

Sustainable Development Goal 7: Affordable and clean energy

The connection between Energy and other Sustainable Development Goals Introduction

Clean energy is energy from sources which do not pollute, including energy generated from recyclable sources which don't emit greenhouse gases.

Renewable energy and green energy are not the same as clean energy, although they're often used together. Both of them are focused on the source that generates the energy, but clean energy is focused on the result, the energy generation. The creation of energy from renewable sources doesn't always leave us with clean air and doesn't always come from green sources.

The environment provides a series of renewable and non-renewable energy sources i.e. solar, wind, hydropower, geothermal, biofuels, natural gas, coal, petroleum, uranium. The International Energy Agency's (IEA) conclusion in its World Energy Outlook 2020 that solar power is now the cheapest electricity in history. The technology is cheaper than coal and gas in most major countries.

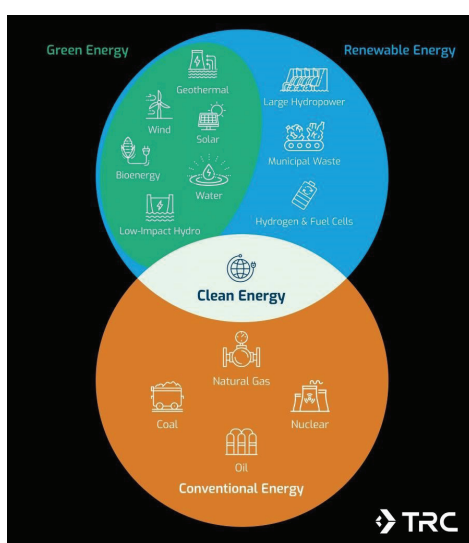


Figure 1. Distinction between types of energies

Connection between energy and education

Energy plays essential role in ensuring that the children have access to information and communication technologies and environment with appropriate heating, cooling, lighting and safe drinkable water.

Electricity in schools increases the time students spend learning and improves children's and teachers' experience. It also increases the chances of children completing their primary education. Similar results have also been presented in UNICEF's Solar in Education Programme in Sudan, where solar PV systems were installed in schools, homes and solar-powered tablets were provided for the children to continue learning.

Indicator 1 measures the proportion of schools offering basic service and electricity is considered as basic service. According to the existing data from the UNESCO Institute of globally, an average of 75% of primary schools have access to electricity. However, 1 in 4 children in primary schools attend school without any form of electricity. The approximate number of these children is 177 mostly in sub-Saharan Africa, South Asia, and Latin America. In Niger and Sierra Leone, only 5% and 14% of schools, respectively, have access to electricity.

Indicator 2 measures access to electricity in educational facilities. Only 31% of educational facilities in the countries(Cambodia, Ethiopia, Kenya, Myanmar, Nepal, and Niger) who were part of the research of World Bank have electricity. This is through so called on-grid source meaning

those systems operate in parallel with the distribution network. In the event of a lack of electricity in ON GRID systems, it is replenished from the network. Only 9% of electricity comes through off grid systems, who operate independently of other energy sources and are systems that are not connected to the electrical distribution network.

For some of the indicators there is not enough data, like proportion of schools with access to clean cooking facilities and girls and boys with access to electricity at school. Energy and education ministries must invest in data collection and monitoring. The private sector and civil society should also work to collectively shape a linked energy and development agenda to go in direction of progress of Sustainable Development Agenda 2030.

Connection between energy and gender equality

Having access to affordable and clean energy is a precondition for the achievement of Sustainable Development Goal (SDG) 5 on gender equality and SDG 7 on energy. Sustainable Development Goal 7 is one of only six out of the seventeen SDGs with no gender-specific indicators, according to UN Women. The research shows that gender inequalities in energy are noticeable in four key areas where progress made in closing gaps needs to be measured:

- 1) Access to electricity and clean cooking fuels and technology – It affects women due to their gender roles and responsibilities, due to the time spent at home and unpaid care; this limits access to education and employment, increases women's exposure to health risks especially indoor air pollution.
- 2) Employment and leadership, both managerial and political – it is shown that gender diversity in managerial roles brings better effectiveness and financial stability. In renewable energy, only 22% of technical jobs are estimated to be held by women and in the power sector, women's employment rate in utilities may be even lower. Companies with women leadership tend to invest in sustainability and are more energy efficient.
- 3) Energy entrepreneurship and productive uses of energy – Entrepreneurship represents a sector which is crucial for women empowerment. Research shows that women represent one in three entrepreneurs but receive only 3% of equity financing. The obstacles and barriers need to be overcome to achieve progress in the field.

In order to have more women included in careers in energy sector, actions that can be taken can be: energy policies should be in line with the needs of women, policies from other countries regarding gender equality and energy should be considered. Donors as well should be included in promoting the gender equality to help climate change solutions. More needs to be done to include women in green economy, for example by women benefiting of projects focusing on clean technology.



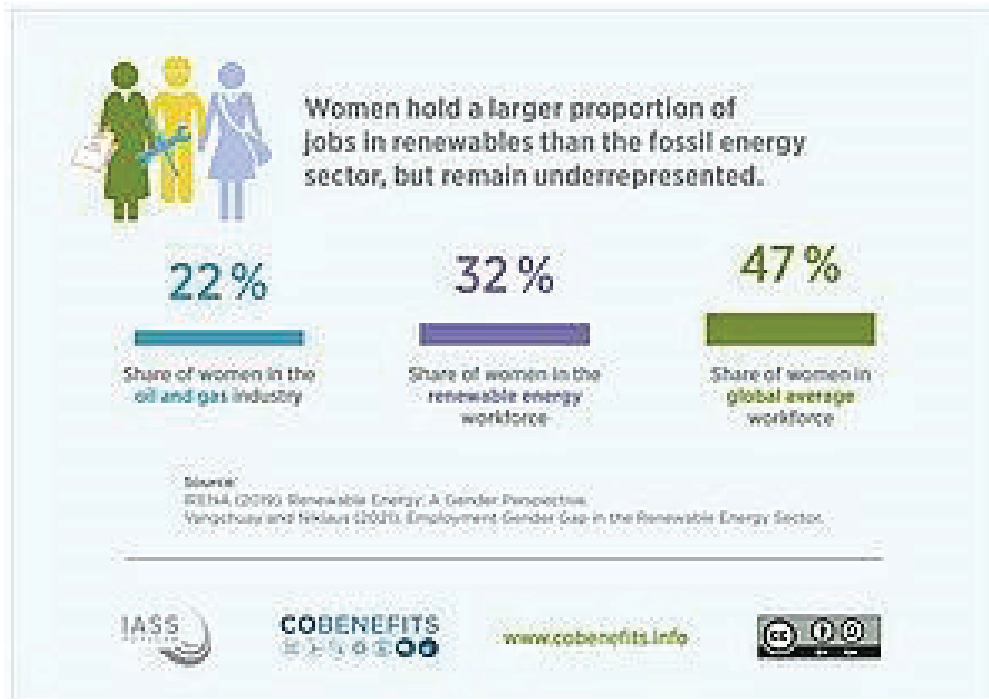


Figure 2. Proportion of women in oil and gas industry, in renewable energy workforce and global average workforce

Resources and further reading:

1. <https://www.oecd-ilibrary.org/sites/c7cbe91b-en/index.html?itemId=/content/component/c7cbe91b-en>
2. https://sdgs.un.org/sites/default/files/2022-06/2022-UN_SDG7%20Brief-060122.pdf
3. <https://www.trccompanies.com/insights/a-conversation-about-clean-energy/>
4. <https://www.international-climate-initiative.com/en/iki-media/news/energy-policy-turn-around-inclusion-of-gender-equality/>