

Safe energy sources and energy saving Pholosong Hospital- South Africa

GGHH AGENDA GOAL

- Energy

HOSPITAL GOAL

Action items the hospital hopes to accomplish:

- Reduce energy costs.
- Reduce energy consumption rate.
- Reduce emissions that contributes to global warming such as carbon dioxide.
- Explore greener energy sources.

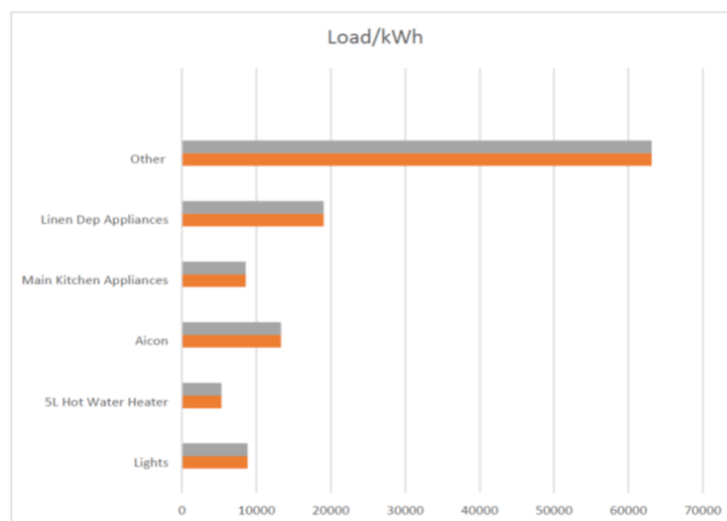
PROGRESS ACHIEVED

- Installed energy saving lights
- From April 2018 to date no coal has been ordered by the hospital

THE ISSUE

- Pholosong Hospital used coal as an alternative source of energy for steam generation and it contributed to the emission of greenhouse gases.
- The negligence of electricity usage has been observed in the hospital (e.g. leaving office lights and computers on). This contributes to cost increase of the hospital electricity bill.
- Loss of thermal gas through the pipelines resulting in the increase on the amount of energy utilization and have cost implications for the hospital.
- Improper storage of coal (not covered) make it vulnerable to various weather conditions including rain which will require more ignition power that will result in high volume of emitted greenhouse gases.
- Pholosong Hospital does not have access to electricity meter readings.

Comparison of different equipment/appliances per kWh.



SUSTAINABILITY STRATEGY IMPLEMENTED

- The hospital wanted to install its own meter to compare its readings with Eskom's however the installation of meters require funding and the process to be followed is time consuming, therefore Pholosong Hospital have invited Eskom Energy Advisers to conduct an energy saving assessment and make recommendations. The assessment was conducted and report was submitted to the hospital. The recommendations contained in the assessment report assisted in the implementation which included (but was not limited to) the following:
 - The most energy consuming departments
 - The purchase of energy saving equipment
 - Ways of saving energy.

IMPLEMENTATION PROCESS

- The energy saving assessment report from Eskom on how best the institution can save energy was presented to the committee.
 - The committee developed an energy saving plan incorporating the recommendations made by Eskom.
 - The energy saving plan is as follows:
 - Conduct a pre-assessment in the entire hospital to check electricity usage and identify energy sources.
 - Compile energy saving report and develop a checklist for audits.
 - Conduct energy saving departmental awareness program for staff.
 - Form departmental competition on energy saving for the best performing department, as per the checklist.
 - The people involved in implementation of this strategy are Eskom, Facility management unit, Hospital Electrician, Medical Manager, Allied Manager, Environmental Health Practitioners and Pholosong Hospital GGHH committee members.
 - Factors that contributed to the success of implementing the energy saving strategy are as follows:
 - External meetings with Eskom representatives.
 - External energy saving assessment by Eskom.
 - Internal meetings with GGHH committee members
 - Internal energy saving assessment by the committee members
 - Internal departmental awareness and audits.
 - The staff received training on energy saving, environmental impacts of coal and health related illness due to emissions from burning of coal.
 - Energy saving lights were installed to replace high consuming lights.
- During the implementation it was observed that staff are negligent in their energy use. (leaving lights on assuming that they do not consume energy) The training on energy savings



Images from Left to Right: Raising awareness on energy savings. Switch off lights stickers. Switch off computer stickers

- has contributed on the behavioral change. The strategy was implemented on the 22 May 2019 and review will be done on the yearly basis.

TRACKING PROGRESS

- The following will be used to track the progress:
 - Monthly electricity bills comparison
 - Monthly audits to monitor behavioral change, electricity usage and etc.

CHALLENGES AND LESSONS LEARNED

- Pholosong Hospital had no access to the meters installed in the institution by Eskom.
- The hospital requested certain information such as faulty and maintenance reports from Eskom and it was not provided.
- Management delays on the progress of the project (e.g. approval of proposals)
- The lights are interconnected in some buildings.
- The requested and required documents are not available internally e.g. contracts.
- Some electrical machines do not have electricity information (that will assist in calculating consumption rate of each machine).
- The institutions do not monitor the electric usage.
- Delayed electric bill payments by the hospital result in arrears.

NEXT STEPS

- The hospital committee will monitor the implementation of the above-mentioned strategy to ensure its success. Should the strategy not meet the target it will be reviewed.
- The hospital committee will suggest the installation of smart meters.
- Request intense energy training for the hospital staff to ensure that they are knowledgeable with regards to the implications of energy loss (e.g. through the pipelines).
- Propose proper coal storage area

DEMOGRAPHIC INFORMATION

Pholosong Hospital is a regional public hospital which is 1800 square meters in size and has 483 beds. It is located in Tsakane at Brakpan in the East of Johannesburg.

LINK

[Pholosong monthly electricity bill \(2017-2019\)](#)

[Pholosong annual coal supply](#)

[Pholosong Eskom report](#)

[Pholosong audit tool](#)

QUOTES

"Trust the process and reach the green journey"

"Let's go green to get Pholosong clean"

Main contact person information: Unathi Stemela

Email: ustemela@gmail.com

Telephone no: 011 812 5228