.9        | 0.0       |                        |
| NRC Nuclear Outage            | 18.7       | 16.6      | 16.7   | 15.9   | 16.0   | 14.2         | -1.7      |                        |
| NRC % Nuclear Cap Utilization | 87.6       | 89.8      | 89.7   | 90.5   | 90.4   | 92.2         | 1.8       |                        |
| Wind Generation Weekly Aver   | age - MW   | h (EIA)   |        |        |        |              |           |                        |
|                               | 2 1        | 40 lum    | 47 1   | 24 1   | 4 11   | 0 11         | MeM       | WoW                    |
|                               | 3-Jun      | 10-Jun    | 17-Jun | 24-Jun | 1-Jul  | 8-Jul        | WoW       | Bcf/d<br>Impact        |
| CALI Wind                     | 3268       | 3842      | 3032   | 2048   | 2048   | 2048         | 0         | 0.0                    |
| TEXAS Wind                    | 17915      | 12449     | 20462  | 22879  | 22879  | 22879        | 0         | 0.0                    |
| US Wind                       | 57939      | 37417     | 57090  | 63443  | 63443  | 63443        | 0         | 0.0                    |
|                               |            |           |        |        |        |              | 0%        |                        |
|                               |            |           |        |        |        | 0.0          |           |                        |
| Generation Weekly Average -   | MWh (EIA   | .)        |        |        |        | 30 data is n |           |                        |
|                               |            |           |        |        | update | ed. EIA exp  | eriencing |                        |
|                               |            |           |        |        |        | some issue   | es.       | loW                    |
|                               | 3-Jun      | 10-Jun    | 17-Jun | 24-Jun | 1-Jul  | 8-Jul        | WoW       | Bcf/d                  |
|                               |            |           |        |        |        |              |           | Impact                 |
| Genscape Wind                 | 59474      | 38198     | 57792  | 50581  | 45558  | 42730        | -2828     | 0.5                    |
| US Solar                      | 18656      | 18807     | 18731  | 19728  | 19728  | 19728        | 0         | 0.0                    |
| US Petroleum                  | 863        | 968       | 1244   | 1333   | 1333   | 1333         | 0         | 0.0                    |
| US Other                      | 7866       | 8001      | 8688   | 9775   | 9775   | 9775         | 0         | 0.0                    |
| US Coal                       | 89706      | 95415     | 106566 | 119543 | 119543 | 119543       | 0         | 0.0                    |
| US Nuke                       | 89728      | 91641     | 91235  | 90696  | 90696  | 90696        | 0         | 0.0                    |

See National Wind and Nuclear daily charts

36328

178204

37495

201845

39690

220700

39690

220700

35051

163383

Source: Bloomberg, analytix.ai

39690

0.0



# **Monthly** Average Generation Data

| <b>Nuclear Generation Monthly Average - GWh (NRC</b> | C)  |
|--|---|
| 2Yr Ago LY   | MTD   |
| Same 30 Same 30<br>davs davs                         | Apr-22 May-22 Jun-22 Jul-22 Last 30 MoM (MTD days |

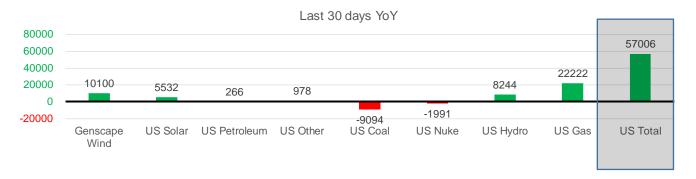
|                               | Same 30<br>days | Same 30<br>days | Apr-22 | May-22 | Jun-22 | Jul-22 | Last 30<br>days | MoM (MTD<br>vs LY) | Last 30<br>days YoY |
|-------------------------------|-----------------|-----------------|--------|--------|--------|--------|-----------------|--------------------|---------------------|
| NRC Nuclear Daily Output      | 91.8            | 89.5            | 73.4   | 81.7   | 88.5   | 90.9   | 89.8            | 2.3                | 0.3                 |
| NRC Nuclear Max Capacity      | 104.9           | 104.9           | 104.9  | 104.9  | 104.9  | 104.9  | 104.9           | 0.0                | 0.0                 |
| NRC Nuclear Outage            | 13.0            | 15.4            | 31.5   | 23.2   | 16.3   | 12.8   | 14.5            | -3.5               | -0.9                |
| NRC % Nuclear Cap Utilization | 93.4            | 91.0            | 74.6   | 83.0   | 90.0   | 92.4   | 91.3            | 2.4                | 0.3                 |

#### Wind Generation Monthly Average - MWh (EIA)

|            | 2Yr Ago         | LY              |        |        |        | MTD    |                 |                    |                     |
|------------|-----------------|-----------------|--------|--------|--------|--------|-----------------|--------------------|---------------------|
|            | Same 30<br>days | Same 30<br>days | Apr-22 | May-22 | Jun-22 | Jul-22 | Last 30<br>days | MoM (MTD<br>vs LY) | Last 30<br>days YoY |
| CALI Wind  | 2676            | 2602            | 3218   | 3361   | 2724   | 2048   | 2048            | -676               | -555                |
| TEXAS Wind | 11862           | 8520            | 16384  | 16756  | 19072  | 22879  | 22879           | 3807               | 14360               |
| US Wind    | 36079           | 34411           | 64240  | 56462  | 54014  | 63443  | 63443           | 9428               | 29031               |

#### **Generation Monthly Average - MWh (EIA)**

| on order months, recording | 2Yr Ago         | LY              |        |        |        | MTD    |                 |                    |                     |
|----------------------------|-----------------|-----------------|--------|--------|--------|--------|-----------------|--------------------|---------------------|
|                            | Same 30<br>days | Same 30<br>days | Apr-22 | May-22 | Jun-22 | Jul-22 | Last 30<br>days | MoM (MTD<br>vs LY) | Last 30<br>days YoY |
| Genscape Wind              | 37294           | 33895           | 63684  | 56803  | 47280  | 37235  | 43995           | <b>6759.5</b>      | <b>10100</b>        |
| US Solar                   | 12314           | 14196           | 16265  | 18186  | 19216  | 19728  | 19728           | <b>0.0</b>         | <b>5532</b>         |
| US Petroleum               | 1288            | 1067            | 979    | 518    | 1204   | 1333   | 1333            | <b>a</b> 0         | <b>266</b>          |
| US Other                   | 9408            | 8798            | 7373   | 7724   | 8994   | 9775   | 9775            | <b>a</b> 0         | <b>978</b>          |
| US Coal                    | 104727          | 128637          | 77400  | 85273  | 109706 | 119543 | 119543          | <b>a</b> 0         | ▼ -9094             |
| US Nuke                    | 94892           | 92686           | 77317  | 85496  | 91073  | 90696  | 90696           | <b>a</b> 0         | <b>▼ -1991</b>      |
| US Hydro                   | 35566           | 31446           | 28877  | 31369  | 38153  | 39690  | 39690           | <b>a</b> 0         | <b>8244</b>         |
| US Gas                     | 209225          | 198477          | 132665 | 157565 | 204668 | 220700 | 220700          | <b>6759</b>        | <b>22222</b>        |
| US Total                   | 501856          | 509963          | 405650 | 443965 | 530484 | 566968 | 566968          | <b>6759</b>        | <b>57006</b>        |



See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai



### Regional S/D Models Storage Projection

Week Ending 8-Jul

|               | Daily Raw<br>Storage | Daily<br>Adjustment<br>Factor | Daily<br>Average<br>Storage<br>Activity<br>(Adjusted) * | Weekly<br>Adjusted<br>Storage<br>Activity |
|---------------|----------------------|-------------------------------|---|---|
| L48           | 8.1                  | -0.5                          | 7.6   | 53  |
|               |                      |                               |   |   |
| East          | 0.7                  | 1.8                           | 2.6   | 18  |
| Midwest       | 3.6                  | -1.2                          | 2.5   | 17  |
| Mountain      | 4.7                  | -4.0                          | 0.7   | 5   |
| South Central | -3.2                 | 3.6                           | 0.4   | 3   |
| Pacific       | 2.2                  | -0.8                          | 1.4   | 10  |

<sup>\*</sup>Adjustment Factor is calcuated based on historical regional deltas

#### U.S. underground natural gas storage facilities by type (July 2015)



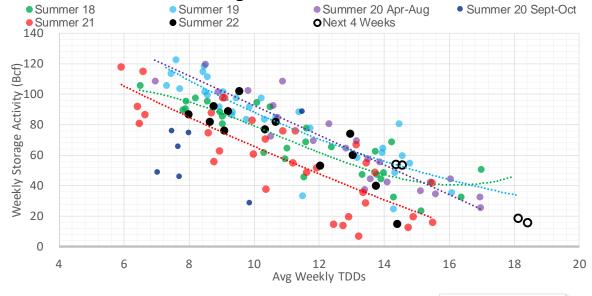


### Weather Model Storage Projection

| Next report |
|-------------|
| and beyond  |

| Week Ending | GWDDs | Week Storage<br>Projection |
|-------------|-------|----------------------------|
| 08-Jul      | 14.6  | 53                         |
| 15-Jul      | 14.4  | 54                         |
| 22-Jul      | 18.2  | 18                         |
| 29-Jul      | 18.4  | 16                         |

### Weather Storage Model - Next 4 Week Forecast



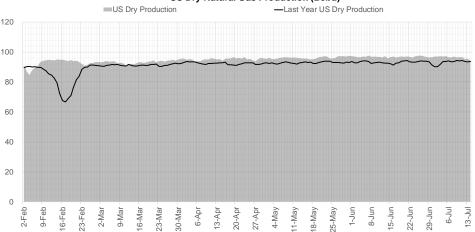
Go to larger image



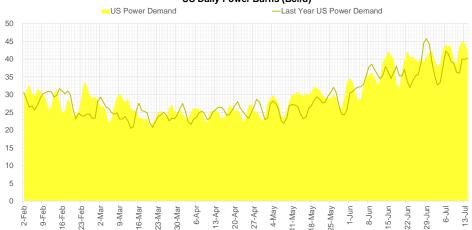


### Supply - Demand Trends

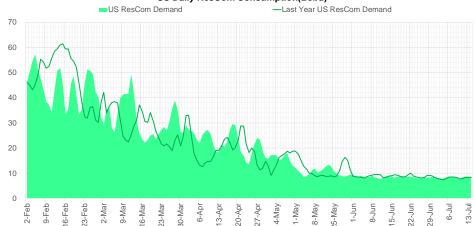
#### US Dry Natural Gas Production (Bcf/d)



#### US Daily Power Burns (Bcf/d)



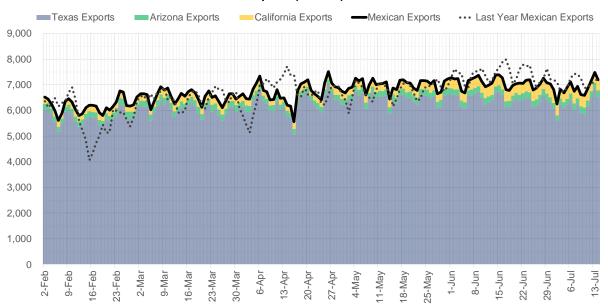
#### US Daily ResCom Consumption(Bcf/d)



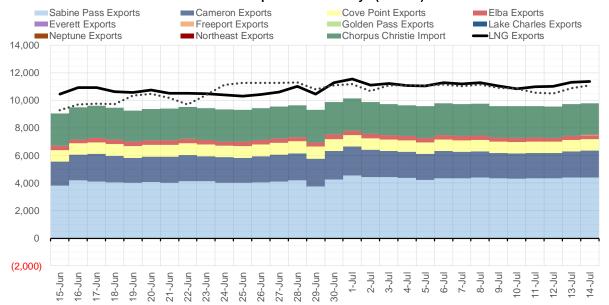
Source: Bloomberg



#### Mexican Exports (MMcf/d)



#### Net LNG Exports - Last 30 days (MMcf/d)



Source: Bloomberg





# Nat Gas Options Volume and Open Interest CME and ICE Combined

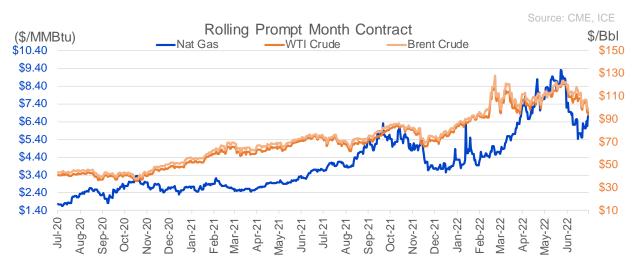
| CONTRACT<br>MONTH | CONTRACT<br>YEAR | PUT/CALL | STRIKE       | CUMULATIVE<br>VOL | CONTRACT<br>MONTH | CONTRACT<br>YEAR | PUT/CALL    | STRIKE     | CUMULATIVE OI |
|-------------------|------------------|----------|--------------|-------------------|-------------------|------------------|-------------|------------|---------------|
| 5                 | 2023             | Р        | 2.00         | 10000             | 8                 | 2022             | С           | 10.00      | 43089         |
| 8                 | 2022             | C        | 8.00         | 6219              | 8                 | 2022             | Č           | 12.00      | 37984         |
| 8                 | 2022             | Č        | 10.00        | 5180              | 10                | 2022             | Ċ           | 6.00       | 35979         |
| 8                 | 2022             | Č        | 7.00         | 4796              | 8                 | 2022             | Ċ           | 7.00       | 32015         |
| 10                | 2022             | Č        | 9.00         | 4688              | 8                 | 2022             | C           | 10.50      | 31608         |
| 8                 | 2022             | Č        | 9.00         | 4422              | 10                | 2022             | P           | 3.00       | 30972         |
| 9                 | 2022             | Č        | 10.00        | 3137              | 10                | 2022             | Р           | 2.50       | 27961         |
| 8                 | 2022             | P        | 6.00         | 3114              | 9                 | 2022             | С           | 6.00       | 24426         |
| 10                | 2022             | C        | 10.00        | 2961              | 10                | 2022             | Р           | 6.00       | 24080         |
| 10                | 2022             | P        | 4.00         | 2820              | 9                 | 2022             | С           | 10.00      | 23951         |
| 8                 | 2022             | Р        | 5.50         | 2719              | 10                | 2022             | С           | 5.00       | 23368         |
| 8                 | 2022             | P        | 5.00         | 2573              | 8                 | 2022             | С           | 12.10      | 22001         |
| 8                 | 2022             | C        | 8.10         | 2508              | 10                | 2022             | Р           | 3.50       | 20941         |
| 8                 | 2022             | Č        | 7.50         | 2487              | 9                 | 2022             | Р           | 4.00       | 20785         |
| 10                | 2022             | P        | 3.00         | 2353              | 8                 | 2022             | С           | 6.00       | 20067         |
| 12                | 2022             | C        | 10.00        | 2300              | 9                 | 2022             | С           | 7.00       | 19383         |
| 8                 | 2022             | Č        | 7.40         | 2135              | 10                | 2022             | С           | 10.00      | 19315         |
| 8                 | 2022             | C        | 11.00        | 2126              | 8                 | 2022             | Р           | 6.00       | 19065         |
| 11                | 2022             | Č        | 10.00        | 2100              | 5                 | 2023             | Р           | 2.00       | 18818         |
| 10                | 2022             | Č        | 7.00         | 1827              | 1                 | 2023             | С           | 10.00      | 18799         |
| 9                 | 2022             | Č        | 9.00         | 1576              | 12                | 2022             | С           | 5.00       | 18218         |
| 10                | 2022             | Č        | 8.00         | 1562              | 3                 | 2023             | С           | 10.00      | 18166         |
| 8                 | 2022             | P        | 5.75         | 1561              | 8                 | 2022             | С           | 8.00       | 18112         |
| 9                 | 2022             | C        | 7.00         | 1410              | 10                | 2022             | Р           | 5.00       | 17805         |
| 3                 | 2023             | P        | 5.00         | 1410              | 8                 | 2022             | Р           | 5.00       | 17576         |
| 10                | 2023             | P        | 2.50         | 1302              | 10                | 2022             | Р           | 4.00       | 17491         |
| 8                 | 2022             | P        | 4.00         | 1302              | 8                 | 2022             | С           | 9.00       | 17378         |
| 10                | 2022             | P        | 2.00         | 1300              | 8                 | 2022             | Р           | 7.00       | 17326         |
| 8                 | 2023             | C        | 2.00<br>9.50 | 1255              | 10                | 2022             | С           | 8.00       | 17322         |
| 10                | 2022             | C        | 12.00        | 1212              | 10                | 2022             | Р           | 2.00       | 16729         |
| 8                 |                  | C        |              |                   | 3                 | 2023             | Р           | 3.00       | 16388         |
| 8                 | 2022<br>2022     | C        | 8.50         | 1199              | 2                 | 2023             | С           | 10.00      | 16155         |
| 8<br>4            | 2022             | P        | 7.10         | 1181              | 9                 | 2022             | С           | 4.00       | 15970         |
|                   | 2023             |          | 3.00         | 1150              | 9                 | 2022             | Р           | 3.00       | 15966         |
| 8                 |                  | C<br>P   | 6.80         | 1137              | 12                | 2022             | Р           | 5.00       | 15614         |
| 11                | 2022             |          | 4.00         | 1050              | 9                 | 2022             | Р           | 2.50       | 15475         |
| 10                | 2022             | C<br>P   | 11.00        | 1041              | 8                 | 2022             | С           | 7.50       | 15430         |
| 10                | 2022             |          | 4.50         | 1034              | 10                | 2023             | Р           | 2.00       | 15424         |
| 11                | 2022             | С        | 9.00         | 1010              | 8                 | 2022             | Р           | 3.00       | 15408         |
| 9                 | 2022             | С        | 11.00        | 1006              | 8                 | 2022             | Р           | 4.00       | 15359         |
| 8                 | 2022             | С        | 7.70         | 1005              | 10                | 2022             | С           | 7.00       | 15237         |
| 11                | 2022             | С        | 11.00        | 1000              | 9                 | 2022             | С           | 9.00       | 15189         |
| 12                | 2022             | С        | 9.00         | 1000              | 8                 | 2022             | Р           | 5.50       | 15089         |
| 12                | 2022             | С        | 11.00        | 1000              | 9                 | 2022             | Р           | 2.75       | 14887         |
| 8                 | 2022             | P        | 4.50         | 993               | 12                | 2022             | С           | 6.00       | 14037         |
| 10                | 2022             | P        | 5.25         | 938               | 10                | 2022             | Р           | 3.25       | 14016         |
| 8                 | 2022             | P        | 6.15         | 907               | 10                | 2023             | Р           | 2.50       | 13940         |
| 9                 | 2022             | C        | 8.00         | 904               | 9                 | 2022             | Р           | 5.00       | 13616         |
| 8                 | 2022             | P        | 5.85         | 850               | 10                | 2023             | Р           | 3.00       | 13405         |
| 4                 | 2023             | Р        | 2.00         | 800               | 10                | 2022             | C<br>Source | : CME, ICE | 13308         |



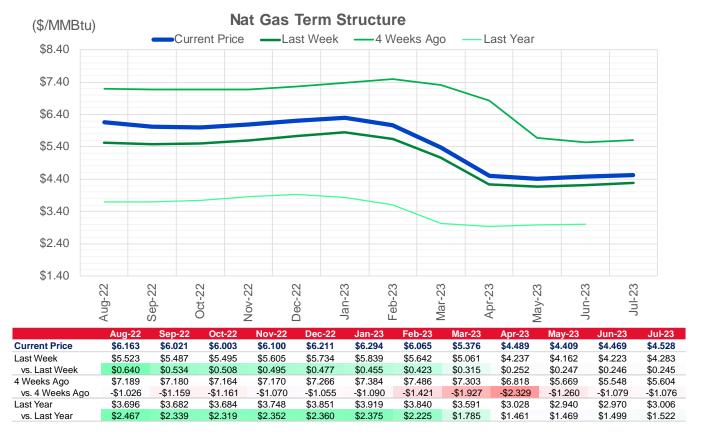
### Nat Gas Futures Open Interest

CME and ICE Combined

| OWE AND TOE COMMITTEE |                 |        |              |  |         |       |              |  |  |
|-----------------------|-----------------|--------|--------------|--|---------|-------|--------------|--|--|
| CME Henry I           | Hub Futures (10 |        |              | ICE Henry Hub Futures Contract Equivalent (10,000 MM |         |       |              |  |  |
|                       | Current         | Prior  | Daily Change |  | Current | Prior | Daily Change |  |  |
| AUG 22                | 64739           | 68939  | -4200        | AUG 22   | 78762   | 78390 | 372          |  |  |
| SEP 22                | 147265          | 144558 | 2707         | SEP 22   | 79009   | 79725 | -717         |  |  |
| OCT 22                | 90917           | 90353  | 564          | OCT 22   | 75930   | 75409 | 521          |  |  |
| NOV 22                | 66198           | 64354  | 1844         | NOV 22   | 62038   | 62056 | -18          |  |  |
| DEC 22                | 51524           | 51600  | -76          | DEC 22   | 64988   | 65104 | -116         |  |  |
| JAN 23                | 70959           | 70003  | 956          | JAN 23   | 63601   | 63588 | 13           |  |  |
| FEB 23                | 33578           | 32478  | 1100         | FEB 23   | 55389   | 54791 | 597          |  |  |
| MAR 23                | 47814           | 47914  | -100         | MAR 23   | 50872   | 50498 | 375          |  |  |
| APR 23                | 65832           | 65601  | 231          | APR 23   | 50744   | 50507 | 237          |  |  |
| MAY 23                | 55447           | 55499  | -52          | MAY 23   | 50004   | 49992 | 13           |  |  |
| JUN 23                | 20582           | 20707  | -125         | JUN 23   | 44319   | 44338 | -19          |  |  |
| JUL 23                | 19830           | 20047  | -217         | JUL 23   | 43332   | 43219 | 113          |  |  |
| AUG 23                | 17619           | 17360  | 259          | AUG 23   | 42674   | 42614 | 60           |  |  |
| SEP 23                | 15586           | 15639  | -53          | SEP 23   | 41493   | 41426 | 67           |  |  |
| OCT 23                | 40969           | 41063  | -94          | OCT 23   | 48302   | 48215 | 87           |  |  |
| NOV 23                | 12289           | 12245  | 44           | NOV 23   | 44376   | 44291 | 85           |  |  |
| DEC 23                | 11844           | 11830  | 14           | DEC 23   | 39845   | 39754 | 92           |  |  |
| JAN 24                | 17997           | 17954  | 43           | JAN 24   | 39421   | 39405 | 17           |  |  |
| FEB 24                | 7664            | 7624   | 40           | FEB 24   | 28698   | 28622 | 77           |  |  |
| MAR 24                | 16424           | 16199  | 225          | MAR 24   | 33514   | 33468 | 46           |  |  |
| APR 24                | 13553           | 13373  | 180          | APR 24   | 27421   | 27444 | -23          |  |  |
| MAY 24                | 6449            | 6441   | 8            | MAY 24   | 26627   | 26620 | 8            |  |  |
| JUN 24                | 2386            | 2386   | 0            | JUN 24   | 23658   | 23648 | 11           |  |  |
| JUL 24                | 2108            | 2127   | -19          | JUL 24   | 23403   | 23362 | 41           |  |  |
| AUG 24                | 3112            | 3112   | 0            | AUG 24   | 23725   | 23708 | 17           |  |  |
| SEP 24                | 1711            | 1593   | 118          | SEP 24   | 23173   | 23162 | 11           |  |  |
| OCT 24                | 8455            | 8123   | 332          | OCT 24   | 26465   | 26454 | 11           |  |  |
| NOV 24                | 4707            | 4707   | 0            | NOV 24   | 24179   | 24148 | 31           |  |  |
| DEC 24                | 7127            | 7127   | 0            | DEC 24   | 27258   | 27212 | 47           |  |  |
| JAN 25                | 14764           | 14764  | 0            | JAN 25   | 19669   | 19707 | -38          |  |  |







|                       |          | Cash    | Prompt | Cash to |  |
|-----------------------|----------|---------|--------|---------|--|
|                       | Units    | Settled | Settle | Prompt  |  |
| AGT Citygate          | \$/MMBtu | 6.12    | 5.66   | -0.46   |  |
| TETCO M3              | \$/MMBtu | 5.92    | 5.03   | -0.89   |  |
| FGT Zone 3            | \$/MMBtu | 6.05    | 6.94   | 0.89    |  |
| Zone 6 NY             | \$/MMBtu | 6.05    | 5.01   | -1.04   |  |
| Chicago Citygate      | \$/MMBtu | 6.29    | 5.37   | -0.92   |  |
| Michcon               | \$/MMBtu | 6.29    | 5.33   | -0.97   |  |
| Columbia TCO Pool     | \$/MMBtu | 6.01    | 4.92   | -1.09   |  |
| Ventura               | \$/MMBtu | 5.95    | 5.25   | -0.71   |  |
| Rockies/Opal          | \$/MMBtu | 6.50    | 5.15   | -1.35   |  |
| El Paso Permian Basin | \$/MMBtu | 6.24    | 4.95   | -1.29   |  |
| Socal Citygate        | \$/MMBtu | 7.62    | 6.49   | -1.13   |  |
| Malin                 | \$/MMBtu | 6.25    | 5.62   | -0.63   |  |
| Houston Ship Channel  | \$/MMBtu | 6.41    | 5.37   | -1.04   |  |
| Henry Hub Cash        | \$/MMBtu | 6.64    | 5.26   | -1.39   |  |
| AECO Cash             | C\$/GJ   | 3.97    | 3.50   | -0.47   |  |
| Station2 Cash         | C\$/GJ   | 4.07    | 5.35   | 1.28    |  |
| Dawn Cash             | C\$/GJ   | 6.32    | 5.35   | -0.97   |  |

Source: CME, Bloomberg



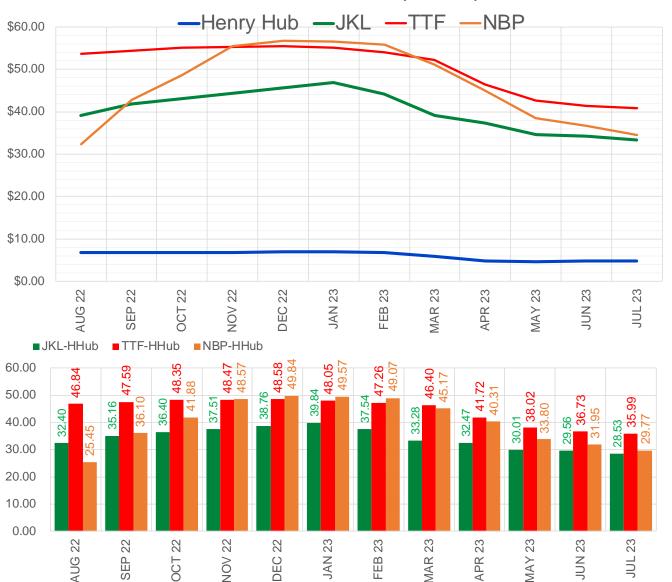


|                         |              |               |                 | vs. 4 Weeks     |                 |
|-------------------------|--------------|---------------|-----------------|-----------------|-----------------|
|                         | Unito        | Current Price | vo Loot Wook    |                 | vo Loot Voor    |
|                         | Units        | 1             | vs. Last Week   |                 | vs. Last Year   |
| NatGas Jul21/Oct21      | \$/MMBtu     | 2.224         | <b>0.000</b>    | <b>0.000</b>    | <b>2.186</b>    |
| NatGas Oct21/Nov21      | \$/MMBtu     | 0.361         | <b>0.000</b>    | <b>0.000</b>    | <b>0.295</b>    |
| NatGas Oct21/Jan22      | \$/MMBtu     | -1.817        | <b>0.000</b>    | <b>0.000</b>    | <b>▼</b> -2.061 |
| NatGas Apr22/Oct22      | \$/MMBtu     | 1.238         | <b>1.081</b>    | <b>-</b> 0.795  | <b>1.243</b>    |
| WTI Crude               | \$/Bbl       | 96.30         | <b>-</b> 2.230  | <b>-</b> 19.010 | <b>23.170</b>   |
| Brent Crude             | \$/Bbl       | 99.57         | <b>▼</b> -1.120 | <b>-</b> 18.940 | <b>24.810</b>   |
| Fuel Oil, NY Harbour 1% | \$/Bbl       | 97.18         | <b>0.000</b>    | <b>0.000</b>    | <b>0.000</b>    |
| Heating Oil             | cents/Gallon | 366.59        | <b>25.530</b>   | <b>-88.110</b>  | <b>152.240</b>  |
| Propane, Mt. Bel        | cents/Gallon | 1.15          | -0.004          | <b>-</b> 0.061  | <b>0.046</b>    |
| Ethane, Mt. Bel         | cents/Gallon | 0.52          | <b>0.061</b>    | <b>▼</b> -0.138 | <b>0.213</b>    |
| Coal, PRB               | \$/MTon      | 12.30         | <b>0.000</b>    | <b>0.000</b>    | <b>0.000</b>    |
| Coal, PRB               | \$/MMBtu     | 0.70          |                 |                 |                 |
| Coal, ILB               | \$/MTon      | 31.05         | <b>0.000</b>    | 0.000           | <b>0.000</b>    |
| Coal, ILB               | \$/MMBtu     | 1.32          |                 |                 |                 |



14 July 2022

Nat Gas Term Structure (\$MMBTU)

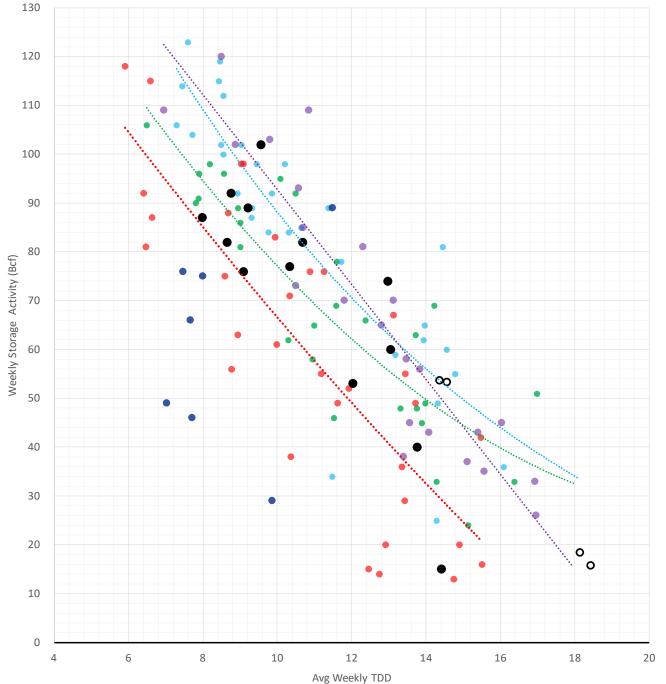


|           | AUG 22   | SEP 22   | OCT 22   | NOV 22   | DEC 22   | JAN 23   | FEB 23   | MAR 23   | APR 23   | MAY 23   | JUN 23   | JUL 23   |
|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Henry Hub | \$6.801  | \$6.705  | \$6.702  | \$6.833  | \$6.940  | \$7.014  | \$6.707  | \$5.884  | \$4.770  | \$4.650  | \$4.708  | \$4.764  |
| JKL       | \$39.205 | \$41.860 | \$43.105 | \$44.340 | \$45.700 | \$46.850 | \$44.250 | \$39.165 | \$37.235 | \$34.655 | \$34.270 | \$33.295 |
| JKL-HHub  | \$32.404 | \$35.155 | \$36.403 | \$37.507 | \$38.760 | \$39.836 | \$37.543 | \$33.281 | \$32.465 | \$30.005 | \$29.562 | \$28.531 |
| TTF       | \$53.642 | \$54.297 | \$55.050 | \$55.305 | \$55.521 | \$55.062 | \$53.968 | \$52.286 | \$46.494 | \$42.674 | \$41.437 | \$40.752 |
| TTF-HHub  | \$46.841 | \$47.592 | \$48.348 | \$48.472 | \$48.581 | \$48.048 | \$47.261 | \$46.402 | \$41.724 | \$38.024 | \$36.729 | \$35.988 |
| NBP       | \$32.253 | \$42.800 | \$48.582 | \$55.400 | \$56.783 | \$56.586 | \$55.772 | \$51.049 | \$45.077 | \$38.446 | \$36.660 | \$34.537 |
| NBP-HHub  | \$25.452 | \$36.095 | \$41.880 | \$48.567 | \$49.843 | \$49.572 | \$49.065 | \$45.165 | \$40.307 | \$33.796 | \$31.952 | \$29.773 |



#### Weather Storage Model - Next 4 Week Forecast







#### Weather Storage Model - Next 4 Week Forecast

