
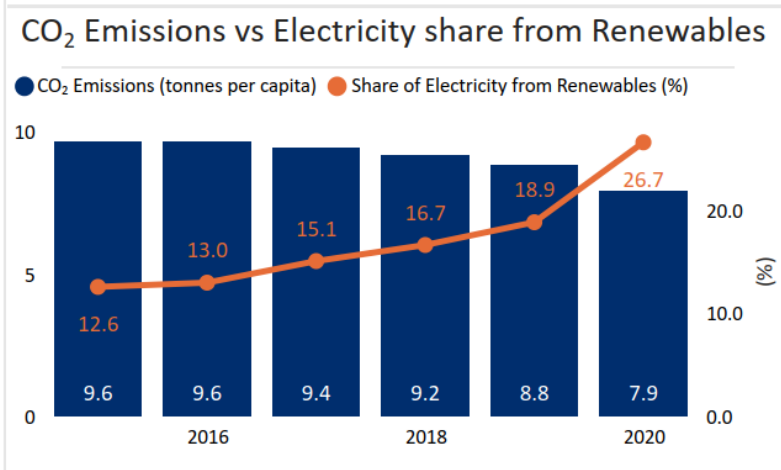
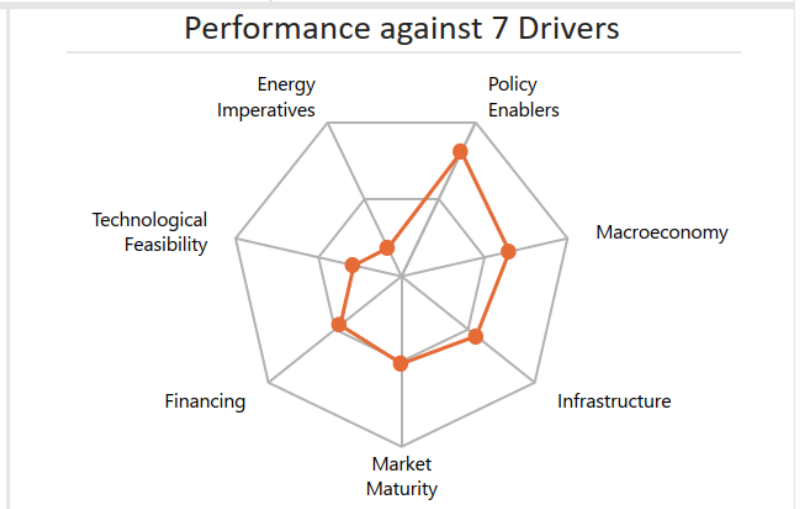
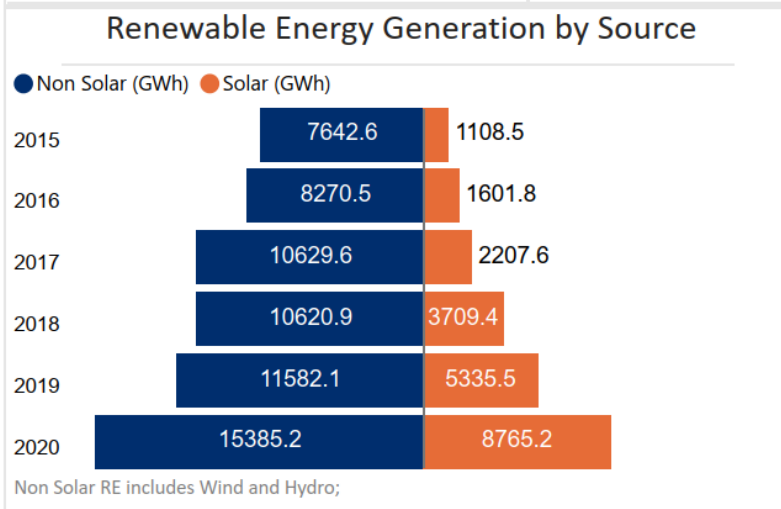
 <h2 style="text-align: center;">Netherlands</h2>		<h3 style="text-align: center;">Ease of doing Solar classification</h3>  <h2 style="text-align: center;">Achiever</h2>
Europe and others		
<h4>Electricity Consumption in kWh/capita (2020)</h4> <h1 style="text-align: center;">6925.2</h1>	<h4>Average PVout in kWh/kWp/day (2020)</h4> <h1 style="text-align: center;">2.9</h1>	<h4>Cumulative Solar Capacity in MW (2021)</h4> <h1 style="text-align: center;">14249.0</h1>
<h4>Getting Electricity Score (2020)</h4> <h1 style="text-align: center;">82.5</h1>	<h4>NDC Target by 2030 in % (base year 1990)</h4> <h1 style="text-align: center;">55.0</h1>	<h4>Human Development Index (2021)</h4> <h1 style="text-align: center;">0.9</h1>



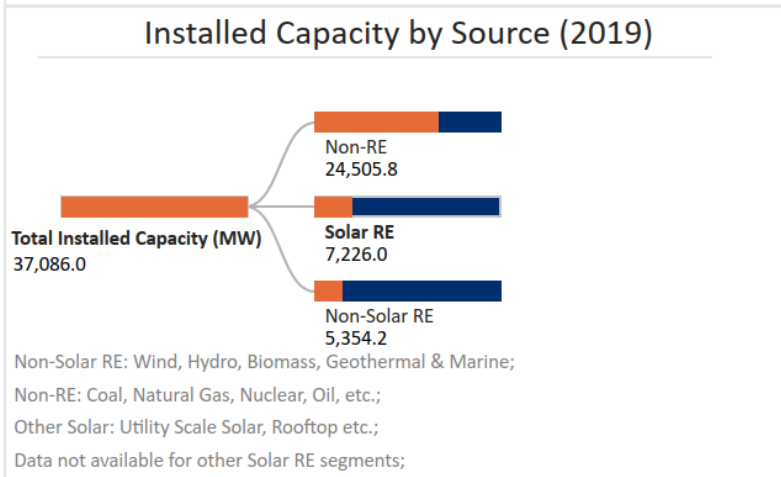
Fiscal Incentives & Public Financing for Renewables (2020)

Investment or production tax credits?

Yes

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

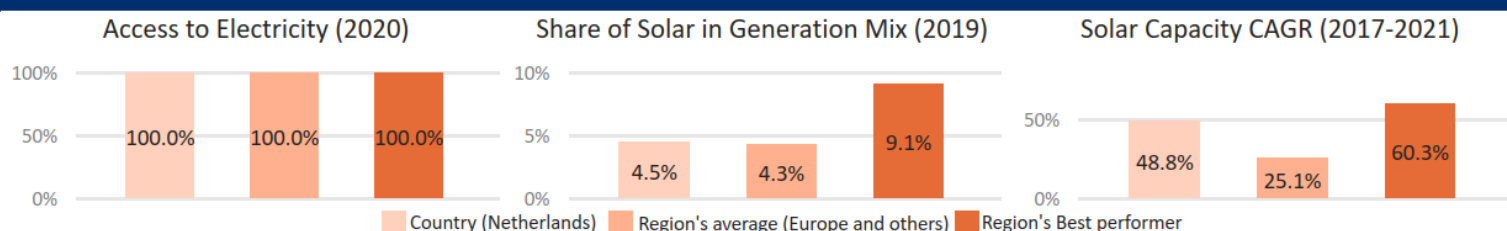
Yes



Support for Renewables (2020)

<p>Feed-in-Tariffs for renewable energy supply to the grid?</p> <h2 style="font-size: 2em;">Yes</h2>	<p>Net metering/Gross metering policies and regulations?</p> <h2 style="font-size: 2em;">Yes</h2>
<p>Renewable Energy Certificates?</p> <h2 style="font-size: 2em;">Yes</h2>	<p>Renewable Purchase Obligation?</p> <h2 style="font-size: 2em;">No</h2>

Country's regional performance and characteristics



Areas of Strength

Macroeconomy

Policy Enablers

Areas of Improvement

Energy Imperatives

Technological Feasibility

Key Insights

Drivers

Insights



Macroeconomy

- Netherlands is a high-income country with a GDP per capita (PPP) of USD 63,742 in 2021.^{1,2}
- Due to COVID-19 Pandemic, the GDP (Real) had declined by 3.9% in 2020. However, in 2021, the GDP bounced back recording an annual growth rate of 4.9%.³
- The inflation rate (CPI) of Netherlands has increased to 2.8% in 2021 from 1.1% levels in 2020.⁴
- The general government gross debt to GDP has slightly reduced to 52.3% in 2021 from 54.6% levels in 2020.⁵



Policy enablers

- Netherlands has set a target to reduce GHG emissions to 49% by 2030 and 95% by 2050 (compared to 1990 levels).⁶
- Netherlands's Sustainable Energy Transition Scheme (SDE+) has provisions of expanding subsidy to renewable sector.⁷
- Netherlands has a net-metering scheme for small-scale PV to drive the growth of residential PV deployment.⁸



Technological Feasibility

- Netherlands receives low solar irradiation (GHI) of 2.9 kWh/m²/day and specific yield 2.9 kWh/kWp/day indicating a low technical feasibility for solar in the country.⁹
- Netherlands has installed its largest Battery Energy Storage System (BESS) with a capacity of 24 MW/48 MWh.¹⁰
- Netherlands's floating solar installations are expected to reach 200 GWp by 2050.¹¹



Market Maturity

- 100% of the population in Netherlands had access to electricity as of 2020.²
- Netherlands's Electricity Act (E-Act) 1998 is an important legislation for the creation of the electricity market for producers and suppliers of electricity.¹²
- Netherlands's Authority for Consumers and Markets (ACM) regulates the transmission and distribution operators of electricity and gas.¹³
- TenneT is a leading European electricity transmission system operator (TSO) that manages operations in Netherlands and Germany.¹⁴
- In Netherlands, EPEX SPOT is the leading exchange for providing market spot to buy, sell, and trade electricity, secure transactions, and auctioning services.¹⁵



Infrastructure

- Netherlands's TenneT, the TSO, owns and operates over 24,500 kms of high-voltage lines and cables and catering to 42 Mn customers.¹⁴
- Netherlands's TenneT operates 110 kV, 380 kV and 220 kV high voltage grid throughout the country.^{14, 16}
- Netherlands's TenneT has planned its expansion by constructing 40 new onshore high voltage substation.¹⁶
- Netherlands has an arrangement for cross border trading of electricity with Germany through TenneT as its TSO.¹⁴



Financing

- The Government of Netherlands has announced its budgetary support of USD 13.09 Bn to SDE++ program for large scale RE projects.¹⁷
- In 2021, European Investment Bank (EIB) signed an agreement of USD 503 Mn with Orsted A/S in support of the commitment towards RE.¹⁸
- The Dutch Fund for Climate Fund (DFCF) is a consortium of Climate Fund Managers (CFM), World Wide Fund for Nature Netherlands (WWF-NL) and SNV Netherlands Development Organisation led by the Dutch Entrepreneurial Development Bank for extending financial support to climate resilient economic growth.¹⁹



Energy Imperatives

- In 2020, Netherlands's per capita electricity consumption stood at 6.92 MWh, which is significantly higher in comparison to the global average of 3.31 MWh.²⁰
- The total installed capacity of Solar PV witnessed a CAGR of 48.8% reaching 14,249 MW in 2021 from 2,903 MW levels in 2017.²¹
- In 2021, the total installed capacity stood at 46.73 GW with a significant share coming from gas (46.95%) followed by coal (12.02%), wind (14.91%), solar (9.40%), fossil fuel based (4.65%), and hydro (0.07%).^{22,23}