ENERGY PROFILE

Gabon

COUNTRY INDICATORS AND SDGS

TOTAL ENERGY SUPPLY (TES)

<table>
<thead>
<tr>
<th>Total Energy Supply (TES)</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-renewable (TJ)</td>
<td>54 465</td>
<td>47 604</td>
</tr>
<tr>
<td>Renewable (TJ)</td>
<td>56 364</td>
<td>60 197</td>
</tr>
<tr>
<td>Total (TJ)</td>
<td>110 829</td>
<td>107 801</td>
</tr>
</tbody>
</table>

Growth in TES

<table>
<thead>
<tr>
<th>Growth in TES</th>
<th>2015-20</th>
<th>2019-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-renewable (%)</td>
<td>-12.6</td>
<td>+6.6</td>
</tr>
<tr>
<td>Renewable (%)</td>
<td>+6.8</td>
<td>+14</td>
</tr>
<tr>
<td>Total (%)</td>
<td>-2.7</td>
<td>+3.6</td>
</tr>
</tbody>
</table>

Primary energy trade

<table>
<thead>
<tr>
<th>Primary energy trade</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imports (TJ)</td>
<td>22 949</td>
<td>13 494</td>
</tr>
<tr>
<td>Exports (TJ)</td>
<td>462 684</td>
<td>427 334</td>
</tr>
<tr>
<td>Net trade (TJ)</td>
<td>439 735</td>
<td>413 840</td>
</tr>
</tbody>
</table>

| Imports (% of supply)        | 21        | 13         |
| Exports (% of production)    | 82        | 83         |
| Energy self-sufficiency (%)  | 506       | 479        |

Total energy supply in 2020

Renewable energy supply in 2020
### Consumption by sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>2015 Petajoules (PJ)</th>
<th>2020 Petajoules (PJ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>11 278</td>
<td>13 595</td>
</tr>
<tr>
<td>Transport</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Households</td>
<td>43 027</td>
<td>44 082</td>
</tr>
<tr>
<td>Other</td>
<td>4 779</td>
<td>5 079</td>
</tr>
</tbody>
</table>

### Renewable capacity in 2022

- **Hydro and marine**: 0.6 GW
- **Solar**: 0.6 GW
- **Bioenergy**: 0.6 GW
- **Geothermal**: 0.6 GW
- **Other Non-RE**: 0.6 GW
- **Total**: 4.6 GW

### Renewable energy consumption in 2020

- **Geothermal**: 6%
- **Solar direct**: 94%

### Renewable TFEC trend

- **Electricity**: 62%
- **Commercial heat**: 20%
- **Bioenergy**: 8%

### Electricity capacity

- **Fossil fuels**: 99%
- **Nuclear**: 0%
- **Other Non-RE**: 0%
- **Hydro/marine**: 6%
- **Wind**: 94%
- **Solar**: 0%
- **Bioenergy**: 0%
- **Geothermal**: 0%

### Net capacity change in 2022 (MW)

- **Non-renewable**: 0 MW
- **Solar**: 0 MW
- **Bioenergy**: 0 MW
- **Other Non-RE**: 0 MW
- **Renewable share**: 6%

### Capacity utilisation in 2021 (%)

- **Fossil fuels**: 34%
- **Nuclear**: 16%
- **Hydro/Marine**: 34%
- **Solar**: 12%
- **Wind**: 0%
**ELECTRICITY GENERATION**

<table>
<thead>
<tr>
<th></th>
<th>GWh</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-renewable</td>
<td>840</td>
<td>46</td>
</tr>
<tr>
<td>Renewable</td>
<td>984</td>
<td>54</td>
</tr>
<tr>
<td>Hydro and marine</td>
<td>982</td>
<td>54</td>
</tr>
<tr>
<td>Solar</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Wind</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bioenergy</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Geothermal</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1824</td>
<td>100</td>
</tr>
</tbody>
</table>

**Per capita electricity generation (kWh)**

- **Total**
- **Renewable**

**LATEST POLICIES, PROGRAMMES AND LEGISLATION**

1. **Law n° 002/2019 regulating the sector of hydrocarbons in the Gabonese Republic** - 2019

2. **Law 07/2014 on Environmental Protection** - 2014


**ENERGY AND EMISSIONS**

**Energy-related CO₂ emissions by sector**

- Elec. & heat
- Other Industrial
- Transport
- Other
- Buildings

**Avoided emissions from renewable elec. & heat**

- Emitted CO₂
- RE Avoided CO₂

**CO₂ emission factor for elec. & heat generation**

- GAB
- Africa
- World

**Avoided emissions based on fossil fuel mix used for power**

Calculated by dividing power sector emissions by elec. + heat gen.
Biomass potential: net primary production

The chart shows the average NPP in the country (tC/ha/yr), compared to the global average NPP of 3-4 tC/ha/yr.

Notes:
- Global average of 3-4 tC/ha/yr
- Solar PV: Solar resource potential has been divided into seven classes, each representing a range of annual PV output per unit of capacity (kWh/kWp/yr).
- Onshore wind: Potential wind power density (W/m²) is shown in the seven classes used by NREL, measured at a height of 100m.
- Biomass: Net primary production (NPP) is the amount of carbon fixed by plants and accumulated as biomass each year. It is a basic measure of biomass productivity.

Sources:
IRENA statistics, plus data from the following sources: UN SDG Database (original sources: WHO; World Bank; IEA; IRENA; and UNSD); UN World Population Prospects; UNSD Energy Balances; UN COMTRADE; World Bank World Development Indicators; EDGAR; IRENA; REN21 Global Status Report; IRENA; IRENA Joint Policies and Measures Database; IRENA Global Atlas; and World Bank Global Solar Atlas and Global Wind Atlas.

Additional notes:
- Capacity per capita and public investments SDGs only apply to developing areas.
- Energy self-sufficiency has been defined as total primary energy production divided by total primary energy supply.
- Avoided emissions from renewable power is calculated as renewable generation divided by fossil fuel generation multiplied by reported emissions from the power sector. This assumes that, if renewable power did not exist, fossil fuels would be used in its place to generate the same amount of power and using the same mix of fossil fuels. In countries and years where no fossil fuel generation occurs, an average fossil fuel emission factor has been used to calculate the avoided emissions.

These profiles have been produced to provide an overview of developments in renewable energy in different countries and areas. The IRENA statistics team would welcome comments and feedback on its structure and content, which can be sent to statistics@irena.org.

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