**Net-zero fantasy?**

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Net Zero/2050 Fantasy or Reality may be the most significant issue of the 21st century.

Net Zero refers to the balance between the amount of greenhouse gas (GHG), such as CO2, that’s produced and the amount that’s removed from the atmosphere. It can be achieved through a combination of emission reduction and emission removal.

The relationship between CO2 and a warmer/hotter climate is basic science: For example, according to Climate.gov: “The relationship between carbon dioxide (CO2) and global temperatures is directly proportional: As CO2 levels in the atmosphere increase, so do global temperatures, primarily because CO2 acts as a greenhouse gas, trapping heat from the sun.”

If Net Zero/2050 is fantasy (false hope), the repercussions are unimaginable. The science is clear. Major ecosystems of the planet like Greenland, Antarctica, Arctic permafrost, and the Amazon rainforest are already severely stressed, right now, today. Climate Change is already doing its dirty work where nobody resides. There are hundreds of headlines in science journals, magazines, and research papers describing trouble with the world’s most important ecosystems.

Headline examples: Emergency Meeting Reveals the Alarming Extent of Antarctica’s Ice Loss (Earth.org). Methane Bombs’ Release 30 Years Equivalent of US Greenhouse Gas Emissions, Risk Triggering Climate Catastrophe (Earth.org). Critical Slowing down of the Amazon Forest After Increased Drought Occurrence ( PNAS – National Academy of Sciences). Thawing Permafrost Poses Environmental Threat to Thousands of Sites with Legacy Industrial Contamination (Nature Communications). A Collapse of the Amazon Could Be Coming ‘Faster Than We Thought,’ The New York Times (The New York Times). Staggering Temperature Rise Predicted for the Middle East and North Africa: Some Parts of the Region, Which is Already Warming at the Same Rapid Rate as the Arctic, Could See up to 9 Degrees Celsius of Warming (Journal of Geophysical Research, Atmosphere)

To mitigate, or prevent, the ‘unimageable’, there are hundreds of well-intentioned publications about the pathway to Net Zero emissions by 2050. On balance, they talk favorably about reaching Net Zero by 2050, and these prognostications are found in science publications, economic papers, online sites, and pretty much everywhere, with a strong sense of accomplishment in the offing. Plans to achieve Net Zero/2050 seem to satisfy people in general, believing success is on-target, no worries. But reality tells a different story.

According to UN Climate Action: Based upon national action plans in effect, as of November 2024, the decrease in global greenhouse gas emissions by 2030 compared to 2019 will be 2.6%. But according to the Paris ’15 Agreement, a reduction of 43% from 2019 levels is required by 2030 to be on track for Net Zero/2050. That’s pathetically insignificant.

There are plenty of doubters about Net Zero/2050, especially in academia. The MIT Center for Energy and Environmental Policy Research published an analysis d/d October 2023. It’s one of many high-level studies: Is Net Zero a Possible Solution to the Climate Problem? A 14-page in-depth analysis: “This commentary explains why achieving global Net-zero is highly unlikely by any certain date and, even if achieved, will not necessarily solve the climate problem. The major obstacles to successful Net-zero are unpredictable, involve significant political issues, and are not easily described in econometric models.”

Meanwhile, as the world waits for Net Zero/2050, climate change clobbers the world over the past two years, 2023-24, setting new records galore, and just to think, Net Zero/2050 is still 25 years away. This despite western democracies such as the UK and Germany and Far Eastern countries like China making solid progress with renewables in 2023-24. Still, the drumbeat of higher CO2 emissions is relentless, higher than ever, and regrettably higher in the face of record-setting renewable installations but in harmony with consistently high oil production.

The amount of CO2 into the atmosphere is straight-forward and easily calculated because human machines like cars and power plants that burn fossil fuels are easily identified. For comparison purposes, 11 billion tons per year was emitted when JFK was president in the early 1960s. Whereas: “Total carbon dioxide (CO2) emissions are projected to be 41.6 billion tonnes in 2024, up from 40.6 billion tonnes last year. This includes fossil CO2 emissions of 37.4 billion, and the rest from land-use change (deforestation), according to the Global Carbon Budget., Ibid.

Never in human history has so much CO2 been emitted into the atmosphere as today. It’s overwhelming. What if a scientist in 1960, when CO2 emissions were 11 billion metric tons per year, predicted CO2 emissions 65 years hence would be 40 billion metric tons per year? It would’ve been labeled kooky, insane, madness!

As a result of today’s madness, i.e., 40B metric tons, global warming has negatively impacted Nature. The world’s major ecosystems are joining the greenhouse gas parade along with cars, trains, planes, and industry, with little respect for Net Zero targeting by 2050. The insanity of this strange concurrence is only too obvious.

Nature commands large reserves of carbon stored over millennia. For example, the Amazon stores an amount of carbon equivalent to 15–20 years of global CO2 emissions. A study published in the journal Nature found that the eastern Amazon has transitioned into a carbon source. This is global warming hard at work and a danger signal if ever there was one.

With Nature’s major ecosystems switching sides from GHG storehouses to GHG emitters, an x-factor comes into play. This is a serious challenge to Net Zero/2050, as the Amazon rainforest and Northern Hemisphere permafrost join alongside planes, trains, cars, and factories spewing CO2 into the atmosphere. Since time immemorial, these ecosystems have been the biggest absorbers of CO2, keeping the climate system in balance. Oops, suddenly that wonderful balancing act is out of kilter.

Excerpted: ‘Net Zero/2050 Fantasy or Reality?’. Courtesy: Counterpunch.org