The Hague International Model United Nations

Forum: Sustainable Development Committee Sub-Commission 1

Issue: Measures to expand infrastructure and upgrading technology to provide clean energy in all developing countries [SDG7]

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Introduction

As of 2025, approximately 730 million people are living without proper electricity access, the majority of these people are located in Sub-Saharan Africa and Developing Asia[1]. The United Nations set out to resolve this issue by 2030 as one of its Sustainable Development Goals (SDG), specifically through SDG 7: "Affordable and clean energy." The aims of this goal include improved efficiency, access, and research on renewable energy as well as its expansion in Less economically developed countries (LEDCs). According to the United Nations renewable energy is becoming significantly cheaper, efficient and reliable, a positive development in the energy sector. The use of Fossil fuels, which still sources a large majority of energy worldwide, is unsustainable and harmful to our ecosystems. The 2025 SDG Report saw renewable energy as the fastest growing form of energy production, predicted to surpass the coal industry by the end of the year. Whilst countries have put effort toward meeting this goal, with global electricity access boosting from 84% in 2010 to 92% in 2023, developing countries still struggle with clean energy investments.[2]

Energy is fundamental to economic growth and development. Access to reliable energy enables services and systems that support modern life, such as housing, education, healthcare, communication, transportation and more. When regions lack reliable energy, their development is hindered, impacting the overall population of the area. This issue disproportionately impacts marginalized communities, especially those in developing countries, who are more likely to experience energy poverty. Without access to modern electrical grids, many people depend on traditional fuel sources that pose risks to their health and contribute to environmental degradation.[3]

Developing the infrastructure and technology needed to provide clean energy worldwide is a major global challenge. Many rural regions lack power grids, transmission lines, and clean energy sources resulting in people being left without stable electricity and unable to complete basic tasks like cooking, and homework. Additionally, people in rural areas in LEDC's often rely on harmful energy sources such as petroleum, which can result in health and environmental risks.[3] Ultimately, measures to expand infrastructure and upgrade technology to provide clean energy in all developing countries, is a significant global challenge which should be addressed, due to its large effect on our people and planet.

Definition of Key Terms

Clean energy

Energy sources that generate power without producing harmful emissions or damaging the environment. This can be both renewable and non-renewable energy, for example nuclear energy, which despite being clean, is non-renewable.[4]

Renewable energy

According to the United Nations, it refers to "energy derived from a natural source, which is replenished at a higher rate than it is consumed." Common examples of renewable energy sources include wind and solar energy. Fossil fuels, such as coal and natural gas on the other hand are non-renewable and cause harm to the environment when burnt for energy.[5]

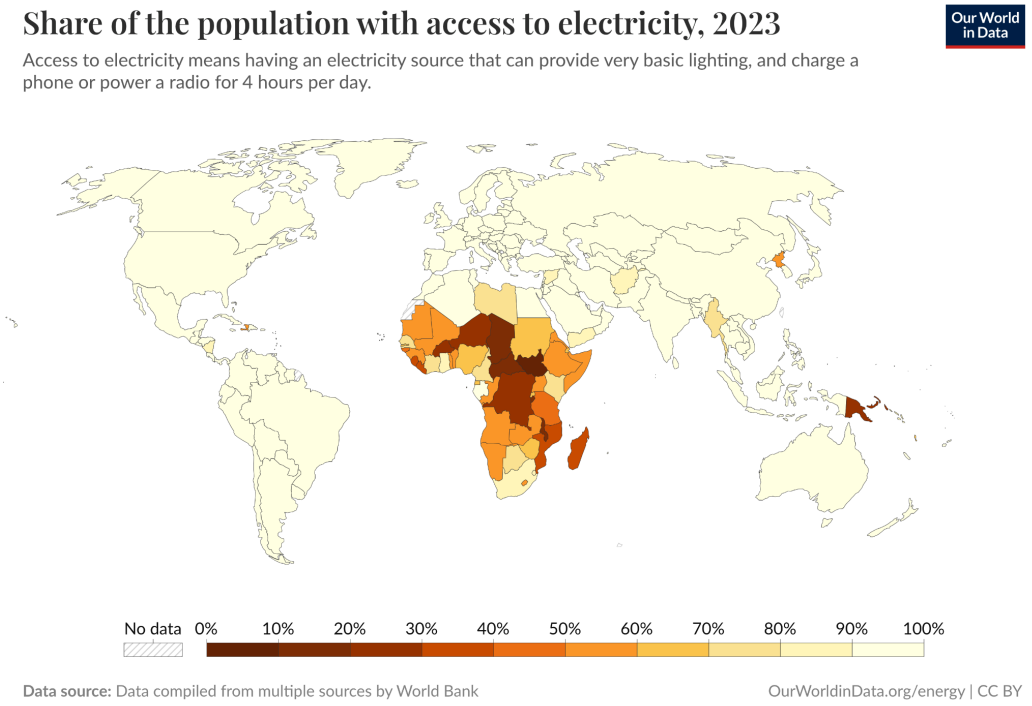
Less Economically Developed Countries (LEDC)

Refer to countries, which when compared to other countries, has a lower standard of living present in its society. There is no set metric for defining a developing country, but in most cases, a developed country may feature: corrupt or less capable government, poorer life expectancy, education and healthcare services etc. all which reduce the quality of life.[6]

Energy Infrastructure

Refers to the systems and facilities allowing for the production, extraction, transportation and availability of energy in our society. This includes both small and large scale technologies, and takes into account both renewable and non renewable energy source production.[7]

Background Information



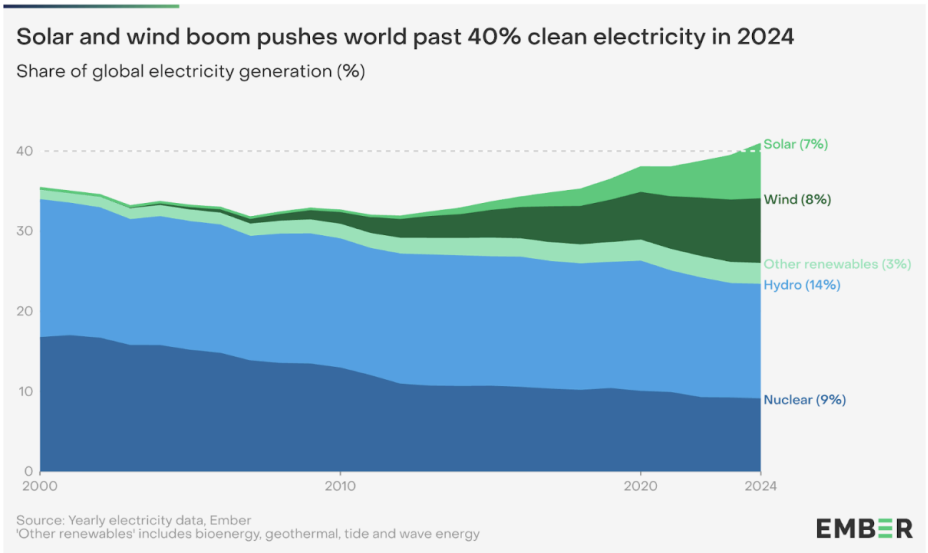
Access to electricity has been increasing over the last decade, achieving significant benchmarks. . 2015 was the first year where the number of people without electricity dropped below the 1 billion threshold. Looking at the figure above, it can be seen that as of 2023, the majority of the world has reached a point of energy provision. Even so, regional disparities continue to grow strong, specifically in Africa and certain Asian countries as seen through the darker shaded regions on the map.[8]

Persistent regional disparities

The United Nations Economic Commission for Africa reports that the continent receives less than 3% of all energy investments despite having 60% of the world's solar potential. Additionally, due to the large gap in finance and economic stability, Countries in Sub-Saharan Africa are often left with short term rather than long term solutions, resulting in over 700,000 prevented deaths annually as families are forced to rely on dangerous substances such as kerosene and firewood for cooking.[9]

Governments face responsibility in ensuring citizens have access to energy. The cost of implementing clean energy sources, remains a barrier in LEDCs, leaving them dependent on fossil fuel dependency. The main drivers of this challenge include poverty, energy security, implementation and development costs as well as the need for continued economic growth as a main priority.[10]

Major Developments



Major developments in recent years include large increases in clean energy worldwide. Solar, wind, hydro and nuclear energy have been consistently developed and prioritized. Looking at the diagram above, it can be seen how as of 2024 clean energy contributes to more than 40% of global electricity generation. Think-Tank "Embers" managing director also states that clean energy is set to develop and grow at a quicker rate than the rising energy demand, and is thus driving global economic development. With this, a future reliant on renewable energy sources rather than fossil fuels seems possible.[11]

Furthermore, another development is the efforts of governments in countries, such as Morocco, South Africa, Namibia, Kenya, etc. to improve their energy availability and sustainability. For further detail, looking specifically at Kenya, 80% of all its energy is produced by renewable energy sources. Efforts like these set a leading example, other countries may choose to follow.[12]

Major Countries and Organizations Involved

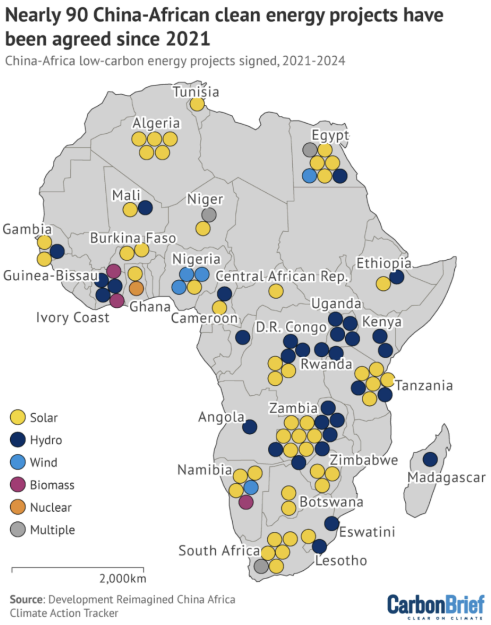
UN and International involvement

The United Nations has done continuous work to achieve SDG 7 by 2030. An example of this is the UN initiative "Sustainable Energy for All", launched in 2011 calling for 3 objectives by 2030: universal access to modern energy sources, improved energy efficiency, and doubled renewable energy globally.[13] This initiative benefited LEDC's in developing their own national strategies and gathering investment, showcasing its success in that aspect. Additionally the UN and its committees have formed multiple resolutions in hopes of tackling the prevailing issue of access to clean energy, including but not limited to:

- International Year of Sustainable Energy for All, 20 December 2010 (**A/RES/65/436**)

- Promotion of new and renewable sources of energy, 21 December 2013 (**A/RES/67/215**)
- International Day of Clean Energy, 25 August 2023, **(A/RES/77/327)**
- Ensuring access to affordable, reliable, sustainable and modern energy for all, 19 December 2024 **(A/RES/79/211)**

China



In the last decade China has become one of the main providers of energy sources to LEDCs. Investing into energy projects in developing nations, primarily in Africa. Though a lot of these projects have been fossil fuel based, China has decided to switch this investment into more renewable energy sources, such as solar panels. With this there are around 90 clean energy projects which have been established since 2021, seen in further details in the figure above.[14]

Timeline of Events

Date	Description of event
June, 5-6th, 1972	Stockholm Conference: The first global conference on environment and sustainable development. It was the first international convention to bring nations together to address the issue of climate change and also supported the creation of the UN Environment Programme.[15]
August, 10-21th, 1981	UN Conference on New and Renewable Sources of Energy: First conference

	on the development of renewable energy. The main goal of this conference was shifting the global reliance on oil to renewable energy.[16]
June, 3-14th, 1992	Earth Summit: Established the The United Nations Framework Convention on Climate Change. It named sustainable development as a significant global priority.[17]
September, 2000	Development of the Millenium Development Goals (MDGs), as a part of the Millennium Declaration by the UN. There was no specific goal on sustainable development, but it was touched upon as a concern regarding poverty and health.[18]
June, 20-22nd, 2012	The SDGs were developed at the 2012 Earth Summit in Rio de Janeiro and officially put into force in 2015. Goal 7 was focused on sustainable energy and infrastructure development.[19]
November, 4th, 2016	Paris Agreement put into force: A binding, international treaty with the purpose of shaping a global pathway to net zero emissions by limiting global.[20]
December, 1-13th, 2023	COP28 Agreement signed. Global commitment to shift away completely from fossil fuels, relying on purely renewable energy.[21]
June, 2025	Renewable energy surpasses Coal energy in electricity production.[22]

Previous Attempts to solve the Issue

UN Decade of Sustainability for all Initiative

2014-2024 was named the decade of sustainability for all, and encouraged countries and international organisations to significantly increase grid expansion, infrastructure development, and clean energy investments. It fostered strong coordination between countries allowing for an investment of over 1.4 trillion US dollars towards reducing emissions, working towards SDG 7. Additionally, it highlighted the challenges of LEDCs. . Despite these efforts, challenges, especially in LEDC's prevail, which is why international cooperation remains vital for the achievement of SDG 7.[23]

IRENA projects and programmes

The International Renewable Energy Agency (IRENA) has spent the past decade facilitating projects and programmes meant to assist developing countries in things such as grid modernization, infrastructure development and renewable energy production. They have placed a large focus on Africa, southern Asia and

certain island nations. However, implementation faces limitations due to lack of funding and weak infrastructure.[24]

2025 SDG Goal 7 Progress report

SDG goal 7 remains one of the strongest global efforts to provide clean energy for all, and has made significant progress over the past decade having reduced energy intensity, people without access to electricity, the proportion of people without access to clean cooking, and having increased renewable energy capacity, and financial flows towards developing countries to support clean energy research and development.[25]

Possible Solutions

Grid Modernization

This refers to the continuous evolution and transformation of electrical grids, including the digitalization of conventional infrastructure, making it vital for improving the efficiency, sustainability and flexibility of the world's energy systems.[26] The digitalization of energy systems would allow for higher levels of renewable energy, supporting its development.

Decentralized renewable energy systems

Decentralized renewable energy systems are considered the most cost and time efficient government solutions for providing energy in less developed areas, as they don't require transmission lines and grid expansion.This allows for governments to provide clean sources of energy, at a lower cost, allowing for quicker implementation and results.[27]

Creation of International renewable/clean energy funds

This includes having a UN organized and funded initiative with the specific goal of improving energy infrastructure through ways such as upgrading previously developed national grids, expanding old ones, investing in more renewable power plants, building transmission networks, etc.

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