

Powering the future

The global energy revolution is here

Clean energy is set to become the world's main source of power within the next 30 years¹.

Global consumption of renewable energy increased by more than 350% in the last decade².



New solar installations almost quadrupled between 2012 to 2019³.

The global solar energy market is expected to generate US\$223.3 billion a year by 2026, representing a potential opportunity for a CAGR of 20.5% from 2019 to 2026⁴.

More solar capacity was installed in the past decade than any other power generating technology⁵.



Similarly, **global wind capacity increased an average of 15% p.a.** from 2009 to 2019⁶. The global market for wind power has been projected to grow at a CAGR of approximately 8% until 2025⁷.



This clean energy growth trajectory is set to continue due to the low cost of clean energy and because it is generally prioritised before other electricity sources due to this lower cost and/or regulations. Continued growth in capacity, with many new projects coming online between 2020 and 2025, will also boost output.

Types of clean energy



SOLAR ENERGY

Solar energy comes from the sun and is harvested with several technologies, including solar panels.



WIND POWER

Wind turbines capture the wind's power and convert it to electricity as they spin.



HYDRO-ELECTRICITY

Hydropower turbines rotate as water flows through them, generating electricity.



BIOMASS & BIOFUEL

Biomass fuels are recently living organic matter (like plants and animals) that are burned for power.



GEOTHERMAL ENERGY

Heat energy from within the earth can be harnessed to generate power.

Access a global megatrend

The transition to clean energy and focus on climate change is one of the world's most important global megatrends and presents a long-term growth opportunity. There are four key drivers accelerating the mass adoption of clean energy.

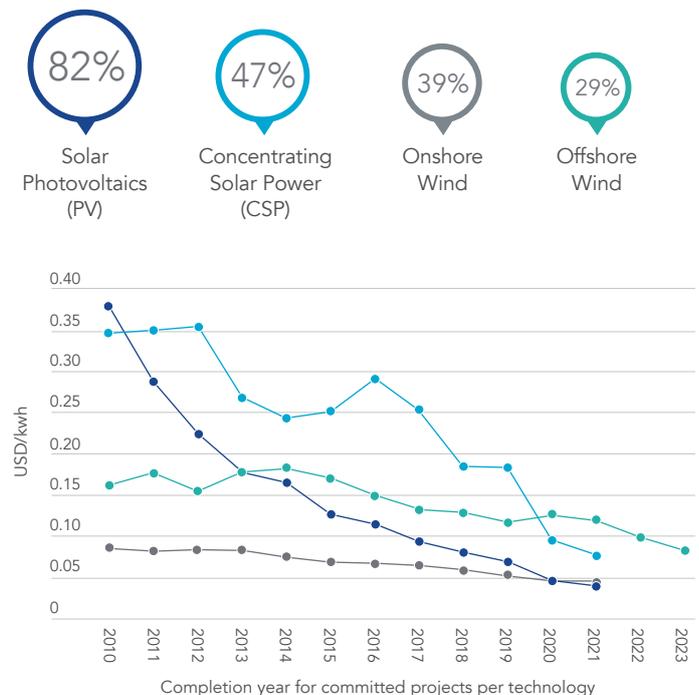
1. Economic

The cost of renewable power has seen a rapid reduction over the last decade, driven by economies of scale, technological improvements and increasingly competitive supply chains. More than half of the renewable capacity added in 2019 achieved lower power costs than the cheapest new coal plants.

Recent solar projects in Chile, the Middle East and China, or wind projects in Brazil, the US and India, are approaching figures lower than \$30/MWh, lower than the costs of building and producing power from plants that use coal or even the cheapest gas. By 2030, upcoming innovations are likely to reduce costs even further.

The case for fossil fuels is becoming economically unjustifiable.

Renewable energy costs declined rapidly over the last 10 years (2010–2019)



Source: International Renewable Energy Agency, Renewable Power Generation Costs in 2019.

2. Regulatory

Almost 200 countries have ratified the Paris Agreement with the aim of net zero emissions by 2050. As part of this commitment, major economies are fast tracking the transition to clean energy with trillions of dollars being invested to increase capacity and infrastructure.

Countries by their participation in the Paris Agreement and policies/actions to achieve target

■ Ratified ■ Signed

UK

£12 billion allocated to create a 'green industrial revolution'; Aim to produce enough offshore wind to power every home, quadrupling production by 2030.

GERMANY

Aims to produce 65% of the country's electricity by 2030, €9 billion allocated to help phase coal out by 2038 and shift to clean energy.

SWEDEN

54% of Sweden's power already comes from renewables; aiming for 100% renewable electricity production by 2040.

US

US\$2 trillion earmarked for clean energy projects; Plan to end carbon emissions from power plants for 2035.

JAPAN:

By 2030, renewables will account for at least 20% of the country's power mix.

INDIA

40% non-fossil share of electricity capacity by 2030; aims to create the world's largest market for clean energy deployment.

CHINA

The world's largest investor in clean energy; Launching a national ETS in 2021.



3. Societal

Demand for action on climate change and access to clean energy has surged in the last few years, buoyed by increasingly extreme weather patterns causing crises like the 2019/20 Australian bushfires.

- 60% of Europeans think climate change is the one of the most serious problems facing the world, up from 43% in 2017⁸.
- 64% of Americans say protecting the environment should be a top priority for the President⁹.
- Over 280 global companies have made a commitment to go '100% renewable'. This includes Google, Ikea, Apple, Facebook, Microsoft, Coca-Cola, Nike, GM, Lego¹⁰.

4. An inevitable future

There is a finite amount of fossil fuels and current estimates show these will be depleted within 140 years. In 2020, for the first time in history:

- Major oil producers announced that the world had now passed "peak oil" demand^{11,12}
- New solar and wind projects resulted in renewables generating more electricity than fossil fuels across Europe¹³
- Renewables generated more electricity than thermal coal in the United States every single day for an entire month¹⁴.

The world is rapidly moving to the infinite power of renewable energy. Clean energy is an investment in the inevitable future of global energy supply.

Power the future with VanEck Vectors Global Clean Energy ETF

With targeted exposure to the largest global companies in the clean energy sector, the VanEck Vectors Global Clean Energy ETF (CLNE) provides investors access to this megatrend and what we believe to be a long-term growth opportunity as the world transitions away from the limited capacity of fossil fuels. CLNE's holdings comprise a diversified mix of companies focused on clean energy production, and clean energy equipment and technology businesses.

CLNE offers

Long-term growth opportunity

An investment in the global energy supply of the future and the transition to infinite clean energy, away from finite, non-renewable sources.

Targeted exposure

Targeted exposure to 30 of the largest global companies involved in the production of clean energy and clean technology & equipment.

Diversification

A diversified portfolio across countries and companies which offers opportunities across a range of subsectors.

ASX code	CLNE
ASX commencement date	10 March 2021
Management cost	0.65% p.a.
Index	S&P Global Clean Energy Select Index
Stock number	30
Key risks	An investment in CLNE carries risks associated with: ASX trading time differences, financial markets generally, individual company management, industry sectors, foreign currency, emerging markets, country or sector concentration, political, regulatory and tax risks, fund operations, liquidity and tracking an index. See the PDS for details.

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1. Statista, Projected electricity generation worldwide from 2018 to 2050, by energy source. 2. Forbes, Renewable Energy Growth Continues At A Blistering Pace, 2 August 2020. 3. CLSA. Data as of November 2020. 4. Allied Market Research, Global Solar Energy Market to Generate \$223.3 billion by 2026: AMR, 3 February 2021. 5. NES FIRCROFT, How has the renewable energy market changed in the last decade?, 15 January 2020. 6. Centre for Sustainable Systems, University of Michigan, Wind Energy Fact Sheet, September 2020. 7. Wind Power Market - Growth, Trends, and Forecast (2020-2025). 8. Special Eurobarometer 490 - Wave EB91.3 - Kantar. 9. Pew Research, How Americans see climate change and the environment in 7 charts, 21 April 2020. 10. The RE 100. 11. New York Times, Shell, in a Turning Point, Says Its Oil Production Has Peaked, 11 February 2021. 12. BP Energy Outlook 2020, September 2020. 13. Forbes, It's official: In 2020, renewable energy beat fossil fuels across Europe, 25 January 2021. 14. EcoWatch, Renewables Surpass Coal in Both the U.S. and U.K. in Historic Firsts, 18 May 2020.