**GCC Sustainability Assessment**

**AUO #1 Energy Reduction**

**Assessment Cycle : 10/12/2020 – 03/08/2021**

**Analysis of Findings and Summary of Results**

**Year Over Year Comparison of Energy Consumption for the Assessment Period**

* **Summary of Results:** Based on the data below which reflects year over year energy usage by GCC (Assessment cycle Oct 2020 to March 2021 compared to Oct 2019 to March 2020), average energy savings during the assessment was approximately **21.27%!** This exceeded our goal, however, many variables must be considered in this drastic decrease in energy usage such as with campus lockdown and limited usage of the campus facilities due to COVID19 restrictions. The reduction of human activity on our campus has a huge effect on energy usage given less demand for conditioned air, equipment and technologies that require energy.
* **GCC** has also completed replacing down and inefficient AC units (15 total AC units replaced). This has increase energy efficiency and contributed to the energy reduction of at least 5%.
* More reliable data is needed. This can be achieve by analyzing data when the campus is opened back up and experiences normal human traffic similar to prior semesters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Month**  | **Assessment Year Data****2020-2021** | **Prior Year Data****2019-2020** | **Difference (+ or -)** |
| **September**  | **231323.73** | **321381.75** | **28.02% (-)** |
| **October** | **234080.67** | **321588.63** | **27.21% (-)** |
| **November** | **247311.93** | **305500.69** | **19.04% (-)** |
| **December** | **242364.86** | **292489.67** | **17.13% (-)** |
| **January**  | **235982.66** | **277580.13** | **14.98% (-)** |
|  |  |  |  |
|  |  | **Average Monthly Reduction**  | **21.27% average monthly energy reduction**  |

**GCC Renewable Energy Production for the Assessment Cycle Period in kilowatt-hours**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **September**  | **October**  | **November**  | **December** | **Jan** | **Feb** |
| **2.486** | **2.414** | **2.419** | **2.393** | 2.642 |  |
| 2.834 | 2.746 | 2.741 | 2.718 | 2.269 |  |
| 2.436 | 2.345 | 2.361 | 2.366 | 2.583 |  |
| 3.401 | 3.245 | 3.24 | 3.208 | 3.51 |  |
| 3.59 | 3.429 | 3.434 | 3.41 | 3.754 |  |
| 2.985 | 2.885 | 2.855 | 2.761 | 2.907 |  |
| 1.136 | 0.933 | 1.136 | 1.26 | 1.275 |  |
| **18.868** | **17.997** | **18.186** | **18.116** | **18.94** |  |
|   |   |   |   |  |  |
| 27,185.00 | 26,990 | 27,718 | 27,449 | n/a  |  |
| $5,094.36  | $4,859.19  | $4,910.22  | $4,891.32  | $5,113.80 |  |