ADVANCING GENDER IN THE ENVIRONMENT: MAKING THE CASE FOR GENDER EQUALITY IN LARGE-SCALE RENEWABLE ENERGY INFRASTRUCTURE DEVELOPMENT

AGENT Thematic Energy Brief Series | 2018

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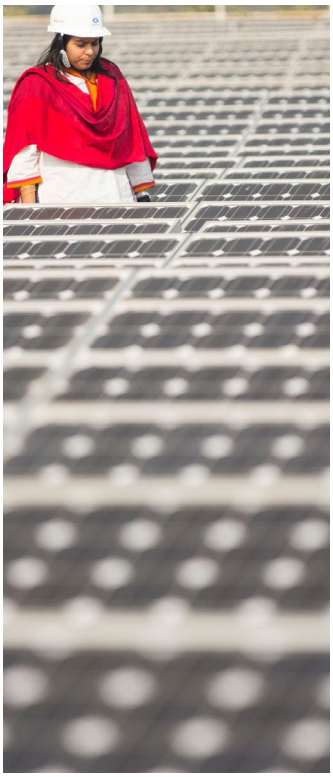


An engineer at a utility-scale solar power station in Delhi, India.

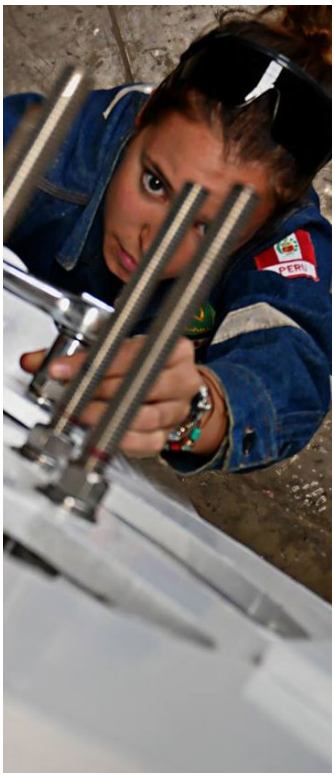
ASHLEY COOPER | ALAMY

ABOUT THIS SERIES

Research at the intersection of gender, energy and economic development reveals the benefits of integrating gender considerations into the energy value chain and throughout the power sector. Developing a sector that ignores the unique needs of women and men can have both differential and unintended impacts. When barriers that prevent women from having equal access to resources, including energy and economic opportunities, are removed, development and economic gains are strengthened.

Gender integration in the energy sector is gaining traction globally. Addressing gender considerations during the design and construction of large-scale renewable energy infrastructure, however, is more of an exception than general practice. When stakeholders take gender considerations into account, renewable energy infrastructure projects have the potential to reduce gender disparities in neighboring or impacted communities, as well as increase access to resources and economic opportunities for women and men. However, the construction of such infrastructure can also create and/or expose local communities to negative impacts —meaning planners have to take steps to reduce risks— from ensuring equitable access to resources to mitigating violence. Gender-responsive approaches to these construction projects can therefore enhance the success of projects themselves while generating benefits for and protecting the interests of impacted communities.

The Advancing Gender in the Environment (AGENT) *Thematic Energy Brief Series* showcases advancements towards the achievement of gender equality in the energy sector and identifies areas for further development and exploration. This series has been developed with the guidance and support of a network of energy experts hosted by AGENT. AGENT is a ten-year program launched by the United States Agency for International Development (USAID) in 2014 and implemented by the International Union for Conservation of Nature (IUCN). The purpose of the partnership is to increase the effectiveness of USAID's environment programing through robust gender integration and improve gender equality and women's empowerment outcomes in a broad range of environmental sectors. Recognizing women as agents of change, and the value of diverse knowledge, experiences and capacities of women and men alike, AGENT envisions a world that approaches environmental work at all levels with gender-responsive policy and action. AGENT drives transformation toward a more sustainable and equitable future for all.



On the cover: An engineer works on the construction of Costa Rica's 305.5 MW Reventazon hydroelectric plant in Limón province. It is one of the biggest renewable energy projects in Central America.

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Above: At Wind Aid, Sofía Garín Martínez,helps assemble a wind turbine. Wind Aid is an educational institute that provides electricity to developing communities utilizing wind energy to provide clean, reliable sources of electricity in Peru.

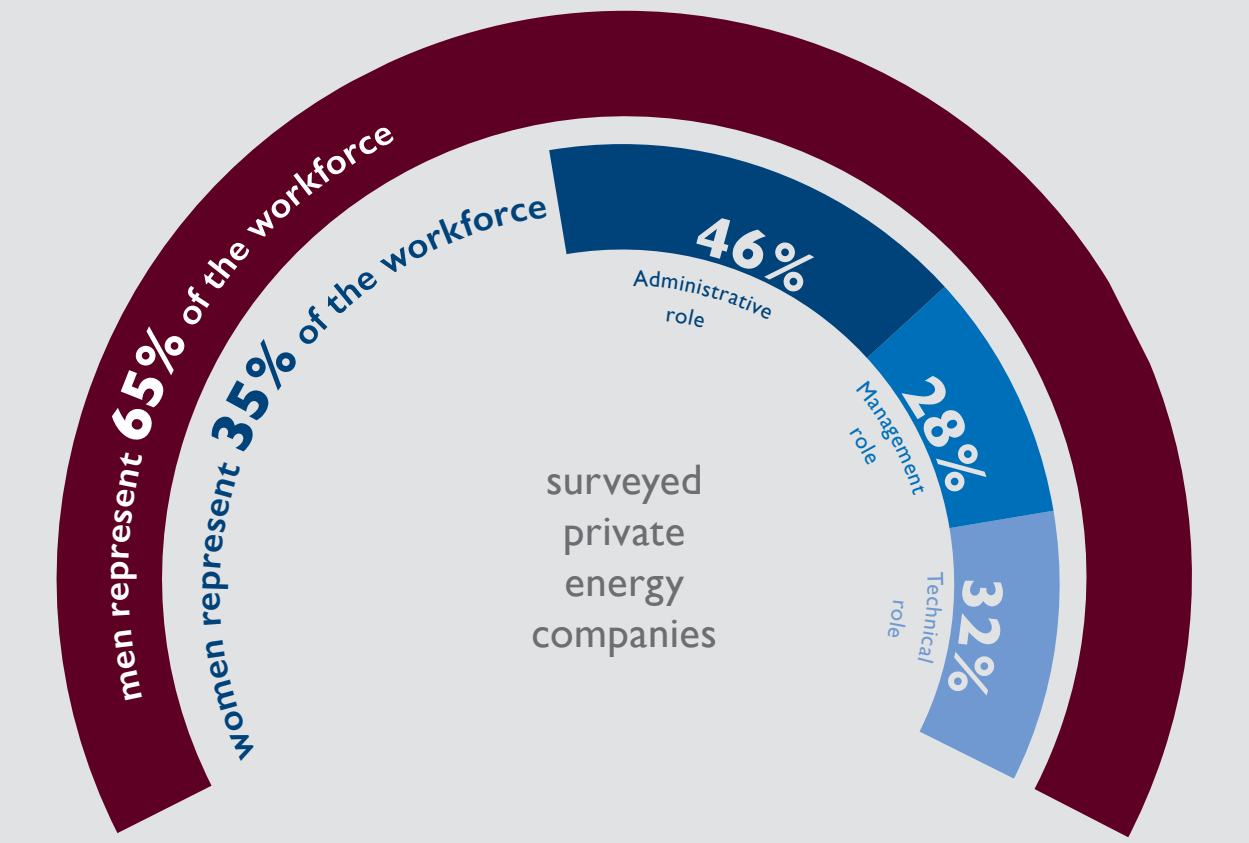
WIND AID | NICHOLAS WARREN

IN THIS BRIEF

This brief provides an overview of the gender dimensions of planning and building large-scale renewable energy infrastructure, such as hydropower and geothermal plants, solar arrays and wind parks with the capacity to generate 10 MW or more. While the practices and lessons highlighted can be applied to energy infrastructure projects in general, this brief focuses on renewable energy infrastructure projects in line with current investment trends. It presents the impacts that large-scale renewable energy infrastructure development can have on communities, women and men and introduces entry points for advancing gender equality. The brief outlines potential gender entry points, such as impact assessment and compensation plans and closes with a list of recommendations with links to resources for stakeholders, including policymakers, practitioners and private sector decision makers.

KEY MESSAGES

- Recognizing the gender dimensions of large-scale renewable energy infrastructure can increase social benefits, reduce conflicts with communities and make projects more inclusive, efficient and profitable.
- Large-scale renewable energy infrastructure has the potential to be transformative, by providing both much needed energy access, as well as opportunities for women's empowerment, employment and gender equality.
- To ensure equitable benefit sharing by impacted communities, large-scale infrastructure projects —whether renewable energy or otherwise— should develop compensation and resettlement plans in a way that recognizes and addresses gender inequalities and the social impacts caused by construction.



DATA FROM IRENA

GLOBAL OUTLOOK ON LARGE-SCALE RENEWABLE ENERGY INFRASTRUCTURE

In the energy market, renewable energy technologies (RETs) —including hydro, solar, wind and geothermal technologies— account for its fastest growing sector with some of its most significant investments in new research and design. During 2016, US$ 187.1 billion was invested in utility-scale projects —i.e. large-scale wind farms and solar arrays— while investment in small-distributed capacity, such as household solar panels, represented US$ 39.8 billion.[i] Additionally, global renewable energy employs 9.8 million people —an 11% increase from 2015— with the upward trend likely to continue.[ii]

A gender-responsive approach to project design and implementation enables the identification of potential barriers to enable energy access to vulnerable households and provides a better understanding of the needs and interests of the whole population of target communities. When integrating women's empowerment and gender equality strategies, large-scale renewable energy projects have an opportunity to deliver better and more impactful development outcomes.

ENGAGING WOMEN IN PLANNING

Considering that the renewable energy sector is expected to grow exponentially in the coming decades, understanding how all people can best contribute their skills and benefit from these new labor opportunities will be central to ensuring sector growth that does not exacerbate labor and income disparities between women and men, but rather builds on, serves and enhances the unique capacities and priorities of all. Understanding women's participation in the energy sector may be key for unlocking their potential and provide much needed support to a sector that is expected to continue its rapid expansion. The International Renewable Energy Agency's (IRENA) 2015 survey among private energy companies showed that women represent an average of 35% of the surveyed workforce. The survey also shed light on the roles women fill in the sector, representing 46% of the administrative workforce, 28% of the technical workforce and 32% of management roles.[iii] The latter may reflect greater interest among women in sustainability related fields.

At a more strategic level, energy policy agendas are typically set by urban men and do not benefit from a wider, gender-responsive consultation process that includes those in impacted areas.[iv] As the renewable energy sector is comparatively new, it presents an invaluable opportunity to scale-up gender-responsive approaches that empower women to play an active role in project design and implementation. For example, including women in decision-making processes —such as project development and design— helps eliminate and/or mitigate negative impacts on communities and/or women, as their needs and desires are often otherwise not properly identified, recorded or addressed.

WHY GENDER-RESPONSIVE APPROACHES MATTER

The differentiated impacts of these developments on women and men are seldom explored, discussed or documented. There is indication that the impacts differ because of the direct effect on women and men, e.g. through job opportunities, as well as through indirect impacts, e.g. with respect to access to land and resources. With regard to jobs, men typically benefit more from large-scale energy infrastructure, as they are often employed as construction labor. Women, meanwhile, often engage in more informal, lower paying, traditional jobs, such as catering, laundry and clerical work.[v]

In terms of access to resources, as with many infrastructure projects, large-scale renewable energy developments can restrict or even eliminate access to a given area and resource. For instance, the reservoir of a hydropower dam may flood villages, pasture lands, community forests and sacred places. Meanwhile, communities may be banned and/or lose access to previously accessible resources on land designated for a solar array or wind farm. In addition, access to clean water and ecosystem services for local communities may also be reduced during the construction period of renewable energy infrastructure, as water sources might be redirected to serve the water needs of the construction site or become polluted as a result of construction activities. Trees and bushes used as a source of produce might be cleared from land as well. Furthermore, in extreme cases, the elimination of access to land and resources caused by these developments can result in both displacement and conflicts of varying intensity.

Furthermore, the extraction and construction processes of energy infrastructure implies the arrival of construction brigades, mainly a temporary workforce composed of men. This influx of transient workforces can have an impact on the social relations of nearby communities, potentially including increased incidences of unwanted pregnancies, gender-based violence (GBV), prostitution and trafficking, and sexually transmitted diseases, including HIV/AIDS.[vi] Providing gender sensitization and sexual education training, as well as codes of conduct against sexual trafficking and exploitation, are among key interventions to reduce these negative social impacts. Unfortunately, field experience shows that most management plan interventions are limited to only distributing condoms among workers.[vii]

Very often, as is the case with extractive industries, resources used for generating renewable energy are located on lands owned, used or inhabited by indigenous peoples who frequently oppose large-scale infrastructure, such as hydropower. Appropriate consultation with indigenous peoples, and even implementation of Free Prior and Informed Consent (FPIC) as per International Labour Organization (ILO) Indigenous and Tribal Peoples Convention (No.169) are uncommon. Furthermore, indigenous consultations that include gender-responsive measures are likewise infrequently conducted. In the much-publicized court case raised by pastoralist groups impacted by a wind development in Lake Turkana, Kenya, the voices of women have yet to be heard.[viii] Ignoring such opportunities to engage indigenous communities can result in violence. For example, opposition to large-scale renewable energy projects has resulted in the persecution and deaths of female indigenous activists in Honduras[ix] and Mexico,[x] among others.

ADDRESSING GENDER-BASED VIOLENCE (GBV) IN LARGE-SCALE INFRASTRUCTURE

Energy and infrastructure development has many implicit, and often invisible, increased risks of gender-based violence (GBV). Failure to integrate GBV prevention and response into project design may result in unintended negative consequences. USAID's Building a Safer World: Toolkit for Integrating GBV Prevention and Response into USAID Energy and Infrastructure Projects is designed to provide guidance on the policies and approaches that can be applied to project design to ensure that projects fully comply with USAID standards and create safe spaces to prevent and reduce GBV risks. The toolkit focuses on three areas:

- Ensuring that projects are designed to include the concerns of women, LGBTI and other vulnerable populations;
- Preventing sexual harassment during construction activities; and
- Developing appropriate reporting mechanisms for when GBV does occur.

To access the Toolkit, please click here.

ENERGIZING THE SECTOR— BUILDING GENDER-RESPONSIVE INFRASTRUCTURE

Within the design of large-scale renewable energy projects, there are opportunities to pursue and achieve positive environmental, social and economic outcomes for women and men alike. Therefore, understanding the ways in which women and men —particularly those in communities being impacted or serviced by the infrastructure project— can benefit from such projects is key for ensuring sectoral growth in line with the achievement of sustainable development goals.

GENDER-RESPONSIVE ASSESSMENTS FOR MORE EFFECTIVE PROJECT DEVELOPMENT

Impact assessments are essential for understanding how women and men can benefit from or be harmed by infrastructure projects. These assessments are processes designed to evaluate the potential environmental and social impacts of a proposed project. In turn, this evaluation enables the identification and design of alternatives to mitigate, address and monitor these impacts. As some of these impacts are unavoidable, large-scale infrastructure projects, whether renewable energy or otherwise, should develop compensation and resettlement plans to address them.

EXAMPLES OF HOW ENERGY INFRASTRUCTURE PRESENT OPPORTUNITIES AND CHALLENGES RELATED TO GENDER-RELATED IMPACTS

IMPACTS	OPPORTUNITIES	CHALLENGES
Population displacement and resettlement	• Improved infrastructure; and • Land titles for women or joint titles for husband and wife.	• Risk of lower land compensation for women; • Impacts on livelihood strategies of women, like collection of non-timber forest products, medicinal herbs, honey, etc., not being recognized nor compensated; • Compensation measures often decided by men; and • Alternative lands without consideration of accessibility to services, resources nor social networks, e.g. as necessary for child care.
Social changes	• Better health services to improve maternal health; • Income generating opportunities related to improved access, e.g., energy, roads, etc.; • Changes in gender norms; • Increased social status for women; and • Stakeholder consultations with both men and women.	• Risk of increased gender-based violence due to migration of workers; and • Increased prostitution and sexually transmitted infections related to construction camps.
Economic changes	• New business opportunities for men and women; and • Increased female labor force participation.	• Affordability of electric services for female headed households.

Modified from: Lopes-Janik, V. (2015). Presentation.

A woman stands at the base of a series of building platforms at a temporary relocation site in Laos. As the village will be completely inundated by Nam Ou River Dam #6, the government has provided resettlement near Hat Sa.

AURORA PHOTOS | ALAMY

Often times, during impact assessments, women are seldom or poorly involved in meaningful consultations. As a consequence, impacts on women's livelihoods and well-being often go unidentified. This means women's needs will neither be quantified nor compensated in resettlement and livelihood restoration plans as a result. In contrast, conducting meaningful gender-responsive consultations[l] and analyses regarding assets, livelihoods, ecosystem services and social networks during the design phase of infrastructure projects will guide the design and implementation of equitable compensation and/or resettlement plans. This is supported by empirical research which shows that women are more likely than men to request investments in community infrastructure and services, such as health centers, schools or education programs, as part of compensation plans.[xi] By understanding the gender dimensions of these projects, women and men are ensured equitable opportunities in influencing the design and location of the project in order to avoid or minimize negative impacts.

For example, when assessing property rights, stakeholders are requested to produce land titles as proof of ownership. As women are estimated to hold less than 20% of the world's land,[xii] they face a stark difference in property ownership issues in comparison to men. This is often a result of customary law or other regulations that impose restrictions on inheritance and land ownership that can leave women without formal land titles. This lack of formal documentation therefore makes compensation for lost property more difficult for women. Hence, compensation schemes that do not consider such impacts result in a wider gender gap and worsen the relative position of women in their communities. Large-scale renewable energy projects must therefore consider the barriers women face accessing alternative lands and assets, equivalent financial compensation and/or support to restore their livelihoods.[xiii]

In addition, compensation plans that include skill-development or retraining activities are often gender-blind and based on the identification of remunerated work. This practice also unintentionally discriminates against women who need to balance child and home care with productive activities, as well as tend to work in subsistence activities or in the informal sector, making them less likely to be included in such retraining schemes or receiving monetary compensation for the loss of their livelihoods.

l Gender-responsive consultations are designed and implemented in a manner that allows women and men to participate fully and in an informed manner. For example, by: (i) identifying a time –i.e. not competing with other activities- and location that is accessible and convenient for women and men; (ii) ensuring information has been disseminated in a format that is understood by women and men –i.e. taking into account literacy levels, language used, etc.–; (iii) organizing discussions in forms that make women feel comfortable and safe sharing their experiences; (iv) giving equal weight to the needs and asks of women and men; (v) reporting the results of the consultation acknowledging if and when there are different asks from women and men.

A worker helps build Costa Rica's 305.5 MW Reventazon hydroelectric plant in Limón province.

GENDER-RESPONSIVE METHODS IN PRACTICE

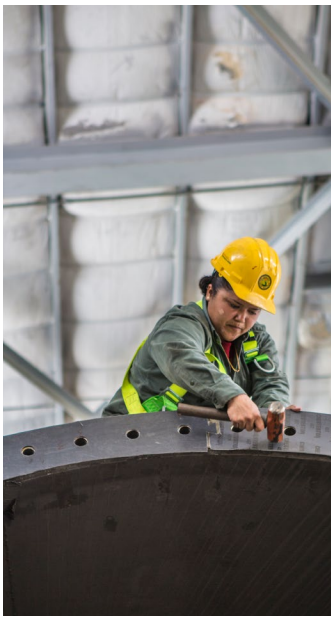
Despite challenges, numerous examples from around the world now illustrate the strategies for and impacts of gender-responsive renewable energy infrastructure development.

LAO PDR

The resettlement that occurred during the construction of the NamTeum 2 Dam in Laos affected 6,300 people in 17 communities. The power company hired gender specialists led by the Laos Women's Union as a means to ensure the effective participation of women in all phases of the project. As a result, the Social Development Plan and the Resettlement Action Plan included important gender considerations —such as land titles being issued jointly to women and men, as well as joint compensation for those who were resettled. In addition, alternative livelihoods were created for the most vulnerable resettled households, including livelihood activities traditionally carried out by women, such as raising chickens and producing handicrafts.[xiv]

COSTA RICA

The Reventazon dam was concluded in 2016 and is —after the Panama Canal— the largest infrastructure facility in the Central American Region. Reventazon also has the distinction of being the first time in which the national power generation company —Instituto Nacional de Electricidad (ICE)— recruited and trained local women as part of the construction crew for the project. None of the 90 women who joined the project had previous experience in construction or masonry work, with most having only held irregular incomes, if any at all, as they were involved in seasonal or household activities. In order to retain women in the workforce, the generation company combated gender stereotypes through sensitization programs and assigned women tasks based on their capacities —such as gross and fine motor-skills, ability to understand processes, attention to detail, and leadership skills. By the end of the construction process, women were highly appreciated as crewmembers, particularly due to their continuous and increasing learning curve as well as their reliability as workers. Perhaps more importantly, women reported an important increase in self-esteem as a result of their new skill development and economic empowerment — stable incomes meant these women were now creditworthy and they used this opportunity to improve their quality of life for themselves and their families. ICE is using this project as a model for combating gender stereotypes in future energy infrastructure projects.[xv]



In El Salvador, a technician works on scheduled maintenance of the Berlín geothermal plant.

LaGeo

EL SALVADOR

The geothermal electricity generation company LaGeo, and its affiliated foundation organization FundaGeo, sought to use the residual hot water and steam production —which is usually waste— to promote women's economic empowerment and encourage community leadership. Women from 15 surrounding communities benefit from these opportunities which include: using water condensation to grow and sell roses, employing heat residuals to dehydrate fruits and fishing in reservoirs. Additionally, women are involved in community meetings concerning the project and attend technical training workshops that expand their skills and understanding of the project.

LaGeo has also worked towards ensuring a more gender-inclusive corporate workplace. The company has designed its human resources policies to ensure women are actively recruited and encouraged to participate in career-development opportunities. LaGeo also sponsors a nursery and daycare facility for the children (including those with special needs) of LaGeo employees. These policies seem to be paying off, as LaGeo reports women hold 32% of permanent positions at the company, with close to 30% of them holding technical positions. LaGeo's actions to increase women's participation in the workforce also extend to the recruitment of temporary employees. Each year, the plants hire more than 50 local women to support annual maintenance of the plants. These women undergo trainings in industrial safety and maintenance activities such as cleaning the mechanical parts. These skills and experiences can be transferred to other sectors and make women more marketable.[xvi]

KENYA

The African Development Bank's (AfDB) Menengai Geothermal Development Project plans to increase Kenya's national power generation capacity by approximately 25% and will be operated by the private sector as an independent power producer (IPP) or through a public private partnership. The project undertook a comprehensive gender assessment and collected available sex-disaggregated data. It also designed inclusive and gender-sensitive stakeholder engagement processes and monitoring and evaluation mechanisms. Expected gender benefits include: promoting direct and indirect employment opportunities for women and enhancing women's participation in traditionally male-dominated labor and physical tasks (i.e. stone quarrying, ballast crashing). Additionally, the project focuses on indirect gender benefits, such as improving health and education infrastructure, particularly for women and girls.[xvii]

PERU

Communities that host large-scale energy projects often do not benefit from the energy produced, as the energy is immediately fed to the national grid. In order to address this disparity, Wind Aid, a volunteer organization that installs small turbines in rural communities, is requesting large-scale wind companies to support their activities and provide small-scale turbines to the communities who do not benefit from the energy produced, addressing the needs of the community to access electricity and increasing their understanding and appreciation of renewable technologies. Such partnerships can provide an avenue for women to become engaged in decisions that affect their lives.[xviii]

Additionally, in Peru, the "*obras por impuestos*" (infrastructure for taxes) is a government initiative to allocate tax money from power generation companies to be used directly to support the infrastructure and public investment needs prioritized by subnational governments and governmental entities.[xix] When linked to supporting the priorities of nearby communities, the "*obras por impuestos*" program could prioritize investments for building schools, medical centers and roads, for example. Though it is not clear if women are specifically targeted or addressed during the consultation process, the reality in rural Peru, where women stay behind while men migrate, may facilitate their participation in these processes.

RECOMMENDATIONS

Continued research and data collection is necessary to increase understanding of how large-scale renewable energy projects impact women and girls, men and boys, and whole communities, and likewise, how gender-responsive approaches can improve outcomes across the sector. Research and data can be collected from and inform impact assessments to indicate, for example, what types of large-scale renewable energy projects are most likely to have negative or positive impacts on women. Additional research on gender-responsive participatory consultations and their effects may serve to both validate and promote the use of these approaches by project implementers. This information can unleash opportunities for financial institutions and implementers to further design projects with the interests and concerns of women and other vulnerable populations in mind.

Ensuring women and men benefit equally from large-scale infrastructure is an important consideration and has the potential to contribute to increased access to modern, reliable and affordable energy while producing additional social and economic benefits. However, this cannot be done without establishing and sustaining strong political will among decision makers, financial institutions and leaders across sectors, especially toward ensuring women's equal voice and opportunities.

The following pages present interventions, recommendations and tools by stakeholder group to transform the sector.

POLICYMAKERS

- Undertake comprehensive gender-responsive consultations with civil society and host communities before deciding on energy policies, especially on the type and scale of sources of energy to be promoted;
- Require and enforce gender-responsive approaches for baseline and impact assessments of large-scale renewable projects and their resettlement plans;
- Ensure public consultations, as well as social and environmental impact assessments, are transparent and inclusive of academia and civil society organizations, including environmental and women's groups;
- Have a gender expert review the impact assessments of large-scale renewable projects; and
- Track enforcement of mitigation measures designed to minimize impacts on women and men using gender indicators and sex-disaggregated data collection methods.

Click the icon to tune into a presentation on how and why ECOWAS is developing a regional directive for integrating gender in large-scale energy infrastructure.

PRIVATE SECTOR COMPANIES

- Hire a gender expert as part of the environmental and social impact assessment team to ensure impacts of projects on women are identified and managed and that women's perspectives on energy requirements and solutions are included;
- Ensure that project management incorporates and delivers on recommended gender-responsive mitigation measures;
- Ensure that resettlement action plans include: i) measures for female-headed households; ii) equal access to compensation for women; iii) joint titling and/or cash compensation requirements of both spouses' signature for access to bank accounts; iv) availability of health services at the point of relocation, including necessary facilities for maternal health; and v) use monitoring indicators and evaluation questions related to how women's needs have been addressed in resettlement implementation;
- Set targets for inclusion of women in all levels and fields in the workforce, and promote women to remain in the workforces, including through the design of flexible working opportunities, mentoring and sponsorship programs, professional development and training;
- Ensure resources for implementation of mitigation measures required for gender-responsiveness;
- Utilize gender-responsive grievance redress mechanisms, using tools and channels that women in the project area have access to and may use;
- Include gender indicators in the monitoring and evaluation of large-scale infrastructure projects;
- Ensure that GBV considerations are included in the project cycle to prevent these types of violence including -but not limited to- sexual harassment during construction activities; and
- Develop appropriate reporting mechanisms for when GBV does occur.

Click on the icon for the World Bank Group's Gender Impact of Public-Private Partnerships report, which provides an assessment of the current and potential gender impacts of public private partnership (PPP) infrastructure projects.

PUBLIC SECTOR

- Include gender related clauses as part of assessments for large-scale energy infrastructure projects financed by the public sector;
- Ensure that private companies who implement the energy projects comply with the gender and social elements identified during assessment studies; and
- Ensure that project investors and developers include GBV considerations in the project cycle to prevent these types of violence from occurring.

Click the icon to access the AfDB's *Checklist for Gender Mainstreaming in the Infrastructure Sector.*

DONORS, MULTI-LATERAL COOPERATION AND DEVELOPMENT BANKS

- Require recipients to undertake a gender analysis of the impacts of renewable energy projects as part of their baseline studies;
- Request evidence of effective participatory, gender-responsive consultation for the identification of design alternatives, including through impact and benefits assessment and mitigation measures;
- Provide guidance on how to analyze impacts from a gender perspective and incorporate them into the overall project planning and implementation;
- Provide resources or access to financing for implementation of mitigation measures required for gender-responsiveness;
- Include gender indicators in the monitoring and evaluation of large-scale infrastructure projects and attach penalties for lack of compliance with the gender-responsive activities identified and defined as part of the gender analysis of the project; and
- Require infrastructure projects they invest in to include GBV considerations in the project cycle, including the development of reporting mechanisms for when GBV does occur, to prevent and combat these types of violence.

Click the icon to access a tool kit by the World Bank Group on integrating gender considerations into energy operations.

CIVIL SOCIETY, INCLUDING ENVIRONMENTAL AND WOMEN'S ORGANIZATIONS

- Increase awareness and engage public opinion to ensure large-scale renewable energy projects are implemented in a manner respectful of gender equality and human rights;
- Use social media, phone and other communication platforms used by women to provide information and to voice concerns and opinions;
- Demand inclusive consultation processes and gender-responsive mitigation and compensation strategies;
- Document and disseminate good practices where large-scale infrastructure projects have been respectful of gender equality and human rights; and
- Denounce large-scale renewable energy infrastructure projects that are detrimental to gender equality, indigenous peoples and human rights.

Click the icon to access CEE's guide for civil society organizations and activities to identify the gender implications of investments by international financial institutions in their countries, including a checklist of questions for assessing impacts in the energy sector.

RESOURCES

DOCUMENTS AND CASE STUDIES

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WEBSITES

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- IUCN GGO: http://genderandenvironment.org/energy/
- World Bank Group: Gender and Energy Projects: http://ppp.worldbank.org/ppp/ppp-sector/gender-impacts-ppps/mainstreaming-gender-sector-specific-materials/energy/mainstreaming-g

VIDEOS AND WEBINARS

- IUCN GGO (2017) *Fomentar la Participacion de las Mujeres en el Sectro Energetico*. GECCO Webinar. Available here.
- IUCN GGO (2017). *Addressing gender considerations in large-scale energy infrastructure, policies and project development*. GECCO Webinar. Available here.
- IUCN GGO (2017). *Transversalizando el enfoque de género en la infraestructura energética a gran escala.* GECCO Webinar. Available here.
- IUCN GGO. (2015). *Gender equality in the energy sector: Understanding how renewable energy contributes to empowerment.* "Large-scale energy infrastructures, if they are not gender neutral why do we hear so little about it?" GECCO Webinar presentation by Vanessa Janik-Lopes. Available here.
- IUCN GGO. (2015). *Gender in large-scale energy infrastructure*. GECCO Webinar. Available here.

i. Frankfurt School-UNEP Collaborating Center. (2017). *Global Trends in Renewable Energy Investment 2017*. Frankfurt School-UNEP Center. At: http://fs-unep-centre.org/sites/default/files/publications/globaltrendsinrenewableenergyinvestment2017.pdf

ii. IRENA. (2017). *Renewable energy and jobs: Annual Review 2017*. At: https://www.irena.org/DocumentDownloads/Publications/IRENA_RE_Jobs_Annual_Review_2017.pdf

iii. IRENA. (2016). *Renewable energy and jobs: Annual Review 2016*. At: http://www.irena.org/DocumentDownloads/Publications/IRENA_RE_Jobs_Annual_Review_2016.pdf

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This brief is included in the AGENT Thematic Energy Brief Series. It was prepared by IUCN with the support of USAID. The accompanying briefs and more information can be found at [http://genderandenvironment.org/energy/.](http://genderandenvironment.org/energy/)

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