



REPORT

Beyond Growth: Pathways for a Just Energy Transition







AUTHORS AND REVIEW



DESIGN



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Designed by Emilia Guzmán

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Executive Summary

This policy brief advocates for an energy transition detached from the imperative of continuous economic growth or expansion, emphasising inclusiveness and social well-being over traditional economic metrics that focuses on the growth of the Gross Domestic Product and merely profit-based logic as measurement of success. As current energy systems are deeply intertwined with economic growth, they greatly contribute to perpetuating unsustainable consumption and exacerbating social and environmental inequalities within and among countries. To address these challenges, this brief argues that it is crucial to adopt what has been called a beyond growth approach; one which redefines economic success through well-being, environmental sustainability, and equitable resource distribution instead of focusing on the growth or expansion of the economy. Furthermore, the brief considers how human rights and feminist perspectives can offer concrete policy guidelines to adopt a beyond growth approach and ensure that marginalised and vulnerable groups are not negatively impacted, excluded, and can participate in energy decision-making processes. In this line, this brief considers how the ethics of care, feminism, and the human rights framework are central tools for the transformation of energy systems along beyond growth principles.

Against this background, the brief puts forward a series of policy recommendations that draw from beyond growth policies and put feminist approaches and human rights in the centre, including scaling down polluting industries that disproportionately harm groups already impacted by structural conditions of inequality; implementing strict energy efficiency standards across sectors—particularly in buildings, appliances, and transportation with a specific focus on supporting lowincome households to adopt energy-saving measures and preventing energy poverty; allocating massive public funding to decentralised, community-based renewable energy generation projects; and adopting gender impact assessments in all energy policies and projects to ensure that the different energy needs and roles of women and men are recognised. These policy recommendations provide a roadmap to envision an approach beyond growth that can deliver a just energy transition that while it serves the purposes of combating the climate emergency also contributes to fostering wellbeing and equality for all.

Climate Crisis and the Consequences of Fossil Fuel Consumption

Despite the improvement of adequate conditions of living throughout the world after the industrial revolution in the XIX Century, this has come at an environmentally unsustainable cost, hindering opportunities for future improvement of humanity's quality of life. Fossil fuels like natural gas and coal have sustained the global energy infrastructure, promoted modern lifestyles, and driven the current economic and technological advancements. For these reasons, billions of tons of fossil fuels are extracted and burned annually releasing large amount of carbon emissions.¹ This high-level of emissions, especially of CO2, emitted through human productive activities, is single-handedly the largest contributor to global warming.

The consequences of anthropogenic climate change have become evident with more unpredictable, frequent, and severe weather events, which impact human health, ecosystems, and infrastructure. Looking at recent evidence, nearly one-third of the global population is facing an increase in wildfires, as has been reported in North America and Southern Europe.² Furthermore, the Antarctic ice sheet has been melting at a rate 75% higher between 2011 and 2020 compared to the previous decade,³ and in the boreal summer of 2024, the global average temperature reached a record high.⁴ Additionally, recent reports show that six out of the seven planetary boundaries, which establish the safe limits for human pressure on nature's critical processes, have been crossed, triggering severe and often irreversible environmental

⁴ World Meteorological Organization (WMO). The Global Climate 2011-2020 A Decade of Accelerating Climate Change. Geneva , 2024. https://wmo.int/media/news/record-breaking-temperatures-continue-august

⁵ Richardson, Katherine, Will Steffen, Wolfgang Lucht, Jørgen Bendtsen, Sarah E. Cornell, Jonathan F. Donges, Markus Drüke, et al. Earth beyond Six of Nine Planetary Boundaries. Science Advances 9, no. 37 (2023). https://doi.org/10.1126/sciadv.adh2458.

¹ Fiedlingstein, Pierre, Michael O'Sullivan, Matthew W. Jones, Robbie M. Andrew, Dorothee C.E. Bakker, Judith Hauck, Peter Landschützer, et al. Global Carbon Budget 2023. Earth System Science Data 15, no. 12 (2023). https://doi.org/10.5194/essd-15-5301-2023.

²Jones, Matthew W, Douglas I Kelley, Chantelle A Burton, Francesca Di Giuseppe, Maria Lucia F Barbosa, Esther Brambleby, Andrew J Hartley, et al. State of Wildfires 2023–24. (2024).

³ World Meteorological Organization (WMO). The Global Climate 2011-2020 A Decade of Accelerating Climate Change. Geneva , 2023 https://wmo.int/publication-series/global-climate-2011-2020-decade-of-acceleration

impacts.⁵ All of the above highlights the need for urgent action to mitigate climate change and avoid climate collapse.

In that direction, many countries, such as Australia⁶, China⁷, the European Union,⁸ and New Zealand⁹ have set ambitious targets to reduce greenhouse gas emissions and achieve climate neutrality. This global effort towards decarbonisation took shape with the signature of the Paris Agreement in 2015 and its entry into force in 2016.

To comply with climate commitments under the Paris Agreement and related instruments, countries are investing in alternative energy systems driven by renewable energy sources like wind, solar, and geothermal. This, coupled with the pressing need for reducing energy dependence, achieving economic stability, and increasing efficiency has opened up a worldwide dialogue on the future of energy sources and systems. While fossil fuels remain the dominant energy source with a global share of more than 80%,¹⁰ the contribution of different renewable energy sources is rapidly increasing. According to a 2022 report by the Renewable Energy Policy Network, the global renewable energy capacity increased significantly in the last decade.¹¹ By the end of 2023, renewables produced just over 30% of the world's electricity; among the largest generators of electricity, Brazil and Canada stand out, generating 89% and 65% of their electricity from renewables, respectively.¹²

⁶ International Energy Agency. Australia 2023 Energy Policy Review. IEA Energy Policy Reviews. Paris: OECD Publishing, 2023. https://www.iea.org/reports/australia-2023

⁷ International Energy Agency. An Energy Sector Roadmap to Carbon Neutrality in China. IEA Energy Policy Reviews Paris: OECD Publishing, 2021. https://doi.org/https://doi. org/10.1787/5f517ddb-en.

⁸ European Commission. Governance of the Energy Union and Climate Action. Official Journal of the European Union 61, no. 21 December (2018).

⁹ International Energy Agency. New Zealand 2023 Energy Policy Review. IEA Energy Policy Reviews. Paris: OECD Publishing, 2023. https://doi.org/https://doi.org/10.1787/d99c3085-en.

¹⁰ Energy Institute. Statistical Review of World Energy 2023 (2023).

¹¹ REN21 Renewables Now. Renewables 2022. Global Status Report. Available on 18 February 2025 at: https://www.ren21.net/wp-content/uploads/2019/05/GSR2022_Full_Report.pdf

¹² Rangelova, Kostantsa. Brazil rises as G20 renewables powerhouse. Ember, 11 Jul. 2024. Accessed 14 March 2025 at :https://ember-energy.org/latest-insights/brazil-rises-as-g20renewables-powerhouse/

Renewable energy technologies not only can reduce greenhouse gas emissions but can be produced locally and are abundant. Amongst them, solar photovoltaic (PV) and wind energy have emerged as the leading technologies. Despite their initial high costs, through a series of public support mechanisms, their cost has dropped significantly in the past years making them more affordable. For instance, the cost of electricity production from solar PV has dropped more than 80%, since 2010, making it a competitive alternative to fossil fuels in many regions.¹³ The share of wind energy in the global energy mix has also been increasing. Global wind energy capacity surpassed 1 terawatt in 2023, driven by strong growth in wind generation in China.¹⁴ Energy storage solutions especially batteries are also becoming more affordable and efficient,¹⁵ allowing for the storage of the intermittent renewable energy during peak hours.

Nonetheless, to meet the targets set by the Paris Agreement, renewable energy's share in global power generation must rise to at least 86% by 2050.¹⁶ To achieve this goal substantial financial investments, technological advancements, efficiency measures, reduction of expenditures on unnecessary or socially harmful industries with significant environmental impacts (such as the military-industrial complex), different lifestyles for people with resources, and supportive policy frameworks are needed. For instance, although 2 trillion dollars are expected to be invested towards clean energy in 2024, there are still important disparities in energy investment flows especially in emerging economies.¹⁷ Additionally, technological advancements are crucial to enhance the performance and integration of renewable sources, such as breakthroughs in

¹⁵Olabi, Abdul Ghani, Qaisar Abbas, Pragati A. Shinde, and Mohammad Ali Abdelkareem. Rechargeable Batteries: Technological Advancement, Challenges, Current and Emerging Applications. Energy 266 (2023): 126408. https://doi.org/10.1016/J.ENERGY.2022.126408.

¹⁶ Güneş, Hakan, Hamis Miraji Ally Simba, Haydar Karadağ, and Mustafa Şit. Global Energy Transformation and the Impacts of Systematic Energy Change Policy on Climate Change Mitigation. Sustainability 15, no. 19 (2023). https://doi.org/10.3390/su151914298.

¹⁷ IEA (2024), World Energy Investment (2024) IEA, Paris https://www.iea.org/reports/worldenergy-investment-2024, Licence: CC BY 4.0

¹³ International Renewable Energy Agency. Renewable Power Generation Costs in 2021. International Renewable Energy Agency. Abu Dhabi: IRENA, 2022.

¹⁴ Global Wind Energy Council. Global Wind Report 2024. Available on 14 March 2025 at: https:// www.gwec.net/reports/globalwindreport

grid management and improved recyclability of photovoltaic systems and wind turbines.

Moreover, to reduce greenhouse gas emissions it is essential to decrease the production and consumption of fossil fuels in absolute terms, not merely as a proportion of the energy mix. The world has not been following this path. According to the IMF, fossil fuel subsidies were \$7 trillion or 7.1 percent of global GDP in 2022, reflecting a \$2 trillion increase since 2020¹⁸. In the United States - the largest oil producer in the world –, oil production reached an all-time high in 2023, breaking the previous record from 2019, held also by the US¹⁹. In order to promote an effective energy transition, policies must aim at phasing out fossil fuels, rather than simply stacking renewable sources alongside them.²⁰

Beyond the focus on energy generation, the energy transition extendsalsotodifferent consumption patterns, with a noticeable shift towards increased electrification that will replace fossil fuel-based systems with electrical, and efficiency measures like upgrading insulation in buildings, using LED lighting, and smart meters and flexible systems that can adapt to changes in supply and demand. As societies move from traditional energy systems towards renewable energy, we are also witnessing a significant reconfiguration of energy arrangements. These new systems have socio-economic implications with different impacts in countries in the Global South and in the Global North, such as new employment opportunities, regional and global energy dependencies, geopolitical power shifts, and new consumer behaviours. These transformations are context-specific and may look different depending on the region, but countries in the Global South, particularly, face stark challenges in moving forward with this transformation

¹⁸ International Monetary Fund. Climate Change: Fossil Fuel Subsidies, accessed on 14 March 2025. https://www.imf.org/en/Topics/climate-change/energy-subsidies.

¹⁹ EIA, US Energy Information Administration. United States produces more crude oil than any country, ever. Accessed on 14 March 2025: https://www.eia.gov/todayinenergy/detail. php?id=61545.

²⁰ Marques, Luiz. Transição energética vira 'empilhamento' de fontes. Jornal da Ciência, 16 feb. 2024. Accessed 14 March 2025 at https://www.jornaldaciencia.org.br/transicao-energeticavira-empilhamento-de-fontes/?fbclid=lwY2xjawFUqRFleHRuA2FlbQIxMQABHRf4J4aLvrgE1jN-IjHVHijS6v67XgtJHZLYe-UV95u1wnCfYoupI5X5NQ_aem_jIrLMFk4N6h93wn1uHiPvw.

as they face limited resources, capacities, and technology, as well as profound social inequalities. It is essential to recognise that the levelling playing field is not the same for all countries in the transformation of energy systems.

Limitations of the Current Growth Economic Paradigm

The current economic paradigm, which prioritises continuous growth, not only has proven inadequate in addressing the environmental and social challenges of our time, but also aggravates inequality and environmental degradation.²¹ This relentless pursuit of economic expansion leads to the overexploitation of natural resources and often aggravates social disparities as the benefits and burdens are commonly unevenly distributed. The relentless drive for economic expansion reinforces systems of exploitation, where frequently the few reap the rewards at the expense of the many. Negative impacts of this model have been shown to disproportionately affect marginalised communities, especially those located in less affluent areas. ²²

A recent study found that the unequal exchange between the Global South and the Global North amounted to \$10.8 trillion in 2015 alone, and \$242 trillion from 1990 to 2015 when measured in terms of resources and labour embodied in goods exported to other countries. This represents a positive balance of trade for the Global North, yet significant losses for the Global South that are not offset by their total aid receipts over the same period, with the remaining disparity being 30 times greater.²³

²¹ Fletcher, Charles, William J Ripple, Thomas Newsome, Phoebe Barnard, Kamanamaikalani Beamer, Aishwarya Behl, Jay Bowen, et al. Earth at Risk: An Urgent Call to End the Age of Destruction and Forge a Just and Sustainable Future. Article. PNAS Nexus 3, no. 4 (2024): pgae106–pgae106. https://doi.org/10.1093/pnasnexus/pgae106.

²² Sultana, Farhana. Whose Growth in Whose Planetary Boundaries? Decolonising Planetary Justice in the Anthropocene. Geo: Geography and Environment (2023). https://doi.org/10.1002/geo2.128.

²³ Hickel, Jason, Christian Dorninger, Hanspeter Wieland, and Intan Suwandi. Imperialist Appropriation in the World Economy: Drain from the Global South through Unequal Exchange, 1990–2015. Global Environmental Change 73 (2022). https://doi.org/10.1016/j. gloenvcha.2022.102467.

Furthermore, in pursuing rapid development, the Global North bears responsibility for 92% of the carbon dioxide emissions that surpass the planetary boundary of 350 parts per million (ppm) atmospheric concentration of CO2. ²⁴ This evidence shows how most affluent countries' dependence on fossil fuels exacerbates both global inequality and climate change. In a similar line, access to renewable energy is also dependent on socioeconomic factors. When income inequality increases, lower-income households often struggle to access and afford renewable energy solutions, such as solar panels or energyefficient appliances, which makes them rely on pollution energy sources leading to further disparities and significant adverse health and environmental impacts. ²⁵

This focus on growth, in the current economic and political structures, tends to concentrate wealth and power in the hands of a few, leaving marginalised communities to bear the disproportionate burden of environmental degradation, resource extraction, and social inequities. For example, the extraction processes associated with material use needed to increase economic output often led to severe environmental pressures disproportionately absorbed by marginalised communities, many located in developing countries.²⁶ Trapped in these models of unequal exchange, the growth imperative globally perpetuates a cycle of exploitation where resources and wealth flow disproportionately to the Global North, while the Global South and marginalised communities bear the brunt of environmental destruction, social inequities, and economic exclusion. This further entrenches a system that prioritises profit over fairness, justice, and sustainability, which leaves little space for the creation of conditions of wellbeing. In this line, energy, which is a driver of well-being, is also concentrated and unequally distributed at the global level. In the UK, 20% of the population falls within the top 5% of global

²⁴ Hickel, Jason. Quantifying National Responsibility for Climate Breakdown: An Equality-Based Attribution Approach for Carbon Dioxide Emissions in Excess of the Planetary Boundary. The Lancet Planetary Health 4, no. 9 (2020). https://doi.org/10.1016/S2542-5196(20)30196-0..

²⁵ Wang, Jiang. Renewable Energy, Inequality and Environmental Degradation. Journal of Environmental Management 356 (2024). https://doi.org/10.1016/j.jenvman.2024.120563.

²⁶ Alarcón, Pedro. Old and New Challenges of the Energy Transition: Insights from South America. South African Journal of International Affairs 30, no. 2 (2023). https://doi.org/10.1080/10220461. 2023.2221227.

energy consumers, compared to 40% in Germany. In contrast, only 2% of China's population and 0.02% of India's are in this category.²⁷ At the same time, even within affluent countries, the increased costs of energy have pushed low-income sectors into energy poverty.²⁸

Addressing these issues requires a fundamental rethinking of the economic system and structures to ensure that energy transitions contribute to global fairness and ecological balance rather than reinforcing existing inequalities. Beyond growth approaches offer an alternative to growth hegemony by challenging the assumption that endless economic expansion is necessary for progress in all societies. Instead, it advocates for a system that prioritises well-being, equity, reparations, and ecological sustainability over GDP growth. This is especially applicable in the most affluent countries where the expansion of their economies has already produced enough resources to provide conditions of wellbeing for all. In the context of energy transitions, beyond growth emphasises redistributing energy resources and ensuring that the burdens and benefits of the shift to renewable energy are fairly distributed.

Limitations of the Green Tech Alternatives

The belief that economic growth can be achieved in a sustainable way, mainly by decoupling economic development from environmental degradation lies at the heart of the green growth theory. Advocates of this theory argue that renewable energy, increased energy efficiency, sustainable resource management, and innovations in clean technology can drive economic development and disassociate from negative externalities like climate change. However, empirical evidence on resource use and carbon emissions challenges the validity of the green growth theory. A review of both historical data and model-based projections reveals that there is no evidence to suggest that absolute decoupling of economic growth from

²⁷ Oswald, Yannick, Anne Owen, and Julia K. Steinberger. Large Inequality in International and Intranational Energy Footprints between Income Groups and across Consumption Categories. Article. Nature Energy 5, no. 3 (2020): 231–39. https://doi.org/10.1038/s41560-020-0579-8.

²⁸ WGuan, Yuru, Jin Yan, Yuli Shan, Yannan Zhou, Ye Hang, Ruoqi Li, Yu Liu, et al. Burden of the Global Energy Price Crisis on Households. Article. Nature Energy 8, no. 3 (2023): 304–16. https:// doi.org/10.1038/s41560-023-01209-8.

resource use can be achieved globally; and that although some decoupling of carbon emissions is possible, achieving it at a pace sufficient to keep global warming below 1.5°C or 2°C is highly unlikely.²⁹ Another research study cautions that energy footprints could double by 2050 compared to 2011 levels, even with improvements in energy efficiency, unless consumption is reduced, and major policy changes are implemented.³⁰

In order to leverage a green transition without sacrificing growth the promises have turned to other technologies like carbon capture and storage. However, these alternatives also come with certain limitations. These technologies are still at a low technological level, making it challenging to predict their future influence on the energy transition and their socioeconomic instance, research on geoengineering impacts. For technologies reveals a significant misalignment with beyond growth principles, as they pose a high risk of perpetuating social injustice.³¹ For instance, carbon capture and storage technologies often require large quantities of water and land that can be diverted from other important activities, such as agriculture or livestock, and entail the conversion of forests and grasslands.³² Furthermore, their development often lacks participatory decision-making processes, leaving a substantial portion of their social and environmental consequences largely unknown.

Renewable energy sources also still face significant challenges. Their intermittent character makes it necessary to have the availability of reliable energy storage solutions and flexible grids that require a significant increase in the use of transition minerals. At the same time, there are questions about their lifetime and impact on their surrounding environment and

²⁹ Hickel, Jason, and Giorgos Kallis. Is Green Growth Possible? New Political Economy 25, no. 4 (2020). https://doi.org/10.1080/13563467.2019.1598964.

³⁰ Oswald, Y., Owen, A., & Steinberger, J. K. (2020). Large inequality in international and intranational energy footprints between income groups and across consumption categories [Article]. Nature Energy, 5(3), 231–239. https://doi.org/10.1038/s41560-020-0579-8

³¹ Muraca, Barbara, and Frederike Neuber. Viable and Convivial Technologies: Considerations on Climate Engineering from a Degrowth Perspective. Journal of Cleaner Production 197 (2018): 1810–22. https://doi.org/10.1016/j.jclepro.2017.04.159.

³² Climate Rights International, Carbon Capture and Sequestration, accessed 17 January 2025 at https://cri.org/carbon-capture-sequestration/

biodiversity. Despite these conditions, renewable sources across the world have increased. Nevertheless, fossil fuels still dominate the global energy system. This is because the ongoing expansion of renewable energy does not directly replace fossil fuel consumption on an equal scale; instead, it tends to increase the overall energy production, a phenomenon known as "energy addition".³³

For these reasons, from a beyond-growth perspective, merely replacing fossil fuels without simultaneously reducing energy demand is insufficient to transition to sustainable societies and economies. It is crucial to consider that green technologies, such as hydrogen, necessitate additional high levels of electricity, further amplifying energy demand. Moreover, if the primary goal remains achieving economic growth, there is a risk that the adoption of renewable technologies could lead to a "rebound effect," where the efficiencies gained through these technologies are offset by increased energy consumption.

A beyond growth approach emphasises the need to actively reduce energy consumption to prevent ever expanding energy systems. This involves downsising harmful, energy-intensive and fossil-fuel based industries, from the military industry all the way to fast fashion. Furthermore, it advocates for energy efficiency and management strategies, such as smart grids and demand response systems, to optimise energy use. Lowtech alternatives, like bicycles over cars combined with public transport, energy education, and awareness, can ultimately cultivate a culture that has reduced energy and material use in line with a beyond growth approach.

³³ York, Richard, and Shannon Elizabeth Bell. Energy Transitions or Additions?: Why a Transition from Fossil Fuels Requires More than the Growth of Renewable Energy. Energy Research and Social Science, 2019. https://doi.org/10.1016/j.erss.2019.01.008.

A Case for Systemic Change

Despite their limitations, there is no doubt that Despite their limitations, there is no doubt that renewable energy systems pose a unique opportunity, not only for a sustainable energy transition, but also for new social arrangements. It is estimated that distributed energy resources and smart grids will play a crucial role in ensuring global energy security and achieving net-zero emissions by 2050.³⁴ These distributed energy systems like solar panels, wind turbines, battery storage, microgrids rely on small-scale production units that utilise locally available resources and distribute energy according to specific needs. So far, these systems present the most viable and desirable alternative to the existing fossil fuel-based centralised energy system.³⁵

Their decentralised character can reduce the dependence on large, centralised fossil fuel industries. That way, renewable energy systems can bring potential positive benefits to the local communities that go beyond electricity production. For instance, small-scale community-owned renewable energy projects can generate local revenue, build new infrastructure, create jobs, and promote energy self-sufficiency and autonomy. Since they are not necessarily connected to the national grid and are not directly dependent on the institutions of the State, they can also offer an opportunity to create new social arrangements through the empowerment of the local community and collaboration among actors.³⁶ It remains, however, crucial to receive the financial

³⁴ EY. Can Decentralized Energy Get Good Enough, Fast Enough?, (2022). https://www. ey.com/en_us/insights/energy-resources/can-decentralized-energy-get-good-enough-fastenough#:~:text=Distributed%20energy%20resources%20and%20smart,renewable%20 technology%20into%20their%20grids.

³⁵ Javid, Iqra, Aditya Chauhan, Sahil Thappa, S. K. Verma, Y. Anand, A. Sawhney, V. V. Tyagi, and S. Anand. Futuristic Decentralized Clean Energy Networks in View of Inclusive-Economic Growth and Sustainable Society. Journal of Cleaner Production (2021). https://doi.org/10.1016/j. jclepro.2021.127304.

³⁶ Tsagkari Marula, Jordi Roca, and Giorgos Kallis, "From Local Island Energy to Degrowth? Exploring Democracy, Self-Sufficiency, and Renewable Energy Production in Greece and Spain. Energy Research & Social Science 81, no. 102288 (2021), https://doi.org/10.1016/j. erss.2021.102288.

support of the State to make this alternative energy systems viable and contribute to their expansion. It is crucial to redirect the trillions of dollars in subsidies for fossil fuels towards massive public funding to support these decentralised, community-owned renewable energy projects. Through democratic processes the needs and voices of the most marginalised—such as women, people of colour, Indigenous People, people with disabilities, among others- could be brought at the forefront of energy transition policies. Of course, renewable energy systems are not by default sustainable or democratic. In fact, there is a significant danger that a renewables-dominated system could follow the same path as previous industrial and energy transitions. If renewable energy infrastructure is driven by the imperative of economic growth and projects are implemented without careful consideration of its social, environmental, and economic impacts, we could see patterns of resource exploitation and environmental degradation like those seen with fossil fuels.

Large-scale renewable projects, such as hydroelectric dams, extensive wind and solar farms, and biofuel plantations, can displace local communities, disrupt ecosystems, or create inequitable access to energy, especially when developed without inclusive planning and governance frameworks. In fact, the development of many large-scale renewable energy projects has mirrored the extractive practices common to the fossil fuel industries, leading to land grabs and dispossessions that increase the vulnerability of marginalised communities. These projects represent aggressive infrastructural expansion. From Morocco³⁷ to Kenya,³⁸ Brazil³⁹,

³⁷ Terrapon-Pfaff, Julia, Thomas Fink, Peter Viebahn, and El Mostafa Jamea. Social Impacts of Large-Scale Solar Thermal Power Plants: Assessment Results for the NOORO I Power Plant in Morocco. Renewable and Sustainable Energy Reviews 113 (2019). https://doi.org/10.1016/j. rser.2019.109259.

³⁸ Mariita, Nicholas O. The Impact of Large-Scale Renewable Energy Development on the Poor: Environmental and Socio-Economic Impact of a Geothermal Power Plant on a Poor Rural Community in Kenya. Energy Policy 30, no. 11–12 (2002). https://doi.org/10.1016/S0301-4215(02)00063-0.

³⁹ Traldi, Mariana (2021). Accumulation by dispossession and green grabbing: wind farms, lease agreements, land appropriation in the Brazilian semiarid. Ambiente & Sociedade, 24. https://doi. org/10.1590/1809-4422asoc20200052r2vu2021L4TD. See also: Cudlínová, Eva, et al (2020). "New Forms of Land Grabbing Due to the Bioeconomy: The Case of Brazil". Sustainability, 12 (8), 3395; https://doi.org/10.3390/su12083395.

Sierra Leone⁴⁰ and Scotland,⁴¹ many areas see infrastructure conflicts around (mega) renewable energy projects from predatory renewable industries. Issues of extractivism and ethical supply chains also remain, to a large degree, unaddressed in the renewable energy sector.

Even if large-scale renewable energy generation is needed as part of the energy transition – given the volume and urgency of such an endeavour -, community-based, decentralised projects should still receive priority in public investments. Additionally, large-scale projects must meet clear prerequisites: social participation in land-use planning, prior and informed consultation of affected communities, and rigorous environmental impact studies that consider the combined impacts of projects in the same region (which are frequently licensed in a fragmented manner, concealing their integrated impacts). Large-scale solar and wind energy generation projects have often been exempted from consistent environmental licensing processes, under the pretext of reducing costs and accelerating the energy transition⁴². However, this has facilitated the creation of sacrifice zones of these industries around the world, harming communities and ecosystems.

In this line, scientists have put forward the idea of energy transition without growth, a new paradigm which envisions a transition to renewable and sustainable energy systems that are not predicated on continuous economic growth and energy expansion.⁴³

Energy Transition Without Growth

Current energy systems, understood as the activities for the production, transmission and consumption of energy, are deeply entangled with economic growth. As an alternative, an "energy transition without growth" will include not only

⁴⁰ Maconachie, Roy (2019). Green grabs and rural development: How sustainable is biofuel production in post-war Sierra Leone?. Land Use Policy, 81: 871: 877. https://doi.org/10.1016/j. landusepol.2017.01.013. See also: "Land grabbing for biofuels must stop", Grain, 21 Feb 2013, https://grain.org/en/article/4653-land-grabbing-for-biofuels-must-stop.

⁴¹ Okkonen, Lasse, and Olli Lehtonen. Socio-Economic Impacts of Community Wind Power Projects in Northern Scotland. Renewable Energy 85 (2016). https://doi.org/10.1016/j.renene.2015.07.047.

⁴² Neri, Marlon et al (2019). "Green versus green? Adverting potential conflicts between wind power generation and biodiversity conservation in Brazil". Perspectives in Ecology and Conservation, 17 (3): 131-135. https://doi.org/10.1016/j.pecon.2019.08.004.

⁴³ Mastini, Riccardo, Giorgos Kallis, and Jason Hickel. "A Green New Deal without Growth?" Ecological Economics 179 (2021). https://doi.org/10.1016/j.ecolecon.2020.106832.

novel energy technologies but also novel socioeconomic arrangements that prioritise ecological sustainability and social well-being over traditional metrics of economic success. By prioritising resource and species conservation, reducing waste, and minimising environmental impacts, new economic models can foster a more balanced relationship between human activities and the planet's ecological limits. Reducing unnecessary consumption will not only reduce the use of resources and waste but will also lower the levels of energy consumption.

An energy system that prioritises well-being over the growth imperative requires new economic indicators. Moving beyond profit-driven initiatives, increased energy consumption and GDP growth, alternative metrics like improvements in quality of life, environmental protection, and social equity should be considered to encourage the development of energy systems that are just and equitable. This is in line, for instance, with the recently adopted Pact for the Future which proposes the development of measures of progress on sustainable development that complement or go beyond gross domestic product.⁴⁴

This proposal does not suggest that Global South countries should avoid expanding their consumption of energy and natural resources. The downscaling of affluent economies and their material flows would enable Global South countries, with lower ecological footprints, to grow their throughput of energy and materials⁴⁵. Within each country, the same logic applies: the beyond growth approach targets activities such as the arms industry, elite consumption and the purchase power of the rich⁴⁶, while opposing austerity measures that cut public investments meant to ensure access to social rights.

⁴⁴ Summit for the Future: Outcome Documents. Pact for the Future, Global Digital Compact, and Declaration on Future Generations. Accessed 10 February 2025 at: https://www.un.org/sites/un2. un.org/files/sotf-pact_for_the_future_adopted.pdf

⁴⁵ Foster, John Bellamy. "Planned Degrowth: Ecosocialism and Sustainable Human Development". Monthly Review, July 2023. https://monthlyreview.org/2023/07/01/planned-degrowth/

⁴⁶ Hickel, Jason. On Technology and Degrowth. Monthly Review, July 2023.https://monthlyreview. org/2023/07/01/on-technology-and-degrowth/

Gender in Energy Systems

Although the discussions around energy systems have paid significant attention to the social, economic and political aspects, gender issues remain overlooked. Failing to adopt a gender perspective means ignoring how energy systems and policies impact different genders in distinct and often unequal ways. By gender we refer to the socially constructed roles, behaviours, and expectations assigned to persons due to their sex. These roles can alter the needs, experiences and access to energy resources. Globally, women in all their diversity disproportionately suffer from energy poverty, spending more time and resources gathering fuel for cooking and heating compared to men.⁴⁷ Women especially in marginalised communities often face disproportionate burdens related to energy access and use, affecting their health, economic opportunities, and overall quality of life.48 They also face greater risks of exposure to air pollution from fossil fuel use, which can lead to respiratory illnesses and reproductive issues.⁴⁹ Thus, when energy policies produce gender specific impacts, they can perpetuate existing inequalities and fail to address the different needs of various groups.

Lack of awareness on gender issues can also refer to unequal job opportunities. Research has highlighted a noticeable gender imbalance in the energy sector workforce globally, with women's participation remaining disproportionately low.⁵⁰ Males dominate especially in positions as engineers or economists and those that stay in the profession longer, build more extensive networks, and attain higher-ranking positions.

⁴⁷ Acheampong, Alex O., Eric Evans Osei Opoku, Afua Amankwaa, and Janet Dzator. Energy Poverty and Gender Equality in Education: Unpacking the Transmission Channels. Technological Forecasting and Social Change 202 (2024). https://doi.org/10.1016/j.techfore.2024.123274.

⁴⁸ UN-Women. Facts and Figures: Economic Empowerment | UN Women – Headquarters. UN-Women (2022) https://www.unwomen.org/en/what-we-do/economic-empowerment/facts-andfigures#87145

⁴⁹ Sorensen, Cecilia, Virginia Murray, Jay Lemery, and John Balbus. "Climate Change and Women's Health: Impacts and Policy Directions." PLoS Medicine 15, no. 7 (2018). https://doi.org/10.1371/ journal.pmed.1002603.

⁵⁰ Pearl-Martinez, Rebecca, and Jennie C. Stephens. Toward a Gender Diverse Workforce in the Renewable Energy Transition. Sustainability: Science, Practice, and Policy 12, no. 1 (2016). https:// doi.org/10.1080/15487733.2016.11908149.

Consequently, with men predominantly discussing energy issues among themselves, the forums where problems are identified, agendas are developed, and solutions are proposed often exhibit an unintended male bias. This should not come as a surprise as technology, and especially energy technology, has strong links to patriarchal systems and masculinity.⁵¹ In Western societies, gender roles often associate women with lower technical skills.52 These established gender norms within male-dominated industries enable men to sustain their power, thereby reinforcing existing gender stereotypes and perpetuating a cycle where male participation is normalised and prioritised. Even when women manage to break the barrier and gain jobs in the coal sector, these are often underpaid and in unskilled positions.⁵³ These conceptions were well established in the fossil fuel era. The concept of "petro-masculinity" has been introduced to highlight the close connection between fossil fuel dependence and white patriarchal systems⁵⁴ that shape identities (the family wage, the suburb, cars, etc), and power structures (e.g. the male-headed household) in ways that often marginalise women and gender issues in the energy sector and beyond.

Even within more alternative forms of organisation like energy communities, mostly composed by decentralised or off-grid energy systems led by communities, and other forms of smallerscale local energy projects, gender disparities are present. Women are not only underrepresented in energy community leading positions,⁵⁵ but also most energy community members are male.⁵⁶

⁵¹ K. Grint, R. Gill, R.M. Gill (Eds.), The Gender-Technology Relation: Contemporary Theory and Research, Taylor & Francis (1995)

⁵² Standal, Karina, and Mariëlle Feenstra. Engaging the Public for Citizen Energy Production in Norway: Energy Narratives, Opportunities and Barriers for an Inclusive Energy Transition. Bookitem. In Energy Transition in the Baltic Sea Region, 1st ed., 1:135–54. Routledge (2022). https://doi.org/10.4324/9781032003092-11.

⁵³ Suravee Nayak, and Ashwini K Swain. "Gender and Just TransitionEnvisioning a Gender-Transformative Pathway to Energy Transition in India's Coal States," Center for Policy Research (2023).

⁵⁴ Daggett, Cara. Petro-Masculinity: Fossil Fuels and Authoritarian Desire. Millennium: Journal of International Studies 47, no. 1 (2018). https://doi.org/10.1177/0305829818775817.

⁵⁵ Fraune, Cornelia. Gender Matters: Women, Renewable Energy, and Citizen Participation in Germany. Article. Energy Research & Social Science 7 (2015): 55–65. https://doi.org/10.1016/j. erss.2015.02.005.

Gender-energy nexus analysis tends to focus on householdlevel issues—such as clean cooking, solar home systems, and basic energy access— and falls short of addressing broader questions about women's involvement and gender dynamics beyond the household. This narrow perspective does not adequately engage with critical areas such as national energy policy-making or women's empowerment. Gender and feminist scholars highlight that this limited focus is problematic. ⁵⁷ This limited perspective reinforces traditional gender roles, misses opportunities for broader change, and ultimately hinders the effectiveness of energy solutions aimed at empowering women and addressing their diverse needs.

Thus, different broader and intersectional approaches are needed, to allow for a deeper understanding of gender relations. The participation of different groups in energy policy can shift the structural and institutional factors that influence gender dynamics at larger scales. In conclusion, gender issues in energy systems shape the way energy is produced, accessed and consumed, how decisions are made and what power dynamics drive the implementation. Neglecting these aspects can result in the reinforcement and magnification of existing inequalities.

⁵⁶ Tsagkari, Marula. The Need for Gender-Based Approach in the Assessment of Local Energy Projects. Article. Energy for Sustainable Development 68 (2022): 40–49. https://doi.org/10.1016/j. esd.2022.03.001.

⁵⁷ Bell, Shannon Elizabeth, Cara Daggett, and Christine Labuski. Toward Feminist Energy Systems: Why Adding Women and Solar Panels Is Not Enough. Energy Research and Social Science 68 (2020). https://doi.org/10.1016/j.erss.2020.101557.

Beyond Growth

Byond growth or Degrowth is an academic term, an activist slogan and a social movement that challenges the traditional focus on continuous economic growth, particularly in high-income countries. Degrowth argues that such growth is incompatible with ecological sustainability and social equity. Instead, degrowth advocates for a deliberate and mindful downscaling of production and consumption to reduce environmental impacts while improving quality of life. It calls for restructuring economies and lifestyles to prioritise human well-being, social justice, human rights, and ecological health over GDP expansion. Degrowth does not imply a reduction in living standards; rather, it seeks to redefine prosperity in terms of shared access to resources, enhanced social relations, reduced inequality, and a sustainable balance with the Earth's ecosystems.

Beyond Gender

By 'feminist approach,' we refer to more than just including 'women' as a group of 'vulnerable' or 'marginalised' individuals within existing, unequal systems. A feminist approach encompasses critically examining and rethinking the so-called fixed frameworks and challenging the unequal power dynamics that are both created and sustained throughout the energy transition process. Feminist approaches to energy research emphasise intersectionality, recognising how gender intersects with various forms of oppression such as race, class, and colonial history. Intersectional feminism advocates for an analytic sensibility that considers power dynamics and the diversity of women's experiences. Energy systems are structures of power that impact different groups in different —often unequal ways. Feminism also addresses issues of value and devaluation of knowledge and practices, examining why certain forms of knowledge or experiences are marginalised in the current discourse and practices. Feminism embraces complexity and resists binary thinking, advocating for energy solutions that address social hierarchies.

Why Beyond Growth is Essential for Achieving Equity and Justice in Energy Systems

Energy is a central component in beyond growth pathways. Traditional models of economic growth rely heavily on increased energy consumption and resource extraction, often at the expense of marginalised communities and ecosystems. These models tend to prioritise profits and expansion, perpetuating social inequalities by concentrating wealth and power in the hands of a few, while leaving many without adequate access to energy and other resources. On the contrary, beyond growth calls for a more equitable distribution of energy resources, based predominantly on small and local renewable energy projects, with ethical supply chains.

Furthermore, beyond growth emphasises a reduction in energy consumption in affluent societies, which are historically disproportionately responsible for global carbon emissions and ecological damage. This can be achieved with less resource-intensive lifestyles —but rich in other dimensions— and through phase out of unnecessary industries like SUVs and private jets. It is also crucial to reduce military spending. The major environmental impacts of military operations and wars have been systematically overlooked, often obscured under the pretext of national security reasons⁵⁸. The US military, for example, is the world's largest institutional consumer of hydrocarbons, emitting more greenhouse gases than many medium-sised countries⁵⁹.

Beyond growth aligned technologies are open source, local, democratic and driven by technological innovations from smallscale community initiatives. These technologies are designed to operate within the natural limits rejecting exploitative and extractivist practices while recognising the interrelation of all living beings, including non-human entities. Very often

⁵⁸ Vuong, Quan-Hoang; Nguyen, Minh-Hoang; La, Viet-Phuong (2024). The overlooked contributors to climate and biodiversity crises: military operations and wars. Environmental Management 73 (6), 1089-1093. https://doi.org/10.1007/s00267-024-01976-4.

⁵⁹ Belcher, O.; Bigger, P.; Neimar, B.; Kennelly, C (2019). Hidden carbon costs of the 'everywhere war': Logistics, geopolitical ecology, and the carbon boot-print of the US military. Transactions of the Institute of British Geographers, 45 (1), 65-80. https://doi.org/10.1111/tran.12319

these technologies are viewed as local nodes interconnected (often through the internet). This approach emphasises the importance of local production and consumption while leveraging digital technologies to facilitate collaboration and knowledge sharing across communities. An example of such technology is the L'Atelier Paysan cooperative and the Farm Hack network, which create open-source agricultural tools designed for small-scale farming.⁶⁰ Another example is the energy communities interconnected in a global network.⁶¹ Also, the indigenous communities in Guatemala and Mexico have organised to provide democratic energy solutions to their communities.⁶²

A holistic approach to the energy transition, aligned with beyond growth principles, requires a comprehensive set of policies based on care. Putting care at the centre of the transition implies organising energy systems to ensure the provision of sufficient energy to cover the most important needs at the household and community levels. This implies articulating energy services to support tasks involving domestic work, food production, and other activities essential for the sustainability of life above other economic and social priorities, often exclusively centred on profitmaking. More specifically, these measures include enhancing energy efficiency through strict regulations, setting limits on excessive energy consumption, and ensuring fair distribution of resources to support care systems. Enforcing stringent efficiency standards can push industries and households to adopt energy-saving technologies, while consumption limits, particularly for high-energy industries and affluent groups, can help redirect resources toward meeting the basic needs of underserved communities.

⁶⁰ Kostakis, Vasilis, and Nikiforos Tsiouris. How to Unite Local Initiatives for a More Sustainable Global Future. Article. Sustainable Futures 7 (2024): 100187. https://doi.org/10.1016/j. sftr.2024.100187.

⁶¹ Caferra, Rocco, Annarita Colasante, Idiano D'Adamo, Andrea Morone, and Piergiuseppe Morone. Interacting Locally, Acting Globally: Trust and Proximity in Social Networks for the Development of Energy Communities. Scientific Reports 13, no. 1 (2023). https://doi.org/10.1038/ s41598-023-43608-7

⁶² La Sandía Digital, La energía de los pueblos, accessed 17 January 2025 at: https:// lasandiadigital.org.mx/2020/10/02/la-energia-de-los-pueblos/

To ensure reduced energy consumption, beyond growth approaches advocate for scaling down heavily polluting industries like fossil fuels, the military, and fast fashion. These industries are not only responsible for a big share of CO2 emissions but are also violating human rights in production chains. Women and minority groups are frequently more vulnerable to the adverse effects of these industries, both environmentally and socially, which include heightened care responsibilities. Progressive carbon taxes and mandatory energy audits can further incentivise reductions in energy use and emissions. However, to ensure the transition is just and does not hinder the rights and livelihoods of the most marginalised, States must also implement compensatory measures to ensure that workers and communities still dependent on these polluting industries are not adversely affected. These measures can include investments in public services, the expansion of social protection systems and programmes for the reskilling and retraining of workers.

Additionally, policies such as those that reduce work hours without decreasing salaries in formal employment, can contribute to support care systems and lower energy consumption, both in workplaces and by reducing the need for commuting. All these critical measures outlined challenge the conventional economic model by promoting a system where resources are managed collectively and equitably, aligning with feminist energy principles that prioritise care, community, and equity also aligning with beyond growth ideas.

Human Rights and Feminist Approaches in Delivering a Just Energy Transition

Feminist Approaches for Just Energy Systems

Feminist theory emphasises the importance of including diverse voices in all aspects of energy system design, development, exchange, and use, particularly those of women and marginalised communities who are often excluded from these processes.⁶³ Renewable energy systems, which can be small-scale and democratically owned, offer an opportunity for a new energy model that supports feminist and intersectional demands. In fact, several ambitious agendas have recently emerged to centre feminist, intersectional, and ecofeminist demands within climate policies. One example is the Feminist Green New Deal, which establishes a series of principles to advance a gender-just transition and provides a platform for civil society organisations to work in their implementation.⁶⁴ Feminist theories have been paying attention to existing power structures in the household, policy, and other circles. Recognising that similar power relations are also present in the energy system, which is driven by (and drives) productivist demands. A feminist approach to energy systems, in contrast, would, as stated before, put care at the centre and recognise its role in the organisation, management and delivery of energy.

⁶³ Hooks, B. (2000). Feminism is for everybody: Passionate politics. South End Press.

⁶⁴ Maheve Cohen, and Macgregor Sherilyn. "Towards a Feminist Green New Deal for the UK." Wen (Women's Environmental Network), London (2020).

An energy system based on ideals of the ethics of care⁶⁵ will redefine both energy production and consumption in the household sphere and beyond. A recent study,66 identifies different facets of care that should underpin energy systems as follows: caring about, which means acknowledging human energy needs, such as heating and cooking, alongside recognising the technical demands required for energy systems to operate effectively. Caring for, where the focus is on taking responsibility to meet these needs while ensuring the reliability of the energy systems in place. Furthermore, care giving plays a vital role by providing support to both individuals and systems based on the necessary skills and knowledge. The care receiving component stresses the importance of assessing the quality of care provided to individuals, including evaluating the energy consumed for these services and ensuring that the energy system functions properly while considering its environmental effects. Finally, caring with underscores the need for collaboration among various stakeholders in energy consumption and production to promote solidarity.

A feminist energy perspective argues that there are many other ways to imagine and create new energy systems that support community well-being and prosperity, especially by centring care in energy policy development.

A Human Rights-Based Approach for Just Energy Systems

The international human rights framework, which establishes a shared standard through the adoption of the Universal Declaration of Human Rights, can be instrumental in offering a roadmap to steer the transformation of energy systems and advance both beyond growth and feminist agendas. As part of international law, human rights contain a body of norms, standards, and principles that can contribute to tackling the structural flaws of current energy systems comprehensively. As human rights law ultimately requires addressing injustices and power imbalances to achieve structural change, it is a

⁶⁵ Gilligan, Carol. Revisiting 'In a Different Voice. LEARNing Landscapes 11, no. 2 (2018). https:// doi.org/10.36510/learnland.v11i2.942.

⁶⁶ Gram-Hanssen, Kirsten. Beyond Energy Justice: Ethics of Care as a New Approach in the Energy System. Energy Research and Social Science, 2024. https://doi.org/10.1016/j.erss.2024.103470

critical tool for the advancement of collective action and the transformation of energy systems. Furthermore, the legal and moral value of the international human rights architecture compels States and other key stakeholders to place people and the protection of the environment at the centre of energy policy.

Notably, under international human rights law, it is recognised that States should phase out fossil fuels and ensure a just and equitable transition to clean, efficient renewable energy.⁶⁷ In addition, the international human rights framework has placed much attention on the development of States' legal duties to respect, protect, and realise human rights in mitigation measures, which encompass all efforts to develop and deploy renewable energy.⁶⁸ Therefore, it can significantly contribute to ensuring that the shift to alternative forms of energy does not replicate but rather redresses the inequalities and uneven power imbalances that characterise the current dominant energy paradigm.

Furthermore, ensuring the universal provision of good quality sustainable energy services is an underlying condition for human development, economic prosperity, and environmental protection. Designing alternative energy systems that aim to produce and distribute energy to achieve the realisation of human rights, including the rights to life, health, education, water, sanitation, work, an adequate standard of living and to a clean, healthy and sustainable environment provides clear priorities and standards to ensure socioeconomic wellbeing and the fair distribution of energy resources.

The principles of non-discrimination and gender equality, cornerstones of the international human rights framework, also establish fundamental standards that ensure that all actors engaged in the energy transition avoid direct or indirect discrimination of any kind as to race, colour, sex, language,

⁶⁷ Statement by Five Treaty Bodies on human rights and climate change, 16 September 2019, available at: https://www.ohchr.org/en/statements/2019/09/five-un-human-rights-treaty-bodies-issue-joint-statement-human-rights-and

⁶⁸ CEDAW General Recommendation No.37, available at: https://www.ohchr.org/en/documents/ general-comments-and-recommendations/general-recommendation-no37-2018-gender-related;

religion, political or other opinion, national or social origin, property, birth or other status.⁶⁹ Under these norms, States must also take adequate measures to ensure everyone has access to energy resources, including adopting affirmative actions to prioritise groups facing barriers to accessing energy services.

The human rights framework can contribute to advancing the feminist agenda by ensuring the energy transition complies with women's rights and gender equality principles. This among other measures, includes considering gender differences in energy policymaking, the inclusion of women in the energy workforce, and undertaking gender-responsive impact assessments in energy policy planning and development. States must set clear objectives to advance substantive gender equality and contribute to the realisation of women's rights in energy transition policies and frameworks.

Finally, it is worth noting that, although still incipiently, international human rights law has started to recognise that realising human rights requires downscaling consumption and moving away from energy systems that aim to grow and expand exponentially.⁷⁰ Increasingly, international human rights are starting to meaningfully consider planetary boundaries and the approaches beyond growth. The UN Committee on the Rights of the Child addresses some of these concerns in its General Comment No. 26. It considers the environmental impacts of consumption and production, stating that human rights must be realised in a sustainable way, including with respect to material consumption, resources, and energy use.⁷¹ The Special Rapporteur on Poverty and Human Rights and several human rights scholars underscore the imperative of abandoning the current economic models based on ever-increasing economic

⁶⁹ Wewerinke-Singh, M. (2022). A human rights approach to energy: Realizing the rights of billions within ecological limits. Review of European, Comparative and International Environmental Law, 31(1). https://doi.org/10.1111/reel.12412

⁷⁰ Bueno de Mesquita, J. (2024). Reinterpreting human rights in the climate crisis: Moving beyond economic growth and (un)sustainable development to a future with degrowth. Netherlands Quarterly of Human Rights, 42(1). https://doi.org/10.1177/09240519231224196

⁷¹ CRC General Comment No. 26 https://www.ohchr.org/en/documents/general-comments-andrecommendations/crccgc26-general-comment-no-26-2023-childrens-rights

growth to produce socially useful and sustainable goods and services to reduce unnecessary and wasteful production as conditions for the realisation of rights.⁷² In practice, this would mean limiting excessive energy use by industries and wealthy individuals while ensuring that critical services indispensable for achieving human rights remain well-powered.

The human rights framework, therefore, provides a myriad of norms and standards that can be mobilised to advance an energy transition aligned with beyond growth approaches.⁷³

⁷² Human Rights Council, Report of the Special Rapporteur on Extreme Poverty and Human Rights Philip Alston (25 June 2019) UN Doc. A/HRC/41/39, para 88.

⁷³ Huhta, Kaisa. Conceptualising Energy Justice in the Context of Human Rights Law. Nordic Journal of Human Rights 41, no. 4 (2023). https://doi.org/10.1080/18918131.2023.2210443.

Key Policy Recommendations

Strategies delivering a beyond growth approach to the energy transition through feminist and human rights, include delivering on the following measures:

Energy Use and Allocation

Scaling Down Highly Unequal and Polluting Sectors:

Certain sectors of the economy such as fossil fuels, aviation, military and fashion industry are destructive of nature and tend to reproduce human rights violations. Rapidly reducing these sectors will not only lower energy consumption but will have deep impacts on gender and human rights as these sectors are often associated with heavy pollution, unethical working conditions, health issues, especially for women and minority groups. It is important, however, to implement compensatory measures to avoid negative impacts on the rights and livelihoods of workers and communities still dependent of these polluting industries.

Implementing Energy Efficiency Standards:

Establishing stringent energy efficiency standards for buildings, appliances, and industrial processes can reduce overall energy consumption and thus reducing the demand for energy. Offer financial support in the form of grants instead of loans to lowerincome households to implement energy efficiency improvements in their households.

Imposing Caps on Energy Use:

Establishing limits to energy to avoid unnecessary production and ensuring a fair allocation of the total amount of energy available within society, also known as energy budget. The human rights framework can ensure energy is used to meet essential needs like healthcare, housing, care, and education, rather than for wasteful production like weapons or luxury goods. It also promotes fair energy distribution, ensuring marginalised communities have access. However, caps on energy use should not apply to marginalised groups which often do not have access to technology and clean energy and may require consuming higher levels of energy.

Equality and Human Rights in Energy Systems

Alignment With Human Rights Framework:

Energy regulations should follow international human rights standards. Mechanisms must be in place for reporting and addressing human rights violations in energy projects, especially in unethical supply chains. In this line, policies must include energy justice and equity principles, ensuring that benefits and burdens are distributed fairly across communities and the energy value chain. Historical injustices should be addressed, and considerations for future generations and biodiversity must be incorporated.

Gender Equality and Empowerment in Energy Systems

Gender Impact Assessment:

Gender-responsive assessments of energy projects are necessary to address inequalities faced by persons of different genders. There is a need to track and systematically assess gender equality goals in energy systems.

Promote Gender-Inclusive Economic Diversification in Coal Regions: Supporting women-led enterprises in coal regions helps diversify local economies and foster a just energy transition.

Sharing Knowledge and Resources on Gender Equality Actions:

Providing tools such as trainings, seminars, and best practices can help integrate gender equality in energy transitions and support long-term evaluation of gender-focused projects.

Inclusive and Transparent Energy Governance

Inclusive Policy Design:

Policies should incorporate feminist approaches and human rights considerations, with quotas to ensure equal participation and support for women's entrepreneurship. Integrate the ethics of care into energy policy frameworks by fostering collaborative partnerships between community organisations and energy providers.

Intersectional Policy Analysis:

Regular intersectional analysis can reveal how discrimination and inequalities manifest in energy systems, helping to address these issues.

Decentralised Decision-Making:

Local communities should have more control over energy governance, with bodies like councils and cooperatives ensuring that energy policies are inclusive and meet community needs. Decentralised energy generation should be a priority for public investments in the energy transition.

Transparency and Accountability:

Transparency mechanisms, such as public reporting and external monitoring, should ensure accountability in energy governance, with frequent consultations with local communities. The expansion of renewable energy should be accompanied by social participation in land-use planning, prior and informed consultation of affected communities, and rigorous environmental impact studies prerequisites that have often been disregarded in large-scale projects within an extractivist logic.

Conclusions

There is an urgent need for a transformative shift in global energy systems. While renewable energy sources offer significant opportunities for sustainability and social equity, their implementation must be managed carefully to prevent the reinforcement of existing inequalities. Beyond growth as a political, economic, and academic movement has offered a series of critiques to the current growth-based system —that is sustained by fossil fuels— and, rather, supports alternative energy models that prioritise sustainability and well-being. However, in order to ensure that these models are genuinely equitable and account for historical and present inequalities that leave no one behind, they should be guided by the human rights framework and feminist perspectives. A truly just transition goes beyond mere technological advancements and economic metrics, recognising that equitable energy futures must centre on social justice and human dignity. In this crucial moment in human history, we have the obligation to fight climate change, but we also have the unique opportunity to reshape our energy systems and, by extension, our societies by designing equitable energy systems that resonate with the values of justice, inclusion, and respect for our planet.



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BEYOND GROWTH: PATHWAYS FOR A JUST ENERGY TRANSITION





This report was authored by Marula Tsagkari with the contributions of Magdalena Belén Rochi Monagas, Ezequiel Steuermann, and Alejandra Lozano, as well as the review of Camila Barretto and João Telésforo.

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Designed by Emilia Guzmán

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The Global Initiative for Economic, Social and Cultural Rights (GI-ESCR) is an international non-go- vernmental organisation. Together with partners around the world, GI-ESCR works to end social, economic and gender injustice using a human rights approach.

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