
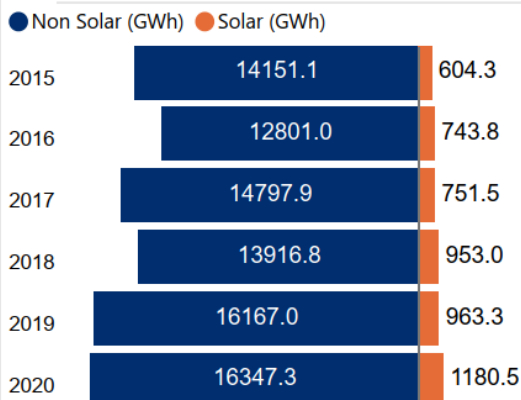
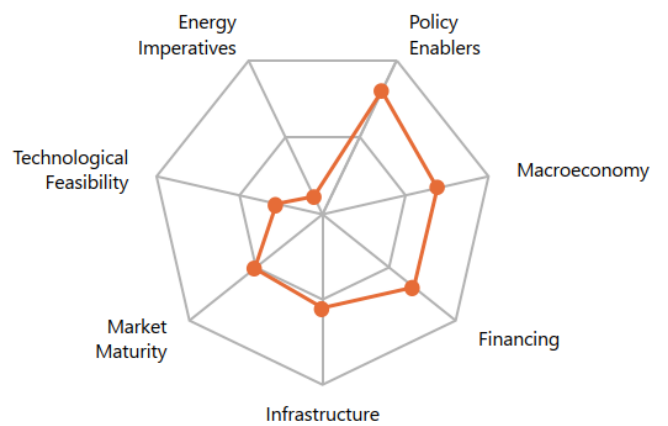
		Denmark	Ease of doing Solar classification 
		Europe and others	Achiever
Electricity Consumption in kWh/capita (2020) 5026.0	Average PVout in kWh/kWp/day (2020) 2.8	Cumulative Solar Capacity in MW (2021) 1540.3	
Getting Electricity Score (2020) 90.2	NDC Target by 2030 in % (base year 1990) 55.0	Human Development Index (2021) 0.9	

Renewable Energy Generation by Source

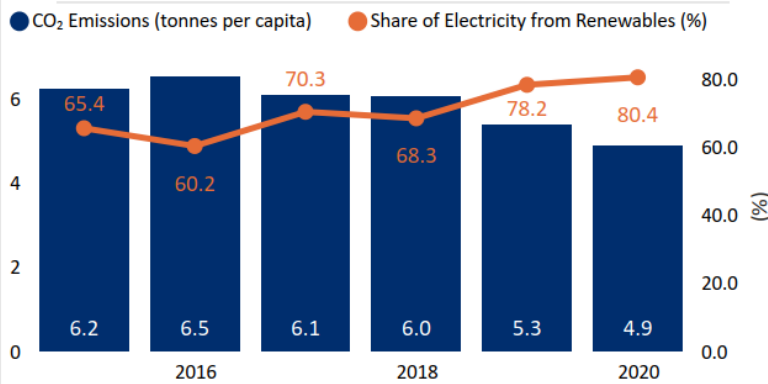


Non Solar RE includes Wind and Hydro;

Performance against 7 Drivers



CO₂ Emissions vs Electricity share from Renewables

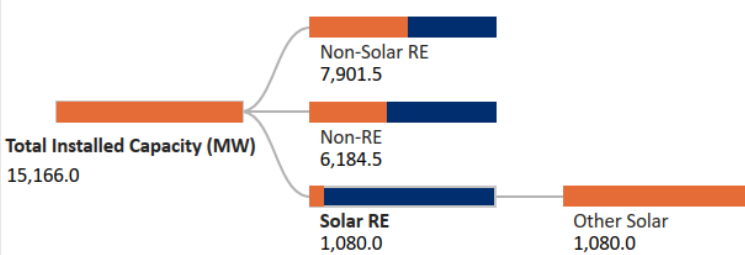


Fiscal Incentives & Public Financing for Renewables (2020)

Investment or production tax credits?
Yes

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

Installed Capacity by Source (2019)



Non-Solar RE: Wind, Hydro, Biomass, Geothermal & Marine;

Non-RE: Coal, Natural Gas, Nuclear, Oil, etc.;

Other Solar: Utility Scale Solar, Rooftop etc.;

Data not available for other Solar RE segments;

Support for Renewables (2020)

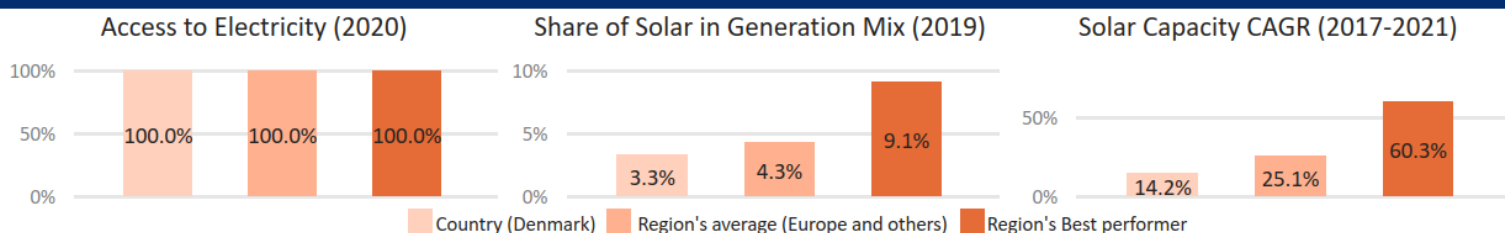
Feed-in-Tariffs for renewable energy supply to the grid?
Yes

Net metering/Gross metering policies and regulations?
Yes

Renewable Energy Certificates?
Yes

Renewable Purchase Obligation?
No

Country's regional performance and characteristics



Areas of Strength

Macroeconomy

Policy Enablers

Areas of Improvement

Energy Imperatives

Technological Feasibility

Key Insights

Drivers

Insights



Macroeconomy

- Denmark is a high-income country¹ with a GDP per capita (PPP) of USD 64,672 in 2021.²
- Due to COVID-19 Pandemic, the GDP (Real) had declined by 2% in 2020. However, in 2021, the GDP has bounced back recording an annual growth rate of 4.9%.³
- The inflation rate (CPI) of Denmark has increased to 1.9% in 2021 from 0.3% levels in 2020.⁴
- The general government gross debt to GDP has reached 36.6% in 2021 from 42.2% levels in 2020.⁵



Policy enablers

- Denmark has set a target to achieve 100% renewable energy-based electricity generation by 2050.⁸
- Denmark has targeted to cut GHG emissions by 70%, from 1990 levels, by 2030.⁶
- In 2021, Denmark announced its plans to allocate funds for energy renovation projects and digital solutions that can monitor and optimise energy consumption.⁷
- Denmark has issued its first green bond, a zero-coupon bond, in 2022 with maturity on 15 November 2031 depending on stable market conditions.⁹



Technological Feasibility

- Denmark receives low solar irradiation (GHI) of 2.8 kWh/m²/day and specific yield 2.8 kWh/kWp/day indicating a very low technical feasibility for solar in the country.¹¹
- In Jan 2022, Denmark's Arla Food in association with Better Energy has announced setting up of four solar parks which will meet almost one third of Arla's electricity consumption.¹²
- Denmark has installed an off-grid hybrid project in Middelfart which can provide 20-25 household with 100% renewable energy 24/7, all year around.¹⁴



Market Maturity

- The Danish Utility Regulator (DUR) is the independent regulator that performs monitoring and regulation of the infrastructure of the Danish electricity network.¹⁶
- Denmark is part of the Nordic electricity spot market (Nord Pool Spot).¹⁷
- Energinet is the Danish national transmission system operator for electricity and natural gas. It is an independent public enterprise owned by the Danish state under the Ministry of Climate and Energy.¹⁸



Infrastructure

- Denmark's transmission network is divided into two separate transmissions grids: West Danish grid is connected to the European continental grid and the East Danish grid is connected to the Nordic grid.¹⁹
- Denmark has a well-connected transmission grid with its neighbouring countries including Sweden, Netherlands, Norway and Germany.²⁰
- Energinet transmission network comprises of 132 kV, 150 kV and 400 kV AC lines and 250 kV–500 kV DC lines handling 40,668 MVA of transformation capacity and 187 substations.²¹



Financing

- Denmark has Danish Cooperation Fund for Renewable Energy and Energy Efficiency which has an aim to increase the use of RE in rural areas.²²
- Danish Green Investment Fund was set up with a corpus of USD 261 Mn to finance all green projects.²³
- The Danish Climate Investment Fund (KIF) is a public-private partnership with total corpus of USD 170 Mn and invests in climate projects in Asia, Africa, Latin America and in Europe.²⁴



Energy Imperatives

- In 2020, Denmark's per capita electricity consumption stood at 5.02 MWh, which is significantly higher than the global average of 3.31 MWh.²⁵
- In 2021, the total installed capacity in the country has reached 16.17 GW²⁷ with a significant share coming from onshore-offshore wind and other fossil fuels.²⁷
- The cost of electricity per kWh is US Cent 45.9 for households and US Cent 25.8 for businesses.²⁸