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Renewable Energy Laws in India

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ABSTRACT

This article deals with the position of India with regards to Renewable sources of energy. India has been taking various steps in order to increase and boost the usage of renewable or non conventional resources of energy mainly for electricity's production among many uses. This article also deals with the legislation in India which deal with various sources of energy be it renewable or non renewable. Solar Energy is the most widely available non conventional resource of energy in India given the position of geographical position of India. The government and authorities hereby are aware of this fact and this is the reason why it promotes solar energy's usage not only in the country but also in the international community so as to combat climate change. Indian Judiciary's stance on energy laws has also been taken up in the article. The article touches upon these subjects in detail.

Keywords: Renewable, Energy, Conventional, Non-Conventional, Solar, Alliance, Climate, Electricity

I. INTRODUCTION

India is the seventh largest country in the world in terms of geographical area² and thus has an abundance of various energy resources. India is also the fifth largest energy economy in the world³. Our country has an abundance of energy resources be it renewable or non-renewable in nature. In India coal, a non-renewable source is most widely used for the purpose of production of energy. However due to reasons like over-population, industrial and technological development and excessive use of resources non-renewable resources availability is on a decline. Moreover, the use of most of these resources is harmful for the environment as they are majorly responsible for pollution. These reasons have prompted the governments worldwide to slowly start with extensive use of renewable sources for production of energy.

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² "Largest Countries in the World (By Area)", Worldometer (July 13 2020, 07:00 pm) <https://www.worldometers.info/geography/largest-countries-in-the-world/>

³ ETEnergyWorld, " India is the world's fifth-largest energy economy; Ranked 3rd on renewable energy", Economic Times (July 13 2020, 07:15 pm) <https://energy.economictimes.indiatimes.com/news/renewable/india-is-the-worlds-fifth-largest-energy-economy-ranked-3rd-on-renewable-energy/75581107#:~:text=Terms%20%26%20Conditions,India%20is%20the%20world's%20fifth%20largest%20energy%20economy%3B%20Ranked%203rd,with%20a%20score%20of%206.3.>

India ranks third on the level of renewable energy and future plans⁴. Also, India is the only country to have a distinct ministry for the development of renewable resources that is Ministry of Non-conventional Energy Sources (MNES)⁵ which was later renamed as the Ministry of New and Renewable Energy⁶. Presently, India has installed capacity of 16500MW of renewable grid connected power. Renewable energy power potential in India can be scaled up to several times more than the present potential. India has been quiet upfront about promoting the usage of renewable sources of energy considering the vast resources available and the ever growing population. Accordingly, legal issues, laws and cases have come up which deal with energy sources.

II. LAWS AND POLICIES GOVERNING RENEWABLE ENERGY IN INDIA

The Electricity Act, 2003 was the very first legislation which dealt with the usage of renewable sources of energy for producing electricity. This act provided for the building of captive renewable power plants (ie independent generation of power for personal uses). It also created specific policy instruments which include preferential tariffs, renewable purchase obligations and tradable renewable energy certificates. Section 61(h) of the Electricity Act, 2003 mandates the State Electricity Regulatory Commissions (SERCs) to encourage the grid connectivity of the electricity which has been generated from renewable resources by way of tariff regulations. Section 86(1)(e)⁷ makes it mandatory for the State Electricity Regulatory Commissions (SERCs) to specify a minimum level of purchase obligation of renewable power⁸. The efforts which were made for the commercialization and industrialization of renewable energy were reinforced by the National Electricity Policy, 2005. Section 5.12.3 of the National Electricity Policy, 2005 also promoted co-generation means and progression in the dispensing of a companies' electricity purchases from cogenerators by the way of a competitive bidding process⁹. Section 6.4(1) of the National Tariff Policy, 2006 lays down certain guidelines for the SERCs for the fixation of renewable purchase obligations at the state level which are centered around the regional availability of resources and the impact of

⁴ Ibid

⁵ Peter Meisen and Eleonore, " Overview of Renewable Energy Potential ", Global Energy Network Institute (July 13 2020, 07:17 pm)
<http://www.geni.org/globalenergy/library/energytrends/currentusage/renewable/Renewable-Energy-Potential-for-India.pdf>

⁶ Ibid

⁷ The Electricity Act, 2003

⁸ Aparna Sawhney, " Renewable Energy Policy in India: Addressing Energy Poverty and Climate Mitigation", Research Gate (June 12 2020,02:00 pm)

https://www.researchgate.net/publication/275146685_Policy_Monitor_Renewable_Energy_Policy_in_India_Addressing_Energy_Poverty_and_Climate_Mitigation

⁹ Ibid

regional purchase obligation on retail tariffs. Section 6.4(2) of the policy stipulates that electricity purchases by the distribution companies would be made at preferential tariffs as laid down by the SERCs but eventually, the renewable energy costs shall be at par with non-renewable sources of energy.

Under the National Tariff Policy, the Central Electricity Regulatory Commission (CERC) has set up a yearly feed-in-tariffs for connectivity by grid power from various renewable energy resources in order to ensure returns along with full recovery during the loan repayment period for full useful life which is an equivalent to a tariff which has been levelized. During the 11th Five year Plan that is the period of 2007 to 2012, various incentives programs for renewable forms of energy were implemented in order to encourage grid connectivity.

At many instances the judiciary of our country has dealt with issues revolving around renewable energy resources. Recently in 2015, the Supreme Court ruled that all industries shall come on board with targets regarding renewable sources of energy or otherwise get fined. This landmark Supreme Court Judgement mandates it for industries having captive power plants to obtain good portion of their energy requirements from renewable sources of energy. This ruling also empowered the state electricity regulators and associated agencies to impose penalties on those organizations which fail to comply with the orders made by the Supreme Court¹⁰.

III. ENERGY LAWS, REGULATIONS AND AUTHORITIES IN INDIA WITH RESPECT TO SOLAR ENERGY

India's potential with respect to solar energy is colossal and also easy to harness. Among the various renewable sources of energy, the potential of solar energy is maximum in India. Almost whole of landmass of India receives a clear and sunny weather for a period of at least 250 to 300 days a year given the fact that Tropic of Cancer passed through our country. The annual solar radiation received by India amounts to almost 1600 to 2200 kwh /m² which is at par with the degree of solar radiation received in tropical and sub tropical countries. Rajasthan and Gujarat are those Indian States that have the maximum insolation. Many other states like Tamil Nadu, Chattisgarh, etc also receive good insolation¹¹. This gives India a

¹⁰ Deepak Sriram Krishnan, "India's Supreme Court Reinforces Renewable Energy Targets for Industry", World Resources Institute (June 13 2020, 08:00 pm) <https://www.wri.org/blog/2015/06/india-s-supreme-court-reinforces-renewable-energy-targets-industry>

¹¹ S.A. Khaparde, M.G. Raoot and Pushpa Seshadri, " INDIAN INITIATIVES IN DEVELOPMENT OF RENEWABLE SOURCES OF ENERGY", 16th National Powers Systems Conference, 15th - 17th December, 2010 (June 13 2020, 10:14 pm

massive opportunity to exploit solar energy for its use. The role of state government's also becomes instrumental in promoting the usage of solar energy as a resource for production of electricity as insolation in every state plus the availability of other necessary factors like finance also differs.

India's energy laws and policies have been formed by its necessity to ensure energy security and also in order to attain energy self sufficiency. Most of the Asian countries are major consumers of energy as a result of which India has been led into a position of competition with other major countries for energy resources. In the year 2003, Former President of India Mr Abdul Kalam elaborated upon the country's policy regarding energy by saying that "Maximum self reliance is the cornerstone of our energy security strategy¹²." Thus in order to diversify its energy supply, the government began with an effort to explore and use its potential sources of local or domestic renewable form of energy. Jawahar Lal Nehru National Solar Mission that is JNNSM is one of the various initiatives which have been undertaken under the National Action Plan on Climate Change. This mission envisaged the smooth transition from non renewable sources of energy to renewable sources of energy. The objective of this mission is to harness solar energy in our country at a huge scale.

Solar Energy Corporation of India Ltd is a Central Public Service Undertaking or CPSU which is under the administrative control and authority of the Ministry of New and Renewable Energy which was set up in the year 2011 to ease the implementation of the Jawaharlal Nehru National Solar Mission and associated targets and missions¹³. It is the sole CPSU which is dedicated to the sector of solar energy. It was originally certified as a not for profit company under the Companies Act, 1956 but was later on converted to a Section-3 company incorporated under the Companies Act, 2013¹⁴. SECI has also ventured into the field of the development of solar energy projects for several PSUs on a turnkey basis¹⁵.

The International Solar Alliance (ISA) is an alliance of 121 nations including India which are entirely or partly situated between the Tropic of Cancer and Tropic of Capricorn. It is also known as International Agency for Solar Policy and Application (IASPA). The ultimate aim of this treaty based inter-governmental organization is to work collectively and tirelessly towards exploiting the solar energy in order to diminish the dependence of these countries on

) <http://www.iitk.ac.in/npsc/Papers/NPSC2010/7018.pdf>

¹² Lok Sabha, President's Address to the Parliament, February 17, 2003

¹³ Introduction, Solar Energy Corporation of India Ltd : A Government of India Enterprise (June 13 2020, 03:30 pm) <https://www.seci.co.in/about/introduction>

¹⁴ Ibid

¹⁵ IBID

fossil fuels¹⁶. The idea regarding the initiative was first put forth by our Prime Minister Mr Narendra Damodardas Modi in the year 2015 at Wembley Stadium in London¹⁷. The alliance has its headquarter in Gwal Pahari, Gurugram, India and is thus the only international organization which has its headquarter in India. It is also the largest group of states worldwide after the United Nations. It is not a necessary fact that a country has to be situated between the tropics in order to be a part of this alliance. Any country can be a part of this alliance and thus be the beneficiary of all the steps taken but if not situated within the tropics the country shall be deprived of all voting rights in the alliance. This alliance sends a strong message in the international community regarding the developing countries' sincerity and dedication towards the climate change. The International Solar Alliance aims at bringing in a major decrease in the expenses of the solar energy, meeting the high demand in developing nations and thus contribute their bit in tackling the menace of climate change.

The Pradhan Mantri Sahaj Bijli Har Ghar Yojna or the Saubhagya Scheme is a new scheme launched by our honourable PM Mr Narendra Damodardas Modi in 2015 in the attempt to provide free electrical connections to all the households (both APL and BPL families) in rural and urban areas. This scheme shall provide solar photo voltaic (SPV) based standalone system for the household without any electricity situated in remote villages whereby it is not feasible to go for grid extension probably due to monetary reasons. Provision for providing solar power packs of 200 to 300 watts with battery bank comprising of five LED Lights, one DC fan and one DC power plug has also been made in this government scheme.

IV. CONCLUSION

India initially promoted the usage of renewable sources of energy with the aim of reducing dependence on imports and thus become self sufficient in terms of energy production. It is a much recent development that India has been promoting the usage of renewable energy resources so as to mitigate the effect the pollution and combat climate change. Keeping in mind the international pressure on India regarding the huge figures of its carbon emissions, the steep and fast evolution of the sector of renewable energy in the country is necessary for a low carbon growth path. The India is the only country to have a distinct ministry for renewable resources of energy depicts the seriousness of the Indian government in dealing

¹⁶ Sarang Shidore and Joshua W. Bushy, "One more try: The International Solar Alliance and India's search for geopolitical influence", *Science Direct* (June 13 2020,07:40 pm)
<https://www.sciencedirect.com/science/article/pii/S2211467X19300781>

¹⁷ WSJ Staff, "Narendra Modi's Speech at Wembley Stadium: As It Happened", *The Wall Street Journal* (June 13 2020, 03:45 pm) <https://blogs.wsj.com/indiarealtime/2015/11/13/live-blog-narendra-modis-speech-at-the-wembley-stadium/>

with this issue. India is also the founding member of the International Solar Alliance. It was an initiative taken by India which was later on supported by most of the nations. Various laws exist in our country which deal with different sources of energy including the non conventional sources of energy. Hopefully, due to the steps taken by the country, it shall soon become an epitome for other countries to follow in terms of love and affection towards the environment.