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KNOWLEDGE NOTE
POWERING PROGRESS ON GENDER-INCLUSIVE ENERGY SOLUTIONS FOR RURAL PAKISTAN

STUDY HIGHLIGHTS

The study, "Light Lightens the Burden on Women: How Access to Electricity has Reduced Women's Workload in rural Khyber Pakhtunkhwa," highlights the transformative potential of decentralised renewable energy for rural women:

- **Workload Reduction**: Electrification reduces the time women spend on labor-intensive household tasks. The saved hours, estimated to be 3 to 4 hours per day, can be reallocated to productive activities.
- **Productive Time Reallocation**: Women are reallocating saved time to rest, learning, and in some cases, economic activities—if enabling conditions exist.
- **Health & Well-being**: Cleaner energy reduces dependence on traditional fuels, improving respiratory health and supporting better nutrition and hygiene.
- **Advancement of Gender Equality**: Beyond easing burdens, electricity empowers women by increasing their agency, fostering decision-making roles within households and communities, and contributing to overall gender equity.
- **Climate and Sustainability Co-benefits:** Renewable energy systems contribute to reduced emissions, reforestation, and long-term energy security—when governance and financing models are well-managed at the local level.

PURPOSE

In Pakistan's rural heartlands, millions of women carry the weight of unpaid care work, limiting their access to education, income, and autonomy. According to the Pakistan Bureau of Statistics (2022), rural women spend an average of 5.5 hours daily on unpaid domestic and care work—nearly five times more than men. Moreover, approximately 54 million people (26% of the population) lack access to electricity and 106 million (51%) lack access to clean cooking facilities, severely limiting household-level productivity and reinforcing time poverty for rural women. This knowledge note captures the insights and recommendations emerging from a roundtable discussion on how decentralised renewable energy systems – particularly solar and micro-hydropower – can empower rural women, reduce unpaid care burdens, and contribute to inclusive and sustainable energy governance. Anchored in the findings of a key study conducted by INTEGRATION GmbH under the Pakistan-German Climate and Energy Partnership (PGCEP). The dialogue brought together policy makers, researchers, development actors and civil society experts to explore the nexus of energy, gender and climate justice in rural Pakistan.

DIALOGUE INSIGHTS

The roundtable underscored that while energy access is essential, empowerment does not happen automatically. Participants emphasised that technical solutions must be paired with social, economic, and governance reforms to deliver meaningful change for women and marginalised groups.

HOUSEHOLD REALITIES

Electrification reduces women's time poverty, yet persistent gender norms and economic exclusion remain key barriers. Affordability and decision-making power often remain with male heads of household, restricting women's agency over energy use.

"Women in electrified villages reduce usage by creatively managing appliances—moving items between fridge and freezer overnight, ironing only essential clothes, and shifting children's homework to daytime to avoid evening electricity costs."
– Civil society representative

Some interventions also overlook social norms. In one community, women refused a solar water system because fetching water was their only chance to converse with peers—a reminder that efficiency gains must consider cultural and social dynamics.

"Fetching water is the only time rural women get to talk among themselves about social issues."
– Development practitioner

These insights also align with broader calls for mainstreaming gender into energy access frameworks such as Pakistan's Climate Change Gender Action Plan (2023), which emphasizes that energy access strategies must be tailored to women's lived realities and not merely focus on supply-side efficiency.

ECONOMIC EMPOWERMENT

This shift in daily life, however, does not automatically translate into economic empowerment. The dialogue highlighted that many women remain disconnected from formal markets and skill-building opportunities. Without embedded support like childcare, market linkage, and gender sensitisation, economic benefits remain out of reach.

"Energy projects often focus on supply, lacking dedicated budgets or pathways for women-led income generation; saved time doesn't automatically become economic opportunity."
– Development practitioner

While challenges persist, there are encouraging examples that signal scalable potential. Women-led solar training initiatives in Chitral and Gilgit-Baltistan, for instance, highlight how targeted efforts can open new economic pathways. Yet these successes remain isolated. Their impact underscores the importance of embedding such efforts within broader energy access frameworks, ensuring that models are replicated with community ownership, cultural tailoring, and strong peer support mechanisms.

TECHNOLOGY & TOOLS

To bridge this gap, the dialogue turned to the role of technology and tools in creating new pathways for women. Access to technology only becomes empowering when coupled with financial and digital literacy, especially for women and girls in low-literacy rural areas. Benefits differ widely depending on geography, education and local norms; what works in urban centers like Karachi doesn't automatically translate to remote villages. For instance,

"In Tharparkar, women now manage pond and solar O&M due to male outmigration, while other run mobile charging stations for income."
– Development sector practitioner

Yet, gaps in contextual design remain. In one case, a female technician received an e-bike but couldn't use it due to lack of training and cultural acceptability.

"The e-bike was exciting, but no one taught her how to ride it, and it wasn't acceptable in her village."
– Civil society representative

Visibility of women in energy (through platforms like Women in Energy) and informal local networks help promote adoption and inspire younger women. Participants called for better tracking of how technology access translates into sustained empowerment, using real-time gender-disaggregated data and longer-term monitoring of women's retention in technical and entrepreneurial roles.

GOVERNANCE & REPRESENTATION

These grassroots and technological efforts, however, are not enough without institutional change. The dialogue shifted to the importance of governance and representation. Women's participation in community energy governance remains minimal—only 9% in the studied areas—and often symbolic.

Participants stressed shifting from "empowering" women to enabling inclusive structures that engage men and leaders as allies.

"Despite no written bans, women hold only 2–4% of leadership roles in energy sectors locally, showing that entrenched gender norms, not policy absence, block equity."
– Independent Researcher

Transforming governance needs push at individual, societal, institutional, and state levels, with community-based models complemented by policy advocacy. To foster genuine inclusion, participants also highlighted the often-overlooked experiences of transgender and gender-diverse persons.

"Transgender and gender-diverse persons face exclusion from both infrastructure access and governance often due to lack of ID documents and persistent bias."
– Transgender rights advocate

POLICY & INSTITUTIONAL GAPS

Finally, the discussion culminated in the need for high-level policy and institutional reform. While gender is mentioned in a few national energy policies, enforcement, accountability, and intersectionality remain weak. Participants emphasised reframing energy access as a human right, tied to dignity, health, and education. Coordination among ministries and agencies remains fragmented.

"Our existing renewable energy frameworks, like the Pakistan National Electricity Policy (NEP), lack a gender focus, which means we miss huge opportunities for creating inclusive jobs."
– Civil society representative

Participants noted that the disconnect between policy rhetoric and field-level realities is stark, particularly in rural contexts. Gender considerations are often seen as an afterthought rather than a core design principle.

"Planning must start with community perceptions—local voices shift social norms far more effectively than top-down mandates."
– Gender and energy practitioner

Shifting norms requires community-owned narratives—stories as well as statistics—and training programs adapted to local languages, cultures, and delivered by women trainers in conservative areas.

RECOMMENDATIONS

Building on these lived realities and evidence, the following stakeholder-specific recommendations emerged.

POLICY MAKERS
(Government Institutions, Regulators)

- *Institutionalise gender audits* and require gender-disaggregated reporting for all rural and donor-funded energy programmes, with findings submitted to legislatures.
- *Ensure inclusive governance* by setting quotas or issuing clear guidelines for women and marginalised groups in energy planning bodies, including transgender persons.
- *Establish an inter-ministerial Gender & Energy Taskforce* to coordinate across ministries, publish annual progress reports, and embed energy access as a human right.
- *Mandate grievance redress mechanisms and community consultations* in all energy initiatives to ensure rights-based safeguards in service delivery (education, health, dignity).

DEVELOPMENT ACTORS
(Implementing Agencies, NGOs, CSOs)

- *Design gender-responsive energy programmes* with measurable outcomes (e.g., % women in governance, # of women trained), ensuring inclusive participation from planning to evaluation stages and enabling women to benefit through acquired skills and learning.
- *Pair energy access with enterprise and vocational opportunities* for women in food processing, cold storage, digital services, and solar maintenance.
- *Establish inclusive energy user groups* and women-led O&M teams, supported by training, rotating leadership roles, and local peer-learning platforms.
- *Conduct norm-shifting campaigns* using community theatre, radio, and digital storytelling to challenge restrictive gender roles and promote women's leadership in energy.

FUNDERS AND DONORS
(BMZ, Multilaterals, Bilateral partners)

- *Prioritise gender equity and climate resilience* as core outcomes in energy investments, with earmarked funding and performance indicators.
- *Support long-term training pipelines*—scholarships, apprenticeships, and leadership mentoring for women in technical and governance roles.
- *Support scalable, integrated pilot projects* linking clean energy access with women's livelihoods, digital inclusion, and local economic development—especially in fragile or remote settings.
- *Promote sustainable financing models* combining community tariffs, local savings, and donor guarantees to support long-term operations, maintenance, and equipment renewal.

LOOKING FORWARD

Gender-transformative and sustainable energy systems are not aspirational—they are essential. The roundtable emphasized that true progress requires moving beyond access to equity, ensuring that energy transitions are inclusive, locally anchored, and climate-resilient. Acting on these recommendations is not just crucial for gender equality, but also a direct pathway to achieving Pakistan's commitments under the Sustainable Development Goals (SDG 5 and SDG 7) and its climate targets for a sustainable, low-carbon future. This dialogue must not be a standalone event—it should mark the beginning of a sustained, collaborative movement toward energy justice.

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