
The Transition of Energy from Sustainable Development to Universal Access: A Quandary

Harkirandeep Kaur

Assistant Professor, Department of Laws, GNDU, Amritsar.

Dr. Varinder Singh

Associate Professor, Department of Laws, GNDU, Regional Campus, Jalandhar

Email Id: harkirandeep.law@gndu.ac.in

ARTICLE DETAILS

Research Paper

Keywords:

Energy; Sustainable development, citizens

ABSTRACT

The development of a nation depends on the availability of the sustainable energy for the citizens. The citizens can participate and inculcate in the social, economic and political growth of the country if they are provided with the basic requirements of life. The movement of liberalization and globalization has brought a transition of energy from sustainable development to universal access in the context of changes taking place in the environment. The energy is not a subject confined solely to environment but has stretched its tentacles in to the social, economic and political fields. As such energy cannot be viewed in isolation. This research discusses the journey of energy as a sustainable development goal to universal access which is one of the trilemma. The study applied analytical method for analyzing the energy laws and explored many international instruments regarding energy. The conceptual method was also used and various norms, concepts were analyzed. The findings revealed that the energy has transformed itself in the context development. Energy is a source of development at the altar of sacrificing ecology. The need is for sustainable development of energy, its affordability, accessibility as without this the universal goal

of access for all cannot be achieved. There is need on the part of the government to disseminate information that population and poverty are intertwined with the environment.

1. Introduction

It has been fifty years of the Stockholm conference on “Human Environment”, which applauds the concern of environment at the international level. The conference was not about environment but the inter-relationship between environment and social-economic and political conditions taking place around the globe. The conference just triggered debate about protection of environment and influence of poverty and population on environment. During these fifty years domestic and international collaboration has worked in finding solutions to the environmental devastations caused by human intervention.

Energy is one aspect of environment which has gained momentum after the industrial revolution. Energy is a means for meeting the requirements of prosperity. But it does not mean that there was no existence or use of energy before the industrial revolution. In primitive times, the humans were more dependent on solar energy. Somewhere before 1700 AD, the human beings used to gather energy with the help of plants. Plants generated organic matter through photosynthesis using solar energy and bio-oxidation of this matter provided the human beings power to work.¹

The energy was used for number of purposes like lightening, cooking, fuel, heating etc. The expanding population, industrial revolution is some of the reasons which gave impetus to the availability of energy.² With the use of fossil fuels as sources of energy, the consumption of energy has also increased.

At present among the environment concerns, energy is one sector which needs transition. Energy is as important for human beings as clean air. Without energy, the citizens cannot participate in the national life. On the other hand, energy is also one of the contributing factors impacting the environment.

¹Anand S. Bal, *An Introduction to Environmental Management* (Himalaya Publishing House, Mumbai, 2009), 66.

²Omer, AbdeenMustafa. "Energy, environment and sustainable development." *Renewable and sustainable energy reviews* 12, no. 9 (2008): 2265-2300, <https://doi.org/10.1016/j.rser.2007.05.001>.

The reason for energy being one of the devastating factors is the unsustainable use of energy. Prior to and post the Stockholm conference, the nations are doing development by using energy in a way which is detrimental for the environment. In the year 1987, the World Commission on Environment and Development debated about the consumption patterns at the global level. This led to the emergence of the concept of “Sustainable Development”. The term sustainable development implies, using the resources available on earth in such manner that something can be preserved for the future generations.³

The Bruntland Report has focused more on treating the World as one, as all living beings are consuming the resources from one earth. The report has highlighted that the consumption patterns vary from nation to nation. Some nations consume more energy, moving towards the target of being developed nations. The nations consuming less energy remain poor, suffer from diseases etc.

Energy as a source of development and devastation led to the debate on use of renewable sources of energy. The Bruntland report has also thrown light on the use of energy and variable consumption behaviors between poor and rich people, developed and developing nations. The poor people for their survival are using the energy resources which are already depleting as they are using the resources without thinking of saving them. As of now many equipment's are developed which help in saving energy.

The Report has hinted towards having energy efficiency incorporated in the national laws for the purpose of sustainable development.

Much progress on saving energy was not done as anticipated after the Bruntland Report. The energy only featured as an environmental issue devoid of any social, economic and political consideration.

Agenda 21 was a comprehensive piece dealing with energy. Chapter 9 titled “Protection of the Atmosphere” deals with energy development, efficiency and consumption.⁴ Agenda 21 recognized the importance of energy in the social and economic development of the nation. Energy is as important for the survival of life as clean air and water on this planet Earth.

³Giddings, Bob, Bill Hopwood, and Geoff O'brien. "Environment, economy and society: fitting them together into sustainable development." *Sustainable development* 10, no. 4 (2002): 187-196, <https://doi.org/10.1002/sd.199>.

⁴Doyle, Timothy. "Sustainable development and Agenda 21: The secular bible of global free markets and pluralist democracy." *Third World Quarterly* 19, no. 4 (1998): 771-786, <https://doi.org/10.1080/01436599814235>.

The Agenda 21 was also cornered around using energy efficiently so that there is equal distribution of energy between the developed and developing nations. The emphasis was on use of new and renewable sources of energy so that the emission of greenhouse gases can be controlled. The energy was to be consumed in the manner that a balance is created between environment and human life. The Agenda 21 has given a long list of activities that can be undertaken by the government, non-government organizations and private sectors. The purpose is to evolve and indulge in activities which provide cost cutting for generating energy so that it can help the developing nations. Sensitizing people and educating them about energy efficiency.

The United Nations Framework Convention on Climate Change in the year 1992 is a forum for cooperation among nations on the issue of climate change. The Convention basically deals with the emission of greenhouse gases and its impact on the environment. The objective of the Convention is “to stabilize greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system, in a time frame which allows eco system to adapt naturally and enables sustainable development”.⁵

In this context the, Kyoto Protocol was the first subsidiary agreement signed for the purpose of regulating emissions of greenhouse gases. As per Article 2 of the Kyoto Protocol, the member countries were to elaborate policies and measures with regard to enhancement of energy efficiency, increased use of new and renewable sources of energy etc.⁶

The Paris Agreement was signed in the year 2015 and was also a subsidiary agreement of the United Nations Framework Convention on Climate Change. The Agreement was basically designed to look into the threat of climate change in the context of sustainable development and eradicating poverty.⁷

The World Summit on Sustainable Development held at Johannesburg, is the first international effort which emphasized that development cannot take place in the absence of energy related policies. This was the first conference which directly dealt with the subject of energy and realized the there is strong bond between water and sanitation, energy, health, agriculture and biodiversity. The goal of sustainable development cannot be achieved in the absence of any one of these five areas. The commission

⁵“The United Nations Framework Convention on climate change, the Kyoto Potocol and the Paris Agreement :A summary, January 29, 2020”, accessed on 15th July, 2022. <https://sgp.fas.org/crs/misc/R46204.pdf>

⁶“Kyoto Protocol to the United Nations Framework on Climate Change” , accessed on 10th July, 2022, <https://unfccc.int/resource/docs/convkp/kpeng.pdf>

⁷“The Paris Agreement” accessed on 10th July, 2022, https://unfccc.int/sites/default/files/resource/parisagreement_publication.pdf

underlined the importance of energy for agricultural productivity and creating employment opportunities. The contribution of energy for the economic development of the nation was also taken into consideration. The commission also recognized the need to provide access of energy to poor. The energy was equated as a gateway for sustainable development. The members emphasized on using renewable sources of energy for fulfilling the goal of sustainable development.

The commission agreed that there is a need of comprehensive framework including the access of energy to the poor and people living in rural areas, reducing subsidies and developing technologies for generating renewable sources of energy. Further the Commission highlighted the main objectives in the field of energy. The first being access of energy for poverty alleviation including women in particular. The nations should focus on investments so that energy can be accessed by poor and industries at the same time.

The Commission also took into consideration the need for adopting cleaner technologies for meeting the requirements of energy. This can be step for the conservation of energy. The countries were given option on the basis of their availability to promote use of renewable sources of energy. The women should be included in the decision making process regarding meeting the needs of the women for energy consumption.

These were the certain key areas in which Commission recognized that energy is not a subject limited within the periphery of environment. But energy is a subject interconnecting economics and environment.

The United Nations Development Programme has given a very comprehensive account about energy in World Energy Assessment in the year 2000. The Report has been jointly compiled by United Nations Development Programme, United Nations Department of Economic and Social Affairs and World Energy Council.

The World Energy Assessment has presented a holistic picture of energy analyzing it from the social, economic and political aspect. The report has also analyzed how poverty is closely related to energy and emphasis on sustainable consumption of energy. It defines energy as, “Energy produced and used in

ways that support human development in all its social, economic, environmental dimensions is what is meant by sustainable energy”.⁸

Thus the emphasis is on providing energy services so that people can carry their day to day activities. The availability of energy services accelerates the comfort level of the humans depending on their paying capacity. This is in contrast to the poor people who are still using the conventional means of energy consumption. The term energy services is defined as “energy services is a sum total of those services which benefit number of activities like indoor temperatures, refrigeration, lightening, transportation and other commercial activities”.⁹

Thus the World Energy Assessment established that energy is an important contributing factor for the human development at the same time cautious about environmental dangers.

Sustainable Development Goal -7

The Sustainable Development goals are the hallmark for achieving prosperity for the future and ending poverty. In 2000 the Millennium Development Goals were adopted with the pledge to achieve them by the year 2015. Later on with the rise of multilateralism, these goals were adopted into 2030 Agenda Sustainable Development Goals. The member nations pledged to achieve these goals by 2030. It consists of 17 Sustainable Development Goals ranging from no poverty, zero hunger, gender equality, good health, quality education, affordable and clean energy, climate action etc. The purpose of these sustainable goals is to involve all nations whether rich or poor in bringing about prosperity and at the same time protecting environment.

The goal 7 of Sustainable Development Goal deals with affordable and clean energy. The goal 7 aims at bring affordable and efficient energy and to prevent the deterioration of environment. The point is to protect environment and at the same time causing social and economic development. The goals are framed to balance the interests of both citizens and environment.

The goal 7 dealing with energy promises to use sustainable means of energy and focusing more on renewable sources of energy. The progress of this goal can be ascertained that nations are making efforts in bringing electricity to those rural areas, which were derived of electricity.

⁸“World Energy Assessment,3 ,accessed on 10th July 2022, file:///C:/Users/ccc/Desktop/engry/World%20Energy%20Assessment-2000.pdf

⁹*Id at 4.*

To fulfill the requirements of goal dealing with energy, the target is to achieve by 2030¹⁰:

- Universal Access to affordable, reliable and modern energy services.
- To increase the share of renewable energy at the global level.
- To double the global rate of improvement in energy efficiency.
- International cooperation for facilitating research and technology for clean energy.
- To expand infrastructure and upgrading technology for supplying modern and sustainable energy services for developing countries and particularly least developed countries.

These are the certain targets which the United Nations and member countries aim to achieve by the year 2022.

The energy is one of the important components of human life. Day and night, the human beings are consuming energy in one form or the other. Most of the people in poor countries use energy for cooking food with traditional methods like dry wood, coal etc.

According to the World Health Statistics, the use of indoor cooking pollutes the environment leading to many adverse impacts on health like burns, irritation and cancer etc. As per WHO, two-thirds of the world population is using clean fuels and technologies for cooking in 2020 which is higher than the one half in 2000.¹¹

Energy and International Law

The different conventions and conferences of the United Nations are more tilted towards Sustainable Development of energy and to achieve the goal of clean and affordable energy by using it in sustainable manner.

The use of energy is in sustainable differs from nation to nation depending on the consumption pattern between the industrialized and non-industrialized nations.

There is no uniform international agreement or regulation with regard to use of energy. Due to lack of any coherent policy with regard to energy sector, it has always been concentrated in the hands of few developed nations. Trade in energy was never a forerunner. It's only when relationship emerged

¹⁰“Sustainable Development Goals”, accessed on 15th July 2022, <https://unric.org/en/united-nations-sustainable-development-goals/>

¹¹“World Health Organization”, accessed on 20th July, 2022, <https://www.who.int/data/gho/data/themes/air-pollution/household-air-pollution>

between energy and climatic conditions that attention was paid to trade in energy and services.¹² Relationship between trade, development, environment and energy has also brought this thing on the forefront.

International Energy Agency

The International Energy Agency was a measure by the industrialized nations to for sustainable use of energy. It was an international organization established in 1974 as a result of oil crisis of 1973. The IEA was established as a part of Organization for Economic Cooperation and Development. The objective of IEA has expanded from promoting oil to all technologies for meeting demand and supply of energy, clean energy and energy efficiency.

Energy Charter Treaty

The Energy Charter Treaty came into origin in the year 1994 for the purpose of international cooperation in the energy sector. The objective of the Charter is sustainable energy development, improving energy security and maximizing the efficiency of production, conversion, transport, distribution and use of energy which is socially acceptable, economically viable and environmentally sound and at the same respecting the sovereignty of each member state.¹³

I. Legal Methods and Materials

This article has used descriptive legal research method. The analytical method of legal research has also been employed to analyze the factual situation with the help of different conventions and conferences at the International level. The primary data has been collected through international regulations. The results will be drawn on the basis of conceptual analysis.

II. Result and Discussion

Energy as a sustainable development goal

Energy is an important facet of human life. Every day in human life energy is being used and consumed be it in the shape of electricity, cooking, using means of transportation or connecting with one and

¹²“United Nations Sustainable Development Goals”, accessed on 15th July, 2022, <https://sdgs.un.org/goals>.

¹³ “The Energy Charter Treaty” accessed on 12th July, 2022, <https://www.energycharter.org/process/energy-charter-treaty-1994/energy-charter-treaty/>.

other.¹⁴ Energy has become part and parcel of modern life. The existence of life on the planet earth could not be imagined in the absence of energy.

In the year 1972, there was awakening about protection of environment and it came out to be global concern. Aftermath the Stockholm Conference, efforts at the international level brought environment on the forefront followed by many conferences and conventions with the initiative of United Nations.

The effort of the United Nations with regard to protection of environment has surpassed the national efforts of the nations. Most of the nations have brought environment as a subject required for the welfare of the citizens.

The United Nations various actions and programmes are focused towards the sustainable development of the environment.

The energy as an important component affecting environment was recognized with the climate change. Energy was recognized as one of the factors deteriorating environment.

The global concern about energy made the nations to think globally about the consumption pattern of energy. The industrialized nations in the name of development are exploiting the energy resources. The developing and least developed nations are suffering from the access and affordability of energy resources. From the point of view of trade, energy is concentrated in the hands of few multinational companies.

The United Nations sustainable development works on the principle of sustainability of resources so that the something is left for the consumption of future generations also.

The pattern of sustainability has evolved and pointed towards using renewable sources of energy. But the case is that the poor nations are struggling with the universal access to energy. These nations are lacking in infrastructure and technology to use energy resources in the renewable form. Hence the poor people in these nations are using conventional methods of energy consumption thus jeopardizing the interest of others. There are many rural areas which are till date devoid of electricity and for cooking and lightening are dependent on woods.

The efforts of United Nations inculcating sustainable behavior are more towards saving for the future generations. The need is to provide efficient, clean and affordable energy to the present generations.

¹⁴Heffron, Raphael J., and Kim Talus. "The evolution of energy law and energy jurisprudence: Insights for energy analysts and researchers." *Energy Research & Social Science* 19 (2016): 1-10, <https://doi.org/10.1016/j.erss.2016.05.004>Get.

The energy is the need of every human being. The development of a nation can only take place if the energy divide between the rich and poor is curtailed. The 2030 year is for the achievement of sustainable development. But it seems to be an uphill task with the growing advent of Covid-19. The picture seems to be bleak with the focus more on the health of the people. The pandemic atleast for two years have had impact on the climate change. Due to lockdowns in many parts of the world, the carbon dioxide emissions were less but with the lifting of lockdowns there was an increased demand for coal, oil and gas.

The United Nations Economic and Social Council have prepared a progress report “Progress towards the Sustainable Development Goals”. The report mentions that there are still 700 million people living in dark and 2.4 billion people who are still cooking with the harmful and polluting fuels. In 2020, 69 percent of the world population had access to clean cooking fuels and technologies.¹⁵ The renewable capacity per capita has increased by 57.6% which is again very less as compared to the least developing countries. It will take another couple of years to meet up the demands of the nations which are least developed.¹⁶ The energy needs has to be viewed from the want of people suffering from poverty.

The sustainable use of energy is not only the solution but access to people is equally important. To fulfill the goal of sustainable use of energy, the requirement is to develop new technologies for energy efficiency decentralized in way to reach the most vulnerable and poor. The use and availability of energy is more focused among the urban population.

The availability of energy among the rural population is primarily not the priority of the government either.

The need of the hour is framing of policies and laws to ensure sustainable development of energy along with focus on accessibility and affordability.

The goal of universal access to energy cannot be achieved at the national level. For the fulfillment of this goal, efforts are needed at the international level also. There is need for international harmonization in the case of environmental taxes and emission trading specially in the industrialized nations.¹⁷

The use of energy in the sustainable development can be achieved in the near future but the challenges are for universal access of energy and making it affordable.

¹⁵“The progress towards sustainable development goals” accessed on 10th July, 2022<https://unstats.un.org/sdgs/report/2021/The-Sustainable-Development-Goals-Report-2021.pdf>,

¹⁶IBID.

¹⁷ Supra note 8 at 25.

The government need to incorporate policies balancing the principle of sustainable development and keeping a check on providing adequate and affordable energy supply.

The multilateralism approach is the need of the hour. International cooperation is required to regulate policies and prices so that the access of energy can be provided to all and universal goal can be fulfilled.

III. Conclusion and Suggestions

The rapid expansion of population and concern for environment has brought the issue of energy on the forefront. The growing population and use of energy in polluting manner has deteriorated the environment. There is urgent need to conserve and rationalize the energy resources so that the needs of both the people in urban and rural areas can be fulfilled. The international concern for environment has led to the formation of sustainable development concept. It has been debated at various international levels that the energy has to be consumed in the sustainable manner so that the resources of the earth are utilized and also preserved for the future generations. There is no iota of doubt that the changing climatic conditions will force the people to adopt sustainable behavior.

The industrialized nations need to cooperate in innovation of new technologies so that new renewable technologies can be developed and the poorest nations can also benefit. The strong institutional structures, financial support and legal framework and policies can be utilized for universal access. There is need for transition of energy from sustainable development to universal access.

REFERENCES

- Bal, S. Anand. *An Introduction to Environmental Management*. Mumbai: Himalayan Publishing House, 2005.
- Chaturvedi, R.G. *Ancient Law of Environment*. New Delhi : Universal Law Publishing, 2010.
- Darsini, Indira Priya and Devi, K.Uma. *Environmental Law and Sustainable Development*. New Delhi: Regal Publications, 2013.
- Doyle, Timothy. "Sustainable development and Agenda 21: The secular bible of global free markets and pluralist democracy." *Third World Quarterly* 19, no. 4 (1998): 771-786,
- Energy Charter Treaty, 1994.

Giddings, Bob, Bill Hopwood, and Geoff O'brien. "Environment, economy and society: fitting them together into sustainable development." *Sustainable development* 10, no. 4 (2002): 187-196,

<https://doi.org/10.1002/sd.199>

<https://doi.org/10.1016/j.rser.2007.05.001>

<https://doi.org/10.1080/01436599814235>

International Energy Charter, 2015.

Khitoliya, R.K, *Environment Protection and the Law*.New Delhi: A.P.H Publishing, 2009.

Murugan, Annamalai. *International Regime of Environmental Law*.New Delhi: Regal Publications, 2016.

Omer, AbdeenMustafa."Energy, environment and sustainable development." *Renewable and sustainable energy reviews* 12, no. 9 (2008): 2265-2300,

Oxford University Press, 2012.

Patel, Bimal N and Biswal, Mamata.*Law, Development and Socio-Economic Policy*.Lucknow: Eastern Book Company, 2012.

SahasranamanP.B. *Handbook of Environmental Law*.New Delhi:

United Nations Conference on Environment and Development, 1992.

United Nations Conference on Human Environment, 1972.

United Nations Framework Convention on Climate Change, 1992.

United Nations Sustainable Development Goals, 2015.

Upadhyay, Sanjay and Upadhyay, Videh. *Environment Protection, Land and Energy Laws*.India: Lexis NexisButterworks, 2002.

World Commission on Environment and Development, 1987.

World Summit on Sustainable Development, 2002.