Critical junctures of hope: how to bridge the gap between the necessary and the feasible?

Reaction to L. P. Fesenfeld in GAIA 30/3 (2021): Glimmers of hope: A global Green New Deal is feasible

A Green New Deal is a necessary and viable tool to halt global heating while reducing socio-economic inequalities. Yet it is important to complement currently feasible designs like a Green New Deal with the removal of the remaining structural barriers to what is necessary in order to limit warming to 1.5°C. A Green New Deal should focus on reducing energy demand while improving well-being. It needs to scale up public investment, while confronting fossil fuel dependencies and incumbent resistance.

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iven current projections on global warming, hope is surely an essential emotional resource to constructively address the need for a more fundamental change in how we organize our social provisioning systems. Similarly, a *Green New Deal* (GND) – which is typically associated with a strong role for public leadership and a simultaneous consideration of ecological and social goals – seems ultimately necessary to initiate or significantly speed up processes of large-scale transformation at the sectoral, regional, and global level. Hence, we welcome Lukas Fesenfeld's argument that something akin to a global GND might soon emerge from decentralized actions of many individual states, which contrasts the typical rationalization of climate change as a hard-to-resolve collective action problem (Fesenfeld 2021).

Fesenfeld gears his focus towards the feasible. Broadly speaking, he argues that a GND based on green growth and decoupling is more likely to attract sufficient political support than a proposal for a more fundamental restructuring of the economy. At the same time, he acknowledges that it is probably not sufficient to stay within safe levels of global heating. Yet this leaves us with a conundrum: if the feasible is simply not enough, how to make what is necessary possible?

Against this background, our motivation for writing this comment is guided by Max Weber's insight that "historical experi-

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ence clearly shows that the possible could often only be achieved by striving for the impossible" (Weber 1926, p. 67, authors' translation). The same idea can be projected onto the challenge of global heating. In our reading, it implies that Fesenfeld's identification of low-hanging fruits should be applauded and his hope that successful policies will induce a virtuous cycle, potentially allowing for more radical change, should certainly be supported.

However, we suggest that limiting the scope of social and political change to low-hanging fruits in the first place constrains the way we conceptualize this change. In this spirit, we thus aim to direct attention to those "high-hanging fruits" that seem most essential for halting ecological breakdown and raise the question of how to make the necessary politically possible. By focusing on how to close the looming gap between the feasible and the necessary, we hope our comment is read as a constructive complement to Fesenfeld's original contribution.

The required decoupling is unlikely with a green growth New Deal

To stay below $1.5\,^{\circ}$ C, it is necessary to not only reduce but virtually eliminate all fossil fuels and to massively reduce all other greenhouse gases as quickly as possible (IPCC 2021). To do so, unprecedented mitigation rates of at least minus $10\,\%$ per year are required from now on.

At their core, green growth proposals assert that absolute decoupling of gross domestic product from greenhouse gas emissions and resource use is possible. This argument needs to hold not only in general but in the outlined magnitude and speed. Much of the available empirical evidence, however, casts doubt on the central premise a green growth proposal builds upon.

Both observed and projected decoupling rates are insufficient to stay below 1.5 °C, even under optimistic assumptions (Haberl et al. 2020, Hickel and Kallis 2020). At the same time, most countries have not yet realized large-scale targeted spending initiatives directed towards a more fundamental transformation of our economies. To reach carbon neutrality in the EU, spending needs to be massively increased relative to current plans if all technical opportunities already available are to be deployed on a large enough scale (Wildauer et al. 2020). Such spending programs should aim to fundamentally alter current structures of production by expanding renewables, insulation, public transportation, and the circular economy. Unprecedented in scope and scale, the net impact of upscaled spending cannot easily be extrapolated based on historical data or common model-based projections.

While it seems plausible that large-scale spending initiatives might have a greater impact on decoupling than slow incremental changes in private investment, it is still overly optimistic to assume that they would automatically achieve the decoupling required. As a result, while some sectors, such as clean energy production and public transport, necessarily need to grow, others need to be scaled back as part of a GND. In particular, fossil products and technologies need to be phased-out deliberately (Rosenbloom and Rinscheid 2020).

The incidence of (selective) growth

Similarly, it is not sufficient to assume that the growth effects a GND might induce will automatically contribute to lowering socio-economic inequality simply because "new industry players are also likely to recognize the need" (Fesenfeld 2021, p. 152) for doing so. In this context, there is a series of contingencies to consider. First, the net growth effects of a GND depend on domestic production capacities (otherwise it will boost imports, with little impact on domestic prosperity). Second, even if growth occurs domestically, it requires deliberate policy decisions to ensure that the additional income will lower inequality as real wages in the bottom half of the income distribution stagnated or decreased in the past – even in the face of substantial aggregate growth.

Hence, a GND as such is not enough to resolve concerns about inequality; it is instead required to ensure that the selective growth effects it might induce truly increase social inclusion. Although we see no fundamental dissent here, our impression is that Fesenfeld's argument partly abstracts from these practical difficulties by implicitly assuming that a GND will promote social inclusion per se.

In sum, we agree with Fesenfeld that the GND emerges as a necessary and viable tool to tackle the low-carbon transition. At the same time, we doubt that the GND will resolve the problem by itself. Complementary policies are required to ensure progressive distributive effects and to reduce aggregate energy demand.

A Green New Deal should focus on reducing energy demand while improving well-being

Overall, past supply-side decarbonization and efficiency improvements have not succeeded in reducing global greenhouse gas emissions. While a GND surely offers new options for arriving at turning points, at least within specific sectors, it is in general unrealistic to assume that supply-side decarbonization will eventually be sufficient. Similarly, Fesenfeld's suggestion that successful first steps towards a GND might unleash policy space for even more radical steps is a legitimate but eventually risky strategy as it implicitly downplays the crucial role of demand-side mitigation already feasible today (Creutzig et al. 2018, Creutzig et al. 2021 c). Demand-side solutions are an important complement to a GND, as they alleviate the need for unprecedented leaps in technology development as well as deployment, which are particularly pressing in aviation, steel and cement (Davis et al. 2018). Demand-side mitigation also reduces our dependence on negative emission technologies, which remain speculative and augment risks to land distribution and livelihoods (Creutzig et al. 2021a, Minx et al. 2018). Beyond technical challenges, demandside solutions also mitigate the risks of low-carbon transition to create or amplify dispossession and vulnerability (Sovacool 2021).

The core question, however, is how to reduce demand without compromising well-being. To advance on this challenge, a lens on socio-economic inequality and welfare theory is crucial. In addition to using more energy in absolute terms, the rich are the predominant consumers of energy-intensive luxury goods, from which the poor are almost excluded (Oswald et al. 2020). At the same time, energy and transport poverty are much more prevalent among the poor. Inequalities in the access to goods and services also span other dimensions such as gender and migration status (Huwe 2021). Together with rapidly depleting carbon budgets, the substantive energy inequality, which prevails also in Europe (Ivanova and Wood 2020, Jaccard et al. 2021), casts doubt on the conventional view in economics that policy should be indifferent to the purpose for which energy is used.

Eudaimonic welfare theories emphasize a focus on human needs as essential constituents of human well-being, while subjective wants are considered less relevant (Doyal and Gough 1984). Hence, not all preferences are equally legitimate from a standpoint of long-run social welfare. While such an approach would impose absolute limits on energy-intensive consumption with little relevance for well-being, it guarantees a social minimum (Huwe and Frick 2022) and would be welfare-enhancing in many contexts. In fact, a large number of demand-side measures are consistent with high levels of well-being (Creutzig et al. 2021 b). This perspective requires a more differentiated policy design. For instance, public investment should aim to decarbonize high-energy basic goods, while less essential luxuries should be regulated or taxed more significantly (Oswald et al. 2020).

Energy use could be significantly reduced without compromising well-being by reconfiguring provisioning systems towards human needs. Taking a systemic view on consumption, the pro-

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visioning system can be understood to moderate how energy use and social outcomes associate. While currently no country provides for basic needs within planetary boundaries, substantial variation exists in how much resource use is associated with meeting these needs (O'Neill et al. 2018). Yet for substantive needs, even the best-performing countries reveal non-generalizable levels of resource use. Consequently, the efficiency of provisioning systems needs to be strengthened. Factors like high-quality public service and income equality are systematically related to a better socio-ecological performance (Vogel et al. 2021) and should hence be strengthened as part of a GND while detrimental provisioning factors should be disabled.

Removing path dependencies as a complement to a Green New Deal

While emphasizing the high relevance of investment and public leadership, Fesenfeld remains vague about how exactly these should take form. Given that the necessary steps to stabilize global heating while safeguarding well-being are large-scale, we conclude that it is required for the state and other actors to remove structural barriers to bring what is necessary within the reach of what is possible. For one, this implies that mobilizing public investment with the specific purpose of speeding up currently feasible transition processes is key. For another, it points to the fact the public leadership should materialize in the form of pathshaping industrial policy strategies that strive for a deliberate fossil phase-out.

An obvious first example of barriers to a rapid and just low-carbon transition are carbon lock-ins (Seto et al. 2016); for example, in the automotive industry (Mattioli et al. 2020) or in cement or steel production. It is in these contexts where public sector interventions are either crucial for reconfiguring provisioning systems, developing alternative modes of provision (e.g., public transport), or for taking over specific risks from the private sector to explore and experiment with less emission-intensive technologies.

Second, the role of incumbent industries is probably more ambiguous than Fesenfeld anticipates. Fossil industries have a long history of denying climate change and delaying potential countermeasures (Bonneuil et al. 2021). While some actors may have started to change their behavior, European industry associations continue their attempts to water down effective regulation (Influence Map Report 2021). Others use support for carbon pricing, which is thought unlikely to gain political traction, as a Trojan horse strategy in order to prevent more effective regulation (Markard and Rosenbloom 2020). This antagonistic setting raises fundamental questions about the role of the state within the transformational process (D'Alisa and Kallis 2020).

Thirdly, current path dependencies also reside in the dynamics imposed by a global economy where international firms can optimize their resource use to avoid regulations and taxation schemes imposed by single countries. In order to effectively con-

front this path-stabilizing impact of the existing international economic order, some unilateral forms of trade regulation on the side of those countries that aim to confront global heating will ultimately prove necessary (Kapeller et al. 2016). These could go well beyond the usual pricing- and tariff-based reasoning typically associated with the climate clubs mentioned by Fesenfeld.

How to fund a Green New Deal?

Finally, although crucially relevant for its distributional impacts, Fesenfeld addresses the question of how to fund a GND only in passing. Like most proposals, Fesenfeld mentions (progressive) carbon taxation and public debt as two key tools for financing a GND. Public debt, however, is typically repaid through taxes. As most tax systems are only slightly progressive at best, the costs associated with a GND would be distributed roughly proportionally to individual income. Affluent groups, while over-emitting, would not contribute overproportionally unless a large-scale change in taxation systems takes place.

Funding via public debt also implies that the transformation is effectively constrained by the willingness to take up additional public obligations. Well-targeted taxation of especially affluent households would thus not only allocate the financial burden more equitably but would also allow for widening the scope of planned investment initiatives. A recent proposal shows that a progressive wealth tax on the richest 1% of the EU population could levy funds of about 320 billion Euro per year and would effectively double the resources dedicated to a GND (Kapeller et al. 2021). Additionally, as tax policy is also climate policy, progressive taxation and an increase in income equality might also reduce high-energy luxury goods overconsumed by the rich and shift overall energy demand to sectors which are less difficult to decarbonize (Oswald et al. 2021).

Conclusion

We conclude that:

- sufficient decoupling may not be reached, even with significant upscaling of public investment a GND thus needs to reduce aggregate energy demand;
- demand-side solutions can reduce energy demand without compromising well-being;
- progressive distributive effects are not guaranteed both the growth effects a GND might induce in some sectors as well as the funding of a GND require explicit consideration to reduce socio-economic inequalities;
- public leadership is key for enabling the transition the state needs to remove structural barriers like carbon lock-ins and confront the sustained opposition of incumbent industries.

Overall, it is not our intention to counter Fesenfeld's optimism with pessimism. Yet we believe that it is important not to stop at

the currently feasible but to *be willing to confront the obstacles to the necessary* in order to have good reasons to share his optimism. Political feasibility is not a given but contingent on political constituencies and social imaginaries that can change over time. Since Fesenfeld is optimistic that social dynamics and feedback effects might tip and soon bring about democratic support for a GND, the endogeneity of political feasibility is in fact already present in his contribution. We argue that the very same social dynamics might expand to a GND designed to deliver the necessary.

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