

Voltage Schedule Policy for Generating Facilities Interconnected to the Entergy Transmission System

All generators interconnected to the Entergy Transmission System are required to maintain a prescribed voltage schedule to support the reactive power requirements in their local area.

The bus voltage at the high side of the Generator Step Up transformer or Point of Interconnection shall be maintained according to the following schedule both in the reactive power supply mode (lagging) and reactive power absorption mode (leading).

While most plants are required to follow the standard Entergy voltage schedule listed in Table 1, plants listed in Table 2 are required to follow the unit specific voltage schedule.

Table 1. Entergy Voltage Schedule

| Arkansas Interconnected Plants Summer Schedule (May 27th – September 15th) On Peak Hours (09:01-24:00) | | | | |
|--|---------|----------------------------|----------------|----------------|
| Arkansas Plants Connected to: | Unit kV | Voltage Schedule | Tolerance Band | Effective Date |
| 69 kV | 69 | 70.38 kV (1.020 per unit) | +2 kV / -2 kV | 5/27/2014 |
| 115 kV | 115 | 118.45 kV (1.030 per unit) | +2 kV / -2 kV | 5/27/2014 |
| 161 kV | 161 | 166.64 kV (1.035 per unit) | +2 kV / -2 kV | 5/27/2014 |
| 230 kV | 230 | 238.05 kV (1.035 per unit) | +3 kV / -2 kV | 5/27/2014 |
| 500 kV | 500 | 521 kV (1.042 per unit) | +5 kV / -5 kV | 5/27/2014 |
| Arkansas Interconnected Plants Summer Schedule (May 27th – September 15th) Off Peak Hours (00:01-09:00) | | | | |
| Arkansas Plants Connected to: | Unit kV | Voltage Schedule | Tolerance Band | Effective Date |
| 69 kV | 69 | 69 kV (1.000 per unit) | +2 kV / -2 kV | 5/27/2014 |
| 115 kV | 115 | 117.3 kV (1.020 per unit) | +2 kV / -2 kV | 5/27/2014 |
| 161 kV | 161 | 165.03 kV (1.025 per unit) | +2 kV / -2 kV | 5/27/2014 |
| 230 kV | 230 | 235.75 kV (1.025 per unit) | +3 kV / -2 kV | 5/27/2014 |
| 500 kV | 500 | 518 kV (1.036 per unit) | +5 kV / -5 kV | 5/27/2014 |
| Arkansas Interconnected Plants Non-Summer Schedule (September 16th – May 26th) | | | | |
| Arkansas Plants Connected to: | Unit kV | Voltage Schedule | Tolerance Band | Effective Date |
| 69 kV | 69 | 69 kV (1.000 per unit) | +2 kV / -2 kV | 10/16/2013 |
| 115 kV | 115 | 115 kV (1.000 per unit) | +2 kV / -2 kV | 10/16/2013 |
| 161 kV | 161 | 161 kV (1.000 per unit) | +2 kV / -2 kV | 10/16/2013 |
| 230 kV | 230 | 232.3 kV (1.010 per unit) | +3 kV / -2 kV | 10/16/2013 |
| 500 kV | 500 | 521 kV (1.042 per unit) | +5 kV / -5 kV | 5/27/2014 |
| Louisiana, Mississippi, and Texas Interconnected Plants Year Round Schedule | | | | |
| Louisiana, Mississippi, and Texas Plants Connected to: | Unit kV | Voltage Schedule | Tolerance Band | Effective Date |
| 69 kV | 69 | 69 kV (1.000 per unit) | +2 kV / -2 kV | 10/16/2013 |
| 115 kV | 115 | 115 kV (1.000 per unit) | +2 kV / -2 kV | 10/16/2013 |
| 138 kV | 138 | 138 kV (1.000 per unit) | +2 kV / -2 kV | 10/16/2013 |
| 161 kV | 161 | 161 kV (1.000 per unit) | +2 kV / -2 kV | 10/16/2013 |
| 230 kV | 230 | 232.3 kV (1.010 per unit) | +3 kV / -2 kV | 9/10/2013 |
| 345 kV | 345 | 351.9 kV (1.020 per unit) | +4 kV / -2 kV | 9/10/2013 |
| 500 kV | 500 | 510 kV (1.020 per unit) | +5 kV / -5 kV | 10/16/2013 |

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Table 2. Unit Specific Voltage Schedule (applicable only to the units listed)

| Individual Plant Name | Unit kV | Monitored PI Point | Voltage or Reactive Power Schedule | Tolerance Band | Effective Date |
|--------------------------------|---------|--|------------------------------------|----------------|----------------|
| Acadia interconnected to EES | 138 | ACADIA.BUS.138_LINE_BUS.KV1 | 141.0 kV (1.022 per unit) | +4 kV / -4 kV | 7/1/2016 |
| Arkansas Nuclear One (ANO) | 500 | | 520.0 kV (1.040 per unit) | +5 kV / -5 kV | 11/6/2014 |
| Attala | 500 | AT1:GEEV_1.AG | 515.0 kV (1.030 per unit) | +5 kV / -5 kV | 10/16/2013 |
| Baxter Wilson U1 | 115 | BW1:AEEE114.AG | 117.0 kV (1.0174 per unit) | +2 kV / -2 kV | 7/22/2019 |
| Bayou Cove (NRG) | 138 | | 141.0 kV (1.022 per unit) | +2 kV / -2 kV | 9/9/2016 |
| Calcasieu | 230 | CALCAS.BUS.1.KV CALCAS.BUS.2.KV | 232.3 kV (1.010 per unit) | +3 kV / -3 kV | 8/5/2016 |
| Carpenter Dam | 115 | CARPTR.BUS.115.KV | 117.0 kV (1.017 per unit)** | +3 kV / -3 kV | 9/10/2013 |
| Carville | 230 | | 230.0 kV (1.000 per unit) | +3 kV / -2 kV | 2/16/2018 |
| Choctaw | 500 | WOLFCX.LN.WOLFCX_CHOCTW8.K V2 | 515.0 kV (1.030 per unit) | +5 kV / -5 kV | 8/26/2021 |
| Dell (AECI) | 500 | | 520.0 kV (1.040 per unit) | +5 kV / -5 kV | 5/27/2014 |
| Exxon Baton Rouge BRTG | 230 | | 230.0 kV (1.000 per unit) | +3 kV / -2 kV | 2/10/2014 |
| Formosa | 230 | | 230.0 kV (1.000 per unit) | +3 kV / -2 kV | 2/10/2014 |
| Frontier interconnected to EES | 345 | | 348.0 kV (1.009 per unit) | +5 kV / -5 kV | 11/21/2018 |
| Gerald Andrus | 230 | ANDRUS.BUS.230E.KV ANDRUS.BUS.230W.KV | 232.3 kV (1.010 per unit) | +3 kV / -2 kV | 9/10/2013 |
| Hinds | 230 | LAKOVR.BUS.230_E.KV LAKOVR.BUS.230_W.KV | 233.0 kV (1.013 per unit) | +3 kV / -3 kV | 7/22/2019 |
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| Individual Plant Name | Unit kV | Monitored PI Point | Voltage or Reactive Power Schedule | Tolerance Band | Effective Date |
|-------------------------------------|---------|--|---|----------------|----------------|
| Hot Springs | 500 | HS1:AEE1V_AI1.AG | <u>May 27th – September 15th (09:01-24:00)</u> 521 kV (1.042 per unit) <u>May 27th – September 15th (00:01-09:00)</u> 518 kV (1.036 per unit) <u>September 16th – May 26th</u> 521 kV (1.042 per unit) | +5 kV / -5 kV | 5/27/2014 |
| Iris Solar | 115 | | 115 kV (1.000 per unit) | +2 kV / -2 kV | 5/25/2025 |
| ISES Unit #1 | 161 | IN1:AESY1001.AG IN1:AESY1002.AG | 166.0 kV (1.031 per unit) | +2 kV / -2 kV | 7/2/2019 |
| ISES Unit #2 | 500 | IN2:AESY2001.AG | 520.0 kV (1.040 per unit) | +5 kV / -5 kV | 5/27/2014 |
| Lake Catherine 4 | 115 | ARKOMA.BUS.115_N.KV ARKOMA.BUS.115_S.KV | 117.0 kV (1.017 per unit) | +4 kV / -2 kV | 7/22/2019 |
| Lake Charles Power Station GTs | 138 | LQ1:AEE10-YVA-EI-1023.AG LQ1:AEE10-YVA-EI-1024.AG | 140.0 kV (1.0145 per unit) | +3 kV / -2 kV | 5/4/2020 |
| Lake Charles Power Station ST | 230 | LQ1:AEE10-YWA-EI-1082.AG LQ1:AEE10-YWA-EI-1083.AG | 234.0 kV (1.0174 per unit) | +4 kV / -4 kV | 5/4/2020 |
| Lewis Creek 1 | 138 | LC.BUS.1.KV | 141.0 kV (1.022 per unit) | +3 kV / -3 kV | 12/29/2020 |
| Lewis Creek 2 | 138 | LC.BUS.2.KV | 141.0 kV (1.022 per unit) | +3 kV / -3 kV | 12/29/2020 |
| Little Gypsy #2 | 115 | LG2:AEEU2GE71.AG LG2:AEEU2GE72.AG | 116.15 kV (1.01 per unit) | +2 kV / -2 kV | 5/11/2016 |
| Little Gypsy #3 | 230 | LG3:AEE230KVYDA.AG | 234.0 kV (1.0174 per unit) | +4 kV / -4 kV | 8/7/2019 |
| Louisiana Station U4A | 230 | | 230.0 kV (1.000 per unit) – May-October 232.0 kV (1.009 per unit) – November-April | +3 kV / -2 kV | 4/13/2015 |
| Louisiana Station U5A | 230 | | 230.0 kV (1.000 per unit) – May-October 232.0 kV (1.009 per unit) – November-April | +3 kV / -2 kV | 4/13/2015 |
| Montgomery County Power Station CTs | 138 | MONTPS.BUS.138_NORTH.KV MONTPS.BUS.138_SOUTH.KV | 141.0 kV (1.022 per unit) | +3 kV / -3 kV | 5/25/2021 |
| Montgomery County Power Station ST | 230 | MONTPS.LN.LN25_230.KV | 235.06 kV (1.022 per unit) | + 3 kV / -3 kV | 5/25/2021 |
| Nelson 1 & 2 | 138 | NELSON.BUS.138_1.KV | 140.0 kV (1.0145 per unit) | +3 kV / -2 kV | 12/19/2019 |

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| Individual Plant Name | Unit kV | Monitored PI Point | Voltage or Reactive Power Schedule | Tolerance Band | Effective Date |
|----------------------------|---------|--|------------------------------------|-------------------------|----------------|
| | | NELSON.BUS.138_2.KV | | | |
| Nelson 4 | 230 | | 234.0 kV (1.0174 per unit) | +4 kV / -4 kV | 7/22/2019 |
| Nelson 6 | 230 | LQ1:AEE10-YWA-EI-1082.AG LQ1:AEE10-YWA-EI-1083.AG | 234.0 kV (1.0174 per unit) | +4 kV / -4 kV | 5/4/2020 |
| New Orleans Power Station | 115 | MICHOD.BUS.115_NORTH.KV MICHOD.BUS.115_SOUTH.KV | 116.0 kV (1.009 per unit) | +2 kV / -2 kV | 5/21/2020 |
| Ninemile 6A & 6B | 115 | NM6:AEE60RTU-NORTH_A-KV.AG NM6:AEE60RTU-SOUTH_A-KV.AG | 116.0 kV (1.009 per unit) | +2 kV / -2 kV | 3/23/2015 |
| Ninemile 6C | 230 | NM6:AEE60RTU-NORTH_B-KV.AG NM6:AEE60RTU-SOUTH_B-KV.AG | 234.0 kV (1.0174 per unit) | +4 kV / -4 kV | 7/23/2019 |
| Ninemile 4 | 230 | NM4:GEEU4GX-SUPV-LINE-VOLTS.AG | 234.0 kV (1.0174 per unit) | +4 kV / -4 kV | 3/27/2020 |
| Ninemile 5 | 230 | NM5:GEEU5GX-SUPV-LINE-VOLTS.AG | 234.0 kV (1.0174 per unit) | +4 kV / -4 kV | 3/27/2020 |
| Ouachita | 500 | STL500.BUS.500.KV | 521.0 kV (1.042 per unit) | +5 kV / -5 kV | 9/10/2013 |
| Oxy Taft | 230 | | 234.6 kV (1.02 per unit) | +3 kV / -2 kV | 5/11/2016 |
| Perryville 1 | 500 | PEPS_EN_B1_KV | 521.0 kV (1.042 per unit) | +5 kV / -5 kV | 9/10/2013 |
| Perryville 2 | 500 | PEPS_EN_B2_KV | 521.0 kV (1.042 per unit) | +5 kV / -5 kV | 9/10/2013 |
| Plum Point | 500 | | 520.0 kV (1.040 per unit) | +5 kV / -5 kV | 10/16/2013 |
| Rain CII Carbon (Lonestar) | 69 | | 70.0 kV (1.015 per unit) | +2 kV / -2 kV | 4/4/2016 |
| Rommel | 115 | | +0.5 MVARs (per unit) | +0.5 MVARs / -0.5 MVARs | 7/5/2017 |
| Sabine 1 & 3 | 138 | SB1:GEE1PWV138K.AG | 138.0 kV (1.000 per unit) | +3 kV / -2 kV | 7/22/2019 |
| Sabine 4 & 5 | 230 | SB4:AEE_230KV_NORTH.AG SB4:AEE_230KV_SOUTH.AG | 234.0 kV (1.0174 per unit) | +4 kV / -4 kV | 7/22/2019 |
| St. Charles Power Station | 230 | 1A: SP1:GEE1A-YWA-EI-1032.AG 1B: SP1:GEE1B-YWA-EI-1032.AG 1C: SP1:GEE1C-YWA-EI-1035.AG | 234.0 kV (1.0174 per unit) | +4 kV / -4 kV | 9/3/2021 |
| St. James Solar | 230 | | 232.3 kV (1.010 per unit) | +3 kV / -2 kV | 5/25/2021 |

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| Individual Plant Name | Unit kV | Monitored PI Point | Voltage or Reactive Power Schedule | Tolerance Band | Effective Date |
|---------------------------------|---------|--|------------------------------------|----------------|----------------|
| Sterlington 7A | 115 | STERLN.BUS.115_1.KV | 116.0 kV (1.0087 per unit) | +2 kV / -2 kV | 7/22/2019 |
| Stuttgart Solar | 115 | | 117.875 kV (1.025 per unit) | +2 kV / -2 kV | 4/13/2018 |
| Toledo Bend | 138 | TBD.BUS.1_HYDRO.KV | 141.0 kV (1.022 per unit)** | +3 kV / -3 kV | 4/4/2016 |
| Union Carbide | 230 | | 234.6 kV (1.02 per unit) | +3 kV / -2 kV | 5/11/2016 |
| Union Power | 500 | UN1:GEE00XI9501KV.AG | 521.0 kV (1.042 per unit) | +3 kV / -12 kV | 10/10/2019 |
| Washington Parish Energy Center | 230 | WP0:AEE09-RTU-BE230-KV.AG WP0:AEE09-RTU-BW230-KV.AG | 236 kV (1.026 per unit) | +4 kV / -4 kV | 12/29/2020 |
| Waterford Units 1, 2, & 4 | 230 | WF1:AXE5002.AG WF2:AXE5002.AG WF0:AXE5002.AG | 234.6 kV (1.02 per unit) | +3 kV / -2 kV | 4/19/2017 |
| Waterford 3 | 230 | | 234.6 kV (1.02 per unit) | +3 kV / -2 kV | 5/11/2016 |
| White Bluff | 500 | WH_BLF.BUS.500.KV WH_BLF.BUS.EAST_BUS.KV | 521.0 kV (1.042 per unit) | +5 kV / -8 kV | 7/22/2019 |
| Whillock Hydro (L&D #9) AECC | 161 | | 165.83 kV (1.030 per unit) | +3 kV / -3 kV | 5/27/2014 |

***This voltage / reactive power schedule is only applicable when the unit is operating in generating mode.*

Notes:

1. The schedule above is a target voltage or reactive power to be maintained within the specified tolerance band.
 - a. The Generation Operator (GO) shall minimize excursions outside the tolerance band specified above and promptly follow the directions provided by the Transmission Operator (TO) to regulate the transmission voltage and reactive power flow.
2. The plant should attempt to exhaust all means of controlling voltage or reactive power.
3. Each plant should contact Entergy's operations control center within 30 minutes upon discovery of a deviation from the prescribed schedule tolerance band. If the voltage has been restored to the voltage tolerance band within those 30 minutes, notification is not required.
4. Entergy may revise the voltage schedule at any time by providing adequate notice to the Generator Operator. Under emergency condition, Entergy may require a different voltage or reactive power schedule in order to maintain reliability and security of the transmission network.

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Revision History

- 07/25/2004 – Original Issue
- SK 08/03/2007 – Revised Voltage Schedule and added tolerance band.
- SK 09/03/2013 – Provided Peak and Off Peak schedules for Arkansas generators
- SK 09/03/2013 – Listed specific voltage schedules for generators in Table 2.
- SK 10/16/2013 – Ended Revised Summer AR Voltage schedule and widened tolerance band for MS, LA, and TX interconnection units to match AR units.
- MP 12/30/2013 – Updated to reflect retirement of Entergy’s OATT and transition of the Entergy Operating Companies to the MISO RTO.
- MP 02/10/2014 – Added Winter & Summer Schedule for Arkansas Plants; added LA Station, Exxon Baton Rouge BRTG, and Formosa to Table 2, Unit Specific Voltage.
- MP 05/27/2014 – Added Summer Off Peak Hours Schedule; changed start date of Arkansas Summer voltage schedule; added AECC L&D #9 to Table 2; revised Dell schedule in Table 2; removed White Bluff, Wrightsville, Hot Springs, Magnet Cove, and Panda from Table 2 and included their existing schedule in Table 1.
- MP 11/06/2014 – Updated ANO voltage schedule.
- MP 03/23/2015 – Updated Ninemile 3, 6A, and 6B voltage schedule.
- MP 04/13/2015 – Updated Louisiana Station 4A and 5A voltage schedule.
- MP 06/03/2015 – Updated Lewis Creek voltage schedule.
- MP 04/04/2016 – Updated Toledo Bend and Rain CII Carbon voltage schedule.
- MP 05/11/2016 – Updated Ninemile 6C, 4, & 5, Waterford 1-3, Oxy Taft, Union Carbide, and Little Gypsy 2 voltage schedule.
- MP 07/01/2016 – Updated Acadia voltage schedule.
- MP 07/27/2016 – Updated Ninemile 6C, 4 & 5 voltage schedule.
- MP 08/05/2016 – Updated Calcasieu and ISES U1 voltage schedule.
- MP 09/09/2016 – Updated Bayou Cove and Nelson 4 & 6 voltage schedule.
- MP 03/06/2017 – Updated Nelson U1 & U2 voltage schedule.
- MP 04/19/2017 – Updated Waterford U4 voltage schedule.
- MP 07/05/2017 – Updated Rammel reactive power schedule.
- MP 02/16/2018 – Updated Carville voltage schedule.

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- MP 04/13/2018 – Updated Stuttgart Solar voltage schedule.
- MP 11/21/2018 – Updated Frontier voltage schedule.
- MP 07/02/2019 – Updated ISES U1 voltage schedule.
- MP 07/22/2019 – Updated Nelson U4/U6, Baxter Wilson U1, Lewis Creek, Sabine U1/U3, Sabine U4/U5, Sterlington 7A, White Bluff, Lake Catherine 4, and Hinds voltage schedule.
- MP 07/23/2019 – Updated Ninemile 6C, 4 & 5 and Union Power voltage schedule.
- MP 07/31/2019 – Updated Table 2 to include monitored PI tags and revised TCC notification for voltage schedule deviations.
- MP 08/07/2019 – Updated Little Gypsy 3 and St. Charles Power Station voltage schedule.
- MP 10/10/2019 – Updated Union Power voltage schedule.
- MP 12/19/2019 – Updated Nelson 1 & 2 voltage schedule.
- MP 03/20/2020 – Added Lake Charles Power Station voltage schedule.
- MP 03/27/2020 – Updated Ninemile 4 & 5 tags, added Choctaw voltage schedule.
- MP 05/04/2020 – Updated Nelson 6 and LCPS tags.
- MP 05/21/2020 – Added New Orleans Power Station voltage schedule.
- MP 07/01/2020 – Updated Choctaw tag.
- MP 12/29/2020 – Added WPEC voltage schedule and updated Lewis Creek 1 & 2 tags.
- MP 05/25/2021 – Added MCPS, St. James solar, and Iris solar voltage schedule
- MP 08/26/2021 – Updated Choctaw and SCPS tags.