

22nd Edition World Energy Markets Observatory: Climate Change and Sustainability

Energy-related CO₂ emissions are down **0.4%** while total global GHG emissions have risen **0.6% in 2019**

COVID-19 led to the largest reduction of GHG emissions since WWII with global emissions expected to be down **8% during 2020**

Even in Europe, the most advanced region in terms of climate change, current policies and measures fall well short of long-term decarbonization objectives and the 1.5-2° scenario identified by the International Energy Agency (IEA)

Key Stats

Europe
Total CO₂ emissions: **3,330 Mt**
Share of renewables in electricity mix: **23%**

U.S.
Total CO₂ emissions: **5117.77 Mt**
Share of renewables: **6.2%**

China
CO₂ emissions: **9,825 Mt**

Canada
Total CO₂ emissions: **588 Mt**
Share of renewables: **4%**

Australia
Total CO₂ emissions: **532 MtCO₂-e**
Share of renewables in electricity mix: **24%**

India
CO₂ emissions: **2,480.4 Mt**
Share of renewables: **3.6%**

Energy demand slowed in 2019, but emissions continued to grow.

+0.7%
Energy demand 2019

VS

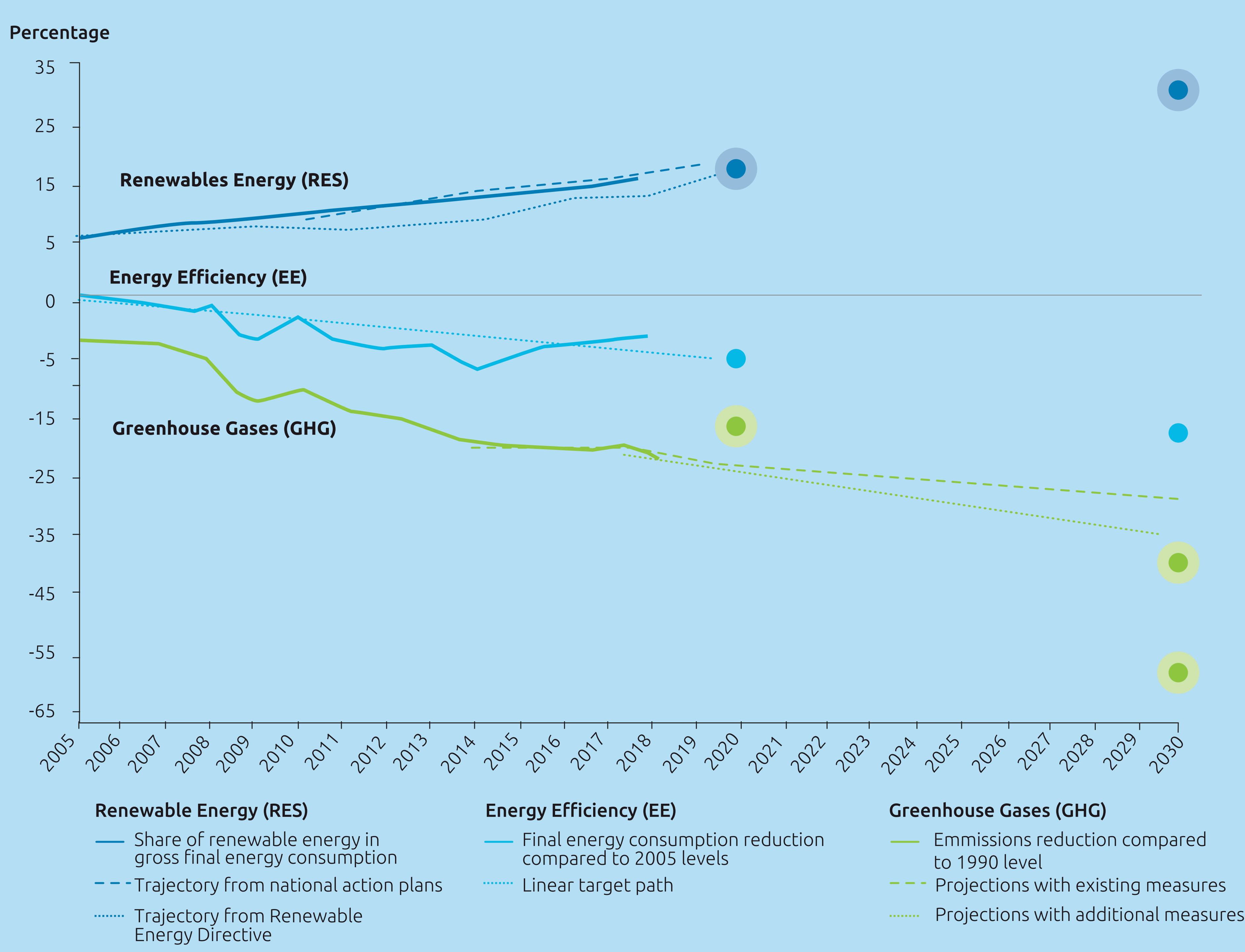
+2.8%
Energy demand in 2018

+0.6%
GHG Emissions historic peak

8% Projected GHG emissions reduction during 2020 due to COVID-19
However, the decrease is unsustainable. Emissions will likely rise as the world recovers from the pandemic.

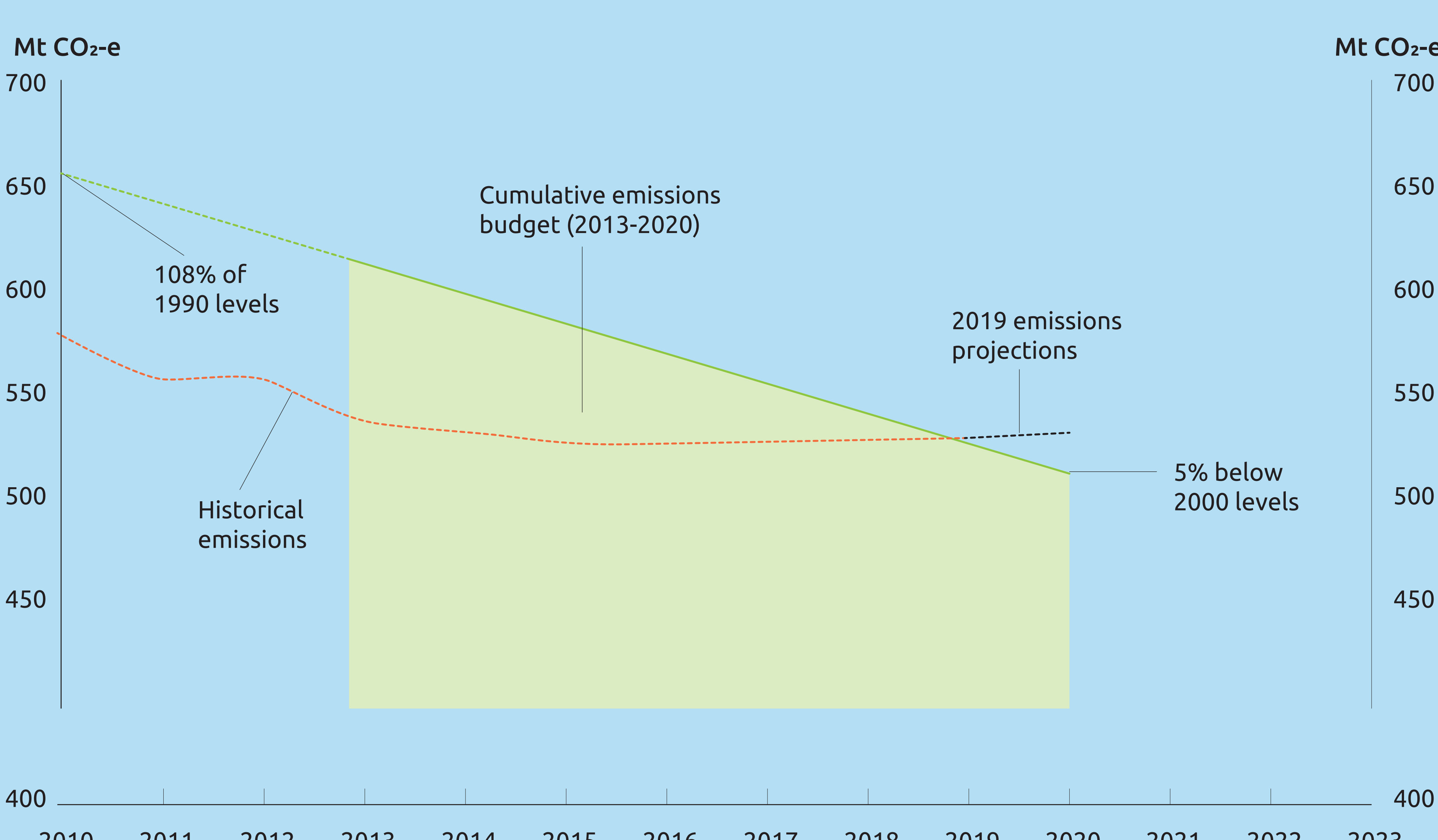
Achieving long-term climate targets

Europe achieved 2 out of 3 of its 2020 climate change targets but will fall short of 2030 goals. Buildings renovation is at the heart of the EU strategy but results and commitments remain insufficient.



The U.S. is at a serious risk of missing its Copenhagen Accord target of a 17% reduction in emissions by the end of 2020. The country is even further away from its 2025 goal of a 26-28% reduction in emissions set in the Paris Agreement.

In 2019, Australia met its 2020 renewable energy target of 23.5% and 33 terawatt-hours (TWh), though achievement of 2020 and 2030 emission reduction targets remains unclear.



Southeast Asia

is highly vulnerable to climate change as a large proportion of the population uses coal as a source of energy and power, leading to high GHG emissions.

3.7% Southeast Asian countries' share of global GHG in 2019

~50% Southeast Asian countries' share of global CO₂ emissions by 2040

India

Coal production: **8%** of the world's total (-0.5%)

Coal consumption: **18%** of the world's total (+0.3%)

China

Coal production: **48%** of the world's total (+4.2%)

Coal consumption: **51.7%** of the world's total (+2.3%)

Canada

Canada revised its anticipated emissions for 2030 to be **227Mt** below the rate projected in 2015 – an unprecedented level of emissions reduction.

Australia

is warming faster than the global average.

2019 was the warmest and driest year on record with temperatures climbing 1.52°C above the long-term average.

In 2019, emissions per capita, as well as emissions intensity, reached their lowest levels in 30 years in Australia.

-2.9% Emissions from the electricity sector

-4.3% reduction in coal generation

+10% increase in renewables



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About WEMO
The World Energy Markets Observatory (WEMO) is Capgemini's annual thought leadership and research report that tracks the development and transformation of electricity and gas markets in Europe, North America, Australia, Southeast Asia, India and China. Now in its 22nd edition, WEMO examines the following topics: climate change & regulatory policies; energy transition; infrastructure & adequacy of supply; supply & final customer; transformation; financials; and, for the first time, the oil & gas industry. This edition also includes data and analysis for the first half of 2020 due to the extraordinary events related to COVID-19.