Why is the Green Energy Transition so challenging in the Global South?

Reflections from a Workshop

Alfonso Medinilla, Bruce Byiers, and Neil McCulloch

February 2025

Acknowledgements

The production of this publication has been funded by UK Aid from the UK government. Views expressed are those of the authors alone and do not necessarily reflect the official policies of the UK government, or the views of the Thinking and Working Politically Community of Practice (TWP CoP).

We would also like to thank Sithandiwe Mujuru of the TWP CoP for all her help in producing this paper and creating the videos featured here.

Suggested Citation

Medinilla, A., Byiers, B., & McCulloch, N. (2025). *Why is the green energy transition so challenging in the Global South?* Thinking and Working Politically Community of Practice, University of Birmingham.

About the Authors

Alfonso Medinilla is the head of the climate action and green transition team at the European Centre for Development Policy Management (ECDPM) in the Netherlands. He specialises in the geopolitical dimensions of the global green transition, renewable energy development, and Africa–Europe climate diplomacy.

Bruce Byiers is a development economist, and the associate director of ECDPM's sustainable and inclusive economic development cluster, where his work focuses on regional integration processes in Africa, particularly from a political economy perspective. This includes looking at regional organisations as well as the dynamics of regional economic integration. He is a member of the Steering Committee of the Thinking and Working Politically Community of Practice (TWP CoP).

Neil McCulloch is a director of The Policy Practice (TPP). His main area of expertise is the political economy of reform in the energy sector, which has included working on corruption in the electricity sector in Lebanon; reform of the power sector in Kyrgyzstan and Pakistan; access to energy in India; the phase-out of coal in Indonesia; reform of fuel subsidies in Indonesia, Nigeria and Zambia; and reform of the electricity market in Guinea, Mali and Togo. Neil's book *Ending Fossil Fuel Subsidies: The politics of saving the planet* was published in 2023. He is a member of the Steering Committee of the Thinking and Working Politically Community of Practice (TWP CoP).

Table of contents

1. Introduction

Fossil fuels are the largest contributors to global climate change, accounting for over 75% of global greenhouse gas (GHG) emissions and nearly 90% of all carbon emissions (SEI et al., 2019). To avoid the worst effects of climate change, world leaders have stressed the importance of limiting global warming to 1.5°C by the end of this century, according to the Paris Agreement. This is because, as the United Nations' International Panel on Climate Change (IPCC) indicates,[1] crossing this threshold may cause severe climate change impacts, including frequent and extreme droughts, rainfall, flooding, and heatwaves.

While the need for a transition away from fossil fuels to renewable energy is widely acknowledged, the rate at which this is currently happening is slower than that required to keep global temperatures below the targets in the Paris Agreement, or to achieve the United Nations Sustainable Development (SDG) Goal 7, which calls for ensuring access to affordable, reliable, sustainable and modern energy for all. Countries in the Global South[2] face a particularly acute challenge –they find themselves having to balance growing energy needs to meet industrialisation and economic transformation objectives, with the international push to transition away from fossil fuels. Energy reform programmes and external support often fall short of objectives. In large part, this is because they often fail to take explicit account of the political realities (Karkare, 2024) that shape the behaviour, incentives, and motivations of those actors with a key role in the green energy transition, whether as champions or blockers.

That was the starting point for a workshop convened by ECDPM and The Policy Practice, in collaboration with the World Bank and the Thinking and Working Politically Community of Practice (TWP CoP), in Brussels on 9 October 2024. The event brought together a group of climate, energy and governance experts and practitioners to discuss the politics of the energy transition, explore how political economy analysis (PEA) and related tools can be used to incentivise key actors with a role in the energy transition, and to help to identify politically feasible pathways towards a green energy transition in countries in the Global South.[3]

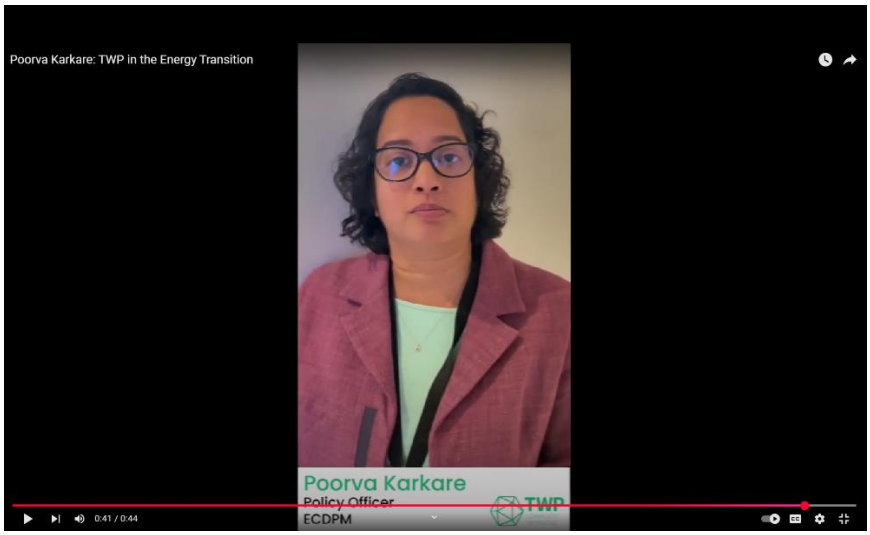
---

[1] The IPCC is the United Nations body for assessing the science related to climate change.

[2] We have opted to use the term 'Global South' in this paper, while being aware of its shortcomings. The term includes vastly heterogeneous countries and economies, from Small Island Developing States (SIDS) to advanced economies like China's, as well as states affected by fragility and conflict. In addition, in many countries in both the 'Global South' and the 'Global North' spectacular wealth co-exists with widespread poverty and social exclusion.

[3] For an overview of what PEA entails, see, for example, Whaites et al., 2023. On potential pathways, see, for example, Bickersteth et al., 2024; and Bickersteth & McCulloch, 2024.

Video 1: Poorva Karkare (ECDPM) on what is missing in the current conversations on the energy transition



Watch on YouTube

The event convened a broad range of people working in the governance–climate nexus to encourage greater cross-fertilisation across these two sectors, share experiences, tease out lessons, and think about what to do next. As part of that, the event also aimed to kickstart a network of interested researchers, practitioners, and policymakers as a means to better connect technical, financial, and political economy expertise regarding the energy transition in the Global South.

This paper highlights some of the reflections on key factors affecting the energy transition that arose in the discussions in Brussels.

2. The politics of the energy transition in the Global South

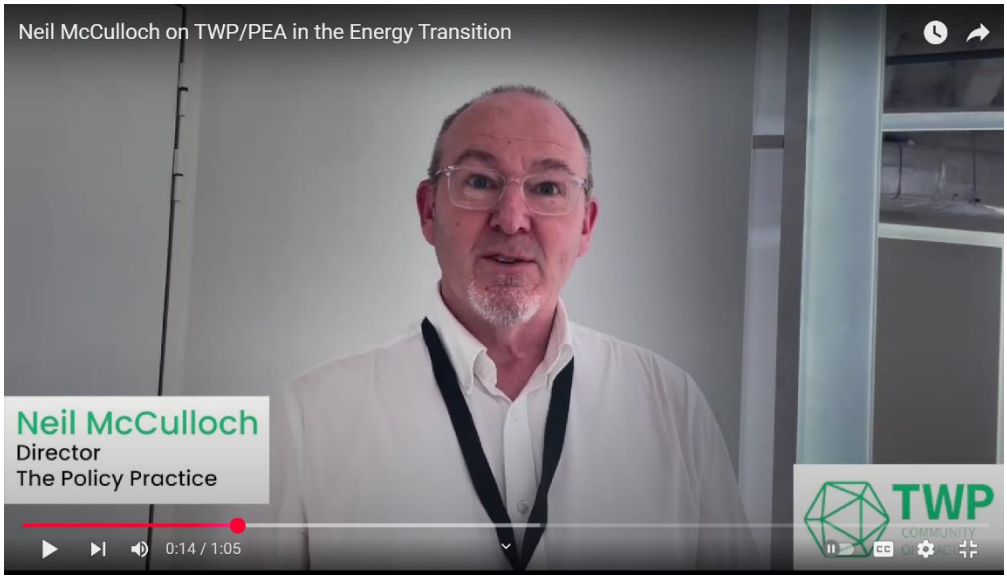
'If politics weren't an issue, renewables would be the winner on price alone.' – Workshop participant

The energy transition is essential to limiting climate breakdown but can be polarising, particularly in countries across the Global South, where expanding access to energy , building energy systems to create jobs, promoting industrialisation, and improving climate resilience may be more urgent priorities than reducing GHG emissions (Karkare, 2024; Moss, 2023). It is estimated that at least 1.18 billion people in the Global South are energy poor (Min et al., 2024). Thus, while the technical case for renewable energy is compelling – solar and wind prices now undercut most other energy sources globally – reform efforts need to appreciate the significance of market and political dynamics related to energy supply and demand, as well as of social and

spatial disparities embedded in the energy sector. They also need to reflect an understanding of who potential winners and losers of policy change might be, whether and how they are organised, and what their interests and relative power to support or block reform might be, including in coalition with other actors.

This is essential to identify realistic entry points for reform. Ultimately, the shift from carbon-based systems to a greener economy is a political process. As Karkare (2024, p. 1) observes, 'techno-economic modelling pushes for a cost-effective high-renewable energy mix for countries in the Global South, yet often ignoring and underestimating the political, behavioural and economic complexity of energy system reform in those developing countries'. Applying PEA can provide deeper insight into the dynamics, tensions, and opportunities shaping the green transition in the Global South.

Video 2: Neil McCulloch (TPP) on how PEA and TWP help in understanding the energy transition and spotting potential windows of opportunity



Watch on YouTube

Reform policies must account for the political dynamics of energy supply and demand while identifying opportunities for suitable reforms. Institutional structures, policies, and decision-making processes are deeply intertwined with financial, economic, political, and social interests, which often constrain efforts towards the energy transition (Bickersteth et al., 2024).

The expansion of renewable energy is a 'wicked problem': technically complex, logistically challenging, and sometimes economically expensive despite falling prices. It is also politically sensitive, involving conflicting interests and incentives. Discussions about the energy transition

often focus on technical, geographic, commercial, and regulatory aspects, neglecting the political economy of the energy sector. However, understanding these challenges in the Global South is crucial for navigating a successful transition and meeting the Paris Agreement's climate goals.

3. Different drivers of energy reform

Another point that emerged clearly from the workshop is that the factors enabling or constraining energy reform can be very different, and it is essential to understand what these are in different contexts. For some countries, energy sovereignty and self-sufficiency are paramount. Depending on how the concept of 'energy sovereignty' is framed, it can be a hook for promoting a transition towards renewals – as in the case of the Grand Ethiopian Renaissance Dam in Ethiopia, the largest hydropower project in Africa – or it can heighten reliance on fossil fuels, as in the case of Mexico (López, 2022).

In some settings, there may be concerns that renewables can create new dependencies on neighbouring countries. In others, such as India, the negative effects of fossil fuels, such as air pollution, may provide more of an incentive to transition to cleaner alternatives, including electric vehicles (EVs) or phasing out coal, than climate and energy costs.

4. Energy endowments

Endowments matter, but these also play out in different ways. Fossil fuel endowments are essential for government revenues for most countries, thus creating path dependency. A clean energy transition may be especially difficult for countries with large existing endowments, production, and consumption. The interplay of domestic production and consumption of fossil fuels makes some countries net exporters or importers of different fossil fuels.

In some cases, such as coal in Colombia and South Africa, fossil fuels are also deeply linked to social stability and internal security. Alternatively, they can be deeply embedded in state- and nation-building processes, such as the oil sector in Mexico. In such environments, making a transition from these sectors can entail significant risks, not only economic but also political and social. On the other hand, the potential for renewable energy in some countries, such as Morocco and Namibia, can be harnessed to promote new green investments in energy-intensive industries and hydrogen production, which can facilitate a 'renewables pull'.

5. Power markets

In principle, solar and wind energy have the potential to undercut most other forms of electricity production. However, energy prices are often heavily distorted for many reasons, including:

- Fossil fuel subsidies: The entire world's energy system is heavily dependent on fossil fuels. Transforming fuel-dependent economies can be especially hard because governments subsidise fossil fuels for a variety of reasons, including to make energy cheaper for consumers, provide allowances and tax breaks for fossil fuel companies, and, indirectly to provide cheap finance and government backing for fossil fuel extraction (McCulloch, 2023). The International Monetary Fund (IMF) reports that globally, fossil fuel subsidies were US$7 trillion or 7.1% of gross development product (GDP) in 2022, reflecting a US$2 trillion increase since 2020 owing to government support from surging energy prices (IMF, 2024). One natural consequence of these subsidies is clear: more consumption of the cheaper fossil fuels and more production from producers as they have an opportunity to increase their profits (McCulloch, 2023).

- Inefficiencies in generation and transmission: The capacity factors for renewables are lower than those of sources of fossil fuel power. In 2022, capacity factors averaged about 25% for solar power and 36% for wind in the United States compared to fossil fuels, which averaged 50% for coal and 93% for nuclear plants (Scheig, 2023). This variation is mostly due to the inherent nature of renewable energy sources. They are variable and reliant on weather conditions, unlike fossil fuels, which can run continuously, barring operational or maintenance interruptions (Scheig, 2023).

- Politically motivated tariff-setting (including cross-subsidisation): Trade wars and tariff disputes between major economies can also affect the energy market. Over the past few years, trade tensions between the United States and China, for example, have had an impact on energy prices.

These price distortions may reinforce political and economic dependencies on fossil fuel industries or reduce the commercial viability of green energy projects, complicating the transition to renewables.

6. Pathways of change

As the above points reflect, green transition outcomes are influenced by the interaction of multiple factors at the economic, social, and geopolitical level, between and within countries. The

challenge is not only to understand the drivers and blockers of energy transition, but also to engage with these dynamics to try to identify plausible pathways of change.

A normative (focused on the need to reduce emissions irrespective of anything else) or technical (focused on optimising green technologies) starting point may not always be the most appropriate. In some cases, it may be more useful to graft energy transition onto economic transformation and industrialisation agendas (e.g. energy-intensive industries) or to emphasise how the energy transition can be part of a pro-poor development strategy. In others, the key to energy transition may be altering rent dynamics, working with a new generation of 'solar barons' who see a way to corner the renewables market. This may not be ideal, but might be 'good enough', at least for the short term.

7. Gender and social justice

Gender and social justice may also offer important entry points for harnessing an energy transition. While universal access to affordable clean energy continues to be a challenge across the globe, women and other marginalised groups often experience climate vulnerabilities even more acutely as a result of intersectional social factors and gender-blind policies that restrain their access even further. In response, countries such as Rwanda (ENERGIA, 2018) and Kenya (Makungu, 2020) have integrated gender considerations into national energy policies, demonstrating how national planning can promote equity. At the workshop, Sheila Oparaocha from the women's empowerment network ENERGIA shared examples of how they are applying a political economy lens in advocacy efforts to foster an energy transition that is gender-just and inclusive (see Video 3).

Among other things, ENERGIA's approach has entailed:

- Nurturing women's collective agency to identify their needs and explore how they can influence the energy transition so that the resulting policies are gender-inclusive and committed to social justice.
- Engaging with powerful actors in the energy arena from an operational side to integrate gender more systematically in energy transition policy.

Kenya was the first country to launch a gender and energy policy, an achievement to which ENERGIA contributed through its politically informed approach to advocacy.

Video 3: Sheila Oparaocha, ENERGIA, on the Network's politically informed work towards a Gender Just and Inclusive Energy Transition in Kenya

Watch on YouTube

8. Finding efficiency within an inefficient system – working politically

PEA can help reframe problems, identify opportunities, and shape narratives. **The real challenge, however, is to move from analysis to practice.** One of the difficulties practitioners face is that studies very often identify blockages but do not offer ways to address them. What came out very clearly from the discussions in Brussels is that funders and project developers are not naive. When given the space and the means, they will work politically, tackle disincentives, and take flanking measures to help nudge incentives towards investments in renewable energy and to enable projects to thrive. Yet this is not always built into the design or operating manuals of green energy projects.

9. Towards a more effective approach to the energy transition

As discussed in the workshop, there seem to be at least three key unifying factors for a more effective political economy approach to the energy transition:

- **Time and flexibility:** Sustained engagement across projects, allowing both for the alteration of conditions for energy investments and the tackling of commercial and policy barriers, which may have very different timelines. Time and flexibility are also needed to enable projects to adjust to contextual shifts as these arise.

- **Problem-driven focus:** Energy transition is an iterative process. It requires thinking about systems change but also identifying and addressing specific problems that can be used to drive momentum.
- **Trust:** Building trust between actors – including governments, utility firms, private investors, and communities –is crucial.

10. Building a network of experts

Video 4: Verena Fritz, World Bank, on why it is important to have a political economy perspective in the Energy Transition

Watch on YouTube

The workshop offered a unique opportunity to learn from funders, project developers, energy regulators, and policy analysts working across the climate and governance sectors, all of whom have to navigate political economy factors in different ways on an ongoing basis. Participants expressed a clear **desire to develop and maintain a network of colleagues and peers** to continue such exchanges, foster collaboration, and bridge the gap between technical solutions and politically informed insights and approaches.

The idea of a network would be to provide a space for researchers, practitioners, and policymakers to share experiences and lessons of thinking and working politically on the green transition in the Global South and to find sources of support and advice. If suitable funding can be secured, bringing this kind of network to life might include one or more of the following activities and ideas, among others:

- A regular series of online webinars covering different topics or aspects of the political economy of the green transition in a variety of contexts.
- Further in-person and/or virtual, workshops on the political economy of the green transition, including ones with a regional or country focus for example.
- A workshop at the World Bank, bringing together key practitioners in the United States working on the green transition.
- A repository of key papers and reports on the political economy of the green transition in the Global South (which could be done through creating a dedicated space for this in existing platforms, including TPP's online library).
- An open-access contacts database of experts working in the field.

These ideas are all work in progress, and we would love to hear from you if you are interested in joining the network or would like more information about it. Please do get in touch with us at <info@twpcommunity.org>.

References

Bickersteth, S., with McCulloch, N., and Tesfamichael, M. (2023). The political economy of energy transitions in Ghana, Zambia and Vietnam. Policy Brief. The Policy Practice. https://www.thepolicypractice.com/political-economy-energy-transitions-ghana-zambia-and-vietnam-policy-brief-17

Buchy, M., & Shakya, S. (2023). Gender equality and social inclusion in a just energy transition. India: Think20 (T20). Task Force 6 – Accelerating SDGs: Exploring New Pathways to the 2030 Agenda. https://cgspace.cgiar.org/items/53e5e442-f085-4fea-8b52-0b2839ad1e61

Byiers, B., Medinilla, A., & Kraki, K. (2023). Navigating green economy development objectives: Between 'green' and development narratives. Brief. ECDPM. https://ecdpm.org/work/navigating-green-economy-development-objectives-between-green-development-narratives

ENERGIA. (2018). Women-led enterprises in the energy sector: Findings and recommendations from ENERGIA meeting in Rwanda. Hivos. Women-led enterprises in the energy sector: Findings and recommendations from ENERGIA meeting in Rwanda - Energia

IMF. (2023). Fossil fuel subsidies. International Monetary Fund. https://www.imf.org/en/Topics/climate-change/energy-subsidies

Johnson, O. W, Han, J, Y., Knight, A. L., Mortensen, S., Aung, M. T., Boyland, M., & Resurrección, B. (2020). Intersectionality and energy transitions: A review of gender, social equity and low-carbon energy. *Energy Research and Social Science*, *70*, 101774. https://www.sciencedirect.com/science/article/pii/S2214629620303492

Karkare, P. (2024). Breaking the gridlock: Navigating the political economy of Africa's energy systems. Brief. ECDPM. https://ecdpm.org/work/breaking-gridlock-navigating-political-economy-africas-energy-systems

Lopez, O. (2022). Mexico sees its energy future in fossil fuels, not renewables. *The New York Times*, August 17. Mexico Sees Its Energy Future in Fossil Fuels, Not Renewables - The New York Times

Makungu, P., & Kooijman, A. (2020). Gender and energy country briefs – Kenya. ENERGIA. https://www.energia.org/assets/2021/02/Country-brief-Kenya_Nov2020_final.pdf

McCulloch, N. (2023). *Ending fossil fuel subsidies: The politics of saving the planet*. Practical Action Publishing. https://practicalactionpublishing.com/book/2642/ending-fossil-fuel-subsidies

Min, B., O'Reilly, Z.P, Adeboye, B., Gaba, K.M., Monroe, T., Stewart, B.P., Baugh, K., & Sánchez-Andrade Nuño. (2024). Lost in the dark: A survey of energy poverty from space. *Joule*, *8*(7), 1982–1998. https://doi.org/10.1016/j.joule.2024.05.001

Moss, T. (2023). Africa's energy transition is not British (or American or German). https://toddmoss.substack.com/p/africas-energy-transition-is-not

Scheig, G. (2023). Understanding capacity factors for renewable sources and fossil fuels. July 13. https://www.stout.com/en/insights/commentary/understanding-capacity-factors-renewable-sources-fossil-fuels

SEI, IISD, ODI, Climate Analytics, CICERO, & UNEP. (2019). *The production gap: Phasing down or phasing up. The discrepancy between countries' planned fossil fuel production and global production levels consistent with limiting warming to 1.5°C or 2°C*. http://productiongap.org/

Whaites, A., Piron, L.-H., Rocha Menocal, A., & Teskey, G. (2023). *Understanding political economy analysis and thinking and working politically*. Thinking and Working Politically Community of Practice. University of Birmingham. Understanding-Political-Economy-Analysis-and-Thinking-and-Working-Politically.pdf

About the Thinking and Working Politically Community of Practice

The Thinking and working Politically Community of Practice (TWP CoP) is a global network of practitioners, researchers and policymakers in development and global affairs committed to promoting more effective policy and practice. The TWP CoP works to foster more politically aware approaches to understand how change happens and why, translate findings and implications emerging from political economy analysis into operationally relevant guidance, encourage more flexible and adaptable ways of working, and provide evidence-based insights that can stimulate innovation, sharing and learning in international development and global affairs.

The TWP CoP is funded by the UK Foreign, Commonwealth & Development Office (FCDO) and hosted by the International Development Department at University of Birmingham.

Visit our website: https://twpcommunity.org/

Subscribe to our Newsletter: https://twpcop.substack.com/

Get in touch:

Email: info@twpcommunity.org

Bluesky: @twpcommunity.org

LinkedIn: Thinking and Working Politically Community of Practice

TWP COMMUNITY OF PRACTICE

UNIVERSITY OF BIRMINGHAM

UK International Development

Partnership | Progress | Prosperity