

Global investment in renewables to hit \$2.6trn

Global investment in new renewable energy capacity this decade - 2010 to 2019 inclusive - is on course to hit \$2.6trn, with more gigawatts of solar power capacity installed than any other generation technology.



Image source: Getty/Gallo

According to the [Global Trends in Renewable Energy Investment 2019](#) report, this investment is set to have roughly quadrupled renewable energy capacity (excluding large hydro) from 414GW at the end of 2009 to 1,650 GW when the decade closes at the end of this year. (All references to renewable energy in this release exclude large hydro-electric dams of more than 50MW.)

Solar power will have drawn half - \$1.3trn - of the \$2.6trn in renewable energy investments made over the decade. Solar capacity alone will have grown from 25GW at the beginning of 2010 to an expected 663GW by the close of 2019 - enough to produce all the electricity needed each year by about 100 million average homes in the USA. (The USA had about 128 million households in 2018)

The global share of electricity generation accounted for by renewables reached 12.9%, in 2018, up from 11.6% in 2017. This avoided an estimated 2-billion tonnes of carbon dioxide emissions last year alone - a substantial saving given global power sector emissions of 13.7-billion tonnes in 2018.

Including all generating technologies (fossil and zero-carbon), the decade is set to see a net 2,366GW of additional power

capacity installed, with solar accounting for the largest single share (638GW), coal second (529GW), and wind and gas in third and fourth places (487GW and 438GW respectively).

The cost-competitiveness of renewables has also risen dramatically over the decade. The levelised cost of electricity (a measure that allows comparison of different methods of electricity generation on a consistent basis) is down 81% for solar photovoltaics since 2009; that for onshore wind is down 46%.

"Investing in renewable energy is investing in a sustainable and profitable future, as the last decade of incredible growth in renewables has shown," says Inger Andersen, executive director of the UN Environment Programme.

"But we cannot afford to be complacent. Global power sector emissions have risen about 10% over this period. It is clear that we need to rapidly step up the pace of the global switch to renewables if we are to meet international climate and development goals."

2018 sees quarter-trillion dollar mark exceeded again

The report, released annually since 2007, also continued its traditional look at yearly figures, with global investment in renewables capacity hitting \$272.9 billion in 2018.

While this was 12% down over the previous year, 2018 was the ninth successive year in which capacity investment exceeded \$200bn and the fifth successive year above \$250bn. It was also about three times the global investment in coal and gas-fired generation capacity combined.

The 2018 figure was achieved despite continuing falls in the capital cost of solar and wind projects, and despite a policy change that hit investment in China in the second half of the year.

A record 167GW of new renewable energy capacity was completed in 2018, up from 160GW in 2017.

"Sharp falls in the cost of electricity from wind and solar over recent years have transformed the choice facing policy-makers. These technologies were always low-carbon and relatively quick to build. Now, in many countries around the world, either wind or solar is the cheapest option for electricity generation," says Jon Moore, chief executive of BloombergNEF (BNEF), the research company that provides the data and analysis for the report.

Non-capital investment

The report also tracks other, non-capacity investment in renewables - money going into technology and specialist companies. All of these types of investment showed increases in 2018. Government and corporate research and development was up 10% at \$13.1bn, while equity raised by renewable energy companies on public markets was 6 per cent higher at \$6bn, and venture capital and private equity investment was up 3% at \$2bn.

"The technologies to use wind, sun or geothermal energy are available, they are competitive and clean. Within 10 years Germany will produce two-thirds of its power based on renewables. We are demonstrating that an industrial country can phase out coal and, at the same time, nuclear energy without putting its economy at risk. We know that renewables make sense for the climate and for the economy. Yet we are not investing nearly enough to decarbonize power production, transport and heat in time to limit global warming to 2C or ideally 1.5C. If we want to achieve a safe and sustainable future, we need to do a lot more now in terms of creating an enabling-regulatory environment and infrastructure that encourage investment in renewables," says Svenja Schulze, Germany's federal minister for the environment, nature conservation and nuclear safety:

China still leads, but renewables investment spreads

China has been by far the biggest investor in renewables capacity over this decade, having committed \$758bn between

2010 and the first half of 2019, with the US second on \$356bn and Japan third on \$202bn.

Europe as a whole invested \$698bn in renewables capacity over the same period, with Germany contributing the most at \$179bn, and the United Kingdom \$122bn.

While China remained the largest single investor in 2018 (at \$88.5bn, down 38%), renewable energy capacity investment was more spread out across the globe than ever last year, with 29 countries each investing more than \$1bnn, up from 25 in 2017 and 21 in 2016

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