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# THE ROLES AND PARTICIPATION OF WOMEN IN THE ENERGY SECTOR IN VIET NAM

# The roles and participation of women in the energy sector in Viet Nam

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## Abbreviation

WOB	Women-owned business
ILSSA	Institute of Labour Science and Social Affairs
IRENA	International Renewable Energy Agency
JICA	Japan International Cooperation Agency
HLSS	Household Living Standards Survey
OECD	Organisation for Economic Cooperation and Development
STEM	Science, Technology, Engineering and Mathematics
GSO	General Statistics Office
LFS	Labour Force Survey
ES	Enterprise survey

## Limitations of the research and disclaimer

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## Overview

Viet Nam is the 6th ranked country in the world to suffer from the impacts of climate change over the past two decades (Eckstein et al., 2020). Aware of the importance of addressing climate change related problems, the Government of Viet Nam has begun implementing several agendas on climate change response, promoting green growth and international commitments towards net zero emission by 2050. In order to obtain this goal, Viet Nam has to invest considerably in the main emission sectors of the country, including energy (World Bank, 2022a). Energy transition, which is promoted by renewable energy, can bring about deep and broad effects and lead to systematic changes to the society. However, this transition process must be inclusive and equitable, contribute to poverty reduction, create employment, improve social welfares, and enable all stakeholders in the society, especially women, to participate actively and enjoy equal benefits, with no one left behind.

In addition to the strong commitment of Viet Nam which is expressed in the Political Declaration on Establishing the Just Energy Transition Partnership, Viet Nam is leading the process of energy transition in the Southeast Asia regarding the capacity of solar and wind power installation (World Bank, 2022b). Moreover, Viet Nam is committed to participating in several international frameworks to promote gender equality and sustainable development and has achieved many remarkable initial results.

The report of the Ministry of Labour, Invalids and Social Affairs (MOLISA) on the implementation results of the national gender equality targets shows that at the end of 2023, 11/20 targets in the National Strategy on gender equality by 2025 were achieved or exceeded; 3/20 targets for 2030 were partly completed, and 12/20 achieved better results than in 2022. These are considerable advances in gender equality in Viet Nam. However, there still exist gender gaps and barriers to the representation, participation and development of women in the energy sector.

Due to the distinctive characteristics of the work and technology, the energy sector is considered the least gender-diverse sector with a much lower proportion of female workers compared to other economic sectors. Although women account for about 48% of the global labour force, they only constitute 22% of the workforce in the oil and gas, and 32% in the renewable energy sector (Japan International Cooperation Agency [JICA], 2023). In Viet Nam, the male labour force constitutes a more predominant proportion compared to women in both traditional energy and renewable energy sectors (Institute of Labour Science and Social Affairs [ILSSA], 2021). Gender equality and energy seem to be still considered separate and unrelated areas, and thus there still exist some gaps in policy. Research on renewable

energy policy in over 30 countries shows that about 18% of the policies take gender into account (International Renewable Energy Agency [IRENA], 2019a). The participation of women is also different among energy sub-sectors.

Employment potential in renewable energy is forecast to nearly triple (up to 42 million) by 2050 (IRENA 2016, 2020a). The demand for workers with higher skills in the electricity sector by 2030 is expected to increase by 31% for jobs in construction and installation, and 25% for those in operation and maintenance (ILSSA, 2021). Are these new opportunities for the employment and livelihoods of women? Research by JICA (2023) indicates that effective access to renewable energy can promote alternative livelihoods in response to climate change, enhance economic opportunities, save time and increase productivity, save energy, bring about cleaner environment, and simultaneously facilitate women entrepreneurship in the whole value chain. Consequently, it brings about not only opportunities to address gender disparities in the energy sector but also economic empowerment, while promoting socio-economic development and the common welfares of the community.

Recognizing of the importance of gender equality in achieving a just and comprehensive energy transition, GIZ in Viet Nam has conducted the research on the Roles and Participation of Women in the Energy Sector in Viet Nam. This research aims to provide some analysis of gender equality issues in the context of energy transition in Viet Nam and barriers and challenges for women in their economic relations with energy as employees, entrepreneurs and energy consumers. Thereby, this research also emphasises the need to promote women's participation and leadership in the energy area, leading to narrowed gender gaps in the sector and ensured justice, sustainability and inclusiveness of the transition of the energy sector in Viet Nam.





## Female workers in the energy sector

### Current status

- In Viet Nam, the number of female workers in the energy sector in 2021 remained quite low at 23.6 thousand workers (equivalent to 21.1% of the workforce in the sector). However, this number has grown. As estimated from Labour Force Survey (LFS), in the period from 2012 to 2021, the average growth rate of female workforce in the energy sector was 4.6% per year.
- The male workforce constitutes a predominant proportion compared to the female workforce in both traditional and renewable energy sectors (COBENEFITS, 2021). As for renewable energy, statistics in the 2020 annual report on renewable energy and employment by IRENA (2020b) show that Viet Nam had about 500,000 employees in this sector, among whom 56,700 employees worked in the solar power industry. Manufacturing, construction and installation and value chain provided about 25,000 jobs to the market. The remaining jobs belonged to the area of operation and maintenance (IRENA, 2020b).
- Female employees mostly undertake jobs that do not require as much technical expertise with lower compensations compared to their male counterparts and are tied to jobs with little relation to innovative designs of technology or management or policy making.
- A considerable number of female workers works in energy institutes and public energy research agencies but do not hold high-level positions.
- A very low rate of women works as managers and leaders in the energy sector in Viet Nam. As estimated from the 2021 Labour Force Survey, the rate of women working as managers and leaders in this sector in Viet Nam is 0.01%.
- Only a few occupation networks for women are established to provide information of employment and professional development in the energy sector in Viet Nam.

### Challenges and causes

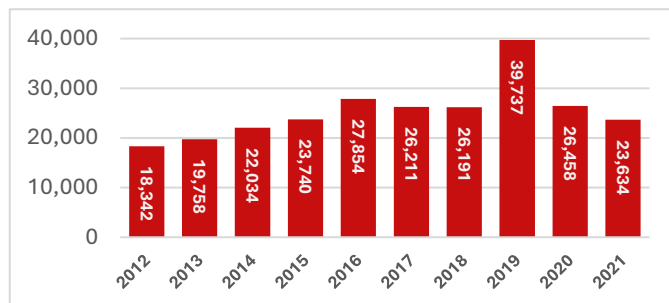
#### **Women face several limitations to job opportunities in the energy sector**

Regarding general employment opportunities, the energy transition process in the future in Viet Nam is projected to create about 1.61 – 1.93 million jobs/year in the electricity sector. According to a simulation study for the period of 2015-2030, solar and wind energy will respectively create 3.5 jobs and 2.8 jobs per MW of installation capacity (where 25% of jobs in the wind and solar power area will

be for high-skill workers). Meanwhile, the coal industry will generate 1.4 jobs per MW (Neeffjes & Ngo, 2021). In GreenID renewable energy scenario, solar and wind power contributes more than 20% of jobs created in the electricity sector by 2030. Additionally, the demand for higher-skill workers in the electricity sector by 2030 is also expected to increase by 31% for jobs in the construction and installation, and 25% for jobs in operations and maintenance (ILSSA, 2021).

**Chart 1. Number of female workers in the energy sector in Viet Nam**

Unit: Person



Source: Estimated from LFS 20120 - 2021

In particular, these jobs are often assumed to be more suitable for men by default and, in fact, the proportion of women in these types of jobs is often very low. This is a common situation in the world, not only in Viet Nam. Studies show that women are more likely to be recruited to low-paid, non-technical, administrative and public relations positions than to technical, management or policy-making positions in the energy sector (European Institute for Gender Equality [EIGE], 2016). In the renewable energy sector, women are mainly employed to do administrative jobs (45%); 35% of women work in positions unrelated to science, technology, engineering and mathematics (STEM); only 28% of women take on roles in STEM-related jobs (IRENA, 2019b). A study on clean energy businesses in India by Patnaik et al. (2021) found that women were more likely to take on office roles while men were more likely to take on technical roles such as supply chain management, manufacturing, and installation. Some businesses also hired women as designers for freelance positions that could be done remotely.



Similarly, in Vietnam:

- the number of Vietnamese women and girls who study STEM majors is smaller than that of men. For example, according to student data from the Hanoi University of Science and Technology in 2019, there were 4,273 male students (78%) but only 1,150 female students (22%). At the University of Information Technology, on average, for every 9 male students, there is only 1 female student (Dang Nguyen, 2019);
- the number of women with technical expertise and skills that meet the requirements of most jobs in the energy sector is significantly lower than that of men;
- limited access to and use of information and communication technology (ICT) affect women's access to information about training and employment in general, including jobs in the energy sector. Survey data on ICT skills in Viet Nam shows that the percentage of women performing at least 1 of 9 computer-related activities is only 27.2% (General Statistics Office [GSO] & United Nations Children's Fund, 2021);
- women in Viet Nam generally have fewer opportunities to participate in training courses and seminars than men, especially in on-site formats.

The persistence of cultural and social norms of gender has influenced recruitment decisions that disadvantage women in the energy sector (IRENA, 2020c). In Viet Nam, there is a widespread gender bias that STEM and jobs that require technical knowledge and skills are not suitable for women, making them much less likely to be recruited in the energy sector than men.

### **Women are rarely assigned managerial positions with influence on decision-making in the energy sector**

In many parts of the world, woman representation in the leadership of energy organizations is still in the minority. A significant number of women work in public energy institutes and energy research agencies but do not hold senior positions (Resurrección & Boyland, 2017).

In Viet Nam, men outnumber women in most workplaces in the energy sector, not only in technical positions, but also in management and policy-making positions, skilled and unskilled jobs. Compared to men, women, have fewer prospects for promotion and are at risk of being left behind in terms of performance evaluation, development and promotion opportunities, even when recruited.

Estimates from the 2021 LFS data show that the proportion of women in management and leadership positions in the energy sector in Viet Nam is only 0.01%, making women's needs and voices underrepresented and not given due attention.

There is a widespread gender prejudice in Viet Nam that downplays or is sceptical of women's leadership roles and abilities, assuming that men are better leaders, and that organizations will operate more effectively when led by men (Hoang, 2019; Institute for Social Development Studies [ISDS], 2016).

One of the reasons that can create barriers to the development and advancement of Vietnamese women in general, and in the energy sector in particular, is related to the **interruption of work** to fulfil the "heavenly" duties of women (giving birth and raising children). According to statistics, the total fertility rate of Viet Nam in 2023 was 1.96 children/woman, lower than the average fertility rate of Southeast Asian countries (2.00 children/woman), but still higher than four countries in the region (Brunei (1.9 children/woman), Philippines (1.9 children/woman), Thailand (1.1 children/woman) and Singapore (1.0 children/woman)) and much higher than some developed countries such as Japan (1.3 children/woman) or the Federal Republic of Germany (1.5 children/woman) (GSO, 2023; World Bank, 2022c).

### **Working conditions in the energy sector are not attractive enough to women**

**Income gaps** - Research on women's employment in renewable energy in member countries of the Organisation for Economic Co-operation and Development (OECD) shows that average wages in the energy sector may be higher than in other sectors, but even when women and men assume the same responsibilities, women may still be paid less due to gender discrimination (Turkish Women in Renewables and Energy Network, 2022; Maier et al., 2022).

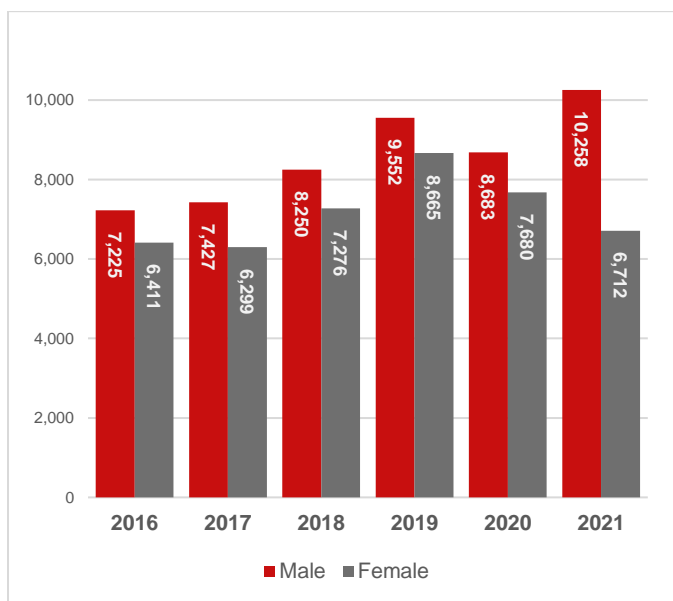


In Viet Nam, women's income in the energy sector is fluctuating upward in recent years but is still significantly lower than the income of men in this sector.

Moreover, the income gap between women and men in the energy sector in Viet Nam tends to increase. According to estimations from LFS data, in 2016, women's income was about 88% of men's income, but by 2021, women's income was only equal to about 65% of men's income.

**Chart 2. Average monthly income of workers in the energy sector by gender**

Unit: 1,000 VND/person/month



Source: Estimated from LFS 2016 - 2021

### Barriers of transportation and distance to work -

Women in Viet Nam often prefer jobs that are close to home or flexible in terms of hours to balance work and family responsibilities (Australia Aid & others, 2021). Meanwhile, energy projects are often carried out in remote locations, lacking family care services and infrastructure. Working in the energy sector may require women to be away from home for long periods of time, making it difficult for them to carry out family care responsibilities.

Most Vietnamese still hold gender stereotypes about women's career choices. The result of a survey by ISDS (2020) shows that more than 90% of men agree with the opinion that "A woman's 'heavenly' duty is to care for the family and be the solid support for her husband's careers".

**Safety risks for female workers** - Work in the energy sector requires strenuous traveling, sometimes to remote areas, in predominantly male working environments, which may pose risks to women related to sexual harassment and gender-based violence in the workplace.

Meanwhile, awareness of sexual harassment and gender-based violence in the workplace among employers and employees in Viet Nam, especially men, is still very limited.

## Women entrepreneurs and women-owned businesses in the energy sector

### Current status

- In the electricity sector alone in Viet Nam, statistics show that there are still a fairly small number of women-owned businesses (WOBs) providing electricity products and services.
- According to estimates from the 2020 Enterprise Survey (ES) data of the GSO:
  - o Out of nearly 6,000 enterprises operating in the electricity sector, there are only more than 1,400 WOBs, accounting for 24.39%;
  - o Viet Nam has about 20 local wind energy developers and 15 domestic solar energy developers. These enterprises are mainly led by men, with only nearly 1/4 of business owners in the electricity and electricity distribution industries in Viet Nam being women;
  - o The majority of WOBs in the energy sector are micro-enterprises (94.2%), followed by small enterprises (5.58%). Medium and large enterprises account for a very small proportion (0.21%);
  - o Women-owned energy enterprises are mainly concentrated in the North Central and Central Coast regions, the Central Highlands and the Southeast (accounting for about 21-22%). The region with few women-owned energy enterprises is the Northern Midlands and Mountainous area (4.89%).
  - o In general, female energy business owners in Viet Nam are highly educated, mainly with university degrees (accounting for 70%) and about 6% with post-graduate degrees.

### Challenges and causes

Women's energy-related livelihoods are diverse, including participation in energy supply and related services, or energy-consumption production activities. Women can be effective renewable energy entrepreneurs through their experience of using energy in their own households and businesses (Cecelski, 2000).

**Table 1. Number and percentage of businesses in the electricity sector by gender of business owners**

	Number	Percentage
Men-owned businesses	4,497	75.61 %
Women-owned businesses	1,451	24.39 %
<b>Total</b>	<b>5,948</b>	<b>100 %</b>

Source: Estimated from ES 2020



In many parts of the world, women's micro-enterprises have used renewable energy to increase the profitability and efficiency of informal sector enterprises and demonstrated their ability to operate and build renewable energy technologies on their own with proper training and support (Gorjian, 2019).

However, the noticeable gender gap in access to networks, information, technology, finance etc. is a barrier for women in developing production, business and service activities in the energy sector.

**Access to credit and finance is one of the major constraints of WOBs**

**Financiers' unwillingness** - Access to finance is critical to facilitating gender-responsive actions involving women entrepreneurs in all economic sectors including the energy sector. Therefore, many financiers are still reluctant to provide widespread financing for energy products and clean energy businesses due to the novelty of the deployed technology, the unproven efficiency of the business models, and the longer time it takes to break even compared to other businesses (International Finance Corporation, 2018; Patnaik et al., 2021).

Although the Vietnamese government has enacted strategic policies to provide capital support for women-owned SMEs, only a small number of banks have implemented it in practice, because the government's policies and regulations are not mandatory for banks and do not provide specific incentives for banks when they support WOBs. In particular, regulations on credit support are still quite general for businesses; they lack clear gender sensitivity and specific tax and capital incentives for WOBs in the energy sector.

A few banks in Viet Nam have introduced their own policies to provide guarantees or support loans for renewable energy. For example, HD Bank introduced policies to support corporate customers in developing and installing rooftop solar power projects; HSBC has supported green credits for rooftop solar power projects; BIDV has provided financing for solar power plants. However, research by Bialus et al. (2022) demonstrated that in Viet Nam, only 5 out of 27 banks (namely BIDV, SeABank, SHB, TPBank, VPBank) had introduced strategies to support WOBs. Compared to male-owned businesses, the rate of WOBs in Viet Nam eligible for loans from commercial banks is much lower, indirectly causing them to obtain loans through informal channels (Joanna et al., 2017).

Furthermore, women-owned small businesses may not have a credit history, which often leads to banks requiring the husbands or other family members to become co-borrowers. This is a major challenge for unmarried or single woman entrepreneurs. In general, WOBs in Viet Nam face many difficulties in accessing credit, despite a

large body of evidence-based research showing that the business performance of WOBs is no less efficient than that of male-owned businesses (Joanna et al., 2017; Bui & Trinh, 2021).

**Gender bias and inequality in land ownership** - Due to gender biases and traditional culture, especially in rural areas, rights to inheritance and land ownership are still predominantly reserved for men. Being unable to own land or have their names on land use certificates limits women's autonomy and their opportunities to have collateral to start businesses, borrow capital and access financial services. This can hinder women's opportunities to participate in entrepreneurship in new renewable energy.

Prejudice against WOBs turn banks in Viet Nam away from this group because they think that WOBs have small capital and limited management capacity, and need intensive support and advice for borrowing at low interest rates (Joanna et al., 2017).

**WOBs face many difficulties in information technology**

**Women entrepreneurs have limited information technology skills and capabilities** - Fewer Vietnamese women have internet access than men, and internet usage among women over the age of 35 is on the decline (GSO, 2022). General studies on woman-owned SMEs in Viet Nam have shown that STEM limitations hinder women's businesses from accessing information technology, business innovation, market information, business networking and new customers; legal advice; and trade promotion support (Australia Aid & others, 2021).

This is a limitation that often leads to WOBs in the energy sector being assessed as not being capable of technological application or timely installation or maintenance.



**WOBs in the energy sector in Viet Nam face many difficulties in networking and market access**

**Lack of information on new energy sectors –**

According to estimations from the 2020 Enterprise Survey (ES) data, although female energy business owners in Viet Nam are highly educated, mostly with university degrees (70%) and about 6% with post-graduate degrees, knowledge about new sectors such as renewable energy is still quite new to many people, especially to women in remote areas and ethnic minorities. Therefore, local female entrepreneurs are still hesitant to invest in production and use of renewable energy for the manufacturing activities of their businesses.

*Table 2. Level of education of energy business owners by gender*

Unit: %

Level of education	Male	Female	General
No training	3,34	4,55	3,63
Training under 3 months	0,31	0,21	0,29
Elementary training	3,27	1,72	2,89
Professional Secondary	8,45	6,34	7,94
College degree	4,87	6,62	5,3
Bachelor's degree	68,16	70,02	68,61
Master's degree	5,6	3,93	5,2
Doctorate degree	0,38	0,21	0,34
Others	5,63	6,41	5,82
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Estimated from ES 2020

**Difficulties in networking and market access-** Apart from the major challenges of inadequate capital and technology, studies show that the networks of women entrepreneurs tend to be based on friendship and families and/or concentrated in the local area where they live. Most women entrepreneurs in the clean energy sector are first-time entrepreneurs and face difficulties in accessing benefits provided by the government because they lack existing networks or are unaware of the necessary procedures (Patnaik et al., 2021).



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Other countries also share this experience, with only a few gender-neutral networks and associations that provide services tailored to the needs of female members; these networks often fall short in accommodating the time constraints that women face (Asian Development Bank & The Asia Foundation, 2018). Similarly, in Viet Nam, there is no dedicated network/association of WOBs in the energy sector.

*Table 3. Proportion of energy businesses by region and gender of business owners*

Unit: %

Region	Male	Female	General
Northern midland and mountainous region	8,14	4,89	7,35
Red River Delta	22,44	16,47	20,98
North Central and South Central Coast	24,68	22,67	24,19
Central Highland	17,55	22,74	18,81
Southeast	18,12	21,02	18,83
Mekong River Delta	9,07	12,2	9,84
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Estimated from ES 2020

WOBs in the energy sector also lack connections to sponsors, energy organizations, industry associations, training institutions, and the private sector that facilitate information and experience sharing on job opportunities and career development in the energy sector. These connections could thereby form networks and systems to support training and mentoring for women in the energy sector.



**The Viet Nam Energy Women Network**, initiated and supported by GIZ as of 2022, is one of

the rare initiatives designed for women in the energy sector to meet, discuss, share, learn and cooperate with one another, aiming at women's empowerment and advancement in the energy sector. Currently, the network is operating with the goals of supporting members to improve their professional knowledge in the energy sector and personal development skills; strengthening connections between members and connecting with international networks on women's empowerment in the energy sector; promoting the image and role of women and the Network in the sector, as well as increasing the participation of women in terms of both quantity and quality in the energy sector in Viet Nam.



The lack of business networks and accessibility to these networks for woman entrepreneurs also affects market accessibility for WOBs. Through business networks, woman entrepreneurs are provided the opportunity to connect with global value chains and international markets (Josephine Carter, 2022). The number of WOBs participating in trade promotion programs is still limited. Not all WOBs are updated or have regular information on important economic development agreements, strategies, and national guidelines of the country (Viet Nam Federation of Commerce and Industry & United States Agency for International Cooperation, 2015; Vietnam Woman Entrepreneurs Council, 2018).

### **Challenges of women entrepreneurs in the energy sector in balancing the “dual” roles between family and business**

A report by IRENA (2022) shows that woman entrepreneurs spend more time on unpaid care work than man entrepreneurs, despite the same amount of time spent on business. Specifically, woman entrepreneurs of microenterprises spend 7 hours on unpaid care work and 6.5 hours on business while men spend the same amount of time on their jobs but less than 3 hours on unpaid care work. This prioritization limits the time woman entrepreneurs have for business, networking and learning (European Union et al., 2020). Many women entrepreneurs acknowledge that they prioritize taking care of their children and family over business.

In Viet Nam, there are still misconceptions about woman business owners, such as the stereotype that women with children do not have time to run a business; women only work in family businesses, most of which are owned by men (Joanna et al., 2017).



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## **Women as energy consumers and users**

### **Current status**

- Women are often the primary energy users in households because they are often responsible for cooking, cleaning, and taking care of the family. A report by Australia Aid and other organizations (2021) shows that Vietnamese women spend about 275 minutes a day on household chores and family care while men only spend about 170 minutes.
- According to estimates from data from the 2020 Viet Nam Household Living Standards Survey (HLSS), in Viet Nam, of the total number of women and girls in households, about 18% of women and girls in the poorest 20% of households have access to the national electricity grid and about 0.4% do not have this access.

### **Challenges and causes**

#### ***The energy sector is considered to lack gender diversity; energy products are usually gender-neutral***

Due to the distinctive nature of work and technology, the energy sector is considered the least gender-diverse with a much lower rate of women participation than other industries. Being a sector that attracts numerous male workers, the energy sector's operation and development policies as well as energy products often reflect the male mindset and interests, with very little to no gender sensitivity and responsiveness, overlooking distinct needs and features of women.

From the gender perspective, there will always be energy-consuming appliances which may be only suitable for a certain sex or leave different impacts on the health of users of different sexes. It is often women who use electric appliances for cooking, housework, personal hygiene, and lighting for child-rearing etc. within the family. However, these electric appliances and energy-consuming devices which are commonly used by women are rarely designed and produced based on distinctive gender aspects of the consumer or labelled with indications specifically for a certain sex and/or warning about potential impact on consumers by sex, especially on women and girls.

#### ***Women's and girls' access to electricity, energy and clean fuel is affected by the purchasing power and the level of expenditure on energy of households.***

**Energy is in rising demand but is not always available** – The demand for energy in the world is steadily increasing. It is estimated that the demand for energy in the world will double by 2040.

Due to gender roles and traditional norms, women and men use energy for different purposes. As the primary

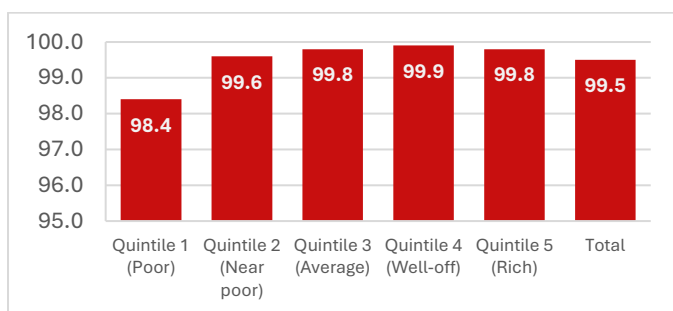
energy consumers for housework and family care, women's lives can be affected by the limited access to energy in general and electricity and clean fuel in particular, including livelihoods, activities in the family and in the community. However, in many parts of the world, the lack of access to energy is still quite common.

According to the 2020 HLSS, most Vietnamese families are currently connected to the national electricity (99.5%); among them, poor households have the lowest rate of connection to the national power grid (98%) (GSO, 2021).

However, as estimated from the 2020 HLSS, in the total number women and girls in households, about 18% of women and girls in the 20% poorest households have access to the national electricity grid and about 0.4% of them do not have this access.

**Chart 3. Percentage of households connected to the electricity grid in Viet Nam by income quintile**

Unit: %



Source: Data from HLSS 2020

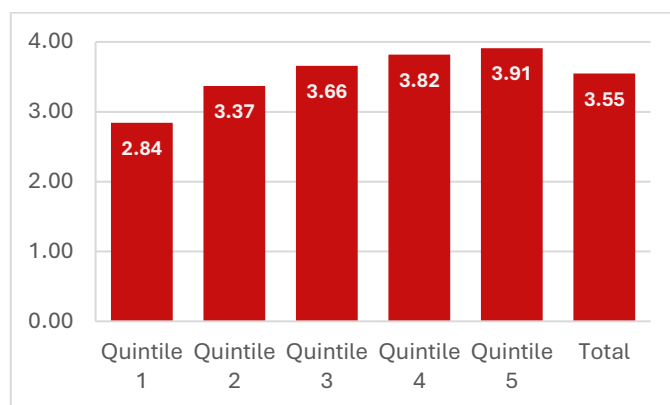
**The level of expenditure on energy depends on purchasing power** – For women and girls, especially those in the regions with difficult socio-economic situations, access to energy is often limited both in terms of availability and their purchasing power. High cost of access to the national electricity grid is a challenge to the poor (JICA, 2023). Energy price is often the reason for choosing unclean fuel, even when households have access to clean energy.

Forecast in Viet Nam also shows an increase in energy demand until at least 2050 (World Bank, 2022b). Statistics from the research of ILSSA in 2019 in Bac Lieu indicate that 94.5% of the interviewees, including women, perceived electricity as an essential issue of their families. However, purchasing power is a factor that decides the level of household expenditure on energy.

Statistics from the 2020 HLSS indicate that, as for the proportion of expenditure, the richer the households, the higher the proportion of energy expenditure over the total expenditure of the household. This implies that when income increases, households use more electricity-consuming products and spend more on electricity. Poor households spend less on electricity both in terms of relative and absolute volume. The electricity expenditure of poor households only equals 1/5 of that of the rich. Accordingly, women and girls in Vietnamese households have lower chance to access electricity energy.

**Chart 4. Proportion of household expenditure on electricity by income quintile**

Unit: % of total expenditure



Source: Estimated from HLSS 2020

In reality, women's demand for and level of electricity and water consumption for daily life and hygiene purposes may be higher than that of men. However, income inequality between male and female employees in many sectors in Viet Nam (including the energy sector) persists and has not been completely addressed. Solutions to close income gaps for women to increase their purchasing power in terms of energy or energy initiatives that prioritise women will facilitate their daily access to energy (electricity).

Similarly, incentives on energy consumption for daily life activities of employees (different from consumption for production purposes) in institutions, organisations and businesses, especially in industries with intensive female labour such as leather and shoes and textiles, will also encourage these units to better implement gender equality actions, leading to more favourable conditions for female workers in the workplace/production sites.

**The disadvantaged role of women in making decisions on energy expenditures in households** - In the household, although women are the primary providers and users, men are usually the decision maker of household infrastructure, the type of energy used and the purchase of electronic appliances (JICA, 2023). The limited participation of women in the energy-related decision-making processes in the household affects their access to modern, clean and sustainable energy (United Nation Environment Programme [UNEP], 2020). Nevertheless, not only are energy-efficient modern appliances clean and convenient, they also contribute greatly to advancing gender equality by saving time and reducing the workload for women.

In many countries in the world as well as in Viet Nam, men are considered the head of the family and are often the persons who make decisions in the family, including purchasing expensive assets and belongings (the Ministry of Culture, Sports and Tourism et al., 2008; ISDS, 2020). An online survey by IRENA (2019a) with over 1,000 participants shows that women are often disadvantaged in accessing energy because men often

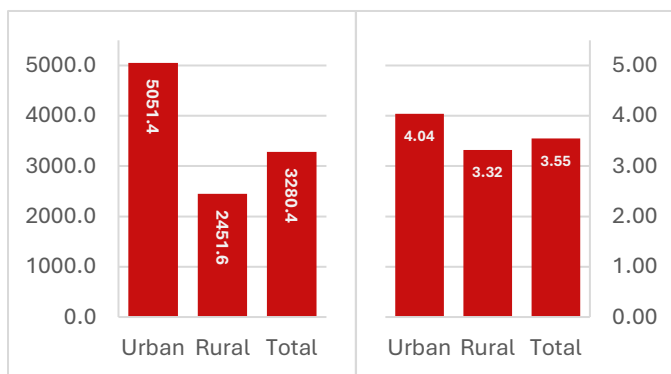
make purchasing decisions in the family. Men – especially when being the main breadwinner – tend to prioritize cost-saving for the whole family’s benefit, especially in the context of high costs of fuel, instead of considering saving time or lessening the workload for women.

**Energy expenditure gaps in rural and urban areas –**

The access to energy of women and girls in rural and urban household groups are very different due to the contrasting levels of electricity expenditure of these groups.

**Chart 5. Average amount and proportion of household expenditure on electricity by area**

Unit: 1,000 VND/household/ year      Unit: % of total expenditure year



Source: Estimated from HLSS 2020

According to the 2020 HLSS, average amount of household expenditure on electricity in urban areas is more than twice as high as that in rural areas. Proportion of expenditure on electricity in urban and rural areas are also very different in level; the proportion of average expenditure on electricity of urban households is higher than that of rural households. This demonstrates the impact of electricity price fluctuation on the household expenditure structure; women’s access to electricity will also be different between rural and urban areas.

Particularly in remote areas and areas with unfavourable socio-economic conditions, women in poor households account for a considerable proportion. Women also make up the main agricultural labour force or have their livelihood directly related to agriculture. Policies on (electricity) energy development have prioritized serving the rural, mountainous, border and island areas, and areas with particularly challenging socio-economic conditions. Policies to support electricity spending (price subsidy for household electricity, irrigation electricity, payment terms for electricity bills and other support related to electric wires etc.) for people in these areas have been introduced. However, most of these policies are still gender-neutral, not considering distinctive needs of different genders, especially of women and girls. For example, poor households headed by poor and single women will have more difficulties and should be given more priority in terms of adequate access to energy through support and enhancement of their income or spending capacity.

**Limited access to energy affects women’s and girls’ health and safety, especially those in regions in challenging socio-economic situations.**

**Energy “poverty” has negative impacts on women’s life -**

Rural households tend to use electricity energy mainly for lighting and unclean fuels for cooking (for example kerosene, firewood and coal). Meanwhile, urban households often have access to the national electricity grid and use less harmful energy sources for cooking, such as electricity and gas. However, the impact of using “unclean” energy on rural women’s health seems to receive much less emphasis in both local energy development policies and in people’s daily life, in comparison with the goal of lighting and providing energy for production and other activities (UN Women & Women Count, 2022). Research by Nathan & Kellar (2021) shows that using unclean energy (coal, firewood, kerosene, rice straw, etc.) in long periods of time puts women and girls at several risks due to indoor air pollution, such as early death or acute respiratory infections.

Some studies have also shown that gender-based violence may be exacerbated or caused by the lack of access to reliable energy sources (Dicalou et al., 2021). Electric streetlights will help reduce the risk of violent attacks against women. Streetlights will contribute to guaranteeing women’s safety (Energy Sector Management Assistance Program, 2013; Nelson & Kuriakose, 2017). Electricity is particularly important for women who work outside the home at night or use toilets, cooking facilities and water sources located outside (UN Women & Women Count, 2022). However, the application of solutions to improve energy efficiency, such as solutions for operating public lighting systems, without taking into account of gender differences and protection factors for vulnerable groups including women, may inadvertently increase harassment and gender-based violence and fail to ensure the safety of women and girls in deep alleys or remote areas.

**Potential risks for women and girls in providing energy for the household in remote areas**

**Gender inequality in the role of biomass, firewood and fuel collection in rural communities –**

Compared to men, rural women in developing countries like Viet Nam spend more time on activities of collecting firewood, carrying water, processing food and cooking. In several communities, women and girls are responsible for providing traditional energy sources such as firewood, coal, dung or other agricultural waste for cooking and heating.

UNICEF points out that girls between the ages of 5 and 14 spend 40% more time doing unpaid housework and fetching water and collecting firewood than boys at the same age. This sometimes becomes a norm of gender role, considered as an inherent duty of women. For example, the Ngo Rao in Dak To district (Kon Tum), the Central Highlands have a tradition that girls go to the



forest to collect and store firewood at home as a dowry when they get married, which is seen a symbol of a clever and loving bride for her husband (Thuy Hương, 2019).

However, the time and effort taken by women and girls to reduce energy scarcity has not been properly recognized. This work is not considered a job in the market and often neither accounted for in analyses of energy supply and demand nor shown in report figures and energy statistics.

**Firewood collection poses potential risks to health, safety and risks of gender-based violence** – Women and girls also have to face risks of gender-based violence, back injury, and exhaustion when performing biomass and firewood collection tasks (Practical Action, 2023). Furthermore, when spending extensive time and effort to get the necessary source of energy for daily life, women can hardly have time to participate in income-generating economic activities, learning and personal development activities, health care, political life, recreational activities or rest to regenerate their labour (Cazzola, 2018; The Global Initiative for Economic, Social and Cultural Rights, 2020; UNEP et al., 2021).



## Women in the role of giving opinions and sharing experience in consuming and using energy

### Current status

- PAPI (Provincial Governance and Public Administration Performance Index) data shows that women have very low representation in the community; only about 12% of villages are headed by women (United Nations Development Programme, 2022). This may result in the ineffective use of their knowledge and experience because they are not sufficiently involved in decision-making and policy design related to energy management and use in the local community.
- Gender mainstreaming in energy policies, particularly renewable energy, and the empowerment of women in energy-related decisions may increase benefits of renewable energy, especially those related to the access, household consumption and micro-enterprises where women are primary actors (Lee & Pollitzer, 2020).

## Challenges and causes

### *Limited opportunities for women to share experience in using and consuming energy*

The proportion of women undertaking community representative positions such as village heads is

relatively low. Moreover, in meetings in the community, household heads or representatives are the primary active participants, while women's participation is rarely emphasised and encouraged. In communities of ethnic minorities, women often only participate in community meetings when men are away from home.

In addition, even when women participate in decision-making meetings on communal activities, sometimes including energy access and use, the quantity and the quality of their participation are still limited because the organisation and facilitation skills fall short in encouraging women's participation (Oxfam et al., 2010; Pham & Nguyen, 2020; Vu, 2022). Many consultation meetings are organised at times when women cannot attend due to their responsibility to take care of the family, or sometimes women in remote areas are hindered from participating in consultation meetings because they are illiterate and can only speak local languages (C3E Initiative, 2019).

*Social norms limit the leadership role of women, preventing them from expressing their points of view in consultation meetings that they can attend.*

### *The necessity of acknowledging and accepting gender perspectives or women's experience and needs in developing energy and energy products*

It is essential to get women's involvement in planning energy development projects. The lack of a gender perspective and proactive participation of women in the initial step of planning may lead to negative impacts, such as imprecise identification of consumers' needs for energy (electricity) and inappropriate pricing (JICA, 2023); this can even result in disadvantages for women, posing risks of gender inequalities as women's needs, desires and knowledge are unaccounted for.

In the context of energy transition being strongly promoted in Viet Nam to realize the commitment to carbon neutrality by 2050, labour policies and regulations such as employment, vocational training, labour standards and safety etc. in the sector need to take into account gender-specific characteristics, ensuring equal rights between male and female workers and promoting empowerment of women in a wide, in-depth and effective manner. The findings of gender gaps in energy and energy-related labour regulations and policies (such as social insurance, employment, social protection, etc.) can contribute to solving the problem of gender neutrality, enhance gender equality and women's empowerment in Viet Nam.

### **There are very few studies with emphasis on gender equality in the energy sector**

Like other countries in the world, in Viet Nam, gender and energy issues are a quite new topic and thus lack of in-depth research. Particularly, not all energy or energy-related policies are gender sensitive and consider distinctive gender characteristics.

There are only a few assessment studies on the social and gender impact of policies encouraging investment in the construction of electrical grids or power stations using on-site energy, new energy, and renewable energy that clarify the vulnerability of women and the potential risks of possibly negative impacts on livelihoods, production facilities, living environment, health consequences, labour migration and other separate impacts on women and girls in project implementation areas. For example, research on renewable energy policies in more than 30 countries show that only 18% of the policies are gender responsive (IRENA, 2019a).

It is important to emphasise the involvement of women in research programs on energy-saving and energy-efficient science and technologies. Thematic research based on real life evidence and data on gender-responsive energy transition is highly beneficial in providing information for decision making in energy programs and supporting the enhancement of women's participation in the energy sector in Viet Nam. However, there are very few studies of this kind. Women's needs, experiences and gender-

specific characteristics, if considered, will create opportunities to significantly improve economic values, quantity and quality of intellectual contribution, and

convenience in the productions of energy-saving and energy-efficient technologies that are user-friendly and meet gender-specific needs. This is a great opportunity to address gender neutrality in energy development policies in Viet Nam from a progressive, intelligent, and gender responsive approach.



## **Conclusion**

In any society, the existence of gender prejudices and norms that limit women's roles and jobs will hinder their participation, employment and development. The elimination of gender prejudice and discrimination is critical to promote an inclusive and just society, especially economic sectors where women are underrepresented such as the energy sector.

In Viet Nam, despite significant advances in gender equality, women continue to face social and cultural barriers that hinder their full economic participation. These barriers are particularly obvious in the energy sector, which is often considered a traditional area for men. Addressing these prejudices and discriminatory practices is integral, not only to ensure equal rights and opportunities for women but also to maximize their potential in different economic roles, thereby contributing to the growth and innovation of the sector. Through substantive promotion of gender equality and elimination of harmful prejudices, Viet Nam can enhance its economic development, improve energy efficiency and ensure a just and sustainable energy transition benefiting all members of society.

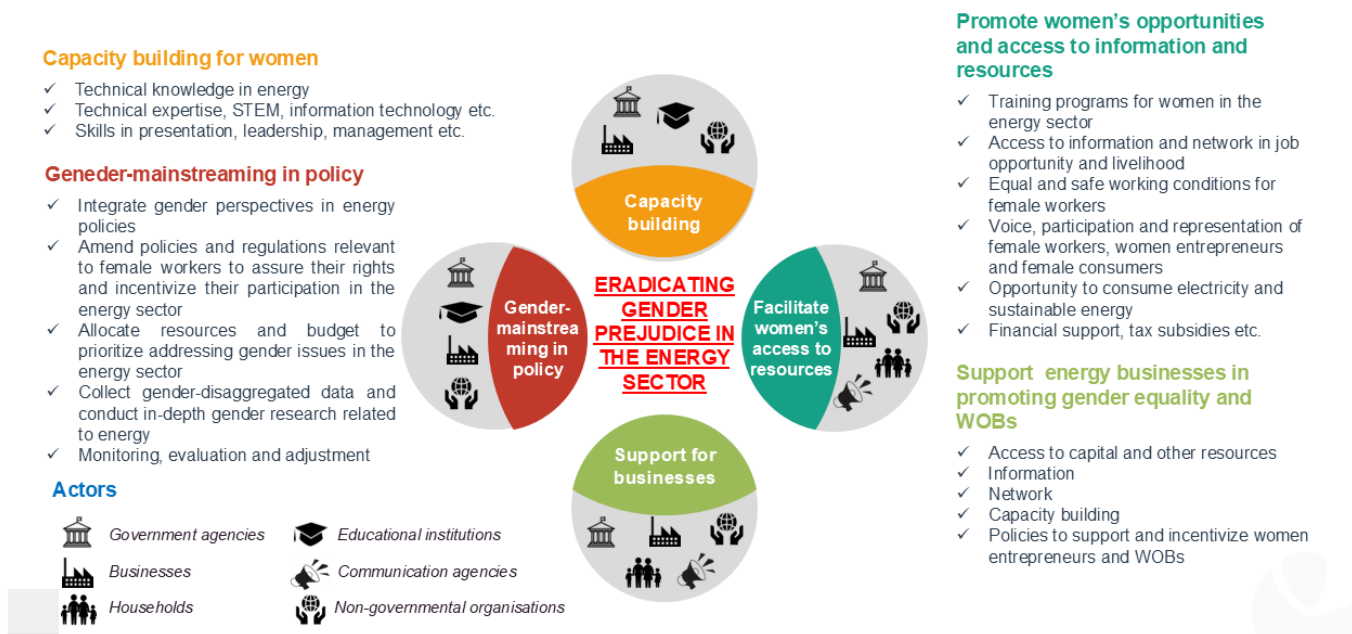
To achieve this, the energy transition process in Viet Nam must be comprehensive, with some principles to close gender gaps that need heightened attention:

**Eliminate gender prejudices and norms preventing women's full participation in the energy sector** – This is the prerequisite action that requires the involvement of all stakeholders in society to make a change in both perception and behaviours of each individual person, organization, business and community. This is related to community awareness-raising strategies and education programs that challenge traditional gender roles, eliminate gender norms and occupational discriminations, and highlight the potential and contribution of women in the energy sector.

**Promote women's equal access to education, training and employment in the energy sector** - This includes technical training programs and initiatives that encourage women's participation in traditionally male-dominated areas such as renewable energy expertise and technology. Access to information about education and training on technical occupations and STEM for women and girls also need be designed and implemented in a gender-responsive and substantively effective manner.

**Monitor the implementation of financial commitments to activities on gender equality and empowerment of women** - Addressing gender inequality in the energy sector needs continuous prioritisation and funding rather than being considered auxiliary or additional task or only implemented with leftover funding. Furthermore, there must be a consistent monitoring and evaluation mechanism for the implementation of commitments and initiatives in the energy sector. This ensures that designed programs and policies are effectively implemented, and necessary adjustments are promptly adopted to achieve expected results.

*Chart 6. Promoting the roles and participation of women in the energy sector*



**Promote women's involvement in opinion and experience sharing and participation in decision-making on energy development** - Not only is consultation with the community, especially with female customers, to understand specific energy needs and the challenges faced by women necessary, it also contributes to ensuring that energy projects are designed and implemented in a way that is beneficial for all community members, particularly women.

Solutions to promote the involvement of women in energy development are necessary for the achievement of sustainable and inclusive growth. Women's gender-specific experience and perspectives can significantly improve the effectiveness of energy policies and projects. By consulting women and ensuring their representation in decision-making, the energy sector can address gender diverse needs and challenges more comprehensively. This holistic approach promotes not only gender equality but also innovation and resilience in energy solutions, and ultimately contributes to a more equitable and sustainable energy future.

**The participation of the private sector plays the key role** - in addressing gender discrimination in employment, preventing and responding to workplace harassment, as well as supporting the advancement of women's representation, promotion opportunities, leadership and participation in decision-making to develop the energy sector.

Initiatives and prioritized targets that encourage businesses to fill gender gaps during the energy transition process in Viet Nam are essential. New energy solutions, which bring about benefits (e.g. less time spent on housework) and favourable conditions for women and girls to attain educational achievements, social capital and welfare, need to be acknowledged and replicated. Particularly, tailored support for woman entrepreneurs in the energy sector will ensure the effective contribution of energy projects to poverty reduction and economic development for women.

**Develop more in-depth studies on policies to develop feminism policies in the energy sector** – These policies must be seen as one of the indispensable factors of development and integration, in parallel with global efforts to promote just transition, green growth and protection of the Earth's atmosphere. Therefore, the promotion and maintenance of cooperation with international and regional organisations to share best practices, resources and expertise in promoting gender equality in the energy sector can help Viet Nam not only achieve socio-economic goals in an inclusive and holistic direction (e.g. the Sustainable Development Goals), but also contribute to reaffirming its compliance with international standards and commitments related to gender equality and climate change to which it is a party.

By complying with these important principles, Viet Nam can achieve significant advances in addressing gender inequality and empower women in the energy sector, contributing to the development of a more comprehensive and sustainable energy sector.



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