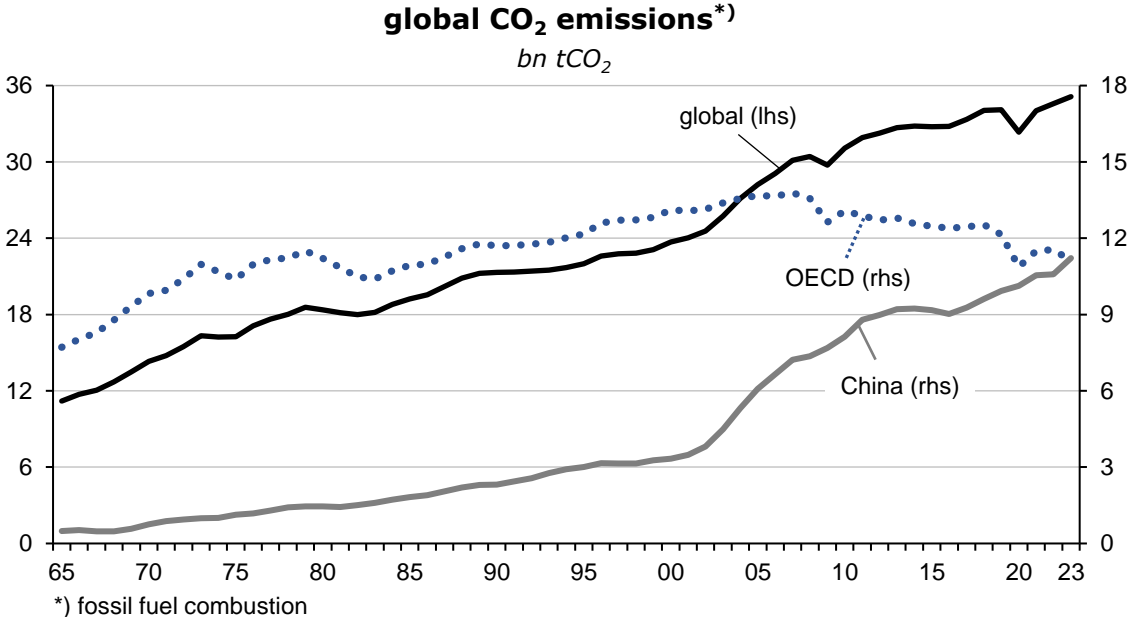


# Cheap green electricity may not be so good for the climate as you may think

Mainz, August 1<sup>st</sup>, 2024 | Dieter Wermuth

There are two important and stable global trends which will determine the structure of our economies. Decision makers have to take them into account: 1) CO<sub>2</sub> emissions will continue to increase which means that the environment will keep deteriorating for some time to come; 2) the relative costs of producing electricity from alternative sources will fall – relative, that is, to those from burning fossil fuels. The overall cost of energy will be on the way down – which will not only boost the demand for “green” energy but also for fossil fuels. To avoid a global climate catastrophe, governments have to intervene by using their regulatory power, ideally in an internationally coordinated way.

Looking at the development of CO<sub>2</sub> emissions in OECD countries, ie, in the richer part of the world one could be forgiven to assume that global emissions as a whole will also soon be on the way down. But this is not the case. In the poor southern part of the planet, including China, real GDP growth is in the order of 4 to 5% annually, and the burning of coal, gas and oil continues unabated, as if there was no tomorrow. The priorities for people there are to own a car, to install air conditioners, to buy cheap food from an industrialized agricultural sector, and to fly energy-intensively to distant places. A healthy environment is not yet a top priority.

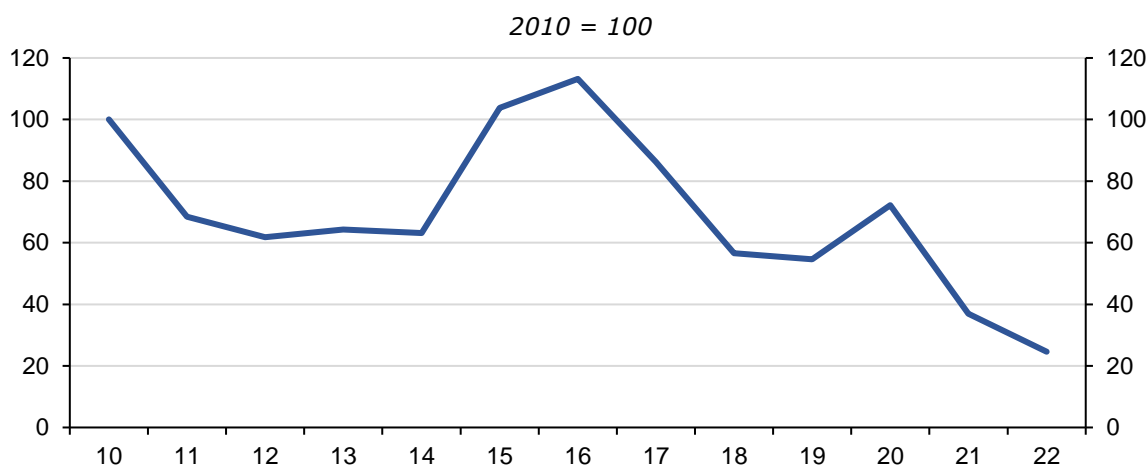


source: EI Statistical Review of World Energy June 2024; design & research: Uwe Richter ©UR

Over the past 50 years, global emissions have increased at an average annual rate of 1.5%, and over the past decade the growth rate has still been in the order of 0.7%. Given these trends the climate will continue to deteriorate fast, and the 1.5 degree target cannot be reached. Before things get better they will get worse.

As to my second proposition, the technical progress in the area of developing electricity from wind, solar and geothermal heat is so rapid that electricity prices from these sources will fall in absolute as well in relative terms (relative to those from fossil fuels). Not only that, because of arbitrage processes the cost of energy in general is bound to fall – which includes coal, gas and oil.

### the relative price of electricity from onshore wind<sup>\*)</sup>



\*) ratio of global weighted average levelized cost of electricity (LCOE) from onshore wind to the crude oil price (Brent)

source: IRENA, own calculations; design & research: Uwe Richter

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Since consumers and business will respond to the falling prices of fossil fuels, the demand for them will increase. The technical progress in the area of green energy leads to falling energy prices in general and may turn out, in the final analysis, to be a climate killer – if left unchecked.

But this is a problem that can be solved, to the benefit of all, and the climate in particular: over the years, the taxes on burning coal, gas and oil have to be raised continuously, in response to hitting or missing emission targets. This can actually be done without negative effects on the standard of living. If the number of climate disasters continues to increase – which is likely if present trends persist – it will become politically easier to reach international agreements about the reduction of CO<sub>2</sub> emissions. The structural change which will be necessary cannot be underestimated, though. It is still a long road and requires a lot of work and goodwill.

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