### **ENERGY PROFILE**

## Belgium

### GDP per capita —8.1.1 Real GDP growth rate 63.6 64 8% 63 6% 62 4% 2% 0% -2% -4% 57 -6% 56 -8% 55 2016 2011 2018 2019 2020 2021 2022 2023

### 7.3.1 Energy intensity 4.2 4.1 4.0 4.0 3.9 3.9 ddb 700 ddb 700 3.9 3.8 3.7 3.9 3.6 3.5 2016 2017 2018 2019 2020 2021

### -7.1.1 Access to electricity (% population) -7.1.2 Access to clean cooking (% population) 7.2.1 Renewable energy (% TFEC) 100% 100% 80% 60% 40% 20% 12% 2016 2017 2018 2019 2020 2021 2022



USD millions 2019

0.5

0.4

0.3

0.2

0.1

2016

2017

2018





7.b.1 Per capita renewable capacity

11.6.2 Air particulate matter (PM<sub>2.5</sub>)



### TOTAL ENERGY SUPPLY (TES)

Total Energy Supply (TES)	2016	2021
Non-renewable (TJ)	2 143 502	2 117 625
Renewable (TJ)	159 532	192 488
Total (TJ)	2 303 034	2 310 113
Renewable share (%)	7	8
Growth in TES	2016-21	2020-21
Non-renewable (%)	-1.2	+11.5

2019 2020 2021

• 0









COUNTRY INDICATORS AND SDGS

Renewable (%)	+20.7	+3.0
Total (%)	+0.3	+10.7

Primary energy trade	2016	2021
Imports (TJ)	3 314 346	3 383 819
Exports (TJ)	1 318 089	1 492 376
Net trade (TJ)	-1 996 257	-1 891 443
Imports (% of supply)	144	146
Exports (% of production)	209	201
Energy self-sufficiency (%)	27	32

28%

Renewable energy supply in 2021



### RENEWABLE ENERGY CONSUMPTION (TFEC)





### ELECTRICITY CAPACITY



### Installed capacity trend

Net capacity change in 2023 (MW)

-1020

Hydro and marine

Non-renewable

Renewable capacity in 2023



### Net capacity change (GW)





### Capacity utilisation in 2022 (%)



### ELECTRICITY GENERATION

Generation in 2022	GWh	%
Non-renewable	71 509	75
Renewable	24 436	25
Hydro and marine	271	0
Solar	6 876	7
Wind	12 353	13
Bioenergy	4 936	5
Geothermal	0	0
Total	95 944	100

Per capita electricity generation (kWh)

2019

-----Renewable

2020

2021

Total

2018

10 000

8 000

6 0 0 0

4 000

2 0 0 0

Mt CO2 Emissions

2017

### Electricity generation trend



### LATEST POLICIES, PROGRAMMES AND LEGISLATION

2022

1 Fiscal reform over VAT cut on electricity and gas	2023
2 Clean hydrogen for clean industry	2022
3 Diesel & petrol excise tax rebate of EUR 0.175/I when price above EUR 1.7/I [1st Extension]	2022
4 EUR 300 subsidy for households heating with heating oil or bulk propane [second Increase]	2022
5 Government measures to face the energy crisis (3) - Council of Ministers on 18 June 2022	2022





Avoided emissions based on tossil tuel mix used for power

Calculated by dividing power sector emissions by elec. + heat gen.

### RENEWABLE RESOURCE POTENTIAL



### Biomass potential: net primary production



# World Belgium 100% 80% 60% 40% 20%

<260 260-420 420-560 560-670 670-820 820-1060 >1060 Wind power density at 100m height (W/m<sup>2</sup>)

### Indicators of renewable resource potential

**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). The bar chart shows the proportion of a country's land area in each of these classes and the global distribution of land area across the classes (for comparison).

**Onshore wind:** Potential wind power density (W/m<sup>2</sup>) is shown in the seven classes used by NREL, measured at a height of 100m. The bar chart shows the distribution of the country's land area in each of these classes compared to the global distribution of wind resources. Areas in the third class or above are considered to be a good wind resource.

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

### Distribution of wind potential

# International Renewable Energy Agency

IRENA Headquarters Masdar City P.O. Box 236, Abu Dhabi United Arab Emirates www.irena.org Prospects; UNSD Energy Balances; UN COMTRADE; World Bank World Development Indicators; EDGAR; REN21 Global Status Report; IEA-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. Energy trade includes all commodities in Chapter 27 of the Harmonised System (HS). Capacity utilisation is calculated as annual generation divided by year-end capacity x 8,760h/year. 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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