

Key figures 2020

TOTAL PRIMARY ENERGY CONSUMPTION

15 917.6 GWh – 1 368.7 ktoe
including 13.0% from local resources

- Energy dependency rate: 87.0%
- Energy intensity per capita: 1.6 toe/capita

TOTAL FINAL ENERGY CONSUMPTION

10 840.3 GWh – 932.1 ktoe

- Transportation: 60.8% - Electricity: 25.1% - Duty-free fuels and combustibles for agriculture and industry (excluding transportation) and butane gas: 6.9% - Heat: 7.2%
- Total electricity consumption per capita: 3 175 kWh/capita
- Total road fuel consumption per capita: 572 litres/capita

ELECTRICITY GENERATION

2 977,9 GWh – 256,1 ktoe

- From 2010 to 2020, electricity generation increased by 1.3% per year on average
- Peak power demand: 495 MW in December
- Share of renewable energies: 31.3% in 2020**

	Hydropower	Photovoltaic	Bagasse	Wind power	Biogas	Bioethanol
Installed capacity (MW)	133.3	206.3	210.0	16.5	4.4	41.0
Electricity generation (GWh)	423.4	255.4	221.0	13.5	15.6	3.9
Share in the electricity generation	14.2%	8.6%	7.4%	0.5%	0.5%	0.1%

SOLAR HEATING

- 178 795 individual solar water heaters = 715 180 m² = 268.2 GWh avoided
 - 51 231 m² of collective solar water heaters = 30.7 GWh avoided
- 298.9 GWh avoided**

CO₂ EMISSIONS

3 982 kilotons, being 4.64 tCO₂/capita

- Direct emission average ratio per consumed kWh: **735 gCO₂/electrical kWh**

General indicators	2014	2015	2016	2017	2018	2019	2020
Energy intensity in toe / million euros (2010 constant euros)	85.30	83.88	82.42	82.25	80.35	81.69	*
Road fuels consumption per capita (L)	596	611	622	630	622	631	572
Primary energy quantity necessary to produce 1 ktoe of final electricity (ktoe)	2.80	2.75	2.74	2.71	2.63	2.75	2.79
Primary energy quantity necessary to produce 1 ktoe of final energy (ktoe)	1.44	1.42	1.42	1.41	1.38	1.41	1.47
Renewable energy production (GWh)	941.9	1 043.0	1 003.8	967.2	1 078.8	951.0	932.8

* 2020 GDP unknown

Glossary

Bagasse:

Sugar cane residue obtained after grinding. Bagasse can be used as a biofuel.

Energy dependency rate:

Shows the proportion of energy that an economy must import. It is defined as net energy imports divided by primary energy consumption.

Energy intensity:

Measures the energy efficiency of the country's economy. The higher the intensity, the more the country consumes.

Final energy consumption:

Total energy consumed by end users (households, services, industries, transport and agriculture).

Non-interconnected territories (NITs):

Refers to the French territories that are not connected to the continental electrical grid due to their geographical remoteness. Reunion Island, Guadeloupe, Martinique, French Guiana and Corsica are referred as NITs.

PV:

Abbreviation for photovoltaic systems

Penetration rate of renewable energies:

Share of renewable energies in total power generation.

Primary energy consumption:

Primary energy consumption measures the total energy demand and covers consumption of the energy sector itself, losses during transformation and distribution of energy and final consumption by end users. The primary energy consumption provides a measure of the energy independency rate.

Necessary Primary energy quantity to produce 1 ktoe of final energy:

This is a conversion factor to go from electricity to primary energy. It is a coefficient that enables the addition of electricity power and primary fossil energies in energy balance.

Rated capacity:

Net power output available on the power grid.

Ton of oil equivalent (toe):

Energy unit equivalent to the energy released by burning one ton of crude oil. It is an energy unit that is used to compare energy from different sources.

For more information, search for the technical energy balance (in French) on our website!
oer.spl-horizonreunion.com

Reunion Island Energy Observatory

The Reunion Island Energy Observatory, OER (Observatoire Energie Réunion), hosted by the company Horizon Réunion, is part of the energy strategy led by the regional council and the partners of the island's action on energy policy.

Being an observation and information tool regarding the energy state of Reunion Island, the observatory comes from the wish of the different partners to provide them with a specific instrument to support energy management actions and develop renewable energies as well as measure the impact of these actions.

Horizon Réunion

Since 2013, the local public company Horizon Réunion has supported Reunion Island towards electric self-sufficiency, serving communities, territories and its inhabitants.

Formerly called Energies Reunion, the company changed its name on 12 February 2019, following the opening of its corporate purpose to new skills regarding the environment, biodiversity and climate. Its role: to support local authorities in the development of concrete projects regarding energy, solidarity and sustainability challenges.

www.spl-horizonreunion.com

Observatory's partners for 2014-2020:



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For more information, contact us at:
(+262) 262 257 257
oer.spl-horizonreunion.com contact@spl-horizonreunion.com



ENERGY BALANCE REUNION ISLAND

KEY FIGURES

2020

Find all the data of your Energy Balance on our new website

oer.spl-horizonreunion.com

We wanted this tool to be dynamic and interactive for easy and relevant access to all energy data in Reunion Island!

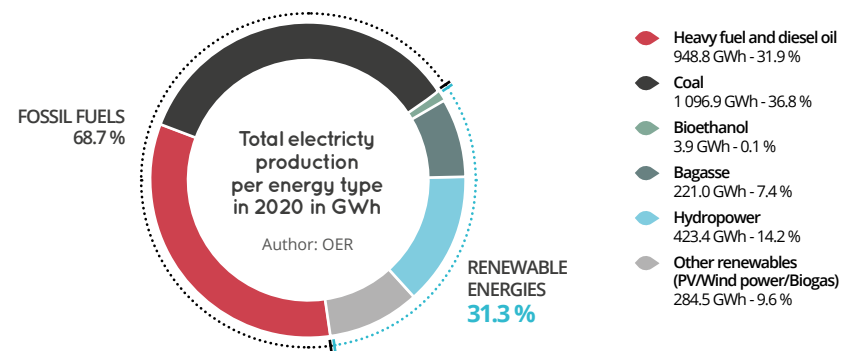


2021 EDITION

Electricity

2020

ELECTRICITY PRODUCTION: 2 977.9 GWh – 256.1 ktoe



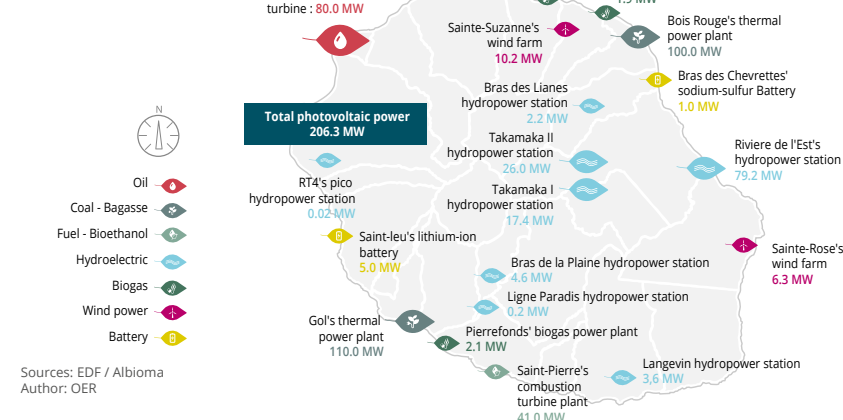
Renewable energy penetration rate in the electricity production in different Non-Interconnected Territories : Production share from renewable resources in 2020

Territory	Share (%)
Guadeloupe	23.3%
Martinique	23.1%
Reunion Island	31.3%
Corsica	34.2%
French Guiana	52.3%
New-Caledonia	15.6%
French Polynesia	30.2%

Sources: EDF Open Data for Corsica, Martinique and French Guiana, OER, OMEGA, Energy Observatory of New Caledonia, Polynesian Energy Observatory

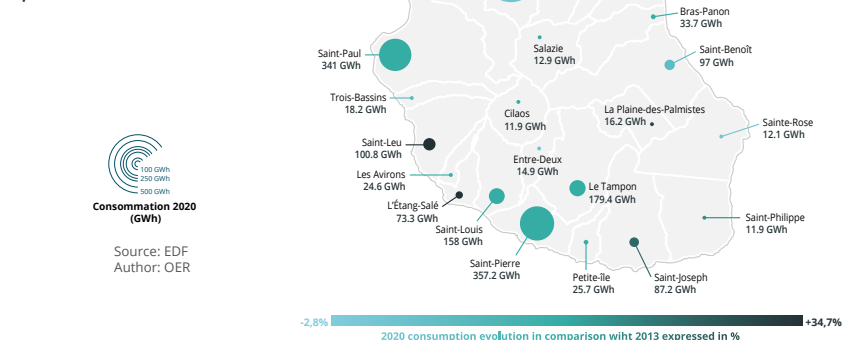
INSTALLED POWER CAPACITY: 908.5 MW

Installed power capacity on the 31st December 2020: 908.5 MW



ELECTRICITY CONSUMPTION: 2 723.6 GWh – 234.2 ktoe

Electricity consumption per town in 2020



Comparison of the electricity consumption per capita in different NITs in 2020 (MWh)

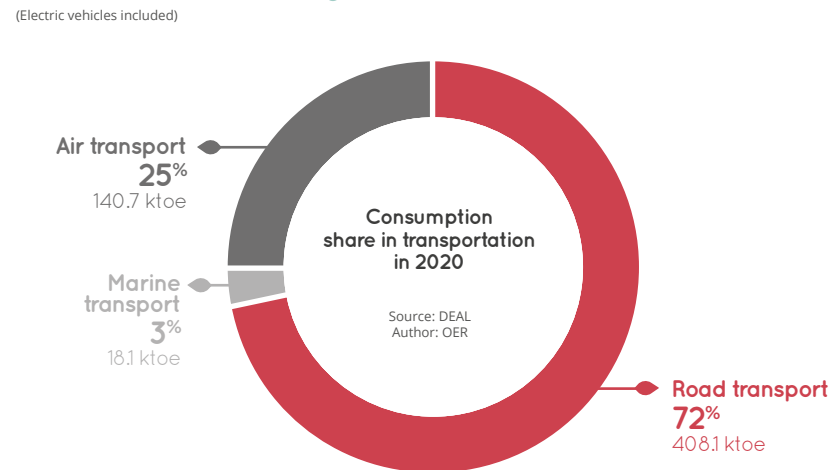
Territory	Consumption (MWh)
Guadeloupe	3.89
Martinique (2019)	3.78
Reunion Island	3.18
Corsica (2019)	7.83
French Guiana (2019)	3.27
New-Caledonia	11.66/2.77*
French Polynesia	3.30

Sources: EDF Open Data for Corsica and French Guiana, OER, OMEGA, Local community of Martinique, Energy Observatory of New Caledonia, Polynesian Energy Observatory
*exclusive of metal industry and mining

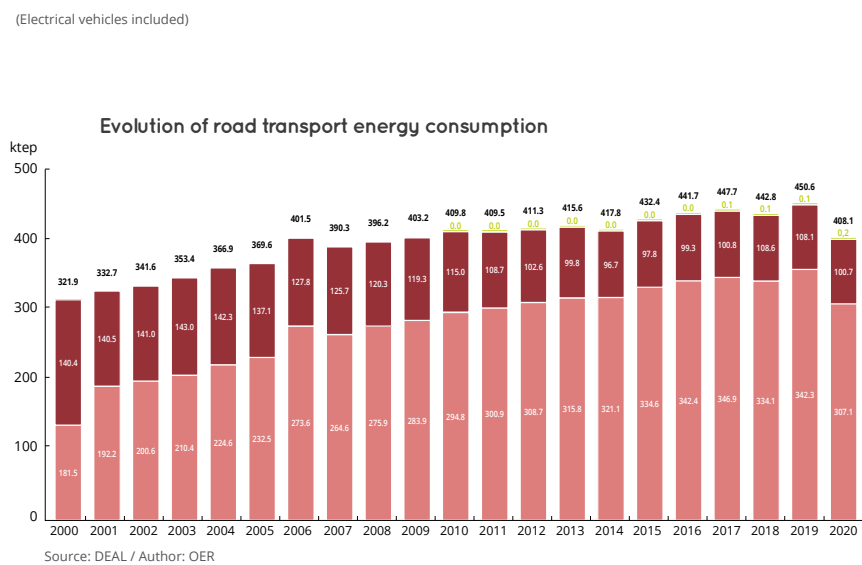
Transportation

2020

FUEL CONSUMPTION: 553 932 tons meaning 566.9 ktoe
(Electric vehicles included)



CONSUMPTION IN ROAD TRANSPORT SECTOR: 401 984 tons meaning 408.1 ktoe
(Electrical vehicles included)



ELECTRIC AND HYBRID TRANSPORTATION DEVELOPMENT

Cumulative number of electric and hybrid cars since 2006:

Year	2006	2010	2015	2016	2017	2018	2019	2020
Hybrid cars	38	685	3 122	3 897	4 635	5 592	7 095	9 649
Plug-in hybrid cars	0	0	105	215	379	528	633	939
Electric cars	0	6	227	334	589	921	1 439	2 508
Electric motorcycles	0	0	0	0	0	0	7	49
TOTAL	38	691	3 454	4 446	5 603	7 041	9 174	13 145

Sources: Automobile department file until 2011, Car dealers from 2013 to 2015, RSVERO since 2016 – Author: OER

In May 2021 there are **195 functioning public power points** for electric vehicles in Reunion Island.

Primary supply

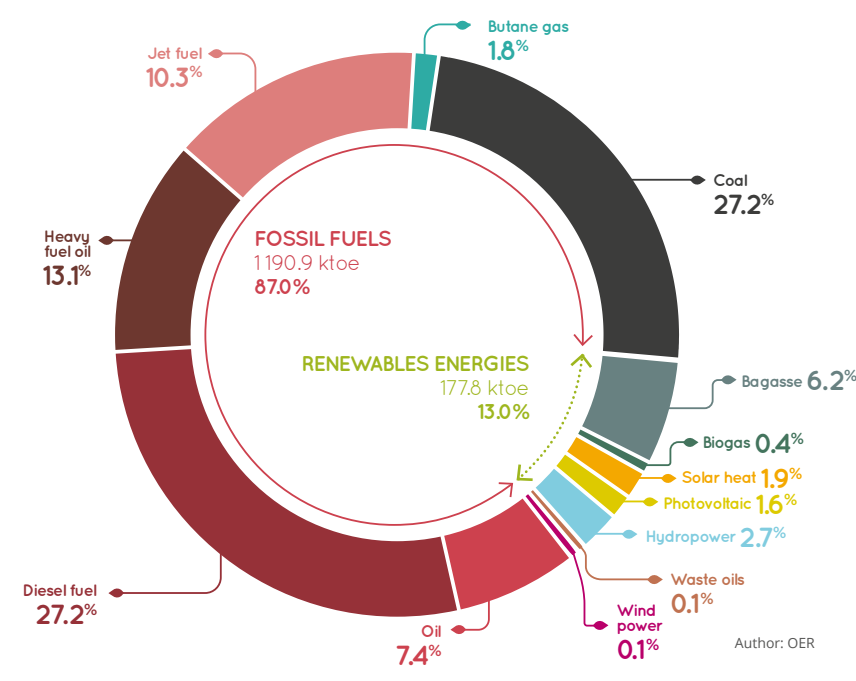
2020

PRIMARY ENERGY SUPPLY: 15 917.6 GWh meaning 1 368.6 ktoe

Category	Resource	Value	
IMPORTED FOSSIL RESOURCES	Oil*	101.1	
	Diesel fuel*	372.6	
	Heavy fuel oil	179.5	
	Jet fuel*	140.7	
	Butane gas*	24.2	
	Coal	372.8	
	Subtotal	1 190.9	
	RENEWABLE AND RECYCLED RESOURCES	Bagasse	85.5
		Biogas	5.3
		Bioethanol	0.8
Wood		n/d	
Sun		Solar heat 25.7 Photovoltaic 22.0	
Water		Hydropower 36.4	
Recovery		Waste oils 0.8	
Wind		Wind power 1.2	
Subtotal		177.7	
TOTAL		1 368.6	

* Corresponding to the stock removals from the SRPP

Consumption share of primary energy consumption in 2020



Evolution of the energy dependency rate from 2000 to 2020

Year	2000	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Rate (%)	83.9%	87.5%	87.5%	88.3%	87.2%	86.2%	86.8%	86.1%	86.6%	87.1%	87.1%	87.5%	87.0%

Comparison of the energy dependency rate in the different NITs in 2020

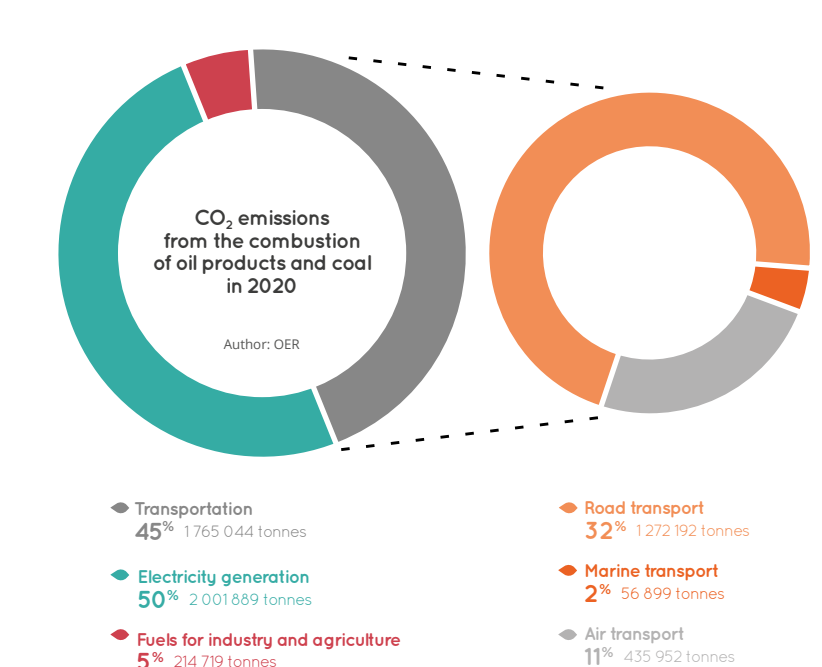
Territory	Rate (%)
Guadeloupe	92.7%
Martinique (2019)	92.5%
Reunion Island	87.0%
Corsica (2016)	87.5%
French Guiana (2015)	82.4%
New Caledonia	96.9%
French Polynesia	93.4%

Sources: GEC for French Guiana, OREGES from Corsica, OER, OMEGA, Local community of Martinique, Energy Observatory of New Caledonia, Polynesian Energy Observatory

Greenhouse gases

2020

CO₂ EMISSIONS FROM THE COMBUSTION OF ENERGY PRODUCTS IN REUNION ISLAND IN 2020*



Total of CO₂ emissions from the combustion of oil products and coal: 3 982 kilotonnes

Direct CO₂ emissions per capita

- Direct emissions from electricity generation: 2.33 tCO₂/capita
- Direct emission from all types of transportation: 2.06 tCO₂/capita
- Emissions from fuels for agricultural, industrial and residential-tertiary sectors: 0.25 tCO₂/capita

One inhabitant of Reunion Island = 4.64 tCO₂

(Emissions due to the combustion of fossil fuels only)
*Simplified methodology of the GHG Emission Inventory

Comparison of the mean direct emissions ratio per kWh in different NITs
Direct emissions average ratio per kWh consumed gCO₂/kWh in 2020

Territory	Ratio (gCO ₂ /kWh)
Guadeloupe (2019)	703
Martinique (2019)	575
Reunion Island	735
Corsica (2019)	365
French Guiana (2019)	468
New Caledonia	1 022/813*
French Polynesia	536

Sources: EDF Open Data for Corsica and French Guiana, OER, OMEGA, Local community of Martinique, Energy Observatory of New Caledonia, Polynesian Energy Observatory
*Exclusive of metal industry and mining



Energy economics

2020

COST OF FOSSIL RESOURCES IMPORTATIONS

Total of fossil resources importations: **1 032.2 ktoe**
Importation's value: **304.6 million euros**

Origin of the most imported resources:

- The coal comes from South Africa
- The diesel fuel comes from Singapore

Tax revenue from fossil resources importations in 2020: **266.2 million euros**

