



Land for Clean Energy Projects: For Community Energy

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Abstract We must increase our share of renewables from today's 29% to 60% by 2030, if we have any hope of keeping global temperatures at 1.5 degrees Celsius and achieving Sustainable Development Goal 7—affordable modern energy access to all by 2030. To do this, we must streamline the approval process of renewable energy projects and eliminate barriers hindering faster approvals. Community opposition, which is one barrier, as per a US study on delayed or cancelled renewable projects between 2008 and 2021 is driven by two main concerns—land and environmental impacts. This conceptual article calls for implementation of the theory of energy justice in its five forms—distributive, procedural, restorative, recognition and cosmopolitanism—as a solution in engaging energy communities and addressing their concerns. Once community engagement is explored through the lens of energy justice, solutions emerge to solve this barrier by including communities in the energy planning process as opposed to further down the pipeline in project implementation;

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restoring and rehabilitating affected community lands and environments impacted by renewable energy projects, through recognising indigenous community connections to their lands; and funding the UNFCCC loss and damage fund to bring up renewable energy projects.

Keywords Energy communities · Nimby · Public participation · Energy justice · SDG7

16.1 INTRODUCTION

Communities are slowing down the pace of the energy transition.¹ Their opposition of renewable energy projects in Europe is a paradox, given that almost 80% of people across the European continent are in favour of renewable energy resources such as wind energy.² In the Netherlands, one-fifth of Dutch municipalities have had dozens of projects cancelled, delayed or postponed owing to local opposition.³ In Norway, environmental activist Greta Thunberg joined indigenous Sami groups and environmental activists two months ago in the country to block wind turbines from reindeer pastures.⁴ The term “nimbyism” (Not In My Backyard—NIMBY) has been used to explain opposition to some of

¹ See Gross S, (2020), ‘Renewables, land use and local opposition in the United States’ (Brookings Institution) < https://www.brookings.edu/wp-content/uploads/2020/01/FP_20200113_renewables_land_use_local_opposition_gross.pdf > accessed on May 30, 2023; Nir SM, (2020), ‘He set up a big solar farm. His neighbours hated it’ (The New York Times) < <https://www.nytimes.com/2020/03/18/nyregion/solar-energy-farms-ny.html> > accessed on May 30, 2023; and Kavilu S, (2021), ‘Land conflicts are slowing Kenya’s transition to clean energy’ (Energy Monitor) < <https://www.energymonitor.ai/policy/just-transition/land-conflicts-are-slowing-kenyas-transition-to-clean-energy/> > accessed on 30 May 2023.

² Wind Europe, (2023), ‘Wind delivers the energy society wants’ (Wind Europe) < <https://windeurope.org/about-wind/wind-energy-today/> > accessed on May 10, 2023.

³ Van Halm I, (2022), ‘Weekly data: onshore wind plans in one-fifth of Dutch municipalities affected by protests’ (Energy Monitor) < <https://www.energymonitor.ai/tech/renewables/weekly-data-onshore-wind-plans-in-one-fifth-of-dutch-municipalities-affected-by-protests/> > accessed on May 10, 2023.

⁴ Ables K & Noack R, (2023), ‘Why Greta Thunberg is protesting wind farms in Norway’ (Washington Post) < <https://www.washingtonpost.com/climate-environment/2023/03/01/greta-thunberg-wind-turbines-reindeer/> > accessed on May 12, 2023.

these renewable energy projects.⁵ This reason is outdated in the light of recent studies which have found that a multitude of reasons drive local opposition to clean energy projects.⁶

A 2021 US study on 53 utility-scale wind, solar and geothermal energy projects that were delayed or blocked between 2008 and 2021 in 28 US states found seven sources of opposition.⁷ These seven reasons which led to significant delays or outright cancellation of 83% of the projects revolved around two main issues—land and environmental impacts. Further, the study found that almost 80% of existing controversies involved more than one type of opposition.

In Kenya, Nigeria, Ghana, Tanzania and Morocco, the situation is different. Displacement of local communities has stopped, severely delayed or affected export of power from wind, solar and geothermal energy projects solely on the basis of the land issue, land compensation and indigenous community land rights.⁸

⁵ Nimbyism posits that there would be no local opposition if the project were situated elsewhere, and that people are inherently selfish and against change, which is incorrect in the light of current studies evidencing projects' opposition. See Susskind L, Chun J, Gant A, Hodgkins C, Cohen J, Lohmar S, (2022), 'Sources of opposition to renewable energy projects in the United States', *Energy Policy*, Volume 165, 2022, 112922, ISSN 0301-4215, <https://doi.org/10.1016/j.enpol.2022.112922>.

⁶ Susskind L, Chun J, Gant A, Hodgkins C, Cohen J, Lohmar S, (2022), 'Sources of opposition to renewable energy projects in the United States', *Energy Policy*, Volume 165, 2022, 112922, ISSN 0301-4215, <https://doi.org/10.1016/j.enpol.2022.112922>.

⁷ These seven sources of opposition include possible environmental impacts; issues with respect to locking down project financing as well as revenue generation; what the public perceive to be unfair participation in the project; lack of respect to indigenous community tribes; health and safety; intergovernmental disputes; and possible impacts on property value and land. Susskind L, Chun J, Gant A, Hodgkins C, Cohen J, Lohmar S, (2022), 'Sources of opposition to renewable energy projects in the United States', *Energy Policy*, Volume 165, 2022, 112922, ISSN 0301-4215, <https://doi.org/10.1016/j.enpol.2022.112922>.

⁸ Lomax J, Mirumachi N, Hautsch M, (2023), 'Does renewable energy affect violent conflict? Exploring social opposition and injustice in the struggle over the Lake Turkana Wind Farm, Kenya', *Energy Research & Social Science*, Volume 100, 2023, 103089, ISSN 2214-6296, <https://doi.org/10.1016/j.erss.2023.103089>. See also, Asiegbu AD, (2012), 'Major reason for failure of most solar street lighting projects in Nigeria,' *International Journal of Current Research* (2012), 141–143. See further, Bawakyillenuo S, (2009), 'Policy and institutional failures: photovoltaic solar household system (PV/SHS) dissemination in Ghana', *Energy & Environment*, Volume 20, issue 6, 927–947, <https://doi.org/10.1260/095830509789625383>; and Gregory J, Sovacool BK, (2019), 'The financial risks and barriers to electricity infrastructure in Kenya, Tanzania, and Mozambique:

This is all very concerning. To keep global temperature at 1.5 degrees Celsius and avoid the most catastrophic effects of climate change, we must increase the share of renewables, from today's 29% to 60% by 2030.⁹

16.2 HOW CAN THE POWER OF ENERGY JUSTICE TRANSFORM THE ISSUE?

It is not enough to conduct dialogue with host communities early on to communicate local benefits, such as job and investment opportunities, or reduced energy bills, as it has been suggested.¹⁰ The process of decision making right from government formulation of policy, call out for tenders and a joint public participation process between the project developer and the government in obtaining permits is key to building this community support.

Energy justice,¹¹ an established theory for the past decade, provides recommendations to solve opposition, by addressing process human rights as well as substantive land, culture and indigenous community rights. Its five forms—distributive justice which concerns equitable distribution of benefits and burdens from the energy sector; procedural justice which concerns whether the legal processes have been observed and that there is access to justice; recognition justice—which concerns recognition of the rights of different groups, in particular local and indigenous communities; restorative justice—which concerns restoration of any injustices caused by the energy sector; and cosmopolitan justice—which concerns the view that we are all citizens of the same world and negative cross-border effects from energy activities need to be considered provides solutions.

a critical and systematic review of the academic literature', *Energy Policy*, Volume 125, 2019, 145–153, <https://doi.org/10.1016/j.enpol.2018.10.026>.

⁹ IEA, (2022), *Renewable Electricity (IEA)* < <https://www.iea.org/reports/renewable-electricity> > accessed on May 11, 2023.

¹⁰ Howe C & Greene N, (2022), 'A way forward toward reducing local opposition to renewables' (NRDC) < <https://www.nrdc.org/bio/cullen-howe/way-forward-toward-reducing-local-opposition-renewables> > accessed on May 12, 2023.

¹¹ The consideration of human rights in the energy life cycle. See Heffron RJ, (2021), 'The challenge for energy justice: correcting human rights abuses' (Palgrave Macmillan) 3.

In implementing distributive justice, it is important that local communities have the capacity to take up job opportunities in energy projects through skills transfer. Further, other opportunities could be presented like the possibility of earning a 5–10% share of government revenue from the energy project given the burden of hosting the project in their lands. In implementing procedural justice, transparency, due process and disclosure of project information well in advance are crucial to gaining meaningful support from the community. If information is shared at the strategic environmental assessment stage, as opposed to project stage, it will enable communities to provide feedback on the relevance of committing to the specific energy plan, programme or policy anchoring the project in the first place, as opposed to at the end of the pipeline project stage, during the environmental impact assessment process, when the decision has already been made to commit to the project.¹²

In implementing recognition justice, recognition of indigenous communities such as the Maasai community in Olkaria Geothermal projects in Kenya and their relationship with the land and customs related to it will facilitate community acceptance of such projects in their territories.

In implementing restorative justice, it is important that security deposits are a mandatory regulatory requirement for all projects—clean or fossil fuel, to rehabilitate inevitable damage to the environment, as well as resettle communities to property of equal to or above the previous one to sustain their socio-economic livelihood activities. This will mitigate community opposition. For instance, the Olkaria geothermal plants in Kenya produce hydrogen sulphide as a by-product besides water vapour as waste; thus, an alternative location far from the plants would be ideal in reducing ongoing pollution complaints from nearby communities.¹³

In implementing cosmopolitan justice, as citizens of the world, we must keep politicians accountable in ramping up energy commitments before COP 28. For instance, committing to finance the loss and damage

¹² An Environmental Impact Assessment (EIA) is limited to projects while a Strategic Environmental Assessment (SEA) evaluates not just the projects but also plans, policies and programmes before the project is decided upon. Thus, an EIA is reactive while an SEA on the other hand is a proactive policy planning approach. See Glazewski J, (2005) ‘Environmental law in South Africa’ (LexisNexis South Africa) 231.

¹³ Accountability Counsel, (2018), “Olkaria B” (Accountability Counsel) < <https://accountabilityconsole.com/complaints/olkaria-b/> > accessed on May 30, 2023.

fund will mean that clean energy projects have enough financial support to engage community stakeholders beforehand, to reduce opposition at the project stage.

16.3 THE CHALLENGES TO OVERCOME FOR LAND

Public participation from the onset must always be accompanied by symmetry and accessibility of information. However, developers are wary to do so to avoid the challenge of artificial inflation of property prices where there are multiple land owners in the project area.¹⁴ Developers who are competing with others in the field may want to keep their projects private so as to avoid wrangles with competitors in maintaining their positions in the transmission queue of eventually distributing electricity. Further, small developers might be hesitant to engage the community before obtaining signed agreements on the projects from government.¹⁵

Another challenge is the failure of some African governments to recognise and register communal lands, as well as indigeneity, in a bid to maintain colonial-era borders (recognition justice).¹⁶ These perspectives may lead to communities hardening their resolve on opposition as historical injustices, as well as their participation on the project impacts at the tail end of the implementation of the planning process as opposed to why even undertaking the project in the first place at the onset of the planning process appears to disregard their views on land use. A balance between these conflicting considerations and a compromise between the developer, government and host community are required to ensure the much-needed clean energy transition is conducted in an equitable, respectful and responsible way—is this where there should be a new social contract?

¹⁴ Howe C & Greene N, (2022), 'A way forward toward reducing local opposition to renewables' (NRDC) < <https://www.nrdc.org/bio/cullen-howe/way-forward-toward-reducing-local-opposition-renewables> > accessed on May 12, 2023.

¹⁵ Howe C & Greene N, (2022), 'A way forward toward reducing local opposition to renewables' (NRDC) < <https://www.nrdc.org/bio/cullen-howe/way-forward-toward-reducing-local-opposition-renewables> > accessed on May 12, 2023.

¹⁶ IWGIA (The International Work Group for Indigenous Affairs) (2019), 'Kenya: the impact of renewable energy projects on indigenous communities in Kenya. The cases of the Lake Turkana Wind Power project and the Olkaria Geothermal Power Plants' IWGIA Report 28 < https://www.iwgia.org/images/publications/new-publications/IWGIA_report_28_The_impact_of_renewable_energy_projects_on_Indigenous_communities_in_Kenya_Dec_2019.pdf > accessed on May 13, 2023.

16.4 CONCLUSION

An energy system that runs on 100% renewable energy sources is key to mitigating climate change. Renewable project delays and cancellations contribute to lost potential generating capacity, for example, almost 4600 MW in the US.¹⁷ In Africa, 600 million, almost half of the continent lack access to electricity.¹⁸ Without faster approvals of these clean energy projects, the continent will fail to attain the UN Sustainable Development Goal of achieving universal access to affordable electricity by 2030.¹⁹

Community opposition to renewable energy projects is an unnecessary obstacle. If we are just in engaging communities, at the energy planning process as opposed to project implementation; just in recognising that we need to restore and rehabilitate affected community lands and environments impacted by clean energy projects; just in recognising indigenous community connections to their lands; and just in financial contributions to the UNFCCC loss and damage fund to mitigate climate change through renewable energy projects, we would solve urgent energy and developmental concerns for the energy poor in the world, and promote the well-being of society.

¹⁷ Susskind L, Chun J, Gant A, Hodgkins C, Cohen J, Lohmar S, (2022), ‘Sources of opposition to renewable energy projects in the United States’, Energy Policy, Volume 165, 2022, 112922, ISSN 0301-4215, <https://doi.org/10.1016/j.enpol.2022.112922>.

¹⁸ IEA, (2023), ‘SDG7: data and projections access to electricity’ (IEA) < <https://www.iea.org/reports/sdg7-data-and-projections/access-to-electricity> > accessed on May 12, 2023.

¹⁹ Ben Payton, (2022), ‘African wind power struggles to gain momentum’ (African Business) < <https://african.business/2022/06/energy-resources/african-wind-power-struggles-to-gain-momentum> > accessed on May 12, 2023.

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