## WMO Arts and Science College, Muttil ENERGY AUDIT (2020-21)

The energy audit is an important process because it helps to identify energy-saving opportunities and improve the energy efficiency of buildings and equipment. It helps to identify energy-saving opportunities that significantly reduce the energy costs of the college. Improving energy efficiency can help reduce greenhouse gas emissions and other harmful pollutants contributing to climate change. Energy audits can identify problems with equipment and systems that may be causing energy waste. By fixing these problems, colleges can improve the performance of the equipment and extend its lifespan. In summary, energy audits are important because they help to identify energysaving opportunities, reduce costs and improve environmental performance.

1. Basic information.

College is situated in a land of 15 acres, with 13 buildings with a total plinth area of 3948 square meter. There are 12 electric connections in the campus and are listed below.

| SI no | Consumer number | Total connected Load |
| :--- | :--- | :--- |
| 1 | 1167925010962 | 1 KW |
| 2 | 1167925010669 | 21 KW |
| 3 | 167923008725 | 13 KW |
| 4 | 1167929007986 | 16 KW |
| 5 | 1167927008037 | 12 KW |
| 6 | 1167926004470 | 1 KW |
| 7 | 1167929010753 | 8 KW |
| 8 | 11679294009062 | 1 KW |
| 9 | 1167920004471 | 1 KW |
| 10 | 1167925008036 | 2 KW |
| 11 | 1167927004468 | 4 KW |
| 12 | 1167924004469 | 1 KW |

2. Methodology:

In this study, we have compared the energy consumption in the previous years with that of the current year in each consumer number and studied the variations and also studied the factors affecting these variations.
3. Results: This section presents the findings of the energy audit, including an analysis of energy consumption, energy costs, and potential energy savings opportunities.

| Consumer <br> No.1167924009062 |  |  |  |  |
| :--- | ---: | ---: | ---: | :--- |
| Year | 2018 | 2019 | 2020 | 2021 |
| Average Monthly <br> Units | 51.33 | 102 | 112.75 | 74.67 |

Consumer No. 1167924009062


| Consumer <br> No.1167929010753 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year | 2019 | 2020 | 2021 |  |  |
|  |  |  |  |  |  |
| Average Monthly Units | 67.5 | 99.83 | 137.5 |  |  |



| Consumer <br> No.1167926004470 |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Year | 2018 | 2019 | 2020 | 2021 |
| Average Monthly <br> Units | 137.25 | 166.1667 | 75.25 | 93.41667 |



| Consumer <br> No.1167926004470 |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Year | 2018 | 2019 | 2020 | 2021 |
| Average Monthly <br> Units | 25.42 | 13.75 | 3 | 3.92 |



| Consumer No. <br> 1167927004468 |  |  |
| :--- | :---: | :---: |
| Year | $\mathbf{2 0 2 0}$ | $\mathbf{2 0 2 1}$ |
| Average Monthly <br> Units | 37 | 50.5 |



| Consumer No. <br> 1167924004469 |  |  |  |  |
| :---: | ---: | ---: | ---: | :---: |
| Year | 2018 | 2019 | 2020 | 2021 |
| Average Monthly <br> Units | 70.92 | 84.92 | 42.5 | 37.58 |



| Consumer <br> No.1167925008036 |  |  |  |  |
| :---: | ---: | ---: | ---: | :---: |
| Year | 2018 | 2019 | 2020 | 2021 |
| Average Monthly <br> Units | 36.08 | 46.25 | 38.67 | 35.08 |



| Consumer <br> No.1167927008037 |  |  |  |  |
| :--- | ---: | ---: | ---: | :---: |
| Year | 2018 | 2019 | 2020 | 2021 |
| Average Monthly <br> Units | 476.75 | 509.92 | 232.25 | 255.17 |



| Consumer No. 1167923008725 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Year | 2018 | 2019 | 2020 | 2021 |
| Average Monthly Units | 207.4167 | 420.1667 | 264.6667 | 264.5833 |
| Consumer No.1167923008725 |  |  |  |  |
| 450 |  |  |  |  |
| 400 |  |  |  |  |
| 350 |  |  |  |  |
| 300 |  |  |  |  |
| 250 - |  |  |  |  |
| $200$ <br> Units |  |  |  |  |
| 150 |  |  |  |  |
| 100 |  |  |  |  |
| 50 |  |  |  |  |
| $0 \xrightarrow{\text { l }}$ |  |  |  |  |
|  |  |  |  |  |


| Consumer <br> No.1167924009062 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Year | 2018 | 2019 | 2020 | 2021 |
| Average Monthly <br> Units | 1362.42 | 1521.92 | 1389.58 | 1792.33 |



| Consumer <br> No.1167929010669 |  |  |  |
| :---: | :---: | :---: | :---: |
| Year | $\mathbf{2 0 1 9}$ | $\mathbf{2 0 2 0}$ | 2021 |
| Average Monthly <br> Units | 614.2857 | 290.8333 | 543.8333 |



