

November 2024 ERCOT Monthly Operations Report

Reliability and Operations Subcommittee Meeting

January 9, 2025

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# Report Highlights

* The unofficial ERCOT peak demand was 60,170 MW for the month of November on 11/04/2024 HE 14:00; this is 3,635 MW higher than the November 2023 peak demand of 56,535 MW on 11/08/2023 HE 16:00.
* There were 4 frequency events.
* There were 3 ERCOT Contingency Reserve Service (ECRS) events.
* There were no Responsive Reserve Service (RRS) events.
* There was 1 DC Tie Curtailment.
* There were 31 HRUC commitments.
* There were 3 OCNs issued.
  + 1 OCN was issued for topology change in PNHNDL IROL region.
  + 2 OCNs were AANs issued due to possible future Emergency Conditions of reserve capacity deficiency.
* There was 1 Advisory issued due to ERCOT’s Voltage Security Assessment Tool unavailability.
* A PVGR Penetration Record of 44.17% was set on 11/20/2024 at 14:55.
* The following GTCs saw congestion in November:

|  |  |
| --- | --- |
| GTC | Days Congestion |
| Panhandle GTC | 25 |
| West Texas Export | 23 |
| Zapata Starr | 18 |
| Hamilton | 16 |
| North Edinburg to Lobo | 16 |
| Nelson Sharpe to Rio Hondo | 15 |
| South Texas Export (E\_PATA) | 15 |
| North to Houston | 11 |
| South Texas Import (I\_KALO) | 10 |
| South Texas Export (E\_PASP) | 8 |
| Valley Export | 5 |
| Wharton County | 2 |

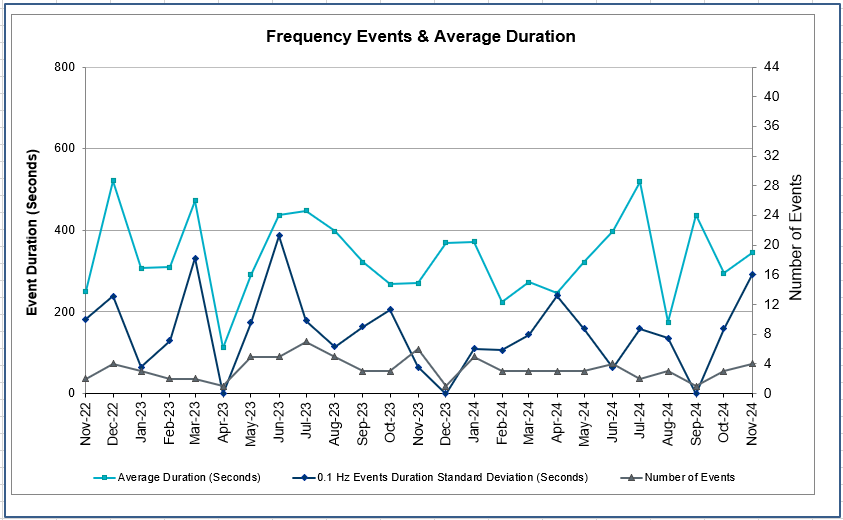
# Frequency Control

## Frequency Events

The ERCOT Interconnection experienced 4 frequency events, which resulted from unit tripping. The average duration of these events was 5 minutes and 45 seconds.

A summary of the frequency event is provided below. The reported frequency event meets one of the following criteria: Delta Frequency is 60 mHz or greater; the MW loss is 350 MW or greater; resource trip event triggered ECRS deployment. Frequency events that have been identified as Frequency Measurable Events (FME) for purposes of BAL-001-TRE-2 analysis are highlighted in blue. When analyzing frequency events, ERCOT evaluates PMU data according to industry standards. Events with an oscillating frequency of less than 1 Hz are inter-area, while higher frequencies indicate local events. Industry standards specify that damping ratio for inter-area oscillations should be 3.0% or greater. For the frequency event listed below, the ERCOT system met these standards and transitioned well after the disturbance. In the case of negative delta frequency, the MW Loss column could refer to load loss.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Date and Time** | **Delta Frequency** | **Max/Min Frequency** | **Duration of Event** | **PMU Data** | | **MW Loss** | **Load** | **IRR** | **Inertia** |
| **(Hz)** | **(Hz)** | **Oscillation Mode (Hz)** | **Damping Ratio** | **(MW)** | **%** | **(MW-s)** |
| 11/17/2024 12:58:54 | 0.076 | 59.894 | 00:01:46 | 0.71 | 10% | 753 | 58,214 | 34% | 243,340 |
| 11/21/2024 5:28:17 | 0.065 | 59.921 | 00:04:14 | 0.68 | 7% | 650 | 71,194 | 35% | 288,891 |
| 11/23/2024 18:18:58 | 0.088 | 59.928 | 00:12:49 | 0.44 | 8% | 527 | 52,013 | 35% | 217,261 |
| 11/23/2024 18:48:15 | 0.073 | 59.929 | 00:04:12 | 0.71 | 15% | 502 | 44,242 | 24% | 228,778 |
|  |  | Avg | 00:05:45 |  |  |  |  |  |  |



(Note: All data on this graph encompasses frequency event analysis based on BAL-001-TRE-2.)

## ERCOT Contingency Reserve Events

There were 3 events where ERCOT Contingency Reserve MWs were released to SCED. The events highlighted in blue were related to frequency events reported in Section 2.1 above.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date and Time Released to SCED** | **Date and Time Recalled** | **Duration of Event** | **Maximum MWs Released** | **Comments** |
| 11/10/2024 17:09 | 11/10/2024 19:51 | 2:42:46 | 1372 | Insufficient Capacity for projected netload ramp |
| 11/17/2024 12:58 | 11/17/2024 13:01 | 0:03:03 | 475.76474 | Unit Trip |
| 11/17/2024 15:12 | 11/17/2024 17:26 | 2:14:27 | 1000 | Release due to SCED UnderGen |

## Responsive Reserve Events

There were no events where Responsive Reserve MWs were released to SCED.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date and Time Released to SCED** | **Date and Time Recalled** | **Duration of Event** | **Maximum MWs Released** | **Comments** |
| N/A | N/A | N/A | N/A | N/A |

## Load Resource Events

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Resource Location** | **# of Resources** | **Operating Day** | **Total # of Hours Committed** | **Total MWhs** | **Reason for Commitment** |
| SOUTH\_CENTRAL | 1 | November 3, 2024 | 6 | 1,230 | E\_PATA |
| COAST, NORTH\_CENTRAL | 5 | November 5, 2024 | 33 | 3,635 | Capacity, E\_PATA |
| EAST, NORTH\_CENTRAL, SOUTH\_CENTRAL, SOUTHERN | 7 | November 7, 2024 | 38 | 6,014 | Capacity, E\_PATA |
| NORTH\_CENTRAL | 2 | November 11, 2024 | 7 | 1,268 | Capacity |
| COAST, NORTH, NORTH\_CENTRAL, #VALUE! | 6 | November 17, 2024 | 38 | 7,719 | E\_PATA, |
| EAST, FAR\_WEST | 2 | November 20, 2024 | 10 | 1,826 | E\_PASP |
| COAST, NORTH\_CENTRAL, SOUTH\_CENTRAL | 3 | November 21, 2024 | 20 | 4,841 | Capacity, E\_PASP |
| NORTH\_CENTRAL | 2 | November 26, 2024 | 8 | 3,148 | E\_PASP |
| NORTH\_CENTRAL | 2 | November 29, 2024 | 12 | 4,716 | E\_PASP |
| NORTH\_CENTRAL | 1 | November 30, 2024 | 4 | 1,580 | DHOLCIS5 |

There were no events where Load Resources that are controlled by Under-Frequency Relays were deployed for an Emergency Condition.

# Reliability Unit Commitment

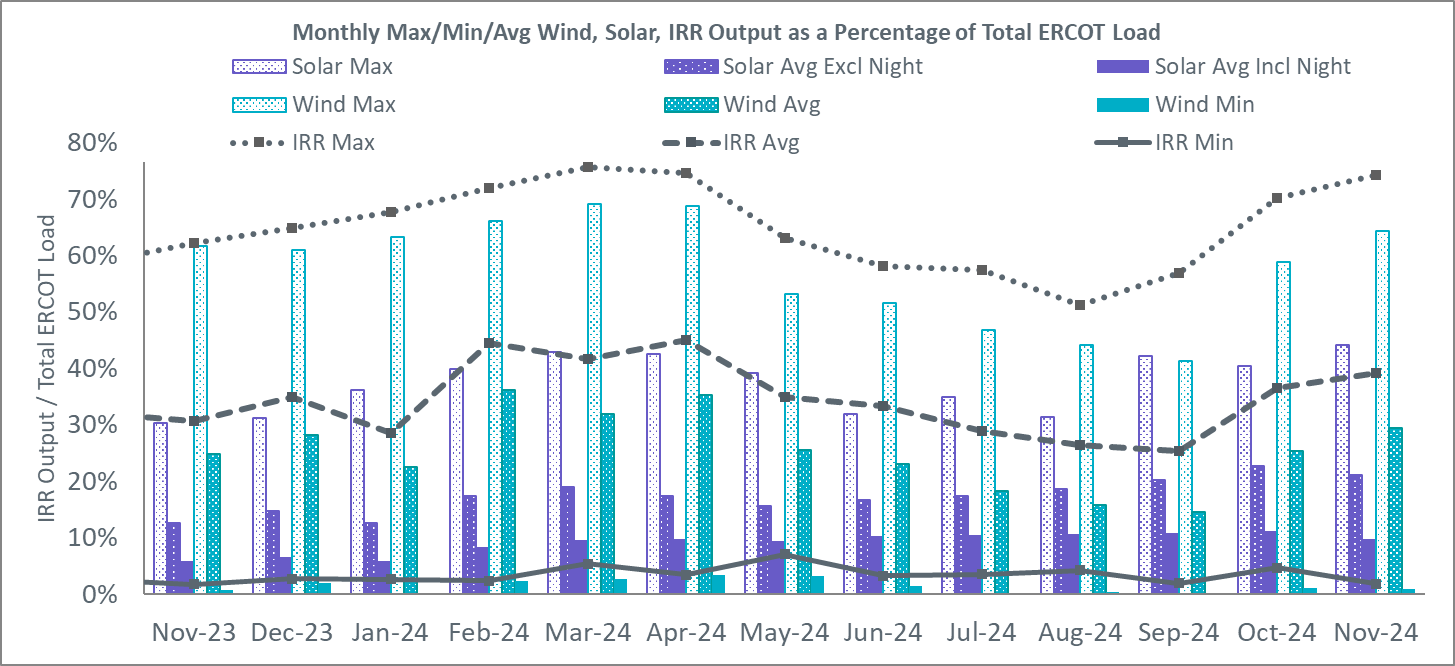
ERCOT reports on Reliability Unit Commitments (RUC) monthly. Commitments are reported grouped by operating day and weather zone. The total number of hours committed is the sum of the hours for all the units in the specified region. Additional information on RUC commitments can be found on the MIS secure site at Grid 🡪 Generation 🡪 Reliability Unit Commitment.

There were no DRUC commitments.

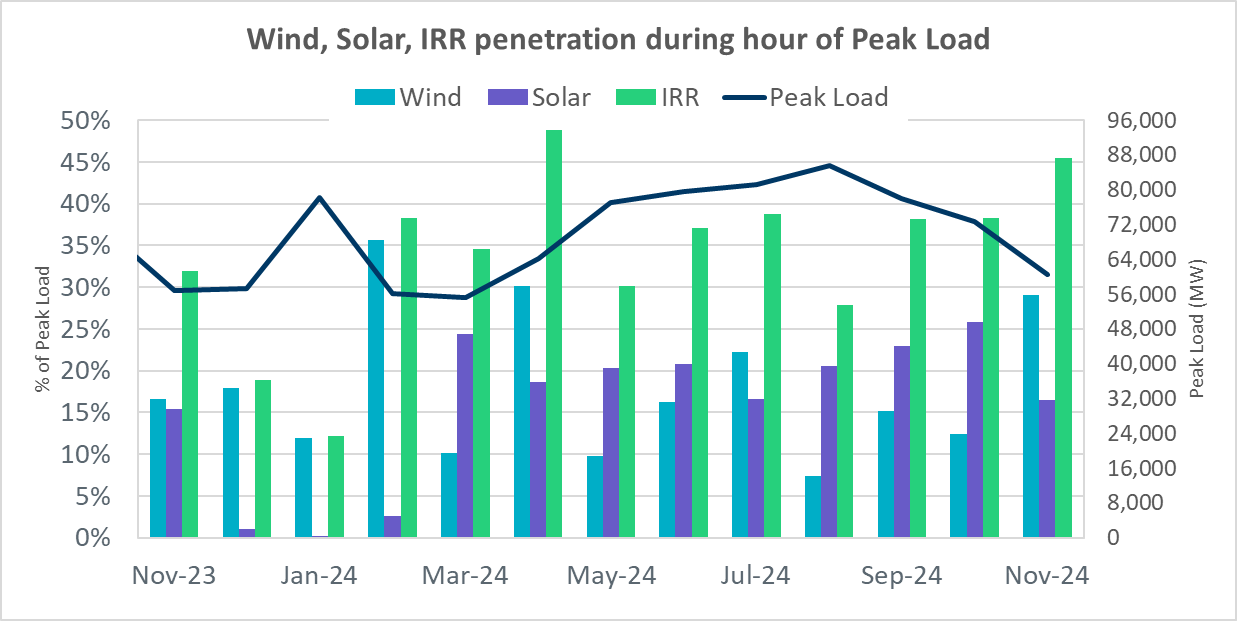
There were 31 HRUC commitments.

# IRR, Wind, and Solar Generation as a Percent of Load

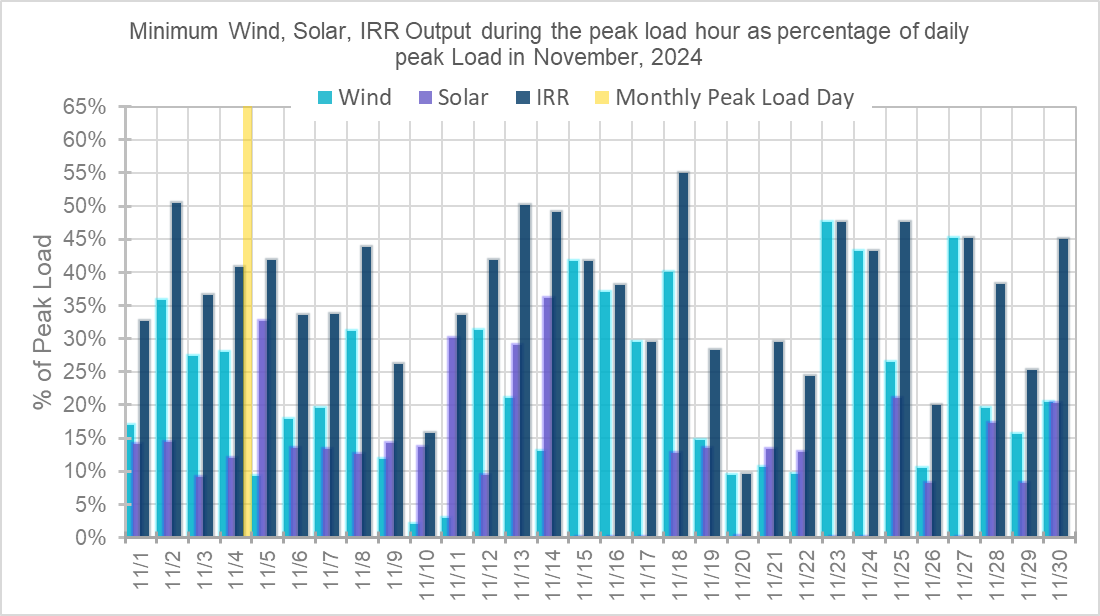
The graph below shows the maximum, minimum and average aggregate solar, wind and IRR output as a percentage of total ERCOT load when evaluated as 10-minute averaged intervals, over the past 13 months. Current wind and solar generation and penetration records are listed in the footnote below[[1]](#footnote-2). Maximum IRR penetration for November 2024 was 74.31% on 11/24/2024 interval ending 11:50 and minimum IRR penetration for the month was 1.89% on 11/30/2024 interval ending 18:00.



During the hour of peak load for the month, hourly integrated wind generation was 17,581 MW and solar generation was 9,961 MW. The graph below shows the wind and solar penetration percentage during the hour of the peak load in the last 13 months.



Lastly, the graph below shows the minimum wind, solar, and IRR output during the peak load hour as a percentage of the daily peak load for every day in the month.



# Largest Net-Load Ramps

The net-load ramp is defined as the change in net-load (load minus wind and PVGR generation) during the defined time horizon. Such a variation in net-load needs to be accommodated in grid operations to ensure that the reliability of the grid is satisfactorily maintained. The largest net-load ramps over 5-minute, 10-minute, 15-minute, 30-minute, and 60-minute intervals in November 2024 were 1,603 MW, 2,870 MW, 3,994 MW, 7,629 MW, and 13,811 MW, respectively. A comparison with historical values is provided in the table below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Month and Year** | **5 min** | **10 min** | **15 min** | **30 min** | **60 min** |
| November 2014 | 991 MW | 1,689 MW | 2,112 MW | 3,289 MW | 5,392 MW |
| November 2015 | 915 MW | 1,637 MW | 1,995 MW | 3,241 MW | 5,516 MW |
| November 2016 | 821 MW | 1,404 MW | 1,827 MW | 3,166 MW | 5,866 MW |
| November 2017 | 877 MW | 1,439 MW | 1,888 MW | 3,279 MW | 5,102 MW |
| November 2018 | 851 MW | 1,495 MW | 2,159 MW | 3,674 MW | 6,545 MW |
| November 2019 | 1,092 MW | 1,606 MW | 2,269 MW | 3,934 MW | 6,317 MW |
| November 2020 | 971 MW | 1,264 MW | 1,655 MW | 3,061 MW | 5,751 MW |
| November 2021 | 1,311 MW | 1,639 MW | 2,281 MW | 3,781 MW | 6,587 MW |
| November 2022 | 1,107 MW | 1,907 MW | 2,764 MW | 5,166 MW | 9,218 MW |
| November 2023 | 1,426 MW | 2,810 MW | 3,991 MW | 6,762 MW | 10,976 MW |
| November 2024 | 1,603 MW | 2,870 MW | 3,994 MW | 7,629 MW | 13,811 MW |
| All months in 2014-2024 | 2,789 MW | 3,107 MW | 4,588 MW | 8,901 MW | 16,522 MW |
| 10/13/2023 | 1/12/2024 | 1/12/2024 | 1/12/2024 | 1/12/2024 |
| (IE 12:01) | (IE 17:24) | (IE 17:31) | (IE 17:33) | (IE 17:47) |

# Congestion Analysis

## Notable Constraints

Nodal protocol section 3.20 specifies that ERCOT shall identify transmission constraints that are binding in Real-Time three or more Operating Days within a calendar month. As part of this process, ERCOT reports congestion that meets this criterion to ROS. In addition, ERCOT also highlights notable constraints that have an estimated congestion rent exceeding $1,000,000 for a calendar month. These constraints are detailed in the table below, including approved transmission upgrades from TPIT that may provide some congestion relief based on ERCOT’s engineering judgement. Rows highlighted in blue indicate the congestion was affected by one or more outages. For a list of all constraints activated in SCED, please see Appendix A at the end of this report.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Contingency Name** | **Overloaded Element** | **Contingency Name** | **Overloaded Element** | **# of Days Constraint Binding** | **Congestion Rent** | **Transmission Project** |
|
| DCONLNG5 | 14040\_\_I | CONSW-MGSES\_and\_CONSW-LNGSW\_345kV\_DBLCKT | Polecat Creek Switch - Wrage Ranch Pod 138kV | 12 | $22,641,602.72 | Oncor\_FW\_45640\_Spraberry - Polecat Creek 138 kV Line (23RPG009, MOD 45640) |
| DWLFMOS5 | 6520\_\_E | WLFSW-MOSSW 345&WLFSW-ODEHV 345\_\_\_\_TRPLCKT-1of3 | Odessa Ehv Switch - Yarbrough Sub 138kV | 20 | $20,439,789.62 |  |
| BASE CASE | WESTEX | Basecase | WESTEX GTC | 15 | $10,621,920.87 |  |
| SKRWBDG5 | 107\_\_B | Krum West Switch to BIRD DOG SWITCH LIN \_A | Hicks Switch - Exchange Switch 345kV | 4 | $10,150,019.36 |  |
| BASE CASE | PNHNDL | Basecase | PNHNDL GTC | 22 | $9,550,602.46 |  |
| SBOMJC25 | 35020\_\_B | COBB SWITCHING STATION to COBB SWITCHING STATION LIN \_A | Garvey Road Switch - Graham Ses 345kV | 12 | $8,798,746.86 |  |
| DBIGKEN5 | FORTMA\_YELWJC1\_1 | Bighil-Kendal 345kV | Yellow Jacket - Fort Mason 138kV | 19 | $7,453,290.28 |  |
| BASE CASE | E\_PATA | Basecase | E\_PATA GTC | 12 | $6,046,154.12 |  |
| SW\_GODE5 | 15045\_\_A | ODESSA EHV SWITCH to ODESSA EHV SWITCH LIN 1 | Expanse Switch - Grady 138kV | 9 | $5,613,963.47 | Oncor\_FW\_71960\_Grady - Expanse (71960) |
| DBYRBOW5 | 6011\_\_B | RILEY-BOMSW 345&BYRSW-BOMSW 345\_DBLCKT | Fisher Road Switch - Riley 345kV | 10 | $5,485,981.00 |  |
| MLOBFOR5 | LARDVN\_LASCRU1\_1 | manual double Lobo to fowlerton 1&2 345 | Laredo Vft North - Las Cruces 138kV | 5 | $3,770,673.01 |  |
| SBWDDBM5 | LPLMK\_LPLNE\_1 | BLACKWATER DRAW SWITCH to DOUBLE MOUNTAIN SWITCH LIN 1 | Mackenzie Substation - Northeast Substation 115kV | 13 | $3,532,788.72 |  |
| SW\_LVLT5 | 15060\_\_B | wett\_long\_draw to Volta LIN 1 | Koch Tap - Vealmoor 138kV | 6 | $2,852,752.96 |  |
| DLYTCIS5 | 196T171\_1 | LYTTON\_S to FPPYD2 & LYTTON\_S to CISTERN | Settlers - Sim Gideon 138kV | 6 | $2,666,722.47 |  |
| DCAGCI58 | 255T279\_1 | Cagnon-Kendal 345 &Cico-Mengcr 138 | Medina Lake - Pipe Creek 138kV | 5 | $1,985,372.75 |  |
| DCONLNG5 | 6046\_\_A | CONSW-MGSES\_and\_CONSW-LNGSW\_345kV\_DBLCKT | Falcon Seaboard - Morgan Creek Ses 345kV | 6 | $1,915,730.43 |  |
| MHARNED5 | HAINE\_\_LA\_PAL1\_1 | Manual dbl ckt for NEDIN-BONILLA 345kV & RIOH-PRIM138kV | Haine Drive - La Palma 138kV | 9 | $1,833,203.63 |  |
| DHOLCIS5 | 196T171\_1 | LYTTON\_S to FPPYD2 & CISTERN TO HOLMAN | Settlers - Sim Gideon 138kV | 6 | $1,662,368.42 |  |
| SBGLTWI8 | LAKENA\_SAMATH1\_1 | TWIN BUTTES to HARGROVE LIN 1 | Lake Nasworthy - San Angelo Mathis Field 69kV | 4 | $1,382,091.68 |  |
| BASE CASE | NE\_LOB | Basecase | NE\_LOB GTC | 10 | $1,357,272.92 | The Lower Rio Grande Valley (LRGV) System Enhancement Project (21RPG017) will improve the NorthEd\_LoboGTC to support up to 80% of total wind and solar generation capacity in the LRGV area. |
| STANPAW5 | CALLIC\_LON\_HI1\_1 | TANGO to PAWNEE SWITCHING STATION LIN 1 | Lon Hill - Callicoatte 138kV | 7 | $1,170,370.40 |  |
| MANSSTP5 | BLESSING\_1382 | Manual STP to HLJ & Anstrom345 KV DOUBLE | Blessing 345kV | 6 | $1,033,528.47 |  |
| SBIRGON8 | LULING\_AT1 | BIRDHOUSE to BIRDHOUSE LIN 1 | Luling 138kV | 5 | $1,031,387.26 |  |
| BASE CASE | ZAPSTR | Basecase | ZAPSTR GTC | 16 | $917,595.86 |  |
| DSALKLN5 | 630\_\_B | SALSW TO KLNSW 345 DBLCKT | Harker Heights South - Killeen Switch 138kV | 4 | $854,623.65 | ONCOR\_SE\_87699\_Belton - Killeen 138 kV\_Line (24RPG001) |
| DCAGCO58 | 656T656\_1 | Cagnon-Kendal 345 & Cico-Comfor 138 | Bergheim - Kendall 345kV | 8 | $791,628.73 |  |
| DBAKCED5 | 6056\_\_A | BAKESW-CEDACA 345kV & BAKESW-CEDACA 345kV | Longshore Switch - Consavvy Switch 345kV | 5 | $767,004.02 | Longshore – Consavvy 345 kV Double-Circuit Line Rebuild (23RPG029, MOD 81268) |
| SCOLBAL8 | SANA\_FMR1 | COLEMAN LAKE IVIE TAP to COLEMAN LAKE IVIE TAP LIN 1 | Santa Anna 138kV | 4 | $732,628.54 |  |
| MLOBFOR5 | BRUNI\_69\_1 | manual double Lobo to fowlerton 1&2 345 | Bruni Sub 138kV | 5 | $622,722.49 |  |
| MLOBFOR5 | CATARI\_PILONC1\_1 | manual double Lobo to fowlerton 1&2 345 | Catarina - Piloncillo 138kV | 5 | $610,814.83 |  |
| MHARNED5 | LASPUL\_RAYMND1\_1 | Manual dbl ckt for NEDIN-BONILLA 345kV & RIOH-PRIM138kV | Las Pulgas - Raymondville 2 138kV | 11 | $606,661.80 |  |
| BASE CASE | E\_PASP | Basecase | E\_PASP GTC | 5 | $598,740.68 |  |
| DFOWSMG5 | CATARI\_PILONC1\_1 | FOWLRTON TO SAN MIGUEL DOUBLE CIRCUIT CONTINGENCY | Catarina - Piloncillo 138kV | 4 | $592,713.44 |  |
| SKRWBDG5 | 108\_\_A | Krum West Switch to BIRD DOG SWITCH LIN \_A | Roanoke Switch - Exchange Switch 345kV | 6 | $549,457.98 |  |
| DKG\_NB\_5 | BCVPSA03\_A | TWR(345) JOR-KG97 & JOR-NB99 | Bigvue - Power Systems Arco Cogen 138kV | 4 | $520,487.36 |  |
| SHAYZO25 | 6T227\_1 | HAYS ENERGY to ZORN LIN 1 | Zorn - Hays Energy 345kV | 6 | $518,094.78 |  |
| BASE CASE | NELRIO | Basecase | NELRIO GTC | 15 | $421,878.69 | The Lower Rio Grande Valley (LRGV) System Enhancement Project (21RPG017) will cause there to be no stability constraint for NelsonSharpe\_RioHondoGTC under normal conditions. |
| BASE CASE | I\_KALO | Basecase | I\_KALO GTC | 5 | $378,444.52 |  |
| DRNS\_TB5 | SNGZEN99\_A | Rns-Rtw & Sng-Tb 345kV | Singleton - Zenith 345kV | 3 | $319,081.92 |  |
| MLOFOW15 | BRUNI\_69\_1 | manual Lobo to Fowlerton #1 345 | Bruni Sub 138kV | 4 | $298,030.59 |  |
| DCONLNG5 | 6095\_\_G | CONSW-MGSES\_and\_CONSW-LNGSW\_345kV\_DBLCKT | Alkali Lake - Jim Payne Poi 138kV | 5 | $296,952.45 |  |
| SLARDUS8 | ASHERT\_CATARI1\_1 | Dust Devil to Dust Devil LIN 1 | Asherton - Catarina 138kV | 5 | $270,384.00 |  |
| DBYRRIL5 | 6011\_\_B | RILEY-BOMSW 345&RILEY-BYRSW 345\_DBLCKT | Fisher Road Switch - Riley 345kV | 4 | $261,325.17 |  |
| SCARFRI8 | ATSO\_SONR1\_1 | Carver to Carver LIN 1 | Atlantic Sonora - Sonora 69kV | 11 | $260,031.88 |  |
| SOWLBIG8 | BISON\_STRS1\_1 | Owls to BIG LAKE LIN 1 | Bison - Strauss Rea 69kV | 9 | $251,581.49 |  |
| DWAP\_JN5 | BI\_WAP50\_A | TWR (345) JN-WAP64 & JN-WAP72 | Bellaire - Wa Parish 345kV | 4 | $245,701.69 |  |
| SES2FRI8 | BIGLAK\_PHBL\_T1\_1 | Esmeralda to Esmeralda LIN 1 | Big Lake - Big Lake Phillips Tap 69kV | 5 | $202,494.66 |  |
| XBAL89 | CONCHO\_VRBS1\_1 | BALLINGER TRX FMR1 138/69 | San Angelo Concho - Veribest 69kV | 3 | $200,132.23 | AEP\_TNC\_Ballinger-ConchoRebuild (55421) |
| SCOBBOM5 | 35020\_\_B | COBB SWITCHING STATION to BOWMAN SWITCH LIN \_A | Garvey Road Switch - Graham Ses 345kV | 5 | $189,367.65 |  |
| SJCKBDG5 | 107\_\_B | JACKSBORO SWITCHING to BIRD DOG SWITCH LIN \_B | Hicks Switch - Exchange Switch 345kV | 3 | $185,279.10 |  |
| DVICVI89 | COLETO\_VICTOR2\_1 | VICTORIA - FANNIN 69 & COLETO - VICTORIA 1 138 | Coleto Creek - Victoria 138kV | 5 | $179,677.29 |  |
| SJCKBDG5 | 108\_\_A | JACKSBORO SWITCHING to BIRD DOG SWITCH LIN \_B | Roanoke Switch - Exchange Switch 345kV | 5 | $162,325.31 |  |
| DELMSTP5 | BLESSING\_1382 | STP-Elmcreek&WAP 345kV | Blessing 345kV | 4 | $154,113.46 |  |
| MHARNED5 | SCARBI\_STILLM1\_1 | Manual dbl ckt for NEDIN-BONILLA 345kV & RIOH-PRIM138kV | South Carbide - Stillman 138kV | 4 | $147,374.39 |  |
| DDILCOT8 | DILLEYSW\_XF1L | Dilleysw-Sanmgsw&Cotulas 138kV | Dilley Switch Aep 69kV | 6 | $132,891.43 |  |
| STANPAW5 | LON\_HI\_WHITE\_1\_1 | TANGO to PAWNEE SWITCHING STATION LIN 1 | Lon Hill - Whitepoint 345kV | 4 | $131,057.43 |  |
| SN\_SLON5 | KINGSV\_KLEBER1\_1 | LON HILL to NELSON SHARPE LIN 1 | Kingsville - Kleberg Aep 138kV | 5 | $124,694.19 |  |
| SBRAPIN8 | HAMILT\_MAVERI1\_1 | BRACKETTVILLE to BRACKETTVILLE LIN 1 | Hamilton Road - Maverick 138kV | 3 | $118,813.80 | Ganso to Hamilton Road: Rebuild 138 kV line (22RPG044, MOD 55626) |
| SKLELOY8 | LOYOLA\_69\_1 | KLEBERG AEP to KLEBERG AEP LIN 1 | Loyola Sub 138kV | 5 | $109,910.11 | STEC\_76816\_upgradeLoyolaAuto (76816) |
| DJACALV8 | 2115\_\_B | JACKCNTY TO BOW 138 AND WISECNTY TO ALVRD 138 DBLCKT | Tower One - Bennett Road Switch 69kV | 6 | $103,032.00 |  |
| SMCEESK8 | MKLT\_TRNT1\_1 | MCELMURRAY to ESKOTA SWITCH LIN 1 | Merkel Tap - Trent 69kV | 7 | $91,102.59 |  |
| DRAZSA89 | UVALDE\_W\_BATE1\_1 | Double Circuit RAZORBAC to DRYFRIO 138 kV & UVALDE to SABINAL 69 kV | Uvalde Aep - West Batesville 138kV | 9 | $85,926.02 |  |
| SCROSAN8 | POT\_PEAR\_1 | CROSS to CROSS LIN 1 | Poteet Sub - Pearsall Switching Station 69kV | 3 | $81,752.76 | STEC\_78478\_OakstoPoteettoPearsallUpgrade (78478) |
| DFPPHOL5 | 196T171\_1 | Fppyd2-Lytton\_S & Holman 345kV | Settlers - Sim Gideon 138kV | 3 | $77,537.05 |  |
| SSPUSLT8 | GIRA\_T\_SPUR1\_1 | SALT CREEK REACTOR to SALT CREEK REACTOR LIN 1 | Girard Tap - Spur 69kV | 13 | $72,918.07 |  |
| SSWCLNC5 | 6025\_\_A | Long Creek to Long Creek LIN \_A | Long Creek - Abilene Mulberry Creek 345kV | 3 | $72,701.85 | Oncor\_FW\_66569\_Mulberry Creek 345 kV Switch (66569) |
| SPEBTRU8 | 940\_\_A | GAMMA to GAMMA LIN \_D | Ennis West Switch - Templeton 138kV | 14 | $72,100.71 | Oncor\_ME\_71156\_Ennis West Switch-Waxahachie Switch 138 kV Line (71156) |
| SN\_SAJO5 | LASPUL\_RAYMND1\_1 | AJO to AJO LIN 1 | Las Pulgas - Raymondville 2 138kV | 8 | $71,401.17 |  |
| BASE CASE | VALEXP | Basecase | VALEXP GTC | 5 | $67,493.27 | The Lower Rio Grande Valley (LRGV) System Enhancement Project (21RPG017) will improve but not eliminate the need for this GTC. |
| SENWSHK8 | 941\_\_C | ENNIS WEST SWITCH to ENNIS WEST SWITCH LIN \_B | Ennis West Switch - Ennis South 138kV | 6 | $61,872.87 |  |
| BASE CASE | HMLTN | Basecase | HMLTN GTC | 15 | $56,315.82 |  |
| DBIGKEN5 | HAMILT\_MAXWEL1\_1 | Bighil-Kendal 345kV | Hamilton Road - Maxwell 138kV | 5 | $53,731.01 | Hamilton Road to Maxwell: Rebuild 138 kV Line (61396) |
| DCAGCO58 | 583T583\_1 | Cagnon-Kendal 345 & Cico-Comfor 138 | Mason Creek - Bandera 138kV | 3 | $52,307.77 |  |
| DBIGKEN5 | FORTMA\_YELWJC1\_1 | Bighil-Kendal 345kV | Yellow Jacket - Fort Mason 138kV | 19 | $51,259.42 |  |
| SMADSAP8 | MADDUX\_SAPOWE2\_1 | MADDUX to SAN ANGELO POWER STATION LIN 1 | Maddux - San Angelo Power Station 138kV | 8 | $49,324.17 |  |
| SSWCLNC5 | 6025\_\_A | Long Creek to Long Creek LIN \_A | Long Creek - Abilene Mulberry Creek 345kV | 3 | $41,148.94 | Oncor\_FW\_66569\_Mulberry Creek 345 kV Switch (66569) |
| SSPUSLT8 | ASPM\_SWEN1\_1 | SALT CREEK REACTOR to SALT CREEK REACTOR LIN 1 | Aspermont Aep - Swenson Station 69kV | 8 | $14,735.75 |  |
| SBLSJAC8 | 560\_\_B | JACK COUNTY to RENO LIN 1 | Bridgeport Tap (Oncor) - Bridgeport (Oncor) 138kV | 4 | $9,839.86 |  |
| XFTS89 | ALPINE\_BRONCO1\_1 | FORT STOCKTON PLANT TRX 69T1 138/69 | Alpine - Bronco 69kV | 4 | $4,062.08 |  |
| SSTAWIC8 | 138\_IH2\_COT\_1 | STAGHORN TNP to WICKETT TNP LIN 1 | Ih 20 Tnp - Collie Field Tap Tnp 138kV | 6 | $2,553.61 |  |
| SSTAPYO8 | 138\_IH2\_COT\_1 | PYOTE TNP to PYOTE TNP LIN 1 | Ih 20 Tnp - Collie Field Tap Tnp 138kV | 4 | $684.43 |  |
| SSOLALM8 | COCS\_FTST1\_1 | Hayter Tap to Hayter Tap LIN 1 | Conoco Comp Station - Fort Stockton Plant 69kV | 3 | $379.72 |  |

## Generic Transmission Constraint Congestion

|  |  |
| --- | --- |
| GTC | Days Congestion |
| Panhandle GTC | 25 |
| West Texas Export | 23 |
| Zapata Starr | 18 |
| Hamilton | 16 |
| North Edinburg to Lobo | 16 |
| Nelson Sharpe to Rio Hondo | 15 |
| South Texas Export (E\_PATA) | 15 |
| North to Houston | 11 |
| South Texas Import (I\_KALO) | 10 |
| South Texas Export (E\_PASP) | 8 |
| Valley Export | 5 |
| Wharton County | 2 |

There was no activity on the remaining GTCs during the month.

Note: This is how many times a constraint has been activated to avoid exceeding a GTC limit, it does not imply an exceedance of the GTC occurred or that the GTC was binding.

## Manual Overrides

None

## Congestion Costs for Calendar Year 2024

The following table represents the top twenty active constraints for the calendar year based on the estimated congestion rent attributed to the congestion. ERCOT updates this list on a monthly basis.

|  |  |  |  |
| --- | --- | --- | --- |
| **Contingency** | **Overloaded Element** | **# of 5-min SCED** | **Estimated Congestion Rent (2024)** |
| Basecase | WESTEX GTC | 23737 | $121,142,739.64 |
| MGSES TO CCRSW 345 AND BTRCK TO MGSES 345 DBLCKT | Tonkawa Switch - Morgan Creek Ses 345kV | 7456 | $87,576,954.87 |
| MGSES-LNGSW\_and\_MGSES-CONSW\_345\_DBLCKT | Morgan Creek Ses - Navigation Sub 138kV | 10586 | $79,638,965.49 |
| WLFSW-MOSSW 345&WLFSW-ODEHV 345\_\_\_\_TRPLCKT-1of3 | Odessa Ehv Switch - Yarbrough Sub 138kV | 19457 | $77,794,892.32 |
| SALSW - HUTTO 345KV | Bell County - Salado Switch 138kV | 9359 | $47,930,165.63 |
| BAKERSFIELD SWITCHYARD to CEDAR CANYON LIN 1 | Hargrove - Twin Buttes 138kV | 6610 | $40,894,479.19 |
| Basecase | PNHNDL GTC | 28146 | $39,897,487.88 |
| Basecase | NE\_LOB GTC | 26081 | $33,854,450.11 |
| Manual dbl ckt for NEDIN-BONILLA 345kV & RIOH-PRIM138kV | Burns Sub - Rio Hondo 138kV | 14719 | $32,004,313.71 |
| CONSW-MGSES\_and\_CONSW-LNGSW\_345kV\_DBLCKT | Morgan Creek Ses - Navigation Sub 138kV | 9919 | $29,958,921.00 |
| BLACKWATER DRAW SWITCH to DOUBLE MOUNTAIN SWITCH LIN 1 | Northwest Substation - Mcdonald Substation 115kV | 4834 | $26,523,546.74 |
| Bighil-Kendal 345kV | Yellow Jacket - Fort Mason 138kV | 4295 | $23,829,562.99 |
| SALSW TO KNBSW 345 AND TMPSW TO BELCNTY 138 DBLCKT | Temple Switch - Temple Southeast 138kV | 1765 | $23,816,058.37 |
| CONSW-MGSES\_and\_CONSW-LNGSW\_345kV\_DBLCKT | Polecat Creek Switch - Wrage Ranch Pod 138kV | 2267 | $22,647,310.76 |
| NAAMAN to NAAMAN LIN 1 | College - Jupiter 138kV | 2485 | $19,241,454.25 |
| BLACKWATER DRAW SWITCH to DOUBLE MOUNTAIN SWITCH LIN 1 | Mackenzie Substation - Northeast Substation 115kV | 6471 | $17,552,825.12 |
| wett\_long\_draw to Volta LIN 1 | Koch Tap - Vealmoor 138kV | 6178 | $17,148,913.61 |
| CONSW-MGSES\_and\_CONSW-LNGSW\_345kV\_DBLCKT | Alkali Lake - Jim Payne Poi 138kV | 6313 | $17,080,681.63 |
| CONSW-MGSES\_and\_CONSW-LNGSW\_345kV\_DBLCKT | Falcon Seaboard - Morgan Creek Ses 345kV | 9151 | $16,904,638.42 |
| AUSTROP to DAFFIN GIN LIN 1 | Decker Power Plant - Aen Dunlap 138kV | 1316 | $16,416,974.49 |

# System Events

## ERCOT Peak Load

The unofficial ERCOT peak load for November 2024 was 60,170 MW and occurred on 11/04/2024, during hour ending 14:00. Instantaneous peak was 61,496 MW. Actual peak for the same month last year was 56,535 MW.

## Load Shed Events

None.

## Stability Events

None.

## Notable PMU Events

ERCOT analyzes PMU data for any significant system disturbances that do not fall into the Frequency Events category reported in section 2.1. The results are summarized in this section once the analysis has been completed.

There were no PMU events outside of those reported in section 2.1.

## DC Tie Curtailment

There was 1 event of DC curtailment on 11/26/2024 00:37.

|  |  |
| --- | --- |
| **Date and Time** | **Message** |
| Nov 26, 2024, 00:37 CST | The DC\_L (Laredo VFT) DC Tie is being curtailed, a DC Tie Curtailment Notice (DCTCN) is active due to a forced outage. |

## TRE/DOE Reportable Events

None.

## New/Updated Constraint Management Plans

* New CMP: MP\_2024\_12 REV0, South Texas Import (I\_PASP and I\_KALO)

## New/Modified/Removed RAS

None.

## New Procedures/Forms/Operating Bulletins

|  |  |  |
| --- | --- | --- |
| **Date** | **Subject** | **Bulletin No.** |
| 11/27/2024 | Transmission and Security Desk V1 Rev 116 | 1163 |
| 11/27/2024 | Shift Supervisor Desk V1 Rev 98 | 1162 |
| 11/27/2024 | Scripts V1 Rev 61 | 1161 |
| 11/27/2024 | Resource Desk V1 Rev 82 | 1160 |
| 11/27/2024 | Real Time Desk V1 Rev 100 | 1159 |

# Emergency Conditions

## OCNs

|  |  |
| --- | --- |
| **Date and Time** | **Message** |
| Nov 07, 2024, 12:01 CST | At 12:00, ERCOT issued an AAN due to a possible future Emergency Condition of reserve capacity deficiency for Monday, November 11, 2024, HE 1800 and HE1900. ERCOT may Delay/Withdraw Approved or Accepted Resource Outages. ERCOT may seek up to 1568 MW from an OAE and then make the OSA on Friday, November 8, 2024, at 12:00. ERCOT will execute an OAE if deemed necessary. Please notify ERCOT by email aan@ercot.com if a specific resource cannot be considered in the OAE. |
| Nov 08, 2024, 13:30 CST | At 13:30, ERCOT issued an AAN due to a possible future Emergency Condition of reserve capacity deficiency for Wednesday, November 13, 2024, HE 1800 and HE1900. ERCOT may Delay/Withdraw Approved or Accepted Resource Outages. ERCOT may seek up to 2251 MW from an OAE and then make the OSA on Saturday, November 9, 2024, at 13:30. ERCOT will execute an OAE if deemed necessary. Please notify ERCOT by email aan@ercot.com if a specific resource cannot be considered in the OAE. |
| Nov 20, 2024, 11:26 CST | ERCOT is issuing an OCN for taking manual action on the PNHNDL IROL due to a topology change. |

## Advisories

|  |  |
| --- | --- |
| **Date and Time** | **Message** |
| Nov 12, 2024, 7:33 CST | Advisory issued due to ERCOTs Voltage Security Assessment Tool is currently unavailable. |

## Watches

None.

## Emergency Notices

None.

# Application Performance

## TSAT/VSAT Performance Issues

None

## Communication Issues

None.

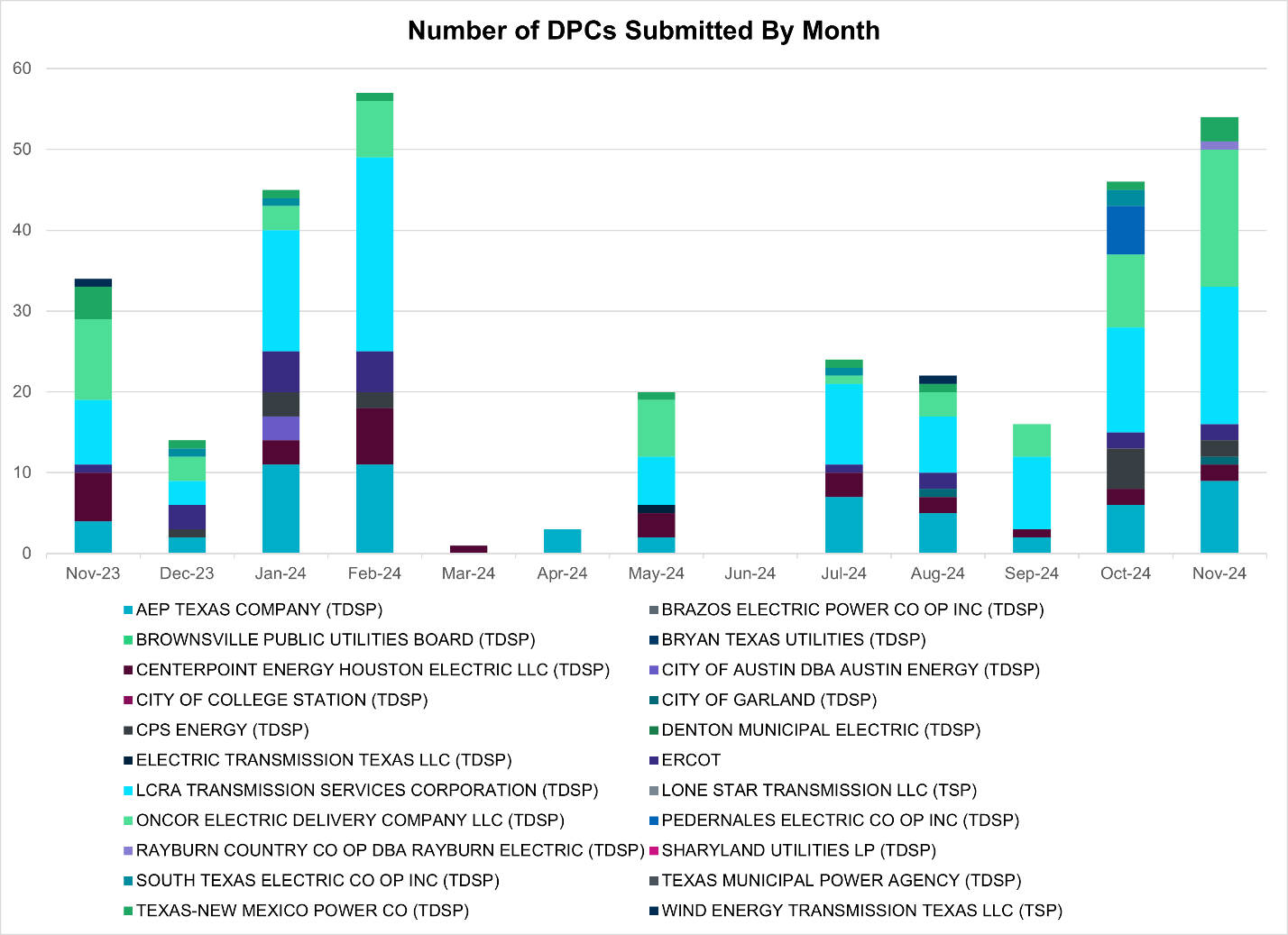
## Market System Issues

None.

# Model Updates

The Downstream Production Change (DPC) process allows ERCOT to make changes in the one-line Network Operations Model without loading a completely new model. The purpose of this process is to allow for reliable grid operations as system conditions change between designated Network Operations Model database loads. The DPC process is limited in scope to just those items listed below, with equipment ratings updates being the most common. ERCOT has seen a rise in the use of the DPC process to make on-line updates to the Network Operations Model in recent years, instead of through the standard Network Operations Model Change Request process.

* Static Line ratings (Interim Update)
* Dynamic Line ratings (non-Interim Update)
* Autotransformer ratings (non-Interim Update)
* Breaker and Switch Normal status (Interim Update)
* Contingency Definitions (Interim Update)
* RAP and RAS changes or additions (Interim Update)
* Net Dependable and Reactive Capability (NDCRC) values (Interim Update)
* Impedance Updates (non-Interim)



|  |  |
| --- | --- |
| **Transmission Operator** | **Number of DPCs** |
| AEP TEXAS COMPANY (TDSP) | 9 |
| BRAZOS ELECTRIC POWER CO OP INC (TDSP) | 0 |
| BROWNSVILLE PUBLIC UTILITIES BOARD (TDSP) | 0 |
| BRYAN TEXAS UTILITIES (TDSP) | 0 |
| CENTERPOINT ENERGY HOUSTON ELECTRIC LLC (TDSP) | 2 |
| CITY OF AUSTIN DBA AUSTIN ENERGY (TDSP) | 0 |
| CITY OF COLLEGE STATION (TDSP) | 0 |
| CITY OF GARLAND (TDSP) | 1 |
| CPS ENERGY (TDSP) | 2 |
| DENTON MUNICIPAL ELECTRIC (TDSP) | 0 |
| ELECTRIC TRANSMISSION TEXAS LLC (TDSP) | 0 |
| ERCOT | 2 |
| LCRA TRANSMISSION SERVICES CORPORATION (TDSP) | 17 |
| LONE STAR TRANSMISSION LLC (TSP) | 0 |
| ONCOR ELECTRIC DELIVERY COMPANY LLC (TDSP) | 17 |
| PEDERNALES ELECTRIC CO OP INC (TDSP) | 0 |
| RAYBURN COUNTRY CO OP DBA RAYBURN ELECTRIC (TDSP) | 1 |
| SHARYLAND UTILITIES LP (TDSP) | 0 |
| SOUTH TEXAS ELECTRIC CO OP INC (TDSP) | 0 |
| TEXAS MUNICIPAL POWER AGENCY (TDSP) | 0 |
| TEXAS-NEW MEXICO POWER CO (TDSP) | 3 |
| WIND ENERGY TRANSMISSION TEXAS LLC (TSP) | 0 |

# Appendix A: Real-Time Constraints

The following is a complete list of constraints activated in SCED. Full contingency descriptions can be found in the Standard Contingencies List located on the MIS secure site at Grid 🡪 Generation 🡪 Reliability Unit Commitment.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year | Month | Contingency Name | Overloaded Element | From Station | To Station | Count of Days |
| 2024 | November | BASE CASE | PNHNDL | n/a | n/a | 25 |
| 2024 | November | DWLFMOS5 | 6520\_\_E | ODEHV | YARBR | 25 |
| 2024 | November | BASE CASE | WESTEX | n/a | n/a | 23 |
| 2024 | November | DBIGKEN5 | FORTMA\_YELWJC1\_1 | YELWJCKT | FORTMA | 21 |
| 2024 | November | DBIGKEN5 | FORTMA\_YELWJC1\_1 | FORTMA | YELWJCKT | 21 |
| 2024 | November | SBWDDBM5 | LPLMK\_LPLNE\_1 | LPLMK | LPLNE | 21 |
| 2024 | November | BASE CASE | ZAPSTR | n/a | n/a | 18 |
| 2024 | November | SSPUSLT8 | GIRA\_T\_SPUR1\_1 | GIRA\_TAP | SPUR | 16 |
| 2024 | November | BASE CASE | NE\_LOB | n/a | n/a | 16 |
| 2024 | November | BASE CASE | HMLTN | n/a | n/a | 16 |
| 2024 | November | SSPUSLT8 | GIRA\_T\_SPUR1\_1 | SPUR | GIRA\_TAP | 16 |
| 2024 | November | SPEBTRU8 | 940\_\_A | ENWSW | TMPTN | 15 |
| 2024 | November | BASE CASE | NELRIO | n/a | n/a | 15 |
| 2024 | November | BASE CASE | E\_PATA | n/a | n/a | 15 |
| 2024 | November | SPEBTRU8 | 940\_\_A | TMPTN | ENWSW | 15 |
| 2024 | November | SCARFRI8 | ATSO\_SONR1\_1 | SONR | ATSO | 14 |
| 2024 | November | SCOBBOM5 | 35020\_\_B | GRVSW | GRSES | 13 |
| 2024 | November | SBOMJC25 | 35020\_\_B | GRVSW | GRSES | 13 |
| 2024 | November | DCONLNG5 | 14040\_\_I | PCTSW | WRPOD | 13 |
| 2024 | November | SW\_GODE5 | 15045\_\_A | EXPSW | GRADY | 13 |
| 2024 | November | MHARNED5 | LASPUL\_RAYMND1\_1 | LASPULGA | RAYMND2 | 12 |
| 2024 | November | DRAZSA89 | UVALDE\_W\_BATE1\_1 | UVALDE | W\_BATESV | 11 |
| 2024 | November | DBYRBOW5 | 6011\_\_B | RILEY | FSHSW | 11 |
| 2024 | November | BASE CASE | N\_TO\_H | n/a | n/a | 11 |
| 2024 | November | MHARNED5 | HAINE\_\_LA\_PAL1\_1 | LA\_PALMA | HAINE\_DR | 11 |
| 2024 | November | BASE CASE | I\_KALO | n/a | n/a | 10 |
| 2024 | November | DCAGCO58 | 656T656\_1 | KENDAL | BERGHE | 10 |
| 2024 | November | SN\_SAJO5 | LASPUL\_RAYMND1\_1 | LASPULGA | RAYMND2 | 10 |
| 2024 | November | SSPUSLT8 | ASPM\_SWEN1\_1 | SWEN | ASPM | 10 |
| 2024 | November | DCONLNG5 | 6046\_\_A | MGSES | FLCNS | 10 |
| 2024 | November | SSPUSLT8 | ASPM\_SWEN1\_1 | ASPM | SWEN | 10 |
| 2024 | November | DCAGCI58 | 656T656\_1 | KENDAL | BERGHE | 10 |
| 2024 | November | SW\_LVLT5 | 15060\_\_B | VEALMOOR | KOCHTAP | 10 |
| 2024 | November | SMADSAP8 | MADDUX\_SAPOWE2\_1 | MADDUX | SAPOWER | 9 |
| 2024 | November | SSTAWIC8 | 138\_IH2\_COT\_1 | IH20 | TNCOLIET | 9 |
| 2024 | November | DSALKLN5 | 630\_\_B | KLNSW | HHSTH | 9 |
| 2024 | November | MANSSTP5 | BLESSING\_1382 | BLESSING | BLESSING | 9 |
| 2024 | November | SOWLBIG8 | BISON\_STRS1\_1 | BISON | STRS | 9 |
| 2024 | November | SOWLBIG8 | BISON\_STRS1\_1 | STRS | BISON | 9 |
| 2024 | November | DJACALV8 | 2115\_\_B | TOWER | BNTSW | 9 |
| 2024 | November | SHAYZO25 | 6T227\_1 | HAYSEN | ZORN | 8 |
| 2024 | November | MLOBFOR5 | LARDVN\_LASCRU1\_1 | LARDVNTH | LASCRUCE | 8 |
| 2024 | November | DBAKCED5 | 6056\_\_A | LNGSW | CONSW | 8 |
| 2024 | November | DDILCOT8 | DILLEYSW\_XF1L | DILLEYSW | DILLEYSW | 8 |
| 2024 | November | SES2FRI8 | BIGLAK\_PHBL\_T1\_1 | PHBL\_TAP | BIGLAKE | 8 |
| 2024 | November | BASE CASE | E\_PASP | n/a | n/a | 8 |
| 2024 | November | STANPAW5 | CALLIC\_LON\_HI1\_1 | LON\_HILL | CALLICOA | 8 |
| 2024 | November | SES2FRI8 | BIGLAK\_PHBL\_T1\_1 | BIGLAKE | PHBL\_TAP | 8 |
| 2024 | November | SJCKBDG5 | 108\_\_A | EXCSW | RNKSW | 7 |
| 2024 | November | SKRWBDG5 | 108\_\_A | EXCSW | RNKSW | 7 |
| 2024 | November | SCOLBAL8 | SANA\_FMR1 | SANA | SANA | 7 |
| 2024 | November | DCONLNG5 | 6095\_\_G | JPPOI | ALKLK | 7 |
| 2024 | November | SMCEESK8 | MKLT\_TRNT1\_1 | MKLT | TRNT | 7 |
| 2024 | November | SENWSHK8 | 941\_\_C | ENSSO | ENWSW | 7 |
| 2024 | November | SMCEESK8 | MKLT\_TRNT1\_1 | TRNT | MKLT | 7 |
| 2024 | November | DBYRRIL5 | 6011\_\_B | RILEY | FSHSW | 7 |
| 2024 | November | SENWSHK8 | 941\_\_C | ENWSW | ENSSO | 7 |
| 2024 | November | SJCKBDG5 | 107\_\_B | HCKSW | EXCSW | 6 |
| 2024 | November | DLYTCIS5 | 196T171\_1 | GIDEON | SETTLE | 6 |
| 2024 | November | SKRWBDG5 | 107\_\_B | HCKSW | EXCSW | 6 |
| 2024 | November | SESMFRI8 | BIGLAK\_PHBL\_T1\_1 | BIGLAKE | PHBL\_TAP | 6 |
| 2024 | November | DHOLCIS5 | 196T171\_1 | GIDEON | SETTLE | 6 |
| 2024 | November | SKELLA\_8 | LASPUL\_RAYMND1\_1 | LASPULGA | RAYMND2 | 6 |
| 2024 | November | DCAGCI58 | 255T279\_1 | PIPECR | MEDILA | 6 |
| 2024 | November | MLOBFOR5 | BRUNI\_69\_1 | BRUNI | BRUNI | 6 |
| 2024 | November | SKLELOY8 | LOYOLA\_69\_1 | LOYOLA | LOYOLA | 6 |
| 2024 | November | DVICVI89 | COLETO\_VICTOR2\_1 | COLETO | VICTORIA | 6 |
| 2024 | November | DCAGCO58 | 583T583\_1 | BANDER | MASOCR | 5 |
| 2024 | November | DBIGKEN5 | HAMILT\_MAXWEL1\_1 | MAXWELL | HAMILTON | 5 |
| 2024 | November | MLOBFOR5 | CATARI\_PILONC1\_1 | CATARINA | PILONCIL | 5 |
| 2024 | November | MLOBFOR5 | CATARI\_PILONC1\_1 | PILONCIL | CATARINA | 5 |
| 2024 | November | XBAL89 | CONCHO\_VRBS1\_1 | CONCHO | VRBS | 5 |
| 2024 | November | SBRAPIN8 | HAMILT\_MAVERI1\_1 | HAMILTON | MAVERICK | 5 |
| 2024 | November | SBIRGON8 | LULING\_AT1 | LULING | LULING | 5 |
| 2024 | November | DCONLNG5 | 6045\_\_A | FLCNS | MDLNE | 5 |
| 2024 | November | SN\_SLON5 | KINGSV\_KLEBER1\_1 | KLEBERG | KINGSVIL | 5 |
| 2024 | November | BASE CASE | VALEXP | n/a | n/a | 5 |
| 2024 | November | SBRIJAC8 | 6085\_\_A | LONESTR | ALVRD | 5 |
| 2024 | November | SOWLBIG8 | BIGLAK\_PHBL\_T1\_1 | PHBL\_TAP | BIGLAKE | 5 |
| 2024 | November | DRNS\_TB5 | SNGZEN99\_A | SNG | ZEN | 5 |
| 2024 | November | SSTAPYO8 | 138\_IH2\_COT\_1 | IH20 | TNCOLIET | 5 |
| 2024 | November | XFTS89 | ALPINE\_BRONCO1\_1 | BRONCO | ALPINE | 5 |
| 2024 | November | STANPAW5 | MELONC\_SEADRF1\_1 | MELONCRE | SEADRFTC | 5 |
| 2024 | November | DFOWSMG5 | CATARI\_PILONC1\_1 | PILONCIL | CATARINA | 5 |
| 2024 | November | XFTS89 | ALPINE\_BRONCO1\_1 | ALPINE | BRONCO | 5 |
| 2024 | November | SOWLBIG8 | BIGLAK\_PHBL\_T1\_1 | BIGLAKE | PHBL\_TAP | 5 |
| 2024 | November | MLOFOW15 | BRUNI\_69\_1 | BRUNI | BRUNI | 5 |
| 2024 | November | SLARDUS8 | ASHERT\_CATARI1\_1 | ASHERTON | CATARINA | 5 |
| 2024 | November | MANGSTP5 | BLESSING\_1382 | BLESSING | BLESSING | 5 |
| 2024 | November | DMTSCOS5 | 6437\_\_F | SCRCV | KNAPP | 5 |
| 2024 | November | DELMSTP5 | BLESSING\_1382 | BLESSING | BLESSING | 5 |
| 2024 | November | XBGL88 | BISON\_STRS1\_1 | BISON | STRS | 5 |
| 2024 | November | DCONLNG5 | 15045\_\_A | EXPSW | GRADY | 4 |
| 2024 | November | MHARNED5 | SCARBI\_STILLM1\_1 | SCARBIDE | STILLMAN | 4 |
| 2024 | November | SBLSJAC8 | 560\_\_B | BRGPR | BTPTM | 4 |
| 2024 | November | DWAP\_JN5 | BI\_WAP50\_A | WAP | BI | 4 |
| 2024 | November | SSOLALM8 | COCS\_FTST1\_1 | FTST | COCS | 4 |
| 2024 | November | SBGLTWI8 | LAKENA\_SAMATH1\_1 | LAKENASW | SAMATHIS | 4 |
| 2024 | November | DD1RAZ\_8 | UVALDE\_W\_BATE1\_1 | UVALDE | W\_BATESV | 4 |
| 2024 | November | SSTAMDL8 | 15045\_\_A | EXPSW | GRADY | 4 |
| 2024 | November | STANPAW5 | LON\_HI\_WHITE\_1\_1 | LON\_HILL | WHITE\_PT | 4 |
| 2024 | November | STANPAW5 | NCARBI\_SEADRF1\_1 | SEADRFTC | NCARBIDE | 4 |
| 2024 | November | SSPUASP8 | ASPM\_SWEN1\_1 | SWEN | ASPM | 4 |
| 2024 | November | UCOLCOL1 | BLESSING\_1382 | BLESSING | BLESSING | 4 |
| 2024 | November | DKG\_NB\_5 | BCVPSA03\_A | PSA | BCV | 4 |
| 2024 | November | SSOLALM8 | COCS\_FTST1\_1 | COCS | FTST | 4 |
| 2024 | November | DDMTMHO5 | FARMLAND\_LONGD\_1 | FARMLAND | W\_LD\_345 | 4 |
| 2024 | November | DKENCA58 | 255T279\_1 | PIPECR | MEDILA | 4 |
| 2024 | November | DMGSCON5 | 6471\_\_C | MGSES | NAVIG | 3 |
| 2024 | November | SMOUMIL8 | 231T323\_1 | PALEPE | MARSFO | 3 |
| 2024 | November | SCROSAN8 | POT\_PEAR\_1 | PEARSALL | POTEETS | 3 |
| 2024 | November | SBRIJAC8 | 561\_\_C | ALVRD | CHITP | 3 |
| 2024 | November | DBAKCED5 | STCO\_STER1\_1 | STER | STCO | 3 |
| 2024 | November | SVICCO28 | COLETO\_VICTOR2\_1 | COLETO | VICTORIA | 3 |
| 2024 | November | DNVAMHO5 | FARMLAND\_LONGD\_1 | FARMLAND | W\_LD\_345 | 3 |
| 2024 | November | DNOECED5 | 6056\_\_A | LNGSW | CONSW | 3 |
| 2024 | November | MLOBFOR5 | ASHERT\_CATARI1\_1 | CATARINA | ASHERTON | 3 |
| 2024 | November | DW\_CNVA5 | FARMLAND\_LONGD\_1 | FARMLAND | W\_LD\_345 | 3 |
| 2024 | November | STANPAW5 | HAISLE\_MEDIOC1\_1 | HAISLEY | MEDIOCRK | 3 |
| 2024 | November | DFPPHOL5 | 196T171\_1 | GIDEON | SETTLE | 3 |
| 2024 | November | SSWCLNC5 | 6025\_\_A | LNCRK | MULBERRY | 3 |
| 2024 | November | MLOBFOR5 | ASHERT\_CATARI1\_1 | ASHERTON | CATARINA | 3 |
| 2024 | November | SSWCLNC5 | 6025\_\_A | MULBERRY | LNCRK | 3 |
| 2024 | November | DBWN\_AM5 | CONCHO\_VRBS1\_1 | CONCHO | VRBS | 3 |
| 2024 | November | DNAVOUT5 | 226\_\_A | LEG | JEWET | 2 |
| 2024 | November | XEIN58 | 6471\_\_C | MGSES | NAVIG | 2 |
| 2024 | November | DMCEBUT8 | ESKSW\_TRNT1\_1 | ESKSW | TRNT | 2 |
| 2024 | November | SRAYRI38 | HAINE\_\_LA\_PAL1\_1 | LA\_PALMA | HAINE\_DR | 2 |
| 2024 | November | DNOECED5 | HARGRO\_TWINBU1\_1 | TWINBU | HARGROVE | 2 |
| 2024 | November | DMCEBUT8 | MKLT\_TRNT1\_1 | TRNT | MKLT | 2 |
| 2024 | November | SJACWIS8 | PAT\_BOWI\_1 | BOW | PATTSNST | 2 |
| 2024 | November | SSANPIT8 | PITSBU\_AT1 | PITSBU | PITSBU | 2 |
| 2024 | November | MDTCRTH5 | WNTSP\_FMR2 | WNTSP | WNTSP | 2 |
| 2024 | November | DLEGOUT5 | 40\_\_A | BBSES | JEWET | 2 |
| 2024 | November | DKENCA58 | 656T656\_1 | KENDAL | BERGHE | 2 |
| 2024 | November | MLOFOW15 | ASHERT\_CATARI1\_1 | CATARINA | ASHERTON | 2 |
| 2024 | November | SMV\_RI28 | CP\_MVCNT\_1 | MV\_CNTRA | COFFPORT | 2 |
| 2024 | November | MLOFOW15 | DEL\_MA\_LAREDO1\_1 | LAREDO | DEL\_MAR | 2 |
| 2024 | November | SSPUSLT8 | DKEC\_JATN1\_1 | DKEC | JATN | 2 |
| 2024 | November | DFOWSMG5 | LARDVN\_LASCRU1\_1 | LARDVNTH | LASCRUCE | 2 |
| 2024 | November | SLHLLCS5 | LCSES\_MR1H | LCSES | LCSES | 2 |
| 2024 | November | DBIGSCH5 | PALOUS\_WOLFCA1\_1 | PALOUSE | WOLFCAMP | 2 |
| 2024 | November | XBGL88 | PHBL\_T\_STRS1\_1 | PHBL\_TAP | STRS | 2 |
| 2024 | November | SRA2D18 | UVALDE\_W\_BATE1\_1 | UVALDE | W\_BATESV | 2 |
| 2024 | November | SRRDLCS5 | 235\_\_B | BALSW | JEWET | 2 |
| 2024 | November | SKLNSAL5 | 271\_\_A | KLNSW | SALSW | 2 |
| 2024 | November | DNAVOUT5 | 50\_\_A | JEWET | BBSES | 2 |
| 2024 | November | SCMNCPS5 | 651\_\_B | CMNSW | CMNTP | 2 |
| 2024 | November | SSPUSLT8 | DKEC\_JATN1\_1 | JATN | DKEC | 2 |
| 2024 | November | SRIOKEL8 | LASPUL\_RAYMND1\_1 | LASPULGA | RAYMND2 | 2 |
| 2024 | November | SPAWCAL5 | MAGRUD\_VICTOR2\_1 | VICTORIA | MAGRUDER | 2 |
| 2024 | November | STANPAW5 | MELONC\_RINCON1\_1 | RINCON | MELONCRE | 2 |
| 2024 | November | XBGL88 | PHBL\_T\_STRS1\_1 | STRS | PHBL\_TAP | 2 |
| 2024 | November | Unknown | Unknown | GNTSW | SPRTP | 2 |
| 2024 | November | BASE CASE | WHARTN | n/a | n/a | 2 |
| 2024 | November | DLC\_PG\_8 | 589T589\_1 | EL\_CAMPO | RICEBI | 2 |
| 2024 | November | DDILCOT8 | ASHERT\_CATARI1\_1 | ASHERTON | CATARINA | 2 |
| 2024 | November | MLOFOW15 | LARDVN\_LASCRU1\_1 | LARDVNTH | LASCRUCE | 2 |
| 2024 | November | DMCEBUT8 | MKLT\_TRNT1\_1 | MKLT | TRNT | 2 |
| 2024 | November | SN\_SLON5 | N\_SHARPE\_XF1 | N\_SHARPE | N\_SHARPE | 2 |
| 2024 | November | Unknown | Unknown | LOBO | LOBO | 2 |
| 2024 | November | DKLNRGP5 | 315\_\_A | TMPCR | TMPSW | 2 |
| 2024 | November | MEXCHCK5 | 595\_\_A | BNTSW | DCATR | 2 |
| 2024 | November | SBLSJAC8 | 595\_\_A | BNTSW | DCATR | 2 |
| 2024 | November | SBAKCED5 | 6056\_\_A | LNGSW | CONSW | 2 |
| 2024 | November | DFERWIR8 | CORONA\_AT4 | CORONA | CORONA | 2 |
| 2024 | November | SNEWGLF8 | LAN\_CT\_PAVLOV1\_1 | LAN\_CTY | PAVLOV | 2 |
| 2024 | November | SWCPYT8 | LAN\_CT\_PAVLOV1\_1 | LAN\_CTY | PAVLOV | 2 |
| 2024 | November | SFOWLOB5 | LARDVN\_LASCRU1\_1 | LARDVNTH | LASCRUCE | 2 |
| 2024 | November | SMCEESK8 | MERK\_MKLT1\_1 | MKLT | MERK | 2 |
| 2024 | November | SWORBRD8 | 138\_WIC\_STG\_1 | WICKETT | STAGHORN | 2 |
| 2024 | November | DRNKLWS5 | 595\_\_A | BNTSW | DCATR | 2 |
| 2024 | November | DELMTEX5 | BLESSING\_1382 | BLESSING | BLESSING | 2 |
| 2024 | November | SCOLBAL8 | COLJ\_SANA1\_1 | SANA | COLJ | 2 |
| 2024 | November | DBIGKEN5 | CONCHO\_VRBS1\_1 | CONCHO | VRBS | 2 |
| 2024 | November | SSPUSLT8 | DKEC\_GIRA\_T1\_1 | DKEC | GIRA\_TAP | 2 |
| 2024 | November | DYELME89 | HEXT\_YELWJC1\_1 | YELWJCKT | HEXT | 2 |
| 2024 | November | SW\_BUVA8 | LAPRYO\_UVALDE1\_1 | UVALDE | LAPRYOR | 2 |
| 2024 | November | DNOECED5 | STCO\_STER1\_1 | STER | STCO | 2 |
| 2024 | November | BASE CASE | THOMASTN\_PS1 | THOMASTN | THOMASTN | 2 |
| 2024 | November | DBIGKEN5 | TREADW\_YELWJC1\_1 | TREADWEL | YELWJCKT | 2 |
| 2024 | November | DSALKLN5 | 315\_\_A | TMPCR | TMPSW | 2 |
| 2024 | November | DFERGRM8 | 33T218\_1 | WIRTZ | BURNET | 2 |
| 2024 | November | SSANPYT8 | 589T589\_1 | EL\_CAMPO | RICEBI | 2 |
| 2024 | November | SWCPYT8 | 589T589\_1 | EL\_CAMPO | RICEBI | 2 |
| 2024 | November | SBRIJAC8 | 6085\_\_G | SNSTP | ALVDT | 2 |
| 2024 | November | SNORNEV5 | 683T683\_1 | BAKESW | SOLSTICE | 2 |
| 2024 | November | DBAKCED5 | CROSSO\_PALOUS1\_1 | PALOUSE | CROSSOVE | 2 |
| 2024 | November | SSPUSLT8 | DKEC\_GIRA\_T1\_1 | GIRA\_TAP | DKEC | 2 |
| 2024 | November | DWHICOT5 | FARMLAND\_LONGD\_1 | FARMLAND | W\_LD\_345 | 2 |
| 2024 | November | DBAKCED5 | HARGRO\_TWINBU1\_1 | TWINBU | HARGROVE | 2 |
| 2024 | November | DLC\_PG\_8 | LAN\_CT\_PAVLOV1\_1 | LAN\_CTY | PAVLOV | 2 |
| 2024 | November | MBONNED5 | SCARBI\_STILLM1\_1 | SCARBIDE | STILLMAN | 2 |
| 2024 | November | DWPWFWP5 | STPWAP39\_1 | STP | WAP | 2 |
| 2024 | November | Unknown | Unknown | HLTSW | TBCSW | 2 |
| 2024 | November | MDTCRFB5 | WNTSP\_FMR2 | WNTSP | WNTSP | 2 |
| 2024 | November | DODEMOS5 | 15045\_\_A | EXPSW | GRADY | 2 |
| 2024 | November | SW\_GVLT5 | 15045\_\_A | EXPSW | GRADY | 2 |
| 2024 | November | DBUCRGP5 | 315\_\_A | TMPCR | TMPSW | 2 |
| 2024 | November | DWLFMOS5 | 6485\_\_A | PWPOD | WLFSW | 2 |
| 2024 | November | XBGL88 | BIGLAK\_PHBL\_T1\_1 | PHBL\_TAP | BIGLAKE | 2 |
| 2024 | November | SHOLHLJ5 | BLESSING\_1382 | BLESSING | BLESSING | 2 |
| 2024 | November | MLOFOW15 | CATARI\_PILONC1\_1 | PILONCIL | CATARINA | 2 |
| 2024 | November | SLARDUS8 | CATARI\_PILONC1\_1 | CATARINA | PILONCIL | 2 |
| 2024 | November | DFT\_PHR8 | DR\_GV\_94\_A | GV | DR | 2 |
| 2024 | November | Unknown | Unknown | BNTSW | DCATR | 2 |
| 2024 | November | Unknown | Unknown | BOW | PATTSNST | 2 |
| 2024 | November | STANPAW5 | VICTO\_WARBU\_1A\_1 | WARBURTN | VICTORIA | 1 |
| 2024 | November | MDSMTCR5 | WNTSP\_FMR2 | WNTSP | WNTSP | 1 |
| 2024 | November | DBWNRGP5 | 315\_\_A | TMPCR | TMPSW | 1 |
| 2024 | November | DTRSRCH5 | 35040\_\_A | NAVARRO | VENSW | 1 |
| 2024 | November | MTCRTHS5 | 505\_\_B | FBRSW | THSES | 1 |
| 2024 | November | SBLSJAC8 | 583\_\_D | DCRSW | ALISN | 1 |
| 2024 | November | DETRIVN8 | 589T589\_1 | EL\_CAMPO | RICEBI | 1 |
| 2024 | November | DVANCOR8 | 589T589\_1 | EL\_CAMPO | RICEBI | 1 |
| 2024 | November | SSUNMGS8 | 6240\_\_C | SACRC | DPCRK | 1 |
| 2024 | November | DWLFMOS5 | 6345\_\_B | GNTSW | SPRTP | 1 |
| 2024 | November | DMTSCOS5 | 6474\_\_A | SUNSW | MGSES | 1 |
| 2024 | November | SNORNEV5 | 718T718\_1 | BAKESW | SOLSTICE | 1 |
| 2024 | November | XFTS89 | ALMC\_T2 | ALMC | ALMC | 1 |
| 2024 | November | DHOLCIS5 | BLESSING\_1382 | BLESSING | BLESSING | 1 |
| 2024 | November | SMCEABS8 | CAPELL\_MERK1\_1 | MERK | CAPELLA | 1 |
| 2024 | November | DLYTCIS5 | CKT\_3132\_1 | FPPYD1 | WINCHES | 1 |
| 2024 | November | DKENBA89 | COLETO\_ROSATA1\_1 | COLETO | ROSATA | 1 |
| 2024 | November | DNOECED5 | CROSSO\_PALOUS1\_1 | PALOUSE | CROSSOVE | 1 |
| 2024 | November | SD1Z18 | E3\_X2\_1 | X2 | E3 | 1 |
| 2024 | November | MLOFOW15 | FREER\_LOBO1\_1 | LOBO | FREER | 1 |
| 2024 | November | DFOWSMG5 | GEO\_SIG\_1 | GEOWEST | SIGMOR | 1 |
| 2024 | November | SSCUSU28 | GIRA\_T\_SPUR1\_1 | SPUR | GIRA\_TAP | 1 |
| 2024 | November | XHHG58 | HHGT\_T2H | HHGT | HHGT | 1 |
| 2024 | November | MHARNED5 | KELVIN\_LA\_PAL1\_1 | KELVIN | LA\_PALMA | 1 |
| 2024 | November | DNOECED5 | LAKENA\_SAMATH1\_1 | LAKENASW | SAMATHIS | 1 |
| 2024 | November | SPALDIL8 | LIPTON\_W\_BATE1\_1 | W\_BATESV | LIPTON | 1 |
| 2024 | November | SCOLPAW5 | MAGRUD\_VICTOR2\_1 | VICTORIA | MAGRUDER | 1 |
| 2024 | November | DD1RAZ\_8 | READIN\_UVALDE1\_1 | UVALDE | READING | 1 |
| 2024 | November | DWPWFCK5 | STPWAP39\_1 | STP | WAP | 1 |
| 2024 | November | SSGVTRC5 | 175\_\_A | TRCNR | FORSW | 1 |
| 2024 | November | SBCESN35 | 431\_\_A | BCESW | SNDSW | 1 |
| 2024 | November | SCOBBOM5 | 6015\_\_A | BOMSW | GRVSW | 1 |
| 2024 | November | DMTSCOS5 | 6240\_\_C | SACRC | DPCRK | 1 |
| 2024 | November | SENSENW8 | 943\_\_B | ENWSW | SHKSW | 1 |
| 2024 | November | BASE CASE | ASPM\_SWEN1\_1 | SWEN | ASPM | 1 |
| 2024 | November | STANPAW5 | BULLMO\_CALLIC1\_1 | CALLICOA | BULLMOOS | 1 |
| 2024 | November | DMCEBUT8 | CAPELL\_MERK1\_1 | CAPELLA | MERK | 1 |
| 2024 | November | MFOWLOB5 | CATARI\_PILONC1\_1 | PILONCIL | CATARINA | 1 |
| 2024 | November | XLOB258 | CATARI\_PILONC1\_1 | CATARINA | PILONCIL | 1 |
| 2024 | November | DVICCO89 | COLETO\_VICTOR1\_1 | COLETO | VICTORIA | 1 |
| 2024 | November | SCRMSAR8 | CONCHO\_VRBS1\_1 | CONCHO | VRBS | 1 |
| 2024 | November | SSANFER8 | CORONA\_AT4 | CORONA | CORONA | 1 |
| 2024 | November | SPAWCAL5 | F2\_11\_1 | KENEDSW | F2 | 1 |
| 2024 | November | SFOUDES8 | HARGRO\_TWINBU1\_1 | TWINBU | HARGROVE | 1 |
| 2024 | November | DMCCI\_D8 | HECKER\_RESNIK1\_1 | RESNIK | HECKER | 1 |
| 2024 | November | DYELME89 | HEXT\_MASONS1\_1 | HEXT | MASONSW | 1 |
| 2024 | November | DD1RAZ\_8 | MAXWEL\_WHITIN1\_1 | MAXWELL | WHITING | 1 |
| 2024 | November | MANGSTP5 | MELONC\_SEADRF1\_1 | SEADRFTC | MELONCRE | 1 |
| 2024 | November | SGODTAN5 | NCARBI\_SEADRF1\_1 | NCARBIDE | SEADRFTC | 1 |
| 2024 | November | DCASRAF8 | READIN\_UVALDE1\_1 | UVALDE | READING | 1 |
| 2024 | November | DELMSAN5 | UVALDE\_W\_BATE1\_1 | UVALDE | W\_BATESV | 1 |
| 2024 | November | SGODTAN5 | VICTO\_WARBU\_1A\_1 | VICTORIA | WARBURTN | 1 |
| 2024 | November | SRCHTRS5 | 31\_\_A | RCHBR | TRSES | 1 |
| 2024 | November | SWALWLN8 | 568\_\_A | RYSSW | NEVADA | 1 |
| 2024 | November | DODEMOS5 | 6095\_\_G | JPPOI | ALKLK | 1 |
| 2024 | November | DSCOTKW5 | 6474\_\_A | SUNSW | MGSES | 1 |
| 2024 | November | SSCLWF28 | 6840\_\_B | NVKSW | ANARN | 1 |
| 2024 | November | SOZNFRI9 | BIGLAK\_PHBL\_T1\_1 | BIGLAKE | PHBL\_TAP | 1 |
| 2024 | November | DMCEBUT8 | CAPELL\_MERK1\_1 | MERK | CAPELLA | 1 |
| 2024 | November | DBIGKEN5 | CARVER\_TINSLE1\_1 | CARVER | TINSLEY | 1 |
| 2024 | November | SCOLPAW5 | COLETO\_ROSATA1\_1 | COLETO | ROSATA | 1 |
| 2024 | November | DCAGTA58 | H3\_K0\_1 | K0 | H3 | 1 |
| 2024 | November | SWILJA28 | JACKCNTY\_BLSRA\_1 | JACKCNTY | BLSRA | 1 |
| 2024 | November | DJEWSNG5 | JK\_TOKSW\_1 | TOKSW | JK\_CK | 1 |
| 2024 | November | MLOBFOR5 | LASCRU\_MILO1\_1 | LASCRUCE | MILO | 1 |
| 2024 | November | XLO2N58 | LON\_HILL\_381H | LON\_HILL | LON\_HILL | 1 |
| 2024 | November | DBAKSOL5 | LYNX\_TOMBST1\_1 | LYNX | TOMBSTNE | 1 |
| 2024 | November | DFRIILL8 | MAXWEL\_WHITIN1\_1 | MAXWELL | WHITING | 1 |
| 2024 | November | SBRAUVA8 | MAXWEL\_WHITIN1\_1 | MAXWELL | WHITING | 1 |
| 2024 | November | MANGWHP5 | MELONC\_SEADRF1\_1 | MELONCRE | SEADRFTC | 1 |
| 2024 | November | MANGSTP5 | NCARBI\_SEADRF1\_1 | NCARBIDE | SEADRFTC | 1 |
| 2024 | November | DSLKSOL5 | 138\_FLT\_FXT\_1 | TNFXTAIL | FLAT\_TOP | 1 |
| 2024 | November | DNAVVEN5 | 31\_\_A | RCHBR | TRSES | 1 |
| 2024 | November | DBUCRGP5 | 505\_\_B | FBRSW | THSES | 1 |
| 2024 | November | SBAKNOR5 | 683T683\_1 | BAKESW | SOLSTICE | 1 |
| 2024 | November | SMARALM9 | ALMC\_PAIS1\_1 | PAIS | ALMC | 1 |
| 2024 | November | SECRLCP8 | ASPM\_SWEN1\_1 | SWEN | ASPM | 1 |
| 2024 | November | DBAKCED5 | HARGRO\_PUMPJA1\_1 | HARGROVE | PUMPJACK | 1 |
| 2024 | November | SRUSBIG8 | LAKENA\_SAMATH1\_1 | LAKENASW | SAMATHIS | 1 |
| 2024 | November | DDILPE89 | LIPTON\_W\_BATE1\_1 | W\_BATESV | LIPTON | 1 |
| 2024 | November | SBWDDBM5 | LPLNE\_LPLDB\_1 | LPLNE | LPLDB | 1 |
| 2024 | November | DTRSRCH5 | MEXIA\_AT1 | MEXIA | MEXIA | 1 |
| 2024 | November | SCONMGS5 | MGSES\_MR1L | MGSES | MGSES | 1 |
| 2024 | November | MBONNED5 | PANTER\_WESMER1\_1 | WESMER | PANTERA | 1 |
| 2024 | November | SESMFRI8 | PHBL\_T\_STRS1\_1 | PHBL\_TAP | STRS | 1 |
| 2024 | November | DRAZSA89 | READIN\_UVALDE1\_1 | UVALDE | READING | 1 |
| 2024 | November | SSPUSLT8 | SPUR\_69\_1 | SPUR | SPUR | 1 |
| 2024 | November | DRNS\_TB5 | THWZEN71\_A | ZEN | THW | 1 |
| 2024 | November | MGRILON5 | VICTO\_WARBU\_1A\_1 | VICTORIA | WARBURTN | 1 |
| 2024 | November | DVENFTS5 | 505\_\_B | FBRSW | THSES | 1 |
| 2024 | November | SBOMJC25 | 6015\_\_A | BOMSW | GRVSW | 1 |
| 2024 | November | DGRSBOW5 | 6840\_\_B | NVKSW | ANARN | 1 |
| 2024 | November | DZORHAY5 | 85T329\_1 | BERGHE | DEVIHI | 1 |
| 2024 | November | DNAVVEN5 | 921\_\_F | SHKSW | GAMMA | 1 |
| 2024 | November | SMARALM9 | ALMC\_PAIS1\_1 | ALMC | PAIS | 1 |
| 2024 | November | XALM689 | ALMC\_T2 | ALMC | ALMC | 1 |
| 2024 | November | MANGWHP5 | BLESSI\_LOLITA1\_1 | LOLITA | BLESSING | 1 |
| 2024 | November | SLAQLOB8 | BRUNI\_69\_1 | BRUNI | BRUNI | 1 |
| 2024 | November | SMCEABS8 | CAPELL\_MERK1\_1 | CAPELLA | MERK | 1 |
| 2024 | November | DHOLCIS5 | CKT\_3132\_1 | FPPYD1 | WINCHES | 1 |
| 2024 | November | DWPWFWP5 | DOWOAS18\_A | DOW | OAS | 1 |
| 2024 | November | SBRAHAM8 | GANSO\_MAVERI1\_1 | GANSO | MAVERICK | 1 |
| 2024 | November | DJEWSNG5 | GC\_JK\_1 | JK\_CK | GIBCRK | 1 |
| 2024 | November | BASE CASE | HHGTOM\_1 | HHGT | OMEGA | 1 |
| 2024 | November | BASE CASE | HOCKB\_90\_A | HOC | KB | 1 |
| 2024 | November | SHONF38 | HON\_DEVI\_1 | HONDOCK | DEVINESW | 1 |
| 2024 | November | SKLEKLE8 | LOYOLA\_69\_1 | LOYOLA | LOYOLA | 1 |
| 2024 | November | DDMTBCK8 | MGSES\_MR1H | MGSES | MGSES | 1 |
| 2024 | November | SLNGCON5 | MGSES\_MR4H | MGSES | MGSES | 1 |
| 2024 | November | MHARNED5 | PANTER\_WESMER1\_1 | WESMER | PANTERA | 1 |
| 2024 | November | SBRIJAC8 | PAT\_BOWI\_1 | BOW | PATTSNST | 1 |
| 2024 | November | SES2FRI8 | PHBL\_T\_STRS1\_1 | PHBL\_TAP | STRS | 1 |
| 2024 | November | DSNG\_TB5 | THWZEN71\_A | ZEN | THW | 1 |
| 2024 | November | SREAUVA8 | UVALDE\_W\_BATE1\_1 | UVALDE | W\_BATESV | 1 |
| 2024 | November | DHARSOM8 | V2\_Z5\_1 | Z5 | V2 | 1 |
| 2024 | November | SCRDLOF9 | 2115\_\_B | TOWER | BNTSW | 1 |
| 2024 | November | SRCHTR25 | 21\_\_A | RCHBR | TRSES | 1 |
| 2024 | November | DSALHUT5 | 440\_\_A | SNDSW | AUSTRO | 1 |
| 2024 | November | SSANPIT8 | 45T267\_1 | PITSBU | SANDMO | 1 |
| 2024 | November | DBUCRGP5 | 506\_\_A | SAMSW | FBRSW | 1 |
| 2024 | November | SBRIJAC8 | 561\_\_A | CHICG | WISECNTY | 1 |
| 2024 | November | DVANEDN8 | 589T589\_1 | EL\_CAMPO | RICEBI | 1 |
| 2024 | November | MEXCRNK5 | 595\_\_A | BNTSW | DCATR | 1 |
| 2024 | November | MFOWLOB5 | ASHERT\_CATARI1\_1 | CATARINA | ASHERTON | 1 |
| 2024 | November | SBAKCED5 | HARGRO\_TWINBU1\_1 | TWINBU | HARGROVE | 1 |
| 2024 | November | SJUNYEL9 | HEXT\_YELWJC1\_1 | YELWJCKT | HEXT | 1 |
| 2024 | November | DBAKCED5 | LAKENA\_SAMATH1\_1 | LAKENASW | SAMATHIS | 1 |
| 2024 | November | SCOMHA38 | MAXWEL\_WHITIN1\_1 | MAXWELL | WHITING | 1 |
| 2024 | November | SFTLMES8 | MAXWEL\_WHITIN1\_1 | MAXWELL | WHITING | 1 |
| 2024 | November | SWHILON5 | PELICA\_WHITE\_1\_1 | PELICAN | WHITE\_PT | 1 |
| 2024 | November | SBGLTWI8 | SAMATH\_TANK1\_1 | SAMATHIS | TANK | 1 |
| 2024 | November | SMV\_RI28 | SCARBI\_STILLM1\_1 | SCARBIDE | STILLMAN | 1 |
| 2024 | November | DSNGZEN5 | SNGTB\_74\_A | SNG | TB | 1 |
| 2024 | November | SZENTH35 | THWZEN71\_A | ZEN | THW | 1 |
| 2024 | November | DAUSLOS5 | 196T171\_1 | GIDEON | SETTLE | 1 |
| 2024 | November | DBUCRGP5 | 325\_\_A | BLFSW | TMPCR | 1 |
| 2024 | November | STMPTHS5 | 325\_\_A | BLFSW | TMPCR | 1 |
| 2024 | November | DWCSH185 | 583\_\_D | DCRSW | ALISN | 1 |
| 2024 | November | DVANELT8 | 589T589\_1 | EL\_CAMPO | RICEBI | 1 |
| 2024 | November | DWLFMOS5 | 6420\_\_A | HLTSW | TBCSW | 1 |
| 2024 | November | SSCLWF18 | 6840\_\_B | NVKSW | ANARN | 1 |
| 2024 | November | SBAKNOR5 | 718T718\_1 | BAKESW | SOLSTICE | 1 |
| 2024 | November | XLOB258 | ASHERT\_CATARI1\_1 | ASHERTON | CATARINA | 1 |
| 2024 | November | SSCUSU28 | ASPM\_SWEN1\_1 | SWEN | ASPM | 1 |
| 2024 | November | SN\_SAJO5 | BONILL\_NEDIN1\_1 | BONILLA | NEDIN | 1 |
| 2024 | November | DCI\_SA\_8 | DH\_FR\_81\_A | FR | DH | 1 |
| 2024 | November | DVICDUP8 | FORMOS\_LOLITA1\_1 | LOLITA | FORMOSA | 1 |
| 2024 | November | MLOFOW15 | GODDAR\_TANGO1\_1 | GODDARD | TANGO | 1 |
| 2024 | November | DGILHIW8 | KOCH\_H\_LON\_HI1\_1 | KOCH\_HF | LON\_HILL | 1 |
| 2024 | November | DTWIBGL8 | LAKENA\_SAMATH1\_1 | LAKENASW | SAMATHIS | 1 |
| 2024 | November | DFOWSMG5 | LOBO\_A3 | LOBO | LOBO | 1 |
| 2024 | November | SLONLON8 | LON\_HILL\_382H | LON\_HILL | LON\_HILL | 1 |
| 2024 | November | SOWLBIG8 | PHBL\_T\_STRS1\_1 | STRS | PHBL\_TAP | 1 |
| 2024 | November | DTWIBGL8 | SAMATH\_TANK1\_1 | SAMATHIS | TANK | 1 |
| 2024 | November | SNEVSHE8 | TER\_DENT\_1 | DENT\_RD | TERREL\_D | 1 |
| 2024 | November | DCASRAF8 | UVALDE\_W\_BATE1\_1 | UVALDE | W\_BATESV | 1 |
| 2024 | November | SLHLLCS5 | 1020\_\_A | ELMOT | MCTYE | 1 |
| 2024 | November | DKRWCDE5 | 108\_\_A | EXCSW | RNKSW | 1 |
| 2024 | November | DVENFTS5 | 235\_\_B | BALSW | JEWET | 1 |
| 2024 | November | SBCESND5 | 421\_\_A | BCESW | SNDSW | 1 |
| 2024 | November | DRNKLWS5 | 583\_\_D | DCRSW | ALISN | 1 |
| 2024 | November | MEXCHCK5 | 583\_\_D | DCRSW | ALISN | 1 |
| 2024 | November | DLWSRNK5 | 587\_\_A | ARGYL | LWSVH | 1 |
| 2024 | November | DFOWSMG5 | ASHERT\_CATARI1\_1 | ASHERTON | CATARINA | 1 |
| 2024 | November | SLCLAN8 | BLESSING\_1382 | BLESSING | BLESSING | 1 |
| 2024 | November | SPAWCAL5 | COLETO\_ROSATA1\_1 | COLETO | ROSATA | 1 |
| 2024 | November | MFOWLOB5 | FREER\_LOBO1\_1 | LOBO | FREER | 1 |
| 2024 | November | SBRAHAM8 | HAMILT\_MAVERI1\_1 | HAMILTON | MAVERICK | 1 |
| 2024 | November | SWHILON5 | HECKER\_WHITE\_2\_1 | WHITE\_PT | HECKER | 1 |
| 2024 | November | DWAPCRB8 | HOCKB\_90\_A | HOC | KB | 1 |
| 2024 | November | SKBBI8 | HOCKB\_90\_A | HOC | KB | 1 |
| 2024 | November | SSPUSLT8 | JATN\_PEAC1\_1 | JATN | PEAC | 1 |
| 2024 | November | DBAKCED5 | JERRY\_PUMPJA1\_1 | PUMPJACK | JERRY | 1 |
| 2024 | November | SWCPYT8 | LANCTY\_LAN\_CT1\_1 | LAN\_CTY | LANCTYPM | 1 |
| 2024 | November | MFOWLOB5 | LARDVN\_LASCRU1\_1 | LARDVNTH | LASCRUCE | 1 |
| 2024 | November | DWHIPEL8 | LON\_HI\_WWKS\_T1\_1 | LON\_HILL | WWKS\_TAP | 1 |
| 2024 | November | SCONMGS5 | MGSES\_MR1H | MGSES | MGSES | 1 |
| 2024 | November | SNADRIC8 | NAD\_ELCM\_1 | ELCMPOS | NADAS | 1 |
| 2024 | November | SRAZDRY8 | UVALDE\_W\_BATE1\_1 | UVALDE | W\_BATESV | 1 |

1. Current Wind Generation Record: 27,881 MW on 06/17/2024 at 21:15 | Current Wind Penetration Record: 69.15% on 04/10/2022 at 01:43

   Current Solar Generation Record: 21,667 MW on 09/08/2024 at 14:03 | Current Solar Penetration Record: 44.17% 11/20/2024 at 14:55 [↑](#footnote-ref-2)