

MEDIUM-TERM RENEWABLE ENERGY MARKET REPORT 2014 FACT SHEET

Recent deployment trends

- In 2013, global renewable electricity generation rose by an estimated 240 terawatt hours (TWh) (+5.0% year-on-year) to nearly 5 070 TWh, comprising almost 22% of total generation.
- Global biofuels production rose by almost 7% in 2013 to exceed 115 billion litres (L), 3 billion L higher compared with projections in *MTRMR 2013*.
- Global final energy use of modern renewable sources for heat, excluding traditional biomass, rose by over 2% in 2013 to 14.5 exajoules (EJ), accounting for 8% of world energy use for heat, only slightly higher than in 2012¹.
- In 2013, global investment in new renewable power capacity was estimated at around USD 250 billion, down slightly versus 2012 and lower than the near USD 280 billion registered in 2011.

Medium-term forecast

- Over the medium term, global renewable electricity generation is projected to grow by almost 45%, or 2 245 TWh, to over 7 310 TWh in 2020 (+5.4% per year). Hydropower, including output from pumped storage, represents about 37% of total growth, followed by onshore wind at 31% of total growth. Under the *baseline case* forecast, the OECD accounts for 30% of new renewable generation globally over 2013-20 and renewables account for about 80% of new OECD power generation. Non-OECD markets are expected to account for almost 70% of new renewable power generation globally from 2013-20. Yet, renewables are expected to meet only 35% of fast-growing electricity needs in the non-OECD.
- Renewable capacity is seen rising from a global total of 1 690 GW in 2013 to 2 555 GW in 2020 (growth of 50%). China remains the anchor of renewable capacity deployment, accounting for almost 40% of the global expansion and over 55% of non-OECD growth. Among other non-OECD regions, the Americas and the rest of Asia should make the largest growth contributions. In the OECD, after several years of rapidly increasing growth, renewables transition to a slower but stable annual capacity expansion.
- Under the *enhanced case*, renewable capacity could be 125-205 GW higher in 2020 than the *baseline case*, reaching a cumulative 2 680-2 760 GW. Solar PV and onshore wind, with relatively short development times, have the largest upside. In the enhanced case, solar PV could reach a cumulative 465-515 GW in 2020 (versus near 400 GW under the *baseline case*) while onshore wind could climb to 635-655 GW (versus near 600 GW under the *baseline case*).
- Global biofuel production is seen reaching 139 billion L in 2020. With a less optimistic outlook for the United States and Brazil, world ethanol output is now forecast to reach 104 billion L in 2020. The advanced-biofuels industry faces headwinds, but capacity is expanding. Operating capacity reached almost 2 billion L in 2013, and could reach 4 billion L in 2020.
- Global renewable energy use for heat, including traditional biomass, is expected to grow by 3.5 EJ to 49.7 EJ in 2020 (1.0% per year). While traditional biomass use is expected to decline in most non-OECD countries as a result of urbanisation and enhanced access to modern energy sources, modern renewable energy sources are expected to grow from 14.5 EJ in 2013 to 17.9 EJ in 2020 (3.0% per year). Modern renewable energy use for heat in the buildings sector grows from 6.1 EJ in 2013 to 8.3 EJ in 2020 (5.1% per year), with China alone accounting for two-thirds (1.6 EJ) of this growth. Developments are slower in the industry sector, where the continued absence of policy drivers leads to only a 0.8 EJ increase to 8.9 EJ in 2020.
- Over the medium term, renewable investment needs are expected to remain high by historical standards, but stabilise at somewhat lower levels through 2020. Required investment in new renewable power capacity under this report's baseline case forecast should average above USD 230 billion annually, in real terms.

¹ This report expresses final energy use for heat in EJ. 1 EJ = 23.9 million tonnes of oil equivalent = 277.8 TWh thermal = 947*10⁶ million British thermal units.