

**WESTERN AREA POWER ADMINISTRATION**  
**HYDRO CONDITIONS AND PURCHASE POWER REPORT**  
**October 2021 – Final**

|               | Generation (Megawatt-Hours [MWh])                   |               |            |            | Purchase Power (MWh) | Purchase Power Expenses (Dollars) |               |               |
|---------------|---|---------------|------------|------------|----------------------|-----------------------------------|---------------|---------------|
|               | Projected Dry                                       | Most Probable | Average    | Actual     | Actual               | Projected Dry                     | Most Probable | Actual        |
| <b>Oct 20</b> | 1,637,082   | 1,708,515     | 1,967,791  | 1,707,748  | 330,036              | \$9,229,116                       | \$5,508,878   | \$9,801,302   |
| <b>Nov 20</b> | 1,413,902   | 1,475,455     | 1,822,863  | 1,442,689  | 480,048              | \$10,118,812                      | \$9,189,960   | \$12,556,811  |
| <b>Dec 20</b> | 1,276,475   | 1,375,669     | 1,800,527  | 1,367,249  | 639,892              | \$15,963,137                      | \$14,405,573  | \$16,561,267  |
| <b>Jan 21</b> | 1,403,979   | 1,511,519     | 1,933,074  | 1,456,026  | 528,281              | \$13,163,488                      | \$11,038,437  | \$12,744,567  |
| <b>Feb 21</b> | 1,417,880   | 1,388,085     | 1,763,834  | 1,396,003  | 457,148              | \$11,692,250                      | \$10,359,333  | \$125,044,358 |
| <b>Mar 21</b> | 1,832,993   | 1,797,417     | 1,967,511  | 1,681,182  | 364,245              | \$6,603,587                       | \$7,804,168   | \$7,898,312   |
| <b>Apr 21</b> | 2,101,732   | 2,108,894     | 2,313,461  | 2,011,044  | 189,417              | \$4,703,774                       | \$4,505,043   | \$3,863,739   |
| <b>May 21</b> | 2,278,194   | 2,330,224     | 2,689,563  | 2,192,273  | 150,782              | \$2,528,661                       | \$3,808,755   | \$3,674,161   |
| <b>Jun 21</b> | 2,308,513   | 2,344,781     | 2,863,634  | 2,252,205  | 193,587              | \$7,904,393                       | \$8,050,265   | \$11,800,145  |
| <b>Jul 21</b> | 2,413,875   | 2,422,616     | 3,078,737  | 2,317,160  | 225,959              | \$15,217,449                      | \$19,972,457  | \$19,302,166  |
| <b>Aug 21</b> | 2,143,092   | 2,088,522     | 2,885,690  | 2,307,892  | 202,564              | \$20,371,242                      | \$22,235,195  | \$13,054,954  |
| <b>Sep 21</b> | 1,852,360   | 1,902,606     | 2,293,950  | 1,784,840  | 214,271              | \$14,028,225                      | \$15,183,251  | \$13,934,635  |
| <b>Total</b>  | 22,080,078  | 22,454,303    | 27,380,633 | 21,916,310 | 3,976,230            | \$131,524,136                     | \$132,061,316 | \$250,236,417 |
|               | Actual generation as a percentage of average: 80.0% |               |            |            |                      | Cost per MWh: \$62.93             |               |               |

Western Area Power Administration (WAPA) generated a total of 21,916 gigawatt-hours (GWh), or 80% of average, during October through September of fiscal year 2021. For the same period, total purchase power was 3,976 GWh, and total purchase power expenses were \$250,236,417, which equates to \$62.93 per megawatt-hour. High purchase power prices during the February polar vortex contribute to the average.

The following pages indicate WAPA’s Regional snowpack, lake/reservoir inflow and storage, generation, and purchase power expenses. Snowpack is reported as snow water equivalent, which is the depth of water that theoretically would result if the entire snowpack melted instantaneously.

The monthly purchase power numbers in this report are used by WAPA’s Regions as a forecasting tool; therefore, they do not reflect energy imbalance transactions and other such information that cannot be forecasted. Furthermore, the purchase power numbers have not been verified for financial auditing purposes. Consequently, these numbers will vary from those reported in WAPA’s year-end financial statements, and the latter should be considered the definitive source for WAPA’s purchase power data.



## Colorado River Storage Project

|               | Snowpack<br>(Inches in Snow<br>Water Equivalent) |        | Lake/Reservoir Inflow<br>(Thousand Acre-Feet) |        | Lake/Reservoir<br>Content<br>(Million Acre-Feet) |        | Generation (MWh) |                  |           |           | Purchase<br>Power<br>(MWh) | Purchase Power Expenses (Dollars) |                  |              |
|---------------|--|--------|---|--------|--|--------|------------------|------------------|-----------|-----------|----------------------------|-----------------------------------|------------------|--------------|
|               | Median   | Actual | Average                                       | Actual | Average  | Actual | Projected<br>Dry | Most<br>Probable | Average   | Actual    | Actual                     | Projected<br>Dry                  | Most<br>Probable | Actual       |
|               | <b>Oct 20</b>                                    | 1.30   | 0.80  | 514.42 | 78   | 15.01  | 10.98            | 247,024          | 376,668   | 382,430   | 352,623                    | 96,196                            | \$5,712,150      | \$2,383,148  |
| <b>Nov 20</b> | 4.80   | 3.40   | 474.23  | 261    | 14.91  | 10.62  | 241,664          | 315,446          | 388,155   | 310,304   | 136,279                    | \$5,110,150                       | \$4,402,490      | \$4,502,668  |
| <b>Dec 20</b> | 8.10   | 6.30   | 362.96  | 169    | 14.86  | 10.13  | 279,537          | 351,663          | 437,962   | 345,778   | 156,942                    | \$6,299,733                       | \$5,277,929      | \$5,473,649  |
| <b>Jan 21</b> | 11.50  | 8.60   | 361.45  | 198    | 14.98  | 9.64   | 329,144          | 364,153          | 457,394   | 358,646   | 140,939                    | \$5,112,308                       | \$4,064,075      | \$4,072,438  |
| <b>Feb 21</b> | 15.10  | 12.60  | 392.01  | 201    | 15.99  | 9.23   | 285,980          | 324,408          | 390,580   | 315,532   | 133,406                    | \$4,550,403                       | \$3,198,843      | \$7,857,765  |
| <b>Mar 21</b> | 18.90  | 16.30  | 666.27  | 297    | 16.77  | 8.84   | 300,884          | 340,401          | 390,170   | 330,480   | 132,948                    | \$3,588,199                       | \$3,937,998      | \$3,770,513  |
| <b>Apr 21</b> | 19.40  | 13.90  | 1,057.14                                      | 289    | 16.74  | 8.5    | 299,431          | 331,588          | 397,861   | 340,907   | 67,641                     | \$1,970,254                       | \$1,901,016      | \$1,769,595  |
| <b>May 21</b> | 7.90   | 4.00   | 2,337.68                                      | 543    | 16.3   | 8.37   | 364,111          | 335,179          | 475,860   | 374,602   | 61,640                     | \$1,374,340                       | \$2,528,177      | \$1,769,724  |
| <b>Jun 21</b> | 0.00   | 0.30   | 2,668.50                                      | 810    | 16   | 8.33   | 350,695          | 402,219          | 534,248   | 377,717   | 81,446                     | \$3,910,230                       | \$3,769,301      | \$5,403,667  |
| <b>Jul 21</b> | 0.00   | 0.30   | 1,093.88                                      | 209    | 15.88  | 7.87   | 393,842          | 429,051          | 536,434   | 418,129   | 80,576                     | \$6,386,456                       | \$11,472,558     | \$7,018,209  |
| <b>Aug 21</b> | 0.00   | 0.00   | 496.08  | 294    | 15.68  | 7.51   | 407,318          | 445,460          | 558,659   | 431,182   | 66,171                     | \$5,796,958                       | \$7,771,409      | \$2,711,975  |
| <b>Sep 21</b> | 0.00   | 0.10   | 405.88  | 159    | 15.38  | 7.26   | 308,163          | 361,991          | 449,558   | 353,456   | 80,859                     | \$4,876,945                       | \$6,433,617      | \$3,379,102  |
| <b>Total</b>  |  |        |   |        |  |        | 3,807,794        | 4,378,227        | 5,399,309 | 4,309,357 | 1,235,043                  | \$54,688,128                      | \$57,140,561     | \$50,722,378 |

Actual generation as a percentage of average: 79.8%

Cost per MWh: \$41.07

### Lake/Reservoir Levels

End of September storage volume for Lake Powell was 7.3 million acre-feet or about 30% of capacity. Lake Powell reservoir inflow for September was 159,000 acre-feet or 39% of average. End of September Lake Powell elevation was about 3,545 feet, 155 feet from maximum reservoir level and 55 feet from the minimum generation level.

### Weather and Other Conditions

Extreme drought throughout the Colorado River Basin has resulted in about 181,000 acre-feet of additional water being released from Upper Colorado River Basin reservoirs to try and maintain Lake Powell elevation above 3,525 feet. However, even with additional releases from upstream reservoirs, Lake Powell is expected to drop below 3,525 feet. Consequently, additional releases from these reservoirs are currently being considered.



## Desert Southwest Region

|               | Snowpack<br>(Inches in Snow<br>Water Equivalent) |        | Lake/Reservoir Inflow<br>(Thousand Acre-Feet) |        | Lake/Reservoir<br>Content<br>(Million Acre-Feet) |        | Generation (MWh) |                  |           |           | Purchase<br>Power<br>(MWh) | Purchase Power Expenses (Dollars) |                  |              |
|---------------|--|--------|---|--------|--|--------|------------------|------------------|-----------|-----------|----------------------------|-----------------------------------|------------------|--------------|
|               | Median   | Actual | Average                                       | Actual | Average  | Actual | Projected<br>Dry | Most<br>Probable | Average   | Actual    | Actual                     | Projected<br>Dry                  | Most<br>Probable | Actual       |
| <b>Oct 20</b> | 1.3  | 0.8    | 59.65   | 35     | 19.82  | 12.25  | 407,200          | 384,190          | 377,268   | 391,920   | 27,216                     | \$498,024                         | \$498,024        | \$1,510,510  |
| <b>Nov 20</b> | 4.8  | 3.4    | 55.47   | 56     | 19.86  | 12.28  | 361,600          | 360,155          | 362,391   | 355,236   | 21,032                     | \$800,684                         | \$800,684        | \$1,098,412  |
| <b>Dec 20</b> | 8.1  | 6.3    | 73.06   | 60     | 20   | 12.46  | 217,750          | 256,520          | 365,340   | 266,410   | 24,797                     | \$1,639,676                       | \$1,639,676      | \$1,208,261  |
| <b>Jan 21</b> | 11.5   | 8.6    | 93  | 74     | 20.16  | 12.78  | 274,050          | 299,265          | 388,937   | 296,996   | 33,596                     | \$907,204                         | \$907,204        | \$1,391,031  |
| <b>Feb 21</b> | 15.1   | 12.6   | 107.5   | 56     | 20.2   | 12.88  | 318,150          | 305,675          | 386,998   | 311,351   | 14,841                     | \$747,756                         | \$747,756        | \$760,432    |
| <b>Mar 21</b> | 18.9   | 16.3   | 103.81  | 34     | 20.01  | 12.63  | 522,450          | 517,060          | 526,368   | 517,092   | 10,701                     | \$1,092,436                       | \$1,092,436      | \$475,939    |
| <b>Apr 21</b> | 19.4   | 13.9   | 83.65   | 37     | 19.84  | 12.22  | 553,400          | 567,845          | 569,446   | 570,700   | 9,356                      | \$286,954                         | \$286,954        | \$453,665    |
| <b>May 21</b> | 7.9  | 4      | 58.4  | 28     | 19.92  | 11.75  | 535,900          | 582,945          | 570,961   | 592,962   | 10,127                     | \$383,310                         | \$383,310        | \$516,477    |
| <b>Jun 21</b> | 0  | 0.3    | 26.28   | -13    | 20.09  | 11.4   | 493,750          | 508,340          | 535,980   | 505,949   | 11,268                     | \$3,097,474                       | \$3,097,474      | \$3,295,728  |
| <b>Jul 21</b> | 0  | 0.3    | 66.28   | 93     | 20   | 11.31  | 455,000          | 454,435          | 545,092   | 452,862   | 9,229                      | \$6,398,969                       | \$6,398,969      | \$5,041,605  |
| <b>Aug 21</b> | 0  | 0      | 97.47   | 89     | 19.88  | 11.32  | 394,150          | 396,310          | 507,986   | 400,165   | 37,055                     | \$10,525,501                      | \$10,525,501     | \$5,182,292  |
| <b>Sep 21</b> | 0  | 0.1    | 85  | 50     | 19.77  | 11.17  | 362,500          | 340,650          | 429,334   | 344,981.8 | 44,865                     | \$5,587,271                       | \$5,587,271      | \$4,584,278  |
| <b>Total</b>  |  |        |   |        |  |        | 4,895,900        | 4,973,390        | 5,566,101 | 5,006,627 | 254,083                    | \$31,965,259                      | \$31,965,259     | \$25,518,630 |

Actual generation as a percentage of average: 89.9%

Cost per MWh: \$100.43

### Lake/Reservoir Levels

Aggregate system storage for the Lower Colorado River Basin, or Lakes Mead, Mohave and Havasu, was 11.2 million acre-feet (MAF) at the end of September or 39% of the Lower Basin capacity. The Lower Basin tributary inflow into Lake Mead for August 2021 was 50,000 acre-feet. The total side inflow into Lake Mead for Water Year 2021 was 593,000 acre-feet, which represents a 31% decrease over last year's actual of 863,000 acre-feet and 46% of the normal annual side inflow of 1.3 MAF. Lake Mead elevation at the end of September 2021 was 1,067.68 feet or about 117.8 feet above the minimum generation elevation for Hoover Dam.

### Weather and Other Conditions

The Desert Southwest Region's hydrology, or the Lower Colorado River Basin, is mostly dependent on the Colorado River Basin snowpack and precipitation above Lake Powell. The precipitation is currently 151% of average.

*Note: DSW's projected dry and most probable generation data are reported from studies conducted by the U.S. Bureau of Reclamation.*



## Rocky Mountain Region

|               | Snowpack<br>(Inches in Snow<br>Water Equivalent) |        | Lake/Reservoir Inflow<br>(Thousand Acre-Feet) |        | Lake/Reservoir<br>Content<br>(Million Acre-Feet) |        | Generation (MWh) |                  |           |           | Purchase<br>Power<br>(MWh) | Purchase Power Expenses (Dollars) |                  |              |
|---------------|--|--------|---|--------|--|--------|------------------|------------------|-----------|-----------|----------------------------|-----------------------------------|------------------|--------------|
|               | Median   | Actual | Average                                       | Actual | Average  | Actual | Projected<br>Dry | Most<br>Probable | Average   | Actual    | Actual                     | Projected<br>Dry                  | Most<br>Probable | Actual       |
|               | <b>Oct 20</b>                                    | 0.00   | 0.00  | 142.50 | 95.30  | 3.854  | 4.138            | 97,268           | 107,268   | 104,469   | 73,515                     | 103,847                           | \$ 1,853,600     | \$ 1,533,600 |
| <b>Nov 20</b> | 3.70   | 4.00   | 125.30  | 111.10 | 3.702  | 4.02   | 49,932           | 59,932           | 71,586    | 48,589    | 124,138                    | \$ 1,131,072                      | \$ 811,072       | \$ 3,817,277 |
| <b>Dec 20</b> | 11.80  | 8.90   | 126.10  | 111.20 | 3.794  | 4.105  | 92,471           | 102,471          | 105,136   | 81,323    | 99,875                     | \$ 1,319,040                      | \$ 999,040       | \$ 3,007,865 |
| <b>Jan 21</b> | 18.60  | 20.40  | 100.40  | 84.30  | 3.788  | 4.075  | 114,675          | 124,675          | 101,067   | 112,305   | 65,082                     | \$ 1,701,344                      | \$ 1,381,344     | \$ 1,576,446 |
| <b>Feb 21</b> | 25.80  | 27.90  | 99.30   | 78.60  | 3.771  | 4.064  | 101,654          | 111,654          | 100,751   | 95,375    | 37,972                     | \$ -                              | \$ -             | \$ 3,394,430 |
| <b>Mar 21</b> | 37.30  | 33.90  | 160.50  | 130.80 | 3.785  | 4.125  | 108,080          | 118,080          | 144,642   | 106,409   | 35,071                     | \$ -                              | \$ -             | \$ 894,723   |
| <b>Apr 21</b> | 45.70  | 43.50  | 252.20  | 191.20 | 3.819  | 4.129  | 123,233          | 133,233          | 206,415   | 151,191   | 21,931                     | \$ 1,322,176                      | \$ 1,002,176     | \$ 593,809   |
| <b>May 21</b> | 43.30  | 36.70  | 759.80  | 536.80 | 4.143  | 4.341  | 197,390          | 207,390          | 234,507   | 181,846   | 10,531                     | \$ -                              | \$ -             | \$ 332,956   |
| <b>Jun 21</b> | 11.30  | 9.00   | 1197.50                                       | 870.70 | 3.733  | 4.665  | 211,066          | 221,066          | 269,854   | 204,831   | 21,365                     | \$ 89,312                         | \$ 230,688       | \$ 1,310,337 |
| <b>Jul 21</b> | 0.00   | 0.00   | 543.10  | 334.00 | 4.373  | 4.443  | 220,682          | 230,682          | 260,779   | 235,935   | 20,052                     | \$ 2,084,224                      | \$ 1,764,224     | \$ 1,828,652 |
| <b>Aug 21</b> | 0.00   | 0.00   | 165.10  | 145.50 | 3.835  | 3.883  | 221,646          | 231,646          | 199,700   | 193,651   | 16,655                     | \$ 3,592,576                      | \$ 3,272,576     | \$ 828,711   |
| <b>Sep 21</b> | 0.00   | 0.00   | 128.70  | 85.90  | 3.700  | 3.669  | 153,809          | 163,809          | 94,000    | 110,044   | 35,561                     | \$ 2,708,128                      | \$ 2,388,128     | \$ 2,415,965 |
| <b>Total</b>  |  |        |   |        |  |        | 1,691,906        | 1,811,906        | 1,892,907 | 1,595,014 | 592,080                    | \$15,801,472                      | \$13,382,848     | \$23,247,676 |

Actual generation as a percentage of average: 84.3%

Cost per MWh: \$39.26

### Lake/Reservoir Content

At the end of September, reservoir inflows were 67% of average and reservoir storage was at 99% of average.

### Weather and Other Conditions

LAP's hydrologic conditions can vary from one river basin and watershed to another. The runoff is complete; no snow accumulation yet. The latest National Weather Service forecast indicates November through January temperatures will most likely be above average in Wyoming and Colorado. The same forecast indicates precipitation will be below average for Wyoming and Colorado. Winter generation in the Colorado River Basin, the North Platte Basin and the Big Horn Basin is forecasted to be below average due to unit and transmission maintenance schedules.



## Sierra Nevada Region

|               | Snowpack<br>(Inches in Snow<br>Water Equivalent) |        | Lake/Reservoir Inflow<br>(Thousand Acre-Feet) |        | Lake/Reservoir<br>Content<br>(Million Acre-Feet) |        | Generation (MWh) |                  |           |           | Purchase<br>Power<br>(MWh) | Purchase Power Expenses (Dollars) |                  |              |
|---------------|--|--------|---|--------|--|--------|------------------|------------------|-----------|-----------|----------------------------|-----------------------------------|------------------|--------------|
|               | Median   | Actual | Average                                       | Actual | Average  | Actual | Projected<br>Dry | Most<br>Probable | Average   | Actual    | Actual                     | Projected<br>Dry                  | Most<br>Probable | Actual       |
|               | <b>Oct 20</b>                                    | N/A    | N/A   | 328.00 | 256.00   | 5.383  | 5.233            | 139,000          | 79,000    | 163,000   | 119,699                    | 55,232                            | \$ 659,220       | \$ 659,220   |
| <b>Nov 20</b> | N/A  | N/A    | 399.00  | 283.00 | 5.338  | 5.133  | 53,000           | 38,000           | 104,000   | 70,365    | 53,796                     | \$ 628,188                        | \$ 628,188       | \$ 1,150,708 |
| <b>Dec 20</b> | 27.37  | 5.20   | 791.00  | 303.00 | 5.617  | 5.117  | 30,000           | 0                | 143,000   | 74,714    | 55,552                     | \$ 654,300                        | \$ 654,300       | \$ 1,302,849 |
| <b>Jan 21</b> | 28.29  | 11.60  | 949.00  | 417.00 | 6.032  | 5.223  | 0                | 0                | 163,000   | 38,018    | 58,365                     | \$ 634,400                        | \$ 634,400       | \$ 1,330,776 |
| <b>Feb 21</b> | 27.96  | 15.10  | 1,216.00                                      | 501.00 | 6.620  | 5.451  | 56,000           | 0                | 195,000   | 11,982    | 53,443                     | \$ 578,400                        | \$ 578,400       | \$ 1,111,030 |
| <b>Mar 21</b> | 28.00  | 16.80  | 1,439.00                                      | 515.00 | 7.309  | 5.584  | 107,000          | 92,000           | 207,000   | 85,317    | 52,517                     | \$ 641,275                        | \$ 641,275       | \$ 912,219   |
| <b>Apr 21</b> | 27.37  | 5.20   | 1,241.00                                      | 486.00 | 7.667  | 5.414  | 234,000          | 219,000          | 288,000   | 143,983   | 47,646                     | \$ 496,000                        | \$ 496,000       | \$ 520,900   |
| <b>May 21</b> | 0.00   | 0.00   | 1,017.00                                      | 364.00 | 7.587  | 5.058  | 264,000          | 319,000          | 442,000   | 172,564   | 49,957                     | \$ 514,400                        | \$ 514,400       | \$ 673,243   |
| <b>Jun 21</b> | 0.00   | 0.00   | 694.00  | 224.00 | 7.122  | 4.399  | 353,000          | 358,000          | 440,000   | 282,859   | 45,421                     | \$ 496,000                        | \$ 496,000       | \$ 807,686   |
| <b>Jul 21</b> | 0.00   | 0.00   | 412.00  | 216.00 | 6.367  | 3.744  | 339,000          | 319,000          | 524,000   | 343,572   | 40,993                     | \$ 237,800                        | \$ 237,800       | \$ 3,370,811 |
| <b>Aug 21</b> | 0.00   | 0.00   | 331.00  | 220.00 | 5.72   | 3.22   | 84,000           | 49,000           | 402,000   | 291,047   | 38,879                     | \$ 237,800                        | \$ 237,800       | \$ 3,390,629 |
| <b>Sep 21</b> | 0.00   | 0.00   | 301.00  | 199.00 | 5.31   | 2.86   | 187,000          | 182,000          | 269,000   | 180,475   | 46,931                     | \$ 232,000                        | \$ 232,000       | \$3,296,347  |
| <b>Total</b>  |  |        |   |        |  |        | 1,846,000        | 1,655,000        | 3,340,000 | 1,814,597 | 598,732                    | \$6,009,783                       | \$6,009,783      | \$18,846,261 |

Actual generation as a percentage of average: 54.3%

Cost per MWh: \$31.48

### Lake/Reservoir Content

As of September 30, reservoir storage was 54% of the 15-year average for Trinity, 47% for Shasta, 53% for Folsom and 66% for New Melones. Accumulated inflow was 32% of the 15-year average for Trinity, 52% for Shasta, 35% for Folsom and 36% for New Melones.

### Weather and Other Conditions

September's precipitation was 0.80 inch while October's was 0.01 inch. Water year total ended with 24 inches or 48% of average. Based on May 1 conditions, the Sacramento River Index forecast for 50% exceedance at 6.7 remains "critical" as does the 90% exceedance at 6.0.

*Note: The Sierra Nevada Region's average generation is based upon long-term modeling done for its "Green Book." The region does not project purchase power expenses for dry conditions, and its most probable expenses are based upon term purchases of 35 to 65% of projected power needs, with the difference being left to day-ahead markets after project pumping and generation have been scheduled.*



## Upper Great Plains Region

|               | Snowpack<br>(Inches in Snow<br>Water Equivalent) |        | Lake/Reservoir Inflow<br>(Thousand Acre-Feet) |          | Lake/Reservoir<br>Content<br>(Million Acre-Feet) |        | Generation (MWh) |                  |            |           | Purchase<br>Power<br>(MWh) | Purchase Power Expenses (Dollars) |                  |               |
|---------------|--|--------|---|----------|--|--------|------------------|------------------|------------|-----------|----------------------------|-----------------------------------|------------------|---------------|
|               | Median   | Actual | Average                                       | Actual   | Average  | Actual | Projected<br>Dry | Most<br>Probable | Average    | Actual    | Actual                     | Projected<br>Dry                  | Most<br>Probable | Actual        |
|               | <b>Oct 20</b>                                    | 1.20   | 1.80  | 7,972.00 | 7,076.94   | 56.14  | 58.83            | 746,590          | 761,389    | 940,624   | 769,992                    | 47,545                            | \$506,122        | \$434,886     |
| <b>Nov 20</b> | 3.80   | 3.60   | 7,334.00                                      | 6,581.48 | 55.06  | 57.86  | 707,706          | 701,922          | 896,730    | 658,194   | 144,803                    | \$2,448,719                       | \$2,547,526      | \$1,987,746   |
| <b>Dec 20</b> | 7.10   | 5.80   | 6,422.00                                      | 5,580.68 | 54.46  | 57.57  | 656,717          | 665,015          | 749,088    | 599,023   | 302,726                    | \$6,050,388                       | \$5,834,628      | \$5,568,644   |
| <b>Jan 21</b> | 10.30  | 8.20   | 6,641.00                                      | 5,891.16 | 54.18  | 57.41  | 686,110          | 723,426          | 822,676    | 650,060   | 230,299                    | \$4,808,232                       | \$4,051,414      | \$4,373,877   |
| <b>Feb 21</b> | 13.10  | 12.40  | 6,281.00                                      | 5,848.92 | 54.50  | 57.08  | 656,096          | 646,348          | 690,506    | 661,762   | 217,486                    | \$5,815,691                       | \$5,834,334      | \$111,920,701 |
| <b>Mar 21</b> | 15.80  | 14.00  | 8,151.00                                      | 6,911.39 | 56.20  | 57.66  | 794,579          | 729,876          | 699,331    | 641,883   | 133,008                    | \$1,281,677                       | \$2,132,459      | \$1,844,918   |
| <b>Apr 21</b> | 14.90  | 11.40  | 8,041.00                                      | 7,292.99 | 57.06  | 56.84  | 891,668          | 857,228          | 851,739    | 804,263   | 42,843                     | \$628,390                         | \$818,897        | \$525,770     |
| <b>May 21</b> | 6.30   | 5.00   | 9,654.00                                      | 8,690.01 | 58.35  | 56.76  | 916,793          | 885,710          | 966,235    | 870,298   | 18,527                     | \$256,611                         | \$382,869        | \$381,761     |
| <b>Jun 21</b> | 0.50   | 0.00   | 11,746.00                                     | 9,067.75 | 60.54  | 56.84  | 900,002          | 855,156          | 1,083,552  | 880,848   | 34,087                     | \$311,377                         | \$456,802        | \$982,727     |
| <b>Jul 21</b> | 0.00   | 0.00   | 10,694.00                                     | 7,809.00 | 60.49  | 53.87  | 1,005,351        | 989,448          | 1,212,432  | 866,662   | 75,109                     | \$110,000                         | \$98,906         | \$2,042,889   |
| <b>Aug 21</b> | 0.00   | 0.00   | 9,716.00                                      | 8,523.33 | 58.91  | 53.54  | 1,035,978        | 966,106          | 1,217,345  | 991,847   | 43,804                     | \$218,407                         | \$427,909        | \$941,347     |
| <b>Sep 21</b> | 0.09   | 0.00   | 8,629.00                                      | 7,190.29 | 57.38  | 52.15  | 840,888          | 854,156          | 1,052,058  | 795,883   | 6,055                      | \$623,881                         | \$542,235        | \$258,943     |
| <b>Total</b>  |  |        |   |          |  |        | 9,838,478        | 9,635,780        | 11,182,315 | 9,190,715 | 1,296,292                  | \$23,059,493                      | \$23,562,864     | \$131,901,472 |

Actual generation as a percentage of average: 82.2%

Cost per MWh: \$101.75

### Lake/Reservoir Content

The yearly runoff forecast for the Missouri River basin as of November 1 was 15.4 million acre-feet (MAF) or 58% of average. Runoff above Sioux City for October was .92 MAF or 75% of average. System storage as of November 23 is at 43.4 MAF. The snowpack has melted.

### Weather and Other Conditions

The U.S. Drought Monitor shows large areas of the upper Basin continue to be impacted by drought. Extreme Drought conditions are occurring in most of North Dakota, northwest South Dakota and northeastern Montana with some Exceptional Drought conditions in north-central Montana and North Dakota. Severe, Moderate Drought and Abnormally Dry conditions are occurring in much of the lower half of South Dakota.

Average purchase power amounts and prices for the year are skewed by the extreme pricing and increased purchasing during the polar vortex on February 15 and 16, with UGP significantly exceeding its purchase power estimates for fiscal year 2021 in just February.

*Note: The Upper Great Plains Region reports 50% share of Yellowtail Dam generation while Rocky Mountain Region reports the snowpack, inflow, content and remaining share of generation. Asterisks indicate that actual purchase power data is not available for the month.*

