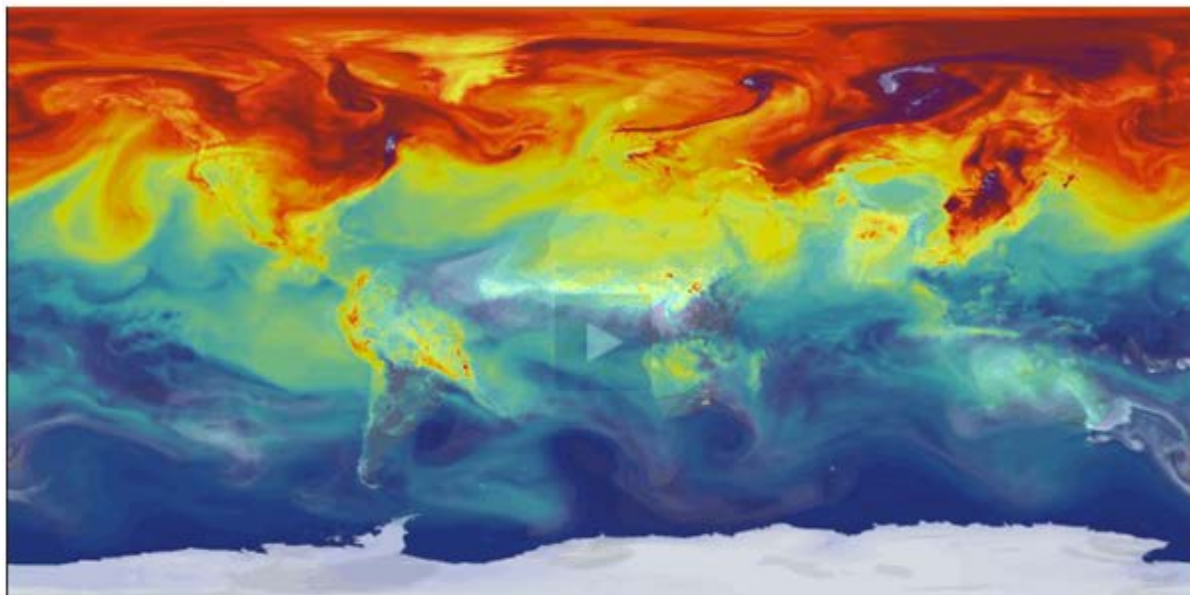




## the energy mix



Source: NASA

### Higher energy demand drove up global CO<sub>2</sub> emissions in 2018

We released our second annual [report on global energy trends](#) last week, highlighting that energy demand worldwide grew by 2.3% in 2018, its fastest pace this decade, thanks to a strong global economy and higher demand for heating and cooling.

Natural gas emerged as the fuel of choice, posting the biggest gains and accounting for 45% of the rise in energy consumption. Solar and wind generation grew at double-digit pace, with solar alone increasing by 31%. Still, that was not fast enough to meet higher electricity demand around the world that also drove up coal use.

As a result, global energy-related CO<sub>2</sub> emissions rose by 1.7% to 33 Gigatonnes (Gt) with coal use in power generation alone surpassing 10 Gt and accounting for a third of total emissions. The majority of that was from coal-fired generation capacity in Asia, with a fleet of young power plants that are decades short of average lifetimes of around 50 years.

### Efficiency events around the world

Improving efficiency will be key to curbing carbon emissions while supporting economic growth and energy security. Efficiency is a key focus area for the IEA, and we engage regularly with government and industry to explore opportunities for efficiency improvements, share best practices, and train statisticians and policy makers.



Last week, the [Efficient World Financing Forum](#) met for the first time, bringing together global leaders of development banks from around the world to help encourage investment in energy efficiency at scale. We also held a [high-level workshop on digitalisation of energy efficiency](#), highlighting how better sensors, real-time data analytics and other innovations enable greater efficiencies and optimise the way energy is consumed. Finally, over 170 energy efficiency professionals gathered in Bangkok for the IEA's third [Energy Efficiency in Emerging Economies Training Week](#), which was co-hosted by Thailand's Ministry of Energy. Participants took part in one of five parallel courses focused on buildings, industry, appliances and equipment, urban planning, and indicators or evaluation.

For more on the IEA's training efforts, visit our [training page](#), and explore the full range of our [work on energy efficiency](#).

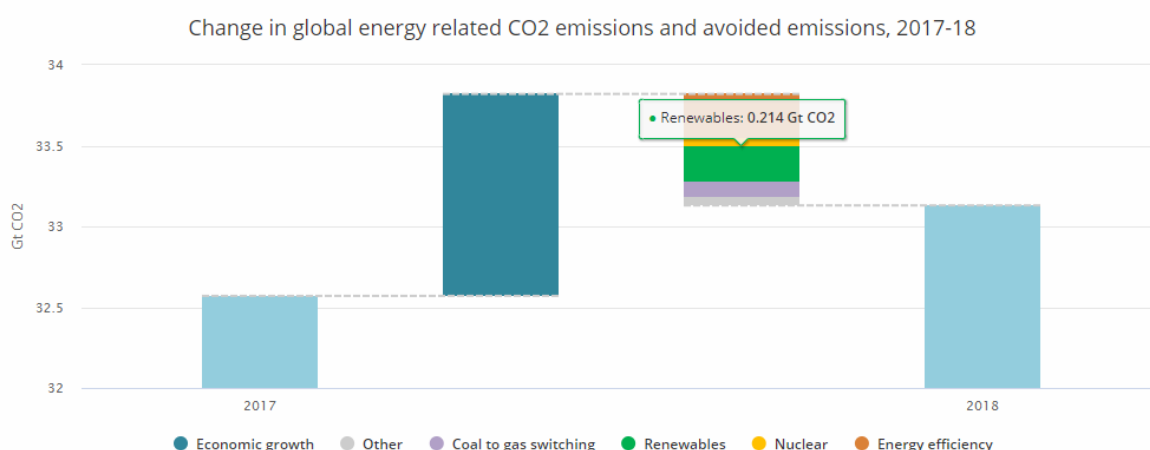
## Shared, automated... and electric?

In the second part of a commentary series on emerging mobility technologies and services, IEA analysts George Kamiya and Jacob Teter ask if we can assume that [shared and/or autonomous vehicles of the future will be electric](#).

*"While electric vehicles tend to be more expensive to purchase, they have lower fuel and maintenance costs than conventional vehicles. As shared and/or autonomous fleets would typically have heavier use patterns than with privately owned vehicles, the lower running costs could make EVs cheaper overall. But whether EVs could fulfil all the operational and technical requirements of shared and/or autonomous vehicles is less certain."*

Read our first [commentary on vehicle automation](#).

## ENERGY SNAPSHOT



Global energy-related CO<sub>2</sub> emissions grew 1.7% in 2018 to reach a historic high of 33.1 Gt CO<sub>2</sub>. The increase in emissions was driven by higher energy consumption resulting from a robust global economy, as well as from weather conditions in some parts of the world that led to increased energy demand for heating and cooling.



However, energy efficiency improvement avoided over 270 Mt of CO<sub>2</sub>, coal-to-gas switching avoided almost 100 Mt, and the increased use of renewables avoided 215 Mt, the vast majority of which is due to the transition to renewables in the power sector.

Read more in this year's [Global Energy and CO<sub>2</sub> Status Report](#).

#### **ACRONYM EXPLAINER: SDS**

The IEA's [Sustainable Development Scenario \(SDS\)](#) outlines a major transformation of the global energy system, showing how the world can reduce emissions, ensure universal energy access and reduce air pollution simultaneously. It is fully aligned with the Paris Agreement's goal of "holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C".

The SDS also shows that there is no trade-off between achieving climate objectives and delivering on energy access and reducing pollution goals, in line with the UN Sustainable Development Goals. For example, achieving universal access to modern energy only leads to a small increase in CO<sub>2</sub> emissions (0.1%), the climate effect of which is more than offset by lower methane emissions due to a reduction in use of traditional biomass cookstoves.

Read more from the IEA's Executive Director, Dr Fatih Birol, about our commitment to [a secure and sustainable energy future for all](#).

**08/04/2019**