



The Open University of Sri Lanka

AIR-CONDITIONING POLICY

April 21, 2017

UNIVERSITY AIR CONDITIONING POLICY

Background

Scientific studies confirm that indoor temperature can significantly impact on the productivity. This means the person who is working in indoor environment should have 'thermal comfort' for the effective work. This is possible only if the air temperature, humidity and air movement should be within a specified range which is known as 'comfort zone'. Generally recommended temperature of the comfort zone lies between 22^o C and 25^o C. Further, Relative humidity level below 20% causes discomfort. This also brings negative effect on printers, and computers due to the built up static electricity (reference: Canadian Center for Occupational Health and Safety).

On the other hand, air conditioning systems are expensive to purchase, install and maintain. Currently, it has been estimated that more than 70% of the energy consumption of the central campus of the OUSL goes to cover the energy demand of the air-conditioners. It has been identified that the larger portion of the recurrent expenditure for the electricity is due to usage of air conditioners. Therefore, it is essential that the use of air conditioners, new installation and expansion of existing units are done in a sustainable manner.

In many cases none of the university buildings were designed for air conditioning. However, later some of these buildings were provided with air conditioning. Extending the air condition facility for these buildings were provided with air conditioning. Extending the air condition facility for these buildings (which were originally not designed for the air conditioning) is a difficult task owing to the limited electrical capacity and building designs.

Aim

The aim of the Open University Air Condition Policy is to ensure that all requests for Air Conditioning and ventilation are addressed in consistent manner. While ensuring this the attention also is paid for conservation of energy and efficiency.

Criteria

The University had identified a number of space categories which may be air conditioned. These categories are given below:

- i. Areas such as offices occupied by the officers of the university
- ii. Large common meeting rooms (such as faculty board rooms, conference rooms, computer rooms)
- iii. Spaces where the indoor temperature in average increases more than 30⁰C for more than 15% of working hours.
- iv. Laboratories with sensitive equipment that are required to operate and maintain within specified temperature (as a condition of the manufacturer's warranty and recommendations). When controlled environment is required for a piece of equipment located in an existing large room the area should be partitioned to provide housing only for the particular equipment.

Note:

- Only the areas where the thermal insulation is possible are eligible for the air conditioning.
- In case of construction of new buildings, at the design stage decision should be made whether the building (or part of it) will be air conditioned. For the new buildings, which will be air conditioned, the electrical wiring for the air conditioners should be done separately.

Expansion or Upgrading existing air conditioning facility

Upgrading or expansion of existing air conditioners is permitted, if

- i. there is an increase of human capacity
- ii. there is increase of equipment load
- iii. there is change in building structure

Aesthetic Considerations

In case of installation of air conditioners consideration should be given to aesthetic look of the building (both outside and inside)

Procedure

All requests for air conditioning should be submitted to the Planning and Development (P&D) Committee through the Head of the relevant department / division for initial consideration. The request should be submitted along with the duly filled AC requisition form given in the appendix (Section A) of this document. When the request satisfied the criteria given in section 3 of this document the committee shall forward the request (Section B) to the Maintenance Engineer to assess and recommend the feasibility of installation of air conditioner. Upon the recommendation of the maintenance engineer (Section C), the P&D Committee shall make the final decision (Section D) on the installation of air conditioner.

SECTION B

Recommendation of the P&D Committee

Request can / cannot be recommended and forwarded for the observation of the maintenance engineer.

Chairman / P&D

SECTION C

Observation of the Maintenance Engineer

1. State whether other options are available to keep the temperature at the control conditions:
2. State whether the availability of other spaces with suitable air conditioning to accommodate the request (in case of equipment):
3. State whether the space can be thermally insulated:
4. State whether the installation affects the aesthetic view of the building:
5. Monthly energy requirement:
6. Other comments (if any):
7. Installation / upgrading is recommended / not recommended.

Maintenance Engineer

SECTION D

Final Approval of the P&D Committee

The request is approved and forward to the Supplies Division

The request is not approved and return to the sender with following observation and recommendations:

Chairman / P&D