

BRUNEI DARUSSALAM

1.0 GOALS FOR EFFICIENCY IMPROVEMENT

1.1. Overall Energy Efficiency Improvement Goals

Brunei Darussalam has set a nationwide target to reduce its energy intensity by 25 percent by 2030 with 2005 as base year. This figure serves as a direction for Brunei Darussalam to ensure that the measures and strategies set out for the energy sector strive the importance of growing improvement in efficiency.

Brunei Darussalam's energy intensity target is also aimed to contribute to the recently revised APEC target at the 19th APEC Economic Leaders Meeting to reduce the regional energy intensity by 45 percent by 2035.

1.2. Sectoral Energy Efficiency Improvement Goals

As to ensure that the target of 25 percent in national energy intensity reduction is met, Brunei Darussalam has identified a number of measures under the generation, residential, industrial, government and transportation sectors. The plan was to improve the energy efficiency performance of these five areas over the period between 2010 and 2030. For 2012, Brunei Darussalam's immediate plans for improvement of energy efficiency and conservation are detailed out below.

1.3. Action Plans for Promoting Energy Efficiency

1.3.1

- a) **Name**
Revision of electricity tariff structure
- b) **Objective**
To encourage use of high efficient appliances, avoid waste and providing subsidies to the right group of people through the introduction of a progressive tariff.
- c) **Applicable sectors**
Residential
- d) **Outline**
The new electricity tariff carries a progressive structure as apposed to the old regressive regime. The tariff came into effect on 1 January 2012.
- e) **Financial resources and budget allocation**
The Government is also replacing all residential electricity meters from postpaid to prepaid meters so that consumers can plan their energy usage better. Analysis on the pattern of consumption shows that consumers with pre-paid meter used 13 percent less compared to usage prior to the introduction of the new tariff.
- f) **Method for monitoring and measuring effects of action plans**
The total consumption of the residential centre is monitored by the Department of Electrical Services on a monthly basis.
- g) **Expected results**
New progressive tariff structure ó 1 January 2012
Replacement of meter -
- h) **Future tasks**

1.3.2

- a) **Name**
Improvement of power plant efficiency
- b) **Objective**
Improvement of Power Plant Efficiency from current 23% to more than 45% through phasing out of simple cycle power plant and optimisation of its operation.
- c) **Applicable sectors**
Power sector
- d) **Outline**
- Maximize utilization of the Combined Cycle Power Plant (by 2012)
 - All new power station shall have efficiency >45%
 - Replacement of existing simple cycle power station to combine cycle (by 2015)
 - Expansion of the existing co-generation plant (by 2014)
- e) **Financial resources and budget allocation**
Government and Private Sector
- f) **Method for monitoring and measuring effects of action plans**
The action plan on power plant will be implemented by the Department of Electrical Services and monitored by the Energy Department, Prime Minister's Office.
- g) **Expected results**
2012; 2014; 2015
- h) **Future tasks**
Extend improvement of power plant efficiency.

1.3.3

- a) **Name**
Formulation of a national standard and labelling for air conditioning system and lighting
- b) **Objective**
To ensure that choices of energy efficiency appliances are open to consumers through information of standard and labelling as to influence their purchasing decision.
- c) **Applicable sectors**
Residential, Industrial and Government.
- d) **Outline**
A consultant has been engaged to assist the Government in formulating the appropriate standard and labelling scheme for Brunei Darussalam to adopt for its air conditioning and lighting.
- e) **Financial resources and budget allocation**
Supported by the Government.
- f) **Method for monitoring and measuring effects of action plans**
The initiative will be regulated by the Energy Department, Prime Minister's Office

g) Expected results

Consultant will complete the study in October 2012 while the implementation is expected to be realised in December 2012.

h) Future tasks

Introduction of Policy and Regulation on the use of high efficient electrical appliances including tax incentive.

1.3.4**a) Name**

Energy Management

b) Objective

The government to lead by example on the effectiveness the right energy management as a start for improvement in energy efficiency and conservation.

c) Applicable sectors

Government and Industrial

d) Outline

- A feasibility study followed by a pilot project for energy management in building will be conducted by a consultant over a period of 2 months. The result is hoped to increase the awareness on energy management.
- The Energy Department will facilitate energy audit exercises to five major government buildings in Brunei Darussalam. The aim is to reduce the consumption of the top five government-building consumers by 10 percent.
- To continue to work closely with PROMEEC as to build capacity in the area of energy management and audit.

e) Financial resources and budget allocation

Supported by the Government.

f) Method for monitoring and measuring effects of action plans

The initiative will be regulated by the Energy Department, Prime Minister's Office

g) Expected results

End of 2012

h) Future tasks

To extend audit exercise to building in other sectors.

1.3.5**a) Name**

Introduction of energy efficient vehicles

b) Objective

The transportation sector accounts for nearly 50 percent of Brunei Darussalam's total energy consumption. Thus, there is a shift the fuel base of the sector to those more efficient.

c) Applicable sectors

Transportation

d) Outline

- To bring in a total of 100 hybrid and electric vehicles into the market.
- To replace main government cars to hybrid.
- To install a minimum of five (5) charging bays across the country.

e) Financial resources and budget allocation

No information.

f) Method for monitoring and measuring effects of action plans

The initiative will be implemented by the Energy Department, Prime Minister's Office and monitored twice a month.

g) Expected results

End of 2012

h) Future tasks

To increase the number of hybrid and electric vehicles available in the market.

1.4. Information Dissemination, Awareness-raising and Capacity-building

The Energy Department holds annual energy awareness campaign, the 'Energy Week' as to continuously increase public awareness on the subject. The Energy Department also works closely with the educational stakeholder through 'Energy Club' at schools to inculcate energy efficiency and conservation among students.

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

Capacity building energy efficiency and conservation has been on going for the past few years. To enhance competency, seminar-workshops were conducted in collaboration with our local and international institutions.

1.5. 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 (Universiti Brunei Darussalam and Institut Teknologi Brunei). These projects aim to conduct energy audit on government buildings, building guidelines and fuel labelling scheme specific for the local conditions. The newly established 'Brunei National Energy Research Institute (BNERI)' will take custodians of any energy projects when it is in full operation in April 2012.

2. MEASURES FOR ENERGY EFFICIENCY IMPROVEMENTS

2.1. Government Laws, Decrees, Acts

a) Name

Energy White Paper ó a policy paper to be launched in Q2, 2012 will entail detailed strategies on energy efficiency and conservation.

b) Purpose

A long-term policy directives to 2035.

c) Applicable sectors

Oil & Gas industries, Power and Transportation sectors.

d) Outline

Information will be available after the Energy White Paper is officially launched.

e) Financial resources and budget allocation

Supported by the Government.

2.2. Regulatory Measures

Policy and Regulations on EE&C will be formulated.

2.3. Voluntary Measures**a) Name**

National Energy Efficiency and Conservation Initiative Awards (NEECIA)

b) Purpose

In 2010 the NEECIA competition introduced and it was open to all sectors participation. This initiative is to recognize those who have been practicing excellent energy efficiency and conservation measures and have achieved 10 percent energy saving or more with the following key objectives:

- To promote and disseminate best practices in energy management in buildings and industries in Brunei Darussalam.
- To encourage all sectors participation in adopting and implementing innovative and creative energy management approaches towards energy efficiency and conservation to enhance business competitiveness.
- To use energy management as a tool to utilize energy optimally and to contribute towards environmental protection.

c) Applicable sectors

The scheme is applicable to the government, commercial, industrial 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

The source of funding is 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. (See section 1.3.1)

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 series of human capacity building program on energy efficiency and conservation for Brunei officials in the last few years which resulted in intensive training and knowledge transfer related to EEC in Japan.