

2019 GLOBAL TRENDS IN RENEWABLE ENERGY INVESTMENT REPORT

KEY MESSAGES

KEY MESSAGE 1

Meeting the world's climate and development goals requires an even more rapid switch to renewable sources of energy worldwide

- A decade's worth of global investment in new renewable energy capacity - from 2010 to 2019 inclusive - is on course to hit \$*2.6 trillion, half of which went to solar energy
- Investment will have roughly quadrupled renewable energy capacity (excluding large hydro) from 414 GW at the end of 2009 to 1,650 GW at the end of 2019
- The global share of electricity generation accounted for by renewables (excluding large hydro) reached 12.9% in 2018, up from 11.6% in 2017
- The decade is set to see around 2,400 GW of power capacity installed, with solar accounting for the largest single share (638 GW), coal second (529 GW), and wind and gas in third and fourth places (487 GW and 438 GW respectively)
- The decade has seen a spectacular improvement in the cost-competitiveness of renewables, with the levelized cost of electricity for solar photovoltaics down 81% and for onshore wind down 46%
- Nevertheless, the stock of fossil fuel power already installed, and those added this decade, has meant that global power sector emissions are likely to have risen by at least 10% between the end of 2009 and 2019

SUMMARY

While renewable energy sources helped avoid about 2 billion tonnes of CO₂ emissions last year. Global power sector emissions however are likely to have risen by 10% in the last decade. Much more clearly needs to be done, and quickly. We are not investing nearly enough to decarbonize power production, transport and heating in time to limit global warming to 2C or ideally 1.5C

KEY MESSAGE 2

Solar power saw the greatest increase in gigawatts of power capacity installed this decade — more than any other generation technology

- There will have been more solar capacity installed during the decade than any other generating technology, fossil or renewable
- Solar's additions, of 643 GW, is a remarkable figure given that there were only 25 GW of solar power capacity worldwide at the end of 2009
- Solar capacity alone will have grown an expected 663 GW by the close of 2019 - enough to produce all the electricity needed each year by about 100 million average homes in the USA
- In many countries around the world, wind or solar is today the cheapest option for electricity generation

SUMMARY

Renewables such as solar PV and onshore wind offer a far more cost-competitive choice than a decade ago, costs continue to fall, and continuing growth is expected

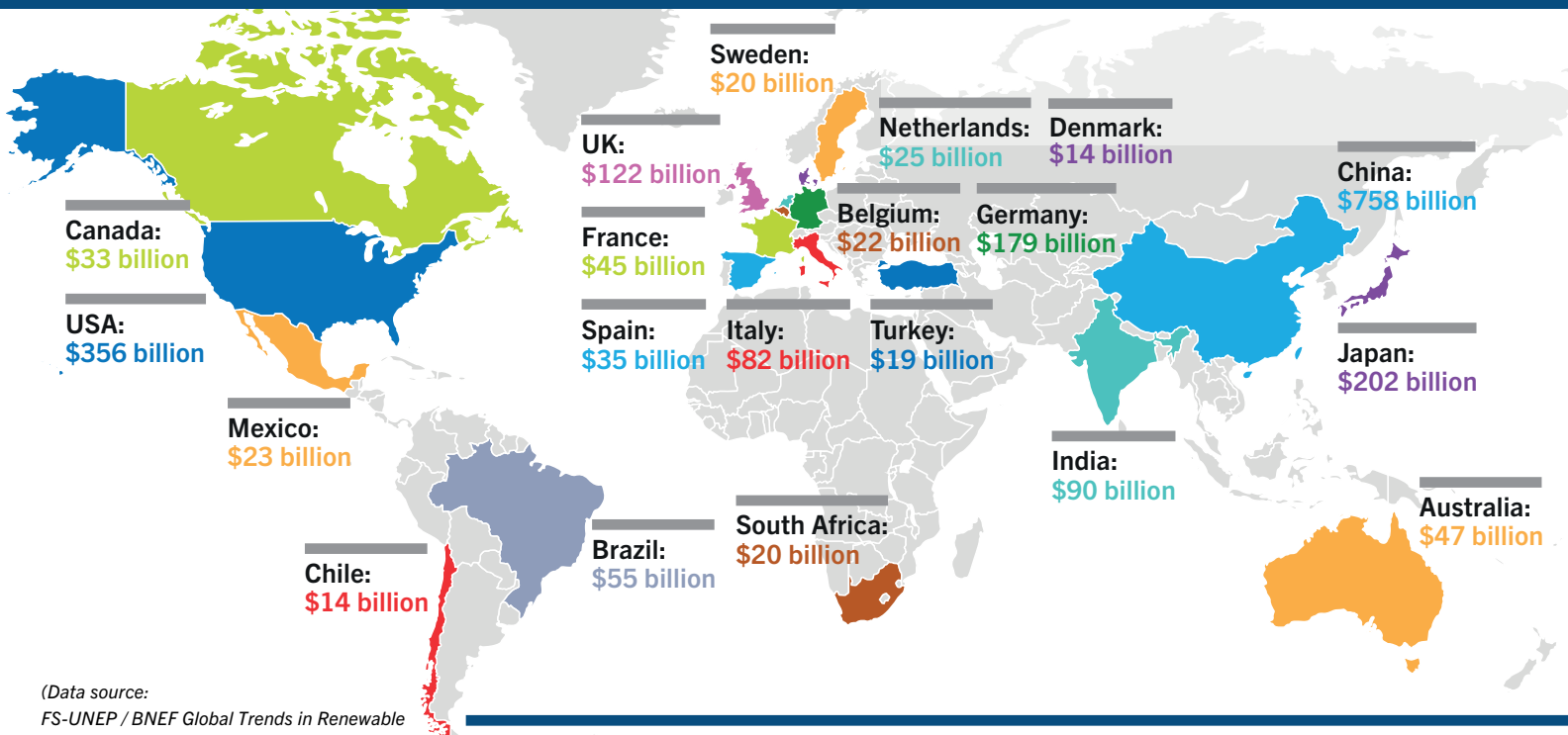
KEY MESSAGE 3 A record of 167 GW new renewable energy capacity despite lower investments of \$272.9 billion in 2018

- 2018 represented the 9th successive year in which renewables capacity investment exceeded \$200 billion; the 5th successive year above \$250 billion
- Renewables capacity investment last year was triple that of investments in coal and gas-fired generation capacity combined
- The 2018 decline also reflected a policy change that hit investment in the second half of the year in China, where by far the largest investments have been made in renewables this decade (\$758 billion of the \$2.6 trillion total worldwide)
- Renewable energy capacity investment was more spread out across the globe than ever, with 29 countries each investing more than \$1 billion in 2018, up from 25 in 2017 and 21 in 2016
- Spain, Vietnam, Ukraine and South Africa were among the countries in the “\$1 billion-plus club” that saw capacity investment jump by more than fivefold in 2018

SUMMARY

More spread out across the globe than ever last year, with 29 countries each investing more than \$1 billion, up from 25 in 2017 and 21 in 2016

RENEWABLE ENERGY CAPACITY INVESTMENT FROM 2010 TO 1H 2019, TOP 20 COUNTRIES, \$BN



GLOBAL INVESTMENT IN FOSSIL FUEL VS GLOBAL INVESTMENT IN RENEWABLES IN 2018

Global investment in fossil fuel
\$123 billion

VS

Global investment in renewable power
\$272.4 billion

Global investment in new renewable energy capacity from 2010 to 2019
\$2.6 trillion



The Global Trends in Renewable Energy Investment report is published on an annual basis since 2007.

It is commissioned by the UN Environment Programme in cooperation with Frankfurt School-UNEP Collaborating Centre for Climate & Sustainable Energy Finance and produced in collaboration with BloombergNEF.

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Download the report at:

<https://fs-unep-centre.org/research/report>

