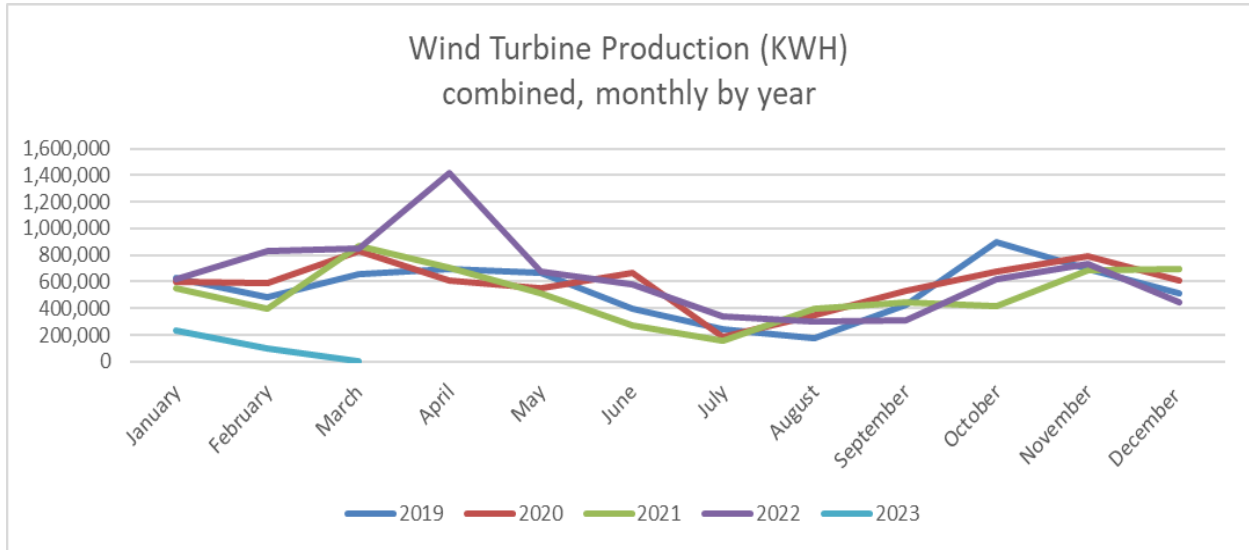




WILLMAR MUNICIPAL UTILITIES

March 2023 Wind Turbine Report

“Willmar Municipal Utilities will provide safe, reliable & quality utility services at competitive rates for their customers.”



| | Production (KWH) | | Availability (%) | | Total | Major Outages |
|------------|------------------|---------|------------------|------|-----------|--|
| | #3 | #4 | #3 | #4 | KWH | |
| Mar 2023 | - | - | 0.0 | 0.0 | - | #3,#4 Breaker Failure |
| Feb 2023 | 92,772 | 3,640 | 25.3 | 41.6 | 96,412 | #3,#4 Breaker Failure |
| Jan 2023 | 229,638 | - | 99.3 | 13.5 | 229,638 | #4 Blade pitch failure |
| Nov 2022 | 314,419 | 418,704 | 76.6 | 97.4 | 733,123 | #3 Breaker Failure |
| Oct 2022 | 272,341 | 344,073 | 69.1 | 92.7 | 616,414 | #3 Annual Maintenance |
| Sept 2022 | 94,466 | 217,202 | 48.1 | 84.7 | 311,668 | |
| Aug 2022 | 147,480 | 151,453 | 92.2 | 93.3 | 298,933 | |
| July 2022 | 181,149 | 162,286 | 90.9 | 83.5 | 343,435 | |
| June 2022 | 302,181 | 276,359 | 94.4 | 88.6 | 578,540 | |
| May 2022 | 334,016 | 346,667 | 94.3 | 90.7 | 680,683 | |
| April 2022 | 682,796 | 733,316 | 95.8 | 98.8 | 1,416,112 | |
| Mar 2022 | 423,397 | 428,473 | 98.4 | 97.2 | 851,870 | |
| Feb 2022 | 386,126 | 442,660 | 92.9 | 95.9 | 828,786 | Contactors and oil cooling fan failure |
| 2023 Total | 322,410 | 3,640 | | | 326,050 | |

| Month | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------|------------------|------------------|------------------|------------------|----------------|
| January | 624,884 | 598,668 | 551,509 | 619,722 | 229,638 |
| February | 484,162 | 590,960 | 397,869 | 828,786 | 96,412 |
| March | 656,272 | 827,205 | 866,500 | 851,870 | 0 |
| April | 699,956 | 611,169 | 709,639 | 1,416,112 | |
| May | 668,434 | 552,522 | 509,051 | 680,683 | |
| June | 400,456 | 667,898 | 269,811 | 578,540 | |
| July | 247,502 | 184,774 | 156,572 | 343,435 | |
| August | 176,047 | 352,244 | 400,452 | 298,933 | |
| September | 426,860 | 531,071 | 444,730 | 311,668 | |
| October | 895,781 | 675,543 | 413,446 | 616,414 | |
| November | 695,008 | 788,202 | 685,170 | 733,123 | |
| December | 514,858 | 613,308 | 693,954 | 444,245 | |
| Total | 6,490,220 | 6,993,564 | 6,098,703 | 7,723,531 | 326,050 |

