



### Moreton Bay Research Station (MBRS) Energy Management Program

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#### 1. Scope

This program is limited to management of electricity as an energy source.

#### 2. Objectives

- To minimise the energy consumed by the Moreton Bay Research Station by identifying areas of wastage and possibility for minimisation and implementation of systems for reducing consumption;
- Include the Moreton Bay Research Station in an energy monitoring and auditing program;
- Define responsibilities and budget allocations for energy management;
- To ensure that all relevant licences, permits and approvals are in place regarding energy management activities; and
- To determine the Moreton Bay Research Station's energy management performance when judged against current, relevant industry standards.

#### 3. Energy Minimisation Strategies

##### 3.1 *Energy Monitoring*

The amount of energy utilised at the Moreton Bay Research Station is monitored through the weekly energy readings. The demand and consumption are noted in a database maintained by Moreton Bay Research Station, with copy forwarded to Property and Facilities Division.

##### 3.2 *Energy Auditing*

Energy audits are conducted to identify areas of energy wastage. Results of energy audits are used to determine further actions, if necessary, and which strategy is most suited to addressing the identified issue.

##### 3.3 *Technology and Equipment*

When new equipment is being purchased, energy ratings should be taken into account. New technology, plant and equipment are often more energy efficient. Examples of measures that may be taken include:

- Purchase of high-energy rated white goods; and
- Purchase and installation of low-energy bulbs.

Selection of larger installed plant, electrical circuitry and wiring, etc should be looked at as part of the briefing process for any significant projects.

### **3.4 Control Systems**

All large energy consuming plant should be controlled to minimise run times to hours it is needed. Control systems can also be used to make the plant run more efficiently.

Systems that may be implemented include:

- Set point relaxation of cooling plant;
- Timers for running of plant. Timers should commence on a push button system and run for a period of one hour; and
- The use of off peak hot water systems.

### **3.5 Education**

An educational campaign is in place to focus the users of Moreton Bay Research Station on energy conservation. The campaign includes:

- Awareness campaigns in the form of posters and notices reminding visitors and staff to turn off lights and the operation of other energy consuming items.
- General Energy Management training as part of the EMS training and awareness.

## **4. Registers**

Information from energy billing is held electronically by the Property and Facilities Division.

## **5. Training**

It is the responsibility of the Manager, Moreton Bay Research Station to ensure that their personnel are adequately trained in respect of environmental management issues.

Refer to the Training Program for further information.

## **6. Utilities Management Committee**

The Utilities Management Committee is responsible for deciding methodology for energy management strategies. The committee meets as issues are identified to discuss strategies, methods by which energy management goals can be achieved and the effect of various programs on the end users.

Membership of the committee is Property and Facilities staff associated with any aspect of energy management, but as required, others within or external to the Division may be invited to attend.

Issues for the Moreton Bay Research Station may be sent to members of the committee to be raised at the meeting. Alternately, the Manager, of the Moreton Bay Research Station may be invited to attend the committee meetings as required.

## **7. Responsibilities**

Energy Management at the University of Queensland is the responsibility of the Environmental Engineer. Successful energy management schemes require input from energy users. Levels of responsibilities under the energy management program are displayed in Table 1:

**Table 1. Responsibilities**

| Responsible Person                         | Duties   |
|--|--|
| Users (Staff, students, researchers, etc). | <ul style="list-style-type: none"> <li>• Understand the energy management procedures applicable to their area of impact/work;</li> <li>• Make a conscious effort to enact energy management procedures.</li> </ul>   |
| Manager, Moreton Bay Research Station      | <ul style="list-style-type: none"> <li>• Ensure staff are aware of the Energy Management minimisation strategies.</li> <li>• Provide adequate Energy Management training.</li> <li>• Ensure that Energy Management is carried out wherever viable.</li> <li>• Conduct energy auditing and/or monitoring to ascertain the efficiency of the energy management program.</li> </ul> |
| Property and Facilities Division           | <ul style="list-style-type: none"> <li>• Provide Energy monitoring and control equipment.</li> <li>• Liaise with the University community to ensure that Energy Management is effectively carried out at University sites.</li> </ul>  |

## **8. Budget**

It is the responsibility of the Environmental Engineer, Property and Facilities Division to allocate the necessary resources to the Energy Management Program on a yearly basis. Other contributions may come from other areas of the University; including Property and Facilities and the Centre for Marine Studies.

## **9. Records**

All documents issued with respect to energy management are held by the Property and Facilities Division or the Manager, Moreton Bay Research Station as required. The term documents, for the purpose of this program includes the following:

- Energy contracts;
- Operational Procedures;
- Checklists;
- Notes;
- Letters;
- Invoices;
- Reports;
- Electronic information; and
- Energy management computer programs.

## 10. Enquiries

For further information regarding energy management, please refer to Table 2:

**Table 2. Energy Management Contacts**

| <b>Subject</b>          | <b>Contact</b>  | <b>Person</b>                    | <b>Telephone</b>      |
|-------------------------|---|----------------------------------|-----------------------|
| Engineering Management  | Engineering Services, Property and Facilities Division. | Engineering Manager              | (07) 336 <b>53205</b> |
| Energy Management       | Engineering Services, Property and Facilities Division  | Environmental Engineer           | (07) 336 <b>51587</b> |
| Air Conditioning Issues | Maintenance, Property and Facilities Division           | Supervisor Refrigeration/Fitting | (07) 336 <b>56638</b> |