GUIDANCE NOTE

GENDER ANALYSIS IN TECHNICAL AREAS:

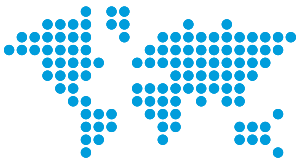
Energy Infrastructure

UN WOMEN

Produced by the UN System Coordination Division of UN Women.

GUIDANCE NOTE

GENDER ANALYSIS IN TECHNICAL AREAS: ENERGY INFRASTRUCTURE



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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
CEDAW	Committee on the Elimination of Discrimination Against Women
ECOSOC	United Nations Economic and Social Council
ESMAP	Energy Sector Management Assistance Program
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
GAP	Gender Action Plan
GBV	Gender-Based Violence
GDI	Gender Development Index
GESI	Gender Equality and Social Inclusion
GIDAP	Gender and Inclusive Development Action Plan
GRB	Gender Responsive Budgeting
GSNI	Gender Social Norms Index
IEA	International Energy Agency
ILO	International Labour Organization
IRENA	International Renewable Energy Agency
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
ROE	Return on Equity
SDGs	Sustainable Development Goals
SEforALL	Sustainable Energy for All
SOGIESC	Sexual orientation, gender identity, gender expression and sex characteristics
STEM	Science, Technology, Engineering, and Mathematics
ToA	Theory of Action
ToC	Theory of Change
UN	United Nations
UNDP	United Nations Development Programme
UNOPS	United Nations Office for Project Services
UN-SWAP	United Nations System-Wide Action Plan on Gender Equality and Women's Empowerment

TABLES AND BOXES

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This Guidance Note on Gender Analysis in Energy Infrastructure is the product of UN Women, led by its UN System Coordination Division in the context of its remit to support the UN system in its work on gender mainstreaming. This Guidance Note is one in a series dedicated to addressing gaps in gender analysis in technical areas. This Guidance Note, and the series, is a complement to the work of the System Coordination Division in their development of the Handbook on Gender Mainstreaming for Gender Equality Results.

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1. INTRODUCTION

1.1 About this guidance note

This publication on Gender Analysis in Energy Infrastructure is part of a **series of guidance notes on gender analysis in technical areas** that seeks to contribute towards gender mainstreaming. The series aims to do so by filling the gaps identified in the 2019 Secretary-General's report and through UN-SWAP reporting, by providing knowledge and capacity for developing gender analyses in a variety of thematic areas aligned with the diverse mandates of UN entities.

The 2019 Secretary-General's report, drawing on reporting under the System-Wide Action Plan on Gender Equality and Women's Empowerment accountability framework (UN-SWAP), **noted gaps in infrastructure, energy and new technologies, among others** – sectors in which gender equality is not traditionally considered, but have significant potential for reducing gender inequality.[2] The UN-SWAP framework has also demonstrated that the methodology used to develop policies and design interventions for gender equality programming needs to be solidly based on evidence, which can be provided through conducting a gender analysis.

This guidance note is part of a capacity-building initiative aimed at enhancing the capacity of sector specialists and gender focal points to produce and utilize gender analysis in their work. The focus in this guide is the thematic area of **energy infrastructure**, which is a sector dominated by men and where gender analysis can provide vital data to practitioners on the key entry points for integrating gender equality and social inclusion into energy infrastructure projects. Therefore, this guide provides simple and practical tips, steps and checklists to conduct a gender analysis and offers examples of good practices.

- **Section 1** gives a broad introduction to gender analysis and to the series on gender analysis in technical areas.
- **Section 2** of the guidance note provides a 'Quick Guide to Gender Issues in Energy Infrastructure', which gives a snapshot of general gender issues within the sector.
- **Section 3** is on planning for gender analysis in energy infrastructure, outlining the factors that need to be considered.
- **Section 4** discusses data collection, describing types of data to consider and potential data sources, and provides a table of existing data sources on gender and energy infrastructure.
- **Section 5** explains data analysis, with guiding questions for gender analysis in energy infrastructure.

BOX 1

Where is gender analysis critical?[1]

As the UN Women Gender Mainstreaming Handbook explains, a gender analysis constitutes the preliminary and foundational step for the promotion of gender goals and is needed to address unequal power relations and systemic gender inequality, including in all situations where:

- Gender equality issues are not adequately addressed in regular analyses.
- Analyses reveals constraints and/or challenges on gender equality issues that require further investigation.
- Policy is as yet not developed, and where knowledge on gender equality issues is as yet unavailable.
- Targeted activities have not incorporated gender perspectives in their design, implementation, and monitoring.

- **Section 6** covers how to use the results of gender analysis in energy infrastructure policy, project and programme development.
- **Section 7** presents a case study of gender analysis in the energy infrastructure sector.
- A series of **Annexes** provide an overview of the steps and tools in a sector-specific gender analysis, a glossary of gender terminology, a sample template for gender analysis terms of reference, a sample gender analysis report structure, a list of key resources and a bibliography.

1.2 Rationale for gender analysis

Gender analysis was identified as the **fundamental starting point for gender mainstreaming** in the 1995 Beijing Platform for Action and the 1997 agreed conclusions of the UN Economic and Social Council, and subsequently across all the major areas of work of the United Nations system. While the application of gender mainstreaming and gender analysis is now commonly embedded in programmatic work in socio-economic sectors often traditionally associated with women, such as education and health, significant gaps remain in terms of gender perspectives in several thematic areas.

The application of gender analysis in mainstreaming for gender equality is governed by some key principles. These include:[3]

- Gender analysis is to be carried out in initial phases to ensure relevant issues are identified and interventions are planned in a gender-responsive manner;
- Gender neutrality should never be assumed in any policy or practice interventions;
- Gender analysis should be used systematically throughout all phases of interventions in order to establish baselines which can be monitored during subsequent phases to track results and impact; and,
- Gender analysis findings must be effectively incorporated in the implementation of policy and practices, as the analysis clearly reveals challenges and vulnerabilities whilst also identifying potential opportunities for change.

1.3 What is gender analysis?

A gender analysis (see Box 2) is commonly used to inform project or programme design, but it can also be integrated into other processes such as a situation analysis, common country analysis, sector analysis or risk assessment. A stand-alone sector-specific, gender analysis can be especially useful in sectors not traditionally given a gender lens.[4]

A gender analysis should, at its core, seek to answer the following questions:[5]

- **What are the key gender issues in the sector?** Namely, how are women, men, boys, girls and persons of diverse genders differently affected in this sector due to differences in their respective roles, needs, priorities, and status? This includes investigating the policy and legal frameworks, the gendered division of labour, access to and control over resources, and decision-making power.
- **How will the intended project or programme affect people differently?** By identifying the likely differential impacts on women, men, boys, girls and persons of diverse genders, the constraints and opportunities for developing gender-sensitive interventions can be highlighted and gender inequalities avoided, contributing to achieving gender equality outcomes.

Whilst we may use the simplified language 'women and girls' and 'men and boys' in this guide on gender

BOX 2

Gender analysis definition

Gender analysis is a methodology that describes existing gender relations in a particular environment through collecting and analysing sex-disaggregated and gender-disaggregated data and other qualitative and quantitative information. It organizes and interprets, in a systematic way, information about gender relations to make clear the importance of understanding gender differences, inequalities and power dynamics in order to achieve development objectives.

analysis in energy infrastructure, we do not seek to define people by a singular identity. We wish to refer to people in all their diversity and with diverse sexual orientations, gender identities, gender expressions and sex characteristics (SOGIESC). When undertaking any gender analysis, we recommend that practitioners take into account how gender or other social and sexual identity/ies may impact energy infrastructure and access to energy resources in the given context so that their specific challenges and opportunities can be recognised.

1.4 Gender analysis in technical areas

As part of a capacity-building initiative aimed at enhancing the skills of sector specialists and gender focal points, this guidance note on Gender Analysis in Energy Infrastructure is one in a series that aims to help individuals and teams to plan, implement and utilize the results from gender analysis for the benefit of their work and their stakeholders, including end-users.[6]

Other guidance notes in the Gender Analysis in Technical Areas series include:

- Climate and Disaster Risk Finance and Insurance
- Digital Inclusion

2. QUICK GUIDE TO GENDER ISSUES IN ENERGY INFRASTRUCTURE

2.1 Background to gender and energy infrastructure

Energy infrastructure projects present three main entry points for gender mainstreaming: access to electricity, increased participation of peoples of all genders in the energy sector workforce, and mitigating adverse effects related to energy infrastructure projects, such as loss of land, involuntary resettlement and environmental degradation that disproportionately affect women and excluded populations.

2020 statistics reveal that globally, 733 million people still do not have access to electricity, and 2.4 billion people do not have access to clean fuels and energy technology for their household needs (cooking and other household activities).[7] Furthermore, the trend in increased access to energy has experienced a setback due to COVID-19, with access declining in 2020[8]. Furthermore, energy access issues resulting from the pandemic have been compounded by conflict situations, which has led to the soaring of energy prices in many countries.[9] Energy poverty increases gender gaps and negatively affects women and excluded populations' access to income-generating opportunities and education.[10] Additionally, the energy sector is widely dominated by men, with women representing only 22 per cent of the worldwide utilities industry's workforce.[11] This lack of representation limits energy infrastructure projects' capacity to mitigate the risks and unwanted impacts of construction projects. The following description of gender issues focuses on energy infrastructure as a major step in the energy sector value chain essential to overcoming energy poverty. It explains how incorporating people from all genders in the sector's workforce is strategic for catalysing equality and social inclusion in the rest of the activities in the energy value chain.

2.2 International and national policy agendas

Gender equality in energy infrastructure is firmly established in the international policy agenda (see Box 3). Gender, energy and infrastructure all feature among the Sustainable Development Goals (SDGs) within the 2030 Agenda for Sustainable Development,[13] and their achievement is interdependent: energy infrastructure projects that incorporate a gender perspective will

BOX 3

International policy instruments[12]

Gender and energy infrastructure SGDs:

SDG 5: Achieve gender equality and empower all women and girls.

SDG 7: Ensure access to affordable, reliable, sustainable, and modern energy for all.

SDG9: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.

Gender and energy infrastructure COP26 agreement:

Acknowledges that all climate actions (including energy transition) shall respect and promote human rights and gender equality.

BOX 4

National energy policy in Sub-Saharan Africa[17]

The Government of Uganda has established strategies in its Renewable Energy Policy to ensure that women play an important role in the sector, and Zambia's revised National Energy Policy provides for gender-balanced development in the energy sector. Since a gender audit in Botswana revealed that the National Energy Policy was formulated without involving women as a major stakeholder group, the government has moved to address gender equity in its household energy supply policies.

help to achieve the goals of universal energy access, environmental sustainability (increased energy efficiency and renewable energy generation) and gender equality, leading to positive developmental outcomes for all.[14] In addition, the Sustainable Energy for All (SE4All) initiative launched by the United Nations Secretary-General identifies gender equality as one of four key development areas within the energy nexus in its Global Tracking Framework.[15] Furthermore, corporate signatories at the COP26 committed to advancing the transition to clean energy, which would involve the growth of renewable energies and with that the growth of opportunities for women, indigenous communities and local leaders to participate in the renewable energy workforce and policy-making processes.[16]

Gender equality issues are rarely addressed in national energy sector policies and strategies. Analysis shows that even where national policies for gender equality exist, gender considerations were only incorporated, to some extent, into approximately one-third of the national energy sector policies reviewed.[18] Energy policy agendas are typically set by urban men and do not benefit from a wide, gender-responsive consultation process that includes those in impacted areas.[19] A gender-sensitive energy sector policy should be aligned with other national development priorities on gender equality, and address the differences between men and women in energy needs; access to employment opportunities and training; resources and labour markets; the implications of tariffs and pricing; and the gendered impacts of large-scale energy infrastructure projects (see Box 4). Gender mainstreaming in energy infrastructure policy frameworks and programmes has proven to contribute to those programmes' goals and improved awareness on gender equality within institutions. Research reveals that household electrification through national energy sector policies has significant impact on the improvement of women's livelihood opportunities by reducing time poverty associated with women's reproductive labour in the home.[20] Moreover, integrating gender into energy infrastructure policies also impacts several other areas of development, such as maternal health, food security, clean water, entrepreneurship and agriculture, with the added advantage that including women's meaningful participation in programme implementation and decision-making contributes to the programme's effectiveness.[21] In the context of the COVID-19 pandemic, integrating women in planning and decision-making has been essential for developing inclusive emergency response and recovery policies. For instance, Hawaii's Commission on the Status of Women developed a feminist recovery plan which states that in order to ensure economic recovery, women must be guaranteed access to jobs in the renewable energy sector, including construction and environmental management jobs.[22]

2.3 Gender inequalities in energy infrastructure

Women's representation in the energy sector has been historically low, particularly in developing countries. Economists and engineers who are men continue to dominate the sector as project implementors, as well as directors and managers of energy companies and the banks and financiers that support them. [23] Globally, women represent 5 per cent of board executives and 16 per cent of board members in power and utility companies.[24] In developed countries, the share of women employees in the energy industry is estimated at only 20 per cent, with most working in non-technical fields such as administration and public relations.[25] Worldwide, women account for only 9 per cent of the construction workforce and make up only 12 per cent of engineers,[26] leading to a pipeline shortage of women

BOX 5

Promoting gender equality in energy companies[30]

Engendering Industries is a USAID program that works with companies in the energy sector to integrate gender equality and social inclusion in the employee life cycle, coaching leaders on change management to drive the transformation of their organizations and develop their capacity to identify inequalities and create strategies for increased gender equality. The program has supported partners to diversify their talent, seeing results in improved employee retention, decreased revenue loss, and improved image and reputation.

leaders. Women hold 31 per cent of mid-management positions in the renewable energy sector but are underrepresented in senior positions as well as those in policy- and decision-making.[27] Furthermore, it has been estimated that women make up a total of 32 per cent in the overall renewable energy workforce, in comparison to just 22 per cent in conventional energy, but are concentrated in lower-paying and non-technical posts.[28] This represents an opportunity to build on existing open spaces for women's involvement. However, most women's positions in renewable energy continue to be associated with administrative jobs rather than STEM or technical jobs.[29]

This absence of women professionals or other specialists to give a voice to the needs and priorities of women and girls - especially in the planning and design of infrastructure - can contribute to the development of energy infrastructure that does not consider the specific needs and circumstances of women, girls, and diverse people which in turn can lead to negative impacts and missed opportunities for individuals and communities whose lives infrastructure seeks to improve.[31] At the same time, promoting gender balance and inclusion, particularly in executive and management positions, is good for business and social performance, and having women representatives makes it easier to establish direct relationships with women in project-affected communities for the purposes of community consultation (see also Box 5).[32] For instance, a 2016 global study by the Ernst and Young Women in Power and Utilities index found that the 20 utilities with the highest levels of gender diversity in their workforces outperformed the bottom 20 in terms of return on equity (ROE), with a 1.07 per cent difference. Thus, increasing gender diversity in the workforce may contribute to better performance in the energy sector.[33]

When a new large-scale energy infrastructure project arrives in a community, employment opportunities may be limited, especially for women. Men are likely to benefit disproportionately from any opportunities that do exist, as higher wage jobs are created in sectors dominated by men such as construction of power transmission and distribution lines, and road-building.[34] While men work in higher-status job, new jobs for women are often in the form of peripheral self-employment opportunities linked to the arrival of external workers. Although jobs in traditionally 'women's sectors' may increase (for example small enterprises that provide food and services to migrant workers; financial services; and clerical support), and contribute to women's access to income and decision-making, their income potential and impact on gender norms are limited, as this work reinforces the existing gender division of labour.[35] Efforts towards hiring women for technical jobs has shown that including women in energy supply activities helps to change the narrative of gendered job segregation, contributing to women's increased participation across the entire energy value chain. For instance, a study by ENERGIA analyzed two cases in Kenya where a gender-sensitive approach was incorporated into the design of energy projects, with women in charge of assembling equipment for electricity supply. In both cases, there was an increase in the women's empowerment, accompanied by new narratives regarding women's roles, capacities and status in the villages where the energy projects were implemented. This new narrative opened spaces for women to take on leadership and 'hand-on' jobs in energy supply activities.[36]

Barriers to women's employment in energy infrastructure include legal restrictions on women's employment in the sector as well as a lack of technical, construction and professional engineering skills. Legislation may affect women's ability to work in the energy sector through laws preventing them from working at night

in the generation of electricity (for example in countries including Belize, Cameroon, Democratic Republic of the Congo, Kiribati, Malaysia, Nigeria, St Vincent and the Grenadines, and Swaziland)[37] from being electricians, or from working with specific amounts of electric power; other laws may prevent women from working in factories and construction.[38] The shortage of qualified women engineers and technicians can be attributed to systematic gendered differences in educational trajectories: gender gaps persist in women's participation in science, technology, engineering, and mathematics (STEM) education, which provides the necessary skills for accessing jobs and contributing to innovation in the sector.[39] These restrictions have been created in response to gendered social norms and cultural beliefs that define the ways in which people of all genders experience life and opportunities. Based on these norms, women are discouraged from studying for STEM careers and legislators may even prevent women from applying for certain jobs that are considered inadequate and/or inappropriate for women. Additionally, power structures reinforce norms that relegate women and men to certain groups but not others, and safeguard prescribed behaviors. These power structures help sustain beliefs such as men's superiority, white privilege, heteronormativity and homophobia, ableism, and other dimensions of social exclusion in all economic sectors.[40]

An additional factor that may discourage energy infrastructure employment for women is a gender- insensitive work environment.[43] Worldwide, women are 4 to 5 per cent less likely to participate in the workforce if there is limited access to affordable caregiving services.[44] The remote location of many large-scale energy infrastructure projects makes it hard for women to work there, given their assigned roles as caregivers and mobility challenges that may limit their ability to travel and relocate. Housing and catering conditions at construction sites are often cited as inadequate and discouraging for women, who may be at risk when workplaces lack an established system to prevent sexual abuse, alcoholism and drug consumption. Despite such constraints deterring women from working in these roles, some projects have succeeded in overcoming biases toward women's involvement in electricity infrastructure by using targets or quotas and job training (see Box 6).[45]

Women and men are differentially affected by land use changes, including reduced access to agricultural land resources, that stem from large-scale energy infrastructure projects.

The reservoir of a hydropower dam may flood villages, pasture lands and community forests, or communities may lose access to resources on land designated for a solar array or wind farm or on right-of-way passages.[47] These developments may lead to a change in cropping patterns toward high-value monocultures, which may displace women engaged in small-scale cultivation. When women lose access to their traditional livelihoods and are excluded from new opportunities and compensation, they may have no choice but to

BOX 6

Outcomes of a gender-sensitive workplace[41] [42]

El Salvador's state-owned energy company LaGeo has implemented progressive recruiting, training and human resource policies, and has established daycare facilities for its employees. Women hold 35 per cent of company jobs and represent 32 per cent of locally hired and trained temporary maintenance workers. LaGeo's company values and workplace culture of equity and inclusion have made it a leader in inclusive geothermal development.

BOX 7

Resettlement framework gender analysis[46]

The World Bank's resettlement framework includes basic, initial considerations on the unintended consequences of involuntary resettlements for women. The framework establishes the importance of developing a resettlement plan based on a gender analysis and considering differentiated compensation mechanisms beyond cash, especially for women, such as replacement land or alternative access to natural resources.

leave the area or take low-wage insecure jobs or even turn to prostitution to survive.[48] In addition, when land-use changes cut off their access to food, water and firewood, which women and girls are generally expected to collect, the increase in their time-burden limits school attendance and other activities for girls.[49] Including women and other excluded groups as stakeholders who can voice their concerns along the energy infrastructure project process can contribute to mitigating the risks associated with land use changes and limited access to resources created by energy infrastructure projects (see Box 7).[50] Moreover, this participation can increase community support for the projects, reduce gender-based violence and prevent human trafficking.[51]

Women are also more likely than men to be excluded from compensation schemes due to a lack of understanding of local gender issues. Women are estimated to hold less than 20 per cent of the world's land[53] due to customary laws or regulatory restrictions on inheritance and land ownership that prevent them from holding formal land titles. Compensation schemes that do not address this serve to widen the gender gap when men, as land title-holders, are compensated for loss of land, while women, who work the land and whose livelihoods are severely impacted by the loss of access to fresh water, vegetable gardens, firewood, food and ceremonial uses, are less often compensated.[54] To remedy this disparity, large-scale energy projects should grant property titles to both men and women, either separately or jointly, to ensure that women are not excluded from the compensation process. This can also produce transformative gender equality outcomes by increasing women's bargaining power in family decisions regarding labour-force participation or reproductive rights (see Box 8).[55] There are also vulnerabilities associated with common-property resources, where, for example, women's subsistence agriculture activities occurs on unregistered land more often than men's does, and as a result of the land not being in their name, women may be denied compensation.[56] Polygamous marriages may also complicate the fair allocation of land and resource-based claims among co-wives. Other issues that disadvantage women in the compensation process include illiteracy; lack of fluency in the language used during negotiations; time poverty; and lack of access to transportation, information technology and media.[57]

BOX 8

Gender-sensitive compensation[52]

The Bumbuna Hydroelectric Power Project in Sierra Leone triggered an involuntary resettlement operational policy that resulted in the design of gender-targeted compensation mechanisms. First, it provided funding and support directly to women without men's intermediation. Second, it required women to set up savings groups, which enabled them to access a revolving loan facility and skills training. Finally, it granted joint titles of land, houses and assets in the names of both husband and wife, facilitating women's access to credit. Women comprised 50 per cent of village resettlement committees, which enhanced their social and economic empowerment and welfare.

There are also differences in men's and women's needs and preferences for compensation forms. Compensation plans that include skill-development or retraining activities are often based on the value of remunerated work. This discriminates against women whose productive activities are typically limited by caring responsibilities, and who work in subsistence activities or the informal sector, making them less likely to be included in retraining schemes or receive monetary compensation for the loss of their livelihoods.[58] Women tend to prefer non-cash compensation more than men, and may, in fact, reject cash compensation, [59] and they are more likely than men to request investments in community infrastructure and services such as health centres, schools or education programmes as part of compensation plans.[60]

Men and women are differently affected by displacement and resettlement, and women often suffer disproportionately due to existing gender inequalities. Women are disadvantaged when they are forced to migrate to locations far from the natural resources that they once depended on and from facilities such as markets where their livelihoods might have relied on selling goods.

Women as primary caregivers may be impacted by the loss of kinship and social networks they depended on for support, as well as the loss of facilities such as health centres.[61] In addition, domestic violence may increase if threatening masculinities arise due to increased livelihood insecurities associated with displacement and resettlement.[62] Specific social groups of women are especially vulnerable when it comes to access to land and housing during energy infrastructure projects. For instance, widowed, divorced or separated women are often subject to property grabbing because they lack formal tenure documents. Likewise, due to intersectional discrimination, indigenous and tribal women, women from ethnic and racial minorities, migrant workers, refugees, sex workers, women with disabilities, and transgender persons are all at greater risk of living in inadequate housing or becoming homeless.[63]

Beyond compensating displaced communities for their immediate losses, energy infrastructure projects can offer ancillary infrastructure and benefit-sharing schemes which, if designed to address gender gaps, can advance gender equality in the community.[64] These can include benefit-sharing such as building housing, education or health facilities and offering training, skills-building, and livelihood support, as well as infrastructure investments such as roads, bridges and ferries, which have the potential to indirectly change gender norms by increasing women's mobility, access to information, and participation in market work. There is as yet little concrete data in this area, but it has been shown that securing access and control over housing impacts women´s development as well as that of their families and communities. Increased access to land is correlated with higher self-esteem, family respect, mobility and decision-making power.[65] Furthermore, when women have land rights, their chances of receiving credit, and their resilience increases. Given the potential risks associated with energy infrastructure projects for women and other excluded populations, and the clear benefits related to land tenure, all energy infrastructure projects should take these differentiated effects into account during project design and implementation, including when developing compensation mechanisms for loss of land.[66]

A number of health risks and related gender impacts are associated with large energy infrastructure projects.

BOX 9

Mitigating the health impacts of a hydropower project[67]

A hydropower project in Indonesia developed an action plan to address project findings that (a) an influx of workers would likely increase public health risks for both construction workers and the local population, and (b) relocating households during resettlement would have potential health impacts. Mitigating activities included HIV/AIDS awareness training, counselling services on transmission and prevention, routine diagnostic examinations, and condom distribution.

Increased HIV prevalence can result from an influx of transient workers; in Africa, for example, large infrastructure projects have been identified as a key driver of the HIV epidemic.[68] A combination of mobility, loneliness, money, alcohol and a high-risk work environment can create a demand for local sex workers, which can push women in need of cash into prostitution and increase the incidence of HIV.[69] Specific social groups may be at higher risk of HIV, discrimination and violence, due to their intersecting excluded identities, including migrants, people with disabilities, gay men, men who have sex with men, sex workers, transgender persons, and people who use drugs.[70] For instance, sex workers face a 30 times higher risk of acquiring HIV compared to the general population. In the case of people using drugs, the risk is 29 times higher; gay men and men that have sex with men face 26 times more risk; and transgender persons have 13 times more risk.[71] The risk of sex trafficking, gender-based violence (GBV) and unwanted pregnancies may also be exacerbated in project communities.[72] Therefore, managers of energy infrastructure sites should be aware of the need for effective education, condom distribution, and information on STI and HIV dissemination (see Box 9).[73] In addition to community health-related risks, energy infrastructure construction can pose occupational health risks to workers and some locals due to inadequate safety provisions around hazardous work such as electrical wiring and chemical handling, with

hydropower having the highest fatality rate among workers.

Ethnic minority and indigenous groups can be particularly affected by energy infrastructure projects, where communities may experience involuntary appropriation of their lands, waterways and other resources, and indigenous women experience suffer multiple forms of discrimination, oppression and marginalization. They often have lower rates of education, health care, and employment, and are often excluded from negotiations and control of compensation and other benefits to households and communities.[74] Research has shown that the largest proportion of people who have lost their livelihoods to large dams are women, indigenous peoples, and other ethnic minorities.[75] Tensions and conflict arising from energy projects have resulted in the persecution and deaths of women indigenous activists in Honduras and Mexico[76] and in GBV against ethnic minority women in the Mekong region (see Box 13 in Section 5).[77]

2.4 Summary of gender issues in energy infrastructure

- Gender equality in energy infrastructure is established in the international policy agenda, but **gender equality issues are rarely addressed in national energy sector policies** and strategies.
- Despite the evidence regarding the benefits of women's participation in the energy sector, **women's representation has been historically low**, which can lead to gender-blind energy infrastructure projects.
- **New employment opportunities from large-scale energy infrastructure projects may be limited** for women due to restrictive beliefs about labour segregation and gendered roles, which translates into legal restrictions on women's employment in the sector, a lack of technical construction and professional engineering skills, and gender-insensitive work environments.
- Women, especially those in indigenous populations, women with disabilities, and widows, are **disproportionately affected by land use changes** and reduced access to agricultural resources that stem from large-scale energy infrastructure projects.
- Women are more likely than men to be **excluded from compensation schemes** due to a lack of understanding about local gender issues; in addition, there are differences in men's and women's needs and preferences for compensation forms.
- Men and women are **differently affected by displacement and resettlement**, and women often suffer disproportionately due to existing gender inequalities that affect their housing conditions, their self-esteem, mobility, decision-making power and ability to access credit.
- **Ancillary infrastructure and benefit-sharing schemes** can, if designed to address gender gaps, advance gender equality in the community.
- A number of **health risks** and related gender impacts are associated with large energy infrastructure projects, including HIV, GBV and work-place injuries.
- Ethnic minority and indigenous women suffer from additional **multiple forms of marginalization** due to involuntary appropriation of lands and waterways.

3. PLANNING FOR GENDER ANALYSIS

A number of factors need to be considered when planning to conduct a gender analysis, including the purpose of the analysis, the timing, who should be involved, how the analysis should be conducted, as well as how the results will ultimately be used.

3.1 What is the purpose of the gender analysis, and what will it cover?

From the outset, it is important to **clarify the purpose of the analysis** and how the results will be utilized. This will vary according to whether the gender analysis is being used to inform a project or programme design, a sector or country analysis, or for another purpose. It might involve a stand-alone gender analysis or be incorporated into environmental and social impact assessments or resettlement action plans, for example. A stand-alone gender analysis could involve hiring a consultant and use significant resources over a number of months, but in other cases the scope and level of detail could be much more modest (see for example the Rapid Gender Analysis tool in Table 1 below).

The parameters of the gender analysis should be **as specific as possible**. This focus will maximize time use and financial inputs and should make it easier to develop clear and targeted recommendations for results.

3.2 When should the gender analysis be conducted?

When a gender analysis is conducted to inform project or programme design, it should be **conducted during the design phase**, i.e. before the finalization of the project/programme document.

3.3 Who should be involved in the gender analysis?

The gender analysis should be performed by a person or team with **gender expertise** in the area of focus, and who should be familiar with mixed-methods research and practice self-reflexivity to understand how their involvement in analyzing gendered dynamics interacts with the analysis itself. If gender expertise is lacking in the project team, it may be necessary to hire an external consultant with gender analysis skills as well as an understanding of the energy infrastructure sector (sample terms of reference are included in Annex 3). Alternatively, it may be possible to consult internal sources such as UN Women staff, gender advisors, or gender focal points for guidance on engaging support for financing for gender analysis and mainstreaming for gender equality, building on existing knowledge and data sources, and for further sector- and context-specific information to support the project team.

Stakeholder mapping must be undertaken to identify who to consult in the gender analysis process. Stakeholders may include representatives from end-users, including representatives of the diverse population considering gender diversity, and persons living with disabilities, in addition to representatives from:

- Women from the local community/ies
- The ministry of energy, infrastructure or national development
- The ministry of women or gender equality
- National energy regulators and agencies (including their gender focal point/s)
- Women's and feminist civil society organizations, including for example, organizations who work with gender and sexual minorities,

sex workers, women with disabilities, and women of ethnic and racial minorities

- Academic institutions
- Networks of women working in the energy sector
- Supply side stakeholders such as energy service providers and energy infrastructure developers.

3.4 How will the gender analysis happen?

Sufficient **financing** for the gender analysis needs to be explicitly incorporated into the project or programme budget from the outset. Financial resources may be needed, for example, to fund external gender expertise, primary data collection where necessary, and stakeholder involvement (see above). Gender-responsive budgeting (GRB) is increasingly used to ensure financial resources are sufficient to fund gender analyses across all sectors. GRB facilitates the tracking of funding sources and allocations towards gender analyses and can ensure that sufficient internal and/or external resources are accounted for and available for data collection, analysis, implementation, and monitoring, evaluation and reporting.

Developing a methodology requires a plan to identify data sources; choose methods of data collection – such as desk research, literature review, focus group discussions, surveys and interviews; create a data analysis framework; map stakeholders; and present and utilize the gender analysis findings, all of which are discussed in further detail in subsequent sections of this guidance.

While many different frameworks for gender analysis exist,[79] the process does not require the use of complex tools and can rely on a framework of guiding questions developed specifically for energy infrastructure as suggested in Section 5.[80] Table 1 below provides a list of additional useful tools for gender analysis processes.

BOX 10

Illustrative workplan to develop a gender analysis[78]

Timelines will vary depending on the nature of the project.

1. **Preliminary project document and literature review:** Prepare a desk review of existing qualitative and quantitative data, identifying data gaps.
2. **Stakeholder mapping:** Identify categories of stakeholders to engage in the project and collect contact information for individuals.
3. **Development of data collection tools:** Prepare focus group discussion (FGD) guides, interview guides, surveys, as needed.
4. **Primary data collection:** Collect field data utilizing trained gender specialists, and involving FGDs, interviews, surveys, or other methods as necessary.
5. **Data analysis and reporting:** Synthesize qualitative and quantitative field data with the literature review findings into a gender analysis report highlighting gender issues, challenges, opportunities and recommendations.
6. **Integration of gender analysis into project design:** Ensure that project planning documents incorporate the findings of the analysis and include actions, indicators, an M&E plan and a budget.

TABLE 1

Further tools for gender analysis

Guide on Integrating Gender Throughout Infrastructure Project Phases in Asia and the Pacific (UNOPS and UN Women): Gender mainstreaming guide with a section on gender analysis in infrastructure projects.
Toolkit for Integrating GBV Prevention and Response into USAID Energy and Infrastructure Projects (USAID): Guidelines and tools for addressing GBV in energy and infrastructure projects, including gender analysis questions.
Balancing the Scales: Using Gender Impact Assessment in Hydropower Development (Oxfam): Manual with tools for incorporating a gender impact assessment into hydropower projects.
Guide to Gender Analysis and Gender Mainstreaming the Project Cycle (UNIDO): Gender mainstreaming guidance that includes a section on conducting a gender analysis within the project cycle.
How to conduct a Gender Analysis (UNDP): A tool for gender analysis throughout the results-based management cycle.
Gender in Emergencies Guidance Note: Preparing a Rapid Gender Analysis (CARE International): Methodology for conducting a rapid gender analysis for use in situations where time and resources are limited.

3.5 Quick checklist for gender analysis planning in energy infrastructure

- **Clarify** the purpose of the gender analysis and how the results will be used.
- **Ensure** that the parameters are as specific as possible.
- **Conduct** the gender analysis early on during the design phase of programme development.
- **Identify** and engage appropriate gender expertise.
- **Undertake** stakeholder mapping.
- **Secure** sufficient financing and include gender analysis in budgetary planning from outset.
- **Develop** a methodology for the gender analysis.

4. DATA COLLECTION

4.1 General principles for gender analysis data collection

The following general principles are important to consider when planning for and implementing data collection for a gender analysis.[81]

Where possible, ensure that data is **gender-sensitive** (see Box 11), and is **disaggregated by gender** (or where this is not possible, as a minimum by sex), as well as by other intersecting forms of discrimination and marginalization that can exacerbate gender inequalities, such as age, (dis)ability, region, race and ethnicity, forced displacement, income level and education (see Box 13 on gender analysis and intersectionality).

BOX 11

What is gender-sensitive data?

- **Sex-disaggregated data** uses separate measures for males and females on a specific indicator. *For example, such data would show the percentage of both the male and female adult population with access to an electric grid.*
- **Gender-disaggregated data**, by contrast, uses separate measures for women, men and persons of diverse genders based on the respondents own perceived gender identity. *An example would be the percentage of people that define themselves as woman, man, transgender, or non-binary, amongst others, that have experienced sexual harassment on energy infrastructure construction sites.*
- **Gender-blind data**, does not make explicit the differences between women and men. *It would show, for example, the percentage of all adults with access to an electric grid.*
- **Gender-specific data** data is specific to women or men, or a gender equality-related issue. *An example of this might be an indicator showing the percentage of women and girls experiencing gender-based violence in a region planned for energy infrastructure development.*

- It is important that **women's and men's and persons of all genders' perspectives are heard** when gathering qualitative insights around social norms. This will include, for example, consulting women in women-only groups, considering the time and location with regards to women's mobility and care responsibilities, and ensuring that the consultations are conducted in languages used by the local community members. These efforts will maximize women and marginalized person's attendance and their contributions.
- Among the data collected, care should be taken to combine information from **both a macro and a micro-perspective**. Micro-level data involves information from the household or community level. Macro-level data could include national-level statistics, gender-responsive legislation or national policy platforms around gender and energy infrastructure issues.
- It is also important to **include both qualitative as well as quantitative data** to provide a complete picture. Qualitative data can provide an in-depth understanding of social relations and power dynamics, the complex roles and behaviours of men and women, as well as systems and cultures relevant to energy infrastructure (see Box 12 on qualitative and quantitative data). Existing qualitative data can be found in published case studies, surveys and research papers. Gaps can be filled through primary research; qualitative data collection methodologies often utilize a combination of key informant interviews and focus group discussions and should be sure to include women and men from different socio-economic

groups. This is important for understanding the different perceptions and experiences of men and women regarding issues such as openness to adopting new technologies or differences in how they prioritize their time use. It is essential to hold separate focus group discussions with women and men and to gender-match the facilitator and participants.

- International documentation such as statistics, longitudinal data sets, composite gender indices, sector gender analyses or country gender profiles conducted by United Nations entities, the World Bank, the Asian Development Bank, the African Development Bank, etc.
- Bilateral development partners and other donors including international non-governmental organizations (NGOs), utilizing their evaluations and programme reports and analyses.
- Studies and reports by academic research institutions.

4.2 Sources of data on gender and energy infrastructure

A **wide range of data sources** should be consulted at national and international levels. Initially, existing analyses, data sources and research findings should be drawn upon as a basis for evidence-based data. These could include reports and studies from:

- Government institutions (such as reports by the national women's machinery, national gender policy or statistics offices, national agencies responsible for energy and infrastructure, and official reports to the CEDAW committee). Sex-disaggregated data here could include social, economic and census data on mortality, economic participation and household electricity connections; time-use surveys; national land and business registry data.
- International entities such as the United Nations, the World Bank, the Asian Development Bank, the African Development Bank and the Islamic Development Bank that have prepared statistics, longitudinal data sets, composite gender indices, sector gender analyses or country gender profiles

BOX 12

Combining quantitative and qualitative data collection methods[82]

The Energy Sector Management Assistance Program (ESMAP) and the World Bank's Social Inclusion team undertook a study to examine the social and gender footprint of large-scale electricity generation, transmission and distribution projects. The study's mixed-methods data collection involved literature and portfolio reviews, as well as critical in-country research to hear first-hand the voices of women and men stakeholders, and involved the following:

- **Existing household surveys:** National Sample Surveys were used to analyse gender-differentiated socio-economic and labour outcomes from transmission infrastructure development in affected communities. These surveys provided large samples of individual-level data on personal and household characteristics (e.g., employment, income and education).
- **Primary qualitative data:** Fieldwork was conducted in Nepal, Morocco and Senegal to better understand how infrastructure construction had changed the lives of local people. Qualitative data was generated through key informant interviews, FGDs, and the use of online multi-media platforms that engaged stakeholders in discussion topics such as how to better integrate women into STEM fields.
- **Project-level information:** An in-depth portfolio review of the World Bank Group's energy-sector lending was conducted to expand the knowledge base on the potential gendered impacts of energy infrastructure projects. Specific objectives were to (a) identify good practices and lessons learned and (b) provide guidance on how to operationalize those lessons to move the gender agenda forward.

- Bilateral development partners and other donors, including international non-governmental organizations (NGOs), utilizing their evaluations and programme reports and analyses.
- Energy utilities, utilizing their sex-disaggregated data on their workforces, as well as surveys of household consumers.
- Academic research institutions.

TABLE 2

Potential sources of existing data

Gender (general)
Human Development Data Center at the United Nations Development Programme (UNDP): 150 global indicators and composite indices for over 190 countries, as well as gender indices such as the Gender Social Norms Index (GSNI) and Gender Development Index (GDI).
World's Women Trends and Statistics: A UN data portal providing assessments of progress towards gender equality in six critical areas: population and families; health; education; economic empowerment and asset ownership; power and decision-making; and violence against women and the girl child.
Gender Data Portal at the World Bank: A comprehensive source for the latest sex-disaggregated data and gender statistics covering demographics, education, health, economic opportunities, public life and decision-making, and agency.
OECD Gender Data Portal: Includes selected indicators on gender inequalities in education, employment, entrepreneurship, health, development and governance. The data cover Organization for Economic Cooperation and Development (OECD) member countries, as well as partner economies including Brazil, China, India, Indonesia and South Africa.
National CEDAW Reports: a database of annual reports to the CEDAW Committee documenting states' progress in implementing the Convention. These reports provide useful overviews on the general status of women in specific countries as seen by the government.
Equilo: An online gender analysis platform that offers a range of free open-source gender equality and social inclusion analysis tools as well as advanced analytics products that can be accessed via a paid subscription. Includes qualitative and quantitative data by country and sector.
Gender and energy infrastructure
IEA Gender Diversity Initiative: A project from the International Energy Agency that is collecting disaggregated gender and energy data related to areas such as employment, management, innovation and financing to track progress. It will release periodic updates to decision-makers and develop policy recommendations for governments and industry.
Renewable Energy: A Gender Perspective: A report on a global multi-stakeholder survey of employees, companies and institutions by the International Renewable Energy Agency (IRENA), examining gender equity throughout the sector (see also the IRENA report specific to Wind Energy).
UNESCO Institute of Statistics (UIS): Produces annual globally-comparable data on education, emphasising the importance of gender equality in education in general and STEM education in particular. Most UIS data on enrolments and graduates are broken down by gender as well as field of study, including some specific STEM or ICT-related majors.

Gender in other relevant sectors
FAOSTAT data portal from the Food and Agriculture Organization (FAO): Provides free access to food and agriculture data for over 245 countries and territories, including sex-disaggregated data from household surveys in ten main dimensions: production, consumption, income, capital, inputs, access to markets, labour, technology adoption, infrastructure and social.
Data for Financial Markets: Provides sex-disaggregated data sets derived from national surveys and financial diaries used by low-income households showing how they manage their financial lives.
ILOSTAT from the International Labour Organization (ILO): Contains a wide range of indicators disaggregated by sex, as well as breakdowns relevant to gender issues and indicators on gender gaps. Topics include unpaid work, population and labour force, employment and unemployment, wages, working time, labour income and inequality, the informal economy, competitiveness and industrial relations.
Women, Business and the Law from the World Bank Group: The 2021 report is the seventh in a series of annual studies measuring the laws and regulations that affect women's economic opportunity in 190 economies.

During the data collection process, a table could be developed to map the topics and information covered by the available data, and to **identify data gaps**. A plan can then be made to collect additional information where needed by tracking down existing data, or by generating new data through surveys, key informant interviews, or focus group discussions with key actors.

4.3 Quick checklist for data collection in energy infrastructure

- **Ensure** that the data collected is gender-sensitive.
- **Make sure** that both women's, men's and persons of diverse gender's perspectives are heard.
- **Combine** macro- and micro-level information.
- **Include** both qualitative and quantitative data.
- **Identify** existing sources of data.
- **Consult** a wide range of data sources.
- **Note** where data gaps exist and make a plan for collecting or generating missing data.

5. DATA ANALYSIS

The next step in conducting a gender analysis is to review the available data, identifying gender differences and the underlying causes of gender inequalities.

5.1 Cross-cutting principles in data analysis

A good sectoral gender analysis must include an **intersectional approach** (see Box 13) by demonstrating important links between variables, between identifying as woman, man or gender diverse, as well as other variables, such as being a man from a particular social group, or being an older woman from a particular ethnic group with a refugee status. The following questions from the World Bank Social Inclusion Assessment tool are useful for integrating an intersectional approach into a gender analysis:[83]

- What is the breakdown of different identity groups among those excluded from the benefits of a project? Which groups are in the bottom percentiles (migrants, indigenous peoples etc.)?
- Which groups are over-represented among those excluded from benefits? Are there historical reasons for such over-representation? Is the over-representation of some groups correlated with the way they participate in different social, economic and political domains?
- What else is known about these excluded groups? Are their aspirations, fears and apprehensions being taken into account?

The gender analysis should also identify context-specific socio-cultural/economic norms, attitudes, and practices, as these influence differential access to power, resources and opportunities.

The data analysis should also consider **change at both formal and informal levels**. Analysis focused at the informal level can identify socio-cultural norms, attitudes

BOX 13

Gender, ethnicity, conflict: An intersectional analysis of hydropower infrastructure projects in Myanmar[84]

Women face entrenched inequality and multiple forms of vulnerability in Myanmar. They experience systemic barriers to economic, political and social leadership, and consultations for large-scale infrastructure projects predominantly engage men.

Hydropower dams are being constructed in conflict, cease-fire, or fragile post-conflict zones in ethnic minority states where communities are especially vulnerable to forced relocation and seizure of land and water assets. The large population influx of often foreign workers during construction increases pressure on local community infrastructure and services, which has gendered implications in many sectors, including water supply, sanitation and food supplies. Social pressures may lead to prostitution and sexually transmitted diseases, with disadvantaged groups such as women and children being most affected.

Increased militarization and conflict are linked with hydropower projects, with multiple militarized ethnic groups contesting land and other resources, leading to conflict and human rights abuses; many cases of GBV against ethnic minority women by both state and non-state actors have been documented.

and practices among individuals, households and communities that underlie inequality, discrimination and exclusion. Analysis focused on the formal context can capture issues such as policy, legislative changes, resource allocation and service delivery, and their impact on the lives of women and men at both household and community levels.

The following table provides a list of **potential guiding questions** for gender analysis, structured around four key areas: legislation, policies and rights; roles and responsibilities; access to and control over resources and services; and decision-making power.

5.2 Questions for gender analysis in energy infrastructure

TABLE 3
Guiding questions for gender analysis in energy infrastructure

Legislation, policies and rights	
What are the legislative and policy frameworks in this sector? How do they impact women's and girls' rights?	• Do customary law, formal legislation and social, economic and political institutions inhibit or support women and girls and people of all gender and age groups in realising their rights, accessing resources, making decisions and living without fear of violence? • Are there gaps between customary and formal laws pertinent to gender equality and/or infrastructure development that impact gender equality positively or negatively? • What national policies and/or international agreements exist on women's and/or human rights? Is there a gender equality policy or national plan, and to what extent is it implemented? • Do energy sector strategies and policies include a commitment to gender equality? To what extent are these implemented? • Are there legal restrictions on women's or diverse person's employment in particular sectors or roles? • Are people of different genders or socially excluded groups subject to the same legal protections when employed (safe working conditions, equal pay, etc.)? Does this extend to the sectors of interest in infrastructure development? • What are property ownership rights for men and women? For married couples, are land titles generally in men's or women's names or held jointly? • Do laws and policies to prevent and prosecute GBV exist? To what extent are they implemented? • Do utilities belong to or report on any international gender certifications or reporting initiatives (e.g. the Global Reporting Initiative, Gender Equality Seal, Gender Equity Model, UN Compact or Women's Empowerment Principles, or donor reporting requirements)?

Roles and responsibilities	
What are the different roles and responsibilities of women and men?	• What is the division of labour among women and men? • What is the level of economic participation in the formal and informal economies by women, men and diverse persons? • What proportion of men and women are in the workforce and in leadership positions in energy authorities and in ministries responsible for energy and infrastructure? Does this impact these agencies' capacity to work on gender issues? • What proportion of women and men are employed in energy, construction, and other relevant sectors? Are there wage gaps between men and women in these roles? • What is the percentage of young women and men graduating in STEM-related fields such as engineering (or graduating from vocational or technical schools with an emphasis in STEM areas)? • Are there particular roles that are deemed appropriate or inappropriate for men and women, or tasks that they are expected to perform? • Who takes responsibility for the care of children and the elderly? What are the mobility and time constraints that result from this? • To what extent have unpaid care responsibilities changed for men and women as a result of the Covid-19 pandemic? • Does the energy agency have a gender strategy or action plan, and/or a gender unit or focal point? • Who will be employed by a proposed project and in what roles? Will men and women both benefit from new employment opportunities?
Access and control	
Who has access to and control over resources and services?	• Who has access to and control over household energy? • Who has access to and control of the land associated with a potential energy infrastructure project? Who owns the land and who uses it? • Do men and women (and diverse persons) have equal access to credit? • In cases of resettlement, what forms of compensation would men prefer (e.g. cash payments, investments in the community)? What forms of compensation would women or others prefer? • Do security or cultural concerns inhibit women from entering certain spaces? Are there other constraints to women's mobility in specific spaces? • Who belongs to organisations or informal networks that help them to access resources? • Will a proposed project affect access to education, health services, markets, land and water resources or social networks? Will the impacts be different for women versus men? What about indigenous communities or marginalised groups?

Decision-making power	
Who has decision-making power?	• Who participates in decision-making in the household, in the public and private sectors, in informal and formal power structures? • To what extent are women and gender-diverse persons able to offer input into the development and implementation of national energy policies? • What are women's and men's capacities to exercise bodily autonomy in the household, community or state? • What are the rates of domestic and other forms of gender-based violence at the national and sub-national levels? • What barriers do women and other vulnerable social groups face in meeting their needs and interests? • What kinds of decisions do women in the household participate in or decide on their own (household management, schooling for children, family decision-making, family planning, etc.)? • Are women engaged as decision-makers and leaders in the design and implementation of energy infrastructure processes? • Are women and men in communities adjacent to a proposed project supportive of the project? Are their views and concerns taken into account?

5.3 Developing programmatic recommendations

The gender analysis must be used as a basis for developing a suite of accompanying recommendations. A useful gender analysis should assist in understanding the best approaches to addressing gender inequalities and identify strategies to mobilize women's rights and empowerment (see Box 14). It therefore needs to provide recommendations that highlight challenges and vulnerabilities as well as identify opportunities and the potential for change.

Table 4 provides some examples of potential programme interventions that may follow from issues identified in the gender analysis, and may help to develop concrete recommendations, which could be then drawn on for design and implementation (see Section 6).

BOX 14

Recommendations developed in response to a gender analysis in the Caribbean[85]

Recommendations for geothermal projects in the Caribbean focused on the underrepresentation of women in the geothermal workforce and ancillary job opportunities, and called on the energy sector to:

- Ensure that women apply for better-paying, on-site jobs, including drilling and construction, by conducting outreach, ensuring the safety of job sites and providing adequate training.
- Make efforts to include civil society organizations or specific ministry staff, such as gender focal points, in development planning as they may have practical ideas for increasing women's participation in a project workforce or oversight committees.
- Explore whether local agricultural activities, such as cooperatives with women members, are located in close enough proximity to drilling sites to benefit from cascaded uses of geothermal resources (e.g., condensates for drip irrigation or process heat).

Table 4 provides some examples of potential programme interventions that may follow from issues identified in the gender analysis, and may help to develop concrete recommendations, which could be then drawn on for design and implementation (see Section 6).

TABLE 4

Examples of potential gender issues and associated programme interventions

Gender issue identified	Associated programme intervention
Women are underrepresented in the energy and construction sectors	• Invest in long-term capacity building through education in STEM. • Support electricity utilities to form partnerships with high schools and universities to promote young women' interest in STEM education and introduce them to potential future employment opportunities. • Set targets for including women in all levels and fields in the workforce, and design flexible working opportunities, mentoring and sponsorship programmes, and professional development and training.[86] • Support electricity utilities to review, amend or adopt guidelines for gender equity and equality in the workplace, and concerning sustainable development, decent work, social inclusion and green jobs.[87]
The influx of external project workers increases the risk of GBV	• Establish codes of conduct for energy project employees and contractors, outlining unacceptable behaviour such as harassment and GBV. • Create reporting mechanisms for when GBV does occur.[88]

Women are excluded from project consultations	• Arrange meetings at a time convenient for women in venues where they feel comfortable. • Use a language that is accessible to women, with women facilitators and interpreters. • Engage women's groups and require their representation and the presence of women from various socioeconomic, ethnic and cultural groups; separate meetings for women may be necessary. • Use targets and quotas for women participants.[89]
Project construction sites are gender-insensitive workplaces	• Provide private, safe, sex-segregated toilets with facilities for menstrual hygiene management, including running water, soap and a private space to clean or dispose of used menstrual materials, and resting and feeding areas for pregnant and nursing mothers. • Provide safety tools and appropriate clothing and footwear to accommodate women's sizes and preferences (such as availability of footwear sizes or PPE to suit women's physique and religious aspects, as well as to accommodate changes in their body due to pregnancy). • Create a safe working environment through policies against sexual harassment and gender discrimination.[90]
Compensation packages often exclude women	• Work on regulatory frameworks to include joint registration of assets and spousal co-ownership rights titles. • Cash compensation could be handed to the household head in the presence of the spouse, or the compensation could be transferred into a joint bank account.[91]
Resettlement plans may not address the different needs of men and women	• Ensure that resettlement plans make health services available at the point of relocation, and that these include facilities for maternal health. • Use monitoring indicators and evaluation questions related to how women's needs have been addressed in resettlement implementation. [92]

5.4 Quick checklist for data analysis

- **Ensure** an analysis of intersectionality that covers all elements of the data, examining cross-cutting issues such as ethnicity/race, age, sexual orientation, (dis) ability, geography, etc.
- **Consider** change at both the formal and informal levels.
- **Ask** guiding questions:
  - What are the **legislative and policy frameworks** in this sector? How do these impact the rights of women, girls and gender-diverse persons?
  - What are the **different roles and responsibilities** of women and men? What does the gendered division of labour look like?
  - Who has **access to and control over resources and services?**
  - Who has **decision-making power?**
- **Develop** recommendations that identify opportunities for positive change around women's rights and gender equality.

6. USING THE FINDINGS OF GENDER ANALYSIS

Gender analysis is always a means to an end; it is only effective when its findings and insights are fully utilized throughout all phases of development policy and practice. Thus, collecting the data, carrying out the analysis and compiling the recommendations is only the beginning of the process, and it is critical that the results of the gender analysis are fully incorporated into policy planning, implementation and monitoring of interventions in order that they have real impact on development processes, outcomes and results.

6.1 The gender analysis report

The findings of the gender analysis should be used to develop a gender analysis report (also referred to as a gender assessment, or gender action plan). The information and data collected are synthesized into a narrative that highlights the trends, insights, gaps and problems that will be addressed in the design of project or programme interventions to challenge existing gender inequalities. A suggested structure for a gender analysis report is provided in Annex 4, and includes the following areas:[94]

- A *methodology* and process for the gender analysis, including data sources, data collection methods, stakeholder mapping and the framework of guiding questions for analysis.
- A *broad overview* of gender equality issues in energy infrastructure or other relevant sectors and geographic areas.
- A *detailed analysis* of gender in the four realms of enquiry covered by the guiding questions (see Section 5), namely legislative and policy frameworks; roles and responsibilities; access to and control over resources and services; and decision-making power.
- *Recommendations* of entry points for addressing gender equality during the project or programme's implementation.

Communicating the results of the gender analysis is another crucial step. This can include directly informing stakeholders and others of the results by sharing the gender analysis report or holding a round table meeting. It could also involve presenting the findings through alternative means of communication such as newsletters, social media and websites.[95] A summary could also be made available in local languages.

6.2 Gender mainstreaming into the programme cycle

The results of the gender analysis form the basis for **mainstreaming gender equality into all steps of the project or programme cycle and results framework**, including in the following areas:[96]

- *Situation Analysis:* Gender analysis directly informs the background or context analysis, highlighting relevant gender inequalities as well as potential benefits or adverse impacts from the project or programme activities in the energy infrastructure sector.
- *Theory of Change (ToC) and Theory of Action (ToA)*: The gender analysis provides the data, evidence base and knowledge needed to develop a ToC by identifying gaps and needs, and the causal linkages to gender equality issues. It also provides the information needed to identify the optimal solutions to be included as interventions in a ToA.
- *Risk Assessment Framework*: The findings from the gender analysis can also be incorporated into gender-differential risks and needs insights to inform programme development.

- *Results Framework*: This must reflect the gender analysis results, and show consistency between the issues identified in the gender analysis and the proposed programme interventions (see Table 4 for examples and Box 15).
- *Budget*: Gender equality priorities must be reflected in the budget, which should include sufficient financial resources for all planned gender-related activities, including hiring gender expertise, collecting sex-disaggregated data and all other gender-specific substantive activities.
- *Monitoring and Evaluation (M&E)*: The gender analysis should be used to establish a baseline against which progress can be measured, and should be reflected in the M&E framework. This includes gender-sensitive indicators and targets (see Box 16).

BOX 15

Using gender analysis to inform project planning[97]

The United Nations Office for Project Services (UNOPS) and UN Women have created a "Guide on Integrating Gender Throughout Infrastructure Project Phases in Asia and the Pacific," which provides information for developing and implementing a Gender Action Plan (GAP) based on a gender analysis and includes a Gender Action Plan Template to support completing a GAP.

A **gender analysis** serves as the basis to formulate a GAP, and identifies gender-based constraints, such as a lack of time due to childcare responsibilities, or the lack of collateral to take out a loan because women often do not hold land titles. Ultimately, it will lead to solutions to overcome constraints and will identify opportunities to strengthen gender equality.

A GAP will detail recommended activities that specifically address the gender-based constraints and opportunities that were identified during the analysis. The GAP must include gender-specific **outcomes**, **outputs** and **activities**, with **targets** and **indicators** to measure progress, and should include responsible actors. The GAP should inform and be integrated into overarching project **work plans**, M&E plans, and **project budgets** for effective gender mainstreaming throughout the project, and should identify concrete human and financial resources and timelines.

BOX 16

Gender-sensitive M&E indicators for energy infrastructure[98]

The Asian Development Bank (ADB) provides a sample list of gender targets and indicators to monitor outputs of projects in the energy sector, including:

- Number of jobs (person-days) generated for women by the project (compared to the number of total jobs generated).
- Number of women receiving technical and skills development training (compared to the total number).
- Percentage of women represented in electricity user groups, committees, cooperatives, utility management level jobs, on energy boards and other decision-making bodies.
- Percentage of women who participated in policy formulation during public consultation meetings.
- Number of project, energy agency and utilities staff receiving gender awareness training.
- Improved gender equality performance by energy sector agencies or utilities (e.g., human resources strategy).
- Sector policy or strategy explicitly highlighting gender equality interventions that have been adopted.

6.3 Quick checklist for using the findings of gender analysis

- **Develop** a gender analysis report based on the findings of the analysis.
- **Communicate** the results via a variety of channels.
- **Use** the results of the gender analysis to form the basis for mainstreaming gender equality into the project or programme results framework, including:
  - Situation Analysis;
  - Theory of Change and Theory of Action;
  - Risk Assessment Framework;
  - Results Framework;
  - Budget; and,
  - M&E, including indicators and targets.

7. CASE STUDY: GENDER EQUALITY AND SOCIAL INCLUSION ANALYSIS FOR ENERGY AND TRANSPORTATION INFRASTRUCTURE

Background:[99] The USAID Mekong Safeguards Activity is a five-year programme (2018–2023) that the Asia Foundation implements in a consortium with the Global Environment Institute and the Stimson Center. USAID Mekong Safeguards provides policy makers, government regulators, major financiers and contractors with the information and tools they need to apply environmental, social and governance standards to energy and transport infrastructure development in the Lower Mekong region. A Gender Equality and Social Inclusion (GESI) analysis was undertaken to examine:

- The impacts that infrastructure projects in the energy and transportation sectors have in the lower Mekong region countries on women and socially excluded groups.
- The gaps and barriers that exacerbate inequalities and impede the best social outcomes, including practices that prevent or hinder women's and socially excluded groups' views and voices from being heard in the infrastructure decision-making and development processes.
- The Activity's potential opportunities to address these barriers and to amplify the voices, contributions and priorities of women and other socially excluded groups.

Data collection: The research was based on a comprehensive **desk review** of secondary data sources, wherein 161 documents were reviewed. It was agreed to try to limit the desk review to material that was dated 2012 and after to ensure that the findings were current. Some exceptions were made in cases where the studies were particularly relevant. A series of remote **key informant interviews** supplemented the desk review to seek further clarifications on the research questions, particularly those related to issues that were inadequately covered by the existing literature, such as data on women in decision-making and GESI approaches in infrastructure-related institutions, evidence of sexual abuse and exploitation in the context of large-scale infrastructure development, and other emerging issues. A total of 53 key informants were interviewed (38 women), including government officials responsible for energy, transport, infrastructure and gender, development partner representatives, NGO representatives and academics. Tools and guiding questions for interviews and FGDs were developed to aid data collection.

The **stakeholders** consulted for the analysis included government agencies responsible for energy, transport,

infrastructure, gender and women's affairs; development partners engaged in infrastructure; and NGOs and specialists whose work involved environmental and social impact assessments and gender equality and social inclusion.

Data analysis: The data analysis process **examined the gendered dimensions** of energy and transport infrastructure around the following domains:

- *The impacts of infrastructure projects in the energy and transportation sectors in the lower Mekong region countries on women and socially excluded groups*: Community disruption and displacement through resettlement and labour influx caused by major infrastructure projects can put women and children at risk of sexual harassment and violence, incur loss of livelihood, increase women's and girls' work burdens and time deficits, and have a negative impact on gender roles and relations.
- *Laws, policies, regulations and institutional practices*: Customary and discriminatory laws, policies and institutional practices in these countries create structural barriers to women's rights and their ability to benefit from and participate in infrastructure development.
- *Participation in decision-making*: Policy makers tend to be men, particularly in energy and transport institutions and organizations in the public and private sector; economists and engineers are the dominant professions, and practitioners are usually men with limited focus on or expertise in gender issues.
- *Gender norms and beliefs*: Due to gender-related norms and barriers, women tend to be directly or indirectly excluded from infrastructure capacity-development activities by governments, even when the activities have been organized by international organizations and NGOs supportive of women's rights.
- *Gender roles, responsibilities, and time use*: Women's direct employment opportunities in infrastructure projects have been restricted by gender roles and social norms in the local community or nationally; by women's low technical, construction and professional engineering skills; by occupational segregation according to gender; and by employer stereotyping.
- *Access and control over resources*: Land documents tend to be registered in men's names and discriminatory inheritance practices impede women's land access.

Findings and implementation: The combined data analysis was used to formulate a series of **findings** around potential **opportunities** to address barriers and to amplify the voices, contributions and priorities of women and other socially excluded groups such as:

- To do no harm, planners need to ensure that a project design will not lead to negative unintended gender impacts, such as the risk of GBV in the context of labour influx or reduced natural resource-based livelihood opportunities for women, etc.
- Initiatives that focus on resettlement, livelihood restoration and improved infrastructure access can target women and other vulnerable groups to increase their participation in consultations, training and employment opportunities within the project and in the local labour market, and in benefit-sharing schemes that increase access to education and health care.
- Infrastructure planning can incorporate design features that capitalize on opportunities for longer-term change to reduce gender disparities and improve development outcomes, such as through creating a mechanism for dual-title land deeds, including targets and quotas for women in technical and technical training and employment, increasing participation of women and marginalized groups in infrastructure sector decision-making, and building capacity for infrastructure planners to address GESI in policy and planning.

These insights were used to produce a **matrix of specific potential project interventions**. Using the findings and recommendations in the gender analysis report as an evidence base, the Activity and USAID planned to discuss and agree on a set of priority gender and social inclusion barriers or gaps that the Activity will address

in its work. This will be outlined in detail for implementation, including proposed indicators, in a second report, which is the Activity's **Gender and Inclusive Development Action Plan** (GIDAP). Finally, the Activity will integrate GESI as outlined in the GIDAP, which will be updated and reported annually.

The findings and recommendations of the country studies were disseminated via an intermediate report, while the market dialogues resulted in a Market Dialogue Report.[112] Both sets of findings are intended to be incorporated into a **Final Report**. Some of the market dialogue solutions that were found to be unique and scalable will be further examined to assess their suitability for **piloting** digital DRR solutions or digital disaster risk transfer products in one or more of the project countries and in the areas of current operations of UN Women.

Annex 1. Overview: Steps and Tools for a Sector-Specific Gender Analysis

Steps	Tools
Planning for Gender Analysis *1. Purpose of the gender analysis* • **Clarify** the purpose of the gender analysis and how the results will be used • **Ensure** the parameters are as specific as possible *2. When to conduct the gender analysis* • **Conduct** the analysis during the design phase of programme development *3. Who should be involved in the gender analysis?* • **Identify** and engage appropriate gender expertise • **Undertake** stakeholder mapping *4. How will the gender analysis happen?* • **Secure** sufficient financing • **Develop** a methodology for the gender analysis	• Illustrative workplan • Gender analysis methodology and process guides/ tools • Sample terms of reference
Data Collection *1. General principles for gender analysis data collection* • **Ensure** that the data collected is gender-sensitive • **Make sure** that women's as well as men's and diverse voices are heard • **Combine** macro-, meso- and micro-level information • **Include** both qualitative and quantitative data *2. Sources of data* • **Identify** existing sources of data • **Note** where data gaps exist, and plan for collecting missing data	• Potential sources of existing data
Data Analysis 1. Cross-cutting principles in data analysis • **Ensure** analysis of intersectionality cuts across all elements of data • **Consider** change at the formal as well as informal levels 2. Questions for gender analysis • **Ask guiding questions:** • What are the **legislative and policy frameworks** in this sector? • What are the **roles and responsibilities** of women and men? • Who has **access to and control over resources and services**? • Who has **decision-making power**? 3. Develop programmatic recommendations • **Develop** recommendations that identify opportunities for positive change around gender equality.	• Guiding questions for gender analysis • Examples of gender issues and potential programme interventions
Using the Findings of Gender Analysis *1. The gender analysis report* • **Develop** a gender analysis report based on the analysis findings • **Communicate** the results via a variety of channels *2. Gender mainstreaming into the programme cycle* • **Use** the results to mainstream gender into the programme results framework, creating a: situation analysis; theory of change and theory of action; risk assessment framework; results framework; budget and M&E framework	• Sample structure for a gender analysis report

Annex 2. Gender Glossary[100]

Access: The ability of women and men to use and benefit from a resource and take advantage of an opportunity. Ability to use resources does not necessarily imply the ability to define or decide the use of that same resource and vice versa.

Control: The ability of women and men to make decisions about the use of a resource and derive benefits from resources and opportunities.

Equal opportunity: The absence of gender-based discrimination; the right to be treated without discrimination, including on the grounds of gender, sex, race or age.

Gender: TThe socially constructed roles and relationships, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to women and men on a differential basis. Gender is relational and refers not simply to women or men but to the relationship between them. Gender is part of the broader socio-cultural context, as are other important criteria for socio-cultural analysis including class, race, poverty level, ethnic group, sexual orientation and age. Genders may include, but are not limited to, identifying as woman, man, gender neutral, transgender, or non-binary.

Gender analysis Gender analysis is a critical examination of how differences in gender roles, activities, needs, opportunities, and rights/entitlements affect men, women, girls and boys and persons of diverse genders in certain situation or contexts. It is a methodology that describes existing gender relations in a particular environment, through collecting and analysing sex-disaggregated data and other qualitative and quantitative information. It organizes and interprets, in a systematic way, information about gender relations to understand gender differences in order to achieve peace and development objectives.

Gender-based violence: Violence targeted at individuals or groups on the basis of their gender. Examples include sex-selective abortion; differential access to food and services; sexual exploitation and abuse, including trafficking, child marriage, female genital mutilation/cutting, sexual harassment, dowry/bride price abuse, conflict-related sexual violence, honour killing, domestic or intimate partner violence, deprivation of inheritance or property, and elder abuse.

Gender-disaggregated data: Data that is collected, analysed and presented separately based on the participant/respondent's gender (woman, man or gender-diverse based on socially constructed and individually perceived identity).

Gender equality: Gender equality refers to the equal rights, responsibilities and opportunities of women, men, girls and boys. Equality does not imply sameness but that the rights of women and men will not depend on the gender they were born with. Gender equality implies that the interests, needs and priorities of all genders are taken into consideration, recognizing the diversity of different groups. Gender equality is not a women's issue but should concern and fully engage all genders while recognizing that neither all men nor all women are a homogenous group.

Gender equity: Fairness in the distribution of responsibilities and benefits between women and men. To ensure fairness, temporary positive measures must often be put in place to compensate for the historical and social disadvantages that prevent women and men from operating on a level playing field. Equity is a justice-based means—equality is the human rights-based result.

Gender identity: A person's understanding of themselves as being a woman, man or gender-diverse person. This may or may not correspond with their birth sex.

Gender mainstreaming: The process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.

Gender roles: A set of prescriptions for action and behaviour assigned to men and women by society according to cultural norms and traditions.

Intersectionality: An analytical tool for understanding and responding to the ways gender identity intersects with and is constituted by other social factors such as socio-economic status, age, (dis)ability, race/ethnicity and sexual orientation.

Multiple-track strategy for gender mainstreaming (also known as dual mandate, or twin- track): Incorporating both *gender-targeted* interventions to support gender equality and women's empowerment in specific social groups, specific organizations and/or processes as well as *gender-integrated* efforts to ensure that gender equality is integrated across the substantive work of all sectors. Also known as using vertical as well as *horizontal programming*.

Practical gender needs and strategic gender interests: Practical gender needs are identified by women as a response to an immediate perceived necessity, and usually relate to inadequacies in living conditions such as water provision, health care, or employment. Strategic gender interests tend to challenge gender divisions of power and control and traditionally defined norms and roles.

Productive work: Work done by both men and women for pay in cash or kind. It includes both market production with an exchange-value, and subsistence/home production with actual use-value and potential exchange-value. For women in agricultural production, this includes work as independent farmers, farm wives and wage workers.

Reproductive work: Childbearing/rearing responsibilities and domestic tasks done largely by women, required to guarantee the maintenance and reproduction of the labour force. It includes not only biological reproduction but also the care and maintenance of the work force (partner and working children) and the future work force (infants and children attending school).

Sex: The physical and biological characteristics that distinguish humans as female/male or intersex.

Sex-disaggregated data: Data that is collected, analysed and presented separately based on the participant/respondent's sex (female, male or intersex).

Women's empowerment: The process of developing women's capacities with a view to participating actively in shaping one's own life and that of one's community in economic, social and political terms.

Annex 3. Sample Terms of Reference to Conduct a Gender Analysis in Energy Infrastructure

1. Background to the assignment[101]

A clear description of why a gender analysis is required should be elaborated and should include reference to previous studies (national reports on gender issues, sector-relevant supporting data, monitoring reports, evaluations, etc.) that identified gender inequalities in the sector, or other inputs that generated gender-related questions to be answered. It is important that the background information indicates clearly the kind of inputs required for the subsequent design (or redesign) of the deliverables, or what inputs from the gender analysis report are requested in terms of policy and procedural guidelines.

2. The assignment

Objectives: State clearly what exactly will be studied under the gender analysis, including target groups, scope, etc., as well as specific research questions to be answered.

Methodology: Broadly specify the research methods to be used, including both participatory methods and qualitative data as well as quantitative sex-disaggregated data. Specify whether the person or team conducting the analysis will be working with other national or international gender experts or with energy infrastructure sector specialists.

Deliverables: Note the desired length of the Gender Analysis Report/Gender Assessment, as well as any other deliverables as required (e.g. inception report, first and final drafts, etc.). Specify that in addition to presenting the gender issues identified in the analysis, the report must also provide recommendations for programming.

3. Competencies, education and experience

Education: The gender expert should have:

- A postgraduate university degree in social sciences or natural sciences or another relevant discipline, preferably with a specialization in gender or energy.
- Academic or professional training/experience the field of gender and development.
- Academic or professional training in social research methods.

Technical and functional experience: The gender expert should have:

- A minimum of five years' practical experience in the field of gender equality and gender mainstreaming.
- Formal training in gender analysis and demonstrated expertise in mainstreaming gender in projects and programmes.
- Thorough understanding of the gender context in country.
- Familiarity with gender analysis tools and methodologies.
- Strong communication skills and ability to work in a team and liaise with various stakeholders at different levels.

Languages: : Fluency in written and spoken [local language/English] is required. (NB: If only English is listed as required, suggest to include that 'Local language [where relevant] would be an asset'.)

Annex 4. Sample Structure for a Gender Analysis Report

1. Introduction[102]

Brief description of the aims and objectives of the gender analysis, and a brief overview of the project or programme to which it contributes.

2. Methodology

Explanation of the methods and processes used to conduct the gender analysis, including data sources, data collection methods, stakeholder mapping and the framework of guiding questions for analysis.

3. Gender equality in the energy infrastructure sector

Broad overview of gender equality issues in the energy infrastructure sector and relevant geographic areas to contextualise the analysis.

4. Gender analysis narrative

Detailed analysis of gender in the four realms of enquiry covered by the guiding questions. The information and data collected should be synthesized to highlight the gender-differentiated trends, insights, gaps and problems in each area:

- Legislative and policy frameworks
- Roles and responsibilities
- Access to and control over resources and services
- Decision-making power

5. Recommendations

Overview of potential project or programme entry points for creating gender-differentiated impacts, followed by specific recommendations on how the proposed project or programme interventions will challenge existing gender inequalities. These can follow the general structure of the programme document (if relevant), so that the recommendations are straightforward to integrate. This includes:

- Identifying potential activities, outputs and results, based on the gender issues identified in the analysis.
- Suggesting gender-sensitive indicators and sex-disaggregated baseline data.
- Providing budget estimates for gender-related activities.
- Providing recommendations to mainstream gender equality into the M&E methodology

Annexes

The annexes contain additional details, and could include a list of stakeholders consulted, data sources consulted, times, locations and participants of focus group discussions, draft results, framework, etc.

Annex 5. Key Resources

Gender mainstreaming

United Nations (2013) Mainstreaming a Gender Perspective into all Policies and Programmes in the United Nations System: Report of the Secretary-General (E/2013/71)

UN Women (2022) Handbook on Mainstreaming for Gender Equality Results.

UN Women (2020) Gender mainstreaming: A global strategy for achieving gender equality and the empowerment of women and girls.

UN Women (2014) Gender Mainstreaming in Development Programming: Guidance Note.

Gender analysis

CARE (2017) Rapid Gender Analysis Toolkit.

CARE (2021) Gender Marker.

C. March, I. A. Smyth, M. Mukhopadhyay (2005) A Guide to Gender-Analysis Frameworks.

Sida (2015) Gender Analysis – Principles and Elements.

UNDP (2016) How to Conduct a Gender Analysis: A Guidance Note for UNDP Staff.

UNDP (2001) Learning and Information Pack: Gender Analysis.

UNIDO (2021) Guide to Gender Analysis and Gender Mainstreaming the Project Cycle.

World Bank (n.d.) The Social Inclusion Assessment Tool.

Gender in energy infrastructure

CEWD (2017) Recruiting and Retaining Women in Non-Traditional Positions.

Diversity toolkit (n.d.) The Changing Utilities Workforce.

ESMAP (2013) Integrating Gender Considerations into Energy Operations.

ESMAP (2018) Getting to Gender Equality in Energy Infrastructure: Lessons from Electricity Generation, Transmission, and Distribution Projects.

ESMAP (2019) Gender Equality In The Geothermal Energy Sector: Road to Sustainability.

ILO (2015) Guidelines for a just transition towards environmentally sustainable economies and societies for all.

IRENA (2021) Renewable Energy and Jobs – Annual Review 2021.

The Advocates for Human Rights (2019) Promoting Gender Diversity and Inclusion in the Oil, Gas and Mining Extractive Industries.

UNOPS and UN Women (2019) Guide on Integrating Gender Throughout Infrastructure Project Phases in Asia and the Pacific.

UN Women (2022) Global Gendered Impacts of the Ukraine Crisis on Energy Access and Food Security and Nutrition.

USAID (2018) Advancing Gender in the Environment: Making the Case for Gender Equality in Large-Scale Renewable Energy Infrastructure Development.

USAID (2021a) Delivering Gender Equality: A Best Practices Framework for Male-Dominated Industries.

Case Studies from Engendering Utilities:

- Female Perspectives Raise Revenue for Indian Power Utility
- Gender-Smart Solutions reduce Employee Absenteeism and Turnover in Solomon Islands (IFC)
- Employing Women Catalyses Change at a Chemical Plant in India (IFC)

USAID (2021b) Workforce Gender Equality Accelerated Program. Facilitator Guide.

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ENERGIA (2016) Mainstreaming Gender in Energy Sector Practice and Policy: Lessons from the ENERGIA International Network. The Hague: ENERGIA.

(2019) Women's Empowerment and Electricity Access: How Do Grid and Off-Grid Systems Enhance or Restrict Gender Equality? The Hague: ENERGIA.

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ESMAP (2013) Integrating Gender Considerations into Energy Operations. Washington, D.C.: ESMAP

(2018) Getting to Gender Equality in Energy Infrastructure: Lessons from Electricity Generation, Transmission, and Distribution Projects. Washington, D.C.: ESMAP.

(2019) Gender Equality in the Geothermal Energy Sector: Road to Sustainability. Washington, D.C.: ESMAP.

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Habtezion, S. (2016) Gender and Climate Change: Gender and Sustainable Energy. UNDP: New York.

Hawaii State Commission on the Status of Women (2020) Building Bridges, Not Walking on Backs: A Feminist Economic Recovery Plan for COVID-19. Honolulu: State of Hawaii.

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International Energy Agency and World Bank (2014) Sustainable Energy for All: Global Tracking Framework. Washington, D.C.: World Bank.

International Finance Corporation (no date) Environmental and Social Impact Assessment Guidelines for Hydropower Projects in Myanmar. Washington, D.C.: IFC.

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ILO (2017) World Employment Social Outlook: Trends for Women 2017. Geneva: ILO.

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(2019b) Gender Equality for an Inclusive Energy Transition. Abu Dhabi: IRENA.

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96 While the process of gender mainstreaming in projects and programmes is beyond the scope of this guidance note, various support resources are provided in Annex 5.
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100 Glossary definitions have been adapted, for the purposes of this guidance note, from the UN Women Training Centre Glossary, and the UN Women Gender Mainstreaming Handbook and ECOSOC definitions, where applicable.
101 This material is adapted from UNDP (2016).
102 This material is adapted from UNIDO (2021) and Green Climate Fund (2017).

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