Book **Review**:

"The Green New Deal and Beyond – Ending the Climate Emergency While We Still Can *by Stan Cox*"

In his 2020 book, Stan Cox sheds a light at the history of the idea of a Green New Deal. He rewards the US version of the GND as a good first step, but criticizes it for not challenging the fossil fuel industry and not reversing the widespread ecological damage. If not implemented with great caution, the (American) Green New Deal in its nature as a stimulus package has the potential to continue to encourage destructive economic growth. Cox advocates for stricter direct measures to fight the fossil fuel industry and for overcoming the fallacious paradigm of green growth that is, in his view, at odds with climatological necessities.

In the first two chapters, Cox outlines the historical roots of today´s Green New Deal proposals. He identifies the original New Deal policy, the economic policy during World War II and the Club of Rome report as major sources of inspiration for the Green New Deal.

The New Deal consisted of several different programs. The central employment programs were the Works Progress Administration (WPA) that employed 8 million workers and the Civilian Conservation Corps (CCC) that provided an additional 3 million jobs, where employees planted trees and built public parks, hiking trails, vehicle bridges, reservoirs and fences.

During World War II the War Production Board (WPB) strictly managed production and consumption in order to deal with the shortage of real resources in the civil economy. Standardization and simplification programs for all kinds of consumption goods as well as a rationing system were important elements of economic policy in these days.

In 1972 the Club of Rome´s Report "Limits of growth" questioned the post-war growth paradigm for the first time. The report is based on large-scale computer models that show that continuous growth will push the world beyond planetary boundaries, resulting in an environmental breakdown that will eventually destroy most of the accumulated wealth. When technological progress lifts one or the other restraint to growth, continuous growth will just push the planet to another boundary with the same result. Cox refers to a study by Turner (2008) to show that the predictions of the Club of Rome´s models fit toady´s reality terrifyingly well.

The first idea for a Green New Deal came from the United Kingdom, where a group of left economists proposed a package of financial reforms and a fiscal stimulus, aimed at a massive conversion to green energy. In 2008 UN officials also proposed a Green New Deal to pull the world economy out of the incipient Great Depression and the European Greens set up an EU GND movement. But once it became clear that a complete economic collapse had been averted, the fever broke and enthusiasm for a GND tapered off.

After Donald Trump took office in the United States, several climate action groups and political initiatives started to put forward concepts for a Green New Deal and other

policy programs to ensure that individual cities or states would continue to cut emission even though the Trump administration had withdrawn from the Paris Climate Agreement. "America´s Pledge", the "U.S. Climate Alliance" and "U.S. Climate Mayors" are the most popular among them. In 2017 the US senators Sanders and Merkley introduced the "100 by 50 Act" to Congress, the first plan to reach net zero in the United States.

In 2018, researches from the team of Alexandria Ocasio-Cortez went to the UK to discuss the Green New Deal with Ann Pettifor, a member of the 2008 campaign. The groups "Data for Progress" and "New Consensus" published a detailed GND plan for the USA. In the 2018 congressional elections the "Sunrise Movement" set out to support climate friendly Democratic candidates. After the election they tried to impose pressure on Congress to support a Green New Deal for the United States. A week after the election the group occupied the office of Nancy Pelosi and demanded the installation of a Committee for a Green New Deal. However, Pelosi refused.

Cox is highly critical of the idea that replacing the entire fossil energy supply with renewables is possible, without reducing energy consumption. He refers to a list of papers that argue that 100% renewable energy plans (e.g. Jacobson) are based on unrealistic assumptions about future improvements in energy efficiency, storage and smart grid technologies. Furthermore such plans are said to rely on technologies that do not yet exist.

Regardless of these flaws, 100% renewable scenarios would mean that renewable infrastructure would have to be built at a rate 33 times higher than the highest rate in the past, if consumption of fossil fuels shall be cut back sufficiently fast to keep climate warming below 2°C. Some 100% scenarios would mean that more land had to be used for solar power than is now used for agriculture, causing severe problems for biodiversity. According to Cox, nuclear power is no alternative to fossil fuels either.

Cox points out that despite any potential gains from efficiency improvements, development in countries of the Global South will inevitably lead to more GHG emissions in these countries ("whether or not stoves and refrigerators can be made to run on less energy, the society-wide infrastructure improvements necessary for development – involving as they do a lot of inputs like cement and steel – will continue to require massive inputs of energy."). This makes Cox conclude that a globally just transition path will require countries of the Global North to achieve even sharper emissions cuts.

Neither current policies, nor the existing GND proposals (Cox refers to the Congressional GND resolution) aim at sufficiently sharp emissions cuts. According to the UN Production Gap Report, governments are planning to produce 50% more fossil fuels by 2030 than would be consistent with a 2° C pathway and 120% more than with 1.5°C. The shortcoming of the GND in this regard is that, apart from investment in renewables, it does not propose direct (regulative) measures to keep fossil fuels in the ground. But only increasing the supply of renewable energies won´t crowd out fossil fuels from the markets, but rather just satisfies an ever-increasing energy demand of the growing capitalist economy. Jason Hickel, for instance, shows that since the year 2000, the total energy demand has risen six times as fast as the world output of renewable energies.

According to Cox, the focus on geoengineering technologies and electrical vehicles is also part of a fallacious ecomodernist illusion. BECCS (Bio Energy Carbon Capture and Storage) could lead to net increases in CO2 emissions instead of reducing them. The reason is large energy requirements (25 – 100% of the energy deployed by BECCS) for the growing of plants, production of pallets and carbon sequestration and the CO2 release resulting from large-scale monocultures.

The production of electrical vehicles requires twice as much energy as the production of cars with combustion engines and the additional electricity demand from an electrified car sector would add to an electricity demand that is already now too high.

With regard to critical resources, Cox notes that if today´s global economy was fully powered by renewables, it would consume 120 – 210% of the global stocks of cobalt and 90 – 160% of lithium (even with optimistic assumptions regard recycling capacities).

One of the books most important points of criticism is that the expansion of renewable energy supply alone will not lead to a phasing out of fossil fuels. In this regard, Cox contradicts other GND authors, for example Jeremy Rifkin. Cox argues that an increase in the renewable energy supply adds to the fossil energy supply rather than automatically replacing it. In line with this criticism, Cox also rejects the possibility of absolute decoupling, arguing that on the historical average, a 1% increase in per capita GDP always corresponded to a 1.5% increase in GHG emissions per capita. Surprisingly, the positive correlation between economic growth and GHG emissions is even stronger when renewables already have a bigger share in the energy supply of a country. Successes in relative decoupling of GDP growth and (production based) GHG emissions are mostly attributable to emission exports that come with a shift of carbon intensive production to countries in the Global South. For the abovementioned reasons, Cox considers a reduction in overall energy consumption inevitable. In particular, he proposes to shrink the military sector and curb the production luxury goods by means of direct regulation (like in WWII). This would correspond with a reduction of working time. Such measures might prevent the GND from making the mistakes of what Cox calls *Climate Keynesianism*. "A credible GND needs a concrete plan for ensuring that the salaries from all the good green jobs it creates aren't immediately poured into high-consumer lifestyles that inadvertently end up increasing emissions." (p. 108).

On the question of carbon pricing, the book takes a differentiated view. Uncertainties about the price elasticity of energy consumption make it hard to estimate the effects of carbon pricing schemes. However, on average a 10% price increase leads to a 2% decrease in energy demand. This means that for a meager emission reduction of 10% a carbon price of $125 would be needed (current carbon prices according to Cox: $6 in the EU and $3 in Japan (2020 data)). Nordhaus (2016) estimates that in order to limit global warming to 2.5°C the carbon price would have to $230 today, rising to $350 in 2030 and $1000 in 2050. In principle, Cox is sympathetic of the idea of a carbon dividend, as for example proposed by Boyce, because such an instrument leads to a more equitable distribution of the burdens of a green transition. Even with a carbon price of $200, he argues, the bottom 80% of households would still have net benefits from a carbon dividend. However, what Cox dislikes about any of the aforementioned pricing and redistribution mechanisms is, that every ton of CO_2 has the same monetary value – regardless of whether it is used for heating or private jet flights. Therefore, Cox

supports a more direct regulation that accounts for normative differences in the consumption of fossil fuels.

Cox supports a mixture of upstream and downstream regulation and pricing mechanisms: He proposes a cap-and-adapt scheme with three individual caps (one on oil, gas and coal) that shrink by a fixed amount every year. Governments issue permits to energy companies, which they have to surrender when pulling oil, gas or coal out of the ground. Additionally, the government would issue a capped and annually decreasing amount of import permits that companies, importing goods to the country would have to surrender. These latter permits would account for the production and transport emissions and are meant to phase out emission exports.
To deal with rising costs of fossil energy, Cox argues for price controls and rationing like in the 1940ies and 70ies. In particular, he proposes Tradable Emission Quotas (TEQ): Based on the national carbon budget, every fossil fuel is assigned an emission point value. Every household has a carbon account that is deposited with emission points every week. People have electronic debit cards and draw from their carbon accounts when they consume carbon intensive goods or services. Markets for emission points ensure that people can trade their carbon permits.
Alternatively, private fossil fuel companies could be nationalized and their economic activities gradually cut back.

Quotes from the book:

"The Green New Dealers have not yet specified a mechanism by which the United States can guarantee the elimination of greenhouse emissions by a hard-and-fast deadline" (p. xxv)

"We must decide collectively that we will refrain, forever, from tapping known, rich reserves of easily available energy." (p. 1)

"The wartime experience of the 1940s suggests that rationing is well tolerated or even popular when it is a response to a clearly perceived national crisis." (p. 15)

"Above all, the Green New Deal is a leftist resurrection of federal industrial policy. It is not an attempt to control the private sector, according to its authors; it is a bid to collaborate with it. (Robinsion Meyer)" (p. 45)

"We have no choice but to make hard decisions about what we will and won´t try to do. For example, replacing gas- and oil-fired furnaces with electric heat pumps will be necessary, but we can no longer support a car and a pickup in every driveway, however they are powered." (p. 67)

"When we ride our bikes, our power lies not in cutting our personal travel footprint – an impact that seems trivial when surrounded by gigantic, diesel-chugging trucks. Instead, it is in creating a space where politicians and planners feel confident investing in bike-friendly infrastructure and policies. (Sami Grover)" (p. 92)

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