ODUMUNC Issue Brief
Economic and Social Council (ECOSOC)

Achieving energy security and Environmental sustainable development

By Federico Minelli
Old Dominion University Model United Nations

Introduction

For most of the 193 UN Member States, energy is the key to national development and individual welfare. Accelerating energy use improves standards of living and quality of life. But rising energy use also is the dominant force in global warming, sea level rise and environmental degradation. Accelerating energy consumption harms the planet and promises deteriorating quality of life for future generations. For the international community, one of the great riddles is how to ensure fair global development without undermining future welfare?

Energy issues pit post-industrial and industrial states, mostly of the global north, against the have-not states of the global south, raising painful issue of fairness. Aggressive energy restrictions are essential to preserve global eco-systems and minimize the impact of global climate change. But restrictions threaten the immediate welfare of energy exporters and the efforts of many countries to lift their people from poverty. Balancing these conflicting problems is exactly the kind of issue the United Nations was created to resolve. And it is vital to stress that global purges is being made.[1]

For the average family in India, for example, access to air conditioning is a life-changing event. But as millions of Indian people gain access, demands for more electricity generation and the resulting pollution increases rapidly. Balancing all these benefits and costs is a difficult problem for every government and the international community.[2]

The key to energy security is diversification.[3] The most readily used forms of are energy are electricity, gasoline and diesel. Ensuring Member States sufficient access requires diversifying the sources of energy in way that are consistent with their economic development and environmental needs.

The United Nations has provided guidance for all states through the 2015 Sustainable Development Goals (SDGs) with coordinate all development assistance, and the Paris Climate Agreement of 2015, which caps emissions of gasses dangerous to the global climate. But economic assistance to help poorer countries diversify their energy sources remains scarce.

[1] 'Renewable energy surges to record levels around the world', *BBC World News*, 1 June 2016, http://www.bbc.com/news/science-environment-36420750

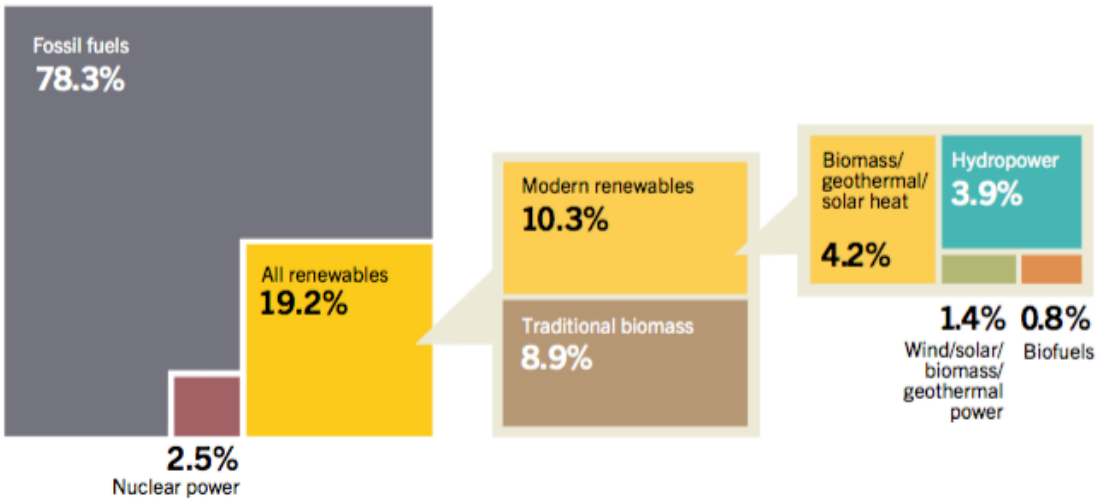
[2] 'Emerging Climate Accord Could Push A/C Out of Sweltering India's Reach', *New York Times*, 12 October 2016, http://www.nytimes.com/2016/10/13/world/asia/india-air-conditioning.html

[3] Daniel Yergin, 'Ensuring Energy Security', *Foreign Affairs*, March-April 2006

http://www.un.org/ga/61/second/daniel_yergin_energysecurity.pdf

Achieving energy security and Environmental sustainable development

Estimated Renewable Energy Share of Global Final Energy Consumption, 2014



As stated by Secretary-General Ban Ki-moon, "Energy is the golden thread that connects economic growth, social equity, and environmental sustainability.

The widespread energy poverty condemns billions to darkness, to ill health, to missed opportunities. Energy poverty is a threat to the achievement of the Millennium Development Goals. It is inequitable and unsustainable". Energy security is emphasized in the Sustainable Development Goals.

Energy security has become increasingly more important in a day and age where energy is used to fuel all aspects of our lives and, therefore, must be shaped in the correct way and direction.

Sustainable energy and renewable fuels are the future, as they have the ability to reconfigure our future. If we continue to use fossil as our main energy source, however, future generations will have a more challenging environment of energy security, and will experience our planet's ecosystem at the very brink of collapse.

Tangible actions must be executed as a reaction to the decisions agreed among international leaders. However, what if you were told that the entire global community could be powered just by utilizing a solar energy based power plant with a surface smaller than Spain.

Solar energy, despite being extremely underrated as an alternate, sustainable fuel source is able to provide more power by hitting the Earth in one hour than humanity uses in an entire year. If solar panels were able to be 20 percent more efficient, which has been proven possible through lab tests, at turning solar energy into power, then the global community would only need to cover a land area smaller than Spain's territory surface in order to power the entire world, using only renewable energy, by 2030.

This map, from the *Land Art Generator Initiative*, shows just how little space is truly necessary:

Achieving energy security and Environmental sustainable development

Current Situation:

There continues to be a lack of fairness in the distribution of energy which becomes increasingly evident as, even today, more than 2.8 billion people have no access to modern energy, that is electricity for home appliance, daycare medicine and emergency operation and internet. Less than half of them do not have electricity at all. Nearly 3 billion people rely on traditional fuels, such as wood and charcoal, for cooking, heating and lighting.

The lack of modern energy services and the dependence on traditional fuel methods triggers major counter effects. For example, most of the smoke created by using wood and charcoal ends up polluting the atmosphere and has direct linkage to the increase in chronic illnesses, most notably respiratory complications. As we find in the political, economic and social fields, the disparity between developed and developing world nations is astonishing. However, during the last 20 years, the concept of renewability has grown and it has developed massively. In late 2015, renewable energy cost reached a competitive level with fossil fuels and was established as a mainstream source of energy around the world. This convergence in price might help a transition toward a more equal and secure access to energy supply especially in the developing countries.

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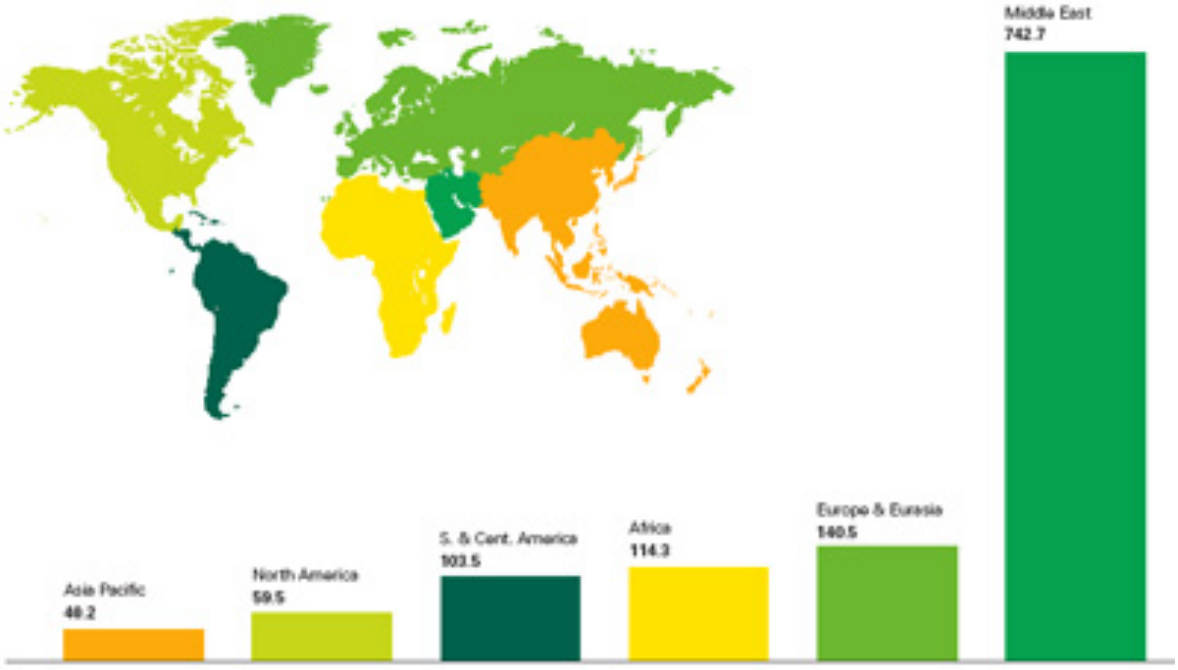


Global distribution of petroleum resources
Credit: British Petroleum, 2014

The '100 Percent Renewable' movement plays a leading role advancing the transition of global energy towards renewable. Private and public companies, advocates of a transition to renewable and clean energy have driven this movement. This campaign has encouraged many nations to make the change from high consumption of non-renewable energy, to energy systems stressing renewable energy resources.

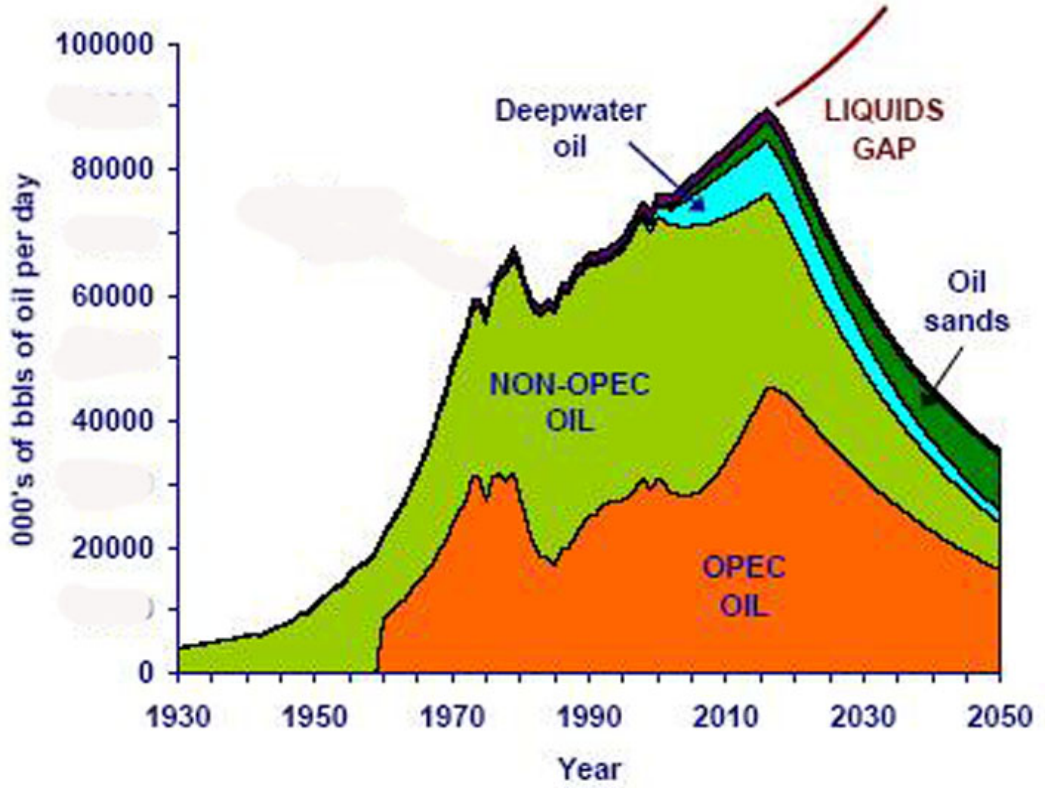
Financially, the switch from non-renewable fossil fuels to renewable energy resources is feasible but expensive this is why all decision-makers have to collaborate with UN regulators in order to share technology among both developed nations and developing nations in order to achieve a more equitable worldwide energy security using renewable sources. An example can be seen in Africa, as one of the sunniest continents on Earth and with the right instruments and guidance, could become a leader in Solar Energy. India has increased the amount of wind turbines in the southern, more isolated, regions of the nation. In less than one year since the introduction of the turbines in 2014, India ranked fifth in the world as player in global wind energy market.

The situation the global community is in becomes astonishingly clear: one third of the world population doesn't have a stable energy source, and most of them rely, as mentioned before, on burning non-renewable material. These practices can be seen largely in the developing worlds of Africa and South-East Asia.

Access to energy in these environments could very well bring stability and improved health standards for all citizens inhabiting those nations. Examples of how increases in the access of safe, renewable energy to developing nations leads to better health care can be seen within the next decade, as the UN has the means to expand the access to modern, sustainable energy services in health facilities. This is particularly true for clinics in rural areas that are not connected to the electrical grid and with little to no access to even basic power. Reliable electricity is crucial for everyday life, for jobs and medicine: powering emergency

medical equipment, for example many types of medicines such as penicillin needs to be store in cool places and performing basic health procedures, especially after dark. However, it is not just a matter of access to medicine and clinical health, but also to industrial production, transportation, constructions and household electrical appliances. Without electricity, there can be no development.

Peak Oil



The Role of the United Nations

Sustainable Energy for All, the initiative launched by UN Secretary-General Ban Ki-moon and World Bank President Jim Kim has, has one of its main goals, for 2030 to ensure universal access to modern energy services. The UN General Assembly has recognized the importance of this objective. Sustainable energy has also been a widely accepted pillar of the post-2015 development agenda as the General Assembly prepares a new set of global goals.

In support of Sustainable Energy for All, the UN Foundation launched a global Energy Access Practitioner Network composed by 2,000 members spread across 170 countries.[4] The Network focuses on the removal of market barriers in order to create effective delivery of energy services by

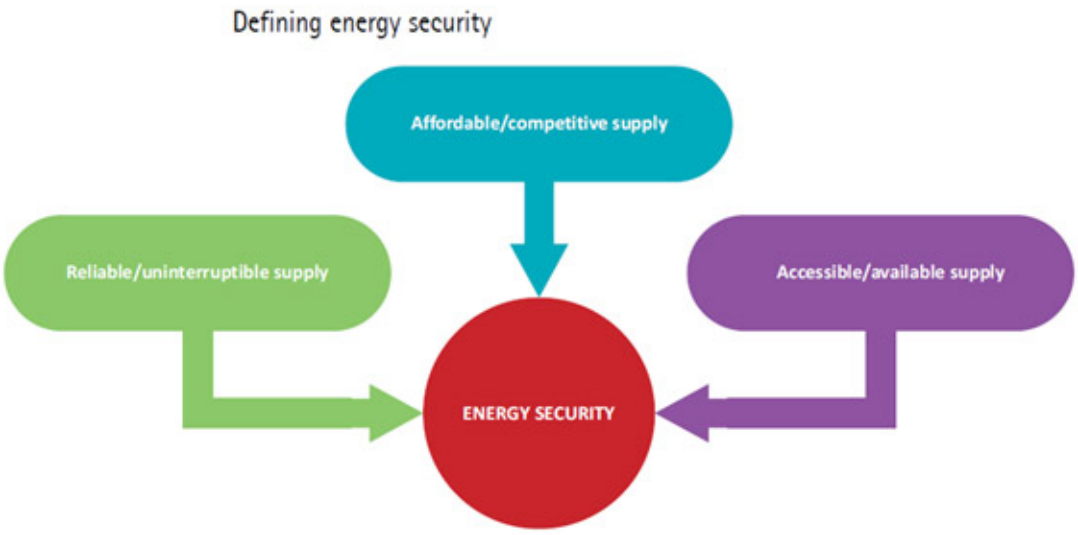
[4] 'Achieving universal energy access', *United Nations Foundation*, n.d. http://www.unfoundation.org/what-we-do/issues/energy-and-climate/clean-energy-development.html

promoting the adoption of new technologies and innovative financial and business models for universal energy access to all nations. Energy security can be summarized in three components branches: reliable supply, affordable supply, and accessibility.

Firstly, reliable supply is when the source of, energy comes from a secure, equally shared source, that be a close power plant using renewable energy like sun or other types.

Secondly, there is affordable, sustainable energy, which is proven to be cheaper. Developing countries have to be fueled by environmental friendly renewable energy. Green energy is cheaper in many different levels, the cost to install a few hundreds windmill blades near Wellington New Zealand, the windiest place on Earth or a hydropower plants in Bangladesh, the country with most rivers in the world is going to be much cheaper than "installing" a new coal mine in the middle of Africa. Its cheaper economically maintenance cost is going to be lower, we can also say it's cheaper environmentally because after all, we are transitioning to renewable in order to stop global warming as well as breaking Earth ecosystem.

Finally, accessibility in both physical and financial terms must be able to be accessed easily by everyone at all times. Whether it is a farmer in Cameroon, or a teacher in Laos, both should have the same affordability, reliability and accessibility to safe, clean, renewable energy consumption.



This issue is one of the most important, and truly life changing, that the United Nations has been concerned about this since the early 2000's.

United Nations Action

The scale of resources need to solve energy security have been estimated by the UN in a crucial report:

> The World Bank has estimated that to achieve the three targets of sustainable energy for all (and the proposed sustainable development goal on energy), total global investments required will be about $600 billion to $800 billion per year, which includes $50 billion per year for energy access alone, and the rest for

energy efficiency and renewable energy targets.[5]

The need to provide a sustainable and environmentally sound energy source that can fuel global economic growth has become a large topic of discussion. With a larger base of available renewable energy resources, coupled with an increase in shared energy efficiency technology, developing nations would be given the tools to economic advantages to the global market, in addition to social and environmental co-benefits.

The promotion of efficient and environmental energy has to be done at all the social levels locally, nationally, regionally and globally. Unfortunately, even if international information sharing on energy efficient technologies can be really effective, still today it is limited. By limited I mean that there is a lack of regulations to control this exchanges as well as a shortage of strategic communication and logistical commitment.

This can make significant changes in order to prove energy for sustainable development. One of the most highly attended conferences held by the United Nations is the Rio +20, that is aimed at the creation of a set of universally Sustainable Development Goals (SDGs) which would have the ability to balance the environmental, social and economic dimensions of sustainable development. SDG's revolve around many pressing and controversial global issues; it is of no surprise that one of them happens to be energy security and renewability.[6]

Some of the main goals for the 2030 SDG's are to ensure universal access to affordable, reliable and modern energy services, to substantially increase the share of renewable energy in the global energy mix, to double the global rate of improvement in energy efficiency, to enhance international cooperation in order to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced, cleaner fossil-fuel technology, to and promote investment in energy infrastructure as well as clean energy technology.

Country and Bloc Positions

Africa and Latin America: The Member States of the African Union and the Organization of American states are especially concerned with cheaper and less restricted access to liveried sources of energy. They need help with access to imported fossil fuels, generation and distribution technology, and infrastructure investment. As principal beneficiaries of recent UN initiatives, they tend to be supportive, but they also work to maintain sovereign control of spending in their countries, resisting efforts to centralize authority by donor countries. They demand that recipient countries alone control how energy security investments are made.

Arab League: the country of the Arab League generally support their petroleum exporting OPEC members such as Bahrain, Iran, Iraq, Kuwait, Libya, Oman, Saudi Arabia and the United Arab Emirates. These countries work in favor of free trade in fossil fuels and work together to strengthen their control over prices. With state budgets heavily dependent on petroleum exports, they require high prices. The richer OPEC members of the Arab world are generous supports of weaker Arab economies, such as Egypt, which suffer from reliance on

[5] *United Nations Decade of Sustainable Energy for All: Report of the Secretary-General*, A/69/395, 22 September 2014

[6] 'Goal 7—Ensure Access to Affordable, Reliable, Sustainable and Modern Energy for All', *UN Chronicle*, April 2015, https://unchronicle.un.org/article/goal-7-ensure-access-affordable-reliable-sustainable-and-modern-energy-all/

importer energy, offset partially by extensive Arab economic assistance.

China: As an energy importer with few domestic resources but coal and some hydroelectric generation capability, China also has suffered extensively from pollution caused by coal burning, as well as cars and industry, and is sensitive to the need for clean energy sources. It stresses access to global energy markets. China has invested heavily on nuclear power, but requires much more in its efforts to lift all its people out of poverty. It encourages other UN Member States to emulate its achievements by developing their economies and work to help them do this.

*European Unio*n: The 28 countries of the European Union have invested heavily in measure to reduce energy consumption and ensure greater energy security. Although their remain heavily dependent on indigenous coal and imported oil and natural gas, most are making progress to reduce rates of energy consumption growth or reverse growth. Major controversies within the EU include the future role of nuclear energy. Germany is committed to eliminate its nuclear power generation, while France, the United Kingdom and others are expanding nuclear power generating capability. The EU is very supportive of UN efforts to aid less developed countries in their efforts to achieve energy security.

Russia: is highly dependent on oil and natural gas exports, especially to Europe and China. It also supports expansion of nuclear power, including exports of its own nuclear power generation systems, as a solution to local energy security.

United States: is divided on these issues, strongly supporting the Sustainable development Goals and Paris Climate Accord, advocating countries that are struggling to liberate their economies and help their people. But the United States also favors action through private firms wherever possible, limiting the funds channeled through international institutions. It also insists on controlling how its development money is spent, rather than allowing recipient governments to control how money is spent in their sovereign territory.

Proposals for Action

Some of the proposals for global energy security the Economic and Social Council might consider in this session include:

- Setting clear financial targets for energy security assistance.
- Scheduling a giving conference to publicize the issue and facilitate greater giving.
- Shifting spending authority from donor to recipient governments.
- Requiring energy exporters to subsidize part of their exports to benefit needy economies.
- Incentive and mandates to make energy exporting firms share part of their profits with needy economies.
- Or helping countries de-regulate their energy economies to facilitate greater private investment,
- Possibly including reducing environmental standards to facilitate economic growth.

Conclusion

As the global community comes together to face the issues of global climate change, caused by the over-use of fossil fuels as a means of energy, as the United Nations, a global community, we will see the manifestation of a system that will benefit our global ecosystem and can give rise to developing nations.

Mother Nature gave us a variety of different natural resources that can be used

as energy source, nation worldwide must find the most appropriate and effective way to use renewable energy. For example, New Zealand could rely solely on wind, and Bangladesh on hydroelectric power. Each country can act to some degree on their own advantage the natural resources available to obtain renewable energy

It is time for the world to promote renewable energy, free energy for all, and better energy equilibrium for balanced world equilibrium in order to reduce global fossil fuel consumption, while increasing energy availability for all.