Progress of the energy system towards the 1.5°C scenario

Despite some progress, there remains a large gap between the current deployment of energy transition technologies and the levels needed to achieve the Paris Agreement's goal of limiting global temperature increase to 1.5°C above pre-industrial levels by the end of this century.

These are some relevant data and the levels that should be reached in 2030 and 2050 to meet the international targets:



	Recent	2030	2050	Progress
Share of direct electricity in final energy consumption	22 %(1)	29 %	51 %	Accord ing to the forecast
Electric cars on the road	10.5 million ⁽²⁾	360 million	2.18 billion	Below the forecast
Investment needs for electric vehicle charging infrastructure	30 USD billion/ year ⁽³⁾	137 USD billion/ year	364 USD billion/ year	Below the forecast
Share of renewables in electricity generation	28 % ⁽⁴⁾	68 %	91 %	According to the forecast
Investment needs for renewable energy generation	486 USD billion/ year ⁽⁵⁾	1,300 USD billion/ year	1,380 USD billion/ year	Accord ing to the forecast
Share of renewables in final energy consumption	17 % ⁽⁶⁾	35 %	82 %	Below the forecast
Investment needs for renewables in end-uses and district heating	13 USD billion/ year ⁽⁷⁾	290 USD billion/ year	210 USD billion/ year	Below the forecast

⁽¹⁾ 2020, ⁽²⁾ 2022, ⁽³⁾ 2022, ⁽⁴⁾ 2020, ⁽⁵⁾ 2022, ⁽⁶⁾ 2020, ⁽⁷⁾ 2022.

Source: World Energy Transitions Outlook 2023, IRENA.



What is electrification?

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