

# Key figures 2022

**TOTAL PRIMARY ENERGY CONSUMPTION:**  
16 638.0 GWh – 1 430.6 ktoe including 13% from local resources

- Energy dependency rate : 85.8 %.
- Energy intensity per capita : 1.8 toe/capita.

**TOTAL FINAL ENERGY CONSUMPTION:**  
12 410 GWh – 1 067.1 ktoe

- Transportation : 64.9% - Electricity : 22.7% - Duty-free fuels and combustibles for agriculture and industry (excluding transportation) and butane gas : 5.8% - Heat : 6.5%.
- Total electricity consumption per capita : 3 246 kWh/capita.
- Total road fuel consumption per capita : 640 liters/capita.

**ELECTRICITY GENERATION:**  
3 064.3 GWh – 263.5 ktoe

- From 2012 to 2022, electricity generation increased by 1.1% per year on average.
- Peak power demand: 487 MW in January.
- Share of renewable energies: 37.7% in 2022.

	Hydropower	Photovoltaic	Bagasse	Wood pellets	Wind power	Biogas	Bioethanol
Installed capacity (MW)	134.3	232.8	204.2	15.1	4.4	41.0	
Electricity generation (GWh)	634.2	266.8	181.4	50.6	2.9	13.5	5.1
Share in the electricity generation	19.0%	8.7%	5.9%	1.7%	0.1%	0.4%	0.2%

## SOLAR HEATING

- 191 798 individual solar water heaters = 767 192 m<sup>2</sup> = 287.7 GWh avoided
  - 52 814 m<sup>2</sup> of collective solar water heaters = 31.7 GWh avoided
- **319.4 GWh avoided**

## CO<sub>2</sub> EMISSIONS :

4 056 kilotons, being 4.67 tCO<sub>2</sub>/capita

- Direct emission average ratio per consumed kWh : **591 gCO<sub>2</sub>/electrical kWh.**

General indicators	2014	2015	2016	2017	2018	2019	2020	2021	2022
Energy Intensity in toe / million euros (2010 constant euros)	85.30	83.88	82.42	82.25	80.35	81.69	77.86	78.62	<b>81.69</b>
Road fuels consumption per capita (L)	596	611	622	630	622	629	569	628	<b>640</b>
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	2.76	<b>2.44</b>
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	1.43	<b>1.34</b>
Renewable energy production (GWh)	941.9	1043.0	1003.8	967.2	1078.8	951.0	931.7	869.8	<b>1154.5</b>

# 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](http://oer.spl-horizonreunion.com)

# Reunion Island Energy Observatory

The Reunion Island Energy Observatory, OER (Observatoire Energie Réunion), hosted by 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 its creation, as Regional Energy Agency of La Réunion, the local public company Horizon Réunion has been committed to the energy transition of Reunion Island. Fighting climate change and energy poverty is the main goal of Horizon Réunion.

The Public Company works closely with local authorities and its fields of action are the energy strategy, the development of renewable energies and the management energy demand. Horizon Réunion greatly values to observe the energy and environmental situation of the island. It leads the Energy Observatory of Reunion Island (OER) thanks to the stringent collection, analysis and structuring of data concerning the energy sector. The company publishes renowned technical studies and carries out the Energy Balance of Reunion Island (BER) every year.

## Observatory's partners for 2014-2023 :



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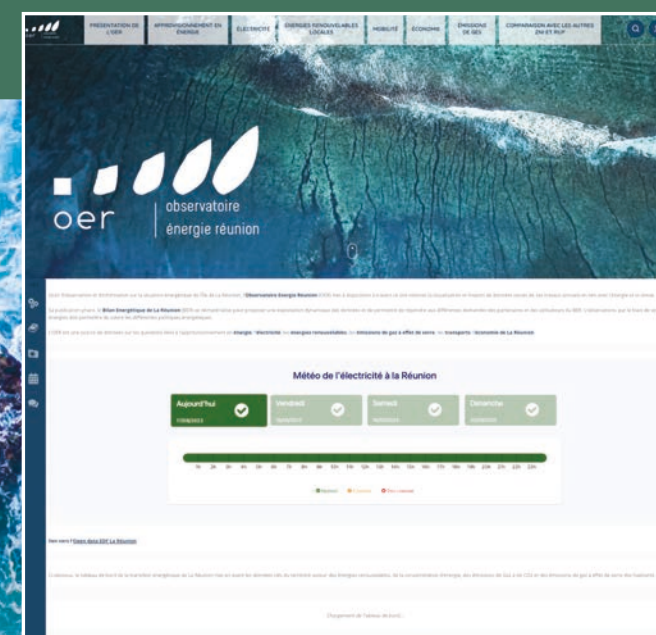
# ENERGY BALANCE REUNION ISLAND

# Key figures 2022

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

[oer.spl-horizonreunion.com](http://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 !

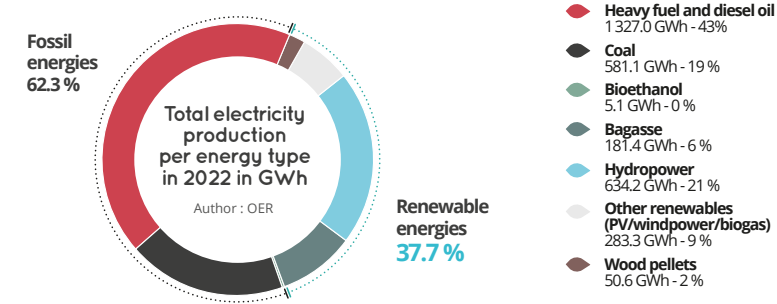


2023 EDITION



# Electricity 2022

**ELECTRICITY PRODUCTION : 3 064.3 GWh – 263.5 ktoe**



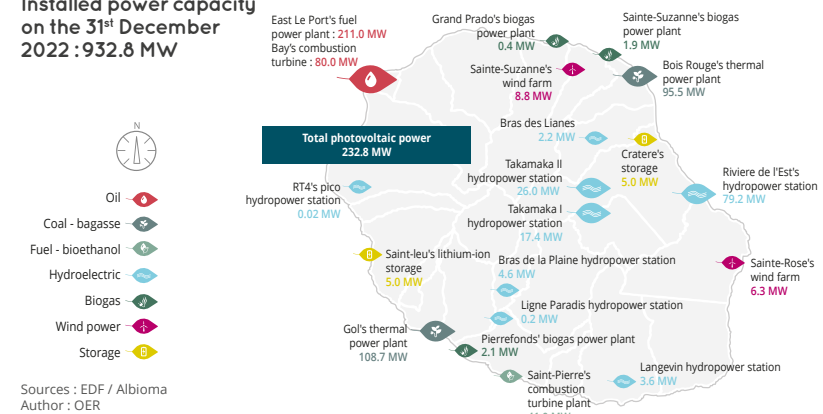
**Renewable energy penetration rate in electricity production in different non-interconnected territories (NITs) in 2022 :**

Territory	Guadeloupe	Martinique	Reunion Island	Corsica	French Guiana	New-Caledonia (2020)	French Polynesia (2021)
Rate	34.7%	26.1%	37.7%	26.6%	72.0%	15.6%	28.2%

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

# INSTALLED POWER CAPACITY : 932.8 MW

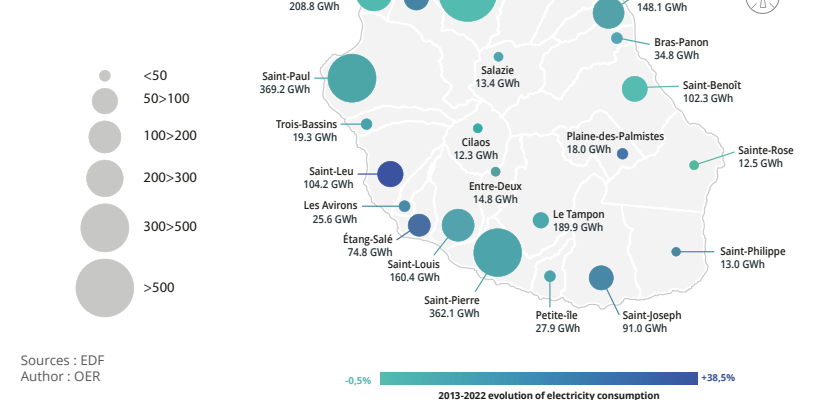
**Installed power capacity on the 31<sup>st</sup> December 2022 : 932.8 MW**



Sources : EDF / Albioma Author : OER

# ELECTRICITY CONSUMPTION : 2 820 GWh – 242.5 ktoe

**Electricity consumption per town in 2022**



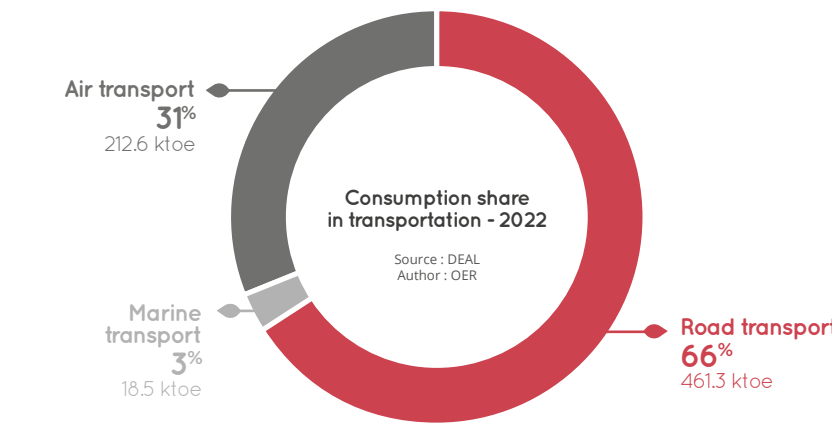
**Comparison of the electricity consumption per capita in different NITs in 2022 :**

Territory	Guadeloupe	Martinique	Reunion Island	Corsica	French Guiana	New-Caledonia (2020)	French Polynesia (2021)
Consumption (MWh)	3.77	3.78	3.27	5.83	2.93	11.66/2.77*	3.30

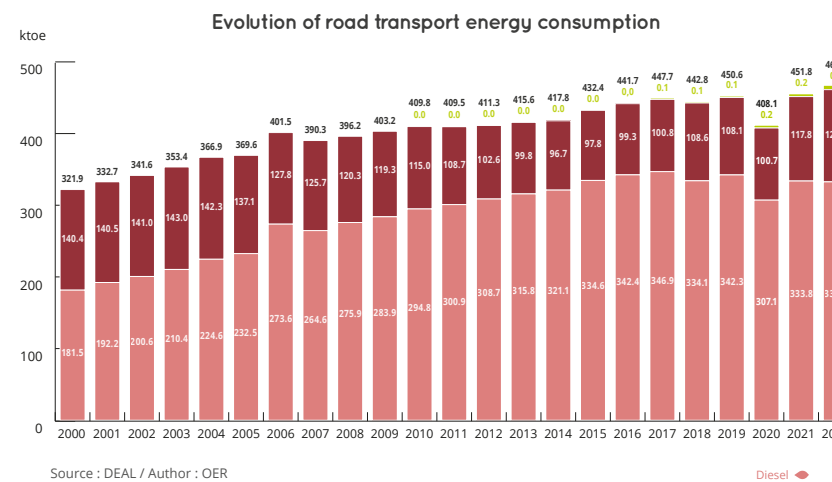
Sources: EDF Open Data for Corsica and French Guiana, OER, OMEGA, Local community of Martinique, Energy Observatory of New Caledonia, Polynesian Energy Observatory. \*Exclusive of metal industry and mining.

# Transportation 2022

**FUEL CONSUMPTION : 674 733 tons of fossil fuels and 692.4 ktoe (Electric vehicles excluded)**



**CONSUMPTION IN ROAD TRANSPORT SECTOR: 454 012 tons and 461.7 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	2021	2022
Hybrid cars	38	685	3 122	3 897	4 635	5 592	7 095	9 649	8 792	14 161
Plug-in hybrid cars	0	0	105	215	379	528	633	939	988	1 791
Electric cars	0	6	227	334	589	921	1 439	2 508	2 402	4 663
Electric motorcycles	0	0	0	0	0	0	7	49	49	49
<b>TOTAL</b>	<b>38</b>	<b>691</b>	<b>3 454</b>	<b>4 446</b>	<b>5 603</b>	<b>7 041</b>	<b>9 174</b>	<b>13 145</b>	<b>12 231</b>	<b>20 664</b>

Sources: Automobile department file until 2009, SDES and Statistics from the Ministry of Ecological Transition and Territorial Cohesion since 2010 - Author : OER. From 2021, the data is retrieved from the file of the Ministry of Ecological Transition and Territorial Cohesion and no data available for motorcycles, hence the postponement to 2020.

In June 2023 there are **378 functioning public power points** for electric vehicles in Reunion Island.

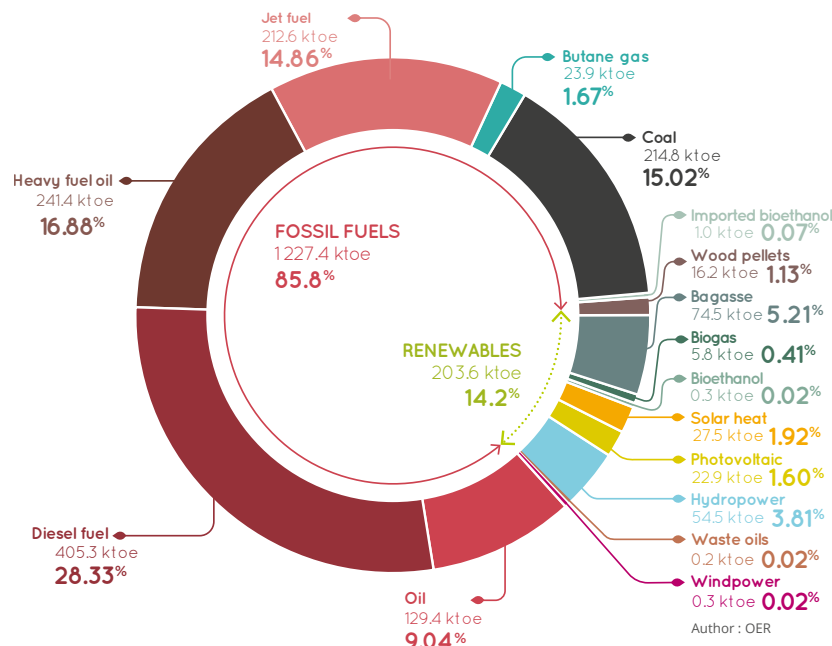
# Primary supply 2022

**PRIMARY ENERGY SUPPLY : 16 638.0 GWh meaning 1 430.6 ktoe**

Category	Resource	2022
IMPORTED FOSSIL RESOURCES	Oil*	129.4
	Diesel fuel*	405.3
	Heavy fuel oil	241.4
	Jet fuel*	212.6
	Butane gas*	23.9
IMPORTED RENEWABLE RESOURCES	Bioethanol	1.0
	Wood pellets**	16.2
RENEWABLE AND RECYCLED RESOURCES	Subtotal	17.2
	Biomass	74.5
	Biogas	5.8
	Bioethanol	0.3
	Wood	nd
	Solar heat	27.5
	Photovoltaic	22.9
	Water	Hydropower 54.5
	Recovery	Waste oils 0.2
	Wind	Wind power 0.3
<b>TOTAL</b>	<b>Subtotal</b>	<b>186.0</b>
<b>TOTAL</b>	<b>Subtotal</b>	<b>1 430.6</b>

\* Corresponding to the stock removals from the SRPP. \*\* Wood pellets were introduced at the end of 2022 in the CTRB power plant during the conversion of boilers from coal to biomass.

# Consumption share of primary energy consumption in 2022



**Evolution of the energy dependency rate from 2000 to 2022**

Year	2000	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
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%	88.2%	85.8%

Author : OER.

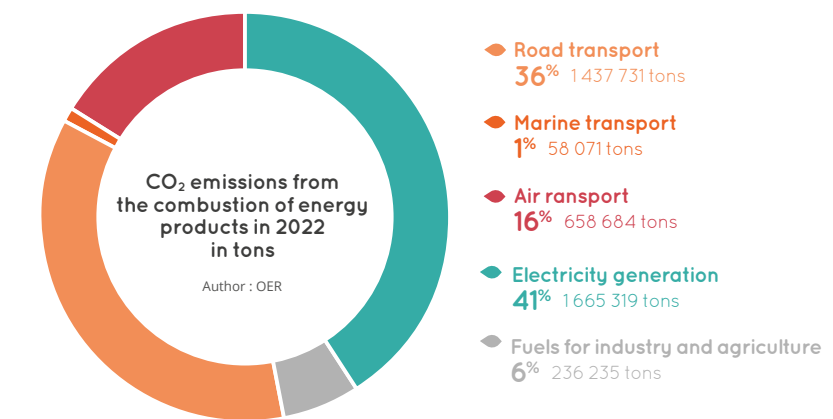
**Comparison of the energy dependency rate in the different NITs**

Territory	Guadeloupe (2021)	Martinique (2021)	Reunion Island (2022)	Corsica (2020)	French Guiana (2015)	New Caledonia (2020)	French Polynesia (2021)
Rate	83.0%	91.8%	85.8%	86.1%	82.4%	96.9%	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 2022

**CO<sub>2</sub> EMISSIONS FROM THE COMBUSTION OF ENERGY PRODUCTS IN REUNION ISLAND IN 2022\***



Total of CO<sub>2</sub> emissions from the combustion of oil products and coal : **4 056 kilotons.**

# Direct CO<sub>2</sub> emissions per capita

- Direct emissions from electricity generation : **1.92 tCO<sub>2</sub>/capita.**
- Direct emission from all types of transportation : **2.48 tCO<sub>2</sub>/capita.**
- Emissions from fuels for agricultural, industrial and residential-tertiary sectors : **0.27 tCO<sub>2</sub>/capita.**

**One inhabitant of Reunion Island = 4.67 tCO<sub>2</sub>**

(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 gCO<sub>2</sub>/kWh

Territory	Guadeloupe (2020)	Martinique (2021)	Reunion Island (2022)	Corsica (2019)	French Guiana (2019)	New Caledonia (2020)	French Polynesia (2021)
Ratio	727	563	591	564	468	1 022/813*	538

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.

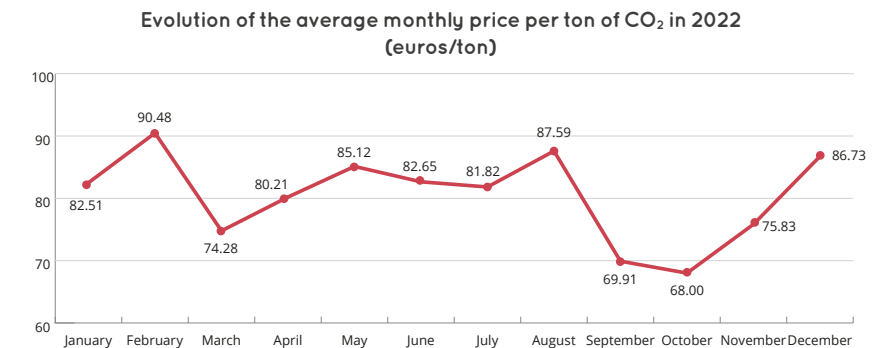
# Energy economics 2022

**HIGHLIGHTS OF THE YEAR 2022**

**Comparison of coal import costs (€/ton)**

January 2022 : 82.51 €/ton.

December 2022 : 86.73 €/ton.



Sources: Agence Trésor France.

# COST OF FOSSIL RESOURCES IMPORTATIONS

Total of fossil resources importations : **1 214.2 ktoe.**

For the year 2021, a regulatory change on data confidentiality makes data collection incomplete: for each product and each exporting country, the data is confidential if fewer than three operators are present or if a single operator holds 85% or more data for this product. Thus, most of the information on the origin of the products is unavailable for the year 2021.

Similarly, gasoline import data in 2021 is completely confidential and therefore unknown.

As a reminder, in 2021, the total imports of fossil resources : **1 270.6 ktoe** for a total value of imports of **586.5 millions euros.**

# Origin of the most imported resources:

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

