

Electrification Factsheet

Electricity plays an ever more central role in energy systems and economies around the world, heralding a new “Age of Electricity.” Since 2019, growth in electricity demand has outpaced GDP growth – and increased more than twice as fast as overall energy demand. This reflects the evolution of the global economy, including the expansion of electricity-intensive sectors such as advanced manufacturing, digital services and artificial intelligence (AI). In parallel, the adoption of electric vehicles, heat pumps and electrified industrial processes is accelerating. Today, electricity accounts for around 23% of total final energy consumption, but it directly powers a much higher share of global GDP – around 46%.

Tapping the electrification potential across sectors and countries through strong policies and cooperation can raise the share of electricity in final energy consumption to 35% by 2035 – a target first proposed by the IEA in 2024. Electrification provides a key avenue to diversify energy systems, which is a critical pillar of energy security. There are signs that the current energy shock is accelerating the deployment of electrification technologies. Building on strong existing momentum, electric car sales in regions that were particularly exposed to disruptions in energy flows due to the conflict in the Middle East saw sales rise by around 75% in March and April 2026 compared with the same two months in 2025. The IEA estimates that the deployment of electrification technologies since 2015 has saved importers around USD 60 billion per year in import bills; including renewables and nuclear raises this total to USD 160 billion.

All countries have opportunities to accelerate electrification to support secure, sustainable, and affordable energy systems. However, priorities and strategies differ by country, depending on their national circumstances. A country’s electrification potential is shaped by the

structure of its economy and energy system, climate conditions, and its stage of economic development. Some may focus on electrifying cooking, motorbikes and light industry; some on electrifying heating and cars; and others on providing full electricity access to households that still lack it. Substantial cost declines and the wide availability of key technologies have made electrification cost-effective across a broad range of end-uses and geographies.

Greater electrification will not happen by itself – key enabling conditions must be met. For electrification to succeed, it must be secure, affordable and sustainable. As electricity plays a greater role in economies and energy systems, electricity security is becoming ever more critical. Investment trends are shifting: in 2015, electricity-related investment accounted for less than 40% of total energy sector investments, but today this share is around 60%. On average, electricity accounts for around one-third of household energy bills, versus around half for oil products like petrol and diesel. Electrifying household energy consumption provides opportunities to reduce overall bills, but ensuring stable, predictable and affordable electricity prices for all users will be key. And as electrification grows, it is critical that generation of low-emissions electricity keeps pace.

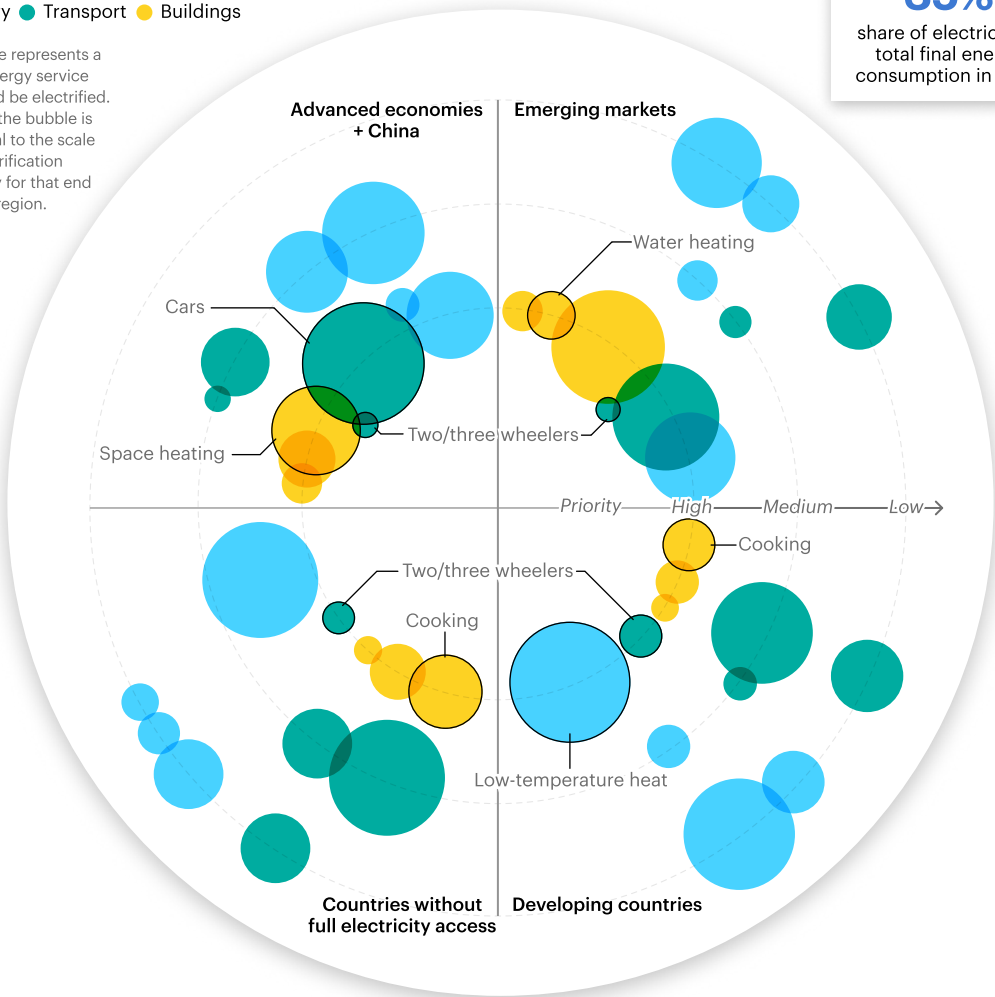
The COP28 goals to double energy efficiency and triple renewables – and the COP29 pledge to expand energy storage and grids – reinforce electrification as interconnected pillars of the same transition. Electrification of end uses of energy is critical to secure and orderly energy transitions, with 90% of oil demand and 50% of natural gas demand coming from sources of demand such as road transport, industrial production and the heating of buildings. At the same time, ensuring that electrification substantially reduces emissions requires that electricity generation is decarbonised over time, highlighting the importance of meeting the goals of tripling renewables capacity, advancing nuclear power and expanding storage and grids.

Electrification

Different countries have different electrification opportunities and priorities

● Industry ● Transport ● Buildings

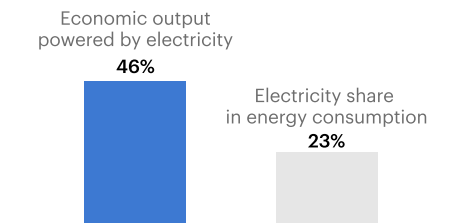
Each bubble represents a different energy service which could be electrified. The size of the bubble is proportional to the scale of the electrification opportunity for that end use in that region.



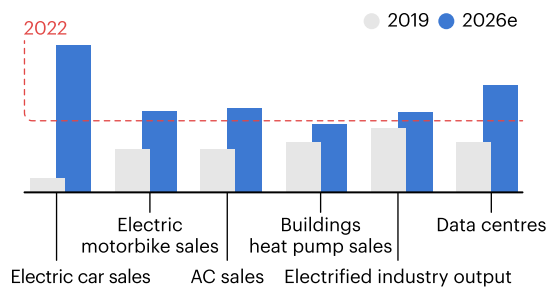
35%
share of electricity in total final energy consumption in 2035

Share of electricity, 2025

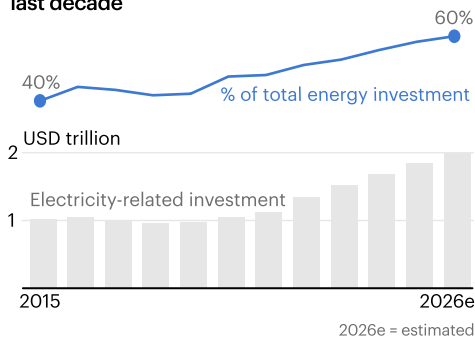
Electricity plays an increasingly important role in economies and energy systems.



Major drivers of electrification are increasing rapidly



Investment in electrification has doubled in the last decade



Electrification contributes to energy security

Progress on electrification and low-emissions electricity already helps avoid USD 160 billion in annual fuel imports in major fuel importing regions today.

