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STATISTICAL NEWS

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Fiji's Experimental Environmental Account for Energy

2018

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 covered electricity generated and distributed by Energy Fiji Limited (formerly known as Fiji Electricity Authority).

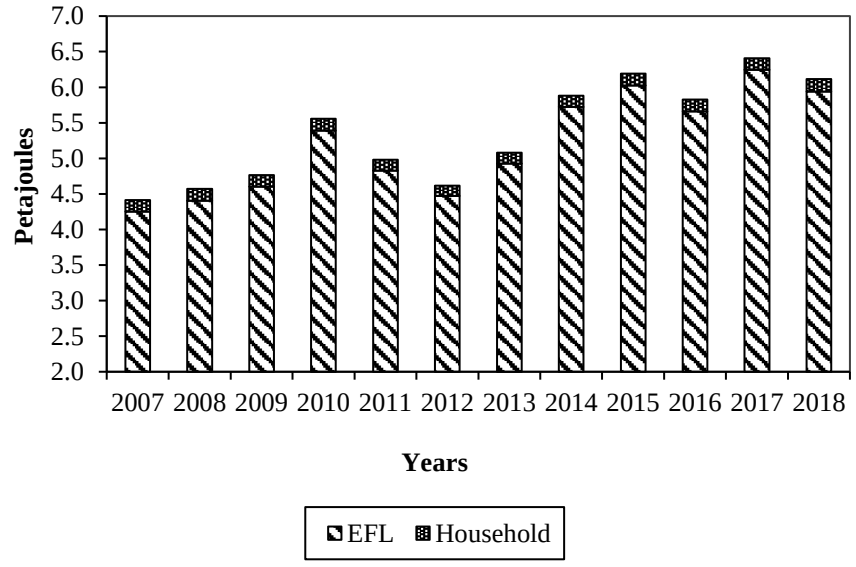
Energy Account Update

The Energy Account now has a section for household generated energy by source. Data from censuses and surveys have been used to estimate the household energy generation from 2007-2018.

Main Findings

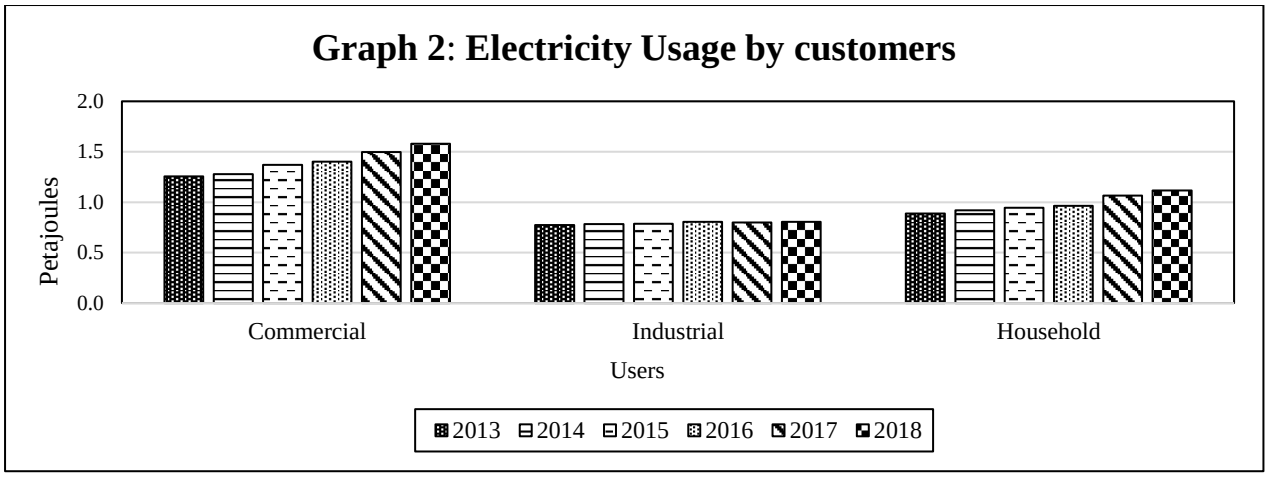
The total energy generated by EFL and Households (own generation) in 2018 was 6.1 PJ[1]. There was a slight decrease of 0.3 PJ when compared to 2017.

Graph 1: Total Energy Generated



Year	Total Energy Generated (PJ)
2007	4.4
2008	4.6
2009	4.6
2010	5.4
2011	5.0
2012	4.6
2013	5.1
2014	5.9
2015	6.2
2016	5.8
2017	6.4
2018	6.1

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



Of the total (6.1 PJ) energy generated in 2018, 3.5 PJ was used, of which the Commercial sector made up the majority, at 44.5 percent, followed by the domestic sector at 31.5 percent and industrial sector at 24.0 percent.

Please find attached the following Appendices for your reference:

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

For any further enquiries please contact Ms. Litia Kurisaqila-Mate – Assistant Statistician [Sector Satellite Accounts] on email lkurisaqila@statsfiji.gov.fj or telephone 331 5822 (ext: 386 237).

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Appendix 1:

Energy Account 2017
Petajoules [PJ]

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017[p]	2018 [p]
Sources of Energy												
1. Energy Fiji Ltd												
Hydro	1.8	1.8	1.7		1.6	1.9	1.9	1.4	1.5	1.8	1.8	2.0
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	0.0
Fuel oil	2.4	2.6	2.9	3.9 [r]	3.2 [r]	2.6 [r]	3.0	4.3 [r]	4.6	3.9 [r]	4.5	3.9
Total	**4.3**	**4.4**	**4.6**	**5.4**	**4.8**	**4.5**	**4.9**	**5.7**	**6.0**	**5.7**	**6.2**	**5.9**
2. Households												
Hydro	0.0	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	0.1	0.1	0.1	0.1
Fuel oil	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Total*	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**
Total Energy generated (EFL & Households)	**4.4**	**4.6** [r]	**4.8**	**5.6**	**5.0**	**4.6**	**5.1**	**5.9**	**6.2**	**5.8**	**6.4**	**6.1**
Less losses during transformation	**1.6**	**1.7**	**1.9**	**2.5**	**2.0**	**1.6**	**1.9**	**2.7**	**2.9**	**2.4**	**2.7**	**2.4**
Total Energy Available for distribution	**2.9**	**2.9**	**2.9**	**3.1**	**3.0**	**3.0**	**3.2**	**3.2**	**3.3**	**3.5**	**3.7**	**3.7**
Users												
Commercial	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.6
Industrial	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9
Domestic	0.9	0.9	0.9	1.0	0.9	0.8	0.9	0.9	0.9	1.0	1.1	1.1
Loss during distribution	**0.2**	**0.2**	**0.2**	**0.3**	**0.2**	**0.3**	**0.3**	**0.2**	**0.2**	**0.3**	**0.3**	**0.2**
Returns to the environment	**4.4**	**4.6**	**4.8**	**5.6**	**5.0**	**4.6**	**5.1**	**5.9**	**6.2**	**5.8**	**6.4**	**6.1**
% of energy loss during transformation	**35.1**	**37.2**	**39.1**	**44.0**	**40.1**	**35.3**	**37.2**	**45.5**	**46.2**	**40.7**	**42.5**	**38.9**
%of energy loss during distribution	**5.0**	**4.0**	**4.7**	**4.6**	**4.3**	**5.6**	**5.5**	**4.0**	**3.8**	**5.0**	**4.6**	**3.3**

* 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 [J] – the basic unit of measurement for energy.

Petajoules [PJ] – is equivalent to quadrillion joules.

Gigajoules [GJ] – 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

[r] – revised

[p] - provisional

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.