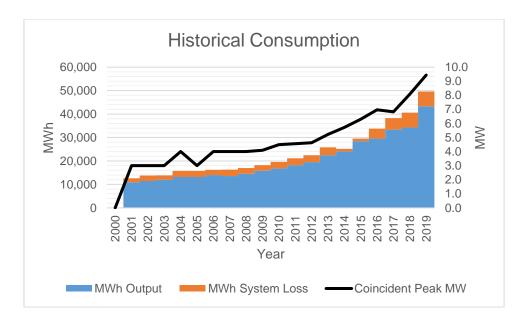
# **Power Supply Procurement Plan**

KALINGA APAYAO ELECTRIC COOPERATIVE, INC. Callagdao, Bulanao, Tabuk

### **Historical Consumption Data**

|      | Coincident<br>Peak MW | MWh Offtake | WESM | MWh Input | MWh Output | MWh<br>System<br>Loss | Load Factor | Discrepancy | Transm'n<br>Loss | System<br>Loss |
|------|-----------------------|-------------|------|-----------|------------|-----------------------|-------------|-------------|------------------|----------------|
| 2000 | 0.00                  | 0           | 0    | 0         | 0          | 0                     | #DIV/0!     | #DIV/0!     | #DIV/0!          | #DIV/0!        |
| 2001 | 3.00                  | 12,650      | 0    | 10,831    | 10,897     | 1,754                 | 41%         | 16.80%      | 14.38%           | 16.19%         |
| 2002 | 3.00                  | 13,804      | 0    | 11,472    | 11,472     | 2,332                 | 44%         | 20.33%      | 16.89%           | 20.33%         |
| 2003 | 3.00                  | 13,868      | 0    | 11,986    | 11,986     | 1,882                 | 46%         | 15.70%      | 13.57%           | 15.70%         |
| 2004 | 4.00                  | 15,792      | 0    | 13,179    | 13,179     | 2,613                 | 38%         | 19.83%      | 16.55%           | 19.83%         |
| 2005 | 3.00                  | 15,792      | 0    | 13,179    | 13,179     | 2,613                 | 50%         | 19.83%      | 16.55%           | 19.83%         |
| 2006 | 4.00                  | 16,267      | 0    | 13,997    | 13,997     | 2,270                 | 40%         | 16.22%      | 13.95%           | 16.22%         |
| 2007 | 4.00                  | 16,337      | 0    | 13,575    | 13,575     | 2,762                 | 39%         | 20.35%      | 16.91%           | 20.35%         |
| 2008 | 4.00                  | 16,970      | 0    | 14,540    | 14,540     | 2,430                 | 41%         | 16.71%      | 14.32%           | 16.71%         |
| 2009 | 4.00                  | 18,210      | 0    | 15,662    | 15,833     | 2,369                 | 45%         | 16.21%      | 13.99%           | 15.13%         |
| 2010 | 4.00                  | 19,619      | 0    | 16,854    | 16,854     | 2,765                 | 48%         | 16.41%      | 14.09%           | 16.41%         |
| 2011 | 5.00                  | 21,159      | 0    | 18,203    | 18,203     | 2,956                 | 42%         | 16.24%      | 13.97%           | 16.24%         |
| 2012 | 5.00                  | 22,458      | 0    | 19,545    | 19,545     | 2,913                 | 45%         | 14.90%      | 12.97%           | 14.90%         |
| 2013 | 5.00                  | 25,810      | 0    | 22,426    | 22,426     | 3,383                 | 51%         | 15.09%      | 13.11%           | 15.09%         |
| 2014 | 6.00                  | 27,714      | 0    | 24,113    | 24,113     | 3,600                 | 46%         | 14.93%      | 12.99%           | 14.93%         |
| 2015 | 6.30                  | 32,153      | 0    | 27,826    | 28,486     | 4,175                 | 50%         | 17.38%      | 13.46%           | 15.00%         |
| 2016 | 6.35                  | 34,056      | 0    | 29,783    | 29,538     | 4,273                 | 54%         | 13.52%      | 12.55%           | 14.35%         |
| 2017 | 6.82                  | 38,266      | 0    | 33,378    | 33,378     | 4,888                 | 56%         | 14.65%      | 12.77%           | 14.65%         |
| 2018 | 8.08                  | 42,642      | 0    | 36,321    | 34,268     | 6,321                 | 51%         | 11.75%      | 14.82%           | 17.40%         |
| 2019 | 9.44                  | 49,621      | 0    | 43,347    | 43,347     | 6,274                 | 52%         | 14.47%      | 12.64%           | 14.47%         |

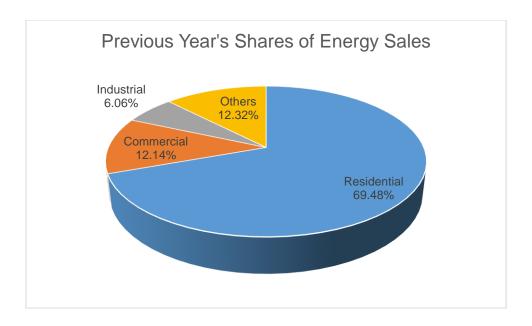
Peak Demand increased from 3 MW in 2001 to 9.44 MW in 2019 at a rate of 58.01% due to increasing number of new Applicants. MWh Offtake increased from 12,650 MWh in 2001 to 49,621 MWh in 2019 due to the government electrification program the Barangay Line Enhancement program(BLEP) and Sitio Electrification Program(SEP).



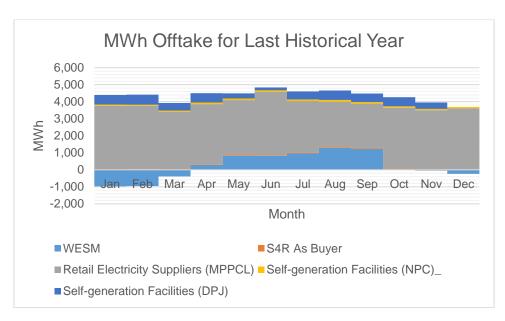
MWh Output increased from year 2011 to year 2019 at a rate of 8.01%.



Historically, Transmission Loss ranged from 13.57% to 16.91% while System Loss ranged from 13.78% to 20.35%. Transmission Loss peaked at 16.91% on year 2008 because of sales was lower than the purchase. System Loss peaked at 20.35% on year 2007 because of sales was lower than the purchase.



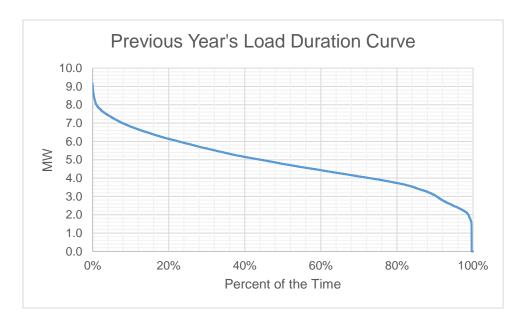
Residential customers account for the bulk of energy sales at 69.48 % despite of the high number of connections. In contrast, Industrial customers accounted for only 6.06% of energy sales despite of due to the low number of connections. However, during this proceeding years, there are some investors who would like to come in our franchise area.



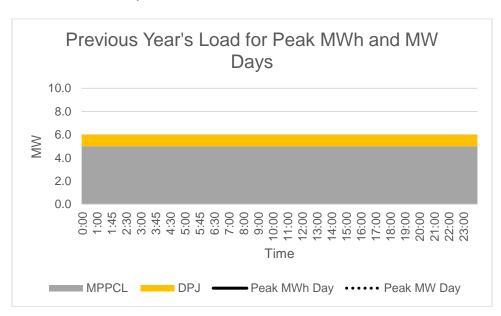


WESM Offtake increased from 10831 MWh in  $\_2001$  to 43347 MWh in 2019 at a rate of 75% due to bulk increase of population and establishments.

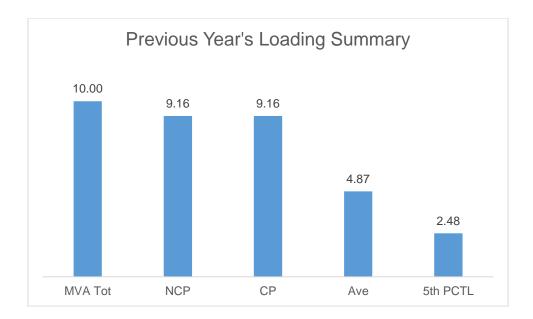
#### **Previous Year's Load Profile**



Based on the Load Duration Curve, the minimum load is around 2MW and the maximum load is 9.1593 MW for the last historical year for the month of June.



Peak MW occurred on 8:00PM due to summer time which mostly consumer used cooling devices.



The Non-coincident Peak Demand is 9.16 MW, which is around 76.8% of the total substation capacity of 10/12.5 MVA.

| Metering   | Substation | Substation |
|------------|------------|------------|
| Point      | MVA        | Peak MW    |
| Tabuk City | 10         | 9.159      |

The substations loaded at above 70% is critically overloaded. This loading problem is expected And we already applied for an emergency CapEx for additional 20/25MVA for the uprating of the Existing Power Transformer and bidding were already done.

### Forecasted Consumption Data

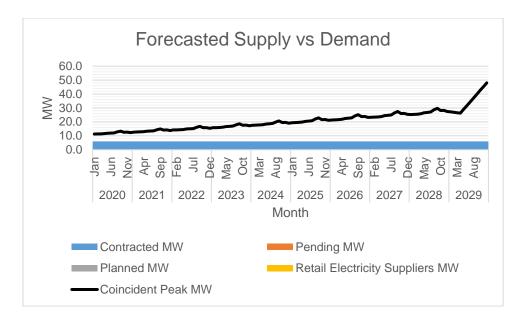
|      |     | Coincident<br>Peak MW | Contracted<br>MW | Pending MW | Planned MW | Retail<br>Electricity<br>Suppliers<br>MW | Existing<br>Contracting<br>Level | Target<br>Contracting<br>Level | MW Surplus<br>/ Deficit |
|------|-----|-----------------------|------------------|------------|------------|--|----------------------------------|--------------------------------|-------------------------|
| 2020 | Jan | 11.28                 | 6.00             | 0.00       | 0.000      |  | 53%                              | 53%                            | -5.28                   |
|      | Feb | 11.35                 | 6.00             | 0.00       | 0.000      |  | 53%                              | 53%                            | -5.35                   |
|      | Mar | 11.42                 | 6.00             | 0.00       | 0.000      |  | 53%                              | 53%                            | -5.42                   |
|      | Apr | 11.54                 | 6.00             | 0.00       | 0.000      |  | 52%                              | 52%                            | -5.54                   |
|      | May | 11.85                 | 6.00             | 0.00       | 0.000      |  | 51%                              | 51%                            | -5.85                   |
|      | Jun | 11.94                 | 6.00             | 0.00       | 0.000      |  | 50%                              | 50%                            | -5.94                   |
|      | Jul | 12.09                 | 6.00             | 0.00       | 0.000      |  | 50%                              | 50%                            | -6.09                   |
|      | Aug | 12.81                 | 6.00             | 0.00       | 0.000      |  | 47%                              | 47%                            | -6.81                   |
|      | Sep | 13.31                 | 6.00             | 0.00       | 0.000      |  | 45%                              | 45%                            | -7.31                   |
|      | Oct | 12.56                 | 6.00             | 0.00       | 0.000      |  | 48%                              | 48%                            | -6.56                   |
|      | Nov | 12.63                 | 6.00             | 0.00       | 0.000      |  | 48%                              | 48%                            | -6.63                   |
|      | Dec | 12.27                 | 6.00             | 0.00       | 0.000      |  | 49%                              | 49%                            | -6.27                   |
| 2021 | Jan | 12.68                 | 6.00             | 0.00       | 0.000      |  | 47%                              | 47%                            | -6.68                   |
|      | Feb | 12.75                 | 6.00             | 0.00       | 0.000      |  | 47%                              | 47%                            | -6.75                   |
|      | Mar | 12.83                 | 6.00             | 0.00       | 0.000      |  | 47%                              | 47%                            | -6.83                   |
|      | Apr | 12.97                 | 6.00             | 0.00       | 0.000      |  | 46%                              | 46%                            | -6.97                   |
|      | May | 13.32                 | 6.00             | 0.00       | 0.000      |  | 45%                              | 45%                            | -7.32                   |
|      | Jun | 13.42                 | 6.00             | 0.00       | 0.000      |  | 45%                              | 45%                            | -7.42                   |
|      | Jul | 13.59                 | 6.00             | 0.00       | 0.000      |  | 44%                              | 44%                            | -7.59                   |
|      | Aug | 14.40                 | 6.00             | 0.00       | 0.000      |  | 42%                              | 42%                            | -8.40                   |
|      | Sep | 14.96                 | 6.00             | 0.00       | 0.000      |  | 40%                              | 40%                            | -8.96                   |
|      | Oct | 14.12                 | 6.00             | 0.00       | 0.000      |  | 42%                              | 42%                            | -8.12                   |

|      | Nov | 14.20 | 6.00 | 0.00 | 0.000 | 42% | 42% | -8.20  |
|------|-----|-------|------|------|-------|-----|-----|--------|
|      | Dec | 13.79 | 6.00 | 0.00 | 0.000 | 44% | 44% | -7.79  |
| 2022 | Jan | 14.19 | 6.00 | 0.00 | 0.000 | 42% | 42% | -8.19  |
|      | Feb | 14.27 | 6.00 | 0.00 | 0.000 | 42% | 42% | -8.27  |
|      | Mar | 14.36 | 6.00 | 0.00 | 0.000 | 42% | 42% | -8.36  |
|      | Apr | 14.52 | 6.00 | 0.00 | 0.000 | 41% | 41% | -8.52  |
|      | May | 14.90 | 6.00 | 0.00 | 0.000 | 40% | 40% | -8.90  |
|      | Jun | 15.01 | 6.00 | 0.00 | 0.000 | 40% | 40% | -9.01  |
|      | Jul | 15.21 | 6.00 | 0.00 | 0.000 | 39% | 39% | -9.21  |
|      | Aug | 16.11 | 6.00 | 0.00 | 0.000 | 37% | 37% | -10.11 |
|      | Sep | 16.74 | 6.00 | 0.00 | 0.000 | 36% | 36% | -10.74 |
|      | Oct | 15.80 | 6.00 | 0.00 | 0.000 | 38% | 38% | -9.80  |
|      | Nov | 15.89 | 6.00 | 0.00 | 0.000 | 38% | 38% | -9.89  |
|      | Dec | 15.43 | 6.00 | 0.00 | 0.000 | 39% | 39% | -9.43  |
| 2023 | Jan | 15.81 | 6.00 | 0.00 | 0.000 | 38% | 38% | -9.81  |
|      | Feb | 15.90 | 6.00 | 0.00 | 0.000 | 38% | 38% | -9.90  |
|      | Mar | 16.00 | 6.00 | 0.00 | 0.000 | 38% | 38% | -10.00 |
|      | Apr | 16.17 | 6.00 | 0.00 | 0.000 | 37% | 37% | -10.17 |
|      | May | 16.61 | 6.00 | 0.00 | 0.000 | 36% | 36% | -10.61 |
|      | Jun | 16.73 | 6.00 | 0.00 | 0.000 | 36% | 36% | -10.73 |
|      | Jul | 16.94 | 6.00 | 0.00 | 0.000 | 35% | 35% | -10.94 |
|      | Aug | 17.95 | 6.00 | 0.00 | 0.000 | 33% | 33% | -11.95 |
|      | Sep | 18.66 | 6.00 | 0.00 | 0.000 | 32% | 32% | -12.66 |
|      | Oct | 17.61 | 6.00 | 0.00 | 0.000 | 34% | 34% | -11.61 |
|      | Nov | 17.70 | 6.00 | 0.00 | 0.000 | 34% | 34% | -11.70 |
|      | Dec | 17.19 | 6.00 | 0.00 | 0.000 | 35% | 35% | -11.19 |
| 2024 | Jan | 17.55 | 6.00 | 0.00 | 0.000 | 34% | 34% | -11.55 |
|      | Feb | 17.64 | 6.00 | 0.00 | 0.000 | 34% | 34% | -11.64 |
|      | Mar | 17.75 | 6.00 | 0.00 | 0.000 | 34% | 34% | -11.75 |
|      | Apr | 17.95 | 6.00 | 0.00 | 0.000 | 33% | 33% | -11.95 |
|      | May | 18.43 | 6.00 | 0.00 | 0.000 | 33% | 33% | -12.43 |
|      | Jun | 18.56 | 6.00 | 0.00 | 0.000 | 32% | 32% | -12.56 |
|      | Jul | 18.80 | 6.00 | 0.00 | 0.000 | 32% | 32% | -12.80 |

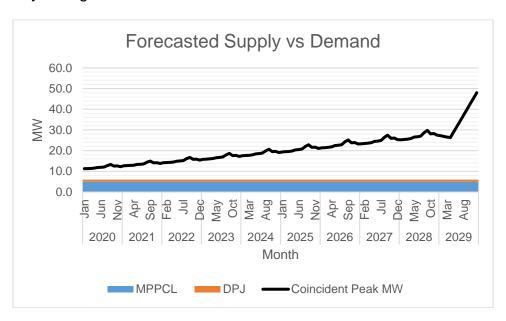
|      | Aug | 19.92 | 6.00 | 0.00 | 0.000 | 30% | 30% | -13.92 |
|------|-----|-------|------|------|-------|-----|-----|--------|
|      | Sep | 20.70 | 6.00 | 0.00 | 0.000 | 29% | 29% | -14.70 |
|      | Oct | 19.54 | 6.00 | 0.00 | 0.000 | 31% | 31% | -13.54 |
|      | Nov | 19.64 | 6.00 | 0.00 | 0.000 | 31% | 31% | -13.64 |
|      | Dec | 19.07 | 6.00 | 0.00 | 0.000 | 31% | 31% | -13.07 |
| 2025 | Jan | 19.39 | 6.00 | 0.00 | 0.000 | 31% | 31% | -13.39 |
|      | Feb | 19.50 | 6.00 | 0.00 | 0.000 | 31% | 31% | -13.50 |
|      | Mar | 19.62 | 6.00 | 0.00 | 0.000 | 31% | 31% | -13.62 |
|      | Apr | 19.83 | 6.00 | 0.00 | 0.000 | 30% | 30% | -13.83 |
|      | May | 20.36 | 6.00 | 0.00 | 0.000 | 29% | 29% | -14.36 |
|      | Jun | 20.51 | 6.00 | 0.00 | 0.000 | 29% | 29% | -14.51 |
|      | Jul | 20.77 | 6.00 | 0.00 | 0.000 | 29% | 29% | -14.77 |
|      | Aug | 22.01 | 6.00 | 0.00 | 0.000 | 27% | 27% | -16.01 |
|      | Sep | 22.88 | 6.00 | 0.00 | 0.000 | 26% | 26% | -16.88 |
|      | Oct | 21.59 | 6.00 | 0.00 | 0.000 | 28% | 28% | -15.59 |
|      | Nov | 21.71 | 6.00 | 0.00 | 0.000 | 28% | 28% | -15.71 |
|      | Dec | 21.08 | 6.00 | 0.00 | 0.000 | 28% | 28% | -15.08 |
| 2026 | Jan | 21.35 | 6.00 | 0.00 | 0.000 | 28% | 28% | -15.35 |
|      | Feb | 21.47 | 6.00 | 0.00 | 0.000 | 28% | 28% | -15.47 |
|      | Mar | 21.60 | 6.00 | 0.00 | 0.000 | 28% | 28% | -15.60 |
|      | Apr | 21.83 | 6.00 | 0.00 | 0.000 | 27% | 27% | -15.83 |
|      | May | 22.42 | 6.00 | 0.00 | 0.000 | 27% | 27% | -16.42 |
|      | Jun | 22.59 | 6.00 | 0.00 | 0.000 | 27% | 27% | -16.59 |
|      | Jul | 22.87 | 6.00 | 0.00 | 0.000 | 26% | 26% | -16.87 |
|      | Aug | 24.23 | 6.00 | 0.00 | 0.000 | 25% | 25% | -18.23 |
|      | Sep | 25.19 | 6.00 | 0.00 | 0.000 | 24% | 24% | -19.19 |
|      | Oct | 23.77 | 6.00 | 0.00 | 0.000 | 25% | 25% | -17.77 |
|      | Nov | 23.90 | 6.00 | 0.00 | 0.000 | 25% | 25% | -17.90 |
|      | Dec | 23.21 | 6.00 | 0.00 | 0.000 | 26% | 26% | -17.21 |
| 2027 | Jan | 23.30 | 6.00 | 0.00 | 0.000 | 26% | 26% | -17.30 |
|      | Feb | 23.43 | 6.00 | 0.00 | 0.000 | 26% | 26% | -17.43 |
|      | Mar | 23.58 | 6.00 | 0.00 | 0.000 | 25% | 25% | -17.58 |
|      | Apr | 23.83 | 6.00 | 0.00 | 0.000 | 25% | 25% | -17.83 |

|      | May | 24.47 | 6.00 | 0.00 | 0.000 | 25% | 25% | -18.47 |
|------|-----|-------|------|------|-------|-----|-----|--------|
|      | Jun | 24.65 | 6.00 | 0.00 | 0.000 | 24% | 24% | -18.65 |
|      | Jul | 24.96 | 6.00 | 0.00 | 0.000 | 24% | 24% | -18.96 |
|      | Aug | 26.45 | 6.00 | 0.00 | 0.000 | 23% | 23% | -20.45 |
|      | Sep | 27.49 | 6.00 | 0.00 | 0.000 | 22% | 22% | -21.49 |
|      | Oct | 25.94 | 6.00 | 0.00 | 0.000 | 23% | 23% | -19.94 |
|      | Nov | 26.08 | 6.00 | 0.00 | 0.000 | 23% | 23% | -20.08 |
|      | Dec | 25.33 | 6.00 | 0.00 | 0.000 | 24% | 24% | -19.33 |
| 2028 | Jan | 25.25 | 6.00 | 0.00 | 0.000 | 24% | 24% | -19.25 |
|      | Feb | 25.39 | 6.00 | 0.00 | 0.000 | 24% | 24% | -19.39 |
|      | Mar | 25.55 | 6.00 | 0.00 | 0.000 | 23% | 23% | -19.55 |
|      | Apr | 25.83 | 6.00 | 0.00 | 0.000 | 23% | 23% | -19.83 |
|      | May | 26.52 | 6.00 | 0.00 | 0.000 | 23% | 23% | -20.52 |
|      | Jun | 26.72 | 6.00 | 0.00 | 0.000 | 22% | 22% | -20.72 |
|      | Jul | 27.06 | 6.00 | 0.00 | 0.000 | 22% | 22% | -21.06 |
|      | Aug | 28.67 | 6.00 | 0.00 | 0.000 | 21% | 21% | -22.67 |
|      | Sep | 29.79 | 6.00 | 0.00 | 0.000 | 20% | 20% | -23.79 |
|      | Oct | 28.12 | 6.00 | 0.00 | 0.000 | 21% | 21% | -22.12 |
|      | Nov | 28.27 | 6.00 | 0.00 | 0.000 | 21% | 21% | -22.27 |
|      | Dec | 27.45 | 6.00 | 0.00 | 0.000 | 22% | 22% | -21.45 |
| 2029 | Jan | 27.27 | 6.00 | 0.00 | 0.000 | 22% | 22% | -21.27 |
|      | Feb | 26.88 | 6.00 | 0.00 | 0.000 | 22% | 22% | -20.88 |
|      | Mar | 26.59 | 6.00 | 0.00 | 0.000 | 23% | 23% | -20.59 |
|      | Apr | 26.30 | 6.00 | 0.00 | 0.000 | 23% | 23% | -20.30 |
|      | May | 29.02 | 6.00 | 0.00 | 0.000 | 21% | 21% | -23.02 |
|      | Jun | 31.73 | 6.00 | 0.00 | 0.000 | 19% | 19% | -25.73 |
|      | Jul | 34.45 | 6.00 | 0.00 | 0.000 | 17% | 17% | -28.45 |
|      | Aug | 37.16 | 6.00 | 0.00 | 0.000 | 16% | 16% | -31.16 |
|      | Sep | 39.88 | 6.00 | 0.00 | 0.000 | 15% | 15% | -33.88 |
|      | Oct | 42.59 | 6.00 | 0.00 | 0.000 | 14% | 14% | -36.59 |
|      | Nov | 45.30 | 6.00 | 0.00 | 0.000 | 13% | 13% | -39.30 |
|      | Dec | 48.02 | 6.00 | 0.00 | 0.000 | 12% | 12% | -42.02 |

The Peak Demand was forecasted using using available data for the recent seven (7) years and adopted the Trend Analysis Methodology. The outputs of these different forecasting models were summarized indicating the Validity and Accuracy Test. All models that had "Failed" the Validity and Accuracy Tests were discarded while those that had "Passed" using the following criteria were considered in the selection of the Forecasted Data. Monthly Peak Demand is at its lowest on the month of December and January.



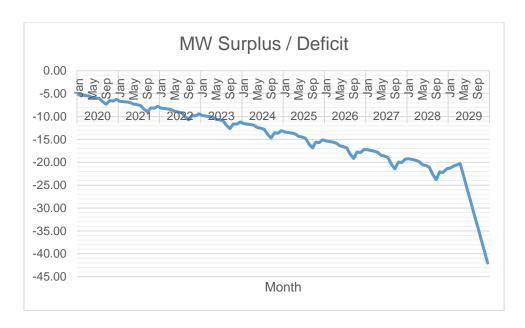
The available supply is generally above the Peak Demand. This is because the consumers were increased specially during summer season.



Of the available supply, the largest is 5MW from MPPCL. This is followed by 1 MW from DPJ.



Currently, there is under-contacting by 10%. The highest target contracting level is 53% which is expected to occur on 2020. The lowest target contracting level is 12% which is expected to occur on 2029.



Currently, there is under-contacting by 5.28MW. The highest [deficit] is 42 MW which is expected to occur on the month of December. The lowest [deficit] is 5.28 MW which is expected to occur on the month of January.

|      |     | MWh Offtake | MWh Output | MWh<br>System<br>Loss | Transm'n<br>Loss | System<br>Loss |
|------|-----|-------------|------------|-----------------------|------------------|----------------|
| 2020 | Jan | 3,166       | 2,734      | 433                   | 0.00%            | 13.66%         |
|      | Feb | 3,227       | 2,786      | 441                   | 0.00%            | 13.66%         |
|      | Mar | 3,230       | 2,789      | 441                   | 0.00%            | 13.66%         |
|      | Apr | 3,751       | 3,239      | 512                   | 0.00%            | 13.66%         |
|      | May | 4,352       | 3,758      | 595                   | 0.00%            | 13.66%         |
|      | Jun | 4,769       | 4,117      | 651                   | 0.00%            | 13.66%         |
|      | Jul | 4,025       | 3,475      | 550                   | 0.00%            | 13.66%         |
| •    | Aug | 4,382       | 3,783      | 599                   | 0.00%            | 13.66%         |
|      | Sep | 3,459       | 2,986      | 473                   | 0.00%            | 13.66%         |

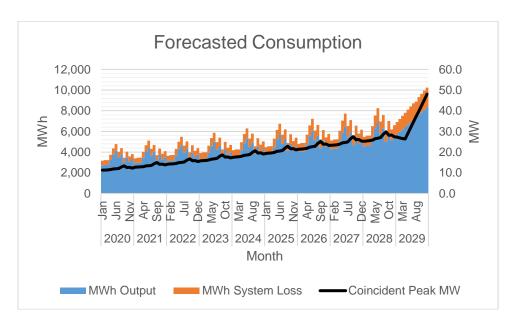
|      | Oct | 4,050 | 3,497 | 553 | 0.00%    | 13.66%  |
|------|-----|-------|-------|-----|----------|---------|
|      | Nov | 3,580 | 3,091 | 489 | 0.00%    | 13.66%  |
|      | Dec |       | 3,288 | 520 | 0.00%    | 13.66%  |
| 2024 |     | 3,809 |       | 479 |          |         |
| 2021 | Jan | 2,396 | 2,917 |     | -41.74%  | 14.11%  |
|      | Feb | 2,461 | 2,973 | 488 | -40.64%  | 14.11%  |
|      | Mar | 2,464 | 2,975 | 489 | -40.59%  | 14.11%  |
|      | Apr | 3,022 | 3,455 | 567 | -33.09%  | 14.11%  |
|      | May | 3,667 | 4,009 | 658 | -27.27%  | 14.11%  |
|      | Jun | 4,114 | 4,393 | 721 | -24.31%  | 14.11%  |
|      | Jul | 3,317 | 3,708 | 609 | -30.15%  | 14.11%  |
|      | Aug | 3,699 | 4,036 | 663 | -27.03%  | 14.11%  |
|      | Sep | 2,709 | 3,186 | 523 | -36.91%  | 14.11%  |
|      | Oct | 3,343 | 3,731 | 613 | -29.91%  | 14.11%  |
|      | Nov | 2,839 | 3,298 | 542 | -35.22%  | 14.11%  |
|      | Dec | 3,084 | 3,508 | 576 | -32.42%  | 14.11%  |
| 2022 | Jan | 2,312 | 3,111 | 530 | -57.45%  | 14.55%  |
|      | Feb | 2,385 | 3,171 | 540 | -55.55%  | 14.55%  |
|      | Mar | 2,388 | 3,173 | 540 | -55.48%  | 14.55%  |
|      | Apr | 3,016 | 3,685 | 627 | -43.00%  | 14.55%  |
|      | May | 3,740 | 4,276 | 728 | -33.80%  | 14.55%  |
|      | Jun | 4,241 | 4,685 | 798 | -29.27%  | 14.55%  |
|      | Jul | 3,346 | 3,955 | 673 | -38.31%  | 14.55%  |
|      | Aug | 3,776 | 4,305 | 733 | -33.44%  | 14.55%  |
|      | Sep | 2,664 | 3,398 | 579 | -49.27%  | 14.55%  |
|      | Oct | 3,376 | 3,979 | 678 | -37.93%  | 14.55%  |
|      | Nov | 2,810 | 3,518 | 599 | -46.47%  | 14.55%  |
|      | Dec | 3,085 | 3,742 | 637 | -41.93%  | 14.55%  |
| 2023 | Jan | 2,265 | 3,317 | 585 | -72.25%  | 14.99%  |
|      | Feb | 2,347 | 3,381 | 596 | -69.44%  | 14.99%  |
|      | Mar | 2,350 | 3,383 | 596 | -69.32%  | 14.99%  |
|      | Apr | 3,053 | 3,930 | 693 | -51.42%  | 14.99%  |
|      | May | 3,862 | 4,559 | 804 | -38.85%  | 14.99%  |
|      | Jun | 4,424 | 4,996 | 881 | -32.84%  | 14.99%  |
|      | Jul | 3,422 | 4,217 | 743 | -44.95%  | 14.99%  |
|      | Aug | 3,903 | 4,591 | 809 | -38.36%  | 14.99%  |
|      | Sep | 2,659 | 3,623 | 639 | -60.29%  | 14.99%  |
|      | Oct | 3,456 | 4,243 | 748 | -44.43%  | 14.99%  |
|      | Nov | 2,823 | 3,751 | 661 | -56.30%  | 14.99%  |
|      | Dec | 3,130 | 3,990 | 703 | -49.94%  | 14.99%  |
| 2024 | Jan | 2,065 | 3,536 | 644 | -102.39% | 15.41%  |
|      | Feb | 2,153 | 3,604 | 656 | -97.89%  | 15.41%  |
|      | Mar | 2,157 | 3,607 | 657 | -97.71%  | 15.41%  |
|      | Apr | 2,908 | 4,189 | 763 | -70.28%  | 15.41%  |
|      | May | 3,775 | 4,860 | 885 | -52.21%  | 15.41%  |
|      | Jun | 4,376 | 5,326 | 970 | -43.88%  | 15.41%  |
|      | Jul | 3,304 | 4,495 | 819 | -60.86%  | 15.41%  |
|      | Aug | 3,818 | 4,894 | 891 | -51.52%  | 15.41%  |
|      | Sep | 2,487 | 3,863 | 704 | -83.61%  | 15.41%  |
|      | Oct | 3,340 | 4,523 | 824 | -60.11%  | 15.41%  |
|      | Oct | 5,540 | 7,525 | 024 | 00.11/0  | 10.71/0 |

|      | Nov | 2,662 | 3,998 | 728   | -77.56%  | 15.41% |
|------|-----|-------|-------|-------|----------|--------|
|      | Dec | 2,991 | 4,253 | 775   | -68.10%  | 15.41% |
| 2025 |     |       | · ·   |       |          |        |
| 2025 | Jan | 1,886 | 3,769 | 708   | -137.43% | 15.81% |
|      | Feb | 1,979 | 3,841 | 721   | -130.53% | 15.81% |
|      | Mar | 1,983 | 3,844 | 722   | -130.25% | 15.81% |
|      | Apr | 2,787 | 4,465 | 839   | -90.26%  | 15.81% |
|      | May | 3,715 | 5,180 | 973   | -65.64%  | 15.81% |
|      | Jun | 4,358 | 5,676 | 1,066 | -54.72%  | 15.81% |
|      | Jul | 3,211 | 4,791 | 900   | -77.26%  | 15.81% |
|      | Aug | 3,761 | 5,216 | 980   | -64.72%  | 15.81% |
|      | Sep | 2,337 | 4,117 | 773   | -109.29% | 15.81% |
|      | Oct | 3,249 | 4,821 | 905   | -76.25%  | 15.81% |
|      | Nov | 2,524 | 4,262 | 800   | -100.55% | 15.81% |
|      | Dec | 2,876 | 4,533 | 851   | -87.21%  | 15.81% |
| 2026 | Jan | 2,010 | 4,017 | 776   | -138.45% | 16.19% |
|      | Feb | 2,106 | 4,094 | 791   | -131.94% | 16.19% |
|      | Mar | 2,110 | 4,097 | 792   | -131.68% | 16.19% |
|      | Apr | 2,935 | 4,758 | 919   | -93.46%  | 16.19% |
|      | May | 3,886 | 5,521 | 1,067 | -69.52%  | 16.19% |
|      | Jun | 4,545 | 6,049 | 1,169 | -58.81%  | 16.19% |
|      | Jul | 3,369 | 5,106 | 987   | -80.86%  | 16.19% |
|      | Aug | 3,933 | 5,559 | 1,074 | -68.63%  | 16.19% |
|      | Sep | 2,473 | 4,388 | 848   | -111.74% | 16.19% |
|      | Oct | 3,408 | 5,138 | 993   | -79.88%  | 16.19% |
|      | Nov | 2,665 | 4,542 | 878   | -103.37% | 16.19% |
|      | Dec | 3,026 | 4,831 | 934   | -90.52%  | 16.19% |
| 2027 | Jan | 1,744 | 4,280 | 849   | -194.06% | 16.55% |
|      | Feb | 1,845 | 4,362 | 865   | -183.37% | 16.55% |
|      | Mar | 1,849 | 4,365 | 866   | -182.94% | 16.55% |
|      | Apr | 2,712 | 5,070 | 1,005 | -124.01% | 16.55% |
|      | May | 3,707 | 5,882 | 1,167 | -90.12%  | 16.55% |
|      | Jun | 4,398 | 6,445 | 1,278 | -75.63%  | 16.55% |
|      | Jul | 3,166 | 5,440 | 1,079 | -105.91% | 16.55% |
|      | Aug | 3,757 | 5,923 | 1,175 | -88.90%  | 16.55% |
|      | Sep | 2,228 | 4,675 | 927   | -151.42% | 16.55% |
|      | Oct | 3,208 | 5,474 | 1,086 | -104.51% | 16.55% |
|      | Nov | 2,429 | 4,839 | 960   | -138.70% | 16.55% |
|      | Dec |       | 5,148 | 1,021 | -138.70% | 16.55% |
| 2028 | Jan | 2,807 | 4,559 | 926   | +        |        |
| 2020 |     | 1,731 |       |       | -216.87% | 16.88% |
|      | Feb | 1,841 | 4,646 | 944   | -203.67% | 16.88% |
|      | Mar | 1,845 | 4,650 | 944   | -203.14% | 16.88% |
|      | Apr | 2,789 | 5,400 | 1,097 | -132.98% | 16.88% |
|      | May | 3,877 | 6,266 | 1,273 | -94.45%  | 16.88% |
|      | Jun | 4,631 | 6,866 | 1,394 | -78.37%  | 16.88% |
|      | Jul | 3,285 | 5,795 | 1,177 | -112.24% | 16.88% |
|      | Aug | 3,931 | 6,309 | 1,281 | -93.09%  | 16.88% |
|      | Sep | 2,260 | 4,980 | 1,011 | -165.09% | 16.88% |
|      | Oct | 3,330 | 5,831 | 1,184 | -110.66% | 16.88% |
|      | Nov | 2,480 | 5,155 | 1,047 | -150.07% | 16.88% |

|      | Dec | 2,893 | 5,483 | 1,114 | -128.03% | 16.88% |
|------|-----|-------|-------|-------|----------|--------|
| 2029 | Jan | 2,928 | 5,720 | 1,180 | -135.65% | 17.11% |
|      | Feb | 2,988 | 5,957 | 1,247 | -141.07% | 17.31% |
|      | Mar | 3,048 | 6,193 | 1,314 | -146.28% | 17.50% |
|      | Apr | 3,303 | 6,430 | 1,381 | -136.47% | 17.68% |
|      | May | 3,558 | 6,666 | 1,447 | -128.06% | 17.84% |
|      | Jun | 3,812 | 6,903 | 1,514 | -120.78% | 17.99% |
|      | Jul | 4,067 | 7,140 | 1,581 | -114.41% | 18.13% |
|      | Aug | 4,322 | 7,238 | 1,648 | -105.60% | 18.54% |
|      | Sep | 4,577 | 7,613 | 1,714 | -103.80% | 18.38% |
|      | Oct | 4,831 | 7,850 | 1,781 | -99.33%  | 18.49% |
| _    | Nov | 5,086 | 8,086 | 1,848 | -95.31%  | 18.60% |
| _    | Dec | 5,341 | 8,323 | 1,914 | -91.67%  | 18.70% |

MWh Offtake was forecasted using forecasting methodology. The assumed load factor is 1 to 3%.

Based on the same study, the Distribution System [cannot] adequately convey electricity to customers.



MWh Output was expected to grow at a rate of 7.07% annually.



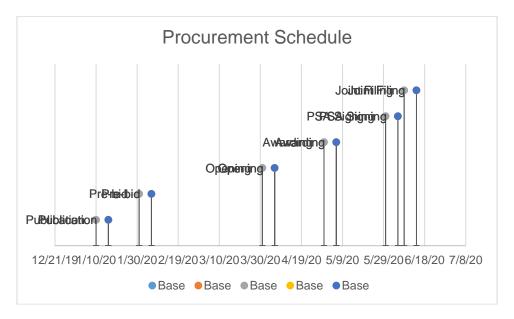
| Transmission Loss is expected to range from -266% to 0% while System Loss is expected to range from 13% to 16% |  |
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### **Power Supply**

| Case No. | Туре | GenCo                                 | Minimum<br>MW | Minimum<br>MWh/yr | PSA Start  | PSA End    |
|----------|------|---------------------------------------|---------------|-------------------|------------|------------|
| MPPCL    | Base | Masinloc Power Partners Company, Ltd. | 5.00          | 43,800            | 12/26/2019 | 12/25/2038 |
| DPJ      | Base | DPJ Engineers & Consultants           | 1.00          | 8,760             | 2/25/2016  | 12/26/2031 |

The PSA with MPPCL filed with ERC under Case No. 2015-220 RC was procured through CSP. It was selected to provide for base requirements due to KAELCO forecasted demand. Historically, the utilization of the PSA is 100%. The actual billed overall monthly charge under the PSA ranged from 4.00 P/kWh to 4.50 P/kWh in the same period.

|                | Base      | Base      | Base      | Base      | Base     |
|----------------|-----------|-----------|-----------|-----------|----------|
| Туре           | RE        | RE        | RE        | RE        | RE       |
| Minimum MW     | 1.5       | 2         | 5.5       | 4         | 5        |
| Minimum MWh/yr | 13,140    | 17,520    | 48,180    | 35,040    | 43,800   |
| PSA Start      | 12/26/19  | 12/26/20  | 12/26/21  | 12/26/22  | 12/26/24 |
| PSA End        | 12/25/20  | 12/25/21  | 12/25/22  | 12/25/22  | 12/25/43 |
| Publication    | 1/10/2020 | 1/16/2020 | 1/10/2020 | 1/16/2020 | TBD      |
| Pre-bid        | 1/31/2020 | 2/6/2020  | 1/31/2020 | 2/6/2020  | TBD      |
| Opening        | 3/31/2020 | 4/6/2020  | 3/31/2020 | 4/6/2020  | TBD      |
| Awarding       | 4/30/2020 | 5/6/2020  | 4/30/2020 | 5/6/2020  | TBD      |
| PSA Signing    | 5/30/2020 | 6/5/2020  | 5/30/2020 | 6/5/2020  | TBD      |
| Joint Filing   | 6/8/2020  | 6/14/2020 | 6/8/2020  | 6/14/2020 | TBD      |



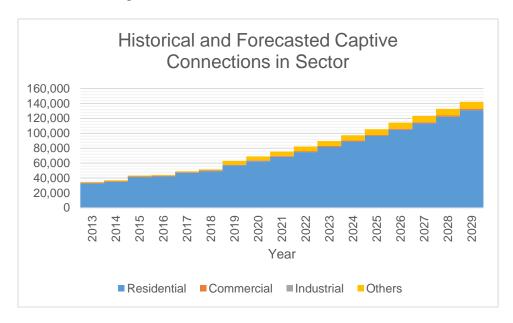
For the procurement of 1.5MW of supply which is planned to be available on 2020 the first publication or launch of CSP will be on 01/10/2020. Joint filing is planned on 06/08/2020, or 150 days later, in accordance with DOE's 2018 CSP Policy.

For the procurement of 2MW of supply which is planned to be available on 2020, the first publication or launch of CSP will be on 01/16/2020. Joint filing is planned on 06/14/2020, or 150 days later, in accordance with DOE's 2018 CSP Policy.

For the procurement of 5.5MW of supply which is planned to be available on 2021, the first publication or launch of CSP will be on 01/10/2020. Joint filing is planned on 06/08/2020, or 150 days later, in accordance with DOE's 2018 CSP Policy.

For the procurement of 4MW of supply which is planned to be available on 2022 the first publication or launch of CSP will be on 01/16/2020. Joint filing is planned on 06/14/2020, or 150 days later, in accordance with DOE's 2018 CSP Policy.

## **Captive Customer Connections**



The number of residential connections is expected to grow at a rate of 7.72% annually from 2013 up to 2019.