

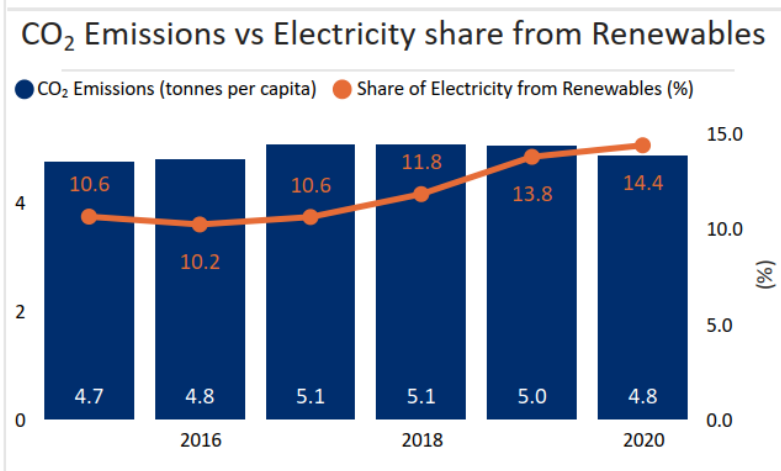
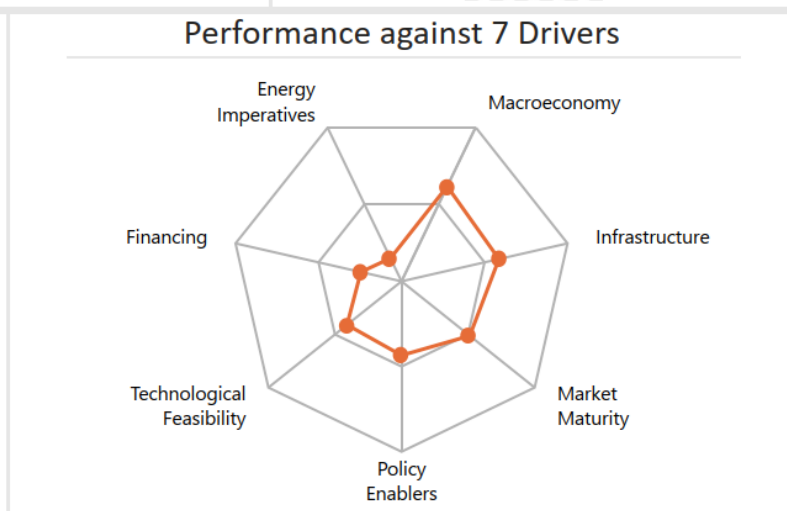
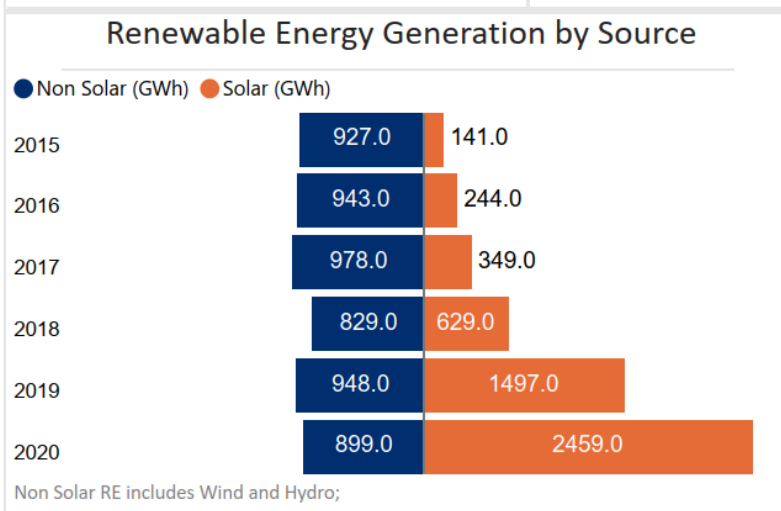
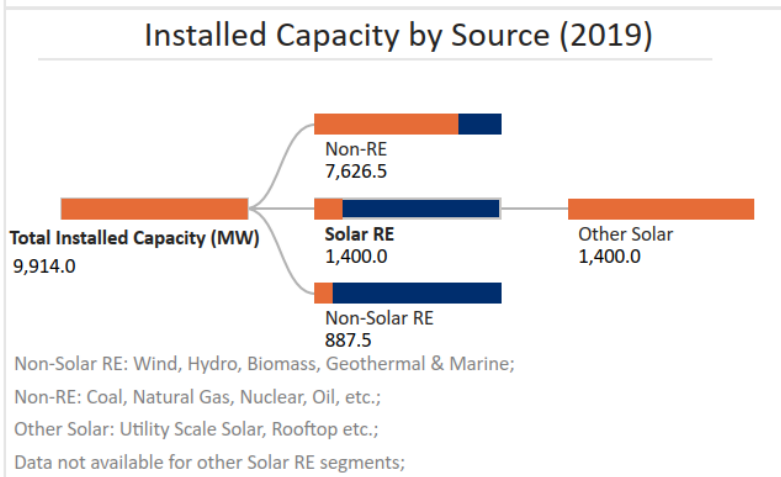
	Hungary	Ease of doing Solar classification 
	Europe and others	Influencer
Electricity Consumption in kWh/capita (2020) 3590.3	Average PVout in kWh/kWp/day (2020) 3.4	Cumulative Solar Capacity in MW (2021) 2131.0
Getting Electricity Score (2020) 63.3	NDC Target by 2030 in % (base year 1990) 55.0	Human Development Index (2021) 0.8



Fiscal Incentives & Public Financing for Renewables (2020)

Investment or production tax credits?
No

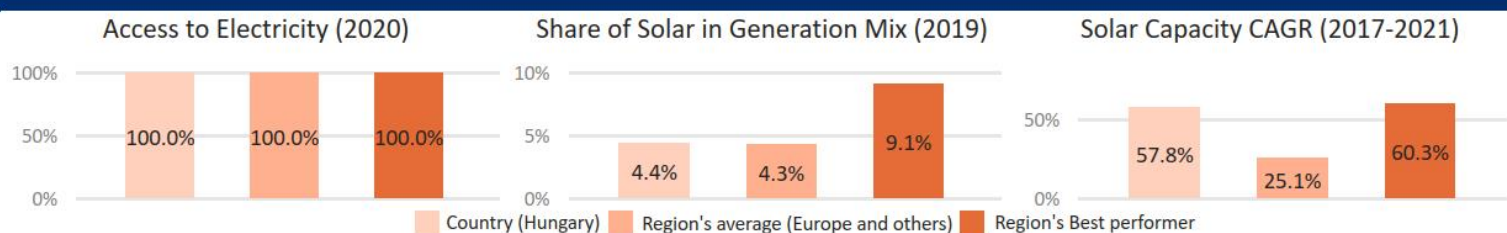
Public investment, loans, grants, capital subsidies or rebates?
Yes



Support for Renewables (2020)

Feed-in-Tariffs for renewable energy supply to the grid? Yes	Net metering/Gross metering policies and regulations? Yes
Renewable Energy Certificates? No	Renewable Purchase Obligation? No

Country's regional performance and characteristics



Areas of Strength

Infrastructure
Macroeconomy

Areas of Improvement

Energy Imperatives
Financing

Key Insights

Drivers

Insights



Macroeconomy

- Hungary is a high-income country with a GDP per capita (PPP) of USD 36,765 in 2021.^{1, 2}
- Due to COVID-19 Pandemic, the GDP (Real) had declined by 4.5% in 2020. However, in 2021 the GDP has bounced back by growing at 7.1%.³
- The inflation rate (CPI) of Hungary has increased to 5.1% in 2021 from 3.3% levels in 2020.⁴
- The general government gross debt to GDP has reduced to 76.8% in 2021 from 79.6% levels in 2020.⁵



Policy enablers

- Hungary has set an ambitious target to achieve a share of 90% coming from clean sources in the generation mix electricity by 2030.⁶
- Hungary has targeted to reach its solar capacity to nearly 6,500 MW by 2030 and almost to 12,000 MW by 2040.⁷
- Renewable energy Support Scheme (METÁR) -2021 aims to support for total electricity production of 300 GWh of electricity using RE sources.⁸
- To support RE in the country, Hungary has implemented feed-in-tariff policy for consumers that have installed RE capacity in the range of 50 kW-500 kW.⁹



Technological Feasibility

- Hungary receives moderate solar irradiation (GHI) of 3.5 kWh/m²/day and specific yield 3.4 kWh/kWp/day indicating a moderate technical feasibility for solar in the country.¹⁰
- Hungary has got 3 Tesla MegaPack energy storage systems installed by MET Group with capacity of 7.68 MWh each.¹¹
- Hungarian firm "ILST-Hungary Ltd." are the leading manufacturers of solar and public lighting system and have been rendering services in central Europe.¹²
- Hungary's Tázlár Solar Park has an integrated capacity of 63 MWp providing electricity to more than 36,000 households.¹⁷



Market Maturity

- 100% of the population in Hungary had access to electricity as of 2020.¹³
- Hungarian Energy and Public Utility Regulatory Authority (HEA) is the regulatory body for energy and public utility market in the country.¹⁴
- Hungarian Independent Transmission Operator Company Ltd. (MAVIR Ltd.) is the agency responsible for providing reliable, efficient, and secure operation of the Hungarian electricity system.¹⁵



Infrastructure

- The length of the Hungarian transmission grid is 3,821 kms.¹⁵
- Hungarian MAVIR Ltd. owns 17 transmission grid sub-stations.¹⁵
- Hungary has a cross border transmission network with Slovenia to exchange electricity between the two countries.¹⁶
- Hungary has a double circuit 400 kV overhead line between Hévíz (Hungary) – Žerjavinec (Croatia).¹⁶



Financing

- The European Commission has approved an investment of USD 1.98 Bn to support sustainable growth in Hungary.¹⁸
- Hungary's Investment bank Berenberg has financed a 65 MW solar power project development in the country.¹⁹
- Photon Energy Group has invested in Hungary under Green Financing Framework for sustainable investments in 1.3 MWp solar plant in Tolna, Hungary.²⁰



Energy Imperatives

- In 2020, Hungary's per capita electricity consumption stood at 3.59 MWh which is comparatively higher to the global average of 3.31 MWh.²¹
- The total installed capacity of Solar PV witnessed a CAGR of 57.8% reaching 2,131 MW in 2021 from 344 MW levels in 2017.²²
- In 2021, the total installed capacity in the country stood at 26.88 GW with a significant share coming from nuclear (46.18%), gas (26.14%), coal (8.39%), solar (9.18%), bioenergy (6.34%), followed by fossil fuel based (1.15%), wind (1.89%) and hydro (0.56%).^{24,23}
- The cost of electricity per kWh is US Cent 9.1 for households and US Cent 11.3 for business.²⁵