# BUZZ-ONOMICS

## A CLEAR AND ACCESSIBLE GUIDE TO THE STORIES THAT MATTER

This week brought the news that renewable energy has overtaken coal as the world's biggest source of electricity. This comes from the Global Electricity Mid-Year Insights 2025 report from the think tank EMBER. Solar and wind energy grew faster than world electricity demand with many countries setting new records. The authors of the report say that solar and wind are no longer marginal technologies but that governments need to invest to ensure progress continues. This matters because according to the Insitute for Environmental Research and Education coal is very harmful to the environment and is a major source of CO2 which is a leading driver of climate change. Coal also causes air pollution, water contamination, land degradation and acidication of oceans.  Coal fired power plants (used to produce electricity) are among the largest single sources of greenhouse gas emissions.

The outlook is not the same for all countries. Electricity generation from fossil fuel fell in China and India but grew in the EU and the US. These four countries account for around 2/3 of global electricity demand and CO2 emissions. Developments in these countries are therefore very important.

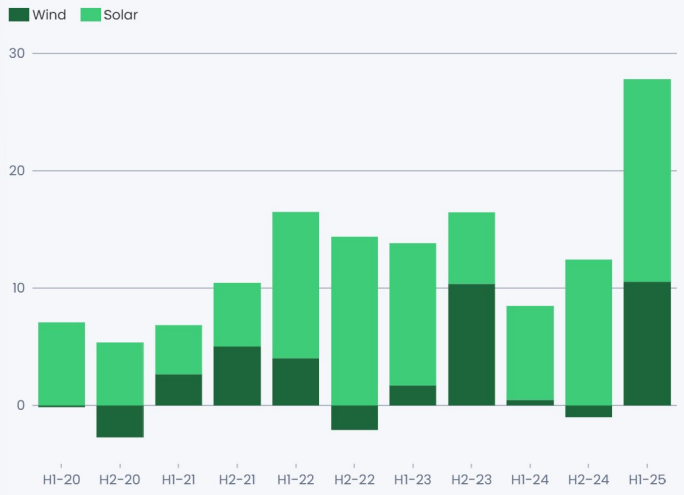
China has been impressive in its energy transition. It continues to invest larger amounts in green technology than Europe, the US and the rest of Asia-Pacific combined. As the top chart shows, India has recorded its largest ever increase in wind and solar power. Both countries though do still rely heavily on coal for electricity. Transitioning away from coal can have both positive and negative effects. It creates new jobs in the renewable sector and reduces healthcare costs but there will be major impacts on coal producing countries and the people employed in that sector. By far the largest coal producer in the world is China with India coming in second. This is one reason why historically this is a large source of power for these two countries.

In the US, coal generation has increased to displace gas and meet a shortfall in clean energy as the second chart shows. The IEA have halved their forecast for the growth of renewable energy in the US this decade. According to the BBC the IEA report represents the most thorough analysis of the results of President Trump's energy policies where he is encouraging the world to buy more US oil and gas. In the EU, months of weak wind and hydropower led to a rise in coal and gas generation.

Most solar power is now in lower-income countries. Africa has experienced a solar boom for example as has Pakistan. Algeria has increased its imports of solar panels 33-fold. So-called sun belt countries can reduce energy costs by adopting solar power. But in some countries the rapid expansion of solar is creating problems with use of solar powered water pumps threatening access to groundwater. For wind, the issue is cost and reliability. The cost of wind turbines has not fallen as much as solar power and as the EU evidences, it can be unreliable. Some find wind turbines visually appealing, but others see them as a blight on the landscape and a danger to wildlife.

**India recorded its largest ever increase in both wind and solar power during the first half of 2025**

Year-on-year change in electricity generation (TWh)




Source: Monthly electricity data, Ember

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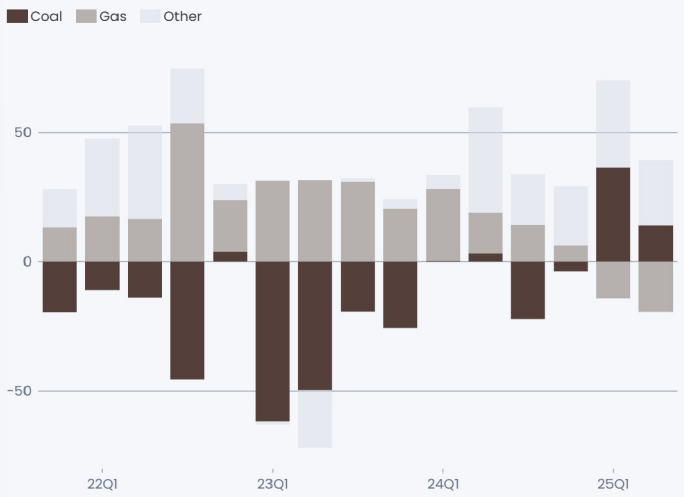
**2025 marked an end to a 13 quarter run of gas generation growth in the US, but coal grew instead**

Year-on-year change in electricity generation (TWh)




Source: Monthly electricity data, Ember

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### Questions to consider:

- Do you think high income countries should do more to reduce their use of fossil fuel?
- Should more be done to reduce the cost of wind turbines?

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