

Aetheis Energy Sub Report 1.1

Mauritius Energy System Context

Excerpt from Report 1 Mauritius Solar Industry | Market Deep Dive from
Aetheis Energy Research | I2form department.

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Sub Report 1.1.0

1. Overview of the national energy balance

This document is a expert of upcoming reports on the Photovoltaic Solar Industry in Mauritius to be published by Aetheis Energy. It presents the structure and evolution of Mauritius' national energy balance before narrowing the analysis to electricity and solar PV. It relies primarily on **Statistics Mauritius' Energy and Water Statistics 2025 [1-A]** as well as the historical **Statistics Mauritius Energy and Water Statistics series for 2015–2025 [2-A]**. The objective is to establish the scale of Mauritius' Total Primary Energy Requirement, the relative contribution of imported and local energy sources, and the implications for energy security before analysing the electricity sector in Section 2.2.

2. Total Primary Energy Requirement — latest baseline – Year 2025

This subsection presents the latest available national primary energy figures.

In 2025, Mauritius' Total Primary Energy Requirement (TPER) reached **1,631,400 tonnes of oil equivalent (toe)**. Imported fuels accounted for **1,480,782 toe**, representing **90.8%** of total primary energy requirement, while locally available energy sources accounted for **150,618 toe**, equivalent to **9.2%** of the national energy balance. This confirms that Mauritius' energy system remains overwhelmingly dependent on imported energy, despite the presence of local renewable sources such as bagasse, hydro, wind, landfill gas, photovoltaic generation and fuelwood.

The imported energy balance is dominated by **petroleum products and coal**, which represented approximately **64.3%** and **26.4%** of TPER respectively in 2025. Petroleum products reflect the continued importance of liquid fuels in the wider economy, particularly transport and non-electricity uses, while coal remains structurally linked to electricity generation. Local energy sources therefore remain significant from a strategic and renewable energy perspective, but still structurally limited in the total primary energy balance. This distinction is important: solar PV may play an increasingly important role in the electricity system, but its contribution to total primary energy remains modest at national scale.

Table 0-1: 2025 National primary energy balance, latest year available [1-A]

Indicator	Share of TPER (%)	Value (toe)	Value (GWhe)
Total Primary Energy Requirement	100.00%	1,631,400	18,973.18
Imported fossil fuels	90.75%	1,480,494	17,218.15
Coal	26.43%	431,243	5,015.36
Petroleum products	64.32%	1,049,251	12,202.79
Local energy sources	9.23%	150,618	1,751.69
Hydro	0.47%	7,672	89.23
Wind	0.06%	965	11.22
Landfill Gas	0.03%	526	6.12
Photovoltaic	1.22%	19,849	230.84
Bagasse ²	7.11%	115,978	1,348.82
Fuelwood ²	0.34%	5,627	65.44

3. Evolution over the last 10 years

Over the 2015–2025 period, Mauritius' Total Primary Energy Requirement (TPER) increased from **1,534.4 ktoe in 2015** to **1,631.4 ktoe in 2025**, equivalent to an increase of approximately **6.3%** over the decade. The trend was not linear: after remaining broadly stable between 2015 and 2019, TPER fell sharply in 2020 to **1,334.0 ktoe**, a temporary contraction consistent with the exceptional reduction in economic activity and mobility during the COVID-19 period. By 2022, total primary energy demand had largely recovered, before reaching its highest level in the period in 2025. [1-A], [2-A].

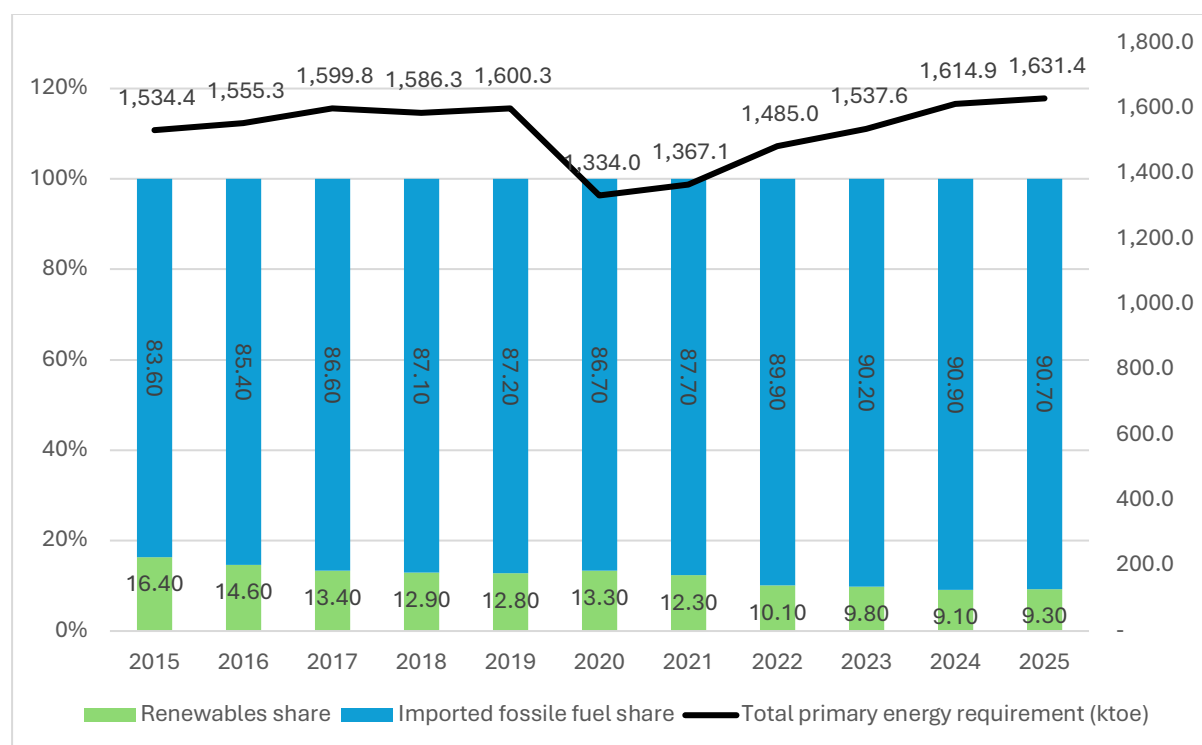


Figure 0-1: Evolution of Total Primary Energy Requirement, 2015–2025 [1/2-A]

The structural trend is more significant than the absolute growth in demand. Over the same period, the share of imported fossil fuels increased from **83.6% in 2015** to **90.7% in 2025** implying a significant decrease in the share of local (renewable) primary energy requirement. This indicates that Mauritius has materially increased its dependence on imported energy over the last decade.

On the contrary, despite growth in solar PV and some other renewable electricity sources, overall local primary energy has decreased structurally. It is due to the reduction of bagasse fuel in electricity generation and the increase of the transport sector that relies almost exclusively on exported fuel. This weakens energy sovereignty and reinforces the importance of accelerating renewable electricity deployment, storage integration and demand-side optimisation in the next phase of the transition. [1-A], [2-A]

4. Imported fuel dependency and energy security exposure

The dominance of imported fuels in Mauritius' primary energy balance creates a structural energy security exposure. As shown in Figure 0-1 in 2025, imported fuels represented **90.8%** of Total Primary Energy Requirement, confirming that the country remains highly dependent on external energy supply chains.

This dependency has a direct macroeconomic dimension: fossil fuel imports were estimated at **21.2% of Mauritius' import bill in 2024 [4-A*]**, exposing the economy to fuel price volatility, exchange-rate movements and international supply disruptions. Petroleum products connect this exposure primarily to transport and liquid fuel demand, while coal remains closely linked to electricity generation, particularly through thermal generation and IPP production outside the bagasse season.[5-H]

As a result, the national energy transition has both a **decarbonisation dimension** and an **import-dependency reduction dimension**. [6-A] These risks are introduced here at system level and analysed in greater detail in Section 2.3

**the 21.2% figure is not on the "4-A EDB-Budget-Newsletter-2025-2026.pdf" document but on an article on the edb website, [newsroom/budget-2025-2026-energy-sector](#)*

5. Local energy sources and renewable contribution

Local energy sources remain a minority component of Mauritius' national primary energy balance. In 2025, locally available energy sources represented **150,618 toe**, equivalent to approximately **9.2%** of Total Primary Energy Requirement. These sources include bagasse, hydro, wind, photovoltaic generation, landfill gas and fuelwood, with bagasse remaining the largest local contributor. This reflects the continuing role of the sugar sector in Mauritius' renewable energy base, although bagasse availability remains seasonal and structurally linked to agricultural production.

Table 0-2: Local Primary Energy Sources by Type 2015-20-25 [1-A],[2-A]

Year	2015			2020			2025		
Source	toe	TPER%	GWh eq.	toe	TPER%	GWh eq.	toe	TPER%	GWh eq.
Total Local Renewables	251,265	16.40%	2,922.20	177,526	13.30%	2,064.60	150,618	9.20%	1,751.70
Bagasse	230,072	15.00%	2,675.70	146,843	11.00%	1,707.80	115,978	7.10%	1,348.60
Hydro	10,482	0.70%	121.9	9,962	0.70%	115.8	7,672	0.50%	89.2
Solar PV	2,225	0.10%	25.9	12,533	0.90%	145.7	19,849	1.20%	230.8
Wind	231	0.00%	2.7	1,555	0.10%	18.1	965	0.10%	11.2
Landfill gas	1,751	0.10%	20.4	2,132	0.20%	24.8	526	0.00%	6.1
Fuelwood	6,504	0.40%	75.6	4,361	0.30%	50.7	5,627	0.30%	65.4

The evolution of local energy sources must be interpreted carefully. Solar PV is increasing and is strategically important for the electricity transition, but it remains modest when measured against total primary energy requirement. In 2025, photovoltaic generation accounted for approximately **231 GWh**, equivalent to around **19,849 toe** and **1.2%** of TPER. By comparison, bagasse represented approximately **115,978 toe**, or **7.1%** of TPER. This distinction is critical: solar PV's relevance is stronger in the electricity system than in the overall primary energy balance, where petroleum products and coal continue to dominate.

This difference between **renewables in primary energy** and **renewables in electricity generation** should be maintained throughout the report. A renewable source may have a limited contribution to total primary energy while still being highly strategic in the electricity mix, especially where it can reduce fossil-based generation, support distributed production, and improve resilience. Section 2.2 therefore narrows the analysis to electricity generation, where the role of solar PV becomes more directly visible.

6. Link between primary energy and electricity

The national energy balance highlights the full extent of Mauritius' dependence on imported fuels, but the solar transition will materialise primarily through the electricity system. Solar PV directly affects electricity generation rather than total primary energy demand, which also includes transport fuels, industrial fuels and other non-electric energy uses.

This distinction is central to the structure of the report. While solar PV remains modest when measured against total primary energy requirement, it becomes substantially more relevant when analysed within the electricity sector, where renewable generation, storage, grid integration and demand-side flexibility determine the pace of transition. Section 2.2 therefore isolates electricity generation, renewable electricity share and solar PV contribution as the next analytical layer.

Primary energy overview remains important with potential increase electrification of usage across many sector. Therefore the energy consumption pool could keep it's current slow upward trajectory but the electricity sector could increase more significantly in the next few years.

Sources and work cited

To ensure analytical consistency, sources are used according to the following hierarchy:

- i. Primary MRU National data (A)
- ii. Regulatory and legal MRU framework (B)
- iii. International benchmarks (C)
- iv. Market and financial data (D)
- v. Corporate disclosures and private sector data €
- vi. Engineering references (F)
- vii. Research papers (G)
- viii. Analytical reports (H)
- ix. Satellite / GIS data (I)

Key principles:

- Mauritian primary sources are systematically prioritised over international data, and to the best of our knowledge the latest versions
- International benchmarks are used to **fill gaps or validate trends**
- Analytical reports are used for **interpretation only**, not as primary evidence
- All assumptions derived from non-primary sources are explicitly stated

Code	Reference	Link
[1-A]	Statistics Mauritius - Energy and Water Statistics 2025	Link
[2-A]	Statistics Mauritius — historical Energy and Water Statistics reports, 2015–2024	Link
[3-A]	EDB-Budget-Newsletter-2025-2026	Link
[4-H]	U.S. Department of Commerce, International Trade Administration. Mauritius: Energy. Country Commercial Guide. Washington, DC: International Trade Administration, 19 February 2026	Link
[5-C]	International Monetary Fund (IMF). Mauritius: 2026 Article IV Consultation—Press Release; Staff Report; Staff Supplement; and Statement by the Executive Director for Mauritius. IMF Country Report No. 26/178. Washington, DC: International Monetary Fund, July 2026.	Link
[6-A]	CEB Annual Reports 2023–2024	Link
[7-A]	MARENA- Renewable Energy Roadmap 2030 Review 2022	Link

[1-A],[2-A] has be compiled in a working spreadsheet available to download on <https://aetheis.com/energy/i2form>

Appendices

1. Key data figures and tables

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2. Methodological notes

Conversion Factors

1 tonne of oil equivalent (TOE) = 0.01163 gigawatt-hour equivalent[GW·h] = 39,683,207.2

British thermal units (BTU) = 1 toe = 1.429 tonnes of coal equivalent (TCE)

1 [GWh]= 86 [TOE]

1 USD ~ 46.96 MUR Rs

1 EU ~ 54,48 MUR Rs as of 30/09/2026 rate in Yahoo Finance

Units

KWh: Kilo Watt Hour [kW.h-1]

TOE: Tonne of oil equivalent [1000.kg]

/: Percent

Rs: Mauritius Rupee

Wh eq. : Watt hour equivalent

Reduction letter

TPER: Total Primary Energy Requirement

MRU: Mauritius

CEB: Central Electric Board

PV:Photovoltaic Solar

GIS: Geographic information system