GEDSI in Energy Transition

for University Students 101



Gender Equality, Disability and Social Inclusion

GEDSI in Energy Transition for University Students 101

About Coordinating Ministry of Maritime Affairs and Investment Republic of Indonesia

The Coordinating Ministry for Maritime Affairs and Investment of the Republic of Indonesia (Kemenko Marves) is a key institution in realizing Indonesia's vision as a global maritime fulcrum by prioritizing cross-sectoral integration and sustainability in managing natural resources and fostering investment growth. This ministry is responsible for coordinating several related ministries, such as the Ministry of Marine Affairs and Fisheries, the Ministry of Tourism and Creative Economy, the Ministry of Energy and Mineral Resources, the Ministry of Environment and Forestry, the Ministry of Transportation, the Ministry of Public Works and Housing, the Ministry of Investment, and other ministries connected to the maritime and investment sectors. Kemenko Marves also serves as a bridge between the central government and international stakeholders in investment matters, particularly to ensure the inflow of investments that support transition energy, industry, infrastructure and maritime-based economic development.

About Institute for Essential Services Reform (IESR)

The Institute for Essential Services Reform (IESR) is a Jakarta-based think tank dedicated to advancing energy and environmental reforms. IESR promotes the transition to a low-carbon energy system through data-driven and scientific policy advocacy, capacity development, and strategic partnerships with non-governmental actors. IESR has been a key contributor to shaping Indonesia's energy transition discourse, working closely with national and local governments, associations, and civil society organizations.

About Generasi Energi Bersih (Gen-B)

Generasi Energi Bersih (Gen-B) is an inclusive, community-driven movement promoting renewable energy adoption and sustainable practices in Indonesia. With a vision of a cleaner future, Gen-B focuses on education, practical action, and advocacy. Through seminars, workshops, and collaborations with organizations like IESR, Gen-B raises awareness about renewable energy. It also engages in initiatives like installing solar-powered streetlights, organizing zero-emission parades, and supporting eco-tourism projects, benefiting underserved communities.

About Griffith University

Since 1975, Griffith University’s teaching and research have been focused on addressing the most important social and environmental issues of the time. Today, that mission remains as relevant as ever. Social and environmental responsibility drive everything Griffith University does, from pioneering teaching in modern Asian studies and environmental science to its long-time support for First Peoples, social justice, and sustainable practices. Consistently ranked in the top 2 percent of universities globally, Griffith University's degrees are designed with industry in mind, the future in sight, and social impact at heart. With more than 45,000 students, Griffith University’s community spans five campuses across South East Queensland, Australia, plus a Digital campus, complemented by a global alumni network of over 200,000 graduates.

GEDSI in Energy Transition for University Students 101

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FOREWORDS

Institute for Essential Services Reform (IESR)

As the world urgently embarks on a journey to transform the energy system by transitioning from fossil to renewables, the question of how this transition could be equal and just has become central to all policymakers and energy planners, including you, the future energy professionals.

With the complex and dynamic process, uncertainty, and high risk, energy transition is neither easy to deliver nor equitable and just, with no one left behind. The only way to prevent energy transition benefits is by integrating Gender Equality, Disability, and Social Inclusion (GEDSI) into the energy transition planning. GEDSI considerations in the energy transition process ensure that energy policies and practices are inclusive and address different groups' specific needs and vulnerabilities.

Welcome to the "GEDSI in Energy Transition for University Students 101" book. This is a valuable resource for university students in Indonesia to explore the intersection of Gender Equality, Disability, and Social Inclusion (GEDSI) within the energy transition. The book underscores the vital role of the GEDSI framework in energy transition efforts to create a more inclusive and sustainable energy future. This aligns with IESR's mission to accelerate a just energy transition in Indonesia.

As the Executive Director of the Institute for Essential Services Reform (IESR), I believe that the energy transition is not only about shifting to clean and renewable energy, but also about ensuring that the process benefits all people, regardless of gender, ability, or background. The Gender Equality, Disability and Social Inclusion (GEDSI) principle ensures that no one is left behind during the energy transition.

Indonesia is striving to transition to clean energy, but there is still much work to be done, including making the energy transition just, particularly for communities or individuals who have been left behind. By learning about the GEDSI concept and how to apply these principles, university students can help create an inclusive energy sector in Indonesia, ensuring that people of all genders, abilities, and backgrounds can participate in and benefit from the energy transition.

This book provides important insights and real examples of how Gender Equality, Disability, and Social Inclusion (GEDSI) can be integrated into the energy transition. It offers university students a deeper understanding of the topic and encourages them to think critically about how GEDSI can be incorporated into programs and policies supporting Indonesia's clean energy journey.

I hope this book inspires all readers and energy transition enthusiasts to embrace the spirit of leaving no one behind in the energy transition while advocating for equality and inclusion. You play a key role in shaping the future of Indonesia's energy transition, and your contribution is essential in ensuring it is sustainable, inclusive, and beneficial for all.

Jakarta, September 2024
Fabby Tumiwa
Executive Director, Institute for Essential Services Reform (IESR)

FOREWORDS

Generasi Energi Bersih (GEN-B)

As Chairperson of Generasi Energi Bersih, it is with great pride and responsibility that I introduce this publication, which delves into the crucial intersection of Gender Equality, Disability, and Social Inclusion (GEDSI) within the framework of Indonesia's energy transition. This book is more than a mere exploration of energy landscapes; it is a call to ensure that the shift from fossil fuels to renewable energy is equitable and inclusive, embracing every segment of society.

Energy has always been a cornerstone of human progress, driving advancements from the industrial age to the modern era. However, this progress has come at a cost—environmental degradation, social inequality, and the exclusion of marginalized groups. As we navigate the challenges of transitioning to clean energy, we must prioritize inclusivity and fairness, ensuring that no one is left behind.

In this book, we offer not just theoretical insights but also practical pathways for embedding GEDSI principles into energy transition efforts. The work of Generasi Energi Bersih is grounded in the belief that the future of energy must be sustainable, accessible, and beneficial for all. Our approach is holistic, recognizing that energy policy must address economic, environmental, and social dimensions to be truly effective.

The role of university students, young professionals, and communities is central to this mission. By engaging in advocacy, education, and implementation of GEDSI-focused energy projects, these groups can drive significant change, contributing to a more equitable and sustainable future.

This publication is the result of collaborative efforts from various stakeholders who share our vision for a just energy transition. I extend my deepest gratitude to everyone involved in making this book a reality. Let it serve as both a guide and an inspiration for those who are committed to advancing a cleaner, fairer, and more inclusive energy future for Indonesia and the world.

Jakarta, September 2024
Maya Lynn
Chairperson, Generasi Energi Bersih

FOREWORDS

Griffith University

The Ministry of Women's Empowerment and Child Protection (KPPPA) has a crucial role in addressing women's issues in Indonesia. A strong legal framework also explicitly guarantees gender equality, via the Indonesian Constitution and the ratification of international conventions such as the Convention of the Elimination of All Forms of Discrimination against Women (CEDAW).

Women in Indonesia enjoy strong economic participation. Indeed, women own an estimated 60% of the country's micro, small, and medium enterprises (MSMEs). However, they often face financial challenges such as lower access to credit and markets, when compared to businesses owned by men. Women's participation in Indonesia's labour force is also relatively low at an estimated 53% (as at 2021) and has remained unchanged for over two decades. Regrettably, the gap between women and men in labour force participation is one of the largest in the South-East Asian region.

People with disabilities, particularly women and girls, are also left behind in socio-economic terms. Unemployed, under-educated and under-represented in Indonesia's national statistics, their full and effective participation in society and their equal access to basic services are hindered. A United Nations' (2021) report on disability data in Indonesia demonstrates, via comprehensive analysis, the ways people with disabilities are under-represented in government statistics.

Data is needed to make people with disabilities 'visible', to highlight where deprivation and disparities exist, and to

develop evidence-based policies to address their needs and related economic and social inequalities.

Insufficient disability statistics in Indonesia mean that current data collected do not provide useful information about persons with disabilities or their needs, capacities and well-being. Inclusive and effective data not only counts people with disabilities, but also supports decisions about what is needed to ensure that they are able to access energy, employment, education, buildings, transportation, health and legal services, and participate in political decisions.

Although progress has been undeniable, Indonesia's people still have a way to go to ensure that gender equality, disability and social inclusion (GEDSI) are integrated into policies, programmes and projects, particularly those that address the country's Just Transition to Renewable Energy.

There is no 'average' or 'typical' Indonesian woman, or person with a disability. Each woman has different responsibilities, comes from a different social background, and has unique dreams and aspirations. Yet research shows that some themes keep repeating – themes that are not new, but which reflect the enduring challenges that persist for so many women and girls, and people with disabilities.

Women and people with disabilities want to be safe – at home, at work, in the street. Women and girls do not want to be crushed under the weight of managing family care responsibilities and work responsibilities, without help from other family members at home.

Women and people with disabilities want dignified work with equal pay and the opportunity to retire with enough money saved in their bank accounts to provide some economic independence. And women and girls, and people with disabilities, want government systems to work for and with them – not against them.

Indonesia's President Joko Widodo issued Presidential Regulation No. 112 in 2022, on the Acceleration of Renewable Energy Development for the Supply of Power. In 2022 also, the development of the landmark Just Energy Transition Partnership with Indonesia focussed on the need for an ambitious and equitable power sector transition in the country. Via the Presidential Regulation and the Just Energy Transition Partnership Indonesia has laid the foundations to address GEDSI in its Just Energy Transition. But without a clear vision and concentrated effort, the path to social equality and inclusion may remain obstructed.

That is why this book is important. It sets out a path to integrate GEDSI into Indonesia's Just Energy Transition, via its introduction to the concept of, and the importance of, GEDSI in a Just Energy Transition; its description of how GEDSI can be applied to Indonesia's Just Energy Transition; its offer of practical ways for students to become involved and to promote the GEDSI in Just Energy Transition framework; and the provision of further information and opportunities for students who want to learn more about GEDSI in a Just Energy Transition.

The book shows that standing still is not an option.

This is not a book that outlines every single policy, programme or project solution – but it does set out how you as a student, can make a clear commitment to work for women and girls, and people with disabilities, via an understanding of GEDSI and how it fits into a Just Energy Transition for Indonesia. It looks toward a future where Indonesia can fulfill the potential of all its citizens by incorporating them into all aspects of future renewable energy solutions.

Brisbane, September 2024
Professor Helen Johnson
Griffith University

INTRODUCTION

From Authors

Energy transition is a crucial step towards a sustainable future. However, the journey towards a low-carbon economy must be fair and inclusive, ensuring that no one is left behind. Gender Equality, Disability, and Social Inclusion (GEDSI) provides a strong framework to support a just energy transition, where different communities and people from various backgrounds are considered. Therefore, understanding and incorporating GEDSI into energy transition frameworks is vital for creating a future where all voices are heard and all communities benefit.

This book, GEDSI in Energy Transition for University Students 101, is designed to introduce university students to the GEDSI concept within energy transition. It is organized into several chapters. The first three chapters —"What is GEDSI in Energy Transition?", "Why is GEDSI in Energy Transition Important?", and "How to Incorporate GEDSI in Energy Transition in Indonesia"—provide an introduction to the GEDSI concept and its importance in a just energy transition. These chapters help students understand the basics of how GEDSI can be applied in Indonesia's energy transition.

The next chapter, "How University Students Can Contribute," offers practical ways for students to get involved and promotes the GEDSI in Energy transition framework. The final chapter, "Additional Resources and Support Programs," provides further information and opportunities for students who want to learn more about GEDSI in Energy Transition and gain experience through mentoring programs.

This book is part of the Australia Awards Mainstreaming GEDSI in Indonesia's Energy Transition short course. We hope that it not only fulfills the course requirements but also serves as a valuable resource for university students. GEDSI in energy transition is an important topic that deserves discussion and action, and we believe this book will inspire and equip students to play a pivotal role in shaping a just and inclusive energy future.

Jakarta, September 2024
Authors

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ABBREVIATIONS

3T	:	Terdepan, Terluar, dan Tertinggal (Frontier, Outermost, and Underdeveloped regions)
AAI	:	Australia Awards Indonesia
ACCEPT	:	ASEAN Climate Change and Energy Project
ADB	:	Asian Development Bank
AJET	:	Alliance for Just Energy Transformation
ARENA	:	Australian Renewable Energy Agency
ASEAN	:	Association of Southeast Asian Nations
BPS	:	Badan Pusat Statistik (Central Agency of Statistics)
CEC	:	Clean Energy Council
CFPP	:	Coal-Fired Power Plant
CIF	:	Climate Investment Funds
CVA	:	Capacities and Vulnerabilities Framework
DCCEEW	:	Department of Climate Change, Energy, the Environment, and Water
DES	:	Disability Employment Services
DFID	:	Department for International Development
DOE-GAD	:	Department of Energy – Gender and Development
EBTKE	:	Energi Baru, Terbarukan dan Konservasi Energi (New, Renewable Energy and Energy Conservation)
EDI	:	Equity, Diversity, and Inclusion
FiTs	:	Feed-in Tariffs
GAM	:	Gender Analysis Matrix
GAWIREA	:	Girls and Women in Renewable Energy Academy
GEDSI	:	Gender Equality, Disability and Social Inclusions
GenB	:	Generasi Energi Bersih (Clean Energy Generation)
GESI	:	Gender Equality and Social Inclusion
GW	:	Giga Watt
GWNET	:	Global Women's Network for the Energy Transition
I-JET	:	Indonesia Transformative and Just Energy Transition
IBEKA	:	Institut Bisnis dan Ekonomi Kerakyatan
IESR	:	Institute for Essential Services Reform
IETO	:	Indonesian Energy Transition Outlook
ILO	:	International Labour Organization
IPG	:	International Partners Group

ABBREVIATIONS

IPU	:	Inter-Parliamentary Union
IRENA	:	International Renewable Energy Agency
JETP	:	Just Energy Transition Partnership
KEN	:	Kebijakan Energi Nasional (National Energy Policy)
LPDP	:	Lembaga Pengelola Dana Pendidikan
MW	:	Mega Watt
NDC	:	Nationally Determined Contribution
NEPP	:	The National Energy Productivity Plan
PLN	:	Perusahaan Listrik Negara
POP	:	People-Oriented Framework
PP	:	Peraturan Pemerintah
PSE	:	Pusat Studi Energi
PV	:	Photovoltaic
RET	:	Renewable Energy Target
RUEN	:	Rencana Umum Energi Nasional (General Plan for National Energy)
SDGs	:	Sustainable Development Goals
SII	:	Sumba Iconic Island
SRF	:	Social Relations Framework
STEM	:	Science, Technology, Engineering, and Mathematics
THET	:	The Health Education and Training Institute
UNDP	:	United Nations Development Programme
UNESCO	:	The United Nations Educational Scientific and Cultural Organization
WGEA	:	Workplace Gender Equality Agency
WHO	:	World Health Organization
WIME	:	Women in Mining and Energy
YRE	:	*Yayasan Rumah Energi*

CHAPTER 1

What is GEDSI in Energy Transition?



01 GEDSI

GENDER EQUALITY, DISABILITY, AND SOCIAL INCLUSION

" Have you ever heard the term GEDSI?
If so, when was the first time you encountered it? "







GEDSI might not be a completely new term to you. You have likely heard of Gender Equality, Disability, and Social Inclusion separately. However, until recently, the term GEDSI itself has not been as commonly used, even though similar terms like GESI (Gender Equality and Social Inclusion) and EDI (Equity, Diversity, and Inclusion) have been around.

The term GEDSI emerged around the mid-2010s as a development from GESI, to explicitly include the element of disability. There was a greater emphasis on the inclusion of people with disabilities in development policies and programs. GEDSI stands for Gender Equality, Disability, and Social Inclusion. GEDSI is a holistic framework that aims to ensure that all individuals, regardless of gender, ability, or socio-economic status, have equal opportunities to participate in and benefit from various societal processes. The GEDSI framework is rooted in the principles of equity, access, and empowerment, striving to address systemic barriers that historically marginalized groups face.

COMPONENTS OF GEDSI

1 GENDER EQUALITY

The discussion of gender equality in this book will focus specifically on the roles and opportunities of men and women within the gender equality framework. Gender equality aims to eliminate disparities between genders in various spheres, including education, employment, political representation, and access to resources.

For instance, according to the World Economic Forum's Global Gender Gap Report 2021, it will take 135.6 years to close the global gender gap if current trends continue. The 2023 Education Statistics report by BPS-Statistics Indonesia shows that while women are increasingly attending and completing higher levels of education, they still lag behind men in certain areas. For example, men tend to dominate in higher education degrees, especially at the doctoral level. Gender equality ensures that both men and women have equal rights, responsibilities, and opportunities, allowing them to thrive and contribute fully to society.

2 DISABILITY INCLUSION

Disability inclusion ensures that individuals with disabilities have access to the same opportunities and rights as others. For example, the World Health Organization reports that about 16% of the world's population lives with some form of disability, and they often face significant barriers to accessing education, employment, and healthcare. Disability inclusion involves creating accessible environments, promoting inclusive policies, and challenging stereotypes and stigmas associated with disabilities. Specifically for Indonesia, according to a 2023 report by Skala, approximately 9% of people in Indonesia have a disability. People with disabilities find it more difficult to get a job and are often perceived as a burden to their families. Due to their limitations and the lack of understanding from their surroundings about their condition, people with disabilities face greater challenges in life.

COMPONENTS OF GEDSI

SOCIAL INCLUSION 3

Social inclusion refers to improving the terms of participation in society for the disadvantaged people. In Indonesia, disadvantaged individuals include those who are socially and economically underprivileged, as well as those living in underdeveloped, remote, and border areas (*daerah 3T*). Many regions in remote or eastern Indonesia, which often fall into these categories, still lack adequate facilities and infrastructure, resulting in low levels of education. Social inclusion creates environments where everyone can fully and effectively participate in economic, social, and cultural life.







WHY GEDSI MATTERS?

After reading the previous explanation,
you surely understand how important GEDSI is, right?

Incorporating GEDSI principles is essential for building inclusive societies where everyone can thrive. For example, McKinsey & Company's (2023) on diversity reveals that companies in the top quartile for gender diversity are 25% more likely to have above-average profitability compared to those in the bottom quartile. This demonstrates that promoting gender equality can lead to significant economic benefits.

Similarly, ensuring disability inclusion can enhance productivity and innovation by bringing diverse perspectives and skills to the workplace. Research has shown that disability inclusion in the workplace enhances innovation and problem-solving due to diverse perspectives (Accenture, 2023). The World Bank and other international organizations have highlighted the critical role of social inclusion in achieving sustainable economic growth. Inclusive practices ensure that all members of society can contribute to and benefit from economic activities, which reduces poverty and fosters stability (Word bank).



GEDSI IN VARIOUS SECTORS

"Now, let's take a closer look at how GEDSI is implemented in various sectors"

EDUCATION

Ensuring equal access to education for all genders, including people with disabilities, and fostering inclusive learning environments is critical. According to UNESCO's Global Education Monitoring Report, girls are still less likely to complete primary and secondary education compared to boys in many regions, especially in low-income countries. This gender gap underscores the importance of promoting gender equality in education. Additionally, children with disabilities are among the most marginalized in terms of access to education. The report highlights that inclusive education policies that cater to the needs of all students, regardless of gender or ability, are essential for achieving equitable learning outcomes.









HEALTHCARE

Promoting equitable job opportunities, fair wages, and inclusive workplaces that accommodate the needs of all employees is another vital aspect of GEDSI. McKinsey & Company's report on diversity reveals that companies in the top quartile for gender diversity are 25% more likely to have above-average profitability compared to those in the bottom quartile. This statistic demonstrates the economic benefits of gender equality in the workplace. Furthermore, Accenture's research on disability inclusion highlights that companies prioritizing disability inclusion are 4x more likely to outperform their peers in terms of total shareholder returns. This points to the economic and innovation benefits of creating inclusive workplaces for people with disabilities.

GEDSI IN VARIOUS SECTORS

POLITICAL PARTICIPATION

Encouraging and enabling the participation of underrepresented groups in political processes and decision-making is another critical area for GEDSI. According to the Inter-Parliamentary Union (IPU)'s Women in Parliament 2023 report, the global proportion of women MPs has increased to 26.9% in 2023, marking a rise from the 25.5% recorded in 2021. Despite some progress, there is still significant underrepresentation of women and other marginalized groups in decision-making bodies, which can limit the diversity of perspectives and the effectiveness of policies in addressing the needs of all citizens.





EMPLOYMENT

Providing accessible and affordable healthcare services to all, including tailored services for women and people with disabilities, is essential for achieving health equity. According to the World Health Organization (WHO), inclusive healthcare significantly improves health outcomes and the quality of life for people with disabilities. A 2021 WHO report highlights that people with disabilities face barriers in accessing healthcare services, which often leads to poorer health outcomes. Addressing these barriers through inclusive health policies is crucial to ensure everyone can achieve the highest possible standard of health.

CONCLUSION

In conclusion, the GEDSI framework is vital for fostering inclusive societies where everyone can thrive. By integrating Gender Equality, Disability, and Social Inclusion, GEDSI addresses systemic barriers and promotes equity, access, and empowerment for all individuals, regardless of gender, ability, or socio-economic status. Implementing GEDSI principles across various sectors, such as education, employment, healthcare, and political participation, can lead to significant social and economic benefits. In Indonesia, while the concept of GEDSI is gaining recognition, continuous efforts by governmental and non-governmental organizations are essential to ensure its effective implementation and understanding. Initiatives like Australia Awards Indonesia and the LPDP's affirmative programs play crucial roles in advancing GEDSI principles, helping to create a more inclusive and equitable society.









02 ENERGY TRANSITION IN INDONESIA

Have you ever wondered why countries around the world are increasingly building solar farms, hydroelectric power plants, or wind farms for electricity generation?

The rapid development of renewable energy power plants is essential for addressing climate change and supporting energy supply. As the population grows, energy demand increases. If this demand is met with traditional fossil fuels, it can lead to greater greenhouse gas emissions

To mitigate these emissions and meet the rising energy needs, transitioning from fossil fuels to sustainable energy sources is crucial. This shift, known as the Energy Transition, is already underway as countries around the world are increasingly installing renewable energy systems and making significant progress toward a more sustainable energy future.

THE IMPORTANCE OF ENERGY TRANSITION IN INDONESIA

A lot of stakeholders are questioning the urgency of why Indonesia should take a part in nourishing renewable energy. One major argument is that “It is unfair for the global north countries to oblige the developing countries like Indonesia to leave coal in the pursuit of economic development”. However, the energy transition is about more than fairness; it is a matter of securing our energy future and protecting our environment. These two vital aspects cannot be ignored:

ENERGY SECURITY

All of us agree that energy is the key to our life and economic development. The problem with fossil fuels is that they are not secure. Firstly, carbon-based fuel is not renewable, since it will need a very long time to become available. In order to decompose organic substances into a carbon-based fuel like oil and coal, we need to wait for millions of years. If we are not transitioning now, we will be led into running out of resources. Secondly, taking the population explosion into account and the limited amount of fossil fuel, we need an alternative energy to meet everyone's needs. Renewable energy sources, such as solar, wind, hydropower, geothermal, and biomass, are sustainable and abundant. Therefore, shifting to sustainable energy sources is crucial for energy security, supporting both human needs and economic growth.

ENVIRONMENTAL IMPACT

It is undebatable that economic growth is important. But who is this development for? Elites? Politicians? Or Businessmen? What about the fisherfolk in the Mahakam river bank area in East Kalimantan whose fish catches are decreasing due to the disruption of the marine and freshwater creature ecosystem by coal shipping? How about the Marunda community on the north Jakarta shore who suffer from respiratory disorders due to the coal dust emitted by the nearby coal-fired power plant? A beneficial economic ambition needs to be acquainted with environmental preservation. Otherwise, the nightmare of climate change drowning Jakarta and other cities will become a reality.

CHALLENGES OF ENERGY TRANSITION IN INDONESIA

Currently the installed capacity of electricity generation in Indonesia is 12,542 MW. Although the installed capacity surpasses the 2022 target, it remains well below the minimum target of 24 GW set for 2025. This indicates that progress in Indonesia's energy transition is still insufficient. The development of renewable energy in Indonesia faces several challenges, including:

UNSUPPORTIVE POLICY

In Indonesia, despite the establishment of the Nationally Determined Contribution (NDC), the transition to renewable energy faces obstacles due to existing policies. For example, according to Permen ESDM Nomor 2 Tahun 2024, excess electricity generated by residential photovoltaic (PV) systems cannot be sold or exported to PLN (the state electricity company). As a result, this surplus electricity is not counted toward the on-grid supply, which complicates the integration of solar power into the national grid.





RELIANCE ON FOSSIL FUEL, PARTICULARLY COAL

In terms of energy consumption, Indonesia is still relying on coal at 44.7% of all supply and most of it is used for electricity generation (IETO, 2024). In addition, the current on-grid coal-fired power plant (CFPP) capacity stands at 35.5 GW, with a projected increase to 40.7 GW by 2030 (IETO, 2024).

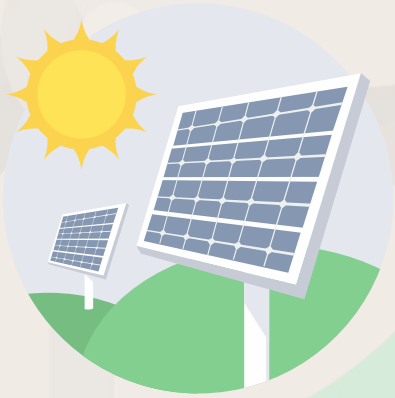
INDONESIA AS AN ARCHIPELAGIC COUNTRY

As an archipelagic country with thousands of islands and remote areas, Indonesia faces significant financial challenges in installing renewable energy infrastructure for these distant locations, which complicates energy distribution and transmission, and leads to a disparity in benefits between larger and smaller islands.



OPPORTUNITIES OF ENERGY TRANSITION IN INDONESIA

Indonesia, an archipelago with over 17,000 islands, holds significant potential for renewable energy development. The country's vast and diverse geography provides a wealth of natural resources that can be harnessed for clean and sustainable energy production.



SOLAR



GEOTHERMAL



WIND





HYDROPOWER

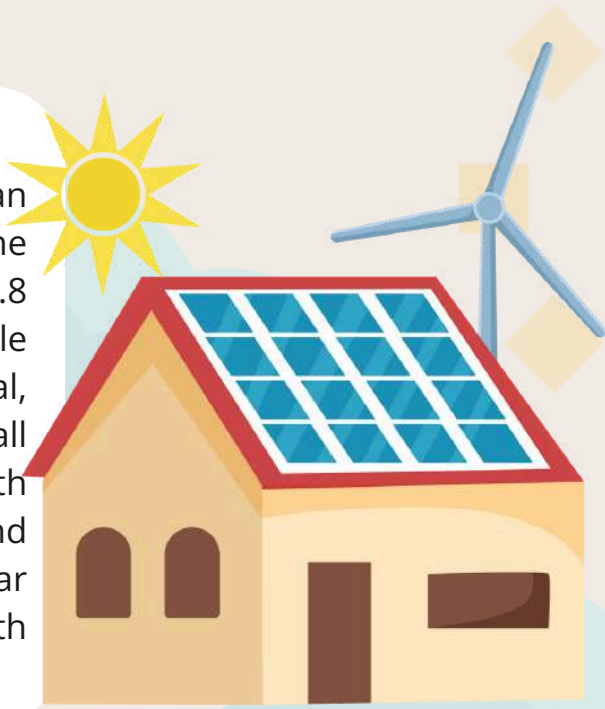


BIOMASS



SOLAR ENERGY

Indonesia lies along the equator, giving it an abundance of sunlight throughout the year. The country receives an average solar radiation of 4.8 kWh/m^2 per day, making solar energy a highly viable option for renewable energy. Despite this potential, solar energy currently contributes only a small fraction to Indonesia's energy mix. However, with the decreasing cost of solar technology and government initiatives to promote solar installations, there is considerable room for growth in this sector.





GEOTHERMAL ENERGY

Indonesia is situated on the Pacific Ring of Fire, which provides it with one of the world's largest geothermal energy potentials. The country has an estimated 40% of the world's geothermal resources, equating to around 28,000 MW. Currently, Indonesia is the second-largest geothermal energy producer in the world, after the United States. The Indonesian government has been actively promoting geothermal development, aiming to increase its contribution to the national energy mix significantly.

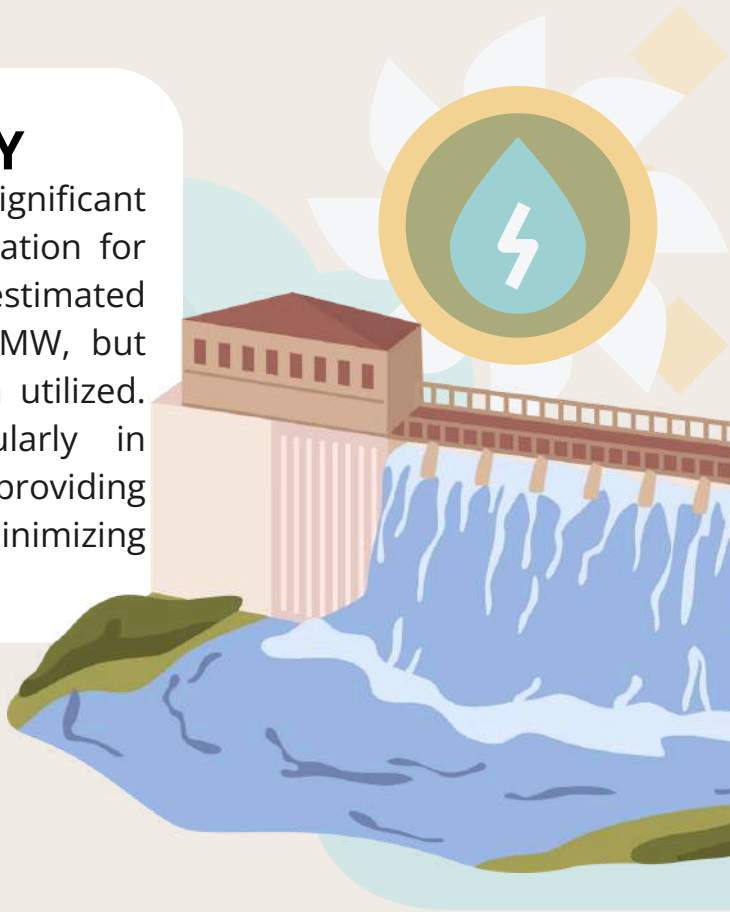
WIND ENERGY

While wind energy potential in Indonesia is lower compared to solar and geothermal, there are regions, particularly in the eastern part of the country, that have promising wind resources. Areas like South Sulawesi, West Nusa Tenggara, and East Nusa Tenggara have been identified as suitable for wind energy projects. The development of wind farms in these regions could help diversify Indonesia's renewable energy portfolio.



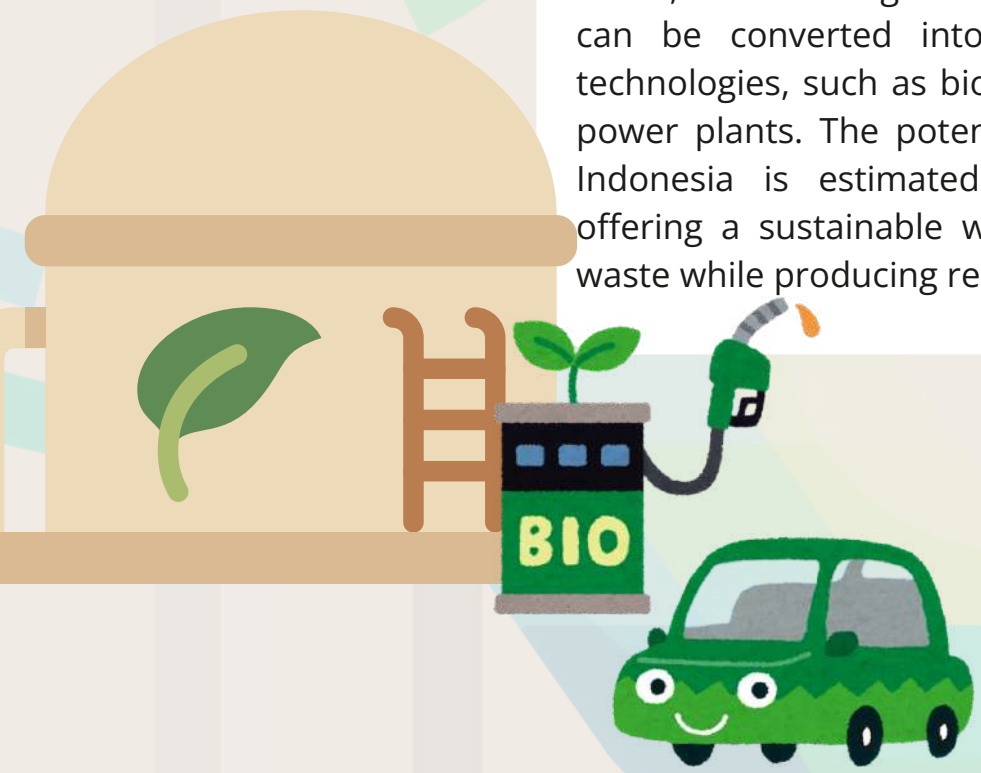
HYDROPOWER ENERGY

Indonesia has numerous rivers and a significant amount of rainfall, making it an ideal location for hydropower. The country has an estimated hydropower potential of around 75,000 MW, but only about 8% of this potential has been utilized. Small-scale hydropower plants, particularly in remote areas, could play a crucial role in providing electricity to underserved regions while minimizing environmental impacts.



BIOMASS ENERGY

Indonesia's vast agricultural sector generates a large amount of biomass, including palm oil residues, rice husks, and other agricultural waste. These materials can be converted into energy through various technologies, such as biogas, biofuels, and biomass power plants. The potential for biomass energy in Indonesia is estimated at around 32,000 MW, offering a sustainable way to manage agricultural waste while producing renewable energy.



INDONESIAN GOVERNMENT PLAN AND POLICY TOWARDS ENERGY TRANSITION

Indonesia's energy regulation framework plays a crucial role in shaping the country's renewable energy landscape. The government has introduced various policies and regulations aimed at promoting the development of renewable energy, aligning with national goals for energy security, economic growth, and environmental sustainability.

NATIONAL ENERGY POLICY (KEN)



source: antarafoto.com

The National Energy Policy (*Kebijakan Energi Nasional*, or KEN), established by Government Regulation No. 79/2014, sets the foundation for Indonesia's energy management. KEN outlines the target of achieving a 23% renewable energy share in the national energy mix by 2025 and increasing to 31% in 2050. This policy emphasizes the diversification of energy sources, prioritizing the development of renewable energy to reduce reliance on fossil fuels and improve energy security.

NATIONAL ENERGY GENERAL PLAN (RUEN)



source: esdm.go.id

The National Energy General Plan (*Rencana Umum Energi Nasiona*l, or RUEN), developed under the guidance of KEN, provides a detailed roadmap for achieving Indonesia's renewable energy targets. RUEN outlines specific actions and projects to increase the contribution of renewable energy sources such as solar, geothermal, wind, hydropower, and biomass. The plan also sets capacity targets for each renewable energy type, encouraging investment and development across the sector.

PRESIDENTIAL REGULATION ON RENEWABLE ENERGY (PERPRES NO. 112/2022)

One of the recent regulatory advancements is Presidential Regulation No. 112/2022 on the Acceleration of Renewable Energy Development for Electricity Supply. This regulation aims to accelerate renewable energy projects by simplifying licensing procedures, offering fiscal incentives, and setting higher targets for renewable energy in the electricity supply industry. The regulation also includes provisions to phase out coal-fired power plants and replace them with cleaner energy sources. These policies play a crucial role in supporting Indonesia's energy transition by promoting energy efficiency, decarbonization, and sustainable practices across various sectors.



source: ebtke.esdm.go.id

ENERGY CONSERVATION POLICY (PP 33/2023)

Government Regulation (PP) No. 33/2023 on Energy Conservation outlines measures to improve energy efficiency across various sectors and reduce the nation's overall energy consumption. What do we expect from this regulation?

1.Energy Management Systems

The regulation requires large energy consumers, including industries and the transport sector with at least 4,000 TOE, buildings with at least 500 TOE annually, and government and regional governments, to implement energy management and report to the Ministry of Energy and Mineral Resources (MEMR). These systems optimize energy use and lead to significant savings.

2.Mandatory Audits

Regular energy audits are mandated for industries and large commercial entities to identify inefficiencies and recommend improvements. Compliance with audit recommendations is monitored to ensure continuous energy savings.



GREEN BUILDING & ENERGY CONSERVATION (PP 16/2021)

Government Regulation (*Peraturan Pemerintah* or PP) No. 16/2021 on Buildings (*Bangunan Gedung*) sets guidelines for the planning, construction, utilization, and maintenance of buildings, with a strong emphasis on sustainability and energy efficiency. The impacts are:

1. **Green Building (*Bangunan Gedung Hijau*) Certification**

The regulation mandates that buildings of certain types and sizes be certified as Green Buildings with Bangunan Gedung Hijau (BGH) certification. Certified buildings meet sustainable criteria, including consuming less energy, which reduces their carbon footprint and supports national energy conservation goals.

2. **Urban Sustainability**

By promoting green buildings, the regulation also contributes to the development of more sustainable urban environments, reducing the overall energy demand in cities and supporting Indonesia's transition to a low-carbon economy.

GEOTHERMAL LAW

Indonesia's geothermal energy sector is governed by the Geothermal Law (Law No. 21/2014), which provides a regulatory framework for the exploration and exploitation of geothermal resources. The law streamlines the permitting process, offers incentives for investors, and ensures that geothermal projects are integrated into the national energy planning. As a result, Indonesia has seen significant growth in geothermal capacity, making it one of the global leaders in this field.



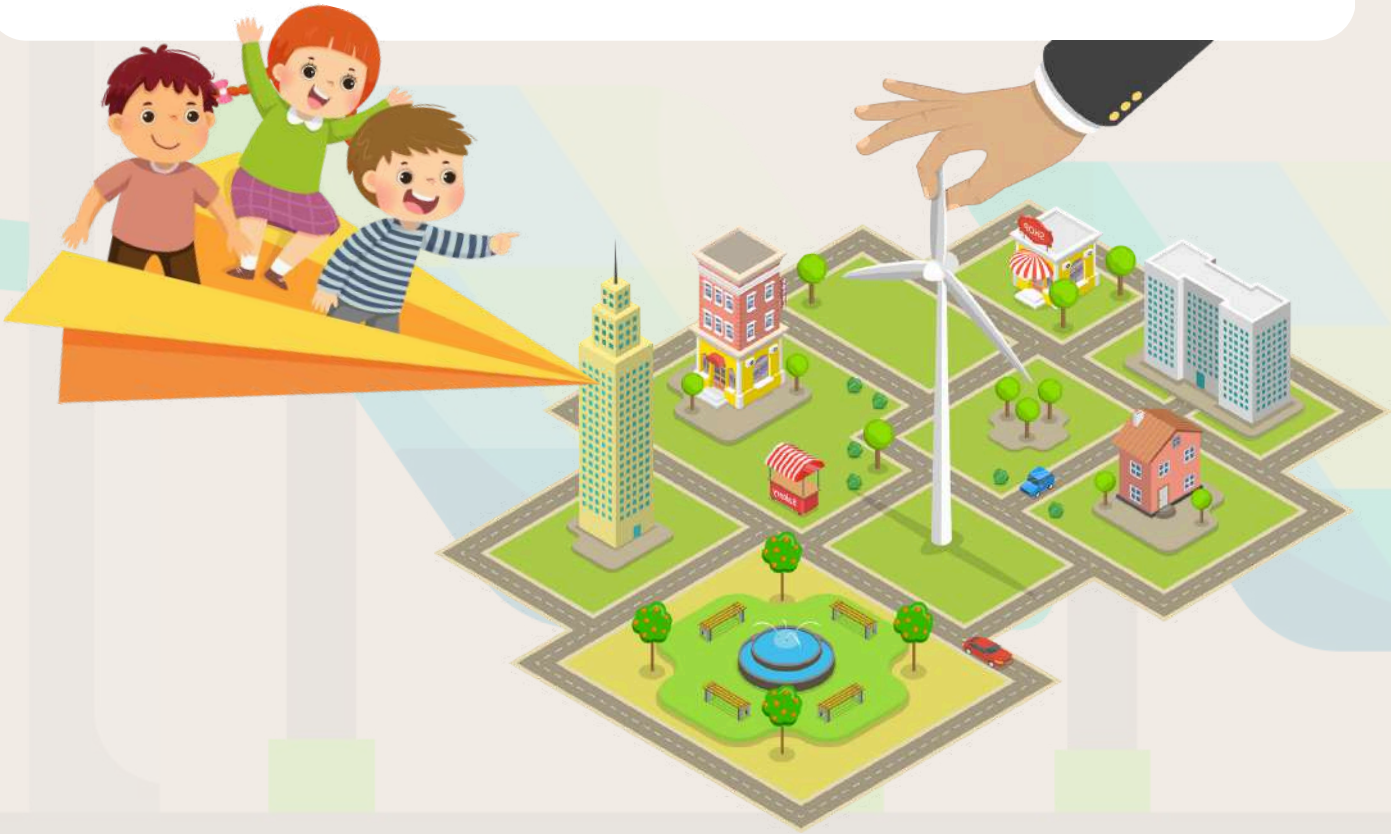


FEED-IN TARIFFS AND AUCTION MECHANISMS

To attract private investment in renewable energy, Indonesia has implemented feed-in tariffs (FiTs) and auction mechanisms for various renewable energy projects. FiTs provide guaranteed pricing for electricity generated from renewable sources, ensuring a stable return on investment. The government has also introduced competitive auctions, particularly for solar and wind projects, which have helped drive down costs and increase the deployment of renewable energy.

RURAL ELECTRIFICATION & SMALL-SCALE RENEWABLE ENERGY PROJECTS

The Indonesian government has prioritized rural electrification through renewable energy, particularly in remote and underserved regions. Regulations encourage the development of small-scale renewable energy projects, such as micro-hydropower, solar PV installations, and biomass power plants, to provide electricity to off-grid areas. This not only supports economic development in rural regions but also contributes to the overall renewable energy targets.



INTERNATIONAL SUPPORT TO INDONESIA

International support plays a significant role in accelerating the development of renewable energy in Indonesia. Various international initiatives, partnerships, and financial mechanisms provide crucial backing to enhance Indonesia's renewable energy potential. Here's how international supports contribute:

The Just Energy Transition Partnership (JETP)

is a collaborative framework involving Indonesia, several donor countries, and international financial institutions. Launched during the G20 summit in 2022, JETP aims to support Indonesia's transition from coal-dependent energy sources to a more sustainable energy mix. How is it benefiting Indonesia?

1.Funding and Investment

JETP provides significant financial support, including grants, concessional loans, and investments, to facilitate the development of renewable energy projects in Indonesia. This funding helps overcome financial barriers and accelerates the deployment of clean energy technologies.

2.Technical Assistance

JETP offers technical support and expertise to help Indonesia implement renewable energy projects efficiently. This includes assistance with project planning, technology selection, and capacity building.

3.Policy Support

The partnership helps shape and refine policies and regulations to support the growth of renewable energy. This includes creating a favorable regulatory environment for renewable energy investments and setting clear targets for emissions reductions.



source: antaranews.com

The Climate Investment Funds (CIF)

support developing countries in their efforts to address climate change and transition to low-carbon economies. Indonesia benefits from CIF's programs aimed at accelerating renewable energy deployment. Impact on Renewable Energy Potential are:

1.Targeted Investments

CIF provides funding for specific renewable energy projects and initiatives, such as solar energy programs and biomass energy projects. These investments help catalyze the growth of renewable energy sectors in Indonesia.

2.Innovation Support

CIF funds innovative projects and technologies that have the potential to drive significant advances in renewable energy. This support helps Indonesia explore and implement cutting-edge solutions.

3.Capacity Building and Knowledge Sharing

CIF facilitates knowledge sharing and capacity building, helping Indonesian stakeholders learn from global best practices and experiences in renewable energy development.



source: cif.org



Besides international supports, there are also some international organizations that support energy transition in Indonesia including:

United Nations Development Program

works with countries to support sustainable development goals, including the transition to renewable energy. Indonesia collaborates with UNDP on various renewable energy initiatives. Indonesia receives benefits in the form of:

1. **Sustainable Energy Projects**

UNDP supports the implementation of sustainable energy projects, such as community-based solar installations and energy efficiency programs. These projects contribute to increasing renewable energy access and reducing emissions.

2. **Policy Advocacy**

UNDP helps advocate for and develop policies that promote renewable energy and climate resilience. This includes supporting the creation of national and regional energy plans that integrate renewable energy goals.

3. **Capacity Building**

UNDP provides training and resources to build local expertise in renewable energy technologies and project management, strengthening Indonesia's ability to develop and manage renewable energy projects effectively.

International Renewable Energy Agency

is a global organization that supports countries in their transition to sustainable energy. ndonesia is an active member, benefiting from IRENA's resources, expertise, and networks. IRENA contributes to Indonesian energy transition in several ways:

1. **Data and Research**

IRENA provides valuable data, research, and analysis on renewable energy trends, potential, and best practices. This information helps Indonesia make informed decisions and develop strategies to harness its renewable energy resources effectively.

2. **Capacity Building**

IRENA offers training programs and workshops to build local capacity in renewable energy technologies and project management. This enhances the skills of Indonesian stakeholders and improves project execution.

International Renewable Energy Agency

3. International Collaboration

IRENA facilitates partnerships and collaborations with other countries and organizations, enabling Indonesia to leverage international experience and technologies.



source: ebtk.esdm.go.id

The World Bank and ADB

THE WORLD BANK

ADB

are major international financial institutions that provide funding and technical assistance for renewable energy projects worldwide, including in Indonesia. The benefits for Indonesia are:

1. Project Financing

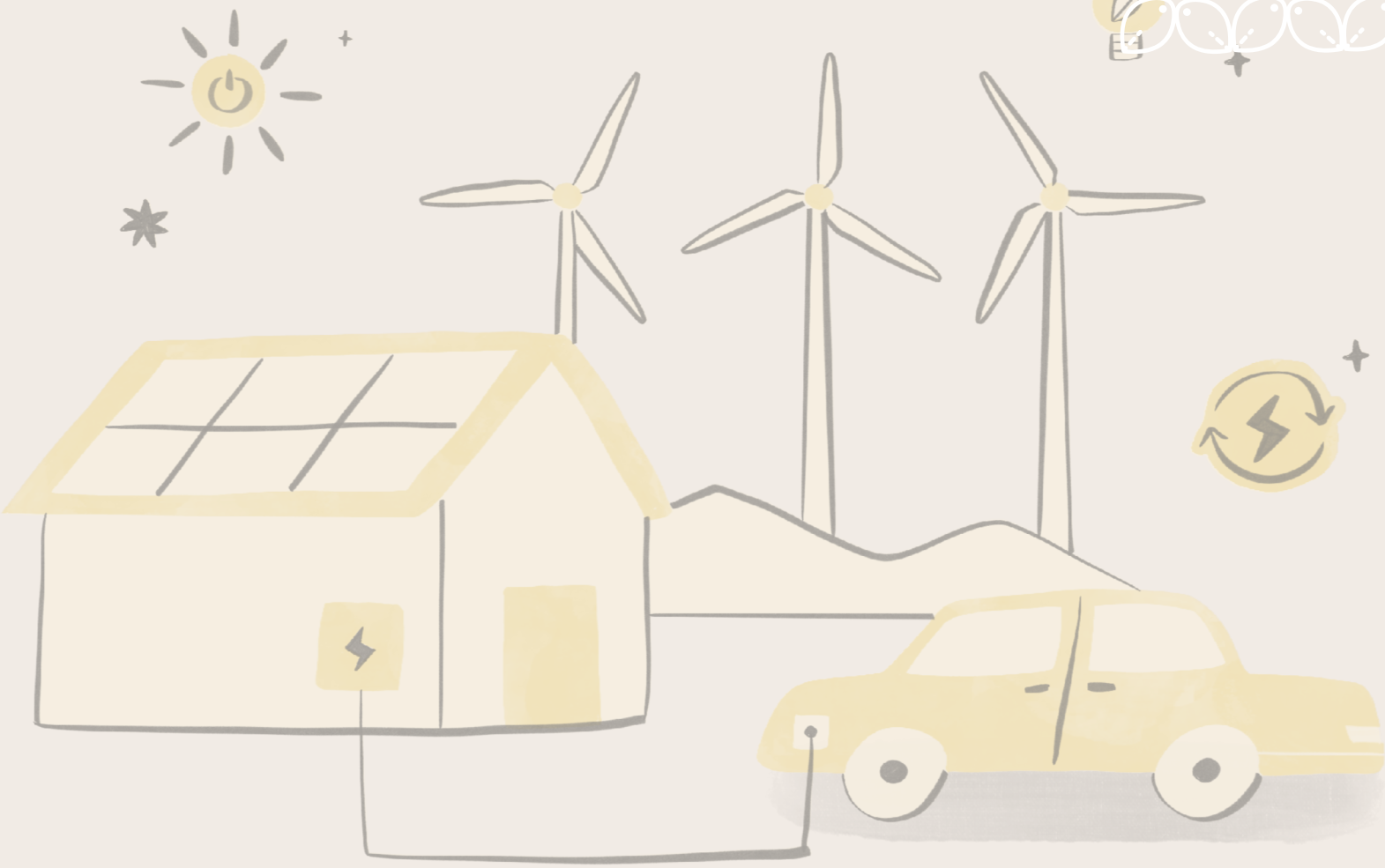
Both institutions offer loans, grants, and investment funding for large-scale renewable energy projects, such as solar parks, wind farms, and geothermal plants. This financial support helps bridge the funding gap and promotes the development of new renewable energy infrastructure.

2. Technical Support

The World Bank and ADB provide technical assistance for project design, implementation, and monitoring. This includes support for feasibility studies, environmental assessments, and technology selection.

3. Policy and Regulatory Advice

These institutions work with the Indonesian government to improve policies and regulatory frameworks for renewable energy. This support helps create a more conducive environment for private sector investment and project development.



CONCLUSION

Indonesia's energy transition is vital for addressing climate change and ensuring long-term energy security amid rising demand. Despite challenges such as policy gaps, reliance on coal, and logistical issues due to its archipelagic nature, the country has significant energy opportunities in renewable resources like solar and geothermal energy. The Indonesian government has implemented policies to boost renewable energy and improve efficiency, while international support from initiatives like JETP and CIF, along with organizations such as UNDP, IRENA, World Bank and ADB play a crucial role in overcoming barriers and accelerating progress. With continued commitment and support, Indonesia can achieve a sustainable energy future.

03 GEDSI IN ENERGY TRANSITION IN INDONESIA

The integration of Gender Equality, Disability, and Social Inclusion (GEDSI) in the energy transition in Indonesia is crucial to ensure that this transition process is inclusive and fair for all groups in society.

As the country's economy continues to develop, future energy demand will increase significantly, making the energy transition a major factor in Indonesia's future. Thus, it is essential to ensure the effective implementation of a just energy transition.

The GEDSI approach promotes inclusivity by ensuring that all communities, regardless of their background, can benefit from the energy transition and its processes.



Therefore, it is important for university students, as future leaders, to understand the significance of integrating GEDSI into the energy transition in Indonesia.

WOMEN IN ENERGY TRANSITION IN INDONESIA



Women in rural Indonesia are often responsible for collecting firewood and other biomass fuels for household cooking and heating needs. According to the "Women at the Forefront of Clean Energy in Indonesia" report by UNDP, 75% of women in rural Indonesia use firewood as the main source of household energy. This condition highlights the critical role women play in household energy management. However, in the context of the energy transition, women have so far been positioned behind men. Leadership and decision-making positions in Indonesia's energy sector are still dominated by men, with women's participation in strategic roles remaining very low. Data shows that women make up 32% of the renewable energy workforce globally, 28% in ASEAN (ACE), and only around 20-25% in Indonesia (IRENA, 2019; IRENA, 2020). This gender imbalance means that women's perspectives and needs are often not adequately represented in energy transition planning and policies, leading to less inclusive outcomes.

WOMEN IN THE RENEWABLE ENERGY WORKFORCE

Only
32%
WORLDWIDE

Only
28%
ASEAN

Only
20-25%
INDONESIA

WOMEN IN ENERGY TRANSITION IN INDONESIA

Cultural norms and patriarchal values in Indonesia, especially in rural and conservative areas, limit women's access to education and training in the energy sector. This gender bias is reinforced by societal perceptions that jobs in the energy sector, particularly technical and fieldwork, are not suitable for women, which prevents them from fully participating in the energy transition, both as technical workers and leaders in this sector.

Despite these challenges and disparity, Indonesia has made notable efforts to involve women in renewable energy projects, recognizing their critical role in achieving sustainability goals. The United Nations Development Programme (UNDP), in collaboration with the Indonesian Ministry of Energy and Mineral Resources (MEMR), launched the Srikandi program, focusing on training women in energy conservation, equipping them with the skills needed to become certified energy auditors and managers. This initiative aims to bridge the gender gap in the energy sector and empower women to take on leadership roles (EBTKE - Ministry of Energy and Mineral Resources, 2021). Additionally, at the community level in rural areas, movements like GAWIREA are empowering women through renewable energy education and non-formal training, allowing them to use renewable energy as a source of income (Green Network Asia, 2022). However, women's involvement in technical training programs related to renewable energy and technology remains low, with only around 15% of women participating (Asian Development Bank, 2020).





source: gawirea.com

WOMEN IN ENERGY TRANSITION IN INDONESIA

In addition to these programs, several female figures in Indonesia have emerged as motivational examples through their dedication and active involvement in the energy transition process. Some of these female figures include the following:

Tri Mumpuni

Tri Mumpuni is a renewable energy activist who has developed more than 60 micro-hydro power plant projects in remote villages in Indonesia. These projects not only provide sustainable electricity but also improve the economic well-being of local communities. Tri Mumpuni believes that empowering local communities, including women, is very important in developing renewable energy. According to her, the involvement of women in these projects can increase the sustainability and positive impact of renewable energy.



source: rmaward.asia

Siti Maimunah



source: kupipedia.id

Siti Maimunah is an environmental activist and renewable energy advocate who has worked to raise awareness about the negative impacts of fossil energy and the importance of the transition to clean energy. She is active in various non-governmental organizations that focus on environmental and energy issues. Siti Maimunah emphasized the importance of inclusiveness in energy policy. She believes that women must be involved in decision-making processes regarding renewable energy to ensure that policies are made that reflect the needs and perspectives of all groups in society.

WOMEN IN ENERGY TRANSITION IN INDONESIA



source: theprakarsa.org

Yuyun Ismawati

Yuyun Ismawati is an environmental expert who has worked on various renewable energy and waste management projects in Indonesia. She is the founder of the BaliFokus Foundation, an organization that works to improve environmental quality and health through renewable energy solutions and sustainable waste management. Yuyun Ismawati believes that a holistic approach that integrates social, economic and environmental aspects is important in the energy transition. She also highlights the important role of women in creating sustainable and inclusive energy solutions.

Alin Halimatussadiah

Dr. Alin Halimatussadiah is the Head of the Green Economy and Climate Research Group at the Institute for Economic and Social Research (LPEM), FEB UI, specializing in natural resource and environmental economics. She conducts research on various topics, including the systemic challenges in procuring renewable energy in Indonesia, the comparative economic impacts of fossil fuel and renewable energy investments through general equilibrium analysis, and the impact of fiscal incentives on the feasibility of solar photovoltaic and wind electricity generation projects in Indonesia.



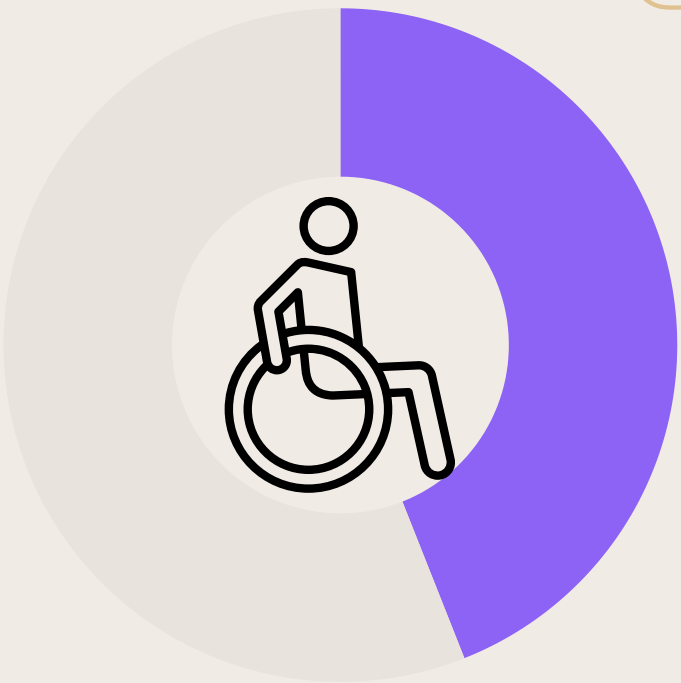
source: lpem.org

PEOPLE WITH DISABILITY IN ENERGY TRANSITION IN INDONESIA



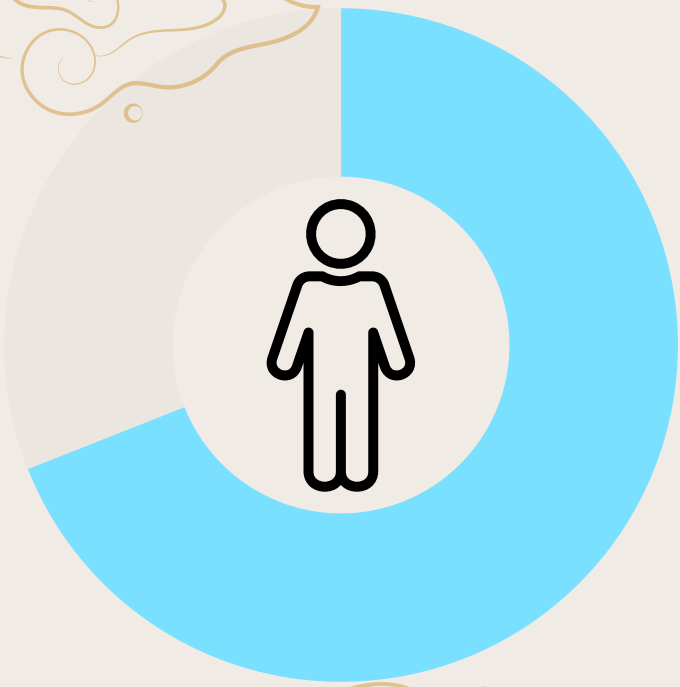
The inclusion of persons with disabilities in Indonesia's energy transition sector is currently limited but recognized as an essential aspect of creating a just and equitable energy future. The Labour Force Participation Rate for persons with disabilities in Indonesia is significantly lower than the general employment rate, with only 44% compared to 69% for the general population. This disparity highlights the challenges faced by persons with disabilities in accessing employment opportunities, including those in the energy sector (ASEAN Centre for Energy, 2023).

LABOUR FORCE PARTICIPATION RATE COMPARISON



44%

of disabled population



69%

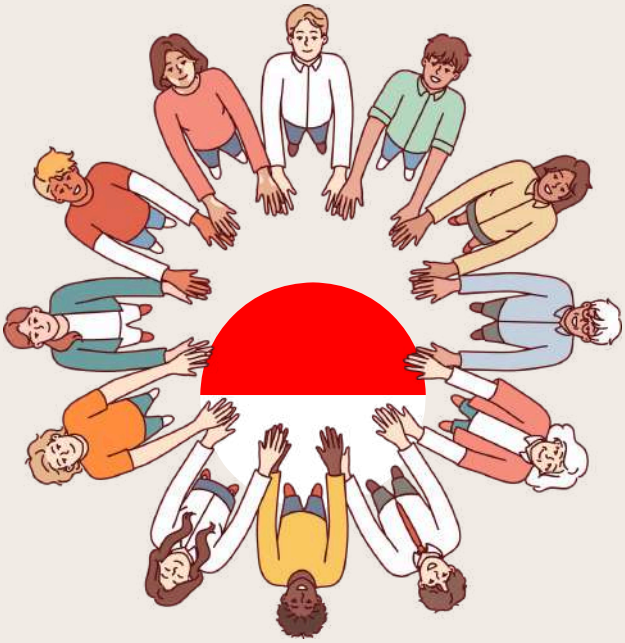
of the general population

PEOPLE WITH DISABILITY IN ENERGY TRANSITION IN INDONESIA

Efforts are being made to address these challenges and promote the inclusion of persons with disabilities in the energy transition. For instance, the Indonesian government and various organizations are advocating for the creation of green jobs that are accessible to persons with disabilities. Roles such as market analysts for renewable energy, system engineers, and remote-based jobs in education and information technology are being identified as suitable for persons with disabilities due to their minimal mobility requirements (ASEAN Centre for Energy, 2023).







Programs like the Indonesia Transformative and Just Energy Transition (I-JET) Project aim to involve women, people with disabilities, and other vulnerable groups in the energy transition process. The I-JET Project seeks to ensure that these groups benefit from and contribute to energy transition, thus promoting inclusivity and equity (Penabulu Foundation, 2023).

SOCIAL INCLUSION FOR ENERGY TRANSITION IN INDONESIA

The Indonesian government, through the National Energy Policy Plan (RUEN), places significant emphasis on social inclusion by promoting sustainable renewable energy infrastructure in villages that have long lacked access to electricity (Perpres 22 Year 2017). This policy aims to ensure that rural and marginalized communities are included in the country's energy transition, providing them with access to clean, affordable, and reliable energy sources.

Besides the program by the Indonesian government, there are several notable individuals and organizations actively promoting energy transition in Indonesia's underdeveloped and remote areas. Tri Mumpuni, often referred to as "*Ibu Listrik*", has significantly contributed to rural electrification through her work with the *Institut Bisnis dan Ekonomi Kerakyatan* (IBEKA). She has led over 60 micro-hydropower projects, providing electricity to remote communities and empowering local women, demonstrating the critical role of community-based renewable energy projects in driving social and economic development (World Bank, 2020; IBEKA, 2023).

source: dw.com



source: daaitv.co.id







SOCIAL INCLUSION FOR ENERGY TRANSITION IN INDONESIA

Additionally, the Sumba Iconic Island (SII) initiative, spearheaded by Hivos Southeast Asia, aims to transform the island of Sumba into a 100% renewable energy-powered region. This project focuses on promoting energy access in one of Indonesia's most underdeveloped regions through the deployment of solar, wind, and micro-hydro power systems, benefiting thousands of households, schools, and health centers (Hivos, 2023).



source: ebtke.esdm.go.id

Yayasan Rumah Energi (YRE) is another key player, implementing projects such as biogas digesters in rural areas, which provide clean energy and improve quality of life by reducing indoor air pollution and promoting sustainable agriculture (YRE, 2023). Kopernik, an organization partnering with local NGOs, private companies, and government agencies, distributes clean energy technologies like solar lights, water filters, and clean cookstoves to remote and underserved regions, helping to reduce reliance on traditional biomass fuels and promote sustainable living (Kopernik, 2023).



source: kopernik.info



source: rumahenergi.org

CONCLUSION

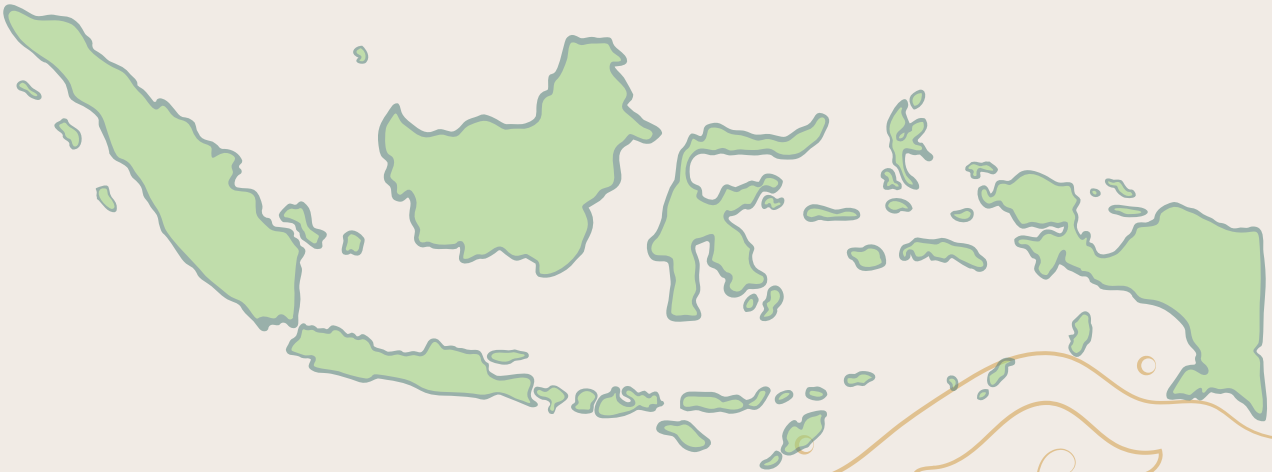


The integration of Gender Equality, Disability, and Social Inclusion (GEDSI) into Indonesia's energy transition is essential for a fair and inclusive process. Although there are positive steps being taken, significant challenges remain.

Women are still underrepresented in the renewable energy sector, and progress for people with disabilities is limited.

Efforts to include disadvantaged communities in remote areas are improving, but more comprehensive policies are needed.

Overall, while there is a commitment to GEDSI, much more work is needed to ensure a truly inclusive energy transition in Indonesia.



CHAPTER 2

Why is GEDSI in Energy Transition important?



04 BENEFIT OF INTEGRATING GEDSI IN ENERGY TRANSITION



Integrating Gender, Disability, and Social Inclusion (GEDSI) into the energy transition in Indonesia offers significant benefits, both socially and economically. As Indonesia navigates its shift towards more sustainable and renewable energy sources, incorporating GEDSI principles is essential for ensuring that this transition is equitable and inclusive.

1 ENHANCING ACCESS AND PARTICIPATION

Integrating Gender, Disability, and Social Inclusion (GEDSI) in the energy sector is crucial for ensuring that women and vulnerable groups have equal access to and participation in decision-making processes and energy resources. These groups often face significant barriers, such as systemic biases, lack of accessibility, and socio-economic constraints, that prevent them from fully engaging in the energy sector. By actively involving these groups in decision-making and ensuring their voices are heard, energy policies can be designed to address their specific needs and challenges, promoting a more equitable and inclusive energy future.

Incorporating the perspectives of diverse groups into energy policy-making leads to more comprehensive and effective policies that reflect a wider range of experiences and requirements. For instance, policies that consider the needs of women and disabled individuals can result in more accessible and user-friendly energy solutions. Ultimately, integrating GEDSI principles into the energy sector not only promotes fairness and representation but also enhances the effectiveness of energy policies, making them more responsive to the needs of all members of society. This inclusive approach contributes to a more sustainable and just energy future, where the benefits of energy resources are equitably distributed and all individuals have the opportunity to participate in and benefit from the sector's advancements.

2 SUPPORTING SUSTAINABLE DEVELOPMENT

Incorporating gender and social inclusion perspectives makes the energy transition more responsive to community needs. For instance, energy policies that consider women's needs in using clean energy can help reduce reliance on fossil fuels, thereby improving public health and reducing environmental impact. This contributes to sustainable development goals by creating a healthier and cleaner environment.

INCREASING INNOVATION & CREATIVITY 3

Diversity in teams managing energy projects can drive innovation. When women and marginalized groups are involved, they bring new perspectives that often lead to creative solutions for energy challenges. For example, they may offer unique insights into more efficient and environmentally friendly ways of using and managing energy.

4 BUILDING ENERGY RESILIENCE

By ensuring that all societal groups have equal access to energy, Indonesia can build stronger energy resilience. Robust energy resilience is crucial for reducing the risk of social and economic instability that can arise from inequitable energy access. With fair and equitable access, communities are better equipped to handle energy crises and rapid changes in energy markets.

IMPROVED SOCIAL AND ECONOMIC OUTCOMES 5

By considering GEDSI factors, Indonesia can create more inclusive and equitable economic growth. Inclusive energy projects can generate job opportunities for a broader segment of the population and support local economic development. For instance, training programs in renewable energy technologies that include women and people with disabilities can lead to more diverse and skilled workforces. This aligns with the goals of Indonesia's National Energy Policy, which aims to increase energy access and create sustainable jobs.

6 ALIGNMENT WITH NATIONAL AND INTERNATIONAL GOALS

Integrating GEDSI supports Indonesia's alignment with international commitments such as the United Nations Sustainable Development Goals (SDGs). Particularly, SDG 5 (Gender Equality) and SDG 10 (Reduced Inequality) emphasize the importance of inclusivity and equity. By incorporating GEDSI into its energy transition strategy, Indonesia can enhance its global standing and attract international support and investment.

ADDRESSING REGIONAL DISPARITIES 7

Indonesia's archipelagic geography and diverse socio-economic conditions create significant regional disparities. Integrating GEDSI can help address these disparities by ensuring that remote and underserved regions benefit from energy transition efforts. For example, renewable energy projects that consider the needs of indigenous populations and rural communities can improve access to clean energy and enhance local development.

8 JOB CREATION AND EXPANDING OPPORTUNITIES

By promoting inclusive participation, GEDSI ensures that job opportunities in the energy sector are accessible to a broader range of people, including women, persons with disabilities, and marginalized communities, leading to a more diverse and skilled workforce.A workforce that reflects the diversity of society is better equipped to address the challenges of the energy transition, leading to more sustainable economic outcomes.



04 BENEFIT

OF INTEGRATING GEDSI IN ENERGY TRANSITION

GEDSI (Gender Equality, Disability, and Social Inclusion) initiatives are crucial for transforming the energy sector by addressing systemic barriers and ensuring equitable access to job opportunities for women, persons with disabilities, and marginalized communities. These initiatives aim to create a level playing field where all individuals, regardless of gender, ability, or social background, have the opportunity to contribute to and benefit from the sector's growth and development.

Currently, the energy sector faces significant challenges related to diversity and inclusion. For example, the International Energy Agency (IEA) highlights a substantial gender disparity within the industry, with women comprising only about 22% of the global energy workforce. This underrepresentation is not merely a statistical anomaly but reflects deeper issues within recruitment practices, workplace culture, and career advancement opportunities. Women and marginalized groups often encounter barriers that prevent them from entering or advancing within the energy sector, such as biased hiring practices, lack of mentorship, and insufficient support systems. As a result, the sector misses out on a vast pool of talent and diverse perspectives that could drive innovation and progress.

Implementing GEDSI policies can address these barriers and significantly impact the sector. By promoting gender equality and inclusivity, energy companies can attract and retain a broader range of talent. For instance, targeted recruitment efforts can help increase the representation of women and individuals from underrepresented backgrounds. This approach not only enhances the diversity of the workforce but also brings in fresh perspectives and ideas that are essential for tackling the complex challenges of the energy transition. When companies embrace inclusive hiring practices and create supportive work environments, they foster a culture where diverse voices are heard and valued, leading to more innovative solutions and improved problem-solving capabilities.

Moreover, the benefits of such inclusivity extend beyond just expanding the talent pool. A more diverse workforce can lead to enhanced economic outcomes for the sector. Research has shown that organizations with higher levels of diversity and inclusion tend to experience better financial performance. For instance, McKinsey & Company's analysis reveals that companies in the top quartile for gender diversity are 25% more likely to achieve above-average profitability compared to those in the lower quartiles. This correlation suggests that diverse teams are not only more innovative but also more effective in achieving business success.

In practice, GEDSI initiatives can manifest in various forms, such as implementing flexible work arrangements to accommodate persons with disabilities, developing mentorship programs tailored to support underrepresented groups, and actively promoting inclusive practices in recruitment and retention. By doing so, energy companies can create a more equitable and supportive environment that encourages individuals from all backgrounds to pursue careers in the sector. These efforts contribute to a more dynamic and resilient workforce, better equipped to address the evolving challenges of energy production and consumption.



GEDSI ACCELERATE

THE ENERGY TRANSITION

Implementing GEDSI (Gender Equality, Disability, and Social Inclusion) principles in Indonesia's energy transition is not merely important; it is essential for accelerating the process and ensuring broader and more equitable benefits. Rather than hindering the energy transition, this approach will foster more inclusive participation from diverse societal groups, including women, persons with disabilities, and other marginalized communities. By broadening participation, the energy transition becomes more responsive to the needs and challenges faced by the entire population, rather than just a select few.

The integration of GEDSI also strengthens decision-making processes by ensuring that a wide range of perspectives and lived experiences are considered. This inclusivity can enhance innovation, efficiency, and the effectiveness of energy policies, as solutions become more comprehensive and grounded in broader social realities. Moreover, by addressing social barriers that often slow down or even derail energy policy implementation, a socially just approach will help ensure that the energy transition proceeds smoothly and delivers sustainable benefits for all societal layers.





WHY UNIVERSITY STUDENT

NEED TO KNOW ABOUT GEDSI IN ENERGY TRANSITION?

University students need to understand the concept of GEDSI (Gender Equality, Disability, and Social Inclusion) within the context of the energy transition because they are the future leaders who will play a crucial role in shaping policies and innovations. A deep understanding of GEDSI enables students to develop approaches that are more inclusive and equitable in addressing the challenges of the energy transition. The energy transition is not just about technological shifts towards cleaner and more sustainable energy but also involves complex social dimensions, including how these changes impact various societal groups.

By understanding GEDSI, students can ensure that the energy transition policies and strategies they develop in the future not only prioritize energy efficiency and carbon reduction but also emphasize social justice. Including vulnerable groups such as women, persons with disabilities, and marginalized communities ensures that the benefits of the energy transition are equitably distributed across all layers of society. This inclusive approach can also mitigate the risk of social resistance to proposed changes, as policies would have already taken into account the needs and interests of various stakeholders.

Students who grasp the importance of GEDSI in the energy transition will be better equipped to face increasingly complex global challenges and contribute to creating holistic and sustainable solutions. In the context of Indonesia, where social and economic disparities remain significant issues, integrating GEDSI into energy policies could be key to achieving equitable and inclusive development.

ENERGY

LITERACY & COMMUNITY

Energy literacy involves the understanding of how energy systems work, the implications of different energy choices, and the impact on both the environment and economy. It encompasses knowledge of energy sources, consumption patterns, efficiency measures, and sustainable practices. For individuals to make informed decisions about their energy use, a high level of energy literacy is essential.

University students are uniquely positioned to promote and advance energy literacy due to their access to education, resources, and networks. Their role as agents of change is crucial in bridging the gap between academic knowledge and practical, community-based applications. Here are several ways students can contribute:

EDUCATIONAL INITIATIVES 1

University students can lead workshops and seminars on campus and in local communities to educate people about energy conservation, renewable energy technologies, and the broader implications of energy choices. By leveraging their academic background, students can present complex topics in an accessible manner.

CAMPUS SUSTAINABILITY 2 PROGRAMS

Students can spearhead campus initiatives focused on reducing energy consumption and implementing energy-efficient technologies. Projects such as energy audits, green building certifications, and campus-wide energy-saving campaigns not only reduce the institution's carbon footprint but also serve as practical examples for the community.

3 COMMUNITY COLLABORATION

Partnering with local governments, businesses, and non-profits, students can work on projects that enhance energy literacy in the community. These partnerships can result in public outreach campaigns, educational materials, and collaborative research that benefits both the university and the local area.

4 ADVOCACY AND PUBLIC ENGAGEMENT

By using platforms like social media, university students can advocate for energy policies and raise awareness about energy issues. Their campaigns can influence public opinion and drive community engagement on energy-related topics.

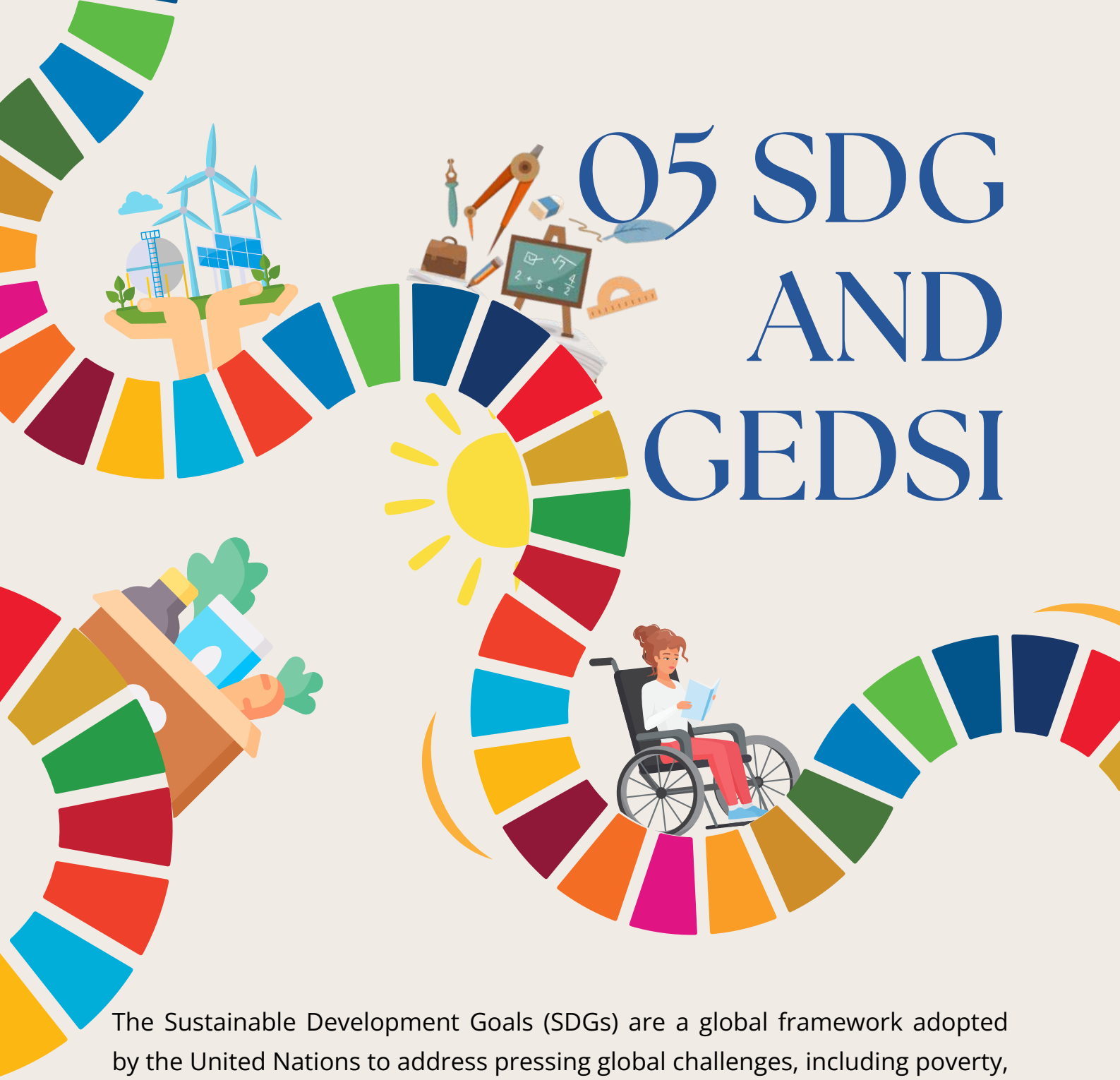
5 RESEARCH CONTRIBUTIONS

Students engaged in research can contribute to the body of knowledge on energy systems, sustainability practices, and new technologies. Sharing their research findings with the public helps in disseminating valuable information and promoting informed decision-making.

6 VOLUNTEER EFFORTS

Students can volunteer with organizations focused on energy education, helping to implement energy-saving measures in schools, community centers, and low-income households. These efforts provide practical, hands-on experiences that reinforce learning and encourage sustainable practices.

In summary, university students, through educational efforts, campus initiatives, community partnerships, advocacy, research, and volunteer work, play a vital role in improving energy literacy. Their efforts not only contribute to their personal development but also help build a more informed and sustainable society.



05 SDG AND GEDSI

The Sustainable Development Goals (SDGs) are a global framework adopted by the United Nations to address pressing global challenges, including poverty, inequality, climate change, and environmental degradation, with the goal of creating a more sustainable and equitable world by 2030. One of the key strategies to support the SDGs is the integration of Gender Equality, Disability, and Social Inclusion (GEDSI) principles across various sectors, including energy transition.

GEDSI in energy transition emphasizes the importance of creating inclusive systems where marginalized groups, such as women, people with disabilities, and underrepresented communities, can fully participate and benefit from the shift towards renewable energy.

This approach not only contributes to achieving key goals like SDG 5 (Gender Equality), SDG 7 (Affordable and Clean Energy), and SDG 13 (Climate Action), but also enhances the interconnection of other goals by promoting inclusive growth, resilience, and global partnerships. Understanding the role of GEDSI in energy transition is crucial to achieving sustainable and equitable outcomes across multiple SDGs.

Connecting GEDSI to SDGs

One of the benefits of implementing GEDSI in energy transition is to be able to support Sustainable Development Goals, also known as SDGs. The United Nations adopted the SDGs as a global call to action, aiming to ensure that by 2030, all people can protect the planet and eradicate poverty, leading to a peaceful life on earth (United Nations Development Programme, 2010).

SDGs have 17 goals, and each of these goals is related—an action in one goal can affect the others (United Nations Development Programme, 2010). So, how does one relate GEDSI in energy transition with SDGs? To simplify, let's break down how GEDSI and energy transition by themselves relate to SDGs.



Energy transition from fossil-based fuels to renewable energy promotes a dual solution, which is reducing gas emissions as well as providing energy access (Siciliano et al., 2021; Urban, 2014; WBGU, 2003). This means that, when linked with the SDGs, it relates to:

What about GEDSI itself? It is evident that GEDSI and SDG 5 are related (UNDP, 2010).



Griggs et al. (2017) assert that studying the correlation between SDGs is crucial to unlocking each goal's full potential, even if it involves uncovering negative relationships. Some examples of positive and negative relations of the mentioned SDGs are presented below.

SDG 7.1 aims to achieve universal access to affordable, reliable and modern energy services, which correlates to the overall SDG 13 targets of fighting climate change.
(UNDP, 2017; Griggs et al., 2017)

SDG 7.2, increasing the share of renewable energy, and SDG 7.3, improving energy efficiency, also correspond with fighting climate change (SDG 13), although in terms of reducing emission, using less fossil fuels also helps. (UNDP, 2017; Griggs et al., 2017)

To support SDG 7.2 and 7.3, integrating climate policies (SDG 13.2), improving awareness and knowledge of climate change (SDG 13.3), and organizing funds (SGD 13.A) is highly recommended. (UNDP, 2017; Griggs et al., 2017)

SDG 7.1 implies a positive connection and serves as the basis for fulfilling all of the SDG 5 goals. However, in order to achieve a more efficient energy supply, women's participation and full leadership (SDG 5.5) in the energy industry are necessary. This suggests that SDGs 7 and 5 are interdependent (Cecelski 2023).

Unfortunately, SDG 7 does not include gender-specific parameters. Gender-specific targets should be addressed in SDG 7 since, according to Zhang et al. (2024), there is a gender gap in terms of energy services that has to be addressed, especially for women in families with low incomes.

Other than SDGs 5, 7, and 13, GEDSI in Energy Transition also contribute to:



(UNDP, 2010; Silver, 2015).



Source: IESR (2024). Pawai Indonesia Bebas Emisi 2050

Speaking of SDGs 7 and 5, did you know there is a coalition called the Gender and Energy Compact?

This alliance was established because many women throughout the world struggle to obtain dependable energy, compromising their rights to education, health, and well-being (UN Energy, 2022). As stated below, interdependence is the key for this coalition since SDG 7 is vital for women's rights, but women are also critical to accomplishing SDG 7 (Cecelksi, 2023; UN Energy, 2022), emphasizing the relevance of collaboration.

The International Network on Gender and Sustainable Energy (ENERGIA), the Global Women's Network for the Energy Transition (GWNET), and the United Nations Industrial Development Organization (UNIDO) together lead the Gender and Energy Compact. This alliance has two goals:

(1) equal opportunities for women to get involved in and benefit from the just energy transition
(2) equal access for women to manage sustainable energy products and services (UN Energy, 2022).



With all that being said, what concrete steps can we take to promote GEDSI in Energy Transition while still keeping an eye on the relevant SDGs? Here are a few instances:

SDG 5

(Achieve gender equality and empower all women and girls)

Specific training programs for women in renewable energy technologies can increase their participation in the sector, reducing the gender gap in STEM jobs (Girotto, V. & Terry, C. 2023)



SDG7

(Ensure access to affordable, reliable, sustainable, and modern energy for all)

Making clean energy technologies accessible to people with disabilities or remote communities ensures that the energy transition leaves no one behind. (Hertanti et al, 2023)



SDG 8

(Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)

Providing training and employment opportunities in the renewable energy sector to women and other vulnerable groups helps create a more inclusive and sustainable economy (Fianto et al, 2023)



SDG 11

(Make cities and human settlements inclusive, safe, resilient and sustainable)

Implementing energy community schemes promotes the decentralized production and consumption of renewable energy, aligning with SDG 11 by enhancing sustainability, energy efficiency, and urban resilience. Integrating these schemes into urban planning not only reduces greenhouse gas emissions but also ensures that the benefits of the energy transition are equitably distributed across all social groups, including women, people with disabilities, and marginalized communities (GEDSI). This approach fosters social inclusion by empowering diverse groups to actively participate in and benefit from the transition to clean energy (Salvia, et al, 2022)



SDG 13

(Take urgent action to combat climate change and its impacts)

Programs for climate adaptation aimed at helping women and other marginalized groups can help them become more resilient to the effects of climate change (Badan Kebijakan Fiskal, 2021)



SDG 16

(Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels)

Fostering peace, justice, and strong institutions is essential in managing the social impacts of energy transitions. This includes ensuring that the transition is equitable and inclusive, avoiding conflicts that might arise from changes in employment patterns, land use, and resource allocation. Transparent governance and strong legal frameworks are necessary to manage these transitions smoothly, as they help to maintain social stability and prevent disputes that might hinder progress (IRENA, 2023)

SDG 17

(Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development)

SDG 17 emphasizes the need for strong partnerships, which are crucial in achieving the energy transition. This includes collaborations between governments, the private sector, and civil society to mobilize resources, share technology, and build capacity. International cooperation and the exchange of best practices are also key to overcoming the technical and financial challenges associated with large-scale deployment of renewable energy (UNESCAP, 2023)

CONCLUSION

The integration of GEDSI (Gender Equality, Disability, and Social Inclusion) in energy transition plays a critical role in advancing multiple Sustainable Development Goals (SDGs), particularly SDG 5 (Gender Equality), SDG 7 (Affordable and Clean Energy), and SDG 13 (Climate Action). GEDSI in energy transitions promotes inclusivity, ensuring that marginalized groups have access to clean energy, and women play a central role in leadership and decision-making in the sector.

Moreover, it contributes to broader goals such as economic growth (SDG 8), sustainable cities (SDG 11), peace and justice (SDG 16), and global partnerships (SDG 17). The Gender and Energy Compact exemplifies this interconnectedness, advocating for equal opportunities and access for women in the energy transition, which ultimately supports the achievement of these SDGs through collaboration, inclusive policies, and targeted initiatives.

CHAPTER 3

How to incorporate GEDSI in Energy Transition in Indonesia?



06 INTERNATIONAL FRAMEWORK

INTERNATIONAL RENEWABLE ENERGY AGENCY

The International Renewable Energy Agency (IRENA) is a lead global intergovernmental agency for energy transformation that serves as the principal platform for international cooperation, supports countries in their energy transitions, and provides state of the art data and analyses on technology, innovation, policy, finance and investment. IRENA drives the widespread adoption and sustainable use of all forms of renewable energy, including bioenergy, geothermal, hydropower, ocean, solar and wind energy in the pursuit of sustainable development, energy access, and energy security, for economic and social resilience and prosperity and a climate-proof future.IRENA was officially founded in Bonn, Germany, on 26 January 2009. IRENA's membership comprises 168 countries and the EU.

In January 2014, the International Renewable Energy Agency (IRENA) and 35 leading players in renewable energy from around the world jointly established a Coalition for Action to promote the uptake of renewable energy technologies. IRENA works with educational institutions and member countries to promote increased awareness of the energy transition among youth and broader society. In the updated Global Energy Transformation: A Roadmap to 2050, IRENA designed a socio-economic footprint analysis that delves into the implications of the energy transition, providing footprint measurement in terms of GDP, jobs and welfare (IRENA, 2022).

1) ENERGY & JOBS

Jobs are of great importance in any economy

Key global findings:

- **13.7 million:** Worldwide employment in renewable energy in 2022, up from 12.7 million in 2021. Close to two-thirds of all jobs are in Asia, where China alone accounts for 41% of the global total.
- **4.9 million:** Jobs in solar photovoltaic (PV) in 2022, the fastest-growing sector, accounting for more than a third of the total renewable energy workforce. Women hold 40% of these jobs. Labour rights and social dialogue are indispensable for an energy transition that produces just outcomes and secures workers' prospects.

2) EDUCATION & SKILLS

Education and training must be expanded to prevent the widening of skill gaps. They must be paired with efforts to build a diverse workforce, tapping talent among under-represented groups, including women, youth and minorities. Producing a series of papers as a contribution to technical discussions and to disseminate new findings on relevant topics in the author's area of expertise (IRENA, 2022).

3) SOCIOECONOMIC FOOTPRINT

Climate damages have been included into the macroeconomic analysis, bringing about important socio-economic consequences.By 2050, global GDP increases by up to 2.5% relative to the business as usual case. IRENA disaggregates the evolution of GDP into four main drivers: trade, consumer expenditure due to tax rate changes, consumer expenditure due to indirect and induced effects, and investment.In terms of economy-wide employment, there is an increase of 0.2% compared to business as usual (IRENA, 2022).

4) LOCAL VALUE CREATION

Renewable energy development can drive economic growth, create new jobs and enhance human health and welfare at the national level. For a typical 50 MW solar PV, a total of about 230,000 person-days are required along the value chain. For a 50 MW onshore wind project, 144,000 person-days are required. A 500 MW offshore wind requires over 2.1 million person-days. Given similarities with the offshore O&G industry, some relevant skills could be transferred with appropriate policies and training. The highest labor requirements are in operations and maintenance, followed by procurement and manufacturing, and construction and installation. In other words, countries that do not manufacture equipment domestically can achieve job creation in other segments of the value chain.

They also offer insights into the types of jobs needed to support the transition by technology, segment of the value chain and educational and occupational requirements. These are crucial elements to inform the transition's policy framework. The analysis also involves assessing the materials and equipment needed in each segment, with a focus on identifying the potential for local value creation, and synergies with existing industries that could potentially leverage the existing capabilities (IRENA, 2022).

5) GENDER

The study finds that 32% of the renewable energy workforce are women. A later study by IRENA on the wind energy sector found that women's talents and insights are even more under-utilised in the wind energy sector, where women represent only 21% of the workforce. The latest study, dedicated to the solar PV sector, finds that the share of women working full time in the solar PV industry is 40%, the highest share of any renewable energy sub sector analysed by IRENA to date. Yet the 40% share held by women in solar PV still trails the global average of women in the overall economy, estimated at 45.9%.

In areas where there is limited electricity access, or it is still expanding, engaging women as active agents of change in deploying off-grid renewable energy solutions is known to improve sustainability and gender outcomes. Renewable solutions bring energy choices to the household and community level, where women tend to have a greater voice. Women bring new perspectives to the workplace, improve collaboration, and enable better performance overall. Women's leadership and contributions will be crucial to ensuring that the energy systems of the future address the needs of modern societies, take on the challenges of climate change and the COVID 19 pandemic, and leave no one behind (IRENA, 2022).

6) ENERGY ACCESS

Universal access to energy is a development imperative. Energy is a catalyst and enabler of development, and societies cannot develop without reliable, adequate and affordable energy services. Decades of national and international efforts have yielded impressive gains in access to modern energy. Yet, over 733 million lived without electricity access in 2020 and more than 2.3 billion relied on traditional cooking fuels. Estimates suggest that under a business-as-usual scenario around 620-670 million people will still not have access to electricity by 2030. Majority of those will be in Sub-Saharan Africa where over 1.1 billion are also estimated to be living without clean cooking access by 2030. Off-grid renewable energy solutions – including stand-alone systems and mini-grids – will play a crucial role in achieving universal access to modern energy in a timely and sustainable manner (IRENA, 2022).



ALLIANCE FOR JUST ENERGY TRANSFORMATION (AJET)

The Alliance for Just Energy Transformation (AJET) is a voluntary initiative that aims to catalyse a shared understanding and transformative action towards successful implementation of Just Transition policies worldwide, even as the details of the transitions differ at national scales.

THE 8 CORE PRINCIPLES OF A JUST ENERGY TRANSFORMATION:

1. Be guided by science and understand the urgency to reduce emissions in line with the goals set out by the Paris Agreement.
2. Be fair and uphold the rights, needs and values of everyone - no single group should be privileged over others and the upfront costs must not fall on those with the least responsibility for climate change or ability to bear them.
3. Be sustainable, ambitious and consistent with wider, holistic strategies that contribute to the energy transition needed to limit global temperature increase to 1.5°C, or well under 2°C.
4. Be comprehensive, transparent and inclusive, which requires that just transition strategies developed at the national level to be co-designed and implemented at the local level.
5. Ensure clearly-defined, robust and meaningful stakeholder engagement and social dialogue, including a specific focus on social protection and gender equality policies to promote equitable access to benefits.

ALLIANCE FOR JUST ENERGY TRANSFORMATION (AJET)

THE 8 CORE PRINCIPLES OF A JUST ENERGY TRANSFORMATION:

6. Be centred on climate justice so that the burdens of climate change, as well as the costs of avoiding it, are shared fairly; both internationally and inter-generationally. Implementation of the transition must support jobs, local communities and improve human wellbeing in the developing world.
7. Recognize energy access as an essential contributor for social wellbeing, economic growth, enabler of sustainable development and improved livelihoods and transformation of energy systems must enable large scale access to clean, safe and reliable energy to meet developmental needs of all.
8. Ensure access to justice, decision-making and information: A common approach to investment which upholds indigenous and local community rights. Recognition and implementation of the right to meaningful participation in energy transition decision-making processes for all stakeholders, acknowledging and compensating for differences in resources and capacity to engage.

Local transitions will together form a global transformation, with common principles to ensure success, including climate justice, international cooperation, equitable social and economic policies, community and environmental resilience, and access to finance (UNDP, 2024).

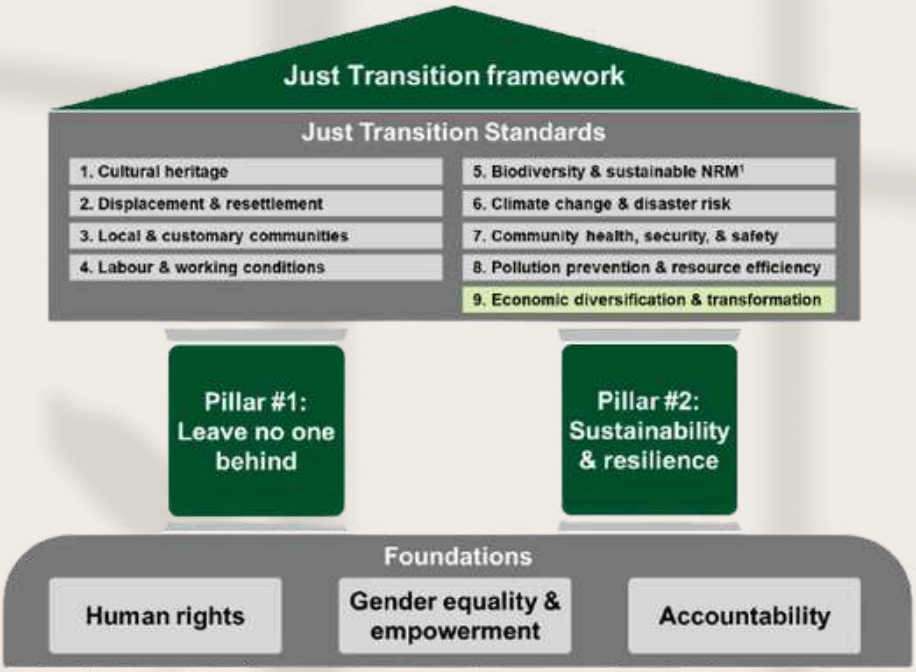
JUST ENERGY TRANSITION PARTNERSHIPS (JETPS)

Just Energy Transition Partnerships (JETPs) are intergovernmental agreements that help developing and emerging economies transition away from fossil fuels and coal. JETPs coordinate technical assistance and financial resources from countries in the Global North to recipient countries. The partnerships are intended to help countries meet the 1.5°C global warming limit.

JETPs emerged during COP26 as a multilateral climate financing initiative by the International Partners Group (IPG). The IPG includes the governments of Japan and the United States as co-leaders, and other countries such as Canada, Denmark, the European Union, France, Germany, Italy, Norway, and the United Kingdom. JETPs are also supported by multilateral development banks, philanthropies, and the Climate Investment Funds (CIF).

Countries with large coal industries and long-term economic growth potential are particularly eligible for JETPs. The financing of renewable energy infrastructure enables an earlier coal phase-out. This should prevent further fossil fuel expansion and avoid future emissions. These agreements can also help fulfill the Global North's promise to mobilize $100 billion in annual climate finance while creating a green investment alternative to China's Belt and Road Initiative (DGAP, 2024).

JUST ENERGY TRANSITION PARTNERSHIPS (JETPS)



Source: JETP Secretariat and Working Groups, 2023

INDONESIA JETPS DEVELOPING A JUST TRANSITION FRAMEWORK THAT CONSIST WITH TWO LEVEL :

The First are Foundations and second is the pillars. The first level of the framework consists of three foundational concepts that underpin the definition of just transition for Indonesia: (i) human rights, (ii) gender equality and empowerment, and (iii) accountability. These foundations guide the just transition process to be inclusive, nondiscriminatory, equitable, and accountable. Above the foundations, there are two pillars that constitute the second level of the framework. These two pillars are (i) Leave No One Behind (to highlight the importance of prioritizing and providing social protection to marginalized and vulnerable groups), and (ii) Sustainability and Resilience (to highlight the importance of creating resilient societies and economies that sustainably manage their natural environment). The first Pillar (Leave No One Behind) support Standard 1: Cultural heritage; Standard 2: Displacement and resettlement; Standard 3: Local and customary communities; and Standard 4: Labor and working conditions.

07 AUSTRALIAN EXAMPLE OF GEDSI

IN ENERGY TRANSITION IMPLEMENTATION

Australia offers an inspiring example of how to integrate GEDSI into the energy transition. Australia is one of the 13 member countries who have joined the Equality in Energy Transitions Initiative (Equality Initiative). The Equality Initiative is a collaboration between the Clean Energy Ministerial (CEM) and the International Energy Agency (IEA), with the aim of advancing the transition to a low carbon economy through advancing women's participation in clean energy and closing the gender gap in the energy sector. Their forward-thinking policies and initiatives have created a more inclusive energy sector, offering important lessons for other nations, including Indonesia. As we delve into Australia's approach, think about how these strategies could be adapted to Indonesia's unique context.

Have you ever wondered how a country can ensure that its energy transition is not only environmentally sustainable but also socially inclusive?

Australia's efforts in integrating GEDSI into their energy transition provide a valuable example for Indonesia. By examining Australia's policies and initiatives, we can gain insights into effective practices and strategies that promote inclusivity across the energy sector. For instance, Australia's focus on social inclusion for diverse groups, including women, people with disabilities, and Indigenous communities, highlights approaches that could be adapted to meet Indonesia's specific needs. As we explore these examples, consider how Indonesia might apply similar strategies to enhance its own energy transition, ensuring that all segments of society benefit from and contribute to a sustainable and equitable energy future.



POLICY FRAMEWORK

GOVERNMENT INITIATIVE

" Did you know that Australia has made substantial efforts to ensure that all segments of society benefit from the energy transition? "

Australia's commitment to GEDSI is deeply embedded in its energy transition policies, which are designed to ensure that all segments of society benefit from the shift to renewable energy. Central to this effort is the Renewable Energy Target (RET) Scheme, a cornerstone policy that has significantly increased the share of renewables in Australia's electricity supply. The RET Scheme not only aims to reduce carbon emissions but also ensures that the economic and social benefits of the transition—such as job creation and energy access—are distributed equitably. By 2023, renewable energy sources contributed to 39.4% of Australia's total electricity generation, supported by the RET Scheme (The Clean Energy Council 2024). The Clean Energy Council 2021 report Empowering Everyone concluded that the clean energy industry had significant opportunity – and obligation – to improve the representation of many traditionally underrepresented groups: women (particularly in leadership roles and the trades), Indigenous Australians, people with disabilities, and more.

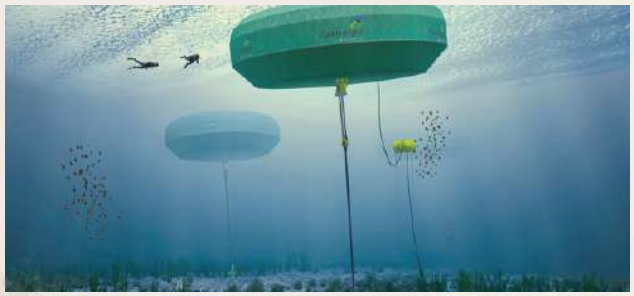


POLICY FRAMEWORK

GOVERNMENT INITIATIVE







Source: createdigital.org.au (2018)

The National Energy Productivity Plan (NEPP) is another critical initiative that underscores Australia's commitment to GEDSI. The NEPP is focused on improving energy productivity across various sectors of the economy, with specific measures to enhance accessibility for people with disabilities and promote gender equality. The NEPP aims for a 40% improvement in energy productivity between 2015 and 2030, with inclusive policies that support the participation of all demographics in the energy sector (National Energy Productivity Plan 2015–2030).



POLICY FRAMEWORK

GOVERNMENT INITIATIVE

Australia's commitment to GEDSI is further demonstrated by the "Women in Energy" initiative under the Department of Climate Change, Energy, the Environment, and Water (DCCEEW). This initiative has led to a significant increase in female participation in the energy sector, with a focus on leadership roles. As of 2022, women constituted 26% of the workforce in the renewable energy sector, up from 22% in 2018. The initiative's emphasis on gender diversity has been linked to improved innovation and sustainability outcomes, reinforcing the value of inclusivity in energy transitions.

The Australian Government has allocated AUD$5.5 million to create the First Nations Clean Energy Strategy (Department of Climate Change, Energy, the Environment and Water, 2024). This strategy supports Indigenous people in Australia during the energy transition by promoting their participation and benefits, ensuring access to reliable clean energy, respecting their cultural heritage, and fostering collaboration and new ways of working.









PROMOTING GEDSI

THROUGH PROGRAMS AND INITIATIVES

Australia has made significant effort in ensuring the GEDSI framework is implemented in the energy transition by focusing on women, people with disabilities, and Indigenous people. Recognizing the unique challenges and opportunities these groups face, the Australian government and various initiatives that promote the involvement of these people in the renewable energy sector.

Clean Energy Council (CEC)

The CEC has launched several programs aimed at increasing the participation of women and people with disabilities in the renewable energy sector. This includes mentorship programs, scholarships, and networking opportunities. The CEC's Women in Renewables initiative has seen a 25% increase in female participation in the sector since its inception in 2016.

Workplace Gender Equality Agency (WGEA)

The WGEA works with energy companies to develop strategies for achieving gender equality in the workplace. This includes conducting audits, setting targets, and implementing best practices for gender inclusivity. Companies that have implemented WGEA's recommendations have reported a 20% increase in gender diversity in leadership roles.

Disability Employment Services (DES)

The DES program supports people with disabilities in finding and maintaining employment in the energy sector. It offers tailored assistance, including training and workplace modifications,

to ensure that people with disabilities can fully participate in the energy transition. The DES program has supported over 10,000 people with disabilities in securing employment in various sectors, including energy.

Social Inclusion for Australia's Indigenous People



Australia has recognized the relationship that indigenous people, like the aboriginal communities, have with the land. Therefore, the Australian government and various organizations have initiated programs that promote their active participation in the renewable energy sector.

First Nations Clean Energy Strategy, which is specifically designed to support Indigenous Australians in the energy transition. This strategy includes several components aimed at ensuring that Indigenous communities benefit from the shift to clean energy:

Community-Owned Renewable Energy Projects

Several Indigenous communities have embarked on renewable energy projects that are owned and managed by the community itself.

For example, the Manungurra Aboriginal Corporation in the Northern Territory has partnered with renewable energy companies to establish solar power projects that provide reliable and affordable electricity to remote Indigenous communities. These projects not only supply clean energy but also create jobs and training opportunities for local Indigenous people.



Cultural Heritage Protection

The strategy emphasizes respecting and integrating Indigenous cultural heritage into energy projects. This includes conducting thorough consultations with Indigenous communities-before project initiation and ensuring that renewable energy infrastructure does not disrupt sacred sites or traditional lands. The Yolngu Solar Project in Arnhem Land is an example where Indigenous knowledge was combined with modern solar technology to create a project that respects local culture while providing sustainable energy.

Training and Capacity Building

To ensure long-term benefits, the Australian government and Non-Governmental Organizations (NGOs) have launched training programs aimed at building technical skills within Indigenous communities. These programs focus on areas such as solar installation, maintenance, and project management, enabling Indigenous Australians to take leadership roles in the energy transition. The Indigenous Employment Program under the Clean Energy Council is a notable example, offering apprenticeships and mentoring to young Indigenous Australians entering the renewable energy sector.



Collaborative Partnerships

Collaboration between Indigenous communities, government bodies, and private companies is another key element of the strategy. For instance, the Collaboration Agreement between the Yorta Yorta Nation and the Victorian government has led to the development of a large-scale solar farm that not only powers local communities but also provides economic benefits to the Yorta Yorta people. This partnership model has been praised for its inclusivity and respect for Indigenous sovereignty.

CASE STUDIES



The impact of these policies and initiatives is best illustrated through the experiences of leading Australian energy companies.

Example 1: AGL Energy Ltd

Est. 1837



AGL Energy, one of the country's largest energy providers, has implemented a comprehensive Diversity and Inclusion Strategy that focuses on attracting and retaining a diverse workforce.



This strategy includes flexible working arrangements, leadership development programs, and targeted recruitment efforts aimed at increasing representation among women, people with disabilities, and individuals from diverse cultural backgrounds.



Since the implementation of this strategy, AGL Energy has reported a 30% increase in female employees and a 15% increase in employees with disabilities, showcasing the tangible benefits of a commitment to inclusivity.

source: agl.com.au

Example 2: Origin Energy Ltd

Est. 2000

Similarly, Origin Energy has taken proactive steps to address the gender gap in senior leadership through its Women in Leadership Program.

This program provides mentoring, professional development, and networking opportunities for women, helping to create a pipeline of female leaders within the company.

The success of this program is evident, with a 40% increase in the number of women holding senior leadership positions at Origin Energy since its launch.





source: originenergy.com.au

Example 3: Australian Renewable Energy Agency (ARENA)

Est 2012





The Australian Renewable Energy Agency (ARENA) has also been a strong advocate for inclusivity in the energy transition.

ARENA supports projects that demonstrate innovative approaches to energy transition, with a particular focus on those that promote the participation of women and people with disabilities.

Through its funding of over 100 projects with inclusivity components, ARENA has played a key role in increasing the representation of underrepresented groups in the renewable energy sector.

CONCLUSION

What can Indonesia learn from Australia's example?

By studying Australia’s example, Indonesia can gain valuable insights into the integration of GEDSI principles within its own energy transition. The Australian experience highlights the importance of :



robust policy framework



targeted programs



active participation of all stakeholders

in creating an inclusive energy sector. For Indonesia, adopting similar strategies could lead to a more equitable distribution of the benefits of energy transition, ensuring that women, people with disabilities, and other marginalized groups are not left behind.

In conclusion, Australia’s approach to integrating GEDSI into energy transition offers a compelling model for Indonesia. By learning from Australia's successes and challenges, Indonesia can develop and implement policies that promote gender equality, disability inclusion, and social inclusion in its own energy sector, contributing to a more sustainable and inclusive future for all.



CHAPTER 4

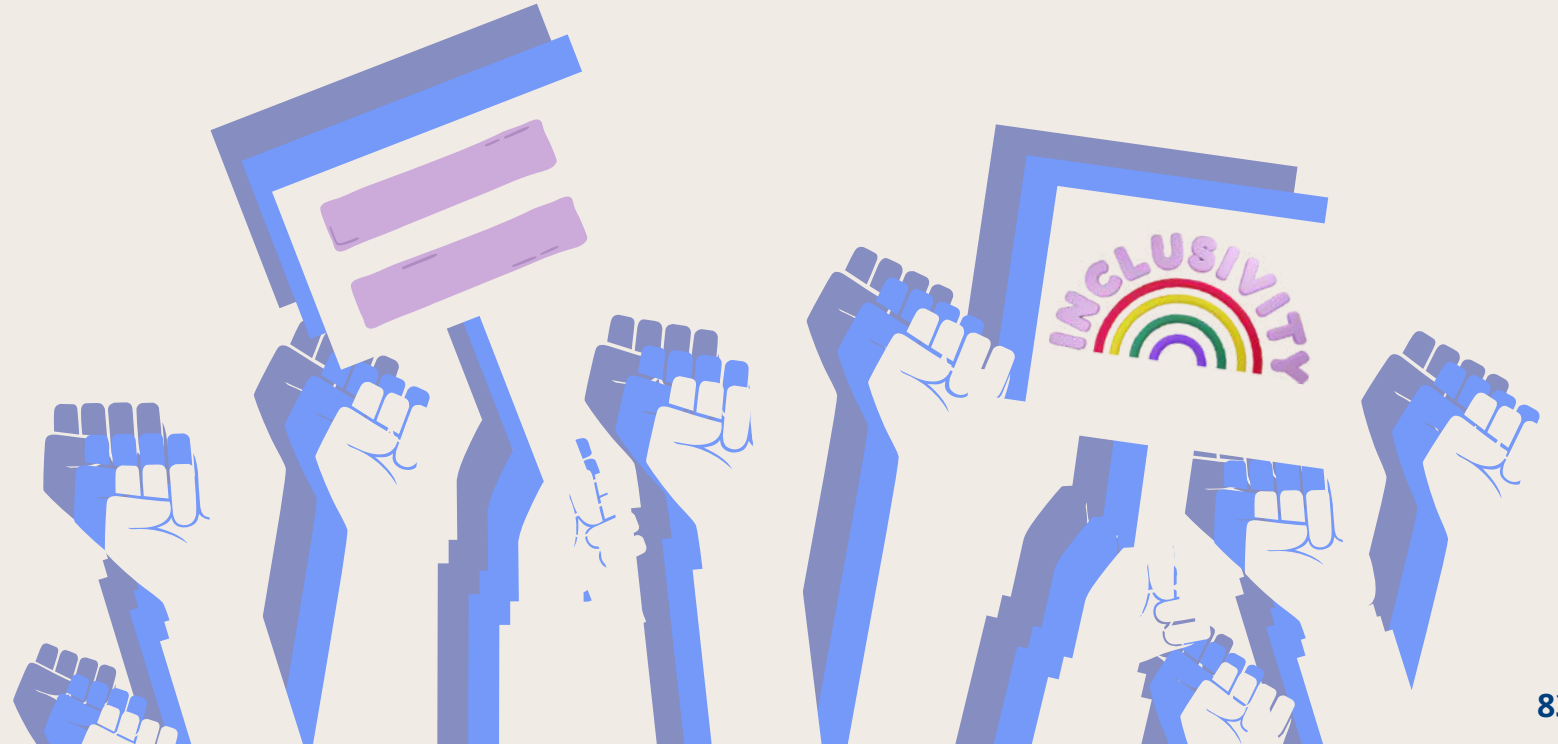
How University Student can contribute?





08 CAMPAIGNING FOR GEDSI IN ENERGY TRANSITION

In previous chapters, we explored the concept of GEDSI (Gender Equality, Disability, and Social Inclusion) in the context of energy transition. In this subchapter, we explore how university students in Indonesia can actively promote the GEDSI in energy transition concept principles to their colleagues. We examine various strategies students can use, including organizing awareness campaigns, becoming GEDSI ambassadors, and leveraging successful examples of student-led initiatives. By focusing on these approaches, we aim to inspire and guide students in their efforts to foster a more inclusive and equitable energy transition.

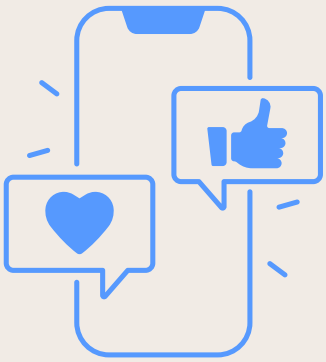


HOW DO UNIVERSITY STUDENTS CONTRIBUTE?



To introduce the concept of GEDSI in energy transition to other university students, several campaign strategies can be implemented such as:

1. Utilizing Social Media



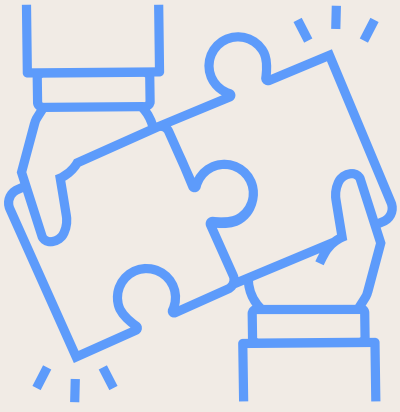
Social media can be an effective tool to reach a wider audience. Platforms like Instagram, Twitter, and YouTube can be used to spread information about GEDSI and energy transition, raising awareness among students. Activities can include creating educational videos, infographics, and success stories from students involved in GEDSI-related projects.



2. Awareness Campaigns

Organize events and workshops on campus to introduce the concept of GEDSI in energy transition. For example, conduct panel discussions with experienced speakers in this field or hold exhibitions showcasing GEDSI-related projects conducted by students.

3. Collaboration



Collaborate with student organizations, clubs, and other campus communities to organize joint activities promoting GEDSI in energy transition. For instance, work with environmental clubs or women's organizations on campus to hold joint campaigns or collaborative projects.



BECOMING STUDENT AMBASSADORS FOR GEDSI IN ENERGY TRANSITION

Students can act as ambassadors for GEDSI in energy transition by undertaking the following activities:

1. Advocacy and Outreach

Act as advocates on campus to spread awareness about the importance of GEDSI in energy transition. Students can organize group discussions, seminars, and workshops to educate their peers about GEDSI and how they can get involved.



2. Mentorship Programs

Develop mentorship programs that connect students with professionals in the energy sector who have integrated GEDSI principles into their work. This can help students receive guidance and inspiration for their future careers.

3. Building Networks

Form networks with stakeholders, including academics, practitioners, and non-governmental organizations working in GEDSI and energy transition. These networks can provide support and resources for students interested in contributing.

EXAMPLE OF SUCCESSFUL GEDSI IN ENERGY TRANSITION CAMPAIGNS BY UNIVERSITY STUDENTS

One successful example comes from Universitas Indonesia's Green Economy Initiative, where students organized campaigns promoting the role of women and social inclusion in renewable energy. The campaign included workshops highlighting bioenergy and solar power, particularly focusing on empowering rural women through sustainable energy practices (PWYP Indonesia, 2023).

Additionally, the ASEAN Climate Change and Energy Project (ACCEPT) initiative in Southeast Asia, involving students from the Philippines, Indonesia, and Vietnam, emphasized gender equality and social inclusion in clean energy. These students led forums and community outreach campaigns, encouraging participation in solar energy and energy-efficient technologies in rural areas (ACCEPT ASEAN, 2024).

Another notable example is the Philippines' Department of Energy – Gender and Development (DOE-GAD), which trained university student ambassadors to engage in gender inclusivity in the energy sector. These ambassadors launched campaigns in their universities, created mentorship programs, and collaborated on renewable energy projects in remote areas, ensuring marginalized communities benefited from clean energy technologies (ACCEPT ASEAN, 2024).



ACCEPT
ASEAN Climate Change and Energy Project
source: accept.aseanenergy.org

UNIVERSITAS INDONESIA
Veritas, Probitas, Iustitia | Est. 1849
source: fib.ui.ac.id

CONCLUSION

University students are critical stakeholders in campaigning for Gender Equality, Disability, and Social Inclusion (GEDSI) within the energy transition. Their ability to leverage various strategies such as social media, awareness campaigns, and collaboration with organizations makes them essential drivers of change. Students can act as ambassadors, raising awareness on campus through events, discussions, and workshops. By fostering advocacy, mentorship programs, and building networks, students can contribute significantly to a more inclusive and equitable energy future.

There have been several campaigns related to GEDSI in energy transition. For example, Universitas Indonesia's Green Economy Initiative empowered rural women through sustainable energy practices, while the ASEAN Climate Change and Energy Project (ACCEPT) saw students from Indonesia, Vietnam, and the Philippines promote solar energy and energy-efficient technologies in rural areas. Moreover, in the Philippines, the DOE-GAD program trained university ambassadors to launch gender-inclusive renewable energy projects. These examples underscore the impactful role of students in pushing forward the GEDSI agenda in energy transition and demonstrate how students can become influential advocates for a just and sustainable energy transition across diverse contexts.



09 PROMOTING STEM FOR WOMEN IN HIGH SCHOOLS









STEM (Science, Technology, Engineering, and Mathematics) education plays a crucial role in shaping the future of energy transition, as it provides the foundation for innovation, technological advancements, and problem-solving needed to shift towards renewable energy sources. The energy transition, which involves moving from fossil fuels to sustainable energy solutions, requires a skilled and diverse workforce capable of addressing the complex challenges of this transformation. By promoting STEM education, particularly for underrepresented groups such as women and minorities, countries can build the talent pool necessary to drive the energy sector's evolution. However, women remain underrepresented in STEM fields, and this gender gap hinders the development of a fully inclusive workforce. Promoting STEM education for women, especially starting in high school, is essential to breaking down barriers and ensuring equal access to opportunities in the rapidly growing energy sector. Empowering young women in STEM is key to fostering innovation and leadership in energy transition, enabling them to play a pivotal role in shaping a sustainable and equitable future.

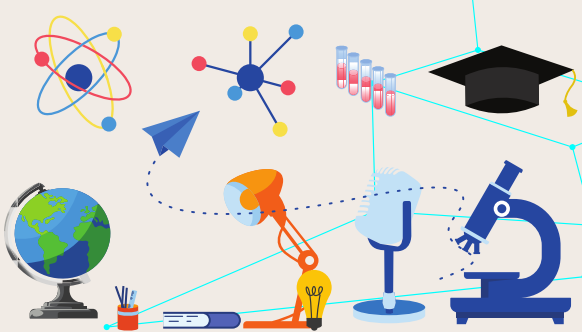
CONNECTIONS IN PROMOTING STEM FOR WOMEN IN HIGH SCHOOLS AND GEDSI IN ENERGY TRANSITION IN INDONESIA

The promotion of STEM (Science, Technology, Engineering, and Mathematics) education for high school girls in Indonesia is crucial for fostering gender equality and enhancing the nation's economic development. By integrating principles of Gender Equality, Disability, and Social Inclusion (GEDSI) into the Energy Transition (ET) sector, we can further support this goal, ensuring a diverse and talented workforce to drive future innovations.

Women in Indonesia face systematic barriers to pursuing STEM education, which limits their access to these fields as adults. Despite women making up 34% of the STEM workforce globally, they are significantly underrepresented in fields such as computer science and engineering, which are crucial for technological advancement, they remain vastly outnumbered by men. This disparity is evident in higher education, where in higher education, the proportion of women in engineering (21%) and computer science (19%) remains low compared to their male counterparts. This low representation at the educational level often translates into fewer women entering these fields professionally.

In the workforce, despite earning degrees in STEM fields, many women are employed in other sectors, such as healthcare, where they dominate (nearly 80%), but they are less likely to hold leadership roles or higher-paying positions within STEM-related industries. This indicates systemic barriers preventing women from fully engaging in their fields of study. Only 38% of women with degrees in computer science and 24% with engineering degrees work in their respective fields, highlighting the need for greater support and representation.





KEY FACTORS CONTRIBUTING TO THE GENDER GAP IN STEM

Gender Stereotypes



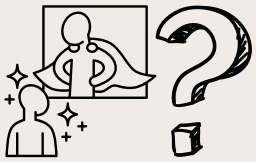
STEM fields are often viewed as masculine, leading to the underestimation of women's abilities. These stereotypes can be perpetuated from an early age, affecting women's self-esteem and interest in STEM fields.

Male-Dominated Cultures



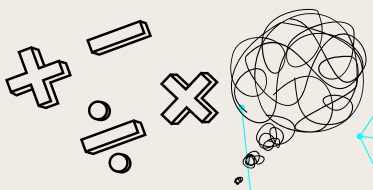
STEM environments are often dominated by male cultures that can be unwelcoming or even hostile to women. This can include biases in hiring practices, unequal opportunities for advancement, and a lack of supportive networks.

Lack of Role Models



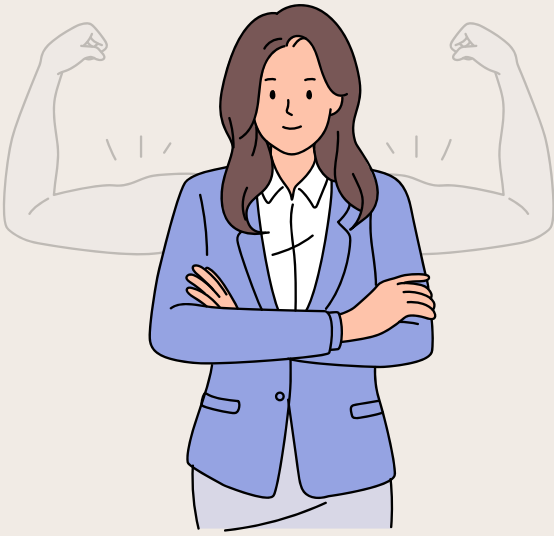
The visibility of female scientists and engineers in the media and popular culture is limited. The absence of relatable role models can affect women aspirations and belief in their potential to succeed in STEM careers.

Math Anxiety



Female teachers' anxieties about mathematics can be transmitted to their students, diminishing women's confidence and performance in math-related subjects. This can contribute to a lower likelihood of women pursuing STEM careers.

“CONFIDENCE GAP IS A SIGNIFICANT ISSUE IN STEM EDUCATION”



Early Confidence Issues

The myth that men are inherently better at math persists, despite evidence showing no cognitive differences between genders. Studies show that girls begin to lose confidence in their mathematical abilities by third grade, while boys often maintain higher levels of confidence. This early loss of confidence can lead to decreased interest and performance in STEM subjects over time.

Cognitive Differences

Contrary to stereotypes, research indicates no inherent cognitive differences between genders in mathematical ability. The confidence gap is influenced more by social and cultural factors than by actual differences in capability.

Increasing women's participation in STEM is essential for addressing the skills gap in Indonesia. Research shows that boosting female participation in STEM could generate significant economic benefits, including an additional $62 billion in economic activity and a 2.9% increase in GDP by 2025. Encouraging women to pursue STEM careers provides access to better job opportunities, higher incomes, and improved livelihoods, particularly for those in impoverished areas.



source: linkedin.com

Amanda Simandjuntak, Chief of Product at Skilvul, emphasizes the importance of changing societal mindsets and representation to promote STEM for women. Her experiences highlight the need to tackle external and internal factors that hinder women's participation in STEM, such as societal stigma and lack of confidence.

EXPLORING STRATEGIES TO PROMOTE STEM FOR WOMEN

Integrating GEDSI principles in the Energy Transition sector can enhance efforts to promote STEM for women by creating inclusive environments and addressing systemic barriers. Strategies include:

Education Reform: Changing the Curriculum

One of the critical steps toward fostering a love for science among women is reforming the education system. The curriculum should be designed to be more inclusive and equitable. This means introducing engaging and gender-neutral teaching materials and removing stereotypes, perpetuating the idea that science is for men. Additionally, schools and teachers should encourage the active participation of women in science-related activities, clubs, and competitions. These experiences can spark interest and curiosity, leading to a lasting passion for STEM subjects.

Inspiring Role Models

The importance of role models can not be overstated. Women must see women who have succeeded in STEM fields to believe they can do it, too. Schools and universities should invite successful women scientists and engineers to share their stories and experiences, providing tangible examples of what is possible. Furthermore, governments and private organizations can initiate campaigns to highlight the achievements of female scientists, showcasing their contributions to society. This can help change the narrative and inspire young girls to follow in their footsteps.







Access to Resources

Access to resources and opportunities is crucial in nurturing a love for science. Providing women with the necessary tools, such as science kits, books, computers, and internet access, can empower them to explore STEM subjects independently. Initiatives that offer scholarships and financial aid to women pursuing STEM education can also make a significant difference.



Supportive Parenting and Mentoring

Parents and guardians are pivotal in shaping a child's attitude toward science. Encouraging parents to support their daughters' interests in STEM, regardless of gender stereotypes, is essential. Implement mentorship programs where women can connect with female mentors in STEM professions. These mentors can provide guidance, answer questions, and offer support, helping women navigate the challenges they may face.





Promoting STEM Extracurricular Activities

Extracurricular activities focused on STEM can be incredibly impactful in fostering a love for science. Schools can organize science clubs, coding workshops, robotics competitions, and science fairs that actively involve women. Schools can also encourage women to participate in the STEM olympiads. Such activities provide hands-on experience and make learning enjoyable.



Government Initiatives

The Indonesian government should take proactive steps to promote gender equality in STEM education. This includes allocating resources for programs aimed at supporting women education in STEM, offering scholarships, and monitoring progress through data collection. Additionally, partnerships with Non-Governmental Organizations and the private sector can scale up initiatives.

Providing equal opportunities for leadership

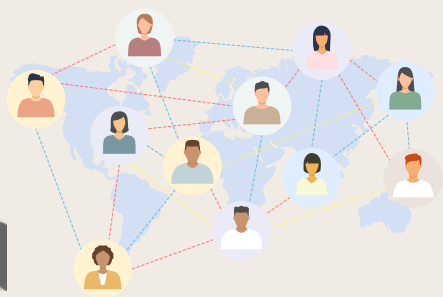
Equal opportunities for leadership in science-related clubs and activities are crucial to fostering the participation and confidence of women in STEM fields. Taking on leadership roles allows women to develop confidence in their abilities. Activities allow women to develop essential skills such as communication, teamwork, problem-solving, and time management. Leadership roles come with responsibilities; when women take on these responsibilities, they learn to manage their tasks effectively.

Global Collaboration

Collaboration with international organizations and institutions can provide valuable insights and resources to bridge the gender gap in STEM. Learning from successful initiatives in other countries and adapting them to the Indonesian context can be beneficial.

Promoting STEM education for high school girls in Indonesia is vital for achieving gender equality and fostering a diverse and talented workforce. Integrating GEDSI principles in the Energy Transition sector can further enhance these efforts, creating inclusive environments and addressing systemic barriers. By implementing these strategies, Indonesia can empower more women to succeed in STEM fields and contribute to economic growth and innovation.





CONCLUSION

Promoting STEM education for high school girls in Indonesia is essential for fostering gender equality and building a diverse, skilled workforce that can drive future innovations, especially in the energy transition sector. By integrating GEDSI principles into STEM initiatives and the broader energy transition framework, systemic barriers such as gender stereotypes, lack of role models, and limited access to resources can be addressed. This will create more inclusive environments that empower women to pursue STEM careers, contribute to economic growth, and participate in leadership roles within STEM fields. Through education reform, mentorship, government initiatives, and global collaboration, Indonesia can pave the way for a more equitable and prosperous future where women play a significant role in technological advancement and the energy transition.



CHAPTER 5

Additional Resources and Support Program



10 ADDITIONAL RESOURCES



Introduction

To assist in planning and implementing projects related to Gender Equality, Disability, and Social Inclusion (GEDSI), toolkits serve as invaluable resources, especially in complex areas like energy transition.

These resources offer structured frameworks, actionable strategies, and measurable indicators to guide stakeholders in embedding GEDSI principles into their policies, programs, and decision-making processes.

In the context of energy transition, which impacts diverse communities, toolkits play a crucial role in ensuring that marginalized groups, such as women and people with disabilities, are included.

Several books and toolkits provide essential guidance for planning and designing GEDSI-focused projects, offering practical steps for integrating GEDSI considerations. This enables project implementers to develop inclusive solutions that ensure equitable access to energy, create sustainable job opportunities, and improve social outcomes, making the transition process more fair and just for all.

E-BOOK

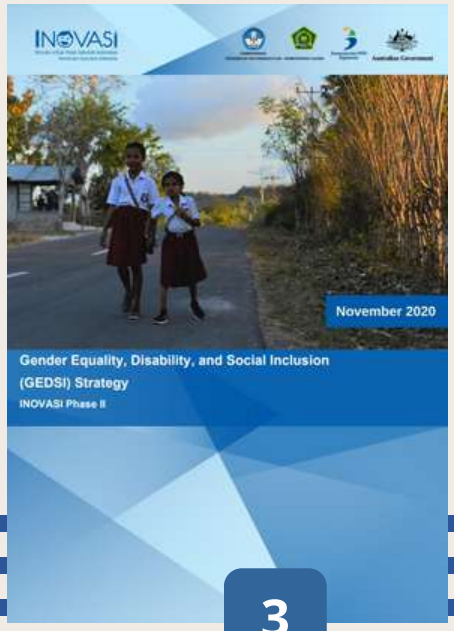
Various e-books provided by organizations in partnership with the Australian government or those receiving financial support from such sources can serve as valuable additional resources for understanding and implementing GEDSI in Indonesia. Some relevant e-books include:



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1."Gender Equality, Disability and Social Inclusion (GEDSI) Toolkit for Health Partnerships" by The Health Education and Training Institute (THET)

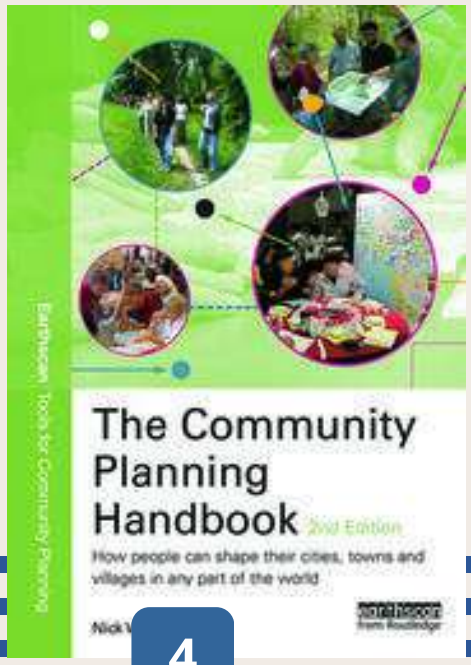
This e-book offers a comprehensive guide on how to integrate GEDSI into health sector participation, including indicators, strategies, and actionable steps to enhance gender equality and social inclusion

2."Mainstreaming Gender Equality, Disability and Social Inclusion (GEDSI) and the Prevention and Response to Sexual Violence in Vocational Education and Training Institutions" by ILO Indonesia

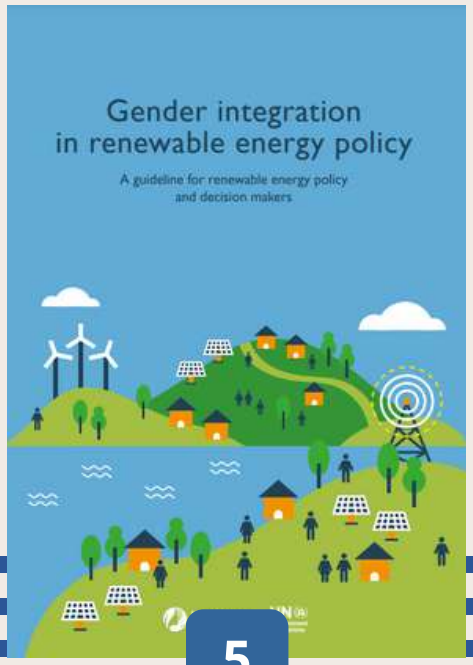
This e-book discusses the integration of GEDSI and strategies for the prevention and response to sexual violence within vocational education and training institutions, providing examples of activities that can be implemented.

3."Gender Equality, Disability and Social Inclusion (GEDSI) Strategy for INOVASI Phase II" by ENG INOVASI

This e-book presents the GEDSI strategy for INOVASI Phase II, focusing on enhancing equitable access to quality services and offering examples of actions that can be taken to implement this strategy.



4



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4. "The Community Planning Handbook" by Nick Wates

This e-book primarily focuses on participatory approaches to community planning, providing tools, techniques, and case studies that encourage inclusive and collaborative planning processes. The principles of inclusivity and participation outlined in the book can certainly be applied to promote gender equality and address disability issues in community planning.

5. "Gender Integration in Renewable Energy Policy: A Guideline for Renewable Energy Policy and Decision Makers" by United Nations Environment Programme

The purpose of this guide is to introduce and improve the integration of gender issues in renewable energy policies, plans and strategies by providing practical ways to step up commitments in renewable energy policy in an inclusive and gender responsive way. This guide is for energy policy and decision makers in order to:

1. Understand the linkages between gender equality and renewable energy;
2. Learn some steps on how to integrate gender into regional, national or sub-national renewable energy policies, plans and strategies; and
3. Learn how to address the lack of women's participation in decision-making in the energy sector

6. "Disability, Poverty and Development" by the Department for International Development (DFID)

This e-book explores the links between disability and poverty, examining how exclusion and discrimination impact the lives of people with disabilities in developing countries. It provides a framework for inclusive development, focusing on policy and practice to ensure that development efforts are accessible and beneficial to all.

GEDSI TOOL KIT



One of the most important lessons is that actions to address gender inequalities must be explicit throughout development planning and programming. Without explicit objectives, strategies, targets, and actions to ensure women's equal participation and outcomes, the needs of women and girls continue to be overlooked.

Identifying clear indicators to measure gender equality results is essential for assessing and improving performance. This is why a GEDSI toolkit must ensure its implementation truly benefits the target community. Some of the GEDSI tool kits are:

1. Gender Tool Kit: Energy – Going Beyond the Meter (2012) by the Asian Development Bank

This toolkit presents a menu of gender equality outcomes, results, and indicators, focusing on the sectors and strategic priorities of the Asian Development Bank (ADB).

2. UN Women's Tool 10 - Employing Gender-Responsive Evaluation Methods

This tool provides methodologies for conducting evaluations that are sensitive to gender issues, ensuring that gender equality is considered throughout the evaluation process.

3. Harvard Analytical Framework

A framework used for gender analysis in development projects, focusing on understanding the roles, activities, and resources associated with different genders.

4. CBM International Disability and Gender Analysis Toolkit

This toolkit provides tools for programs to assess knowledge, attitudes, and practices, which can inform situation analysis and design, create baseline data, and improve monitoring, evaluation, accountability, and learning.

5. UN Partnership on the Rights of Persons with Disabilities Guidance for Conducting a Situational Country Analysis of the Rights of Persons with Disabilities

This guidance sets out a framework for analyzing the preconditions to disability inclusion, levels of participation, inclusion of marginalized and under-represented groups, and the rights of women and girls with disabilities.

6. Moser Framework (Triple Roles)

This toolkit explores the division of labor between women and men, focusing on the different roles women play in society: productive, reproductive, and community management roles. It distinguishes between practical gender needs, which are immediate and related to basic survival, such as access to water and healthcare, and strategic gender needs, which address long-term structural inequalities, such as equal pay and legal rights. This framework is essential for recognizing the distinct roles women occupy and ensuring that development interventions address both their practical and strategic needs.

7. Levy's Web of Institutionalisation Framework

This toolkit is designed to assess how gender mainstreaming is integrated into institutions. It focuses on the extent to which gender equality principles are institutionalized within organizational policies, programs, and structures. By examining elements like political will, accountability, and organizational culture, this framework evaluates how well an institution incorporates gender perspectives and promotes gender equity. It is especially useful for analyzing institutional commitment to gender equality in public policy and organizational practices.

8. Gender Analysis Matrix (GAM)

This tool is for monitoring and evaluating the gender impact of development programs, particularly at the community level. It examines how projects affect men and women in four key areas: labor, time, resources, and socio-cultural aspects. This matrix is especially useful in disaster risk management (DRM) programs, where understanding gendered differences in impact and response is critical. By focusing on the specific needs and contributions of both genders, GAM helps ensure that development initiatives foster equitable resilience and recovery.

9. Equality and Empowerment Framework (Longwe)

This Frameworks provides a structure for evaluating the contribution of development interventions to women's empowerment. It is based on five levels of empowerment: welfare, access, conscientization, participation, and control. This framework allows for a detailed assessment of how various sectors, such as health or education, contribute to advancing gender equality. By identifying progress across these stages, it helps in tracking how interventions improve women’s control over their lives and participation in decision-making processes.

10. Capacities and Vulnerabilities Framework (CVA)

This tool kit is primarily used in the context of humanitarian disaster preparedness, focusing on the existing capacities and vulnerabilities within a community. This framework examines the resources and strategies people use to cope with disasters, as well as their weaknesses, with particular attention to gendered differences. By identifying how women and men are differently affected by and respond to disasters, the CVA framework ensures that gender-sensitive approaches are incorporated into disaster preparedness and response plans, enhancing overall community resilience.

11. People-Oriented Framework (POP)

This toolkit expands on the Harvard Analytical Framework by providing a broader social perspective, examining how development interventions impact the livelihoods of different groups, particularly women and marginalized communities. This tool encourages a participatory analysis, ensuring that projects consider the needs and contributions of various social groups, including those often overlooked. By incorporating a gender lens, the POP framework helps ensure that development projects foster inclusivity and equitably improve livelihoods for all, regardless of gender or social status.

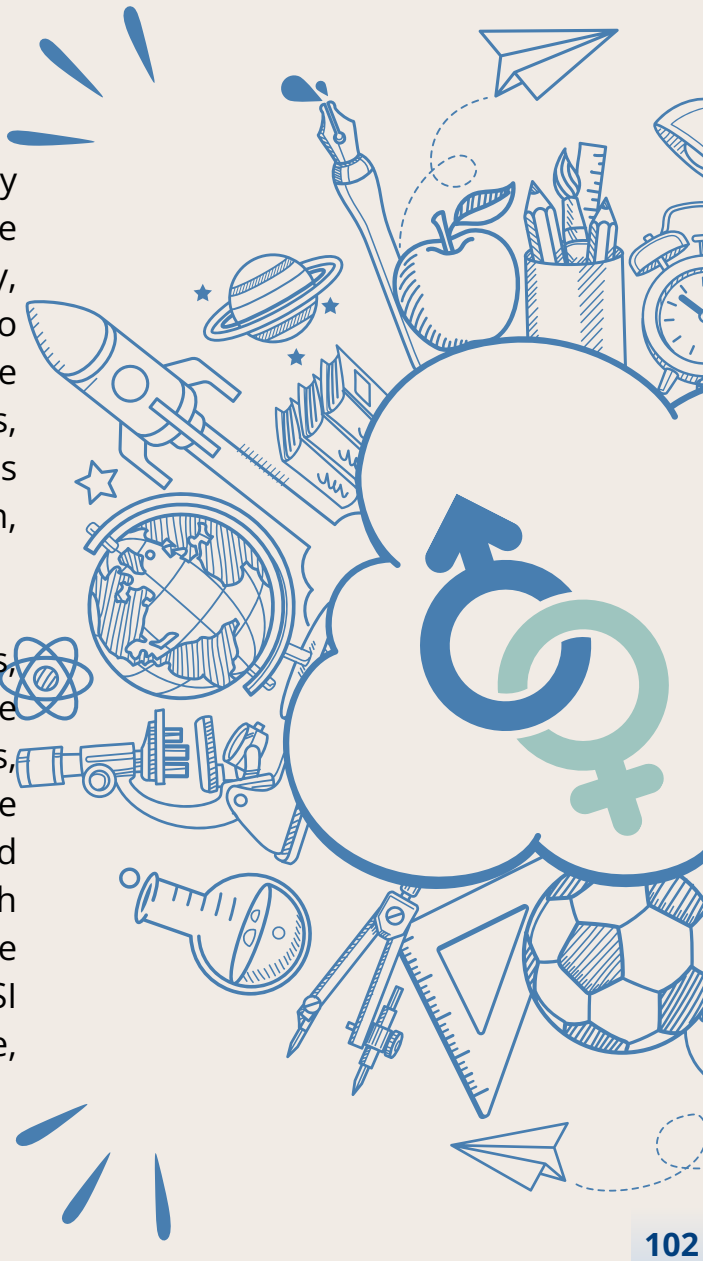
12. Social Relations Framework (SRF)

This tool focuses on the gendered aspects of sustainable development and institutional change by examining the dynamics of social relations within key institutions like the State, Market, Community, and Family/Kinship. This framework highlights how access to resources, power, and opportunities is shaped by gender and seeks to promote human well-being through institutional reform. By considering how social relations affect both men and women, the SRF framework ensures that development initiatives address not only economic growth but also the social and gender equity necessary for long-term sustainability.

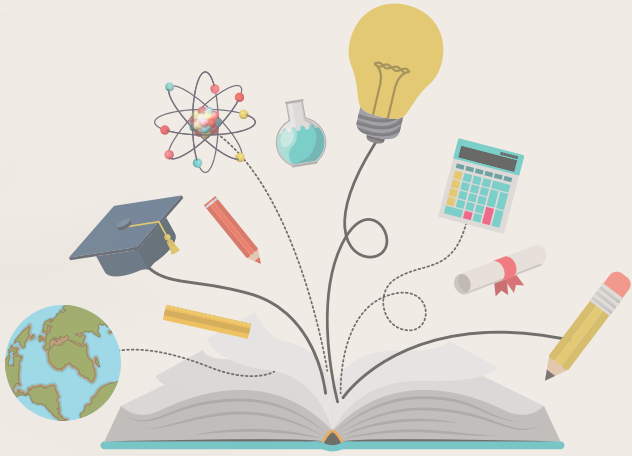
CONCLUSION

Various e-books and toolkits supported by international organizations provide invaluable resources for integrating Gender Equality, Disability, and Social Inclusion (GEDSI) into development sectors in Indonesia. These materials offer practical strategies, measurable indicators, and case studies across key areas such as health, education, energy, and community planning.

By embedding GEDSI principles into policies, programs, and evaluation frameworks, these resources help to address gender disparities, promote disability inclusion, and ensure equitable access to opportunities and services. The availability of such comprehensive tools is critical to the successful implementation of GEDSI initiatives, leading to more inclusive, sustainable outcomes for all communities.

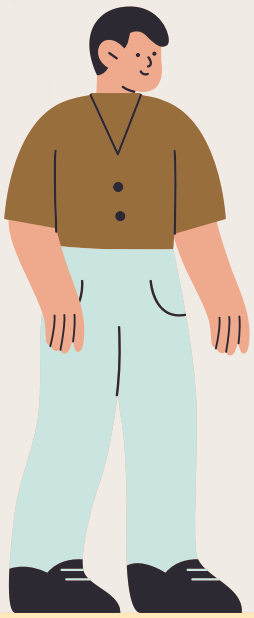


11 SUPPORT PROGRAMS



Introduction

We are now in the last section of this book. We have learned about what GEDSI in Energy Transition is and why it is important to be implemented, learning from the example of the international framework and the Australian case, how university students can contribute to the campaigning of this aspect, also the GEDSI in Energy Transition e-book and tools. Now, we discuss a support program that can be used by you, as university students, to explore more about the GEDSI in Energy Transition concept by providing some information about the programs and mentoring activities.





Programs

Below are several programs that can help university students better understand the concept of GEDSI. Although these programs are not directly related to energy transition, they can enhance students' understanding of the GEDSI concept. This, in turn, can make it easier for university students to learn how to incorporate GEDSI into the energy transition.

1.Education and Training Programs

Organizations such as International Labour Organization (ILO) Indonesia offer education and training programs focused on GEDSI and the prevention of sexual violence within vocational education and training contexts.

2. Online Resources

UN Women offers a free online course on gender equality within the context of the 2030 Sustainable Development Agenda, which can help expand knowledge and skills in implementing GEDSI. Additionally, a range of books and online guides available for free or purchase can serve as valuable resources for understanding and implementing GEDSI.

3. Commitment and Collaboration

Organizations that partner with the Australian government or receive funding from such sources often demonstrate a strong commitment to implementing GEDSI, making them effective partners in various support programs. For example the SKALA program that produces Gender Equality, Disability and Social Inclusion Strategy 2023-2026.

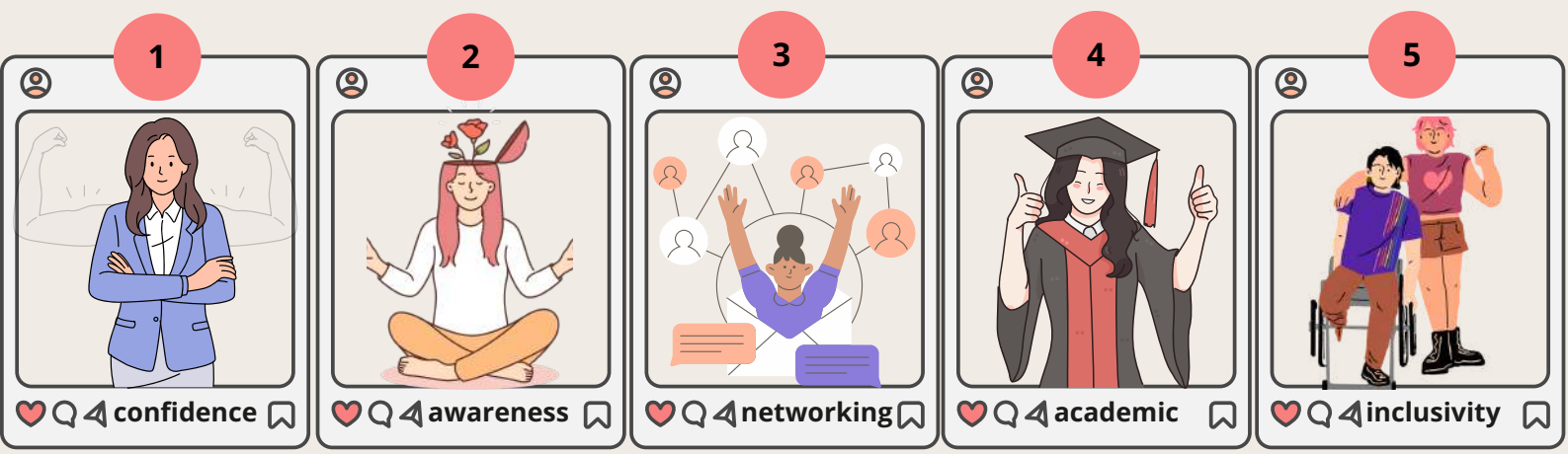


Mentoring Activities

A mentoring program is a structured relationship in which an experienced individual (the mentor) provides guidance, support, and knowledge to a less experienced person (the mentee) to help them develop skills, advance their careers, or achieve personal growth. The primary goal of a mentoring program is to foster professional development and facilitate the sharing of insights, experiences, and expertise.

A mentoring program related to Gender Equality, Disability, and Social Inclusion (GEDSI) for university students is designed to promote an inclusive environment where all students, regardless of gender, disability, or social background, receive equal opportunities for personal and academic growth. The program aims to support students from underrepresented groups by providing guidance, fostering a sense of belonging, and helping them navigate the challenges they may face in their educational and career journeys.

Benefits of a GEDSI-Focused Mentoring Program for University Students are:



1. Empowerment and Confidence Building

Mentees gain confidence and feel empowered to pursue their academic and career goals, knowing they have support and guidance from their mentors.

2. Increased Awareness and Sensitivity

Mentors and mentees develop a deeper understanding of the challenges faced by underrepresented groups and learn how to advocate for inclusivity in their academic and professional lives

3. Enhanced Networking Opportunities

The program provides students with access to a network of peers, mentors, and professionals who are committed to GEDSI principles, opening doors to new opportunities and resources.

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4. Academic and Personal Growth

Mentees receive guidance and support in their academic pursuits, personal development, and career planning, helping them to succeed in a diverse and inclusive environment.

5. Promotion of an Inclusive Campus Culture

By actively promoting GEDSI principles, the mentoring program contributes to creating a more inclusive and supportive university culture, benefiting the entire student body.

There are some examples of mentoring programs related to GEDSI in Energy Transition in Indonesia, such as:

1.Woman in Mining and Energy (WIME)

WIME is a strategic hub that aims to initiate a partnership with companies, government, and other relevant stakeholders through education and knowledge management to benefit advocacy efforts on gender in the mining and energy sector. They have a program related to mentoring programs dedicated to female graduates with STEM backgrounds who are interested in pursuing their career in the mining and energy sectors. Also, an internship program and a masterclass program.



source: women in mining and energy

2. Woman in Energy Indonesia

Women in Energy Indonesia (WOMENINENERGY.ID) is a community that aims to inspire more Indonesian women to be impactful leaders in the energy and STEM sector and to empower them to break the invisible glass ceiling of leadership roles for women in the energy sector.

WOMENINENERGY.ID believes that comprehensive understanding and collaboration cross-area make the the best outcome of someone's energy career by focusing its programs for 6 energy-related career areas, which are: Research and Development, Engineering, Corporation, Consultancy, Start-up, and Policy-making. It regularly conducts several classes, mentoring sessions, and workshops featuring various influential people in the energy sector.



source: Women in Energy Indonesia (WOMENINENERGY.ID)



CONCLUSION

In conclusion, this book has provided a comprehensive overview of GEDSI (Gender Equality, Disability, and Social Inclusion) within the context of energy transition, highlighting its importance and examining international frameworks and case studies. University students are encouraged to engage with various support programs designed to deepen their understanding of GEDSI. These programs include education and training initiatives, online resources, and mentoring activities that collectively aim to enhance awareness, build confidence, and promote inclusivity. By leveraging these resources and participating in mentoring programs, students can effectively integrate GEDSI principles into their academic and professional live, contributing to a more equal and inclusive energy transition in Indonesia.



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