

# **POLICY : ENERGY EFFICIENCY IN COUNCIL BUILDINGS AND ON COUNCIL PREMISES**

ITEM MI 143-2002  
MC 05.12.2002

**PROPOSED POLICY ON ENERGY EFFICIENCY IN COUNCIL BUILDINGS AND ON COUNCIL PREMISES**

## **RESOLVED:**

- (a) **That** the contents of the report by the Executive Director : Municipal Infrastructure presenting a draft policy on Energy Efficiency in Council buildings and on Council premises, **BE NOTED**.
- (b) **That** the Policy on Energy Efficiency in Council buildings and on Council premises referred to in 1 above, **BE ADOPTED** as Council policy and **BE CIRCULATED** to all Regional Executive Directors.

## PROPOSED POLICY ON ENERGY EFFICIENCY IN COUNCIL BUILDINGS AND ON COUNCIL PREMISES

### PURPOSE OF REPORT

The need to develop an energy efficiency policy for Council was recently identified as a priority for the Municipal infrastructure Department. The purpose of this report is to present to Council for consideration and possible adoption a draft policy on energy efficiency in Council buildings and on Council premises

### MOTIVATION

There is a need for the Ekurhuleni Metropolitan Municipality to take a new look at how efficiently energy is being used in its buildings and on the premises it controls. The reasons for this are as follows:

1. Reserves of fossil fuels like coal, oil and wood are being sparingly to extend the lifespan of the currently known reserves
2. There are still many problems associated with the use of nuclear power and renewable sources of energy, like solar and wind power could, up to now, only supply in a fraction of worldwide energy needs.
3. There is a problem with global warming and associated changes in climate that impacts negatively on nature and human development and that seems to be linked to the excessive use of fossil fuels

It is thus important for the Ekurhuleni Metropolitan Municipality to use all forms of energy efficiently and sparingly. In this regard it should always be remembered that the Municipality has a leadership role to play and that it should, in the first place, lead through example.

In the light of the above, Council should have a uniform policy for application in all its premises. **A Draft Policy on Energy Efficiency in Council Buildings and on Council Premises** accompanies this report as **Annexure A**.

### FINANCIAL IMPLICATIONS

The Draft Policy is aimed at the optimal use of resources and the elimination of waste. If implemented properly it will reduce expenditure.

### COMMENTS FROM RELEVANT DEPARTMENTS

#### Finance Department

*"The recommendations are supported"*

## **DRAFT POLICY. ON ENERGY EFFICIENCY IN COUNCIL BUILDINGS AND ON COUNCIL PREMISES**

### **PREAMBLE**

There is a need for the Ekurhuleni Metropolitan Municipality to take a new look at how efficiently energy is being used in its buildings and on the premises it controls. The reasons for this are as follows:

1. Reserves of fossil fuels like coal, oil and wood are being depleted and need to be used sparingly to extend the lifespan of the currently known reserves.
2. There are still many problems associated with the use of nuclear power and renewable sources of energy like solar and wind power could, up to now, only supply a fraction of worldwide energy needs.
3. There is a problem with global warming and associated changes in climate that impacts negatively on nature and human development and that seems to be linked to the excessive use of fossil fuels.

It is thus important for the Ekurhuleni Metropolitan Municipality to use all forms of energy efficiently and sparingly. In this regard it should always be remembered that the Municipality has a leadership role to play and that it should, in the first place, lead through example.

### **LIGHTING ON COUNCIL PREMISES**

It is acknowledged that in most instances lighting uses only a small fraction of the energy used by any community, it is, however, a very visible application that often carries a strong message about the attitudes in an organisation towards energy efficiency. The following should thus be regarded as Councils policy in this regard:

1. A person should in all cases where lighting needs to be switched on I off be appointed in writing to attend to this. Measures should be put in place to ensure that this task receives the necessary attention when such a person is not available to perform it.
2. Where lighting is -switched automatically by means of a time or light sensitive switch a person should be appointed in writing to monitor the automatic switching and to ensure the correct operation thereof.
3. Energy efficient light sources should always be considered when lighting installations are designed. Incandescent (including quartz halogen) lamps should only be considered when a clear case can be made for the use of such lamps due to the limited hours the lighting will be used.
4. Light fittings based on conventional fluorescent tubes, compact fluorescent tubes or high pressure sodium, mercury or metal halide lamps should always first be considered for interior lighting. Incandescent lamps should, however, be considered for use where the light will only be required for short periods like in store rooms, safes, etc.
5. Light fittings based on high-pressure sodium, mercury or metal halide lamps or compact fluorescent tubes should always first be considered for outdoor areas and sports field lighting. Due consideration should, however, be given to the hours the lighting will be required and the purchase and maintenance cost of energy efficient lighting equipment should be weighed up against the possibly lesser cost of incandescent lighting.

6. Lighting levels should be adequate for the prevailing circumstances but due consideration should be given not to light to excessive (ie wasteful) levels. The guidelines provided in the relevant SABS specifications should be noted and applied where applicable.
7. Where incandescent lamps have to be replaced the use of compact fluorescent lamps should always be considered. In cases where it is costly or inconvenient to repeatedly replace incandescent lamps, compact fluorescent lamps may offer a neat solution. Possible reasons for not using compact fluorescent lamps may be short time periods light will be required and the possibility of the lamps being stolen. Enclosed luminaires that do not allow the easy / quick removal of lamps may, however, offer a solution in this regard, cost permitting.
8. Sports field lighting should, whenever practical to do so, be designed so that only a part of the lighting can be switched on for practice purposes. Clubs should be encouraged to use the lighting made available to them in this fashion, even though the club may be paying for the electricity consumed by the lighting.
9. All contracts for the letting of Council property or the making available of premises like sports fields and clubhouses should include provisions giving effect to policy points 1 to 8 above. Where existing agreements do not contain the necessary provisions addenda to such agreements should be negotiated with the various lessees.

## **STREET AND AREA LIGHTING**

The provision of street and public area lighting is one of the major responsibilities of the Ekurhuleni Metropolitan Municipality. The reduction of incidents of crime and of traffic accidents are of major importance in this regard. Municipal street and public area lighting, however, consume approximately one percent of all the electricity used in the area of jurisdiction of the Metro. Energy efficiency is thus of prime importance. The following should be regarded as Council policy in this regard:

1. High-pressure sodium lamps have a long life and are highly energy efficient. This light source should first of all be considered when new street and / or area lighting installations and / or the upgrade of existing installations are designed.
2. Lighting levels should be adequate for the prevailing circumstances but due consideration should be given not to light to excessive (i.e. wasteful) levels. The guidelines provided in the relevant SABS specifications should be noted and applied where applicable.
3. Street and area lighting installations are generally switched automatically by means of time or light sensitive switches. Persons should be appointed in writing to monitor the automatic switching and to ensure the correct operation of all such lighting in order to avoid the wasting of energy and lamp life.

## **HEATING AND AIR CONDITIONING**

The heating and / or air conditioning of buildings use a lot of energy. The climate in South Africa (and specifically in Ekurhuleni) is, however, such that the heating of premises occupied by people during the winter period can be considered as essential. The cooling of premises during the summer period can, however, be considered as a luxury that should be restricted as far as practicable. The provision of forced ventilation or evaporative cooling only should also always be considered before full air conditioning is decided upon. The following should be regarded as Council's policy on the provision of air conditioning in municipal premises:

1. A person should in all cases where air conditioning needs to be switched on / off be appointed in writing to attend to this. Measures should be put in place to ensure that this task receives the necessary attention when such a person is not available to perform it.
2. Where air conditioning is switched automatically by means of a time switch a person should be appointed in writing to monitor the automatic switching and to ensure the correct operation thereof.
3. Heating that only heat the people in a room (or at most the immediate vicinity of such people), such as infra-red heaters or local panel heaters should always be considered as opposed to heating that attempts to heat the whole room, e.g. under-floor heating.
4. Consideration should always be given to the thermal characteristics of a and the effect this can have on the energy consumption of the building. Where appropriate, thermal insulation should be installed to retain heat in winter and to keep heat out in summer.
5. Consideration should always be given to the effect that solar radiation will have on a building. Buildings should be designed to optimally utilise the sun to heat the building in winter. Buildings should be suitably orientated and, where appropriate, be equipped with shades or blinds to minimise the heating effect of the sun in summer.
6. Full air conditioning should only be provided where a strong motivation for the provision of such air conditioning exists.
7. Employees should be encouraged to dress appropriately for the South African climate rather than to insist on the provision of air conditioning.
8. All contracts for the letting of Council property or the making available of premises like sports fields and clubhouses should include provisions giving effect to policy points 1 to 7 above. Where existing agreements do not contain the necessary provisions addenda to such agreements should be negotiated with the various lessees.

## **CUSTOMER EDUCATION**

The Ekurhuleni Metropolitan Municipality holds a licence from the National Electricity Regulator allowing it to distribute electricity. In terms of this licence the Municipality has an obligation to educate its electricity customers in the safe and efficient use of electricity. This the municipality will do, inter alia, through its Customer Communication Forums and by means of its Customer Advisers.

Where any equipment is provided or sold to customers, due consideration shall be given to the energy efficiency of such equipment Compact fluorescent lamps shall thus be provided with "Ready Boards" sold to customers rather than incandescent lamps. Council will also support and, where appropriate, take part in the "Efficient Lighting" project that Central Government is driving through Bona and Eskom.