



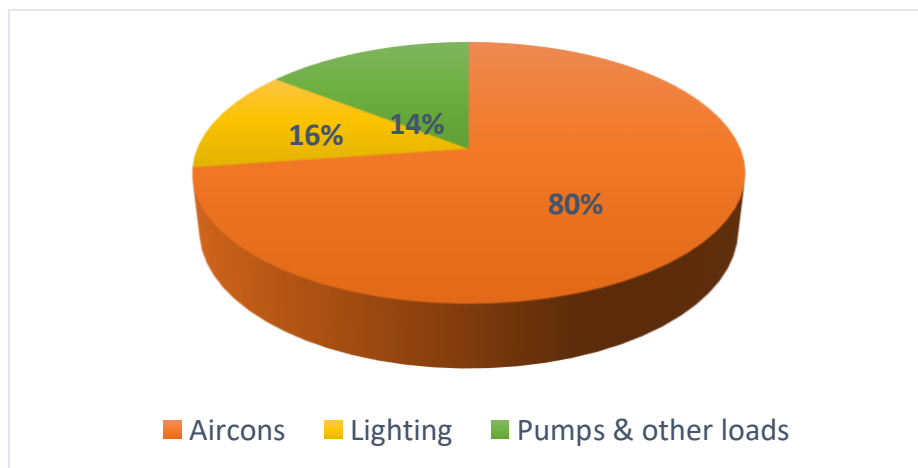
## ENGINEERING AND FACILITIES DEPARTMENT

### Energy Utilization and Conservation

The Engineering Department is primarily responsible for providing a stable power supply in the campus. Power is obtained from Aboitiz Energy Solutions, Inc., a wholesale electricity spot market provider.

Airconditioning units comprise the biggest chunk in electrical consumption, taking up 80% of the entire monthly power utilization of the campus. The distribution of power utilization is presented below.

#### Distribution of Power Consumption in UPHSD-Las Piñas Campus



This being the case, the use of aircons in classrooms and other instructional areas is strictly controlled. Aircon power in classrooms with class plotting is normally opened as early as 7 a.m., while unplotted rooms will require the user/s to fill out the aircon request form to be signed by the Dean/Department Head and the School Director. Switching off of aircon power in Grade School and Junior High School Departments is done at 4 p.m. for classrooms and 6 p.m. for offices.

Aircon power is also switched off at 6 p.m. in all other offices, unless a prior request is received. Duly approved request form is also required to open aircon in certain rooms on Saturdays, Sundays, and holidays. Power for outlets, computers, and electric fans is not switched off.

In order to generate an estimated utilization of the electricity by college/department for a particular month, the Engineering and Facilities Department developed a costing procedure. This calls for the following actions:

- ❖ Determining the number of operational hours spent on an event or activity (from the time of aircon switch on to switch off; and,



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- ❖ Identifying the venue of the event or activity.

The electrical cost of each event will be computed by multiplying the number of operational hours with the electrical cost per hour of the assigned venue. A copy of the costing summary will be forwarded to the concerned college dean/department head. At the end of the school year, a year-end summary will be sent to each college dean/department head, listing down the total electrical costs incurred by his/her department or college for the past school year for out-of-classroom activities.

Aside from controlling aircon supply, energy conservation is also achieved through the following approaches:

- ❖ Aircon units aged 10 years or older are replaced with new ones for a more efficient cooling system, while bringing about 10%-15% savings in electrical consumption.
- ❖ Aircons in small offices or rooms with 2 or 2.5 Hp are downgraded to 1.5 or 2 Hp, resulting in 30% to 35% savings in electrical consumption.
- ❖ Incandescent and fluorescent lighting conversion to LED leads to 50% to 60% savings on electrical consumption.
- ❖ Other departments or business units under the DALTA Group are charged for electricity and utilities for their events held in UPHSD Las Piñas Campus.

In case of power outages, the Engineering and Facilities Department maintains a standby generator set with a capacity of 400 kW, that is able to supply the lighting load requirements of the entire campus, but not the aircons. This genset can run continuously for eight (8) hours a day.

## Water Utilization and Conservation

Water supply for UPHSD Las Piñas Campus is primarily sourced from Maynilad. The first Maynilad water connection serves the Junior High School Building, University Chapel, College of

International and Hospitality Management Building, crossing to the New Engineering Building and the Main Canteen.

The second Maynilad connection originates from the University Lane, and services the U-Lane Dorm, and part of the Gymnasium and Grade School Building.



The water conservation program of UPHSD-Las Piñas Campus is anchored on the following strategies:

- ❖ Persistent defect monitoring & corrective action - Frequent checking/monitoring of comfort rooms, lavatories, laboratories, kitchen sinks, water hoses, and other water lines to identify leaks and continuous water flows.
- ❖ Daily/weekly usage monitoring - Recording of water readings weekly to analyze trends and unusual movements.
- ❖ Water conservation campaign - Educating stakeholders on water conservation practices through handouts and posters in the comfort rooms.
- ❖ Installation of automatic shut off valves – Replacement of existing faucets and urinal valves to push valve type to control the flow of water after each use.
- ❖ Installation of float valves - Installing float valves in 7 water storage tanks to avoid tank overflows.
- ❖ Audit of current water use - Installing separate water meters at strategic locations to identify high and low consumers.
- ❖ Reduction of water pressure - Installing pressure-reducing valves to control water pressure during each use.
- ❖ Selective irrigation of plants - daily irrigation of plants that are directly under the sun; less frequently for those that are under shades or with natural vegetative property to reduce water consumption.

*(Lifted from Engineering and Facilities Operations Manual October 2019)*