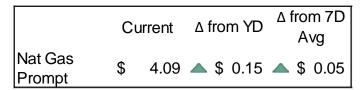


# **14 February 2022**



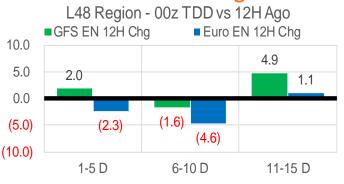
|               | С  | urrent | Δ from YD        | Δ from<br>Av |     |
|---------------|----|--------|------------------|--------------|-----|
| WTI<br>Prompt | \$ | 92.25  | <b>\$</b> (0.85) | <b>\$</b>    | 0.9 |

|                 | C.,      | rrant   | Δ from YD        | ∆ from   | า 7D       |
|-----------------|----------|---------|------------------|----------|------------|
|                 | Cu       | Jurrent | םו וווטוו ב      | Av       | g          |
| Brent<br>Prompt | <b>¢</b> | 03 63   | <b>\$</b> (0.81) | <b>2</b> | Λ <u>8</u> |
| Prompt          | Ψ        | 93.03   | Ψ ψ (0.01)       | Ψ        | 0.0        |

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Price Summary

## Vs. 12H Ago



## Vs. 24H Ago

L48 Region - 00z TDD vs 24H Ago

GFS EN 24H Chg

Euro EN 24H Chg

0.1

(5.0)

(5.6)

1-5 D

6-10(9,2)

11-15 D

|                      | Current | Δ from YD   | Δ from 7D<br>Avg |  |  |
|----------------------|---------|-------------|------------------|--|--|
| US Dry<br>Production | 96.5    | <b>0.46</b> | <b>1.24</b>      |  |  |

|               | Current | Δ from YD     | Δ from 7D<br>Avg |
|---------------|---------|---------------|------------------|
| US<br>ResComm | 48.1    | <b>a</b> 0.30 | <b>8.41</b>      |

|                    | Current | Δ from YD     | Δ from 7D<br>Avg |
|--------------------|---------|---------------|------------------|
| Net LNG<br>Exports | 11.9    | <b>-</b> 0.98 | <b>▼</b> -0.63   |

|                   | Current | Δ from YD      | Δ from 7D<br>Avg |
|-------------------|---------|----------------|------------------|
| US Power<br>Burns | 28.1    | <b>▼</b> -1.63 | <b>▼</b> -0.37   |

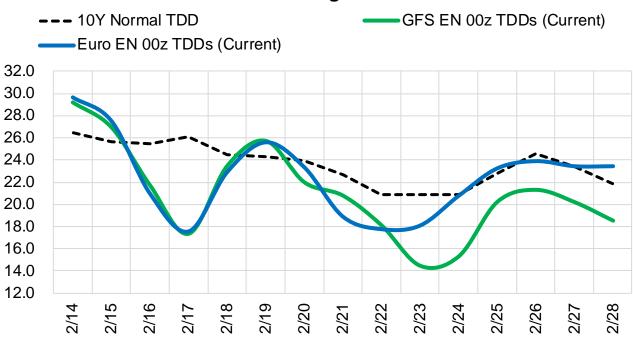
|                     | Current | Δ from YD     | Δ from 7D<br>Avg |
|---------------------|---------|---------------|------------------|
| Canadian<br>Imports | 6.3     | <b>-</b> 0.07 | <b>a</b> 0.20    |

|                    | Current | Δ from YD   | Δ from 7D<br>Avg |  |  |
|--------------------|---------|-------------|------------------|--|--|
| Mexican<br>Exports | 6.0     | <b>0.25</b> | <b>-</b> 0.03    |  |  |

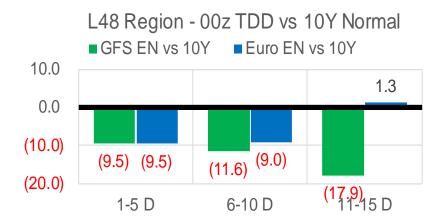


## Short-term Weather Model Outlooks (00z)

## L48 Region



# Vs. 10Y Normal



Source: WSI, Bloomberg



# Lower 48 Component Models

#### **Daily Balances**

|  | 8-Feb | 9-Feb | 10-Feb | 11-Feb | 12-Feb | 13-Feb | 14-Feb | DoD        | vs. 7D      |
|--|-------|-------|--------|--------|--------|--------|--------|------------|-------------|
| Lower 48 Dry Production  | 94.8  | 95.7  | 96.0   | 96.4   | 95.3   | 96.0   | 96.5   | <b>0.5</b> | <b>8.0</b>  |
| Canadian Imports   | 6.1   | 5.9   | 5.6    | 5.8    | 5.6    | 6.4    | 6.3    | ▼ -0.1     | <b>0.5</b>  |
| L48 Power  | 29.6  | 28.3  | 27.0   | 25.8   | 28.3   | 29.7   | 28.1   | ▼-1.6      | ▼ 0.0       |
| L48 Residential & Commercial   | 41.4  | 36.2  | 35.2   | 32.2   | 40.0   | 47.8   | 48.1   | <b>0.3</b> | <b>9.3</b>  |
| L48 Industrial   | 25.1  | 24.9  | 25.6   | 26.1   | 28.0   | 29.1   | 28.6   | ▼ -0.5     | <b>2.2</b>  |
| L48 Lease and Plant Fuel   | 5.2   | 5.2   | 5.2    | 5.3    | 5.2    | 5.2    | 5.2    | ▼ 0.0      | <b>0.0</b>  |
| L48 Pipeline Distribution  | 3.4   | 3.1   | 2.9    | 2.7    | 3.2    | 3.7    | 3.6    | ▼ -0.1     | <b>0.4</b>  |
| L48 Regional Gas Consumption   | 104.6 | 97.6  | 95.9   | 92.1   | 104.7  | 115.5  | 113.7  | ▼-1.9      | <b>11.9</b> |
| Net LNG Delivered  | 11.54 | 12.21 | 12.11  | 13.13  | 13.29  | 13.13  | 12.21  | ▼ -0.9     | ▼ -0.4      |
| Total Mexican Exports  | 6.3   | 6.5   | 6.3    | 6.2    | 5.1    | 5.7    | 6.0    | <b>0.3</b> | ▼ -0.1      |
| Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error | -21.5 | -14.7 | -12.8  | -9.3   | -22.2  | -32.0  | -29.1  |            |             |

#### **EIA Storage Week Balances**

| 7-Jan          | 14-Jan   | 21-Jan  | 28-Jan   | 4-Feb   | 11-Feb   | WoW   | vs. 4W  |
|----------------|--|---|--|---|--|---|---|
| 95.0           | 95.0   | 94.7  | 94.5   | 94.5  | 92.1   | ▼ -2.4  | ▼ -2.5  |
| 5.7            | 6.5  | 7.0   | 7.1  | 7.1   | 7.1  | ▼ 0.0   | <b>0.1</b>  |
| 29.8           | 30.4   | 30.3  | 32.1   | 29.8  | 29.4   | ▼-0.4   | <b>▼</b> -1.2   |
| 42.9           | 46.3   | 47.1  | 52.8   | 48.2  | 45.1   | ▼-3.2   | <b>▼</b> -3.5   |
| 27.3           | 26.8   | 28.0  | 27.5   | 28.3  | 26.1   | <b>▼</b> -2.2   | <b>▼</b> -1.6   |
| 5.2            | 5.2  | 5.2   | 5.2  | 5.2   | 5.0  | ▼ -0.1  | <b>▼</b> -0.1   |
| 3.5            | 3.7  | 3.8   | 4.1  | 3.7   | 3.5  | ▼-0.2   | <b>▼</b> -0.3   |
| 108.7          | 112.4  | 114.3   | 121.7  | 115.2   | 109.1  | ▼ -6.1  | ▼-6.8   |
| 11.9           | 12.3   | 12.9  | 12.5   | 12.1  | 12.4   | <b>0.3</b>  | ▼-0.1   |
| 5.9            | 6.3  | 6.4   | 6.5  | 6.4   | 6.1  | ▼ -0.3  | ▼-0.3   |
| -25.9<br>-25.6 | -29.5<br>-29.4   | -32.0<br>-31.3  | -39.0<br>-38.3   | -32.2<br>-31.7  | -28.5  | 3.7   |   |
|                | 95.0<br>5.7<br>29.8<br>42.9<br>27.3<br>5.2<br>3.5<br>108.7<br>11.9<br>5.9<br>-25.9 | 95.0     95.0       5.7     6.5       29.8     30.4       42.9     46.3       27.3     26.8       5.2     5.2       3.5     3.7       108.7     112.4       11.9     12.3       5.9     6.3       -25.9     -29.5       -25.6     -29.4 | 95.0         95.0         94.7           5.7         6.5         7.0           29.8         30.4         30.3           42.9         46.3         47.1           27.3         26.8         28.0           5.2         5.2         5.2           3.5         3.7         3.8           108.7         112.4         114.3           11.9         12.3         12.9           5.9         6.3         6.4           -25.9         -29.5         -32.0           -25.6         -29.4         -31.3 | 95.0         95.0         94.7         94.5           5.7         6.5         7.0         7.1           29.8         30.4         30.3         32.1           42.9         46.3         47.1         52.8           27.3         26.8         28.0         27.5           5.2         5.2         5.2         5.2           3.5         3.7         3.8         4.1           108.7         112.4         114.3         121.7           11.9         12.3         12.9         12.5           5.9         6.3         6.4         6.5           -25.9         -29.5         -32.0         -39.0           -25.6         -29.4         -31.3         -38.3 | 95.0         95.0         94.7         94.5         94.5           5.7         6.5         7.0         7.1         7.1           29.8         30.4         30.3         32.1         29.8           42.9         46.3         47.1         52.8         48.2           27.3         26.8         28.0         27.5         28.3           5.2         5.2         5.2         5.2         5.2           3.5         3.7         3.8         4.1         3.7           108.7         112.4         114.3         121.7         115.2           11.9         12.3         12.9         12.5         12.1           5.9         6.3         6.4         6.5         6.4           -25.9         -29.5         -32.0         -39.0         -32.2           -25.6         -29.4         -31.3         -38.3         -31.7 | 95.0         95.0         94.7         94.5         94.5         92.1           5.7         6.5         7.0         7.1         7.1         7.1           29.8         30.4         30.3         32.1         29.8         29.4           42.9         46.3         47.1         52.8         48.2         45.1           27.3         26.8         28.0         27.5         28.3         26.1           5.2         5.2         5.2         5.2         5.0           3.5         3.7         3.8         4.1         3.7         3.5           108.7         112.4         114.3         121.7         115.2         109.1           11.9         12.3         12.9         12.5         12.1         12.4           5.9         6.3         6.4         6.5         6.4         6.1           -25.9         -29.5         -32.0         -39.0         -32.2         -28.5           -25.6         -29.4         -31.3         -38.3         -31.7 | 95.0       95.0       94.7       94.5       94.5       92.1       ▼-2.4         5.7       6.5       7.0       7.1       7.1       7.1       7.1       ♥ 0.0         29.8       30.4       30.3       32.1       29.8       29.4       ▼-0.4         42.9       46.3       47.1       52.8       48.2       45.1       ▼-3.2         27.3       26.8       28.0       27.5       28.3       26.1       ▼-2.2         5.2       5.2       5.2       5.2       5.2       5.0       ▼-0.1         3.5       3.7       3.8       4.1       3.7       3.5       ▼-0.2         108.7       112.4       114.3       121.7       115.2       109.1       ▼-6.1         11.9       12.3       12.9       12.5       12.1       12.4       ▲ 0.3         5.9       6.3       6.4       6.5       6.4       6.1       ▼-0.3         -25.9       -29.5       -32.0       -39.0       -32.2       -28.5       3.7         -25.6       -29.4       -31.3       -38.3       -31.7 |

| Monthly Balances   |         |        |        |        |        |        |        |               |               |
|--|---------|--------|--------|--------|--------|--------|--------|---------------|---------------|
| •  | 2Yr Ago | LY     |        |        |        |        | MTD    |               |               |
|  | Feb-20  | Feb-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | MoM           | vs. LY        |
| Lower 48 Dry Production  | 94.2    | 84.3   | 94.3   | 95.6   | 96.9   | 94.9   | 93.0   | ▼-1.9         | <b>8.7</b>    |
| Canadian Imports   | 5.3     | 6.4    | 5.4    | 5.3    | 4.8    | 6.7    | 6.8    | <b>0.1</b>    | <b>0.5</b>    |
| L48 Power  | 30.2    | 27.6   | 30.5   | 29.1   | 28.4   | 30.8   | 29.0   | ▼-1.8         | <b>1.4</b>    |
| L48 Residential & Commercial   | 40.6    | 48.1   | 12.4   | 27.1   | 32.6   | 48.3   | 43.8   | <b>▼</b> -4.6 | <b>▼</b> -4.3 |
| L48 Industrial   | 25.1    | 21.1   | 21.1   | 24.3   | 25.1   | 27.7   | 26.9   | ▼ -0.8        | <b>5.8</b>    |
| L48 Lease and Plant Fuel   | 5.1     | 4.6    | 5.2    | 5.2    | 5.3    | 5.2    | 5.1    | ▼ -0.1        | <b>0.5</b>    |
| L48 Pipeline Distribution  | 3.5     | 3.6    | 2.4    | 2.9    | 3.0    | 3.8    | 3.4    | ▼ -0.4        | <b>▼</b> -0.1 |
| L48 Regional Gas Consumption   | 104.5   | 104.9  | 71.6   | 88.7   | 94.4   | 115.8  | 108.2  | ▼ -7.6        | <b>3.2</b>    |
| Net LNG Exports  | 8.5     | 8.4    | 10.6   | 11.4   | 12.1   | 12.4   | 12.6   | <b>0.2</b>    | <b>4.1</b>    |
| Total Mexican Exports  | 5.2     | 5.7    | 6.6    | 6.1    | 6.1    | 6.3    | 6.1    | ▼ -0.2        | <b>0.4</b>    |
| Implied Daily Storage Activity<br>EIA Reported Daily Storage Activity<br>Daily Model Error | -18.7   | -28.4  | 10.9   | -5.3   | -11.0  | -32.9  | -27.0  |               |               |

Source: Bloomberg, analytix.ai



# **Daily** Average Generation Data

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

|                               | 6-Feb | 7-Feb | 8-Feb | 9-Feb | 10-Feb | 11-Feb | 12-Feb | DoD | vs. 7D |
|-------------------------------|-------|-------|-------|-------|--------|--------|--------|-----|--------|
| NRC Nuclear Daily Output      | 86.9  | 86.4  | 87.5  | 87.5  | 88.3   | 88.3   | 88.3   | 0.0 | 0.9    |
| 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            | 18.0  | 18.5  | 17.4  | 17.4  | 16.6   | 16.5   | 16.5   | 0.0 | -0.9   |
| NRC % Nuclear Cap Utilization | 88.3  | 87.8  | 89.0  | 89.0  | 89.8   | 89.8   | 89.8   | 0.0 | 0.9    |

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

|            | 6-Feb | 7-Feb | 8-Feb | 9-Feb | 10-Feb | 11-Feb | 12-Feb | DoD    | vs. 7D |
|------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| CALI Wind  | 1323  | 817   | 1031  | 1261  | 1388   | 944    | 850    | -94    | -278   |
| TEXAS Wind | 12798 | 7307  | 13046 | 5090  | 5144   | 17325  | 14640  | -2685  | 4522   |
| US Wind    | 60023 | 39786 | 64605 | 54050 | 51981  | 77936  | 47784  | -30153 | -10280 |

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

|              | 6-Feb  | 7-Feb  | 8-Feb  | 9-Feb  | 10-Feb | 11-Feb | 12-Feb | DoD    | vs. 7D |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| US Wind      | 60023  | 39786  | 64605  | 54050  | 51981  | 77936  | 47784  | -30153 | -10280 |
| US Solar     | 11635  | 11088  | 10928  | 15652  | 13688  | 12904  | 12509  | -395   | -140   |
| US Petroleum | 3631   | 4074   | 2771   | 2598   | 3129   | 2496   | 3904   | 1408   | 788    |
| US Other     | 9603   | 9691   | 8813   | 8753   | 8514   | 8516   | 8220   | -296   | -761   |
| US Coal      | 115618 | 126101 | 108382 | 104059 | 100612 | 87447  | 98758  | 11311  | -8279  |
| US Nuke      | 91806  | 91440  | 92438  | 92960  | 93477  | 89932  | 92619  | 2687   | 610    |
| US Hydro     | 33078  | 33281  | 31406  | 30321  | 30767  | 31584  | 30524  | -1060  | -1215  |
| US Gas       | 152194 | 170865 | 158657 | 156334 | 151573 | 126720 | 133171 | 6451   | -19553 |

See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai



# **Storage Week** Average Generation Data

| Nuclear Ge | neration | Weekly | <b>Average</b> | - GW | √h (N | IRC) |  |
|------------|----------|--------|----------------|------|-------|------|--|
|            |          |        |                |      |       |      |  |

|                               | 7-Jan | 14-Jan | 21-Jan | 28-Jan | 4-Feb | 11-Feb | WoW  | WoW<br>Bcf/d<br>Impact |
|-------------------------------|-------|--------|--------|--------|-------|--------|------|------------------------|
| NRC Nuclear Daily Output      | 91.3  | 90.6   | 89.7   | 89.7   | 89.5  | 87.6   | -1.9 | 0.3                    |
| NRC Nuclear Max Capacity      | 104.9 | 104.9  | 104.9  | 104.9  | 104.9 | 104.9  | 0.0  |                        |
| NRC Nuclear Outage            | 13.6  | 14.3   | 15.1   | 15.2   | 15.4  | 17.3   | 1.9  |                        |
| NRC % Nuclear Cap Utilization | 0.1   | 0.1    | 0.1    | 0.1    | 0.1   | 0.1    | 0.0  |                        |

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

| 7-Jan | 14-Jan        | 21-Jan                   | 28-Jan                              | 4-Feb   | 11-Feb   | WoW  | Bcf/d<br>Impact  |
|-------|---------------|--------------------------|-------------------------------------|---|--|--|--|
| 1603  | 1266          | 1273                     | 1580                                | 1627  | 1156   | -471   | 0.1  |
| 13603 | 10192         | 15630                    | 7185                                | 12223   | 9259   | -2964  | 0.5  |
| 57109 | 50716         | 55686                    | 45244                               | 53914   | 53945  | 31   | 0.0  |
|       |               |                          |                                     | 8669.9  |  |  |  |
|       |               |                          |                                     | 19%   |  |  |  |
|       | 1603<br>13603 | 1603 1266<br>13603 10192 | 1603 1266 1273<br>13603 10192 15630 | 1603 1266 1273 1580<br>13603 10192 15630 7185 | 1603     1266     1273     1580     1627       13603     10192     15630     7185     12223       57109     50716     55686     45244     53914       8669.9 | 1603     1266     1273     1580     1627     1156       13603     10192     15630     7185     12223     9259       57109     50716     55686     45244     53914     53945       8669.9 | 1603     1266     1273     1580     1627     1156     -471       13603     10192     15630     7185     12223     9259     -2964       57109     50716     55686     45244     53914     53945     31       8669.9 |

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

|              |        |        |        |        |        | est.   |        |                        |
|--------------|--------|--------|--------|--------|--------|--------|--------|------------------------|
|              | 7-Jan  | 14-Jan | 21-Jan | 28-Jan | 4-Feb  | 11-Feb | WoW    | WoW<br>Bcf/d<br>Impact |
| US Wind      | 57109  | 50716  | 55686  | 45244  | 53914  | 53945  | 31     | 0.0                    |
| US Solar     | 8468   | 9389   | 8609   | 10087  | 10457  | 12307  | 1850   | -0.3                   |
| US Petroleum | 3038   | 4915   | 5260   | 5993   | 4672   | 3554   | -1119  | 0.2                    |
| US Other     | 8303   | 8254   | 8109   | 9663   | 9657   | 9174   | -483   | 0.1                    |
| US Coal      | 94949  | 115096 | 117880 | 130576 | 124851 | 113851 | -10999 | 2.0                    |
| US Nuke      | 96362  | 95713  | 94657  | 94693  | 94661  | 92641  | -2020  | 0.4                    |
| US Hydro     | 34608  | 34200  | 34490  | 34128  | 31800  | 32155  | 355    | -0.1                   |
| US Gas       | 154375 | 161930 | 156870 | 177830 | 159397 | 161815 | 2417   |                        |

See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

14/014/



# **Monthly** Average Generation Data

| <u>Monthly</u> /worage                         | Octiciation Data |
|--|------------------|
| Nuclear Generation Monthly Average - GWh (NRC) |                  |
| 2Yr Ago LY                                     | MTD              |

|                               | ZII Ago         |                 |        |        |        |        |                 |                    |                     |
|-------------------------------|-----------------|-----------------|--------|--------|--------|--------|-----------------|--------------------|---------------------|
|                               | Same 30<br>days | Same 30<br>days | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Last 30<br>days | MoM (MTD<br>vs LY) | Last 30<br>days YoY |
| NRC Nuclear Daily Output      | 93.2            | 91.4            | 82.8   | 90.3   | 90.2   | 88.2   | 88.9            | -2.0               | -2.5                |
| 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            | 11.7            | 13.5            | 22.0   | 14.6   | 14.7   | 16.7   | 15.9            | 2.0                | 2.5                 |
| NRC % Nuclear Cap Utilization | 94.8            | 92.9            | 84.2   | 91.8   | 91.7   | 89.7   | 90.4            | -2.0               | -2.5                |

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

|            | 2Yr Ago         | LY              |        |        |        | MTD    |                 |                    |                     |
|------------|-----------------|-----------------|--------|--------|--------|--------|-----------------|--------------------|---------------------|
|            | Same 30<br>days | Same 30<br>days | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Last 30<br>days | MoM (MTD<br>vs LY) | Last 30<br>days YoY |
| CALI Wind  | 1206            | 1756            | 1224   | 1585   | 1364   | 1270   | 1331            | -94                | -425                |
| TEXAS Wind | 9275            | 9926            | 11678  | 12927  | 11355  | 12286  | 11089           | 931                | 1163                |
| US Wind    | 33922           | 41330           | 49838  | 54810  | 51165  | 56931  | 52091           | 5767               | 10760               |

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

| Constant monary monage | 2Yr Ago         | LY              |        |        |        | MTD    |                 |                    |                     |
|------------------------|-----------------|-----------------|--------|--------|--------|--------|-----------------|--------------------|---------------------|
|                        | Same 30<br>days | Same 30<br>days | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Last 30<br>days | MoM (MTD<br>vs LY) | Last 30<br>days YoY |
| US Wind                | 33922           | 41330           | 49838  | 54810  | 51165  | 56931  | 52091           | <b>~</b> -4840.9   | <b>10760</b>        |
| US Solar               | 5993            | 7164            | 9688   | 7376   | 9476   | 11866  | 10835           | <b>▼</b> -1031.4   | <b>3671</b>         |
| US Petroleum           | 3589            | 2796            | 3022   | 3135   | 5021   | 3451   | 4669            | <b>1218</b>        | <b>1873</b>         |
| US Other               | 8153            | 7795            | 8445   | 8222   | 8792   | 8932   | 9174            | <b>243</b>         | <b>1379</b>         |
| US Coal                | 82190           | 123353          | 80906  | 81617  | 118026 | 108833 | 119080          | <b>1</b> 0247      | <b>▼ -4273</b>      |
| US Nuke                | 94291           | 96701           | 87558  | 95449  | 95259  | 92818  | 93811           | <b>993</b>         | <b>▼ -2890</b>      |
| US Hydro               | 35617           | 33017           | 26649  | 30826  | 34107  | 31559  | 32734           | <b>1175</b>        | <b>▼</b> -283       |
| US Gas                 | 165239          | 153283          | 151991 | 152627 | 164025 | 151116 | 160879          | <b>8003</b>        | <b>7596</b>         |
| US Total               | 437973          | 463785          | 418455 | 434177 | 485994 | 465958 | 483554          | <b>20847</b>       | <b>19769</b>        |



See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai



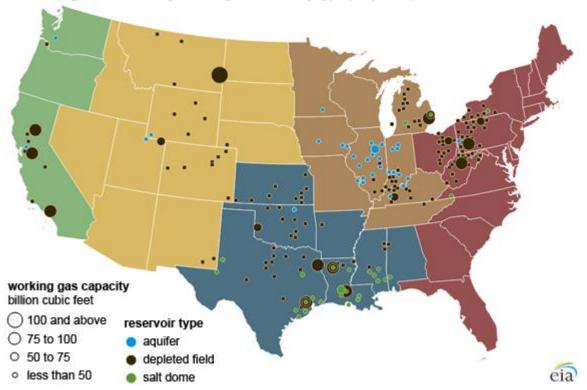
# Regional S/D Models Storage Projection

Week Ending 11-Feb

|               | 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           | -28.5                | 0.7                           | -27.7   | -194                                      |
|               |                      |                               |   |   |
| East          | -8.4                 | 2.3                           | -6.2  | -43                                       |
| Midwest       | -8.3                 | -0.3                          | -8.6  | -60                                       |
| Mountain      | 2.3                  | -3.3                          | -1.0  | -7  |
| South Central | -14.0                | 2.6                           | -11.3   | -79                                       |
| Pacific       | 0.0                  | -0.6                          | -0.6  | -4  |

<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 |
|-------------|-------|----------------------------|
| 11-Feb      | 25    | -194                       |
| 18-Feb      | 23    | -134                       |
| 25-Feb      | 20    | -91                        |
| 04-Mar      | 22    | -122                       |

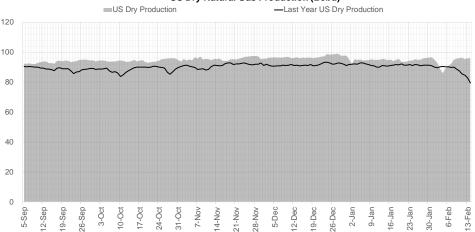
### Weather Storage Model - Next 4 Week Forecast



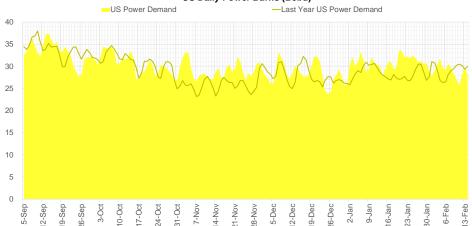


### Supply - Demand Trends

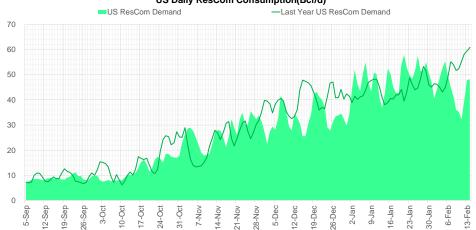
#### US Dry Natural Gas Production (Bcf/d)



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



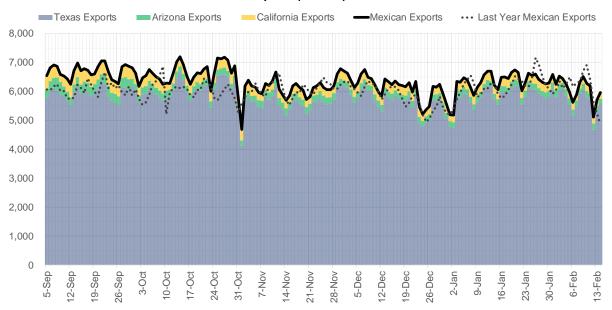
#### US Daily ResCom Consumption(Bcf/d)



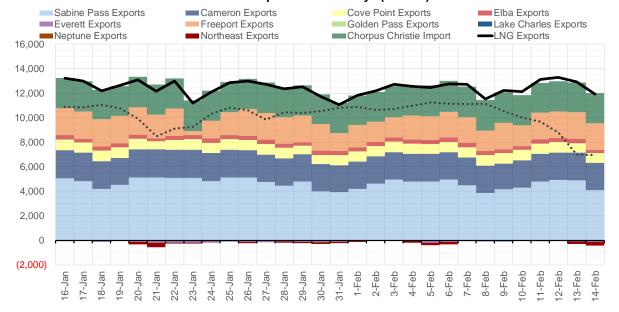
Source: Bloomberg



#### 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

ICE Data not updated today

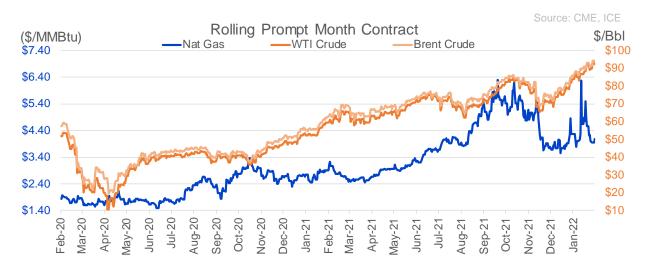
| CONTRACT | CONTRACT | PUT/CALL  | STRIKE  | CUMULATIVE | CONTRAC           |              | PUT/CALL  | STRIKE        | CUMULATIVE OI  |
|----------|----------|-----------|---------|------------|-------------------|--------------|-----------|---------------|----------------|
| MONTH    | YEAR     | 1 01/OALL | OTIVILL | VOL        | MONTH             | YEAR         | 1 01/CALL | STRIKE        | COMOLATIVE OF  |
| 4        | 2022     | Р         | 3.50    | 10628      | 3                 | 2022         | Р         | 3.00          | 44192          |
| 7        | 2022     | Р         | 3.25    | 10550      | 3                 | 2022         | C         | 10.00         | 41931          |
| 3        | 2022     | P         | 3.75    | 8671       | 3                 | 2022         | Р         | 4.00          | 39783          |
| 4        | 2022     | C         | 4.75    | 7976       | 3                 | 2022         | С         | 5.00          | 32656          |
| 3        | 2022     | P         | 3.50    | 7114       | 3                 | 2022         | Р         | 3.50          | 32125          |
| 4        | 2022     | С         | 4.50    | 5535       | 3                 | 2022         | С         | 6.00          | 27930          |
| 4        | 2022     | С         | 5.00    | 5449       | 3                 | 2022         | С         | 8.00          | 26101          |
| 4        | 2022     | Р         | 3.25    | 4813       | 10                | 2022         | С         | 6.00          | 25413          |
| 3        | 2022     | С         | 4.50    | 4802       | 3                 | 2022         | Р         | 3.75          | 25189          |
| 3        | 2022     | С         | 4.25    | 4708       | 3                 | 2022         | Р         | 2.50          | 24084          |
| 4        | 2022     | С         | 4.00    | 3737       | 4                 | 2022         | Р         | 3.00          | 23849          |
| 3        | 2022     | С         | 4.00    | 3568       | 4                 | 2022         | С         | 5.00          | 23033          |
| 4        | 2022     | Р         | 3.75    | 3535       | 3                 | 2022         | С         | 4.50          | 23021          |
| 6        | 2022     | С         | 5.00    | 3081       | 3                 | 2022         | P         | 4.50          | 22758          |
| 3        | 2022     | Р         | 3.45    | 2987       | 3                 | 2022         | C         | 4.00          | 22494          |
| 3        | 2022     | С         | 5.00    | 2888       | 10                | 2022         | С         | 5.00          | 21773          |
| 6        | 2022     | Р         | 3.50    | 2725       | 5                 | 2022         | P         | 3.00          | 21355          |
| 3        | 2022     | Р         | 3.60    | 2507       | 3                 | 2022         | С         | 7.00          | 20795          |
| 3        | 2022     | Р         | 3.00    | 2454       | 3                 | 2022         | P<br>P    | 3.25          | 20578          |
| 10       | 2022     | С         | 5.00    | 2351       | 3                 | 2022         | -         | 3.90          | 20538          |
| 6        | 2022     | С         | 4.50    | 2251       | 5                 | 2022         | P         | 2.50          | 20027          |
| 4        | 2022     | С         | 6.00    | 2077       | 6<br>4            | 2022         | C<br>P    | 6.00          | 19484          |
| 10       | 2022     | Р         | 3.75    | 1675       | <del>4</del><br>5 | 2022<br>2022 | C         | 3.50<br>5.00  | 19152<br>18870 |
| 8        | 2022     | С         | 5.00    | 1668       | 6                 | 2022         | C         | 5.00<br>5.00  | 18458          |
| 8        | 2022     | Р         | 3.75    | 1663       | 4                 | 2022         | C         | 3.00          | 17511          |
| 6        | 2022     | Р         | 3.75    | 1604       | 4                 | 2022         | P         | 2.50          | 17143          |
| 5        | 2022     | Р         | 3.75    | 1602       | 6                 | 2022         | P         | 3.00          | 16815          |
| 7        | 2022     | Р         | 3.75    | 1600       | 5                 | 2022         | P         | 2.75          | 16699          |
| 9        | 2022     | Р         | 3.75    | 1600       | 4                 | 2022         | Ċ         | 6.00          | 16496          |
| 3        | 2022     | Р         | 4.00    | 1576       | 12                | 2022         | Č         | 5.00          | 16019          |
| 3        | 2022     | Р         | 3.90    | 1488       | 4                 | 2022         | Č         | 4.50          | 15828          |
| 5        | 2022     | Р         | 3.50    | 1477       | 3                 | 2022         | Č         | 5.50          | 15748          |
| 8        | 2022     | Р         | 3.50    | 1409       | 10                | 2022         | P         | 3.00          | 15502          |
| 6        | 2022     | С         | 6.00    | 1373       | 4                 | 2022         | Р         | 4.00          | 15446          |
| 5        | 2022     | С         | 5.00    | 1305       | 3                 | 2022         | Р         | 5.00          | 15413          |
| 4        | 2022     | С         | 5.50    | 1303       | 3                 | 2022         | Р         | 2.00          | 14981          |
| 5        | 2022     | С         | 4.50    | 1289       | 5                 | 2022         | С         | 6.00          | 14795          |
| 6        | 2022     | Р         | 3.25    | 1250       | 9                 | 2022         | С         | 6.00          | 14322          |
| 9        | 2022     | Р         | 3.50    | 1225       | 4                 | 2022         | С         | 4.75          | 14232          |
| 10       | 2022     | Р         | 3.50    | 1225       | 5                 | 2022         | Р         | 3.50          | 14211          |
| 3        | 2023     | Р         | 3.00    | 1200       | 3                 | 2022         | С         | 4.25          | 13979          |
| 5        | 2022     | С         | 5.75    | 1165       | 10                | 2022         | Р         | 2.00          | 13921          |
| 6        | 2022     | С         | 5.75    | 1165       | 3                 | 2022         | Р         | 2.25          | 13916          |
| 4        | 2022     | Р         | 4.00    | 1155       | 5                 | 2022         | С         | 3.00          | 13733          |
| 7        | 2022     | Р         | 3.50    | 1130       | 3                 | 2022         | С         | 5.75          | 13682          |
| 3        | 2022     | С         | 5.75    | 1108       | 4                 | 2022         | С         | 4.00          | 13681          |
| 10       | 2022     | Р         | 4.00    | 1100       | 3                 | 2022         | Р         | 2.75          | 13591          |
| 4        | 2022     | Р         | 3.00    | 1068       | 6                 | 2022         | С         | 3.00          | 13438          |
| 9        | 2022     | С         | 4.50    | 1032       | 4                 | 2022         | C         | E: CME, ICE   | 13383          |
|          |          |           |         |            |                   |              | Source    | E. CIVIE, ICE |                |



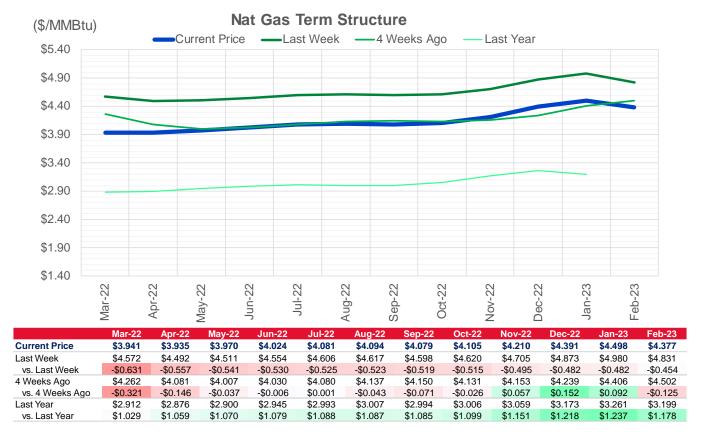
# Nat Gas Futures Open Interest CME and ICE Combined

ICE Data not updated today

| CME Henry H | Hub Futures (1 | 0,000 MMBt | u)           | ICE Henry Hub Futures Contract Equivalent (10,000 MM |         |       |              |  |  |
|-------------|----------------|------------|--------------|--|---------|-------|--------------|--|--|
|             | Current        | Prior      | Daily Change |  | Current | Prior | Daily Change |  |  |
| MAR 22      | 76841          | 109370     | -32529       | MAR 22   | 83325   | 85957 | -2632        |  |  |
| APR 22      | 118726         | 107285     | 11441        | APR 22   | 84163   | 84380 | -216         |  |  |
| MAY 22      | 178725         | 170797     | 7928         | MAY 22   | 78935   | 78925 | 11           |  |  |
| JUN 22      | 69813          | 68094      | 1719         | JUN 22   | 71363   | 71375 | -13          |  |  |
| JUL 22      | 78635          | 75302      | 3333         | JUL 22   | 66279   | 65989 | 291          |  |  |
| AUG 22      | 42090          | 42552      | -462         | AUG 22   | 60303   | 60137 | 166          |  |  |
| SEP 22      | 63954          | 60028      | 3926         | SEP 22   | 60441   | 60592 | -152         |  |  |
| OCT 22      | 71027          | 74082      | -3055        | OCT 22   | 68301   | 68541 | -241         |  |  |
| NOV 22      | 41175          | 40564      | 611          | NOV 22   | 54714   | 54933 | -219         |  |  |
| DEC 22      | 40191          | 40419      | -228         | DEC 22   | 63626   | 63889 | -264         |  |  |
| JAN 23      | 53228          | 54577      | -1349        | JAN 23   | 54728   | 54744 | -16          |  |  |
| FEB 23      | 20750          | 20621      | 129          | FEB 23   | 44147   | 44238 | -91          |  |  |
| MAR 23      | 38287          | 39314      | -1027        | MAR 23   | 45973   | 46185 | -213         |  |  |
| APR 23      | 33127          | 31986      | 1141         | APR 23   | 47400   | 47300 | 99           |  |  |
| MAY 23      | 20667          | 20858      | -191         | MAY 23   | 40812   | 40531 | 281          |  |  |
| JUN 23      | 12624          | 12745      | -121         | JUN 23   | 37672   | 37438 | 234          |  |  |
| JUL 23      | 10136          | 10078      | 58           | JUL 23   | 37612   | 37357 | 255          |  |  |
| AUG 23      | 7189           | 7183       | 6            | AUG 23   | 37345   | 37010 | 335          |  |  |
| SEP 23      | 10553          | 10561      | -8           | SEP 23   | 36628   | 36383 | 245          |  |  |
| OCT 23      | 18956          | 18770      | 186          | OCT 23   | 40825   | 40595 | 230          |  |  |
| NOV 23      | 9769           | 9763       | 6            | NOV 23   | 40162   | 40065 | 97           |  |  |
| DEC 23      | 12896          | 13254      | -358         | DEC 23   | 34412   | 34290 | 122          |  |  |
| JAN 24      | 12570          | 12552      | 18           | JAN 24   | 27508   | 26782 | 725          |  |  |
| FEB 24      | 3182           | 3304       | -122         | FEB 24   | 19123   | 19012 | 111          |  |  |
| MAR 24      | 12422          | 12417      | 5            | MAR 24   | 24944   | 24820 | 124          |  |  |
| APR 24      | 6462           | 6456       | 6            | APR 24   | 18436   | 18373 | 63           |  |  |
| MAY 24      | 2333           | 2329       | 4            | MAY 24   | 18128   | 18102 | 26           |  |  |
| JUN 24      | 1093           | 1043       | 50           | JUN 24   | 18033   | 18008 | 26           |  |  |
| JUL 24      | 642            | 634        | 8            | JUL 24   | 18668   | 18642 | 26           |  |  |
| AUG 24      | 774            | 766        | 8            | AUG 24   | 18397   | 18405 | -8           |  |  |







|                       |          | Cash    | Prompt | Cash to |  |
|-----------------------|----------|---------|--------|---------|--|
|                       | Units    | Settled | Settle | Prompt  |  |
| AGT Citygate          | \$/MMBtu | 3.90    | 11.59  | 7.69    |  |
| TETCO M3              | \$/MMBtu | 3.42    | 4.78   | 1.36    |  |
| FGT Zone 3            | \$/MMBtu | 6.77    | 4.68   | -2.09   |  |
| Zone 6 NY             | \$/MMBtu | 6.77    | 5.09   | -1.68   |  |
| Chicago Citygate      | \$/MMBtu | 3.78    | 4.54   | 0.76    |  |
| Michcon               | \$/MMBtu | 3.79    | 4.46   | 0.67    |  |
| Columbia TCO Pool     | \$/MMBtu | 3.52    | 4.13   | 0.61    |  |
| Ventura               | \$/MMBtu | 3.74    | 4.64   | 0.90    |  |
| Rockies/Opal          | \$/MMBtu | 3.56    | 4.22   | 0.66    |  |
| El Paso Permian Basin | \$/MMBtu | 3.33    | 4.00   | 0.67    |  |
| Socal Citygate        | \$/MMBtu | 3.80    | 4.30   | 0.50    |  |
| Malin                 | \$/MMBtu | 3.59    | 4.21   | 0.62    |  |
| Houston Ship Channel  | \$/MMBtu | 3.77    | 4.44   | 0.67    |  |
| Henry Hub Cash        | \$/MMBtu | 3.92    | 4.36   | 0.44    |  |
| AECO Cash             | C\$/GJ   | 2.96    | 3.24   | 0.28    |  |
| Station2 Cash         | C\$/GJ   | 2.94    | 4.00   | 1.06    |  |
| Dawn Cash             | C\$/GJ   | 3.87    | 4.77   | 0.90    |  |

Source: CME, Bloomberg



|                         |              |                      |      |           | MC | s. 4 Weeks |    |              |
|-------------------------|--------------|----------------------|------|-----------|----|------------|----|--------------|
|                         | Units        | <b>Current Price</b> | VC   | Last Week | ve |            | Ve | s. Last Year |
|                         |              |                      | v 5. |           |    | Ago        | VE |              |
| NatGas Jul21/Oct21      | \$/MMBtu     | 2.224                |      | 0.000     |    | 0.000      |    | 2.211        |
| NatGas Oct21/Nov21      | \$/MMBtu     | 0.361                |      | 0.000     |    | 0.000      |    | 0.308        |
| NatGas Oct21/Jan22      | \$/MMBtu     | -1.817               |      | 0.000     |    | 0.000      |    | -2.072       |
| NatGas Apr22/Oct22      | \$/MMBtu     | 0.170                |      | 0.042     |    | 0.024      |    | 0.166        |
| WTI Crude               | \$/Bbl       | 93.10                |      | 0.790     |    | 9.280      |    | 33.630       |
| Brent Crude             | \$/Bbl       | 94.44                |      | 1.170     |    | 8.380      |    | 32.010       |
| Fuel Oil, NY Harbour 1% | \$/Bbl       | 97.18                |      | 0.000     |    | 0.000      |    | 0.000        |
| Heating Oil             | cents/Gallon | 291.09               |      | 3.580     |    | 27.660     |    | 113.950      |
| Propane, Mt. Bel        | cents/Gallon | 1.26                 |      | -0.023    |    | 0.117      |    | 0.383        |
| Ethane, Mt. Bel         | cents/Gallon | 0.38                 |      | -0.023    |    | 0.013      |    | 0.104        |
| Coal, PRB               | \$/MTon      | 12.30                |      | 0.000     |    | 0.000      |    | 0.000        |
| Coal, PRB               | \$/MMBtu     | 0.70                 |      |           |    |            |    |              |
| Coal, ILB               | \$/MTon      | 31.05                |      | 0.000     |    | 0.000      |    | 0.000        |
| Coal, ILB               | \$/MMBtu     | 1.32                 |      |           |    |            |    |              |

19.00

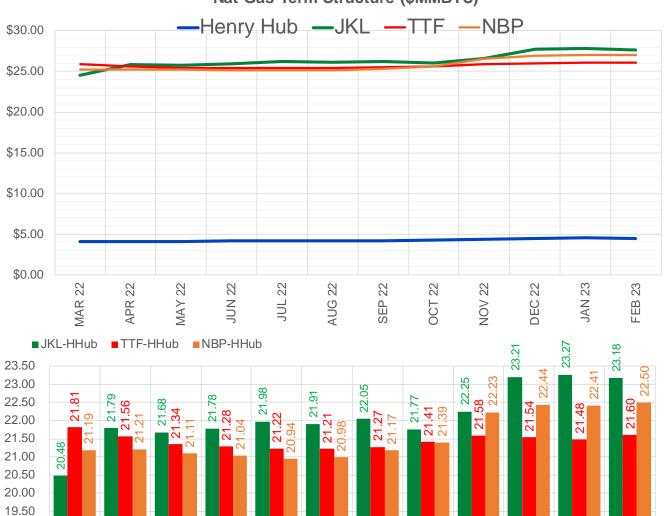
**MAR 22** 

**APR 22** 

MAY 22

**JUN 22** 

## **Nat Gas Term Structure (\$MMBTU)**



|           | MAR 22   | APR 22   | MAY 22   | JUN 22   | JUL 22   | AUG 22   | SEP 22   | OCT 22   | NOV 22   | <b>DEC 22</b> | JAN 23   | FEB 23   |
|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------------|----------|----------|
| Henry Hub | \$4.088  | \$4.069  | \$4.102  | \$4.146  | \$4.202  | \$4.203  | \$4.201  | \$4.235  | \$4.341  | \$4.494       | \$4.593  | \$4.490  |
| JKL       | \$24.570 | \$25.860 | \$25.780 | \$25.930 | \$26.180 | \$26.110 | \$26.255 | \$26.000 | \$26.595 | \$27.700      | \$27.865 | \$27.665 |
| JKL-HHub  | \$20.482 | \$21.791 | \$21.678 | \$21.784 | \$21.978 | \$21.907 | \$22.054 | \$21.765 | \$22.254 | \$23.206      | \$23.272 | \$23.175 |
| TTF       | \$25.901 | \$25.624 | \$25.446 | \$25.429 | \$25.426 | \$25.417 | \$25.473 | \$25.644 | \$25.921 | \$26.029      | \$26.069 | \$26.087 |
| TTF-HHub  | \$21.813 | \$21.555 | \$21.344 | \$21.283 | \$21.224 | \$21.214 | \$21.272 | \$21.409 | \$21.580 | \$21.535      | \$21.476 | \$21.597 |
| NBP       | \$25.276 | \$25.281 | \$25.208 | \$25.187 | \$25.145 | \$25.186 | \$25.374 | \$25.624 | \$26.570 | \$26.929      | \$27.001 | \$26.992 |
| NBP-HHub  | \$21.188 | \$21.212 | \$21.106 | \$21.041 | \$20.943 | \$20.983 | \$21.173 | \$21.389 | \$22.229 | \$22.435      | \$22.408 | \$22.502 |

AUG 22

**SEP 22** 

NOV 22

**JAN 23** 

23

JUL 22



## Weather Storage Model - Next 4 Week Forecast

