Flash Economics

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Even if the European Union were the only region fighting against global warming, it should persist in decarbonising

In the worst-case scenario, the European Union remains the only region in the world committed to achieving net-zero emissions by 2050.

Even if that were the case, it would still be in the EU's interest to maintain the direction of its climate policies. Indeed, the latest estimates[1] of the impact of global warming on global GDP show that climate change reduces GDP so significantly (a 1°C rise in global temperature leads to a 12% drop in global GDP) that, from the EU's perspective alone, continuing with decarbonisation remains economically worthwhile.

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(1) Bilal, A., & Känzig, D. R. (2024). *The macroeconomic impact of climate change: Global vs. local temperature* (No. w32450). National Bureau of Economic Research.

What if the European Union were the only one still fighting climate change?

In the worst-case scenario, the European Union is the only region in the world that continues to fight climate change and reduce its greenhouse gas emissions (see Charts 1/2), with the goal of achieving net-zero emissions by 2050.

Chart 1
CO2 emissions (2000 = 100)

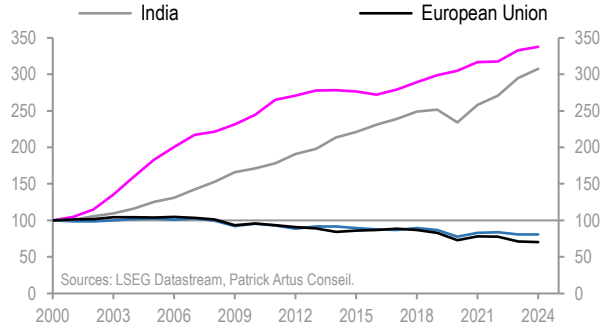
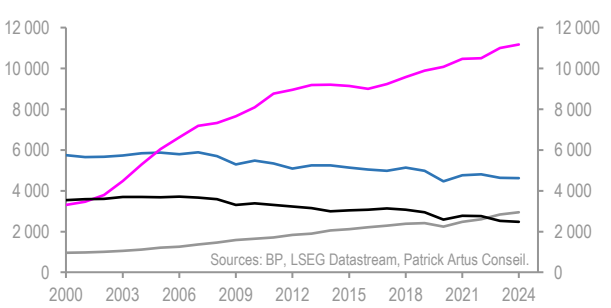


Chart 2
CO2 emissions (millions of tonnes)



Charts 1 and 2 show that today, the pace of emissions reduction is roughly the same in the United States and the European Union, but the level of CO_2 emissions is significantly higher in the United States.

We are therefore left with the following question: if the European Union remains the only region attempting to eliminate its greenhouse gas emissions, given that **it accounts for only 6% of global greenhouse gas emissions, should it continue pursuing its strategy to reach net-zero emissions by 2050**?

The impact of global warming on world GDP

A very insightful study by Bilal, A., and Känzig, D. R. shows that **a 1°C increase in global temperature reduces world GDP, after a few years, by 12%**.
Now, without action against climate change — and if the United States stops promoting renewable energy and even shifts towards a fossil-fuel-friendly policy — global warming, which was at 1.1°C above pre-industrial levels in 2024, **could reach 4°C by 2100**.

Is it in Europe's interest to act alone against climate change?

If Europe acts alone against climate change, global CO_2 emissions would fall by 6%, and so would the rise in global temperature by 2100. If the temperature were to increase from 1.1°C in 2024 to 4°C in 2100, it would instead rise from 1°C to 3.8°C.
Using the estimates by Bilal and Känzig, this reduction in global temperature would avoid a 2.4% drop in global GDP.

Now, **the investments needed for the energy transition are around 2 percentage points of GDP per year for Europe**: by investing 2% of its GDP in the energy transition each year, Europe would avoid a 2.4% drop in its GDP — also per year.
This investment would, of course, benefit all countries, including those making no effort to cut their CO_2 emissions, **but it would still be economically worthwhile for Europe**.

Summary: Even if Europe were the only one fighting climate change, it should still do so

Recent estimates of the negative impact of rising global temperatures on GDP are so high (a 12% loss of GDP for every 1°C increase) that even if Europe only cuts 6% of global greenhouse gas emissions, it would still be worthwhile for it to pursue a policy of ending CO_2 emissions — even on its own.
The investment cost of this policy would in fact be lower than the additional GDP generated, for Europe and for the world as a whole, by ending CO_2 emissions from Europe alone.

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