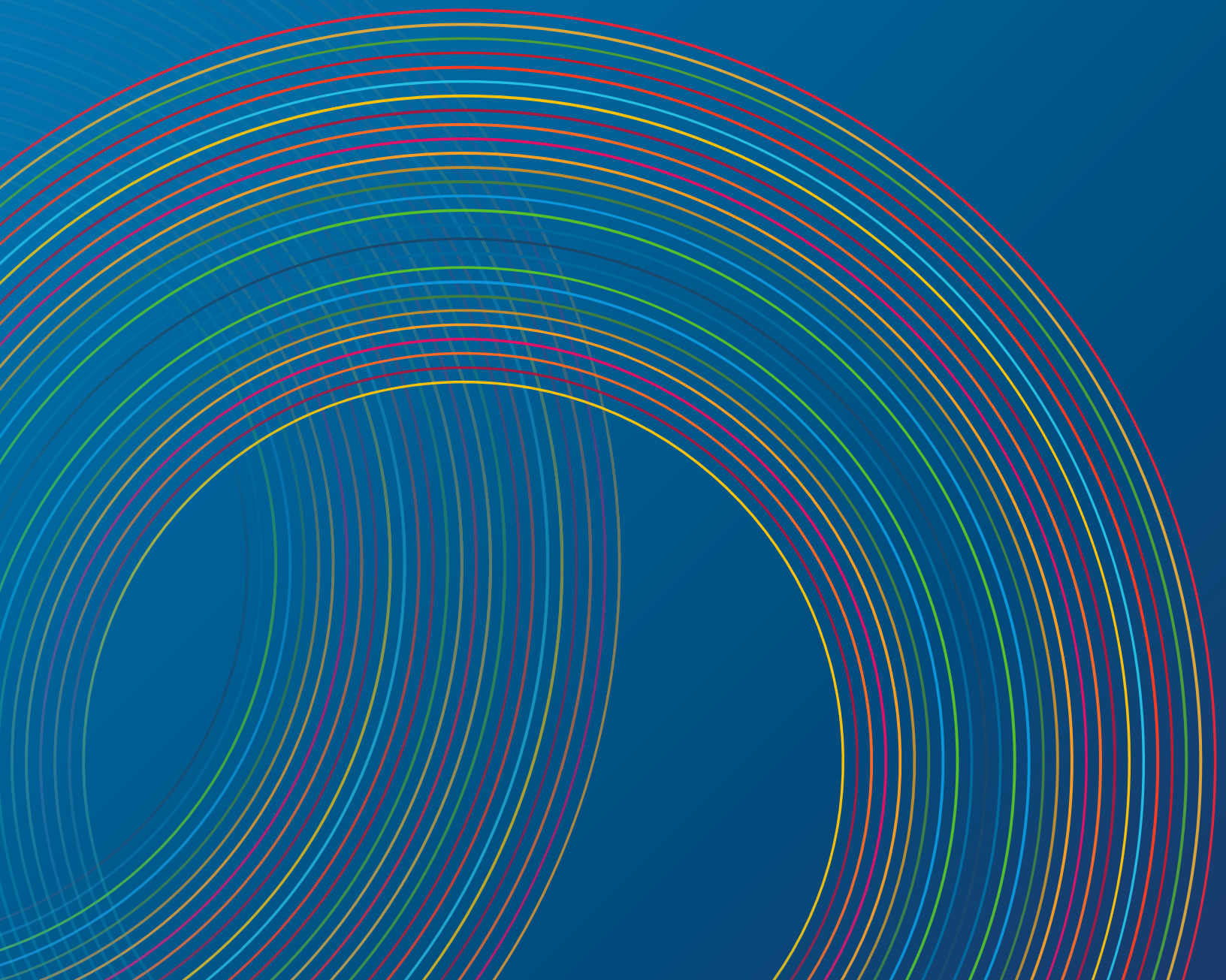
POLICY BRIEFS IN SUPPORT OF THE UN HIGH-LEVEL POLITICAL FORUM 2025

Gender Indicators for Sustainable Energy: A Call to Action



SDG7 POLICY BRIEFS IN SUPPORT OF THE UN HLPF 2025

This document is part of a series of policy briefs compiled by the multistakeholder SDG7 Technical Advisory Group (SDG7 TAG) in support of the review of SDG7 at the High-level Political Forum (HLPF) 2025. Convened by UN DESA, the SDG7 TAG is composed of over 40 experts from governments, UN organizations, international organizations and other stakeholders. The HLPF is the central United Nations platform for the follow-up and review of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) at the global level. More information on the SDG7 TAG, including previous editions of the annual SDG7 Policy Briefs, is available here.

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Gender Indicators for Sustainable Energy: A Call to Action

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United Nations Industrial Development Organization (UNIDO)

Energy Sector Management Assistance Program (ESMAP)

United Nations Statistics Division (UNSD)

International Energy Agency (IEA)

United Nations Entity for Gender Equality and the Empowerment of Women (UN Women)

International Renewable Energy Agency (IRENA)

The World Bank

Sustainable Energy for All (SEforAll)

World Health Organization (WHO)

United Nations Department of Economic and Social Affairs (UNDESA)

Global Women's Network for the Energy Transition (GWNET)

Gender and Energy Compact

KEY MESSAGES

- **With the links between energy and gender equality well-recognized, gender equality is fundamental to a sustainable energy transition. This makes tracking progress through gender indicators essential.** However, these crucial measures are currently absent within Sustainable Development Goal 7 (SDG7). This obscures critical inequalities and hinders the development of inclusive solutions.

- **Gender data highlights women's disproportionate vulnerability to energy poverty and their untapped potential as consumers, entrepreneurs, skilled workers and decision-makers**. Furthermore, greater participation of women in the energy workforce addresses skills gaps and enhances business performance. The underrepresentation of women in the political and regulatory frameworks for energy decision-making hinders gender-responsive energy policies. As a result, these often fail to adequately reflect the diverse needs and priorities of all segments of society.

- **Women's empowerment across the energy landscape is a strategic imperative for a thriving sector and for accelerating progress toward SDG7**. Gender data is vital for informing gender-responsive policies, shaping targeted project design, establishing measurable targets and tracking progress towards gender equality within the energy sector.

- **The pathway to adopting gender indicators in the energy transition hinges on existing foundations, a sound methodology and strong political commitment.** There is growing global recognition of the critical gender-energy nexus, with key initiatives highlighting the urgent need for sex-disaggregated data for an inclusive energy transition. The process proposed in this policy brief will leverage pioneering data collection by the International Energy Authority (IEA), the International Renewable Energy Agency (IRENA), the Multi-Tier Framework (MTF) and the Regulatory Indicators for Sustainable Energy (RISE), all of which are starting to bridge the gender data gap.

- **Moving forward requires a robust and inclusive methodology**. This must be built through consensus by a dedicated working group with a clear roadmap and a pragmatic agenda that prioritizes relevance, feasibility and national contexts.

- **Sustained political commitment is essential.** This crucial requirement necessitates fostering a broad consensus that is aligned with current priorities and engages key champions. It also requires the implementation of targeted communication and advocacy strategies. These are necessary in order to translate into concrete political action the need for gender indicators and, ultimately, foster a supportive environment for their adoption and utilization.

I. Integrating Gender Indicators Toward Sustainable Energy: Rationale and Imperative

Background

As the world struggles to meet SDG7 targets,[1] women's empowerment in sustainable energy offers a powerful, often overlooked solution that can unlock progress for everyone.

In 2023, the United Nations designated energy access a key investment priority, in order to try and revitalize progress across the SDGs.[2] At the same time, UN Women has long seen a gender-responsive and sustainable energy transition as a critical opportunity to advance gender equality and women's rights.[3] Mirroring this perspective, a 2019 United Nations General Assembly resolution highlighted the crucial nature of gender equality in accelerating sustainable energy access.[4]

Now, as we reflect on the Beijing Declaration's 30th anniversary,[5] a paradigm shift that explicitly recognizes and integrates the critical role of gender equality has become essential in order to course-correct and achieve sustainable energy targets.

Despite the widely-recognized interlinkages between energy and gender, SDG7 is one of the few SDGs lacking a dedicated gender indicator.[6] This omission partly stems from the 2015 adoption of the 2030 Agenda, when energy was a new stand-alone goal. At that time, macro-level, tested gender data for SDG7 was unavailable. Indeed, although there was evidence that highlighted women's needs and roles in energy, indicators regarding gender and energy remained largely conceptual and broadly unproven. This left the international community unprepared to propose a concrete gender indicator for SDG7.

Yet, while this goal lacked a dedicated gender indicator in 2015, the inclusion in SDG7 of Target 7.1.2 on Access to Clean Fuels and Technologies, driven by the World Health Organization (WHO), the Clean Cooking Alliance and ENERGIA, significantly expanded monitoring beyond electricity access.[7] The clean cooking indicator recognized the disproportionate impact on women of this issue and thus acted as a proxy gender indicator. This, in turn, increased women's visibility within SDG7. However, the multifaceted relationship between gender equality and energy extends beyond clean cooking, underscoring the need for a specific gender indicator.

Historically, the energy sector's technical and supply focus has also overshadowed the need to consider demand and integrate gender perspectives within SDG7. Evaluation has tended to centre on output-level results, such as power plant construction, transmission

line installation and large-scale infrastructure projects. This supply-centric approach has continued in decentralized energy solutions, emphasizing technical specifications and regulations for private investment.

More recently, though, the energy community has broadened its focus to the demand side, evaluating energy use and supply performance, through metrics like quality and reliability. Consequently, interventions have increasingly targeted last-mile connectivity and service delivery, incorporating outcome-level indicators, such as number of connections. Energy providers now recognize that affordable access to appliances is key to sustainable demand growth.[8]

Gender and energy interlinkages

As highlighted by the twin goals of the Gender and Energy Compact,[9] the energy-gender nexus centres on two key dimensions: access to energy; and economic opportunities in the energy sector (figure 1). Improving gender equality in each of these dimensions does not only empower women, but also boosts the performance of the sector as a whole, accelerating progress toward SDG7. It is therefore vital to understand that the relationship is both reciprocal and mutually beneficial.

FIGURE 1
Gender and energy interlinkages

	ACCESS TO ENERGY	ECONOMIC OPPORTUNITIES IN THE ENERGY SECTOR
BENEFITS FOR WOMEN	• Time poverty reduction • Mitigates health risks	• Job opportunities • Entrepreneurship in renewable energy
BENEFITS FOR THE ENERGY SECTOR	• Untapped consumer market • Knowledge for product design • Inclination for energy efficiency • Minimize risks and strengthen reputation	• Understand customer needs • Address skills gap • Improve business performance • Boost innovation

Energy access

Energy access transforms lives for both men and women by reducing labour time and enhancing well-being. Its impact on women, however, is potentially greater due to existing inequalities and differing roles. As primary household energy users, women in energy-deprived settings face severe time poverty. This is due to the physically demanding tasks they often have to undertake, such as firewood collection, water fetching and food processing – all significant components of unpaid care work.[10] Furthermore, as women and children are often tasked with cooking and firewood collection, they suffer disproportionately from health issues that arise from the use of polluting fuels.[11] Access to modern energy, through clean cooking solutions, water pumps and mills, can liberate women from these unpaid, time-consuming and often unsafe tasks, unlocking pathways to education, economic opportunity and community participation.[12,13,14]

The energy community, however, often assumes that all household members benefit equally from greater energy access. This overlooks unequal distribution. For example, even when electricity is available, kitchen lighting or food processing appliances may be lacking.[15] Existing gender roles and power imbalances, including men's decision-making and women's financial/mobility constraints, prevent women from automatically benefiting from improved energy access.[16] A gender-blind approach thus reinforces gender inequalities, making gender-responsive energy policies crucial for equal benefit distribution.

While the role of women in achieving SDG7 is vital, it remains underrecognized. Representing half of consumers and voters, women represent a substantial – yet often untapped – market. Energy companies that strategically engage women as both residential customers and, crucially, business owners requiring energy for productive uses, see increased profitability and market sustainability.[17] Ignoring these demographic factors risks missing key consumer insights and hindering the adoption of technology.

Women's first-hand knowledge of household energy use is also invaluable in designing effective, user-friendly energy products, such as clean cooking solutions.[18,19,20] Companies that prioritize women's perspectives gain a competitive edge through customer loyalty and market penetration.[21,22] Furthermore, women's inclination toward energy-efficient appliances aligns with SDG7.3 and offers opportunities for companies to expand sustainable offerings and enhance their corporate social responsibility.[23,24,25]

Meaningfully engaging women in energy project planning and implementation reduces the risk of failure by ensuring consideration of energy's social and practical aspects. This leads to greater efficiency and resource optimization. This strategic inclusion enhances project outcomes and reinforces a company's reputation as supporting gender equality and inclusion within the energy sector. Thus, engaging women is a strategic business decision for successful, sustainable energy solutions.

Economic opportunities in the energy sector

Despite comprising nearly half the global workforce, women are notably underrepresented in employment and leadership roles across the energy sector. Limited data suggests they represent just 22 per cent of the oil and gas workforce and 32 per cent of those employed in renewables.[26] Women are also often concentrated in lower-paid administrative roles, while their representation in technical, managerial and policy-making positions is minimal. Amongst utility board executives, for example, their representation is only around 5 per cent.[27] This stems from a combination of cultural norms, limited access for women to science, technology, engineering and mathematics (STEM) fields and workplace biases. The latter include perceptions about physical strength requirements and scepticism regarding women's abilities[28,29] Women also face hiring/promotion biases, lack of mentorship and safety concerns.

At the same time, the projected tripling of the renewables workforce by 2030[30] offers significant job opportunities for women across the value chain,[31] fostering their financial independence. Increasing women's participation, especially in technical and leadership roles, is also crucial for a sustainable energy transition. Women's representation in national parliaments leads countries to adopt more stringent climate change policies resulting in lower emissions. Furthermore, the energy transition will enable women to create businesses, such as distributing solar products or clean cooking solutions, which can boost economic empowerment and accelerate clean energy access.[32,33,34] Supporting women's entrepreneurship through business incubators, financing and skills development is therefore also essential.

In addition, the energy sector itself stands to gain in performance and sustainable growth through greater participation of women.[35] Indeed, gender diversity demonstrably boosts business performance, sustainability, and innovation.[36] Diverse perspectives deepen understanding of customer needs, directly improving marketing and product design to drive wider adoption. Women's strong connections, particularly with other women, also make them effective sales representatives and community leaders. Inclusive networks strengthen community ties and sales effectiveness, particularly improving outreach to historically underserved customer segments and building trust. Recognizing this, energy companies often strategically hire women to drive sales and energy access.[37]

With the renewable energy boom demanding skilled labour, the recruiting, retaining and promotion of women is crucial in bridging skills gaps, ensuring a sustainable, efficient energy transition.[38]

Globally, however, the persistent underrepresentation of women in energy-related political and regulatory decision-making significantly impacts policy development and outcome.[39] This imbalance, compounded by limited gender data and awareness among policymakers, can lead to energy strategies that fail to address diverse societal needs. Cultivating an enabling environment through gender-responsive energy planning, policymaking, regulation and progress monitoring is therefore essential in fostering women's participation in the energy sector.

Why gender data matters

For an effective, inclusive and sustainable energy transition – and the achievement of an SDG7 that also advances SDG5 on gender equality – gender data are crucial. Such information illuminates how women and men are represented in energy sector jobs and leadership roles. It also highlights their respective representation in entrepreneurship and their roles as beneficiaries of energy access, making otherwise invisible inequalities measurable.[40]

Gender data should therefore directly shape energy project design and policy in the following ways:

- **In support of policy formulation:** Gender data are pivotal for sound energy policy, enabling evidence-based approaches that translate goals into action.[41] Data on women's underrepresentation in technical roles, for example, should prompt policies promoting gender diversity through targeted recruitment and retention. By addressing women's specific constraints, gender data can thus help shape policies and translate objectives into actionable strategies for a more inclusive sector. Data on gender across the Economic Community of West African States (ECOWAS), for example, was crucial in developing the organization's Policy for Gender Mainstreaming in Energy Access. This data-driven analysis revealed how gender inequality hinders development and limits opportunities, providing evidence and a rationale for the policy's vision and objectives.[42]

- **In informing energy project design:** Gender data are fundamental to effective design, as they can reveal distinct energy needs and usage patterns, ensuring tailored and impactful solutions for all. By exposing disparities in access and representation – such as in employment, leadership and entrepreneurship – data enables targeted programme development. This can effectively promote inclusive access and foster a sustainable energy transition. For example, over 90 per cent of World Bank energy lending operations include a gender gap analysis. This is based on gender data and has resulted in the inclusion of specific actions that aim to close the gender gap.

- **In setting targets and tracking progress:** Gender data are essential in setting measurable targets and tracking progress towards gender equality. Strong monitoring, evaluation and reporting that is based on this data can secure high-level commitments to gender equality programmes. Without these data, identifying gaps and monitoring progress is impossible, hindering accountability and the development of an inclusive energy sector. As an example, the Ministry of Energy of the Republic of Chile now issues *Energia + Mujer* (Energy + Women) annual reports. Published by its Gender and Human Rights Office, these track key indicators such as the percentage of women in management and the gender pay gap in the energy sector.[43]

Gender data are therefore vital for a sustainable energy transition. By identifying inequalities, informing projects, shaping policies and enabling progress they reveal the reciprocal benefits of gender equality and sector performance. They also provide the perspective necessary to dismantle barriers to women's access, while also highlighting missed opportunities for sector growth.

II. Adopting Gender Indicators for a Sustainable Energy Transition: The Way Forward

This policy brief makes the following recommendations:

Build upon existing efforts

International initiatives are now increasingly highlighting the crucial connection between gender equality and energy, advocating for gender integration.

SDG7 tracking reports stress the need for gender-responsive policies and sex-disaggregated data for energy access and women's empowerment.[44] This is a point echoed by the Gender and Energy Compact,[45] while in 2024, the Group of 7 (G7) Climate, Energy and Environment Ministers' Meeting also committed to better gender data collection.[46]

The growing focus on strengthening gender indicators and sex-disaggregated data in the energy sector directly supports SDG7. This can be seen in the work of the Equality in Energy Transitions Initiative, for example, which recognizes that limited data impedes progress.[47]

Building on this global momentum, specific gender and energy data collection initiatives are gaining further traction. IRENA, for example, is actively researching gender balance in renewables through surveys and studies across various technologies. This has revealed persistent underrepresentation of women in key roles.[48,49,50,51] The IEA Gender and Energy Data Explorer tracks women's employment, leadership, entrepreneurship and patenting in selected countries. Elsewhere, the Multi-Tier Framework (MTF) for energy access[52] has been gathering gender-specific household energy data, while in 2022, the Regulatory Indicators for Sustainable Energy (RISE) framework[53] incorporated gender tracking across numerous countries, marking progress in understanding the gendered impacts of energy regulations.[54]

Develop a robust methodology

Building on these initiatives and as part of the effort to transition to universal access to sustainable energy, a robust and inclusive methodology is needed to effectively develop and track gender indicators. This requires collaboration, strategic planning and a pragmatic approach to indicator selection and data collection. This selection must also be sensitive to diverse national contexts.

Establish a working group: This dedicated working group should leverage diverse perspectives and sources of expertise to strengthen gender indicators, drawing on a variety of organizations.

The working group's members should include representatives from the custodian organizations of SDG7 and SDG5; national focal points; and experts from key government ministries, such as energy, gender, statistics and economic development. This will ensure national relevance and practical data collection. The group should also consult civil society, women's groups, academia and research institutions. It should prioritize geographical balance and broad expertise in order to establish a collaborative and impactful process. The group should then deliver a final report recommending gender indicators and data collection methods.

Create a roadmap: The working group should first establish a clear timeline and comprehensive work programme in order to ensure the timely and effective development of gender indicators. This roadmap will define key milestones, activities and responsible parties, providing a structured framework. The work programme should also encompass workshops for dialogue, knowledge-sharing and consensus on indicator scope, candidates and methodological challenges. The timeline should include deadlines for deliverables, such as a preliminary indicator list, cost-benefit analyses and a data availability assessment. The final report should detail the agreed indicators and the tracking framework. Regular progress reviews and communication strategies should be integrated to maintain progress and keep stakeholders informed.

Develop an agenda: The development of gender indicators requires a carefully structured agenda that prioritizes relevance, feasibility and national contexts. This process begins by identifying potential indicators. This, in turn, should be informed by a cost-benefit analysis and technical discussions that balance ambitious goals with data availability. The agenda must assess existing data sources and methodological challenges, including quality and disaggregation. It must also identify strategies for enhancing data collection and explore innovative methods. Furthermore, the agenda must explicitly strengthen country statistical capacities through technical assistance and standardized tools. Finally, the process must accommodate diverse Member State priorities and capacities, allowing flexibility in indicator adoption while potentially establishing a core set of universally applicable measures alongside those that are nationally relevant.

Strengthen political commitment

Achieving an inclusive and sustainable energy transition that integrates gender considerations demands strong political commitment. It must move beyond mere acknowledgment to active championing through targeted communication and advocacy.

Fostering broad consensus and partnerships: Building widespread political commitment will require actively engaging diverse stakeholders. These include government agencies, national statistical organizations (NSOs), non-governmental organizations (NGOs), community leaders, businesses and affected populations. Inclusive participation and strong coalitions are essential in ensuring that gender indicators in sustainable energy reflect shared understanding and commitment.

Align with existing agendas and priorities: Gaining political traction for gender indicators requires strategic alignment with national and global priorities. Demonstrating how gender-responsive data and policies contribute to economic goals, such as job creation, the care economy and the National Determined Contributions (NDCs), will strengthen the indicators' importance. Highlighting the political benefits enjoyed by champions of gender indicators, while also adopting a flexible approach that respects national contexts, can secure a broader buy-in.

Identify and engage key champions and stakeholders: Cultivating political commitment necessitates identifying and actively engaging with influential stakeholders. These include ministries of energy, utilities, renewable energy companies, women's energy cooperatives, international agencies and donors. To cultivate a strong network of advocates for gender-sensitive energy indicators, engagement efforts can be strategically targeted. This can be done by understanding a given stakeholder's influence on energy transition monitoring and policy. It also requires an assessment of the current political will for gender equality and an identification of opportunities within existing frameworks.

Implement a targeted communication and advocacy strategy: A communication and advocacy strategy is crucial in translating the need for gender indicators into concrete political action. This involves crafting clear, evidence-based messages for policymakers, industry leaders and civil society. These messages should emphasize the practical benefits of gender data in sustainable energy and alignment with initiatives such as the Gender and Energy Compact. Direct engagement with government officials, concise policy briefs and coordinated advocacy at national and international forums can help lobby for policy change. Alongside discussions on technical assistance for developing countries, such activity can also foster a supportive environment for the adoption of gender indicators in an inclusive and sustainable energy transition.

Endnotes

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[10] Time and health burdens are especially acute for women in large humanitarian settlements and other displacement settings. In these locations, comprehensive energy access is often lacking, and gathering fuel from protected areas may be prohibited or unsafe.

[11] According to WHO data, household air pollution caused an estimated 3.2 million deaths in 2020. This included over 237,000 deaths of children under five. Combined with ambient air pollution, this contributes to 6.7 million premature deaths annually. It also leads to non-communicable diseases like strokes, heart disease, chronic obstructive pulmonary disease and lung cancer. www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health.

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[31] Potential areas of employment include design, manufacturing, marketing and customer support.

[32] See endnote 17 above.

[33] See endnote 12 on the previous page.

[34] Women-led enterprises can find significant entrepreneurial opportunities in clean cooking, including LPG distribution, electric cooking appliance sales, ethanol production, and biogas systems. Women are also crucial in the cookstove carbon market as distributors or project agents.

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[49] *See Wind Energy: A Gender Perspective,* IRENA, Abu Dhabi, 2020, www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Jan/IRENA_Wind_gender_2020.pdf.

[50] See *Solar PV: A Gender Perspective,* IRENA Abu Dhabi, 2022, www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Sep/IRENA_Solar_PV_Gender_perspective_2022.pdf.

[51] See *Fostering Livelihoods with Decentralised Renewable Energy: An Ecosystems Approach*, IRENA and SELCO Foundation, Abu Dhabi, 2022, https://selcofoundation.org/wp-content/uploads/2022/02/IRENA-SELCO-Fostering-Livelihoods-with-DRE-Ecosystems.pdf.

[52] See "Multi-Tier Framework for Energy Access," ESMAP, Washington DC, www.esmap.org/mtf_multi-tier_framework_for_energy_access.

[53] See Regulatory Indicators for Sustainable Energy (RISE) website, https://rise.esmap.org/.

[54] RISE evaluates national policy and regulatory frameworks for renewables, energy efficiency and electricity access. It also provides investment environment snapshots, identifies areas of SDG7 improvement and communicates global progress to policymakers and investors.

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