



STATISTICAL NEWS

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Fiji's Experimental Environmental Account for Energy 2016

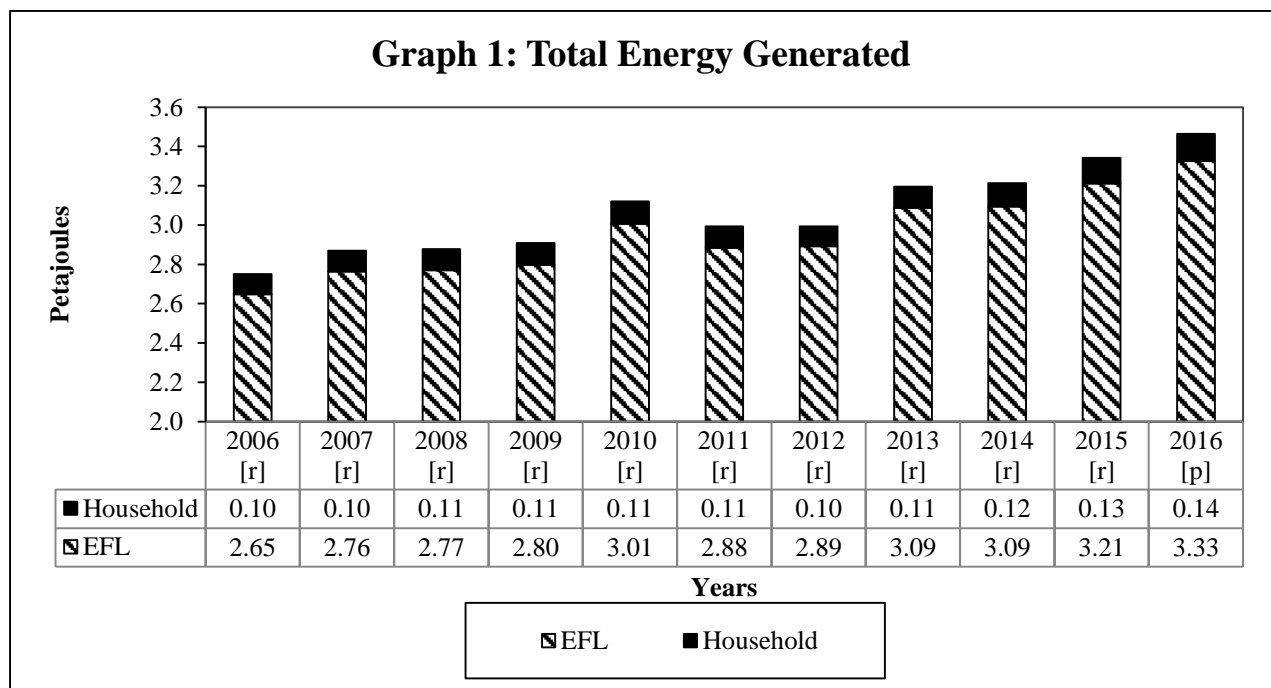
The environmental account for energy provides a framework for the assessment of energy production and consumption as well as related issues of resource use. The initial experimental Energy Account had only included electricity generated and distributed by Energy Fiji Limited (formerly known as Fiji Electricity Authority).

Energy Account Update

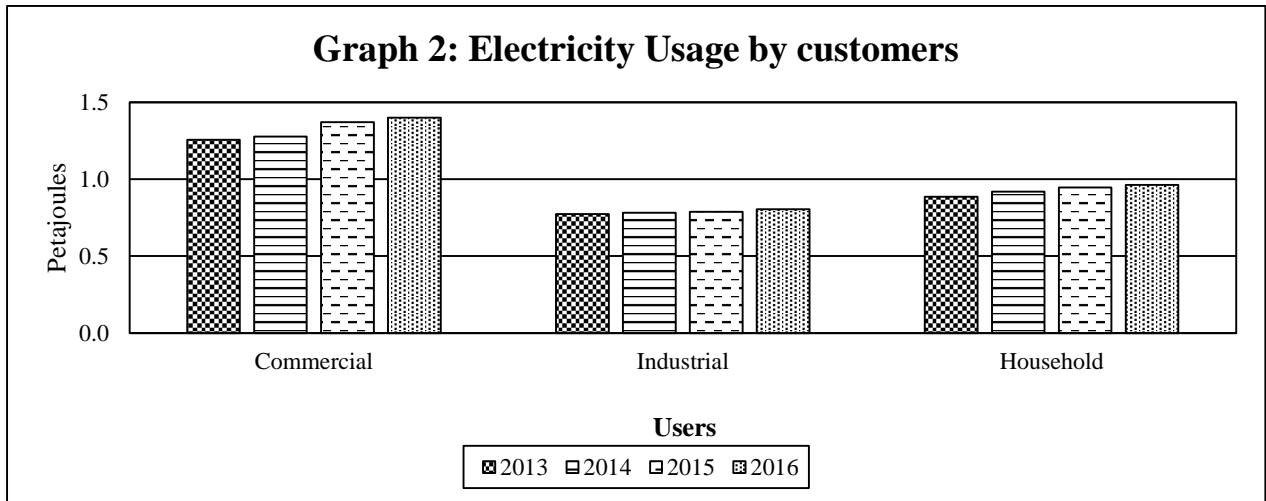
The Energy Account has been updated in this release to include a section for household generated energy, i.e. Solar energy and diesel generators. From 2006, the numbers from surveys as well as censuses carried out have been used to derive estimates for energy generated by households (not produced by utility companies like Energy Fiji Limited).

Main Findings

The total energy generated by EFL and Households (own generation) was 6.1 PJ¹ and 5.7 PJ in 2015 and 2016 respectively. In 2016 there has been an increase 0.6 PJ representing an increase of 11.8% over 2006.



¹ Joules is the international standard unit of measurement for energy. Refer to appendix for conversion factors.



Of the total (5.7 PJ) energy generated in 2016, 3.17PJ was used, of which the Commercial sector made up the majority, at 44.2 percent, followed by the domestic sector at 30.4 percent and industrial sector at 25.4%. The trend was similar in 2015.

Please find attached the following Appendices for your reference:

- Appendix 1: Fiji's Energy Account; and
- Appendix 2: Technical Notes.

The following contact persons are available to attend to any further enquiries:

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Appendix 1:

Energy Account 2016

Petajoules [PJ]

	2006[r]	2007[r]	2008[r]	2009[r]	2010[r]	2011[r]	2012[r]	2013[r]	2014[r]	2015[r]	2016[p]
Sources of Energy											
1. Energy Fiji Ltd											
Hydro	1.2	1.8	1.8	1.7	1.5	1.6	1.9	1.9	1.4	1.5	1.8
Solar and wind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel oil	3.7	2.4	2.6	2.9	3.8	3.1	2.5	3.0	4.2	4.5	3.8
Total Energy generated	4.9	4.2	4.4	4.6	5.3	4.7	4.4	4.9	5.6	6.0	5.6
2. Domestic (Households own generation)											
Hydro	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Fuel oil	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Energy generated	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Energy generated (EFL & Households)	5.1	4.4	4.5	4.7	5.4	4.8	4.5	5.0	5.7	6.1	5.7
Less losses during transformation	2.4	1.6	1.7	1.9	2.4	1.9	1.6	1.8	2.6	2.8	2.3
Total Energy Available for distribution	2.7	2.8	2.8	2.8	3.0	2.9	2.9	3.2	3.1	3.3	3.4
Users											
Commercial	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.4	1.4
Industrial	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8
Domestic	0.9	0.9	0.9	0.9	1.0	0.9	0.8	0.9	0.9	0.9	1.0
Loss during distribution	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.3
Returns to the environment	5.1	4.4	4.5	4.7	5.5	4.9	4.6	5.0	5.8	6.1	5.8
% of energy loss during transformation	47.1%	36.4%	37.8%	40.4%	43.6%	38.8%	34.9%	36.0%	44.8%	45.9%	39.7%
% of energy loss during distribution	3.9%	4.5%	4.4%	4.3%	5.4%	4.1%	6.5%	6.0%	3.4%	3.3%	5.2%

Any discrepancy in totals and sum of components are due to rounding.

N.B. This is a simplified version of the energy account, the SEEA Conceptual Framework Version of the Energy Account i.e. inclusive of the Physical Supply and Use Tables is available on the website: www.statsfiji.gov.fj.

Appendix 2: Technical Notes

Definition (SEEA 2012 – UNSD)

SEEA 2012 Central Framework – is a multipurpose conceptual framework for understanding the interactions between the economy and the environment, and for describing stocks and changes in stocks of environmental assets.

Energy Account - Energy flow accounts record flows of energy, in physical units, from the initial extraction or capture of energy resources from the environment into the economy; the flows of energy within the economy in the form of the supply and use of energy by industries and households; and, finally, the flows of energy back to the environment.

Joules – the basic unit of measurement for energy.

Petajoules – is equivalent to quadrillion joules.

Gigajoules – the equivalent to one billion joules.

Loss during transformation – refers to the energy lost, for example, in the form of heat, during the transformation of energy product into another energy product.

Loss during distribution – are losses that occur between a point of abstraction, extraction or supply and a point of use.

Commercial user – refers to users in businesses and light industries.

Industrial user – refers to users in heavy industries.

Domestic user – refers to household users.

Returns to environment – comprises of all energy that is returned to the environment i.e. sum of loss during transformation, billed energy (electricity), and loss during distribution.

Energy available for distribution – refers to energy after transformation available for distribution to users.

MWh - A megawatt hour (MW) is equivalent to one million watt.

Independent Power Producers – those generating energy other than main on the grid suppliers.

EFL – Energy Fiji Limited

Conversion Factors:

1 MWh = 0.0000036 Petajoules

1 tonne of fuel = 1111.20 litres of fuel

1 tonne of fuel = 0.000043 Petajoules

N.B. For Electricity generated by households for their own supply, the assumption is that they would not have any distribution losses simply because there is no transfer from households to other parties, hence zero losses. However, similar methods were used in calculating losses during transformation for both Energy Fiji Limited (Commercial) and the Domestic sector