

BRUNEI DARUSSALAM

Country at a glance

- Population: 398.9 million (2010) [1]
- Total area: 5,765 sq. km [2]
- Carbon emissions per capita: 20.6 metric tons (2010) [3]
- Energy consumption per capita: 96.5 MWh (2010) [4]
- Percentage of global carbon emissions: 0.03% (2010) [4]



Oil well pumping in Brunei

A nodding donkey in Bandar Seria, Begawan, Brunei.

The discovery of oil in Seria marked the birth of the oil industry in Brunei and made it a wealthy nation. Today Brunei is one of the largest oil producers in the Asia region.

*Serial Nodding Donkey, oil well pumping by whl.travel. Permission under CC BY-NC-SA 2.0 License
www.flickr.com/photos/whltravel/7591055130/sizes/l/in/photostream/*

Table 1 Breakdown of energy use, electricity and heat generation, 2010

	Primary energy sourced within country		Energy imports minus exports	Primary energy used within the country ^(a)			Electricity Generation ^(b)		Heat Generation ^(c)		
	unit	ktoe		%	ktoe	GWh	%	GWh	%	GWh	%
Coal, including brown coal & peat		0	0	0	0	0	0	0	0	0	0
Oil fuels		8,293	45	0	638	7,419	19	38	1	0	0
Natural gas		10,266	55	0	2,677	31,128	81	3,824	99	0	0
Nuclear		0	0	0	0	0	0	0	0	0	0
Hydroelectric		0	0	0	0	0	0	0	0	0	0
Biofuels and waste		0	0	0	0	0	0	0	0	0	0
Solar photovoltaics		0	0	0	0	0	0	0	0	0	0
Solar thermal		0	0	0	0	0	0	0	0	0	0
Tide, wave and ocean		0	0	0	0	0	0	0	0	0	0
Wind		0	0	0	0	0	0	0	0	0	0
Geothermal		0	0	0	0	0	0	0	0	0	0
Electricity (imported)		0	0	0	0	0	0	0	0	0	0
Sub total Renewables		0	0	0	0	0	0	0	0	0	0
Totals		18,559	100	0	3,314	38,547	100	3,862	100	0	0

Source: Based on World Energy Statistics and Balances Database 2012, "World Energy Balances." © OECD/IEA, 2012.

Notes:

Standard conversion used is 1 ktoe = 11.63 GWh

- Sum of energy sourced within country, energy imports minus exports, international marine and aviation bunkers and stock change flows.
- Includes all electricity generation, including any exported.
- Does not include electrical heating. Includes waste heat recovery from electricity generation plants.

Table 2 Breakdown of transport fuel use, 2010

(in ktoe)	Total transport mix	%	Domestic aviation	Road	%	Rail	Pipeline transport	Domestic navigation	Non-specified (transport)
Oil products	395	100	0	395	100	0	0	0	0
Total	395	100	0	395	100	0	0	0	0

Source: Based on World Energy Statistics and Balances Database 2012, "World Energy Balances." © OECD/IEA, 2012.

Stand on climate change

Brunei Darussalam ratified the United Nations Framework Convention on Climate Change (UNFCCC) on 20 August 2009 and the Kyoto Protocol on 18 November 2009. Brunei has not submitted any National Communications to the UNFCCC, but has commissioned a greenhouse inventory to be set up as a prerequisite to the preparation of its first National Communication [5].

Brunei is a substantial producer and exporter of crude oil and natural gas and relies on these revenues for nearly two-thirds of its gross domestic product. Despite only contributing to 0.016 per cent of the global carbon emissions, Brunei believes that as a member of the global community the country should use its best capabilities to reduce greenhouse gas emissions [6].

Brunei relies on natural gas to fuel nearly all of its electricity generation. However, the country is seeking to diversify its installed capacity, import more electricity through a proposed transmission line from Malaysia, expand renewable generation capacity, and improve electricity efficiencies so as to conserve its natural gas for exports.

National climate change Programs

In 2011, Brunei establishes a National Council on Climate Change (NCCC), [7]. This is headed by the Ministry of Development and the Energy Division at the Prime Minister's Office.

Brunei also focuses on forestry and sustainable development and has previously developed a National Environment Strategy. In the 8th National Development Plan, the Brunei Government allocated B\$91.9 million for the implementation of environment related projects, which constitutes 1.26% of the total development allocation. The plan covers the following actions:

Building Sector:

- Introduce energy efficiency in commercial buildings to promote green building concepts.
- Encourage innovative production techniques, building technologies and alternative building materials for developers.

Industrial Sector:

- Implement the 2002 "Pollution Control Guidelines for Industrial Development", introduced in 2002, to mitigate environmental impacts of developing industrial zones and to assist industrialists, architects, professional engineers and consultants in the design and operation of industrial premises [8].

Transport Sector:

- Reduce 5 per cent excise duties on all hybrid cars
- Increase 10 per cent tax duties on high fuel consumption vehicles

Waste and Water:

- Enhance and expand sewerage services, wastewater treatment processes and disposal facilities in urban and housing areas as well as for new villages such as Kampong Ayer, Kampong Bolkiah 'A' and Kampong Sungai Bunga.
- Prevent direct disposal of solid wastes and effluent into the Brunei River, via a pilot scheme for garbage collection which was introduced in the 6th and 7th National Development Plan.
- Implement a waste minimization policy to improve recycling rates by 15 per cent by 2015 and 20 per cent by 2020.
- Continue the programme of 'No Plastic Bags Weekends' to save per year the use of 13 million plastic bags, 19,000 liters of oil, and reduce overall carbon emissions by 37 metric tons.

Forestry:

- Adopted a shift to a land development policy to minimize deforestation.
- Jointly, with Malaysia and Indonesia, undertake a project to conserve 220,000 sq. km of tropical rainforest. This is a third of the total land area of Borneo.
- Designated 58 per cent of total land area for forest conservation under a Heart of Borneo (HoB) Initiative.

Energy Sector:

- Reduce energy intensity by up to 25 per cent of the 2005 levels by 2030 via an "Energy Efficiency Conservation" Initiative.
- Introduce energy audits for buildings.
- Establish energy consumption profiles for companies.
- Introduce a "Solar Energy Pilot Project" to produce 1,344 MWh of electricity per year and to reduce carbon emissions by 940 metric tons per year.

Ministries involved in climate change/energy policy making:

Ministries involved	Web links
The Government of Brunei	www.jpm.gov.bn
Ministry of Development	www.mod.gov.bn
Department of Environment, Parks and Recreation	www.env.gov.bn

Education institutes involved in climate change/energy policy making:

Ministries involved	Web links
Department of Physics, University of Brunei Darussalam	fos.ubd.edu.bn/

References

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- [6] Statement by H.E. Pehin Dato Suyoi Osman, Minister of Development, Brunei Darussalam at the High-level Segments of the 16th Conference of the Parties to the UNFCCC and 6th Meeting of Parties to the Kyoto Protocol, Cancun, Mexico, 7-10 December 2010.
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