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OPINION

On injustices raised by the implementation of low-carbon technologies

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Some ethical imperatives pertaining to climate change are mostly uncontroversial. Humanity has caused the problem and must do something to mitigate it and this job must to a large extent be carried by the current generations, as time is short [1]. There is also wide agreement, at least among climate justice scholars, that the reason for why this is so is a combination of causal responsibility and ability to pay, and that the affluent therefore must lead the transition away of fossil fuels [2]. However, when it comes to implementing a just transition to a low-carbon and sustainable future, most policies are ethically and politically contentious.

Most policies aimed at phasing out fossil fuels as well as scaling up fossil-free alternatives can and have been objected to as illegitimate and unjust [3]. Carbon is not just the basis of biological existence but is also the stuff of which modern societies and cultural practices are built. Coal heats homes, gas cooks food, and the combustion engine fired by gasoline is a symbol of freedom and independence. Climate policies, aiming to correct for the historical market failure of the costs of fossil fuel consumption falling on innocent others, thus provoke sometimes morally justified resistance. Similarly, replacement low-carbon alternative technologies are ethically controversial and policies aiming to promote them can too be unjust. The green future envisioned is often less colourful in real life. Wind turbines, solar panels, biogas production facilities, and mines are physically located somewhere which inevitably leads to conflicts [4].

A current conflict in the north of Sweden is a case in point. Despite both local and international protests–including by authorities such as UNESCO, Amnesty and the UN High Commissioner for Human Rights–in early 2022 the Swedish state gave the British company Beowulf Mining the green light to develop an iron-ore mine in Kallak/Gállak, in the municipality of Jokkmokk in northern Sweden, a region which is part of the traditional Sápmi land of the indigenous Sámi people (who call it Gállak) as well as next door to the Laponian UNESCO World Heritage Site. The Kallak iron ore project is aimed at supporting the production of so-called 'green steel', and as an infrastructure project it raises similar concerns to many renewable energy developments. Furthermore, the demand for steel is expected to increase even as energy systems are decarbonised, so those who worry about the predation on nature caused by fossil fuel exploitation have reason to be equally worried about the decarbonised world.

One basis for criticism of low-carbon energy policies is their environmental impact. Firstly, clean energy technologies, such as wind turbines, solar panels and batteries, require a range of metals (such as iron, lithium) and rare earth elements (such as neodymium and praseodymium) in order to be constructed. Since the ambition is to drastically scale up these technologies in the coming decades [5], the demand for critical resources will increase greatly and new mines open up. There are also land and environmental conflicts around the placement of new wind, solar and hydro power, both because of encroachment on land and the impact on other human interests, as well as the consequences on ecosystems and animal welfare.

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On the social side, there is a conflict between, on the one hand, economically justified clean energy technologies and on the other hand the perception by those affected that their implementation is unfair. Climate policies may be justified in economic terms for correctly pricing dirty and hazardous fossil fuels and incentivising clean and efficient renewable technologies, but at the same time objected to as unjust, unfair or even colonial. There are plenty of cases around the world [6, 7] of allegedly sustainable industrial investments that are perceived as unjust, violent, repressive and in which the decision-making process is considered illegitimate, disrespectful and undemocratic [8]. In the worst cases, autocratic leaders use the green agenda to repress people and protestors are beaten down or even assassinated [9]. This includes development of renewable energy, such as wind, solar, hydro and bioenergy, as well as mining projects. Individuals and communities standing in the way are at risk of being exploited or treated unfairly.

Another ground for criticism is that the low-carbon transition reinforces historical patterns of exclusion and encroachment of among others indigenous peoples. The land traditionally used for reindeer herding can, for example as in the case of the Sami in the Gállok region, be fragmented by infrastructure, power lines and necessary access roads, just as it has previously been by historical development projects [10]. Similarly, procedural injustices, such as decision-making failing to ensure prior, informed and freely-given consent, feed into patterns of paternalism and disrespect [11]. Some see patterns of environmental racism in how the burdens and benefits of renewable energy are distributed between different groups [12].

Time is also an issue. The expected lifespan of the Kallak mine is 14 years, whereas some of the negative consequences, for example discharge of metals having a negative impact on water quality and changes to the landscape, will be more long-term and possibly permanent. The inter-temporal dimension plays out differently in other cases of the low-carbon transition, leading to other time-specific injustices [13]. Another example is the perceived urgency to roll out renewable energy infrastructure, which sometimes speeds up unnecessarily cumbersome planning processes but also risks leading to unsustainable quick-fixes and potential abuses by authoritarian leaders.

If mismanaged, episodes in the low-carbon transition can unfortunately turn out to be 'shortsighted, racist, colonial and nature-hostile' (to paraphrase Greta Thunberg's verdict about the Kallak-Iron mine), but this need not be so. To prevent such injustices, the decision-making process must be inclusive and abide by procedural justice norms [14] and the socio-economic and ecological effects must be carefully evaluated not only in economic terms but also in those of justice [15]. Resistance must furthermore be taken seriously and possibly lead to projects being revisited or cancelled. This is not to say that all opposition is equally relevant and valid: some complaints are groundless, irrelevant or a defence of unjustified privileges afforded by the current system. But given the large scale, urgency and generalised legitimacy by which societies are beginning to undergo transformation, we need to guard against the real injustices this can bring about. No one should be thrown under the bus headed towards a low-carbon future.

References

1. Puthalpet JR. Mitigation of Climate Change. Daunting Clim Chang. 2022; 219–276. https://doi.org/10.1201/9781003264705-7
2. Caney S. Climate Justice. Stanford Encyclopedia of Philosophy. 2021.
3. Green F, Gambhir A. Transitional assistance policies for just, equitable and smooth low-carbon transitions: who, what and how? Clim Policy. 2020; 20: 902–921. https://doi.org/10.1080/14693062.2019.1657379

4. Ramasar V, Busch H, Brandstedt E, Rudus K. Energy Research & Social Science When energy justice is contested: A systematic review of a decade of research on Sweden ' s conflicted energy landscape. Energy Res Soc Sci. 2022; 94: 102862. https://doi.org/10.1016/j.erss.2022.102862
5. Cozzi L (International EA, Gould T (International EA. World Energy Outlook 2021. 2021; 1–386. Available: www.iea.org/weo.
6. Finley-Brook M, Thomas C. Renewable energy and human rights violations: Illustrative cases from indigenous territories in panama. Ann Assoc Am Geogr. 2011; 101: 863–872. https://doi.org/10.1080/00045608.2011.568873
7. Dunlap A. The 'solution' is now the 'problem:' wind energy, colonisation and the 'genocide-ecocide nexus' in the Isthmus of Tehuantepec, Oaxaca. Int J Hum Rights. 2018; 22: 550–573. https://doi.org/10.1080/13642987.2017.1397633
8. Sovacool BK. Who are the victims of low-carbon transitions? Towards a political ecology of climate change mitigation. Energy Res Soc Sci. 2021; 73: 101916. https://doi.org/10.1016/j.erss.2021.101916
9. Temper L, Avila S, Bene D Del, Gobby J, Kosoy N, Billon P Le, et al. Movements shaping climate futures: A systematic mapping of protests against fossil fuel and low-carbon energy projects. Environ Res Lett. 2020;15. https://doi.org/10.1088/1748-9326/abc197
10. Lawrence R. Internal Colonisation and Indigenous Resource Sovereignty: Wind Power Developments on Traditional Saami Lands. Environ Plan D Soc Sp. 2014; 32: 1036–1053. Available: http://journals.sagepub.com/doi/10.1068/d9012.
11. Cambou D. Uncovering injustices in the green transition: Sámi rights in the development of wind energy in Sweden. Arct Rev Law Polit. 2020; 11: 310–333. https://doi.org/10.23865/arctic.v11.2293
12. Levenda AM, Behrsin I, Disano F. Renewable energy for whom? A global systematic review of the environmental justice implications of renewable energy technologies. Energy Res Soc Sci. 2021; 71: 101837. https://doi.org/10.1016/j.erss.2020.101837
13. Partridge T, Thomas M, Pidgeon N, Harthorn BH. Urgency in energy justice: Contestation and time in prospective shale extraction in the United States and United Kingdom. Energy Res Soc Sci. 2018; 42: 138–146. https://doi.org/10.1016/j.erss.2018.03.018
14. Brandstedt E, Brülde B. Towards a Theory of Pure Procedural Climate Justice. J Appl Philos. 2019; 1–15. Available: http://doi.wiley.com/10.1111/japp.12357.
15. Schlosberg D. Theorising environmental justice: The expanding sphere of a discourse. Env Polit. 2013; 22: 37–55. https://doi.org/10.1080/09644016.2013.755387