



Task Force 6
Accelerating SDGs: Exploring New
Pathways to the 2030 Agenda



GENDER EQUALITY AND SOCIAL INCLUSION IN A JUST ENERGY TRANSITION

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The image features a white rectangular area on a red background. In the top-left corner, there are several overlapping, semi-transparent red and orange shapes that resemble petals or leaves. The word "Abstract" is written in a bold, black, sans-serif font in the upper-left portion of the white area. At the bottom of the white area, there are more overlapping, semi-transparent red and orange shapes, similar to the ones in the top-left corner.

Abstract



Universal access to affordable clean energy continues to be a challenge across the globe. Women's and marginalised groups' access to clean energy services and green technologies remains constrained by intersectional social factors and gender-blind policies. The recurrent failure of policies to consider differentiated gender and social inclusion needs is a significant obstacle to sustainable development. Underlining the concepts of energy poverty and energy justice, this Policy


Brief identifies the key institutional and social constraints to addressing issues of gender equality and social inclusion (GESI) in energy policy in the South Asian region. Studying the case of Nepal, the brief makes recommendations on how to facilitate a gender- and socially inclusive energy transition. These include developing evidence-based gender policies and socially inclusive energy policies; fostering a government culture of intersectoral collaboration; and investing in a workforce able to address the technological challenges to achieving energy justice.



The Challenge



1



Sustainable Development Goal (SDG) 7 aims to “ensure access to affordable, reliable, sustainable, and modern energy for all by 2030.”¹ To achieve this, the global roadmap for accelerated SDG7 action requires that no one is left behind. However, universal access to affordable clean energy services continues to be a challenge across the globe. As of 2022, 733 million people lacked access to electricity and 2.6 billion people relied on wood, coal, charcoal or animal dung for cooking.²


These challenges are especially relevant in South Asia, which is home to about 20 percent of the global population without access to electricity.³ An estimated 990 million people in the region are without clean cooking solutions and approximately 8,700 deaths occur every year due to household air pollution.⁴ In Nepal, 51 percent of people rely on biomass for their energy, 44.3 percent on LPG, and only about three percent have access to renewable clean energy.⁵

The impact of this lack of access to affordable and clean energy is more pronounced in poor regions and communities.

The transition towards low-carbon, renewable energy offers a great opportunity to invest in technologies that will enhance access to, and affordability of, energy for the poor. This transition holds particular promise for women, who are increasingly considered as key actors in the development of clean energy value chains.⁶

However, financing the energy transition is costly. Globally, the estimated costs of closing the energy access gap amount to US\$35 billion a year for electricity access and US\$25 billion a year for clean cooking. An additional estimated US\$4.4 trillion annual investment in clean energy and energy efficiency is also required to achieve net-zero emissions by 2050.⁷ Nevertheless, the cost of inaction far exceeds the required annual investment to achieve universal access targets. The negative impact associated with the lack of access to modern cooking equipment alone, is estimated to cost US\$2.4 trillion a year—a result of negative externalities for health (US\$1.4 trillion), gender (US\$0.8 trillion), and climate (US\$0.2 trillion).⁸

In addition to financing energy transition, ensuring that this benefits all—including women and marginalised populations—



presents another pressing challenge, and one that has received little attention so far. Women and girls constitute 51 percent of the total population living in extreme poverty, and 20.9 percent of them live in South Asia.⁹ Thus, the limited focus on gender and social inclusion in energy policies in South Asia increases the risk of inequalities being overlooked.

This Policy Brief, based on a literature review and using Nepal as a case study, explores the challenges to achieving energy access for all, with a specific focus on gender and social exclusion. With the world struggling to meet its affordable and sustainable energy goals by 2030,¹⁰ there is growing need to adopt inclusive energy transition pathways that consider linkages across the SDGs, especially those pertaining to gender equality and poverty reduction.

Gender and Energy Poverty

Energy poverty is defined as a “lack of access to adequate, reliable, affordable and clean energy carriers and technologies for meeting energy service needs for cooking and those enabled by electricity to support economic and human development.”¹¹ The gendered household roles and responsibilities of women and girls, which typically focus

on care and domestic duties, mean that women constitute a significant proportion of energy consumers and that they are disproportionately impacted by energy poverty.¹²

In South Asia, particularly in rural areas, women are the primary collectors and users of biomass energy. Biomass harvesting is time-consuming and potentially dangerous as women can feel unsafe during firewood collection activities.¹³ When resources become scarce, the distances needed to be covered to collect biomass increase. Transporting heavy loads increases physical pressure, which accelerates ageing and can lead to back injuries.¹⁴

The lack of accessible and affordable energy services for manual grinding, food processing, irrigation, and other agricultural activities increases women’s drudgery. This has significant repercussions for their health and their ability to engage in educational and income-generating activities. Furthermore, cooking with firewood or cow dung exposes women to toxic fumes that affect the lungs and the eyes.¹⁵

Energy Justice


The principle of 'energy justice' is used to evaluate and highlight where unfair patterns of energy supply and access emerge, which sections of society are affected, and how these injustices can be curbed.¹⁶ Energy justice embraces energy security, climate change, and the political economy of energy as well as the intersectionalities of gender, caste, economic status, and ethnicity. As such, energy justice is the key to meeting SDG1 (poverty alleviation), SDG3 (health and well-being), SDG5 (gender equality), and SDG8 (sustainable economic growth), in addition to SDG7.

Economics is a significant impediment to energy justice. Studies show that poverty levels are correlated to the use of unclean energy as limited financial capital restricts the ability to adopt new technology.¹⁷ In their study of Kathmandu's urban household technology, for example, Shrestha et al.¹⁸ found a correlation between low income, higher proportion of unclean energy use, and an unwillingness to purchase new technologies.

In addition to economics, other variables like gender, caste, ethnicity,

and religion can all exacerbate energy injustice. Women, those of Janajati or Madhesi ethnicity, members of the Dalit caste, and religious minorities may face discrimination due to their language, poverty, lower levels of literacy, and the remoteness of their villages. Rahut et al.,¹⁹ for example, studied ethnicity and caste-based social differentiation, and the consumption of clean cooking energy in Nepal. Their results show how caste and economic status, which are tied to endowment ownership and education levels, imply that Dalits are less likely to access clean energy, compared with members of the socially higher-ranking Hill Chhetri caste.

These factors intersect. A Madhesi Dalit woman, for instance, may experience discrimination against her gender, caste, and ethnic identity. An example of this intersectionality can be seen in the study on biogas adoption in Nepal, which found that men-led Brahmin households are more likely to adopt biogas than any other caste groups.²⁰ Other aspects, such as greater assets, income, land and livestock ownership, and geographical remoteness (in this case, the distance from the nearest bank), determine technology adoption.



Reflecting on this evidence, gender equality and social inclusion (GESI) matters for three reasons:

- **Justice and rights:** Men and women should have equal access and enjoy equal benefits from energy investments, regardless of caste, ethnicity or social status.
- **Human development:** Freeing women and girls from unpaid, time-consuming household activities can potentially enable them to engage in economic development and education, and improve their health.
- **Efficiency:** Ignoring the gender dimension of energy poverty slows the energy transition. The low valuation of women's labour in households and in agriculture explains the limited interest of households in investing in mechanised technologies in India and Nepal.²¹

Underrepresentation of Women in Energy Governance and Barriers to Access

Women's social mobility and ability to take part in decision-making are

constrained by strong patriarchal values. These values dictate that men make most of the decisions and that social norms control the behaviour of men and women.

Three types of interlinked barriers explain the limited progress of general policy development in the energy sector:²²

- **Pragmatic barriers** are linked to limited resources available within government bureaucracy. This can explain limited methodological investment, such as lack of disaggregated data or of appointment of gender experts within a policy team. This lack of investment, in turn, affects how energy use is captured.²³ For example, water milling is computed as part of the energy sector, but when women complete this task manually, it is not reflected in accounts, showing how methodological choices and definitions influence knowledge outcomes. Similarly, human energy expenditure—despite being the significant factor that determines selection of cooking energy—is rarely measured and usually

excluded from the energy systems analysis.²⁴ Such methodological omissions partly result in the statistical invisibility of women.

- **Conceptual barriers** refer to a limited understanding of gender, intersectionality, and the power relationships between men and women and privileged and disadvantaged groups as well as a limited understanding of the analytical tools to better grasp these concepts. Conceptual barriers are maintained partly by the fragmentation of social science research into policy, economics, and anthropology, and a strong quantitative focus that leads to superficial analyses of gender and energy.²⁵
- **Political barriers** emerge from a combination of pragmatic barriers and lack of conceptual understanding. At best, this leads to gender-blind policies, and at worst, to gender-biased policies.

An additional barrier to energy policy development relates to social norms and hierarchies between genders, and between castes and ethnicity more generally.

- **Social barriers** can explain why new technologies are adopted or not. They also explain the global trend of underrepresentation of women and disadvantaged groups in the energy sector, and in management and decision-making positions in particular. On average, there are 76-percent fewer women than men working in the energy sector, and only one in five senior-level or leadership roles in the energy sector is held by a woman.²⁶ A survey covering 72 countries found that women represent only six percent of the ministerial positions responsible for national energy policies and programmes.²⁷

The lack of diversity in the workforce of the energy sector, whether in the private sector or at government institutions, influences the type of decisions made as well as the ways in which decisions are made.²⁸ Prejudice against women's interest and abilities also slows the rate of technological innovation in the energy sector as planners do not consult women.²⁹

Gender-blind Policy Outcomes: The Case of Nepal

The combination of patriarchal attitudes, underrepresentation of women in energy governance, and their invisibility in energy debates has resulted in gender-blind policies and processes worldwide. Moreover, when women are acknowledged in policies, they are often portrayed as a homogeneous group, meaning that

policies fail to address intersectionality, structural constraints, and power inequalities, which limit women's capabilities.³⁰ This is often combined with a lack of understanding of how clean technology adoption will impact gender roles or livelihoods, which limits the effectiveness of policy design, especially of policies that will target women's empowerment. Box 1 explores examples of these gender-blind policy outcomes in Nepal.


Box 1: GESI and Energy Policy Development in Nepal

To meet the SDG7 targets as well as its nationally determined contributions to the Paris Agreement, Nepal has been implementing a roadmap for energy development. In concert with the UN General Assembly's declaration of the International Decade for Action 'Water for Sustainable Development', Nepal has declared 2018–2028 as its Energy and Water Resources Decade; the objective is to improve the country's socioeconomic development through its energy sector. Although energy access has been recognised as one of the key issues in Nepal since at least the country's Seventh Development Plan (1985–1990), policymaking in the energy sector has largely been devoid of GESI considerations until recently.

The Rural Energy Policy 2006 was the first to recognise the importance of rural energy technologies for women and the need to promote special programmes for accessing and using rural energy, albeit without specific targets and measures for implementation.

In 2007, gender-responsive budgeting was introduced in Nepal. This required the ministries and line departments to establish a GESI unit to mainstream gender into their organisation's strategies.³¹ This led to the gradual strengthening of GESI considerations in programmes and strategies in the water and energy sectors. In 2013, for example, the National Energy Strategy was formulated, which was among the first strategies to recognise the multiple energy-related challenges faced by women. However, of the 45 strategic options, none was dedicated to achieving gender equality and empowerment.

In the Energy Sector Vision 2050 created in 2013, the word 'gender' is mentioned only once in the 149-page document, and that too, as a synonym for women and to refer to the traditional use of local forest products for energy. Similarly, the word 'women' is used either to denote their dependence on or issues faced due to the dependence on traditional biomass.



The first GESI policy for Nepal's energy sector dates from 2018. It provides GESI mainstreaming principles and a GESI mainstreaming theory of change, and includes a list of 17 strategies to implement mainstreaming. The policy also highlights the need to “monitor and report with disaggregation and also monitor changes in gender and inclusion related issues in the energy sector impacting women, poor, disadvantage group, vulnerable population, project affected people and people of excluded social groups.”³²

However, subsequent policies such as the White Paper prepared by the Ministry of Energy, Water Resources, and Irrigation in 2018, are silent on the energy-related issues faced by women and disadvantaged social groups. The Irrigation Master Plan mentions ‘GESI’ in its acronym list but not in the main document. Other policies, such as the draft Electricity Bill 2020 and the Water Resources Bill 2020 (aiming to replace the incumbent Electricity Act 1992 and the Water Resources Act 1993, both of which are gender-blind), have limited GESI to affirmative action. The draft Electricity Bill provisions for the inclusion of one woman in the 13-member policy body to advise and decide on the design and implementation of energy projects. The Water Resource Bill specifies the inclusion of one woman in the nine-member Water and Energy Commission.

The Renewable Energy Subsidy Policy 2022 acknowledges the renewable energy gap in rural areas and offers subsidy and easy loan provisions, based on the geographical and socioeconomic categorisation of people.

The Nepal case study highlights the following points:


- Despite the stated commitment to GESI at the national level, endorsement of GESI policies at the sectoral level has been much slower, and there are limited studies explaining why.
- Policy documents, while at times recognising that energy access is an issue for women and disadvantaged groups, fail to provide clear guidance for implementation actions to improve access, thereby limiting the accountability of duty-bearers.
- The focus of GESI policies has been on increasing women’s representation (in compliance with constitutional requirements) instead of exploring and addressing barriers to equality.
- The siloed approach, identified in social science research, is also present in policy design: gender policy is divorced from energy policy and climate change or agriculture policies.³³



The G20's Role

2





The G20, with this year's theme of 'One Earth, One Family, One Future', brings to the fore the much-needed global solidarity to tackle the impacts of climate change. Energy transitions towards cleaner, accessible, and affordable energy solutions play a big role in shaping a climate-resilient


future. Moreover, ensuring equity and inclusion is the key to leaving no one behind and realising the visions of 'one family'. Therefore, the G20 should play an instrumental role in responding to issues of energy access, energy justice, and sustainable energy transitions, with a particular focus on underdeveloped and developing countries.



Recommendations to the G20

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Encourage member countries to include gender- and socially inclusive, evidence-based sections within energy policies to mainstream GESI into these, instead of developing standalone GESI policies. This will require:

- building staff skills around GESI so that they are able to generate substantial gender and social analyses to strengthen the conceptual understanding of exclusionary processes in the energy sector;
- prioritising GESI objectives within new energy policy and setting aside adequate resources (human and financial) to implement these objectives; and
- identifying and including contextualised GESI key performance indicators for monitoring gender and social inclusion outcomes of policy implementation.


Invest in a diversified workforce, able to recognise exclusion, and foster energy justice while addressing technological challenges. This will require:

- ensuring tertiary education curricula that promote multidisciplinary approaches to engineering and valorise qualitative and quantitative approaches, and development of user-friendly technologies; and
- encouraging the emergence of young talent, including women and students from underrepresented social groups, by addressing unconscious biases of teachers in secondary education curricula (review science textbooks, orient talented girls towards science studies) and strengthening networking and capacity-building opportunities for such students. This will require collaboration at the ministerial level to influence educational policies, which will promote equal access to science training and studies for boys and girls.

Attribution: Marlène Buchy and Shristi Shakya, “Gender Equality and Social Inclusion in a Just Energy Transition,” *T20 Policy Brief*, July 2023.

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