January 29, 2021
Barcy F. McNeal
Docketing Division Chief
Public Utilities Commission of Ohio
180 East Broad Street
Columbus Ohio 43215-3793

Steven T. Nourse
VP - Legal
(614) 716-1608 (P)
(614) 716-2014 (F)
stnourse@aep.com

Re: In the Matter of the gridSMART Phase 2 Rider for Ohio
Power Company, Case No. 20-939-EL-RDR
Dear Ms. McNeal:
Consistent with the April 28, 2017 Application filed to initiate this case and in accordance with the February 1, 2017 Opinion and Order in Case No. 13-1939-ELRDR (gridSMART Phase 2 Order), Ohio Power Company (AEP Ohio) hereby submits its gridSMART Phase 2 rider update for the fourth quarter 2020. The gridSMART Phase 2 Order requires quarterly filings with automatic approval 30 days after the filing unless otherwise determined by the Commission. Therefore, absent Commission intervention the rates from this filing will become effective Cycle 1 March 2021.

Attachment 1 reflects the actual Phase 2 O\&M spending and Capital Carrying Charges from October through December 2020. The update includes the Capital Carrying Charges related to the movement of twenty-two thousand additional AMI meters to Phase 2 as Ordered in the Phase 2 Order (at Page 14), and the allocation between the Residential and Non-Residential classes as Ordered in the Global Settlement (Case No. 10-2929-EL-RDR et.al). Additionally, Attachment 1 includes a $20204^{\text {th }}$ Quarter Operational Savings Credit of $\$ 2,057,500$ and the allocation between the Residential and Non-Residential classes as Ordered in the November 21, 2019 Finding and Order in Case No. 18-1618-EL-RDR (at Page 7 Par A).Attached as Attachment 2 are revised tariff sheets 485-1 and 485-1D, reflecting the revised gridSMART Phase 2 Rider Rates. Workpaper 1 details the calculation of carrying charges for Phase 2 Capital Spending. Workpaper 2 details the additional twenty-two thousand meters mentioned above through February 2019. As agreed to with Staff, effective with March 2019 plant, the Company began tracking the total Net Book Value of AMI meters less the gridSMART Phase 1 AMI meters in account 370.16 (AMI Meters in Service).

Additionally, the gridSMART Phase 2 Order (at Page 15, par 37) requires the Company to report the non-financial metrics as shown on Attachment 3 of the Phase 2 Stipulation and Recommendation (filed on April 7, 2016) in this case, annually for the next six annual rider filings for the prior calendar year. However, in the Finding and Order Filed on November 21, 2019 in Case No 18-1618-EL-RDR (at Page 9, par I) the Company agreed to extend this reporting obligation through 2024. Please find the nonfinancial metrics report for 2020 included as modified by discussions with the Staff as Attachment 3. The 2020 nonfinancial metrics report contains revised values for several metrics to reflect improved reporting and corrected calculations. Please refer to the appendix for each metric for details regarding the change.

Thank you for your attention to this matter.
Regards,
/s/ Steven T. Nourse

## Ohio Power Company gridSMART Phase 2 4th Quarter 2020 True-up



## P.U.C.O. NO. 20

```
gridSMART PHASE 2 RIDER
```

Effective with the first billing cycle of December 2020March 2021, all customer bills subject to the provisions of this Rider, including any bills rendered under special contract, shall be adjusted by the monthly gridSMART Phase 2 charge. This rider shall be adjusted periodically to recover amounts authorized by the Commission. This Rider is subject to reconciliation, including, but not limited to, refunds to customers, based upon the impact to the carrying charge rate recovered through this Rider of changes in Federal corporate income taxes due to the Tax Cuts and Jobs Act of 2017 or based upon the results of audits ordered by the Commission in accordance with the February 1, 2017 Opinion and Order in Case No. 13-1939-EL-RDR.

Residential Customers
\$0.901.65
Non-Residential
$\$ 8.5514 .64$

Filed pursuant to Order dated April 25, 2018 in Case No. 16-1852-EL-SSO
Issued: October 26, 2020January 29, 2021
Effective: Cycle 1 December 2020March 2021
Issued by
Rajagopalan Sundararajan, President
AEP Ohio

P.U.C.O. NO. 20<br>OAD - gridSMART PHASE 2 RIDER<br>(Open Access Distribution - gridSMART Phase 2 Rider)

Effective with the first billing cycle of December 2020March 2021, all customer bills subject to the provisions of this Rider, including any bills rendered under special contract, shall be adjusted by the monthly gridSMART Phase 2 charge. This rider shall be adjusted periodically to recover amounts authorized by the Commission. This Rider is subject to reconciliation, including, but not limited to, refunds to customers, based upon the impact to the carrying charge rate recovered through this Rider of changes in Federal corporate income taxes due to the Tax Cuts and Jobs Act of 2017 or based upon the results of audits ordered by the Commission in accordance with the February 1, 2017 Opinion and Order in Case No. 13-1939-EL-RDR.

Residential Customers
\$0.901.65
Non-Residential
$\$ 8.5514 .64$

Filed pursuant to Order dated April 25, 2018 in Case No. 16-1852-EL-SSO
Issued: October 26, 2020January 29, 2021
Effective: Cycle 1 December
2020March 2021
Issued by
Rajagopalan Sundararajan, President
AEP Ohio

Workpaper 1
Page 1 of 17

| Depreciation Tables |  | Intangible Property - Account 303 5 Year Life |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Gioss <br> Capital Expenditure (booked cost) | Cumulative Gross Plant | Net Plant | $\begin{aligned} & \text { Depreciation } \\ & \text { Reserve } \end{aligned}$ | Accumulated Depreciation | Annual Depreciation Expense | $\begin{gathered} \text { Return } \\ \text { Carrying } \\ \text { Charge Rate } \end{gathered}$ | Depreciation Carrying Charge Rate | Property Carrying Charge | Annual Carrying Charge |
| 2017 | January | \$0.00 | - | - | \$0.00 |  |  |  |  |  |  |
|  | February | \$0.00 | - | - | \$0.00 |  |  | - | - |  | - |
|  | March | \$0.00 | - | - | \$0.00 |  |  | - | - | - | - |
|  | April | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | May | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | June | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | July | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | August | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | September | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | October | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | November | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | December | \$0.00 | - | - | \$0.00 | - | \$0.00 | - | - | - | . |
| 2018 | January | \$0.00 | - | - | \$0.00 | - |  | - |  | - | - |
|  | February | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | March | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | April | \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
|  | May | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | June | \$0.00 | $-$ | - | \$0.00 | - |  | - | - | - | - |
|  | July | \$0.00 |  | - | \$0.00 | - |  | - |  |  | - |
|  | August | \$491,762.92 | 491,762.92 | $460,535.66$ | \$31,227.26 | 31,227.26 |  | 3,534.61 | 81.96 | 1,170.53 | 4,787.10 |
|  | September | \$0.00 | 491,762.92 | 436,394.67 | \$24,140.99 | 55,368.25 |  | 3,349.33 | 81.96 | 1,109.17 | 9,327.56 |
|  | October | \$0.00 | 491,762.92 | 383,614.90 | \$52,779.77 | 108,148.02 |  | 2,944.24 | 81.96 | 975.02 | 13,328.79 |
|  | November | \$29,563.47 | 521,326.39 | 360,398.60 | \$52,779.77 | 160,927.79 |  | 2,766.06 | 86.89 | 916.01 | 17,097.75 |
|  | December | (\$29,563.47) | 491,762.92 | 277,562.64 | \$53,272.49 | 214,200.28 | \$214,200.28 | 2,130.29 | 81.96 | 705.47 | 20,015.47 |
| 2019 | January | \$0.00 | 491,762.92 | 224,782.87 | \$52,779.77 | 266,980.05 |  | 1,725.21 | 49,254.29 | 571.32 | $51,550.82$ |
|  | February | \$0.00 | 491,762.92 | 172,003.10 | \$52,779.77 | 319,759.82 |  | 1,320.12 | 8,196.05 | 437.17 | 61,504.17 |
|  | March | \$0.00 | 491,762.92 | 119,223.33 | \$52,779.77 | 372,539.59 |  | 915.04 | 8,196.05 | 303.03 | 70,918.28 |
|  | April | \$0.00 | 491,762.92 | 108,402.87 | \$10,820.46 | 383,360.05 |  | 831.99 | 8,196.05 | 275.52 | 80,221.85 |
|  | May | \$747,266.15 | 1,239,029.07 | 844,848.56 | \$10,820.46 | 394,180.51 |  | 6,484.21 | 20,650.48 | 2,147.32 | 109,503.87 |
|  | June | \$57,008.81 | 1,296,037.88 | 878,582.48 | \$23,274.89 | 417,455.40 |  | 6,743.12 | 21,600.63 | 2,233.06 | 140,080.68 |
|  | July | \$2,252,815.93 | 3,548,853.81 | 3,109,797.76 | \$21,600.65 | 439,056.05 |  | 23,867.70 | 59,147.56 | 7,904.07 | 231,000.01 |
|  | August | \$44,215.69 | 3,593,069.50 | 3,094,865.89 | \$59,147.56 | 498,203.61 |  | 23,753.10 | 59,884.49 | 7,866.12 | 322,503.72 |
|  | September | \$146.50 | 3,593,216.00 | 2,656,293.58 | \$438,718.81 | 936,922.42 |  | 20,387.05 | 59,886.93 | 6,751.41 | 409,529.12 |
|  | October | \$531,342.22 | 4,124,558.22 | 3,127,748.86 | \$59,886.94 | 996,809.36 |  | 24,005.47 | 68,742.64 | 7,949.70 | 510,226.92 |
|  | November | \$98,429.60 | 4,222,987.82 | 3,157,435.84 | \$68,742.62 | 1,065,551.98 |  | 24,233.32 | 70,383.13 | $8,025.15$ | 612,868.52 |
|  | December | \$0.00 | 4,222,987.82 | 3,069,341.30 | \$88,094.54 | 1,153,646.52 | \$939,446.24 | 23,557.19 | 70,383.13 | 7,801.24 | 714,610.09 |
| 2020 | January | \$0.00 | 4,222,987.82 | 2,998,958.16 | \$70,383.14 | 1,224,029.66 |  | 23,017.00 | 70,383.13 | 7,622.35 | 101,022.49 |
|  | February | \$0.00 | 4,222,987.82 | 2,928,575.02 | \$70,383.14 | 1,294,412.80 |  | 22,476.81 | 70,383.13 | 7,443.46 | 201,325.89 |
|  | March | \$0.00 | 4,222,987.82 | 2,858,191.90 | \$70,383.12 | 1,364,795.92 |  | 21,936.62 | 70,383.13 | 7,264.57 | 300,910.22 |
|  | April | \$2,267,187.68 | 6,490,175.50 | 5,054,996.47 | \$70,383.11 | 1,435,179.03 |  | 38,797.10 | 108,169.59 | 12,848.12 | 460,725.02 |
|  | May | \$4,564.72 | 6,494,740.22 | 4,951,391.58 | \$108,169.61 | 1,543,348.64 |  | 38,001.93 | 108,245.67 | 12,584.79 | 619,557.41 |
|  | June | \$503.81 | 6,495,244.03 | 4,838,667.10 | \$113,228.29 | 1,656,576.93 |  | 37,136.77 | 108,254.07 | 12,298.28 | 777,246.52 |
|  | July | \$2,213.48 | 6,497,457.51 | 4,732,626.52 | \$108,254.06 | 1,764,830.99 |  | 36,322.91 | 108,290.96 | 12,028.76 | 933,889.15 |
|  | August | \$0.00 | 6,497,457.51 | 4,624,335.53 | \$108,290.99 | 1,873,121.98 |  | 35,491.78 | 108,290.96 | 11,753.52 | 1,089,425.40 |
|  | September | \$0.00 | 6,497,457.51 | 4,516,044.60 | \$108,290.93 | 1,981,412.91 |  | 34,660.64 | 108,290.96 | 11,478.28 | 1,243,855.28 |
|  | October | (\$130,797.21) | 6,366,660.30 | 4,276,956.43 | \$108,290.96 | 2,089,703.87 |  | 32,825.64 | 106,111.01 | 10,870.60 | 1,393,662.53 |
|  | November | \$2,189,875.95 | 8,556,536.25 | 6,360,721.35 | \$106,111.03 | 2,195,814.90 |  | 48,818.54 | 142,608.94 | 16,166.83 | 1,601,256.84 |
|  | December |  |  |  |  |  | \$1,042,168.38 |  | - | - | 1,601,256.84 |
| 2021 | January February | - | - | - | - | - |  | - | - | - |  |
|  | March | - | . | . | - | - |  | - | . | - |  |
|  | April | - | - | - | - | - |  | - | - | - |  |
|  | May | - | - | - | - | - |  | - | - | - |  |
|  | June | - | - | - | - | - |  | - | - | - |  |
|  | July | - | - | - | - | - |  | - | - | - |  |
|  | August | - | - | - | - | - |  | - | - | - |  |
|  | September | - | - | - | - | - |  | - | - | - |  |
|  | October | - | - | - | - | - |  | - | - | - |  |
|  | November | - | - | - | - | - |  | - | - | - |  |
|  | December | - | - | - | - | - | - | - | - | - | . |
| 2022 | January February | : | - | - | - | : |  | - | - | - |  |
|  | March | . | - | - | - | - |  | - | - | . |  |
|  | April | - | - | - | - | - |  | - | - | - |  |
|  | May | - | - | - | - | - |  | - | - | - |  |
|  | June | - | - | - | - | - |  | - | - | - |  |
|  | July | - | - | - | - | - |  | - | - | - |  |
|  | August | - | - | - | - | - |  | - | - | - |  |
|  | September | - | - | - | - | - |  | - | - | - |  |
|  | October | - | - | - | - | - |  | - | - | - |  |
|  | November | - | - | - | - | - |  | - | - | - |  |
|  | December January | $\square$ | $\square$ | - | - | - | - | - | - | - | - |
| 2023 | January February | : | - | - | : | : |  | : | : | : |  |
|  | March | - | - | - | - | - |  | - | - | - |  |
|  | April | - | - | - | - | - |  | - | - | - |  |
|  | May | - | - | - | - | - |  | - | - | - |  |
|  | June | $:$ | : | $:$ | $:$ | $:$ |  | $:$ | $:$ | $:$ |  |
|  | August | - | - | - | - | - |  | - | - | - |  |
|  | September | - | - | - | - | - |  | - | - | - |  |
|  | October | - | - | - | - | - |  | - | - | - |  |
|  | November | - | - | - | - | - |  | - | - | - |  |
|  | December | - | - | - | - | - | - | - | - | - |  |
| 2024 | January | : | : | : | - | : |  | : | : | : |  |
|  | February March | : | $:$ | $\square$ | $\div$ | : |  | $\div$ | $\square$ | $:$ |  |
|  | April | - | - | - | - | - |  | - | - | - |  |
|  | May | - | - | - | - | - |  | - | - | - |  |
|  | June | - | - | - | - | - |  | - | - | - |  |
|  | July | - | - | - | - | - |  | - | - | - |  |
|  | August | - | - | - | - | - |  | - | - | - |  |
|  | September | - | - | - | - | - |  | - | - | - |  |
|  | October | - | - | - | - | - |  | - | - | - |  |
|  | November | $\cdot$ | - | - | - | - |  | - | - | $\cdot$ |  |
|  | December | - | - | - | - | - | $-$ | - | - | - | - |

Workpaper 1
Page 2 of 17


Workpaper 1
Page 3 of 17
gridSMART Phase 2 NBV
Depreciation Tables


Workpaper 1
Page 4 of 17
gridSMART Phase 2 NBV Depreciation Tables



Workpaper 1
Page 6 of 17
gridSMART Phase 2 NBV Depreciation Tables

| Overhead Conductors, Devices - Account 365 32 Year Life |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Giross <br> Capital Expenditure (booked cost) | Cumulative Gross Plant | Net Plant | $\begin{gathered} \text { Depreciation } \\ \text { Reserve } \\ \hline \end{gathered}$ | Accumulated Depreciation | Annual Depreciation Expense | Return Carrying Charge Rate | Depreciation Carrying Charge Rate | Property Carrying Charge | Annual Carrying Charge |
| \$0.00 | - | - | \$0.00 | - |  | - |  | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - |  | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - | \$0.00 | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - |  | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - |  |  |
| \$0.00 | - | - | \$0.00 |  |  | - |  |  |  |
| \$816.71 | 816.71 | 811.88 | \$4.83 | 4.83 |  | 6.23 | 2.47 | 2.06 | 10.77 |
| \$83.94 | 900.65 | 893.70 | \$2.12 | 6.95 |  | 6.86 | 2.72 | 2.27 | 22.62 |
| \$2.42 | 903.07 | 894.97 | \$1.15 | 8.10 |  | 6.87 | 2.73 | 2.27 | 34.50 |
| \$96,671.09 | 97,574.16 | 96,572.90 | \$993.16 | 1,001.26 |  | 741.20 | 295.16 | 245.46 | 1,316.31 |
| \$18,445.55 | 116,019.71 | 114,680.65 | \$337.80 | 1,339.06 |  | 880.17 | 350.96 | 291.48 | 2,838.92 |
| \$16,619.47 | 132,639.18 | 130,938.78 | \$361.34 | 1,700.40 |  | 1,004.96 | 401.23 | 332.80 | 4,577.92 |
| \$153,030.51 | 285,669.69 | 281,641.94 | \$2,327.35 | 4,027.75 |  | 2,161.60 | 864.15 | 715.84 | 8,319.51 |
| \$61,013.35 | 346,683.04 | 341,351.01 | \$1,304.28 | 5,332.03 | \$5,332.03 | 2,619.87 | 1,048.72 | 867.60 | 12,855.69 |
| \$34,573.53 | 381,256.57 | 374,528.69 | \$1,395.85 | 6,727.88 |  | 2,874.51 | 1,153.30 | 951.93 | 4,979.74 |
| \$10,651.76 | 391,908.33 | 384,212.31 | \$968.14 | 7,696.02 |  | 2,948.83 | 1,185.52 | 976.54 | 10,090.63 |
| \$428,103.30 | 820,011.63 | 809,076.07 | \$3,239.54 | 10,935.56 |  | 6,209.66 | 2,480.54 | 2,056.40 | 20,837.22 |
| \$394,751.41 | 1,214,763.04 | 1,199,440.17 | \$4,387.31 | 15,322.87 |  | 9,205.70 | 3,674.66 | 3,048.58 | 36,766.16 |
| \$118,100.93 | 1,332,863.97 | 1,314,668.50 | \$2,872.60 | 18,195.47 |  | 10,090.08 | 4,031.91 | 3,341.45 | 54,229.61 |
| \$55,464.61 | 1,388,328.58 | 1,367,443.36 | \$2,689.75 | 20,885.22 |  | 10,495.13 | 4,199.69 | 3,475.59 | 72,400.01 |
| \$41,122.38 | 1,429,450.96 | 1,405,576.47 | \$2,989.27 | 23,874.49 |  | 10,787.80 | 4,324.09 | 3,572.51 | 91,084.41 |
| \$36,017.69 | 1,465,468.65 | 1,438,453.93 | \$3,140.23 | 27,014.72 |  | 11,040.13 | 4,433.04 | 3,656.07 | 110,213.65 |
| (\$70,620.74) | 1,394,847.91 | 1,368,639.01 | (\$805.82) | 26,208.90 |  | 10,504.30 | 4,219.41 | 3,478.62 | 128,416.00 |
| \$20,625.14 | 1,415,473.05 | 1,386,794.68 | \$2,469.47 | 28,678.37 |  | 10,643.65 | 4,281.81 | 3,524.77 | 146,866.22 |
| \$46,533.98 | 1,462,007.03 | 1,430,443.23 | \$2,885.43 | 31,563.80 |  | 10,978.65 | 4,422.57 | 3,635.71 | 165,903.16 |
| \$363,383.51 | 1,825,390.54 | 1,785,773.94 | \$8,052.80 | 39,616.60 | \$34,284.57 | 13,705.81 | 5,521.81 | 4,538.84 | 189,669.62 |
| \$156,727.87 | 1,982,118.41 | 1,936,931.91 | \$5,569.90 | 45,186.50 |  | 14,865.95 | 5,995.91 | 4,923.04 | 25,784.90 |
| \$125,085.32 | 2,107,203.73 | 2,057,221.17 | \$4,796.06 | 49,982.56 |  | 15,789.17 | 6,374.29 | 5,228.77 | 53,177.13 |
| \$322,326.94 | 2,429,530.67 | 2,372,554.08 | \$6,994.03 | 56,976.59 |  | 18,209.35 | 7,349.33 | 6,030.24 | 84,766.05 |
| \$658,501.30 | 3,088,031.97 | 3,022,454.20 | \$8,601.18 | 65,577.77 |  | 23,197.34 | 9,341.30 | 7,682.07 | 124,986.76 |
| \$276,723.09 | 3,364,755.06 | 3,291,564.41 | \$7,612.88 | 73,190.65 |  | 25,262.76 | 10,178.38 | 8,366.06 | 168,793.96 |
| \$400,706.10 | 3,765,461.16 | 3,682,391.23 | \$9,879.28 | 83,069.93 |  | 28,262.35 | 11,390.52 | 9,359.41 | 217,806.24 |
| \$251,895.02 | 4,017,356.18 | 3,923,477.03 | \$10,809.22 | 93,879.15 |  | 30,112.69 | 12,152.50 | 9,972.17 | 270,043.60 |
| \$1,072,989.88 | 5,090,346.06 | 4,978,101.95 | \$18,364.96 | 112,244.11 |  | 38,206.93 | 15,398.30 | 12,652.68 | 336,301.51 |
| \$1,939,154.23 | 7,029,500.29 | 6,885,292.19 | \$31,963.99 | 144,208.10 |  | 52,844.62 | 21,264.24 | 17,500.12 | 427,910.48 |
| \$1,748,557.37 | 8,778,057.66 | 8,599,100.72 | \$34,748.84 | 178,956.94 |  | 65,998.10 | 26,553.62 | 21,856.05 | 542,318.25 |
| \$2,194,168.27 | 10,972,225.93 | 10,748,770.30 | \$44,498.69 | 223,455.63 |  | 82,496.81 | 33,190.98 | 27,319.79 | 685,325.84 |
| - |  | - |  |  | \$183,839.03 | - | - |  | 685,325.84 |
| - | - | - | - | - |  | - |  |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | $\square$ | - | - | - | - | - | - | - | - |
| - | - | - | - | - |  | - |  |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| : | - | - | - | - |  | - | - | - |  |
| $:$ | : | : | - | $:$ |  | - | : | : |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | - | - | - | - |
| - | - |  | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| : | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | . | - |  |  |  |  |  | - |  |
| - | - | - | - | . |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | $:$ | - |  |
| - | - | - | - | - |  | - | - | : |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | : | - | - |  |





Workpaper 1
Page 10 of 17


Workpaper 1
Page 11 of 17


Workpaper 1
Page 12 of 17
gridSMART Phase 2 NBV
Depreciation Tables

| $\begin{gathered} \text { AMI Meters - In Service - Account } 370.16 \\ 15 \text { Year Life } \end{gathered}$ |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Giross <br> Capital Expenditure (booked cost) | Cumulative Gross Plant | Net Plant | $\begin{aligned} & \text { Depreciation } \\ & \text { Reserve } \end{aligned}$ | Accumulated Depreciation | Annual Depreciation Expense | Return Carrying Charge Rate | Depreciation Carrying Charge Rate | Property Carrying Charge | Annual Carrying Charge |
| \$1,239.87 | 1,239.87 | 1,222.50 | \$17.37 | 17.37 |  | 10.74 | 8.47 | 3.11 | 22.32 |
| \$7,516.82 | 8,756.69 | 8,602.31 | \$137.01 | 154.38 |  | 75.56 | 59.84 | 21.86 | 179.58 |
| \$10,080,135.63 | 10,088,892.32 | 9,874,832.46 | \$213,905.48 | 214,059.86 |  | 86,733.95 | 68,940.76 | 25,098.53 | 180,952.82 |
| \$2,211,179.74 | 12,300,072.06 | 11,994,094.24 | \$91,917.96 | 305,977.82 |  | 105,348.13 | 84,050.49 | 30,484.99 | 400,836.43 |
| \$259,949.42 | 12,560,021.48 | 12,200,908.86 | \$53,134.80 | 359,112.62 |  | 107,164.65 | 85,826.81 | 31,010.64 | 624,838.53 |
| \$3,421,407.38 | 15,981,428.86 | 15,464,887.66 | \$157,428.58 | 516,541.20 |  | 135,833.26 | 109,206.43 | 39,306.59 | 909,184.82 |
| \$2,147,085.70 | 18,128,514.56 | 17,474,240.70 | \$137,732.66 | 654,273.86 |  | 153,482.08 | 123,878.18 | 44,413.70 | 1,230,958.78 |
| \$620,648.36 | 18,749,162.92 | 18,001,015.63 | \$93,873.43 | 748,147.29 |  | 158,108.92 | 128,119.28 | 45,752.58 | 1,562,939.56 |
| \$1,094,915.04 | 19,844,077.96 | 18,975,442.74 | \$120,487.93 | 868,635.22 | \$868,635.22 | 148,324.71 | 135,601.20 | 48,229.25 | 1,895,094.72 |
| \$195,189.23 | 20,039,267.19 | 19,017,621.71 | \$153,010.26 | 1,021,645.48 |  | 148,654.41 | 136,934.99 | 48,336.46 | 333,925.86 |
| \$135,871.15 | 20,175,138.34 | 18,997,019.45 | \$156,473.41 | 1,178,118.89 |  | 148,493.37 | 137,863.45 | 48,284.09 | 668,566.76 |
| \$3,647,640.00 | 23,822,778.34 | 22,449,049.13 | \$195,610.32 | 1,373,729.21 |  | 175,476.73 | 162,788.99 | 57,058.00 | 1,063,890.48 |
| \$4,832,814.65 | 28,655,592.99 | 27,028,777.23 | \$253,086.55 | 1,626,815.76 |  | 211,274.94 | 195,813.22 | 68,698.14 | 1,539,676.78 |
| \$7,575,022.16 | 36,230,615.15 | 34,278,430.95 | \$325,368.44 | 1,952,184.20 |  | 263,086.96 | 221,308.67 | 87,124.35 | 2,111,196.76 |
| \$4,839,797.68 | 41,070,412.83 | 39,034,492.70 | \$83,735.93 | 2,035,920.13 |  | 299,589.73 | 250,871.77 | 99,212.67 | 2,760,870.93 |
| \$13,396,162.35 | 54,466,575.18 | 51,931,587.96 | \$499,067.09 | 2,534,987.22 |  | 398,574.94 | 332,700.00 | 131,992.79 | 3,624,138.65 |
| \$6,369,471.03 | 60,836,046.21 | 57,888,208.99 | \$412,850.00 | 2,947,837.22 |  | 444,292.00 | 371,606.85 | 147,132.53 | 4,587,170.04 |
| \$8,131,220.50 | 68,967,266.71 | 65,519,081.73 | \$500,347.76 | 3,448,184.98 |  | 502,858.95 | 421,275.05 | 166,527.67 | 5,677,831.71 |
| \$10,793,821.76 | 79,761,088.47 | 75,685,156.12 | \$627,747.37 | 4,075,932.35 |  | 580,883.57 | 487,207.32 | 192,366.44 | 6,938,289.04 |
| \$10,622,801.11 | 90,383,889.58 | 85,621,076.17 | \$686,881.06 | 4,762,813.41 |  | 657,141.76 | 552,094.93 | 217,620.24 | 8,365,145.96 |
| \$17,964,265.68 | 108,348,155.26 | 103,438,346.52 | \$146,995.33 | 4,909,808.74 | \$4,041, 173.52 | 793,889.31 | 661,826.65 | 262,905.80 | 10,083,767.71 |
| (\$346,196.72) | 108,001,958.54 | 102,472,824.29 | \$619,325.51 | 5,529,134.25 |  | 786,478.93 | 659,711.96 | 260,451.76 | 1,706,642.65 |
| \$4,920,878.83 | 112,922,837.37 | 106,605,417.89 | \$788,285.23 | 6,317,419.48 |  | 818,196.58 | 689,770.33 | 270,955.44 | 3,485,565.00 |
| \$21,695,070.66 | 134,617,908.03 | 120,888,081.37 | \$7,412,407.18 | 13,729,826.66 |  | 927,816.02 | 822,291.05 | 307,257.21 | 5,542,929.29 |
| \$6,450,621.72 | 141,068,529.75 | 126,586,510.13 | \$752,192.96 | 14,482,019.62 |  | 971,551.47 | 861,693.60 | 321,740.71 | 7,697,915.07 |
| \$1,904,526.67 | 142,973,056.42 | 127,829,265.12 | \$661,771.68 | 15,143,791.30 |  | 981,089.61 | 873,327.09 | 324,899.38 | 9,877,231.15 |
| \$3,583,570.07 | 146,556,626.49 | 130,804,649.55 | \$608,185.64 | 15,751,976.94 |  | 1,003,925.69 | 895,216.73 | 332,461.82 | 12,108,835.38 |
| \$2,261,068.30 | 148,817,694.79 | 132,310,350.59 | \$755,367.26 | 16,507,344.20 |  | 1,015,481.94 | 909,028.09 | 336,288.81 | 14,369,634.21 |
| \$1,910,417.65 | 150,728,112.44 | 133,213,173.72 | \$1,007,594.52 | 17,514,938.72 |  | 1,022,411.11 | 920,697.55 | 338,583.48 | 16,651,326.36 |
| \$1,643,399.07 | 152,371,511.51 | 134,064,586.41 | \$791,986.38 | 18,306,925.10 |  | 1,028,945.70 | 930,735.98 | 340,747.49 | 18,951,755.53 |
| \$1,814,442.23 | 154,185,953.74 | 135,066,294.35 | \$812,734.29 | 19,119,659.39 |  | 1,036,633.81 | 941,819.20 | 343,293.50 | 21,273,502.04 |
| \$2,819,579.34 | 157,005,533.08 | 137,038,486.17 | \$847,387.52 | 19,967,046.91 |  | 1,051,770.38 | 959,042.13 | 348,306.15 | 23,632,620.70 |
| \$905,599.02 | 157,911,132.10 | 137,092,439.54 | \$851,645.65 | 20,818,692.56 | \$15,908,883.82 | 1,052,184.47 | 964,573.83 | 348,443.28 | 25,997,822.29 |
| \$869,832.07 | 158,780,964.17 | 137,141,299.09 | \$820,972.52 | 21,639,665.08 |  | 1,052,559.47 | 969,887.06 | 348,567.47 | 2,371,014.00 |
| \$1,120,002.54 | 159,900,966.71 | 137,509,540.67 | \$751,760.96 | 22,391,426.04 |  | 1,055,385.72 | 976,728.40 | 349,503.42 | 4,752,631.54 |
| \$913,014.48 | 160,813,981.19 | 137,562,871.84 | \$859,683.31 | 23,251,109.35 |  | 1,055,795.04 | 982,305.40 | 349,638.97 | 7,140,370.95 |
| \$569,560.22 | 161,383,541.41 | 137,210,895.09 | \$921,536.97 | 24,172,646.32 |  | 1,053,093.62 | 985,784.47 | 348,744.36 | 9,527,993.39 |
| \$1,048,078.16 | 162,431,619.57 | 137,355,869.09 | \$903,104.16 | 25,075,750.48 |  | 1,054,206.30 | 992,186.48 | 349,112.83 | 11,923,499.00 |
| \$425,803.97 | 162,857,423.54 | 136,920,519.19 | \$861,153.87 | 25,936,904.35 |  | 1,050,864.98 | 994,787.43 | 348,006.32 | 14,317,157.73 |
| \$547,135.30 | 163,404,558.84 | 136,646,092.71 | \$821,561.78 | 26,758,466.13 |  | 1,048,758.76 | 998,129.51 | 347,308.82 | 16,711,354.83 |
| \$512,071.64 | 163,916,630.48 | 136,331,178.71 | \$826,985.64 | 27,585,451.77 |  | 1,046,341.80 | 1,001,257.42 | 346,508.41 | 19,105,462.45 |
| \$473,306.99 | 164,389,937.47 | 135,945,577.34 | \$858,908.36 | 28,444,360.13 |  | 1,043,382.31 | 1,004,148.53 | 345,528.34 | 21,498,521.64 |
| \$1,092,913.42 | 165,482,850.89 | 136,157,348.74 | \$881,142.02 | 29,325,502.15 |  | 1,045,007.65 | 1,010,824.41 | 346,066.59 | 23,900,420.30 |
| \$86,725.22 | 165,569,576.11 | 135,359,860.13 | \$884,213.83 | 30,209,715.98 |  | 1,038,886.93 | 1,011,354.16 | 344,039.64 | 26,294,701.03 |
| - |  |  | - |  | \$9,391,023.42 | - | - | - | 26,294,701.03 |
| - | - | - | - | - |  |  |  |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | : | - | : | - |  | $\div$ | : | - |  |
| - | - | - | . | - |  | - |  |  |  |
| - | - | - | - | - |  | - | - |  |  |
| - | - | - | - | - |  | - | - |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| : | $:$ | $:$ | $:$ | $:$ |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | $:$ | : | : |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | : | - |  | - | $:$ | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - |  | - |  |  |  |  |  |  |  |

Workpaper 1
Page 13 of 17

| Depreciation Tables |  | Installs Customer Premises AMI - Account 37100 14 Year Life |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Giross <br> Capital Expenditure (booked cost) | Cumulative Gross Plant | Net Plant | $\begin{gathered} \text { Depreciation } \\ \text { Reserve } \\ \hline \end{gathered}$ | Accumulated Depreciation | Annual Depreciation Expense | Return Carrying Charge Rate | Depreciation Carrying Charge Rate | Property Carrying Charge | Annual Carrying Charge |
| 2017 | January <br> February <br> March |  |  |  |  |  |  |  |  |  |  |
|  | April | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | May | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | June | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | July | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | August | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | September | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | October | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | November | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | December | \$0.00 | - | - | \$0.00 | - | \$0.00 | - | - | - | - |
| 2018 | January | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | February | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | March | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | April | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | May | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | June | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | July | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | August | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | September | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | October | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | November | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | December | \$0.00 | - | - | \$0.00 | - | \$0.00 | - | - | - | - |
| 2019 | January | \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
|  | February | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | March | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | April | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | May | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | June | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | July | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | August | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | September | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | October | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | November | \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
|  | December | \$0.00 | - | - | \$0.00 | - | \$0.00 | - | - | - | - |
| 2020 | January | \$0.00 | - | - | \$0.00 | - |  | - | - | - | \$0.00 |
|  | February | \$0.00 | - | - | \$0.00 | - |  | - | - | - | \$0.00 |
|  | March | \$0.00 | - | - | \$0.00 | - |  | - | - | - | \$0.00 |
|  | April | \$0.00 | - | - | \$0.00 | - |  | - | - | - | \$0.00 |
|  | May | \$0.00 | - | - | \$0.00 | - |  | - | - | - | \$0.00 |
|  | June | \$357.64 | 357.64 | 350.79 | \$6.85 | 6.85 |  | 2.69 | 2.72 | 0.89 | \$6.31 |
|  | July | \$25.23 | 382.87 | 374.26 | \$1.76 | 8.61 |  | 2.87 | 2.92 | 0.95 | \$13.05 |
|  | August | \$7.20 | 390.07 | 379.99 | \$1.47 | 10.08 |  | 2.92 | 2.97 | 0.97 | \$19.90 |
|  | September | \$0.30 | 390.37 | 378.96 | \$1.33 | 11.41 |  | 2.91 | 2.97 | 0.96 | \$26.75 |
|  | October | \$0.00 | 390.37 | 377.63 | \$1.33 | 12.74 |  | 2.90 | 2.97 | 0.96 | \$33.58 |
|  | November | \$80.51 | 470.88 | 453.88 | \$4.26 | 17.00 |  | 3.48 | 3.59 | 1.15 | \$41.80 |
|  | December |  |  |  | . |  | \$17.00 |  | - |  | 41.80 |
| 2021 | January | - | - | - | - | - |  | - | - | - |  |
|  | February | - | - | - | - | - |  | - | - | - |  |
|  | March | - | - | - | - | - |  | - | - | - |  |
|  | April | - | - | - | - | - |  | - | - | - |  |
|  | May | - | - | - | - | - |  | - | - | - |  |
|  | June | - | - | - | - | - |  | - | - | - |  |
|  | July | - | - | - | - | - |  | - | - | - |  |
|  | August | - | - | - | - | - |  | - | - | - |  |
|  | September | - | - | - | - | - |  | - | - | - |  |
|  | October | - | - | - | - | - |  | - | - | - |  |
|  | November | - | - | - | - | - |  | - | - | - |  |
|  | December | - | - | - | - | - | - | - | - | - |  |
| 2022 | January | - | - | - | - | - |  | - | - | - |  |
|  | February | - | - | - | - | - |  | - | - | - |  |
|  | March | - | - | - | - | - |  | - | - | - |  |
|  | April | - | - | - | - | - |  | - | - | - |  |
|  | May | - | - | - | - | - |  | - | - | - |  |
|  | June | - | - | - | - | - |  | - | - | - |  |
|  | July | - | - | - | - | - |  | - | - | - |  |
|  | August | - | - | - | - | - |  | - | - | - |  |
|  | September | - | - | - | - | - |  | - | - | - |  |
|  | October | - | - | - | - | - |  | - | - | - |  |
|  | November | - | - | - | - | - |  | - | - | - |  |
|  | December | - | - | - | - | - | - | - | - | - |  |
| 2023 | January | - | - | - | - | - |  | - | - | - |  |
|  | February | - | - | - | - | - |  | - | - | - |  |
|  | March | - | - | - | - | - |  | - | - | - |  |
|  | April | - | - | - | - | - |  | - | - | - |  |
|  | May | - | - | - | - | - |  | - | - | - |  |
|  | June | - | - | - | - | - |  | - | - | - |  |
|  | July | - | - | - | - | - |  | - | - | - |  |
|  | August | - | - | - | - | - |  | - | - | - |  |
|  | September | - | - | - | - | - |  | - | - | - |  |
|  | October | - | - | - | - | - |  | - | - | - |  |
|  | November | - | - | - | - | - |  | - | - | - |  |
|  | December | - | - | - | - | - | - | - | - | - |  |
| 2024 | January |  | - | - | - | - |  | - | - | - |  |
|  | February | - | - | - | - | - |  | - | - | - |  |
|  | March | - | - | - | - | - |  | - | - | - |  |
|  | April | - | - | - | - | - |  | - | - | - |  |
|  | May | - | - | - | - | - |  | - | - | - |  |
|  | June | - | - | - | - | - |  | - | - | - |  |
|  | July | - | - | - | - | - |  | - | - | - |  |
|  | August | - | - | - | - | - |  | - | - | - |  |
|  | September | - | - | - | - | - |  | - | - | - |  |
|  | October | - | - | - | - | - |  | - | - | - |  |
|  | November December | - | - | - | - | - | - | $:$ | $:$ | - |  |

Workpaper 1
Page 14 of 17


Workpaper 1
Page 15 of 17
gridSMART Phase 2 NBV
Depreciation Tables

| Office Furniture \& Equip 391 30 Year Life |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gross <br> Capital Expenditure (booked cost) | Cumulative Gross Plant | Net Plant | $\begin{gathered} \text { Depreciation } \\ \text { Reserve } \\ \hline \end{gathered}$ | Accumulated Depreciation | Annual Depreciation Expense | Return Carrying Charge Rate | Depreciation Carrying Charge Rate | Property Carrying Charge | Annual Carrying Charge |
| \$0.00 | - | - | \$0.00 |  |  |  |  |  | - |
| \$0.00 | - | - | \$0.00 |  |  |  |  |  | - |
| \$0.00 | - | - | \$0.00 |  |  |  |  |  | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - | \$0.00 | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$112,941.71 | 112,941.71 | 112,941.71 | \$0.00 | - |  | 866.83 | 313.41 | 287.06 | 1,467.30 |
| \$0.00 | 112,941.71 | 112,941.71 | \$0.00 | - |  | 866.83 | 313.41 | 287.06 | 2,934.60 |
| \$0.00 | 112,941.71 | 112,941.71 | \$0.00 | - |  | 866.83 | 313.41 | 287.06 | 4,401.90 |
| \$29,211.53 | 142,153.24 | 139,890.54 | \$2,262.70 | 2,262.70 |  | 1,073.66 | 394.48 | 355.56 | 6,225.59 |
| \$0.00 | 142,153.24 | 139,677.46 | \$213.08 | 2,475.78 | \$2,475.78 | 1,072.02 | 394.48 | 355.01 | 8,047.11 |
| \$0.00 | 142,153.24 | 139,246.62 | \$430.84 | 2,906.62 |  | 1,068.72 | 394.48 | 353.92 | 1,817.11 |
| \$0.00 | 142,153.24 | 138,811.51 | \$435.11 | 3,341.73 |  | 1,065.38 | 394.48 | 352.81 | 3,629.78 |
| \$0.00 | 142,153.24 | 138,372.52 | \$438.99 | 3,780.72 |  | 1,062.01 | 394.48 | 351.70 | 5,437.96 |
| \$0.00 | 142,153.24 | 137,930.05 | \$442.47 | 4,223.19 |  | 1,058.61 | 394.48 | 350.57 | 7,241.62 |
| \$0.00 | 142,153.24 | 137,486.87 | \$443.18 | 4,666.37 |  | 1,055.21 | 394.48 | 349.45 | 9,040.75 |
| \$0.00 | 142,153.24 | 137,040.98 | \$445.89 | 5,112.26 |  | 1,051.79 | 394.48 | 348.31 | 10,835.33 |
| \$0.00 | 142,153.24 | 136,591.43 | \$449.55 | 5,561.81 |  | 1,048.34 | 394.48 | 347.17 | 12,625.31 |
| \$0.00 | 142,153.24 | 136,140.33 | \$451.10 | 6,012.91 |  | 1,044.88 | 394.48 | 346.02 | 14,410.69 |
| \$0.00 | 142,153.24 | 135,686.28 | \$454.05 | 6,466.96 |  | 1,041.39 | 394.48 | 344.87 | 16,191.43 |
| \$0.00 | 142,153.24 | 135,233.07 | \$453.21 | 6,920.17 |  | 1,037.91 | 394.48 | 343.72 | 17,967.53 |
| \$0.00 | 142,153.24 | 134,784.45 | \$448.62 | 7,368.79 |  | 1,034.47 | 394.48 | 342.58 | 19,739.06 |
| \$0.00 | 142,153.24 | 134,339.07 | \$445.38 | 7,814.17 | \$5,338.39 | 1,031.05 | 394.48 | 341.45 | 21,506.03 |
| \$0.00 | 142,153.24 | 133,878.83 | \$460.24 | 8,274.41 |  | 1,027.52 | 394.48 | 340.28 | 1,762.27 |
| \$0.00 | 142,153.24 | 133,417.97 | \$460.86 | 8,735.27 |  | 1,023.98 | 394.48 | 339.10 | 3,519.83 |
| \$0.00 | 142,153.24 | 132,957.21 | \$460.76 | 9,196.03 |  | 1,020.45 | 394.48 | 337.93 | 5,272.69 |
| \$0.00 | 142,153.24 | 132,496.24 | \$460.97 | 9,657.00 |  | 1,016.91 | 394.48 | 336.76 | 7,020.83 |
| \$0.00 | 142,153.24 | 132,035.32 | \$460.92 | 10,117.92 |  | 1,013.37 | 394.48 | 335.59 | 8,764.27 |
| \$0.00 | 142,153.24 | 131,574.80 | \$460.52 | 10,578.44 |  | 1,009.84 | 394.48 | 334.42 | 10,503.00 |
| \$0.00 | 142,153.24 | 131,115.06 | \$459.74 | 11,038.18 |  | 1,006.31 | 394.48 | 333.25 | 12,237.03 |
| \$0.00 | 142,153.24 | 130,656.25 | \$458.81 | 11,496.99 |  | 1,002.79 | 394.48 | 332.08 | 13,966.38 |
| \$0.00 | 142,153.24 | 130,198.64 | \$457.61 | 11,954.60 |  | 999.27 | 394.48 | 330.92 | 15,691.05 |
| \$0.00 | 142,153.24 | 129,742.65 | \$455.99 | 12,410.59 |  | 995.77 | 394.48 | 329.76 | 17,411.06 |
| \$0.00 | 142,153.24 | 129,288.77 | \$453.88 | 12,864.47 |  | 992.29 | 394.48 | 328.61 | 19,126.44 |
| - |  |  |  |  | \$5,050.30 | - | - | - | 19,126.44 |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| : | . | - | - | - |  | : | - | - |  |
| : | : | - | - | - |  | - | - | - |  |
| - | , | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - |  | - | - | - |  |
| $:$ | $:$ | $:$ | - | - |  | - | - | - |  |
| : | - | - | - | - |  | - | - | - |  |
| : | - | - | - | - |  | - | - | : |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| : | : | - | : | : | - | : | - | - | . |
| - | - | - | - | - |  | - | - | - |  |
| - |  | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| $:$ | - | - | - | - |  | - | - | - |  |
| : | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | - | - | - | $-$ |

Workpaper 1
Page 16 of 17
gridSMART Phase 2 NBV
Depreciation Tables

| Communications Equipment 397 35 Year Life |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Giross Capital Expenditure (booked cost) | Cumulative Gross Plant | Net Plant | $\begin{aligned} & \text { Depreciation } \\ & \text { Reserve } \end{aligned}$ | Accumulated Depreciation | Annual Depreciation Expense | Return Carrying Charge Rate | Depreciation Carrying Charge Rate | Property Carrying Charge | Annual Carrying Charge |
| \$0.00 | - | - | \$0.00 |  |  |  |  |  | - |
| \$0.00 | - | - | \$0.00 |  |  |  |  |  | - |
| \$0.00 | - | - | \$0.00 |  |  |  |  |  | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | . | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - | \$0.00 | - | - | - | - |
| \$0.00 | - | $\cdot$ | \$0.00 | - |  | - | - | - |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$77,086.89 | 77,086.89 | 76,353.51 | \$733.38 | 733.38 |  | 586.01 | 247.32 | 194.07 | 1,027.40 |
| \$24,944.92 | 102,031.81 | 100,939.93 | \$358.50 | 1,091.88 |  | 774.71 | 327.35 | 256.56 | 2,386.02 |
| \$83,341.45 | 185,373.26 | 183,169.86 | \$1,111.52 | 2,203.40 |  | 1,405.83 | 594.74 | 465.56 | 4,852.15 |
| \$56,283.69 | 241,656.95 | 238,500.76 | \$952.79 | 3,156.19 |  | 1,830.49 | 775.32 | 606.19 | 8,064.14 |
| \$367,291.96 | 608,948.91 | 600,275.20 | \$5,517.52 | 8,673.71 | \$8,673.71 | 4,607.11 | 1,953.71 | 1,525.70 | 16,150.67 |
| \$1,804.00 | 610,752.91 | 600,611.32 | \$1,467.88 | 10,141.59 |  | 4,609.69 | 453.17 | 1,526.55 | 6,589.41 |
| (\$9,326.07) | 601,426.84 | 590,238.25 | \$1,047.00 | 11,188.59 |  | 4,530.08 | 1,433.40 | 1,500.19 | 14,053.08 |
| \$69,854.61 | 671,281.45 | 658,193.72 | \$1,899.14 | 13,087.73 |  | 5,051.64 | 1,599.89 | 1,672.91 | 22,377.51 |
| \$124,005.88 | 795,287.33 | 780,011.88 | \$2,187.72 | 15,275.45 |  | 5,986.59 | 1,895.43 | 1,982.53 | 32,242.07 |
| \$19,845.01 | 815,132.34 | 798,044.90 | \$1,811.99 | 17,087.44 |  | 6,124.99 | 1,942.73 | 2,028.36 | 42,338.16 |
| \$3,036.10 | 818,168.44 | 799,387.94 | \$1,693.06 | 18,780.50 |  | 6,135.30 | 1,949.97 | 2,031.78 | 52,455.21 |
| \$72,053.88 | 890,222.32 | 869,341.52 | \$2,100.30 | 20,880.80 |  | 6,672.20 | 2,121.70 | 2,209.58 | 63,458.68 |
| \$129,762.13 | 1,019,984.45 | 996,619.09 | \$2,484.56 | 23,365.36 |  | 7,649.05 | 2,430.96 | 2,533.07 | 76,071.77 |
| \$88,396.73 | 1,108,381.18 | 1,082,211.33 | \$2,804.49 | 26,169.85 |  | 8,305.97 | 2,641.64 | 2,750.62 | 89,770.00 |
| \$147,022.65 | 1,255,403.83 | 1,225,524.34 | \$3,709.64 | 29,879.49 |  | 9,405.90 | 2,992.05 | 3,114.87 | 105,282.82 |
| \$446,281.16 | 1,701,684.99 | 1,663,856.97 | \$7,948.53 | 37,828.02 |  | 12,770.10 | 4,055.68 | 4,228.97 | 126,337.58 |
| \$254,467.55 | 1,956,152.54 | 1,912,059.56 | \$6,264.96 | 44,092.98 | \$35,419.27 | 14,675.06 | 4,662.16 | 4,859.82 | 150,534.61 |
| \$120,549.52 | 2,076,702.06 | 2,025,845.37 | \$6,763.71 | 50,856.69 |  | 15,548.36 | 4,949.47 | 5,149.02 | 25,646.86 |
| \$42,187.01 | 2,118,889.07 | 2,062,580.33 | \$5,452.05 | 56,308.74 |  | 15,830.30 | 5,050.02 | 5,242.39 | 51,769.57 |
| \$186,253.72 | 2,305,142.79 | 2,243,367.15 | \$5,466.90 | 61,775.64 |  | 17,217.84 | 5,493.92 | 5,701.89 | 80,183.23 |
| (\$16,207.56) | 2,288,935.23 | 2,225,010.69 | \$2,148.90 | 63,924.54 |  | 17,076.96 | 5,455.30 | 5,655.24 | 108,370.72 |
| \$358,951.98 | 2,647,887.21 | 2,577,003.64 | \$6,959.03 | 70,883.57 |  | 19,778.50 | 6,310.80 | 6,549.88 | 141,009.91 |
| \$37,919.31 | 2,685,806.52 | 2,609,467.69 | \$5,455.26 | 76,338.83 |  | 20,027.66 | 6,401.17 | 6,632.40 | 174,071.14 |
| \$12,536.75 | 2,698,343.27 | 2,616,668.48 | \$5,335.96 | 81,674.79 |  | 20,082.93 | 6,431.05 | 6,650.70 | 207,235.82 |
| \$41,018.05 | 2,739,361.32 | 2,651,283.47 | \$6,403.06 | 88,077.85 |  | 20,348.60 | 6,528.81 | 6,738.68 | 240,851.91 |
| \$289,332.04 | 3,028,693.36 | 2,932,227.67 | \$8,387.84 | 96,465.69 |  | 22,504.85 | 7,218.39 | 7,452.75 | 278,027.89 |
| \$63,258.97 | 3,091,952.33 | 2,989,545.50 | \$5,941.14 | 102,406.83 |  | 22,944.76 | 7,369.15 | 7,598.43 | $315,940.23$ |
| (\$541.16) | 3,091,411.17 | 2,983,414.51 | \$5,589.83 | 107,996.66 |  | 22,897.71 | 7,367.86 | 7,582.85 | 353,788.65 |
| - |  |  | - |  | \$63,903.68 | - | - | - | 353,788.65 |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | . | . | . | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| : | - | : | - | - |  | - | - | - |  |
| - | - | - | . | - |  | - | - |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| $:$ | : | $:$ | : | $:$ |  | $:$ | $:$ | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| $:$ | : | : | - | - |  | : | - | - |  |
| - | - | - | - | : |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | : | : | $:$ | - |  | $:$ | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | $:$ | $:$ | $:$ | $:$ | - | $:$ | $:$ | $:$ | - |

Workpaper 1
Page 17 of 17

## griasMART Phase 2 N

 Depreciation Tables| AMI Communication Equipment - Account 397.16 15 Year Life |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Giross Capital Expenditure (booked cost) | Cumulative Gross Plant | Net Plant | $\begin{aligned} & \text { Depreciation } \\ & \text { Reserve } \end{aligned}$ | Accumulated Depreciation | Annual Depreciation Expense | $\begin{gathered} \begin{array}{c} \text { Return } \\ \text { Carrying } \\ \text { Charge Rate } \end{array} \\ \hline \end{gathered}$ | Depreciation Carrying Charge Rate | Property Carrying Charge | Annual Carrying Charge |
| \$0.00 | - |  | \$0.00 |  |  |  |  |  |  |
| \$0.00 | - | - | \$0.00 |  |  |  |  |  |  |
| \$0.00 | - | - | \$0.00 |  |  |  |  |  |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - |  |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
| \$0.00 | - | - | \$0.00 | - | \$0.00 | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  |  |  |  |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - | - |
| \$0.00 | - | - | \$0.00 | - |  | - | - | - |  |
| \$0.00 |  | - | \$0.00 | - |  |  |  |  |  |
| \$232,171.85 | 232,171.85 | 223,360.43 | \$8,811.42 | \$8,811.42 | \$8,811.42 | 1,714.29 | 1,290.49 | 567.71 | 3,572.49 |
| \$16,512.34 | 248,684.19 | 237,944.13 | \$1,928.64 | \$10,740.06 |  | 1,826.22 | 1,382.27 | 604.77 | 3,813.27 |
| \$7,646.47 | 256,330.66 | 243,714.09 | \$1,876.51 | \$12,616.57 |  | 1,870.51 | 1,424.77 | 619.44 | 7,727.98 |
| \$10,633.43 | 266,964.09 | 252,145.73 | \$2,201.79 | \$14,818.36 |  | 1,935.22 | 1,483.88 | 640.87 | 11,787.95 |
| \$2,299.19 | 269,263.28 | 252,396.56 | \$2,048.36 | \$16,866.72 |  | 1,937.14 | 1,496.66 | 641.51 | 15,863.25 |
| \$6,442.41 | 275,705.69 | 256,650.76 | \$2,188.21 | \$19,054.93 |  | 1,969.79 | 1,532.46 | 652.32 | 20,017.83 |
| \$114,750.52 | 390,456.21 | 367,283.75 | \$4,117.53 | \$23,172.46 |  | 2,818.90 | 2,170.29 | 933.51 | 25,940.53 |
| \$9,551.16 | 400,007.37 | 374,170.95 | \$2,663.96 | \$25,836.42 |  | 2,871.76 | 2,223.37 | 951.02 | 31,986.69 |
| \$123,686.79 | 523,694.16 | 492,399.43 | \$5,458.31 | \$31,294.73 |  | 3,779.17 | 2,910.87 | 1,251.52 | 39,928.24 |
| \$16,640.67 | 540,334.83 | 505,618.33 | \$3,421.77 | \$34,716.50 |  | 3,880.62 | 3,003.36 | 1,285.11 | 48,097.33 |
| \$11,957.34 | 552,292.17 | 514,194.43 | \$3,381.24 | \$38,097.74 |  | 3,946.44 | 3,069.82 | 1,306.91 | 56,420.51 |
| \$39,148.34 | 591,440.51 | 548,972.85 | \$4,369.92 | \$42,467.66 |  | 4,213.37 | 3,287.42 | 1,395.31 | 65,316.60 |
| \$26,591.24 | 618,031.75 | 571,401.19 | \$4,162.90 | \$46,630.56 | \$37,819.14 | 4,385.50 | 3,435.23 | 1,452.31 | 74,589.65 |
| \$29,897.13 | 647,928.88 | 596,010.26 | \$5,288.06 | \$51,918.62 |  | 4,574.38 | 3,601.40 | 1,514.86 | 9,690.64 |
| \$60,415.83 | 708,344.71 | 648,620.30 | \$7,805.79 | \$59,724.41 |  | 4,978.16 | 3,937.22 | 1,648.58 | 20,254.60 |
| \$17,555.47 | 725,900.18 | 660,055.66 | \$6,120.11 | \$65,844.52 |  | 5,065.93 | 4,034.80 | 1,677.64 | 31,032.96 |
| \$273,738.33 | 999,638.51 | 911,201.47 | \$22,592.52 | \$88,437.04 |  | 6,993.47 | 5,556.32 | 2,315.97 | 45,898.73 |
| \$5,958.68 | 1,005,597.19 | 909,427.61 | \$7,732.54 | \$96,169.58 |  | 6,979.86 | 5,589.44 | 2,311.46 | 60,779.49 |
| \$93,872.09 | 1,099,469.28 | 992,804.39 | \$10,495.31 | \$106,664.89 |  | 7,619.77 | 6,111.22 | 2,523.38 | 77,033.86 |
| \$17,353.90 | 1,116,823.18 | 1,001,042.31 | \$9,115.98 | \$115,780.87 |  | 7,683.00 | 6,207.68 | 2,544.32 | 93,468.85 |
| \$3,347.73 | 1,120,170.91 | 996,214.67 | \$8,175.37 | \$123,956.24 |  | 7,645.95 | 6,226.28 | 2,532.05 | 109,873.12 |
| \$8,611,283.22 | 9,731,454.13 | 9,384,491.28 | \$223,006.61 | \$346,962.85 |  | 72,025.97 | 54,090.67 | 23,852.25 | 259,842.01 |
| \$62,357.65 | 9,793,811.78 | 9,410,637.93 | \$36,211.00 | \$383,173.85 |  | 72,226.65 | 54,437.27 | 23,918.70 | 410,424.63 |
| \$40,101.01 | 9,833,912.79 | 9,415,303.04 | \$35,435.90 | \$418,609.75 |  | 72,262.45 | 54,660.17 | 23,930.56 | 561,277.81 |
| - |  |  | - |  | \$371,979.19 | - | - | - | 561,277.81 |
| - | - | - | - | - |  |  |  |  |  |
| $:$ | $:$ | $:$ | $:$ | $:$ |  | - | - | - |  |
| . | - | . | - | . |  | - | - | - |  |
| - | - | - | - | - |  |  | - |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| : | - | - | - | - |  | - | - | - |  |
| : | : | - | - | - | - | - | $\div$ | - |  |
| - | - | - | - | - |  |  |  |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | * |  |
| - | - | - | - | - |  | - | - | - |  |
| $:$ | $:$ | $:$ | $:$ | $:$ |  | - | - | - |  |
| : | : | : | - | $:$ |  | $:$ | - | - |  |
| - | - | - | - | - |  | - | . |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| $:$ | : | $:$ | - | - |  | - | : | - |  |
|  |  |  |  |  |  |  |  |  |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| $:$ | $:$ | $:$ | - | - |  | - | - | - |  |
| $:$ | : | $:$ | - | : |  | $:$ | $:$ | - |  |
| - | - | - | - | . |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - |  | - | - |  |  |
| $:$ | $:$ | - | $:$ | : |  | $\div$ | - | - |  |
| - | - | - | $\div$ | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| - | - | - | - | - |  | - | - | - |  |
| $:$ | : | $:$ | $:$ | - |  | $:$ | - | - |  |
| : | : | : | - | $:$ |  | $:$ | - | $:$ |  |
| : | : | : | - | : | - | $\div$ | - | $\div$ | - |



## ATTACHMENT 3

NON FINANCIAL METRICS

NON FINANCIAL METRICS

| AMI / Meter Metrics |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Physical Meters | Metric Definition | Baseline Detail and Timeline | Baseline Value | 2019 Ye Value | 2020 YE Value |
| \# of Certified Meters <br> See Appendix A for monthly detail | The number of AMI meters installed, communicating, and available for billing within the Phase 1 and Phase 2 deployment area. | Start of Phase 2 <br> - \# of Phase 1 Meters as of $2 / 1 / 2017$ <br> - Snapshot at baseline date | 134,349 | 1,026,887 | 1,056,849 |
| AMI meters installed, but not certified See Appendix B for monthly detail | The number of AMI meters installed, but not communicating and considered Active within the Phase 2 deployment area. | Start of Phase 2 <br> - \# of Phase 1 Meters as of $2 / 1 / 2017$ <br> - Snapshot at baseline date | 0 | 0 | 0 |
| Certified smart meter failures See Appendix Cfor monthly detail | The number of certified AMI Meters that are removed due to defect. <br> - Includes Phase 1 \& Phase 2 areas | End of Phase 1 <br> - Total \# of failures between $1 / 15 / 2009$ and $12 / 31 / 2013$ <br> - Phase 1 footprint | 403 | 2,475 | 2,509 |
| Meters salvaged (\#) See Appendix D for monthly detail | The number of meters removed from Phase 2 premises and sent to salvage. | End of Phase 1 <br> - Total \# of meters that were removed from Phase 1 premises | 48,663 | 427,706 | 210,654 |
| Meters salvaged (\$) <br> See Appendix D for monthly detail | The dollar value of meters removed from Phase 2 premises and sent to salvage. | End of Phase 1 <br> - Total \$ of meters that were removed from Phase 1 premises | \$48,176 | \$192,468 | \$94,794 |
| Meters transferred (\#) ${ }^{1}$ <br> See Appendix E for monthly detail | The number of meters removed from Phase 2 Premises and transferred between AEP operating companies outside of Ohio. | End of Phase 1 <br> - Total \# of meters that were removed from Phase 1 premises between 12/1/2009 and 12/31/2013 and transferred to AEP operating companies outside of Ohio | 9,522 | 3,122 | 14,401 |
| Meters transferred $(\$)^{1}$ <br> See Appendix E for monthly detail | The dollar value of meters removed from Phase 2 Premises and transferred between AEP operating companies outside of Ohio. | End of Phase 1 <br> - Total \$ of meters that were removed from Phase 1 premises between 12/1/2009 and 12/31/2013 and transferred to AEP operating companies outside of Ohio | \$260,177 | \$296,955 | \$1,289,166 |
| Meter Reading | Metric Definition | Baseline Detail and Timeline | Baseline Value | 2019 Ye Value | 2020 YE Value |
| Manual Meter Reads See Appendix F for monthly detail | Within the Phase 2 deployment area, the number of meter reads conducted by an individual onsite for monthly billing. | Start of Phase 2 <br> - 12 months ending 2/1/2017 <br> - Total of monthly data <br> - Within Phase 2 Footprint | 7,913,659 | 1,628,989 | 70,180 |
| Successful ("actual" for the purpose of billing) AMI meter reads See Appendix $G$ for monthly detail | Within the Phase 2 deployment area, the total of "Actual" reads recorded from AMI meters. | Start with actuals as of first report date | n/a | 9,896,988 | 11,269,476 |
| Successful ("actual" for the purpose of billing) <br> AMR meter reads <br> See Appendix H for monthly detail | Within the Phase 2 deployment area, the total of "Actual" reads recorded from AMR meters. | Start with actuals as of first report date | n/a | 525,242 | 45,036 |
| Meter readers employed by AEP Ohio, expressed in FTEs See Appendix I for monthly detail | Number of meter readers (expressed in FTE) employed by AEP Ohio each month | End of Phase 1 <br> - \# of AEP Ohio meter readers as of $12 / 31 / 2013$ <br> - Snapshot at baseline date | 101 | 14 | 0 |
| Meter readers employed by external contractor, expressed in FTEs See Appendix I for monthly detail | Number of meter readers (expressed in FTE) employed by contractor each month | End of Phase 1 <br> - \# of contracted meter readers as of $12 / 31 / 2013$ <br> - Snapshot at baseline date | 47 | 0 | 0 |
| Billing Related | Metric Definition | Baseline Detail and Timeline | Baseline Value | 2019 Ye Value | 2020 YE Value |
| Residential bills issued See Appendix J for monthly detail | Number of residential bills issued each month, system-wide | Start of Phase 2 <br> - 12 months ending $2 / 1 / 2017$ <br> - Total of monthly data | 15,669,629 | 15,876,987 | 15,961,259 |
| Residential bills based upon estimated read See Appendix for J monthly detail | Number of estimated residential bills issued each month, system-wide | Start of Phase 2 <br> - 12 months ending $2 / 1 / 2017$ <br> - Total of monthly data | 1,204,165 | 239,119 | 60,211 |
| Customers eligible for disconnect due to non-pay (System) <br> See Appendix K for monthly detail | Number of customers eligible for disconnection each month, system-wide | Start with actuals as of first report date | n/a | 625,722 | 885,904 |
| Customers eligible for disconnect due to non-pay (Phase 2) <br> See Appendix K for monthly detail | Number of customers eligible for disconnection each month, Phase 2 deployment area only | Start with actuals as of first report date | n/a | 382,641 | 564,926 |
| Non-Pay Disconnects (System) See Appendix K for monthly detail | Number of customers disconnected due to non-pay each month, system-wide | Start with actuals as of first report date | n/a | 165,862 | 97,684 |
| Non-Pay Disconnects (Phase 2) See Appendix K for monthly detail | Number of customers disconnected due to non-pay each month, Phase 2 only | Start with actuals as of first report date | n/a | 117,863 | 72,045 |
| Power theft cases (\#) <br> See Appendix L for monthly detail | Number of power theft cases found each month, system-wide | Start of Phase 2 <br> - Average monthly number as of $2 / 1 / 2017$ <br> - Average taken over 12 month period (2/2016 to $1 / 2017$ ) | 139 cases per month | 983 cases per month | 953 cases per month |
| Power theft cases (\$) <br> See Appendix M for monthly detail | Monetary value of power theft cases found each month, system-wide | Start of Phase 2 <br> - Average monthly number as of $2 / 1 / 2017$ <br> - Average taken over 12 month period (2/2016 to $1 / 2017$ ) | \$222 per case per month <br> \$30,726 total per month | $\begin{gathered} \begin{array}{c} \$ 172 \text { per case per } \\ \text { month } \end{array} \\ \begin{array}{c} \$ 169,612 \text { total } \\ \text { per month } \end{array} \\ \hline \end{gathered}$ | $\begin{gathered} \$ 208 \text { per case } \\ \text { per month } \\ \$ 198,485 \text { total } \\ \text { per month } \\ \hline \end{gathered}$ |
| Customers Impact Measures | Metric Definition | Baseline Detail and Timeline | Baseline Value | 2019 Ye Value | 2020 YE Value |
| Total call center calls See Appendix N for monthly detail | Number of call center calls received each month, system-wide. Total of monthly data. | Start of Phase 2 <br> - 12 months ending $2 / 1 / 2017$ <br> - Total of monthly data | 5,489,826 | 5,295,472 | 4,243,156 |
| Call center calls related to meter reading (IO40 Check Read Orders initiated at call center) See Appendix O for monthly detail | ```Number of call center calls related to meter reading received each month, system-wide - Metric is being tracked as total of Check Read Orders (IO40s) issued by the call center.``` | Start with actuals as of first report date | n/a | 6,928 | 1,939 |
| Call center calls related to billing complaints (IOO4 HI/LO Bill Orders initiated at call center) See Appendix P for monthly detail | Number of call center calls related to billing complaints received each month, system-wide. <br> - Metric is being tracked as total of High/Low Bill complaint orders (IO04s) issued by the call center. | Start with actuals as of first report date | n/a | 1,812 | 948 |
| DACR Metrics |  |  |  |  |  |
| **No Phase 2 DACR Circuit Schemes were added in 2017** |  |  |  |  |  |
| DACR Circuit Metrics | Metric Definition | Baseline Detail and Timeline | Baseline Value | 2019 YE Value | 2020 YE Value |
| Circuits equipped with DACR | Number of Phase 2 circuits newly equipped with DACR each month | End of Phase 1 <br> - \# of circuits as of $12 / 31 / 2013$ | 70 | 7 | 38 |
| DACR opportunities ${ }^{1}$ | For Phase 2 circuits, number of opportunities for DACR to operate each month | Start with actuals as of first report date | n/a | 2 | 6 |
| DACR successes ${ }^{1}$ | For Phase 2 circuits, number opportunities when DACR operated as intended each month | Start with actuals as of first report date | n/a | 1.9 | 4.5 |
| DACR failures ${ }^{1}$ | For Phase 2 circuits, number of opportunities when DACR did not operate as intended each month | Start with actuals as of first report date | n/a | 0.1 | 1.5 |

NON FINANCIAL METRICS

| DACR Operational Efficiency Gains | Metric Definition | Baseline Detail and Timeline | Baseline Value | 2019 YE Value | 2020 YE Value |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Truck rolls related to an outage | For Phase 2 circuits, number of truck rolls related to an outage each month | Start with actuals as of first report date | n/a | 158 | 373 |
| Outage-related truck rolls avoided | For Phase 2 circuits, number of avoided truck rolls related to an outage each month | Start with actuals as of first report date | n/a | 0 | 1 |
| DACR Direct Customer Benefits | Metric Definition | Baseline Detail and Timeline | Baseline Value | 2019 YE Value | 2020 YE Value |
| Customer Minutes Saved ${ }^{1}$ | For Phase 2 circuits, the total customer minutes interrupted (CMI) avoided monthly due to successful self-healing events. <br> - Number of customers saved by DACR multiplied by an estimated outage duration <br> - The estimated outage duration is an average of historical first step of restoration durations for outages in the impacted area | Start of Phase 2 <br> - 12 months ending $2 / 1 / 2017$ <br> - Total of monthly data <br> - Excluding Ohio major events | 2,602,115 | 318,348 | 128,693 |
| Allocated Customer Minutes Saved ${ }^{1}$ | Customer minutes saved allocated by the customer class percentage on the circuit. See appendix W for details by circuit. | Commercial | N/A | 23,678 | 11,648 |
|  |  | Industrial | N/A | 303 | 280 |
|  |  | Other | N/A | , | 224 |
|  |  | Public Authority | N/A | 1,756 | 1,091 |
|  |  | Residential | N/A | 292,610 | 115,450 |
| Customer interruptions saved from DACR events ${ }^{1}$ | For Phase 2 circuits, the total customer interruptions saved each month due to successful DACR events | Start with actuals as of first report date | n/a | 2,868 | 1,027 |
| VVO Metrics |  |  |  |  |  |
| **No Phase 2 VVO Circuits were added in 2017*or 2018** |  |  |  |  |  |
| VVO Energy Efficiency | Metric Definition | Baseline Detail and Timeline | Baseline Value | 2019 YE Value | 2020 YE Value |
| Average MW saved due to $\mathrm{VvO}^{1}$ | Provided by Utilidata from M\&V data; Phase 2 VVO circuits only <br> - Total MW saved due to VVO per month, system-wide | Start with actuals as of first report date | n/a | 7 | 15 |
| MWh saved due to $\mathrm{VVO}^{1}$ | Provided by Utilidata from M\&V data; Phase 2 VVO circuits only <br> - Total MWh saved due to VVO per month, system-wide | Start with actuals as of first report date | n/a | 1,692 | 3,167 |
| Average system voltage ${ }^{1}$ | For Phase 2 VVO circuits only, the average of the voltage at the substation on the secondary side of regulation. This an average of all 3 phases over the entire month. | Start with actuals as of first report date | n/a | 120 | 120 |
| VVO GHG Impact | Metric Definition | Baseline Detail and Timeline | Baseline Value | 2019 YE Value | 2020 YE Value |
| Reduction in greenhouse gases due to VVO (estimate metric tons) ${ }^{1}$ | For Phase 2 circuits, the estimated reduction in greenhouse gases due to VVO per month <br> - The number of MWh saved due to VVO on Phase 2 circuits, multiplied by $0.88442^{*}$ <br> *Based on 2014 EPA eGRID number for RFC West subregion of $1,949.8 \mathrm{lbs}$ of cO 2 per MWh, converted to metric tons per MWh. | Start with actuals as of first report date | n/a | 1,496 | 2,800 |

[^0]
## Appendix A - Number of Certified Meters

| Phase 1 Footprint | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | 134,012 | 134,090 | 134,183 | 134,232 | 134,267 | 134,318 | 134,342 | 134,365 | 134,375 | 134,391 | 134,415 | 134,449 |
| 2018 | 134,459 | 134,479 | 134,501 | 134,513 | 134,512 | 134,534 | 134,523 | 134,534 | 134,554 | 134,590 | 134,615 | 134,631 |
| 2019 | 134,907 | 134,848 | 134,896 | 134,954 | 135,186 | 135,151 | 135,212 | 135,045 | 135,374 | 135,261 | 135,170 | 135,236 |
| 2020 | 135,370 | 135,087 | 135,115 | 134,979 | 135,159 | 135,335 | 135,654 | 135,635 | 135,289 | 135,158 | 135,194 | 135,229 |


| Phase 2 Footprint | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 542 | 4,336 | 6,735 | 9,511 | 16,642 |
| 2018 | 33,357 | 65,510 | 106,753 | 148,870 | 186,393 | 227,388 | 272,129 | 325,190 | 373,746 | 440,703 | 493,084 | 536,674 |
| 2019 | 579,229 | 610,987 | 647,058 | 680,883 | 719,661 | 756,286 | 795,898 | 831,138 | 863,001 | 881,070 | 885,452 | 891,651 |
| 2020 | 897,441 | 901,586 | 904,884 | 907,353 | 909,410 | 912,059 | 913,788 | 915,988 | 917,820 | 919,381 | 920,038 | 921,620 |


| Total Certified AMI Meters | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | 134,012 | 134,090 | 134,183 | 134,232 | 134,267 | 134,318 | 134,349 | 134,907 | 138,711 | 141,126 | 143,926 | 151,091 |
| 2018 | 167,816 | 199,989 | 241,254 | 283,383 | 320,905 | 361,922 | 406,652 | 459,724 | 508,300 | 575,293 | 627,699 | 671,305 |
| 2019 | 714,136 | 745,835 | 781,954 | 815,837 | 854,847 | 891,437 | 931,110 | 966,183 | 998,375 | 1,016,331 | 1,020,622 | 1,026,887 |
| 2020 | 1,032,811 | 1,036,673 | 1,039,999 | 1,042,332 | 1,044,569 | 1,047,394 | 1,049,442 | 1,051,623 | 1,053,109 | 1,054,539 | 1,055,232 | 1,056,849 |

Appendix B - AMI Meters Installed but Not Certified

No data to report

## Appendix C - Certified Smart Meter Failures

| Phase 1 Footprint | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2017 | 188 | 395 | 127 | 137 | 148 | 180 | 145 | 54 | 301 | 270 | 45 | 62 | 2,052 |
| 2018 | 95 | 218 | 142 | 98 | 160 | 210 | 84 | 166 | 117 | 141 | 97 | 63 | 1,591 |
| 2019 | 175 | 53 | 62 | 100 | 275 | 254 | 199 | 115 | 256 | 240 | 174 | 299 | 2,202 |
| 2020 | 309 | 69 | 74 | 7 | 99 | 240 | 459 | 474 | 145 | 71 | 69 | 68 | 2,084 |


| Phase 2 Footprint | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 4 |
| 2018 | 1 | 0 | 1 | 1 | 3 | 3 | 0 | 6 | 18 | 21 | 32 | 43 | 129 |
| 2019 | 8 | 28 | 27 | 40 | 31 | 18 | 25 | 12 | 16 | 11 | 30 | 27 | 273 |
| 2020 | 18 | 13 | 8 | 29 | 22 | 19 | 39 | 49 | 27 | 47 | 44 | 110 | 425 |


| Total Smart Meter Failures | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2017 | 188 | 395 | 127 | 137 | 148 | 180 | 145 | 54 | 302 | 271 | 47 | 62 | 2,056 |
| 2018 | 96 | 218 | 143 | 99 | 163 | 213 | 84 | 172 | 135 | 162 | 129 | 106 | 1,720 |
| 2019 | 183 | 81 | 89 | 140 | 306 | 272 | 224 | 127 | 272 | 251 | 204 | 326 | 2,475 |
| 2020 | 327 | 82 | 82 | 36 | 121 | 259 | 498 | 523 | 172 | 118 | 113 | 178 | 2,509 |

## Appendix D - Meters Salvaged

| METERS SALVAGED | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | - | - | - | - | 13,365 | - | - | 63,098 | 9,759 | 57,619 | 45,355 | - | 189,196 |
| 2019 | 18,673 | 29,040 | 67,958 | 30,086 | 49,136 | 20,140 | - | 60,786 | 57,066 | - | 56,190 | 38,631 | 427,706 |
| 2020 | 77,300 | - | 38,424 | 43,324 | - | 6,718 | 7,368 | - | - | - | - | 37,520 | 210,654 |
| Total Salvaged Meters | 95,973 | 29,040 | 106,382 | 73,410 | 62,501 | 26,858 | 7,368 | 123,884 | 66,825 | 57,619 | 101,545 | 76,151 | 827,556 |


| METERS SALVAGED \$ | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | \$ | \$ | \$ | \$ | \$ 11,546 | \$ | \$ | \$ 54,510 | \$ 8,431 | \$ 49,777 | \$ 20,410 | \$ | \$ 144,674 |
| 2019 | \$ 8,403 | \$ 13,068 | \$ 30,581 | \$ 13,539 | \$ 22,111 | \$ 9,063 | \$ | \$ 27,354 | \$ 25,680 | \$ | \$ 25,286 | \$ 17,384 | \$ 192,468 |
| 2020 | \$ 34,785 | \$ | \$ 17,291 | \$ 19,496 | \$ | \$ 3,023 | \$ 3,316 | \$ | \$ | \$ | \$ | \$ 16,884 | \$ 94,794 |
| Value of Salvaged Meters | \$ 43,188 | \$ 13,068 | \$ 47,872 | \$ 33,035 | \$ 33,657 | \$ 12,086 | \$ 3,316 | \$ 81,864 | \$ 34,111 | \$ 49,777 | \$ 45,695 | \$ 34,268 | \$ 431,936 |

## Appendix E - Meters Transferred

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 2 |
| 2018 | - | - | 1 | - | 2 | - | 7 | 98 | 2,350 | 6 | 4,805 | 4 | 7,273 |
| 2019 | 5 | 6 | 2,822 | 2 | - | 3 | 20 | 115 | 33 | 1 | 114 | 1 | 3,122 |
| 2020 | 3 | 2,694 | 1,147 | 4,255 | 2,026 | 1,200 | 954 | 587 | 606 | 396 | 455 | 78 | 14,401 |
| Total Meters Transferred | 8 | 2,700 | 3,970 | 4,257 | 2,028 | 1,203 | 981 | 800 | 2,989 | 404 | 5,374 | 84 | 24,798 |


| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$67 | \$0 | \$67 | \$135 |
| 2018 | \$0 | \$0 | \$179 | \$0 | \$358 | \$0 | \$2,079 | \$17,520 | \$172,325 | \$769 | \$352,351 | \$293 | \$545,874 |
| 2019 | \$357 | \$428 | \$220,153 | \$143 | \$0 | \$214 | \$6,105 | \$29,871 | \$9,930 | \$71 | \$29,612 | \$71 | \$296,955 |
| 2020 | \$994 | \$405,785 | \$82,392 | \$304,117 | \$144,723 | \$85,608 | \$111,958 | \$42,287 | \$44,463 | \$28,251 | \$33,025 | \$5,565 | \$1,289,166 |
| Value of Meters Transferred | \$1,350 | \$406,213 | \$302,724 | \$304,260 | \$145,081 | \$85,822 | \$120,142 | \$89,678 | \$226,719 | \$29,158 | \$414,987 | \$5,997 | \$2,132,130 |

Meter Transfer numbes were restated as we discovered some meters are moved back to the storeroom before being transferred and were missed by the original data pull

## Appendix F - Manual Meter Reads

| AEP Ohio <br> Manual Meter Reads | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | 709,595 | 677,614 | 698,824 | 652,591 | 707,760 | 664,633 | 607,446 | 643,087 | 623,200 | 633,843 | 619,079 | 577,524 | 7,815,196 |
| 2018 | 590,558 | 613,152 | 662,313 | 625,957 | 593,752 | 549,628 | 502,539 | 492,671 | 426,390 | 444,237 | 345,679 | 276,154 | 6,123,030 |
| 2019 | 252,658 | 236,534 | 239,313 | 204,441 | 193,485 | 147,294 | 125,524 | 98,483 | 62,895 | 33,398 | 17,948 | 17,016 | 1,628,989 |
| 2020 | 15,273 | 11,815 | 8,447 | 6,780 | 6,148 | 6,052 | 4,633 | 3,838 | 2,575 | 2,089 | 1,248 | 1,282 | 70,180 |
| TOTAL | 1,568,084 | 1,539,115 | 1,608,897 | 1,489,769 | 1,501,145 | 1,367,607 | 1,240,142 | 1,238,079 | 1,115,060 | 1,113,567 | 983,954 | 871,976 | 15,637,395 |

## Appendix G - Successful AMI Meter Reads

| AEP Ohio AMI Meter Reads | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 1,063 | 10,896 | 11,299 | 12,536 | 24,697 | 60,501 |
| 2018 | 55,353 | 108,939 | 174,916 | 213,689 | 246,435 | 297,471 | 353,586 | 423,963 | 430,488 | 562,775 | 569,528 | 573,313 | 4,010,456 |
| 2019 | 686,349 | 647,984 | 726,907 | 759,735 | 819,479 | 810,647 | 906,337 | 937,088 | 916,447 | 949,426 | 848,458 | 888,131 | 9,896,988 |
| 2020 | 940,575 | 895,496 | 945,293 | 941,035 | 901,928 | 956,131 | 966,436 | 965,755 | 960,716 | 964,580 | 873,821 | 957,710 | 11,269,476 |
| TOTAL | 1,682,277 | 1,652,419 | 1,847,116 | 1,914,459 | 1,967,842 | 2,064,249 | 2,226,369 | 2,327,869 | 2,318,547 | 2,488,080 | 2,304,343 | 2,443,851 | 25,237,421 |

## Appendix H - Successful AMR Meter Reads

| AEP Ohio <br> AMR Meter Reads | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2017 | 171,353 | 159,809 | 178,198 | 169,211 | 180,349 | 175,940 | 172,471 | 175,852 | 171,437 | 178,198 | 175,864 | 168,719 | $2,077,401$ |
| 2018 | 184,935 | 178,407 | 180,450 | 174,142 | 164,455 | 160,883 | 159,448 | 152,324 | 117,513 | 122,447 | 104,032 | 87,408 | $1,786,444$ |
| 2019 | 82,397 | 74,324 | 69,905 | 63,011 | 56,522 | 46,742 | 39,869 | 31,825 | 22,893 | 16,167 | 11,136 | 10,451 | 525,242 |
| 2020 | 10,157 | 7,270 | 6,169 | 4,807 | 3,775 | 3,344 | 2,771 | 2,387 | 1,602 | 1,378 | 742 | 634 | 45,036 |
| TOTAL | 448,842 | 419,810 | 434,722 | 411,171 | 405,101 | 386,909 | $\mathbf{3 7 4 , 5 5 9}$ | $\mathbf{3 6 2 , 3 8 8}$ | $\mathbf{3 1 3 , 4 4 5}$ | $\mathbf{3 1 8 , 1 9 0}$ | $\mathbf{2 9 1 , 7 7 4}$ | $\mathbf{2 6 7 , 2 1 2}$ | $\mathbf{4 , 4 3 4 , 1 2 3}$ |

## Appendix I-AEP Ohio Meter Readers

|  | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| AEP_Employee |  |  |  |  |  |  |  |  |  |  |  |  |
| 2017 | 84 | 83 | 79 | 81 | 80 | 79 | 74 | 77 | 80 | 83 | 85 | 84 |
| 2018 | 86 | 82 | 85 | 82 | 74 | 72 | 67 | 61 | 56 | 53 | 52 | 48 |
| 2019 | 39 | 37 | 40 | 39 | 34 | 31 | 27 | 20 | 20 | 17 | 14 | 14 |
| 2020 | 7 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |


| AEP_Contractor |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2017 | 26 | 26 | 25 | 23 | 23 | 19 | 16 | 19 | 17 | 17 | 15 | 18 |
| 2018 | 19 | 21 | 24 | 25 | 23 | 20 | 23 | 21 | 18 | 15 | 15 | 18 |
| 2019 | 15 | 13 | 14 | 12 | 11 | 8 | 7 | 4 | 2 | 2 | 2 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |


| Total Meter Readers |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2017 | 110 | 109 | 104 | 104 | 103 | 98 | 90 | 96 | 97 | 100 | 100 | 102 |
| 2018 | 105 | 103 | 109 | 107 | 97 | 92 | 90 | 82 | 74 | 68 | 67 | 66 |
| 2019 | 54 | 50 | 54 | 51 | 45 | 39 | 34 | 24 | 22 | 19 | 16 | 14 |
| 2020 | 7 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## Appendix J - Residential Bills Issued

| Bill Type | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ACTUAL |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2017 | 1,264,131 | 1,258,424 | 1,249,191 | 1,240,257 | 1,255,288 | 1,213,603 | 1,188,161 | 1,182,690 | 1,199,948 | 1,197,442 | 1,208,339 | 1,215,671 | 14,673,145 |
| 2018 | 1,153,566 | 1,222,227 | 1,266,174 | 1,273,102 | 1,264,095 | 1,252,904 | 1,262,397 | 1,267,514 | 1,271,318 | 1,291,192 | 1,275,449 | 1,267,009 | 15,066,947 |
| 2019 | 1,257,476 | 1,267,604 | 1,303,637 | 1,304,553 | 1,311,075 | 1,306,480 | 1,308,667 | 1,318,970 | 1,312,483 | 1,312,795 | 1,316,420 | 1,317,708 | 15,637,868 |
| 2020 | 1,315,660 | 1,317,586 | 1,321,613 | 1,318,197 | 1,322,467 | 1,325,257 | 1,330,372 | 1,335,003 | 1,330,958 | 1,329,362 | 1,326,770 | 1,327,803 | 15,901,048 |


| ESTIMATE |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2017 | 40,078 | 42,292 | 64,819 | 67,027 | 58,256 | 97,934 | 126,651 | 133,562 | 83,771 | 115,225 | 104,672 | 90,943 | $\mathbf{1 , 0 2 5 , 2 3 0}$ |
| 2018 | 163,630 | 88,520 | 50,344 | 44,931 | 54,079 | 66,379 | 60,082 | 59,059 | 45,546 | 25,884 | 43,040 | 49,880 | $\mathbf{7 5 1 , 3 7 4}$ |
| 2019 | 58,200 | 49,447 | 16,767 | 18,124 | 12,507 | 16,717 | 20,400 | 11,982 | 10,664 | 10,216 | 6,968 | 7,127 | $\mathbf{2 3 9 , 1 1 9}$ |
| 2020 | 6,407 | 5,133 | 5,697 | 4,883 | 4,468 | 5,055 | 4,344 | 4,058 | 5,241 | 5,843 | 4,114 | 4,968 | $\mathbf{6 0 , 2 1 1}$ |


| TOTAL BILLS ISSUED |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | 1,304,209 | 1,300,716 | 1,314,010 | 1,307,284 | 1,313,544 | 1,311,537 | 1,314,812 | 1,316,252 | 1,283,719 | 1,312,667 | 1,313,011 | 1,306,614 | 15,698,375 |
| 2018 | 1,317,196 | 1,310,747 | 1,316,518 | 1,318,033 | 1,318,174 | 1,319,283 | 1,322,479 | 1,326,573 | 1,316,864 | 1,317,076 | 1,318,489 | 1,316,889 | 15,818,321 |
| 2019 | 1,315,676 | 1,317,051 | 1,320,404 | 1,322,677 | 1,323,582 | 1,323,197 | 1,329,067 | 1,330,952 | 1,323,147 | 1,323,011 | 1,323,388 | 1,324,835 | 15,876,987 |
| 2020 | 1,322,067 | 1,322,719 | 1,327,310 | 1,323,080 | 1,326,935 | 1,330,312 | 1,334,716 | 1,339,061 | 1,336,199 | 1,335,205 | 1,330,884 | 1,332,771 | 15,961,259 |

## Appendix K - Customer Disconnects

| Customers Eligible <br> for Disconnect | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AEP Ohio - System Wide |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\mathbf{2 0 1 7}$ | 66,500 | 65,972 | 75,112 | 58,855 | 69,578 | 53,681 | 52,877 | 70,041 | 71,973 | 76,428 | 68,789 | 63,487 | 793,293 |
| $\mathbf{2 0 1 8}$ | 73,589 | 72,567 | 71,110 | 65,889 | 65,120 | 65,759 | 64,598 | 72,629 | 64,736 | 76,991 | 67,475 | 57,110 | 817,573 |
| $\mathbf{2 0 1 9}$ | 50,426 | 51,629 | 48,883 | 51,405 | 54,351 | 48,191 | 50,180 | 53,485 | 52,848 | 62,684 | 51,650 | 49,990 | 625,722 |
| $\mathbf{2 0 2 0}^{1}$ | 48,200 | 49,184 | 58,185 | 78,848 | 82,398 | 90,699 | 92,185 | 136,491 | 109,777 | 55,196 | 41,663 | 43,078 | 885,904 |


| AEP Ohio - Phase 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{2 0 1 7}$ | 41,196 | 41,744 | 46,238 | 37,048 | 42,205 | 33,129 | 33,352 | 43,418 | 46,259 | 47,620 | 43,196 | 40,493 | 495,898 |
| $\mathbf{2 0 1 8}$ | 45,532 | 45,917 | 45,373 | 41,764 | 39,787 | 40,301 | 39,440 | 44,804 | 39,932 | 48,083 | 41,698 | 35,487 | 508,118 |
| $\mathbf{2 0 1 9}$ | 30,502 | 31,261 | 29,623 | 30,581 | 32,878 | 29,659 | 30,448 | 33,020 | 32,486 | 39,312 | 31,585 | 31,286 | 382,641 |
| $\mathbf{2 0 2 0}^{1}$ | 29,702 | 30,497 | 35,206 | 48,629 | 52,010 | 56,692 | 58,888 | 85,440 | 70,199 | 35,093 | 25,443 | 37,127 | 564,926 |


| Non Pay Disconnects | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AEP Ohio - System Wide |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\mathbf{2 0 1 7}$ | 9,157 | 6,517 | 9,590 | 8,222 | 11,174 | 9,322 | 7,413 | 10,858 | 9,248 | 11,516 | 8,421 | 3,103 | 104,541 |
| $\mathbf{2 0 1 8}$ | 4,444 | 7,191 | 8,330 | 9,928 | 12,053 | 11,959 | 10,515 | 13,026 | 11,434 | 16,402 | 10,077 | 7,691 | 123,050 |
| $\mathbf{2 0 1 9}$ | 6,469 | 10,461 | 11,217 | 15,035 | 16,886 | 14,703 | 14,599 | 15,774 | 15,532 | 19,357 | 13,952 | 11,877 | 165,862 |
| $\mathbf{2 0 2 0}^{1}$ | 12,737 | 11,531 | 5,801 | 0 | 0 | 0 | 0 | 0 | 14,629 | 23,930 | 14,923 | 14,133 | 97,684 |


| AEP Ohio - Phase 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 7}$ | 4,661 | 3,789 | 4,626 | 4,197 | 5,626 | 4,738 | 3,819 | 5,673 | 4,339 | 5,526 | 4,029 | 1,326 | 52,349 |
| $\mathbf{2 0 1 8}$ | 2,209 | 2,848 | 3,838 | 4,750 | 6,383 | 6,332 | 5,516 | 7,231 | 6,453 | 10,920 | 6,600 | 5,097 | 68,177 |
| $\mathbf{2 0 1 9}$ | 4,221 | 7,177 | 7,200 | 10,443 | 11,832 | 10,585 | 10,407 | 11,249 | 10,951 | 14,288 | 10,338 | 9,172 | 117,863 |
| $\mathbf{2 0 2 0}^{1}$ | 9,383 | 8,713 | 4,387 | 0 | 0 | 0 | 0 | 0 | 9,303 | 18,137 | 11,096 | 11,026 | 72,045 |

[^1]
## Appendix L - Number of Power Theft Cases

| AEP Ohio <br> Service Area | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL | Avg Monthly <br> Number of Cases |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | ---: | ---: |
| 2017 | 158 | 169 | 145 | 65 | 99 | 111 | 126 | 118 | 138 | 119 | 174 | 127 | 1,549 |  |
| 2018 | 145 | 117 | 117 | 131 | 130 | 131 | 153 | 123 | 117 | 90 | 172 | 220 | 1,646 | 129 |
| 2019 | 153 | 459 | 750 | 892 | 946 | 910 | 1,214 | 1,330 | 1,360 | 1,493 | 1,271 | 1,027 | 11,805 | 137 |
| 2020 | 1,229 | 984 | 775 | 609 | 1,181 | 746 | 723 | 860 | 1,055 | 1,187 | 993 | 1,101 | 11,443 |  |
| Total Power Theft | $\mathbf{1 , 6 8 5}$ | $\mathbf{1 , 7 2 9}$ | $\mathbf{1 , 7 8 7}$ | $\mathbf{1 , 6 9 7}$ | $\mathbf{2 , 3 5 6}$ | $\mathbf{1 , 8 9 8}$ | $\mathbf{2 , 2 1 6}$ | $\mathbf{2 , 4 3 1}$ | $\mathbf{2 , 6 7 0}$ | $\mathbf{2 , 8 8 9}$ | $\mathbf{2 , 6 1 0}$ | $\mathbf{2 , 4 7 5}$ | $\mathbf{2 6 , 4 4 3}$ |  |

## Appendix M - Total Value of Power Theft Cases

| AEP Ohio Service Area | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL | Avg Monthly Total Value of Power Theft Cases | Average Value of Power Theft Per Case |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$37,443 | \$39,060 | \$33,422 | \$12,849 | \$18,862 | \$22,711 | \$19,818 | \$19,489 | \$30,582 | \$20,489 | \$37,563 | \$34,166 | \$326,454 | \$27,205 | \$211 |
| 2018 | \$36,888 | \$22,918 | \$23,288 | \$22,831 | \$28,845 | \$16,786 | \$22,418 | \$21,953 | \$19,166 | \$16,056 | \$40,255 | \$93,085 | \$364,488 | \$30,374 | \$221 |
| 2019 | \$33,038 | \$86,357 | \$139,775 | \$147,213 | \$98,099 | \$77,714 | \$129,172 | \$191,855 | \$188,901 | \$203,912 | \$287,975 | \$451,339 | \$2,035,350 | \$169,612 | \$172 |
| 2020 | \$302,153 | \$190,788 | \$137,808 | \$55,331 | \$255,263 | \$234,757 | \$77,704 | \$189,102 | \$200,219 | \$224,079 | \$104,073 | \$410,538 | \$2,381,815 | \$198,485 | \$208 |
| Total Power Theft | \$409,522 | \$339,123 | \$334,293 | \$238,224 | \$401,069 | \$351,968 | \$249,112 | \$422,398 | \$438,868 | \$464,536 | \$469,866 | \$989,128 | \$5,108,107 |  |  |

## Appendix N - Total Call Center Calls

| Call Volume | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 7}$ | 448,912 | 403,026 | 477,019 | 402,742 | 478,182 | 520,115 | 540,028 | 511,067 | 445,988 | 444,667 | 418,167 | 391,260 |
| $5,481,173$ |  |  |  |  |  |  |  |  |  |  |  |  |
| $\mathbf{2 0 1 8}$ | 473,970 | 434,948 | 474,639 | 413,955 | 460,527 | 527,573 | 454,707 | 467,438 | 447,635 | 546,325 | 516,171 | 376,568 |
| $5,594,456$ |  |  |  |  |  |  |  |  |  |  |  |  |
| $\mathbf{2 0 1 9}$ | 415,584 | 472,111 | 412,256 | 416,927 | 485,648 | 501,139 | 505,245 | 459,528 | 410,105 | 443,147 | 416,265 | 357,517 |
| $5,295,472$ |  |  |  |  |  |  |  |  |  |  |  |  |
| $\mathbf{2 0 2 0}$ | 386,317 | 331,659 | 346,671 | 274,353 | 310,428 | 336,914 | 383,218 | 361,877 | 388,044 | 392,645 | 413,733 | 317,297 |

## Appendix O-Call Center Calls Related to Meter Reading

| IO40 (Check Read) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | 1,875 | 1,407 | 1,473 | 1,596 | 1,487 | 1,985 | 1,755 | 3,581 | 3,765 | 2,358 | 1,917 | 2,514 | 25,713 |
| 2018 | 3,249 | 2,953 | 2,419 | 1,715 | 1,370 | 1,571 | 1,514 | 1,739 | 1,145 | 1,319 | 886 | 745 | 20,625 |
| 2019 | 740 | 926 | 1,181 | 855 | 713 | 432 | 410 | 438 | 409 | 417 | 235 | 172 | 6,928 |
| 2020 | 185 | 211 | 161 | 186 | 138 | 135 | 306 | 147 | 124 | 124 | 132 | 90 | 1,939 |

## Appendix P - Call Center Calls Related to Billing Complaints

| IO04 (High/Low Bill) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | 436 | 271 | 223 | 148 | 152 | 118 | 145 | 181 | 231 | 221 | 193 | 336 | 2,655 |
| 2018 | 624 | 559 | 373 | 283 | 242 | 221 | 291 | 331 | 254 | 285 | 154 | 275 | 3,892 |
| 2019 | 331 | 212 | 217 | 171 | 106 | 109 | 115 | 159 | 146 | 97 | 41 | 108 | 1,812 |
| 2020 | 167 | 89 | 82 | 47 | 56 | 54 | 118 | 112 | 46 | 40 | 39 | 98 | 948 |

## Appendix Q - Circuits Equipped with DACR

| CIRCUITS EQUIPPED WITH DACR | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 2019 | 2 | 2 | 2 | 2 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 2020 | 7 | 7 | 7 | 7 | 11 | 11 | 11 | 11 | 15 | 19 | 19 | 38 |

## Appendix R-DACR Opportunities

| DACR OPPORTUNITIES | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 2020 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 6 |

2019 number decreased as an outage on 12/30/2019 was reclassified as a major event which removes it from the data

## Appendix S - DACR Successes

| DACR SUCCESSES | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2019 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 |
| 2020 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 4.5 |

2019 number decreased as an outage on 12/30/2019 was reclassified as a major event which removes it from the data. Data has also been adjusted to account for partial reconfigurations

## Appendix T - DACR Failures

| DACR FAILURES | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2019 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 2020 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 1.5 |

2019 number changed as data was adjusted to account for partial reconfigurations

## Appendix U - DACR Truck Rolls Related to an Outage

| TRUCK ROLLS RELATED <br> TO AN OUTAGE | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 |
| 2019 | 1 | 1 | 0 | 8 | 22 | 18 | 26 | 11 | 23 | 14 | 19 | 15 | 158 |
| 2020 | 19 | 9 | 32 | 12 | 25 | 48 | 39 | 30 | 32 | 49 | 65 | 13 | 373 |

## Appendix V - DACR Outage Related Truck Rolls

| OUTAGE RELATED <br> TRUCK ROLLS AVOIDED | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |

## Appendix W - Customer Minutes Saved From DACR Events

| CUSTOMER MINUTES SAVED FROM DACR EVENTS | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 180,375 | 137,973 | 0 | 0 | 0 | 0 | 0 | 0 | 318,348 |
| Commercial | 0 | 0 | 0 | 0 | 12,529 | 11,149 | 0 | 0 | 0 | 0 | 0 | 0 | 23,678 |
| Industrial | 0 | 0 | 0 | 0 | 216 | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 303 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Public Authority | 0 | 0 | 0 | 0 | 972 | 784 | 0 | 0 | 0 | 0 | 0 | 0 | 1,756 |
| Residential | 0 | 0 | 0 | 0 | 166,658 | 125,953 | 0 | 0 | 0 | 0 | 0 | 0 | 292,610 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 76,923 | 0 | 0 | 0 | 0 | 51,770 | 128,693 |
| Commercial | 0 | 0 | 0 | 0 | 0 | 0 | 3,821 | 0 | 0 | 0 | 0 | 7,827 | 11,648 |
| Industrial | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 280 | 280 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 224 | 224 |
| Public Authority | 0 | 0 | 0 | 0 | 0 | 0 | 420 | 0 | 0 | 0 | 0 | 671 | 1,091 |
| Residential | 0 | 0 | 0 | 0 | 0 | 0 | 72,681 | 0 | 0 | 0 | 0 | 42,769 | 115,450 |

2019 numbers decreased as an outage on 12/30/2019 was reclassified as a major event which removes it from the data.

## Appendix X - Customer Interruptions Saved From DACR Events

| CUSTOMER INTERRUPTIONS SAVED <br> FROM DACR EVENTS | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | 1,625 | 1,243 | 0 | 0 | 0 | 0 | 0 | 0 | 2,868 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 | 693 | 0 | 0 | 0 | 0 | 334 | 1,027 |

## Appendix Y - VVO MW and MWh Saved

| MW Saved Due to VVO | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Monthly <br> Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2019 | N/A | N/A | N/A | N/A | N/A | 1.7 | 2.1 | 3.1 | 4.0 | 3.7 | 2.8 | 3.3 | 3.0 |
| 2020 | 3.4 | 3.2 | 2.5 | 1.9 | 3.1 | 3.2 | 2.9 | 2.4 | 2.0 | 1.8 | 2.3 | 2.7 | 2.6 |

Inaccurate scaling factors applied to the data caused inaccuracies in the reported values. The calculations are corrected for 2019 and 2020 data
Values shown are only for completed $M \& V$ circuits and applied to the data since the completion of $M \& V$. As of this report submission 26 circuits have completed M\&V.

| MWh Saved Due to Vvo | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2019 | N/A | N/A | N/A | N/A | N/A | 133 | 220 | 197 | 302 | 250 | 244 | 346 | 1,692 |
| 2020 | 350 | 352 | 302 | 233 | 258 | 298 | 294 | 234 | 132 | 170 | 235 | 309 | 3,167 |

The original 2019 value reflected total MWH instead of saved MWH. Additionally, inaccurate scaling factors applied to the data caused inaccuracies to original 2019 values. The calculations are corrected for 2019 and 2020 data. Values shown are only for completed M\&V circuits and applied to the data since the completion of M\&V. As of this report submission 26 circuits have completed M\&V.

## Appendix Z - VVO Average System Voltage

| Average System Voltage | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Monthly Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2019 | 120 | 120 | 120 | 120 | 120 | 120 | 119 | 120 | 119 | 119 | 120 | 119 | 120 |
| 2020 | 120 | 120 | 120 | 120 | 120 | 120 | 121 | 120 | 120 | 120 | 120 | 120 | 120 |

## Appendix AA - VVO Reduction in Greenhouse Gas Emissions

| Reduction in Greenhouse Gases Due to VVO (estimate) | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YE TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2019 | N/A | N/A | N/A | N/A | N/A | 117 | 195 | 174 | 267 | 221 | 216 | 306 | 1,496 |
| 2020 | 309 | 311 | 267 | 206 | 228 | 264 | 260 | 207 | 117 | 150 | 208 | 273 | 2,800 |

Due to issues with 2019 data as stated for the MWH saved metric, this value must be recalculated to use the updated 2019 MWh data. Values shown are only for completed M\&V circuits and applied to the data since the completion of $M \& V$. As of this report submission 26 circuits have completed M\&V.

This foregoing document was electronically filed with the Public Utilities

## Commission of Ohio Docketing Information System on

1/29/2021 9:43:14 AM
in

## Case No(s). 20-0939-EL-RDR

Summary: Correspondence -Ohio Power Company submits its gridSMART Phase 2 rider update for the fourth quarter 2020 electronically filed by Mr. Steven T Nourse on behalf of Ohio Power Company


[^0]:    ${ }^{1}$ Previously reported values revised, please see the appendix for details

[^1]:    ${ }^{1}$ Impacts due to COVID pandemic and PUCO order to cease disconnections

