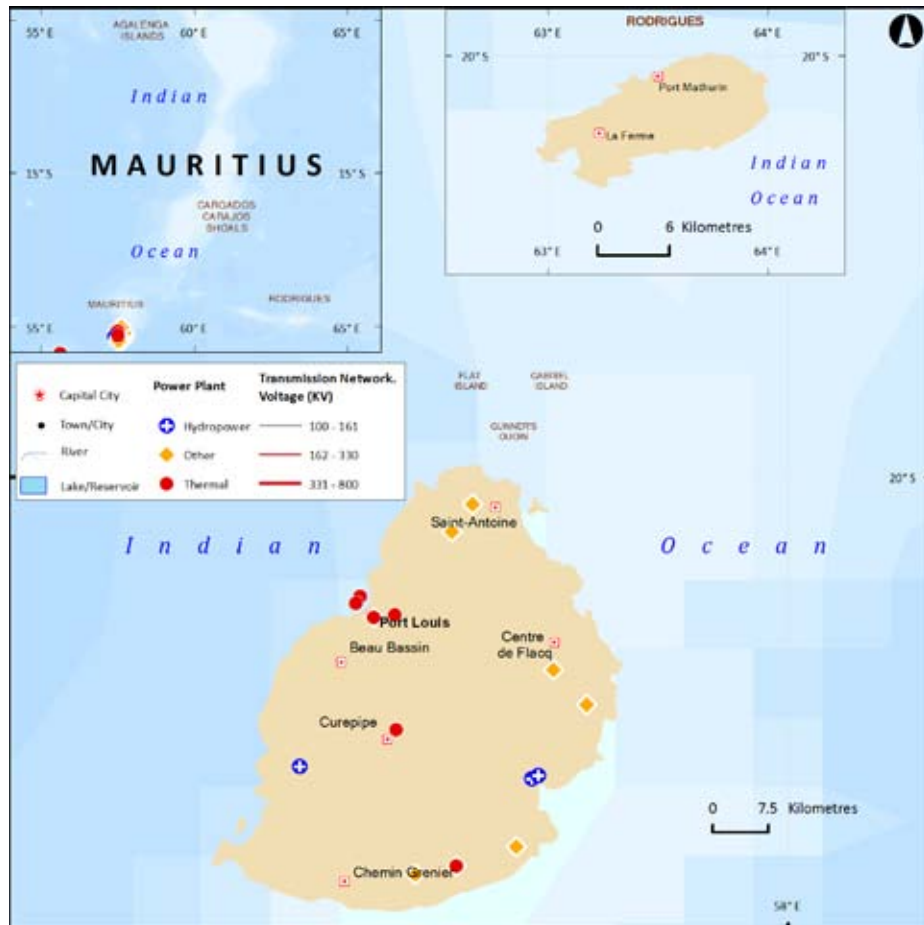




Figure 1: Energy profile of Mauritius



## Energy Consumption and Production

In 2013, the population of Mauritius was 1.26 million (Table 1). In 2015, total production of electricity was 228 ktoe, of which 92.1 per cent came from fossil fuels, 26.3 per cent from biofuels and waste and 3.9 per cent from hydro sources (Table 2). Final consumption of electricity in the same year was 210 ktoe (AFREC, 2015). Figures 2 and 3 show the main energy statistics.

Table 1: Mauritius's key indicators

Key indicators	Amount
Population (million)	1.26
GDP (billion 2005 USD)	8.66
CO <sub>2</sub> emission (Mt of CO <sub>2</sub> )	3.83

Source: (World Bank, 2015)

## Energy Resources

### Biomass

There is ample opportunity to generate electricity using biomass from agricultural waste. For instance, in 2013 there was an annual technical generation potential of 1,000 GWh of electricity from bagasse (solid waste left after sugar cane juice has been extracted) and other agricultural residue (REEEP, 2012).

Figure 2: Total energy production, (ktoe)

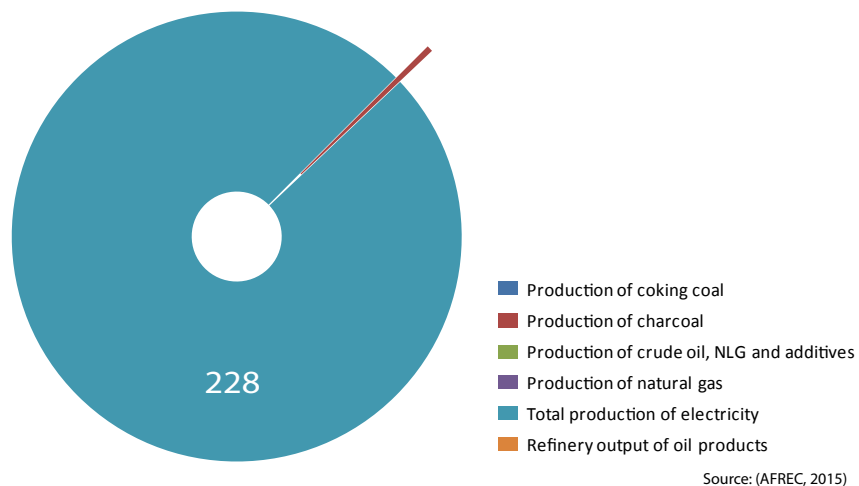
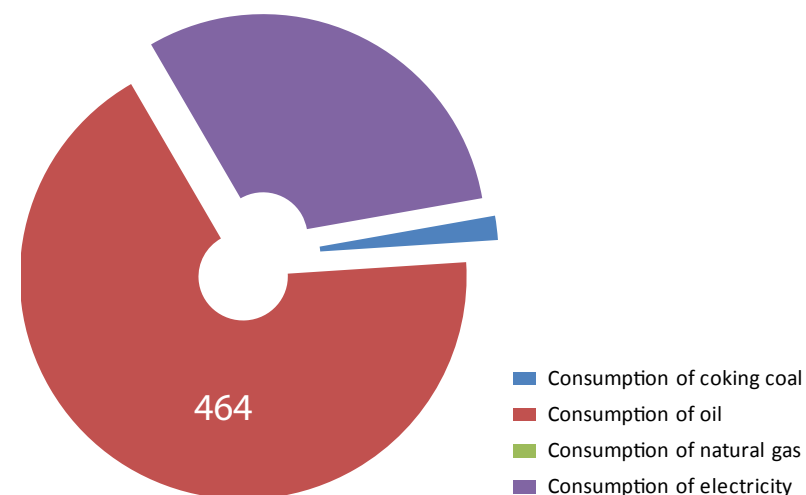


Figure 3: Total energy consumption, (ktoe)



Anna Frodesiak / Wikipedia / CC BY



Bagasse, a by-product of the cane sugar industry, is used to produce energy in Mauritius

**Table 2: Total energy statistics (ktoe)**

Category	2000	2005	2010	2015 P
Production of coking coal	-	-	-	-
Production of charcoal	0	1	1	1
Production of crude oil, NLG and additives	-	-	-	-
Production of natural gas	-	-	-	-
Production of electricity from biofuels and waste	35	37	47	60
Production of electricity from fossil fuels	101	138	175	157
Production of nuclear electricity	-	-	-	-
Production of hydro electricity	8	10	9	9
Production of geothermal electricity	-	-	-	-
Production of electricity from solar, wind, Etc.	0	0	0	2
Total production of electricity	145	185	231	228
Refinery output of oil products	-	-	-	-
Final Consumption of coking coal	14	21	13	12
Final consumption of oil	997	1098	445	464
Final consumption of natural gas	-	-	-	-
Final consumption of electricity	134	172	215	210
Consumption of oil in industry	0	0	97	84
Consumption of natural gas in industry	-	-	-	-
Consumption of electricity in industry	0	0	80	78
Consumption of coking coal in industry	0	0	13	13
Consumption of oil in transport	0	0	293	319
Consumption of electricity in transport	-	-	-	-
Net imports of coking coal	114	194	337	377
Net imports of crude oil, NGL, Etc.	-	-	-	-
Net imports of oil product	974	1,100	1,094	1,069
Net imports of natural gas	-	-	-	-
Net imports of electricity	-	-	-	-

- : Data not applicable

0 : Data not available

(P): Projected

(AFREC, 2015)

### Hydropower

Electricity generated from hydro sources amounted to 9 ktoe in 2015 and any future expansion will probably be through micro (5-100 kW) or pico hydro (less than 5kW) plants to a total of 10 MW (REEEP, 2012).

### Oil and natural gas

Mauritius imports petroleum products to meet its energy requirements, as it has no oil or gas (REEEP, 2012).

### Wind

The potential for wind energy has allowed Mauritius to set a target in its Long-term Energy Strategy 2009-2025 to source 35 per cent of its electricity from renewables by 2025, with wind supplying 8 per cent of total generation. The

country has an inland technical wind-power potential of between 60 and 140 MW and almost twice that potential offshore (REEEP, 2012). The government also aims to improve the knowledge base guiding decision makers implementing wind energy by producing a wind atlas.

### Solar

Solar resources are substantial, with an average solar radiation of 5.4 kWh/m<sup>2</sup>/day (REEEP, 2012). In 2015, 2 ktoe of electricity was generated from wind or solar (AFREC, 2015). The Mauritius Sustainable Island Fund, launched in 2008, is promoting energy efficiency through introducing household usage of solar for water heating and lighting. The government has also been considering augmenting grid supply through solar generation (REEEP, 2012).

## Tracking progress towards sustainable energy for all (SE4All)

By 2012, the whole of Mauritius had access to electricity (Table 3 and Figure 4) (World Bank, 2016). National access to non-solid fuels in 2012 was 99.26 per cent (World Bank, 2015).

Mauritius's energy intensity increased at a compound annual growth rate (CAGR) of -1.19 per cent over the 20 years between 1990 and 2010 and at -1.98 per cent CAGR from 2010 to 2012. Between 2010 and 2012, the Mauritian economy's energy intensity (the ratio of the quantity of energy consumption per unit of economic output) increased from 6.5 MJ to 6.2 MJ per US dollar (2005 dollars at PPP) (World Bank, 2015).

The share of renewable energy in total final energy consumption (TFEC) decreased from 91.6 to 83.54 per cent between 1990 and 2012. In 2012, traditional solid biofuels formed the biggest share of renewable sources at 1.3 per cent, followed by modern biofuels at 15.1 per cent of TFEC and hydro at 1.3 per cent (World Bank, 2015). Renewable sources contributed 24.5 per cent of the share of electricity capacity and 22.2 per cent of the electricity generated in 2012 (World Bank, 2015).

### Intended Nationally Determined Contributions (INDC) within the framework of the Paris climate Agreement

Mauritius is already facing environmental challenges, such as changes in rainfall patterns, and this is likely to impact the agricultural and natural resources sectors

**Table 3: Mauritius's progress towards achieving SDG7 – Ensure access to affordable, reliable, sustainable and modern energy for all**

Target	Indicators	Year					
		1990	2000	2010	2012	2000-2010	2011-2015
7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Per cent of population with access to electricity	97	99	100	100		
	7.1.2 Per cent of population with primary reliance on non-solid fuels	83	93	98	99.26		
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption	51.9	14.6	6.9	34.0		
7.3 By 2030, Double the rate of improvement of energy efficiency	7.3.1 GDP per unit of energy use (constant 2011 PPP \$ per kg of oil equivalent)				15.66 (2013)		
	Level of primary energy intensity(MJ/\$2005 PPP)	8.2		6.5	6.2	6.28	6.20

Sources: (World Bank, 2015); (World Bank, 2016)

**Figure 4: SDG indicators**

Percentage of population with access to electricity	Access to non-solid fuel (% of population)	GDP per unit of energy use (PPP \$ per kg of oil equivalent) 2013	Renewable energy consumption (% of total final energy consumption), 2006-2011, 2012
100%	99.26%	16.18	3.36%

**Table 4: Mauritius's key aspects/key mitigation measures to meet its energy Intended Nationally Determined Contributions (INDCs)**

INDC
*Expand solar, wind and biomass energy production and other renewable energy sources.
*Adopt sustainable consumption and production in all sectors of the economy.
*Gradually shift towards the use of cleaner energy technologies, such as LNG, among others.
*Modernize the national electricity grid through the use of smart technologies, which is a prerequisite to accelerate the uptake of renewable energy.
*Increase efficient use of energy through the deployment of appropriate technologies in all sectors of the economy and awareness raising on energy conservation.
*Adopt sustainable transportation, including promotion of energy efficient mass transportation systems based on hybrid technologies and cleaner energy sources.
*Implement sustainable and integrated waste management, including waste to energy.
*Implement a sustained tree planting programme within the context of the cleaner, greener and safer initiative.

Source: (MEM, 2015)

**Table 5: Mauritius's institutional and legal framework**

Basic Elements	Response
Presence of an Enabling Institutional Framework for sustainable energy development and services (Max 5 institutions) most critical ones	Ministry of Energy and Public Utilities
Presence of a Functional Energy Regulator	Central Electricity Board (CEB)
Ownership of sectoral resources and markets (Electricity/power market; liquid fuels and gas market)	
Level of participation in regional energy infrastructure (Power Pools) and institutional arrangements	A member of SADC, but does not participate in the Southern Africa Power Pool.
Environment for Private Sector Participation	
Whether the Power Utility(ies) is/are vertically integrated or there is unbundling (list the Companies)	Central Electricity Board
Where oil and gas production exists, whether upstream services and operations are privatized or state-owned, or a mixture (extent) e.g., licensed private exploration and development companies	
Extent to which Downstream services and operations are privatized or state-owned, or a mixture (extent)	State Trading Corporation (STC) imports all petroleum products which are then distributed by Shell, Esso, Caltex and Total.
Presence of Functional (Feed in Tariffs) FIT systems	Yes being developed
Presence Functional IPPs and their contribution	Compagnie Thermique de Savannah (CTSav) 74 MW Compagnie Thermique Du Sud (CTDS) Central Thermique de Belle Vue (CTBV) FUEL Steam and Power Generation Company (FSPG) Consolidated Energy Limited (CEL)
Legal, Policy and Strategy Frameworks	
Current enabling policies (including: RE; EE; private sector participation; & PPPs facilitation) (list 5 max) most critical ones	<ul style="list-style-type: none"> <li>• Outline of the Energy Policy 2007-2025 in 2007</li> <li>• Long Term Energy Strategy 2009-2025 in 2008</li> <li>• Integrated Electricity Plan (IEP) 2003-2012</li> </ul>
Current enabling laws/pieces of legislation (including: RE; EE; private sector participation; & PPPs facilitation) – including electricity/grid codes & oil codes (5 max or yes/no) most critical ones	<ul style="list-style-type: none"> <li>• Electricity Act of 1939 (amended 1991)</li> <li>• Utility Regulatory Authority Act 2005</li> <li>• Grid Code 2009</li> <li>• Maurice Ile Durable (MID) Levy 2008</li> <li>• Energy Efficiency Act 2011</li> <li>• Central Electricity Board Act 1964</li> <li>• Petroleum Act of 1970 (amended 1991)</li> </ul>

This table was compiled with material from (REEEP, 2012) and (AFD, 2012)

adversely. To play its role in mitigating climate change, the country articulated its Intended Nationally Determined Contributions in 2015. The energy-related INDCs are listed in Table 4.

### **Institutional and Legal Framework**

The Ministry of Energy and Public Utilities is in charge of the energy sector (Table 5). The Central Electricity Board (CEB) is the generator and supplier of electricity and also acts as the

current electricity regulator. On a regional level, Mauritius is a member of the Southern Africa Development Corporation, but does not participate in the Southern Africa Power Pool. The legal framework is provided by the Electricity Act of 1939 (amended in 1991). The Long Term Energy Strategy 2009-2025 aims to increase the renewable energy share to 35 per cent by 2025, with the application of technologies to harness available renewable energy resources.