

# BRUNEI DARUSSALAM

## 1. GOALS FOR EFFICIENCY IMPROVEMENT

### 1.1. Overall Energy Efficiency Improvement Goals

The overall energy efficiency goal of Brunei Darussalam is to reduce energy intensity by 25% in 2030 with 2005 as the base year. This goal would contribute to the APEC Leaders' 2007 Sydney Declaration to reduce the energy intensity of the APEC region by 25% overall in 2030 compared with 2005.

### 1.2. Sectoral Energy Efficiency Improvement Goals

Specific targets have been set for certain sectors, such as a 10% reduction in energy consumption targeted for government buildings, and a 10% improvement of thermal efficiency in the power generation sector.

### 1.3. Action Plans for Promoting Energy Efficiency

#### a) Name

Energy Efficiency and Conservation Strategic Plan

#### b) Objectives

To improve the energy efficiency and conservation of Brunei Darussalam by promoting and implementing energy efficiency and conservation practices and activities

#### c) Applicable sectors

Industry, transport, residential, commercial, electricity, and government

#### d) Outline

*Industrial sector:* promote the practices of energy audit, energy management, and the use of more efficient equipment and appliances.

*Residential, commercial and government sectors:* promote the practices of energy auditing and energy management, introduce energy efficiency labelling for electrical equipment and appliances, regulate operating hours for air conditioners in government buildings, introduce energy efficient building guidelines, hold continuous awareness campaigns, promote the use of energy efficient lighting and other energy efficient equipment and appliances and enhance energy efficiency education.

*Transportation sector:* promote techniques for energy-saving driving and introduce fuel efficiency labelling for vehicles.

*Electricity sector:* improve power generation thermal efficiency and minimum energy performance standards for new gas-fired power plants and improve efficiency of street lighting.

*Government:* regulate operating hours for air conditioners in government.

*Others (education):* encourage energy saving and conservation (EE&C) through energy education, incorporate energy education in curriculum syllabi, promote EE&C activities and dissemination of energy saving tips booklets to public and private agencies including schools.

#### e) Financial resources and budget allocation

No information available

#### f) Method for monitoring and measuring effects of action plans

The plan is monitored by the Energy Division, Prime Minister's Office with the assistance of the Department of Electrical Services through the compilation of energy statistics and audits.

There are also plans to introduce compulsory annual reporting on energy consumption for government ministries and departments.

**g) Expected results**

No information available

**h) Future tasks**

No information available

**1.4. Institutional Structure**

**a) Name of organisation**

Energy Efficiency and Conservation Unit, Energy Division, Prime Minister's Office

**b) Status of organisation**

Policymaker (government)

**c) Roles and responsibilities**

Plans, formulates and implements policies on energy efficiency and conservation issues

**d) Covered sectors**

Government, industry, transport, residential and commercial, power generation and education

**e) Establishment date**

24 May 2005

**f) Number of staff members**

Three core staff members with ancillary support from the Energy Division

**1.5. Information Dissemination, Awareness-raising and Capacity-building**

Information on energy efficiency and conservation is continuously disseminated through briefings and talks, seminars and workshops, booklets and posters, the official website and the media. This information and knowledge has permeated to all sectors and every level of society.

Awareness campaigns on energy efficiency and conservation have continuously been held as the Unit's own event or in support of other related areas.

Capacity building on energy efficiency and conservation has occurred through presentations by invited experts and the dissemination of knowledge through workshops and seminars. A group of government officers also participated in capacity building training in Japan as part of bilateral cooperation between both economies.

**1.6. Research and Development in Energy Efficiency and Conservation**

Research and development for energy efficiency and conservation projects in Brunei Darussalam are currently being planned by local tertiary institutions (University Brunei Darussalam and Institute Technology Brunei). These projects aim to research energy auditing, building guidelines and fuel labelling specific to the local conditions and context. These projects are currently under consideration by the relevant authorities for funding.

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**2. MEASURES FOR ENERGY EFFICIENCY IMPROVEMENTS**

**2.1. Government Laws, Decrees, Acts**

**a) Name**

Energy Efficiency and Conservation (EE&C) Act (to be effective in 2012 (tentative))

**b) Purpose**

To enforce the application of Energy Efficiency and Conservation to buildings and industries to ensure reduced energy consumption

**c) Applicable sectors**

Industry, commercial and transport

**d) Outline**

- 1) All power producers are required to submit an annual report on energy production and energy consumption information, and report on medium- and long-term plans for energy conservation improvements.
- 2) Owners of buildings and industries with power demand of more than 1 MVA are required to submit a report on energy consumption information, and report on medium- and long-term plans for energy conservation improvements.

Energy producers in 1) and consumers in 2) are encouraged to engage energy auditors for preparation of the annual report.

**e) Financial resources and budget allocation**

No information available

**2.2. Regulatory Measures**

No information available

**2.3. Voluntary Measures**

There are three major voluntary measures as follows:

**a) Name**

Brunei Darussalam Energy Efficient Building Guidelines (to be introduced in 2011)

**b) Purpose**

To provide guidelines for new buildings to incorporate energy efficient building envelope elements such as cooling, heating, lighting, ventilating, insulation, site orientation and design as well as the use of energy efficient materials.

**c) Applicable sectors**

New buildings

**d) Outline**

No information available

**e) Financial resources and budget allocation**

Funding for the necessary research to carry out the project is currently under consideration by the relevant authorities.

**f) Expected results**

These guidelines are expected to be mandatory and be incorporated into the current building code. Elements of energy efficiency and conservation are incorporated into the current building code developed under the Ministry of Development, which is mandatory in its usage and practice.

**a) Name**

Energy Efficiency Labelling scheme for electrical appliances and equipment

**b) Purpose**

The scheme aims to provide consumers with information on the energy efficiency of electrical appliances and equipment and thus encourage consumers to invest in energy efficient appliances and equipment.

**c) Applicable sectors**

The scheme applies to the commercial, residential and government sector

**d) Outline**

Energy efficient labelling will be used for air conditioners (inverter, non-inverter types, single-phase and three-phase). The standards for energy efficient labelling are based on similar standards in the region. The energy efficient labelling scheme will be expanded to other electrical appliances and equipment in the future.

**e) Financial resources and budget allocation**

Financial resources for the scheme are to be derived from the government

**f) Expected results**

The energy efficient label informs consumers of the energy efficiency of an electrical product. It is hoped that the labels will make consumers better-informed and encourage them to invest in energy efficient appliances and equipment.

**a) Name**

Energy Efficiency and Conservation Initiative Awards

**b) Purpose**

The award scheme was introduced in 2007 to highlight the examples of selected organisations in their initiatives and efforts to introduce and implement energy efficiency and conservation activities.

**c) Applicable sectors**

The scheme is applicable to the government, commercial and education sectors

**d) Outline**

Organisations are selected based on initiatives introduced within the organisation or on a wider scope. Achievements are highlighted and the selected organisations become examples for others to follow.

**e) Financial resources and budget allocation**

The awards given are financed by the government and supporting private organisations.

**f) Expected results**

The continued efforts of the selected organisations and the emulation of their efforts by similar aspiring organisations in their respective sectors.

**2.4. Financial Measures Taken by the Government**

Funding is provided by the government and the private sector, for the Energy Week annual event, EEC-related workshops and EEC initiative awards, for example.

**2.5. Energy Pricing**

Energy pricing is regulated by the government.

## **2.6. Other Efforts for Energy Efficiency Improvements**

### **2.6.1. Cooperation with Non-Government Organisations**

The private sector has made efforts to increase awareness of energy efficiency and conservation and implement its activities.

The government has supported these initiatives and has brought the private sector (the industry and commercial sector) together to participate in workshops, seminars and training sessions on energy efficiency and conservation practices, such as energy auditing and energy management. Energy audits have also been conducted on selected companies. Energy efficiency and conservation initiative awards are given to companies that have shown good examples and initiatives in the implementation of energy efficiency and conservation.

### **2.6.2. Cooperation through Bilateral, Regional and Multilateral Schemes**

Brunei Darussalam is involved in regional programs for energy efficiency and conservation under ASEAN through the Promotion of Energy Efficiency and Conservation. Jointly organised by the ASEAN Centre for Energy and the Energy Conservation Centre, Japan, Brunei Darussalam has participated in the programs for Major Industry, Buildings and Energy Management since 2000.

Information sharing and knowledge gathering is also carried out by the APEC Energy Working Group and the East Asia Summit Energy Cooperation Task Force.

Bilaterally, Brunei Darussalam and Japan have conducted a human capacity building program on energy efficiency and conservation for Brunei officials in 2008 which resulted in intensive training and knowledge transfer related to EEC in Japan.

### **2.6.3. Other Cooperation/Efforts for Energy Efficiency Improvements**

No information available