Renewables could account for 86% of global power generation in 2050

According to the International Renewable Energy Agency (IRENA), renewable energy sources (RES) could account for 86% of power generation in 2050. IRENA's reference scenario foresees electricity to become the central energy carrier, reaching a 50% share of final energy consumption by 2050 (from the current 20%). Renewable power development should benefit from the fall in the Levelized Costs Of Electricity (LCOE), which should halve between 2010 (US$80/MWh) and 2050 (US$40/MWh) for wind power and divide 9-fold for solar, from US$347/MWh in 2010 to US$38/MWh in 2050. Solar PV deployments could accelerate from the current 109 GW/year to 360 GW/year in 2050, while wind capacity additions could surge from around 54 GW/year to 240 GW/year.

Conversely, fossil fuel consumption would decline: oil demand would be reduced to 22 mb/d (from current 95 mb/d), gas demand would reach 2,250 bcm/year (from around 3,750 bcm/year in

2018) and coal demand would collapse from around 5,360 Mtce/year in 2018 to 713 Mtce/year in 2050. The investment required to decarbonise the global energy system is estimated at US$15,000bn by 2050 (-40% than previous estimates due to decreasing renewable power generation costs).

The higher renewable power generation could cut CO_2 emissions by 27% in 2030 (compared to the current level), by 48% in 2040 and by 71% in 2050, leading to a fall in CO_2 emissions per capita, from 4.3 tCO_2/cap in 2010 to 1.1 tCO_2/cap in 2050.

https://www.enerdata.net/publications/daily-energy-news/renewables-could-account-86-global-power-generation-2050.html