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LEGAL FRAME WORK RELATED TO RENEWABLE ENERGY IN INDIA- A CRITICAL STUDY

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Abstract

Renewable energy is new for other countries but India is using clean energy since ancient time but due to blind race of globalization & liberalization we put aside these clean energy resources and attracted to non-renewable energy which is more costly as well as dangerous for our environment and Biodiversity. Renewable energy generated from natural processes that are continuously replenished at free of cost which includes sunlight, geothermal energy, wind, tides, water, and various forms of biomass.

The purpose Act on renewable energy 2015 is to promote the production of energy through the use of renewable energy sources in accordance with legal framework, climate, environment and macroeconomic considerations in order to reduce dependence on fossil fuels, ensure security of supply and reduce emissions of CO_2 and other greenhouse gases. Renewable energy legal framework shall in particular contribute to ensuring fulfillment of national and international objectives on increasing the proportion of energy produced through the use of renewable energy sources.

"One Sun- One World" by PM Modi Ji

Keywords:- *Legal Frame Work, Renewable Energy, Solar energy, Geothermal energy, Wind energy, Biomass from plants, Hydropower.*

INTRODUCTION

Critical to note that energy governance is a very complex issue and there is no 'best model' suited for renewable energy (RE) governance. At the national level, there is a chasm between what is needed and what governments do 'on the ground', while regionally and globally, collective action challenges have often presented insurmountable obstacles. Few legal framework initiatives can be considered, including, enactment and passage of specific law on RE, containing series of policies for the introduction of tariff support for electricity generation from renewable sources. Offering incentives and subsidies have proved to be useful in bringing positive changes in the Europe. International investment treaties and binding legal instruments may ensure universal access to energy for all, though such initiatives need political commitments and willingness beyond the borders. Regional and institutional legal frameworks suggest that RE has become an important issue for further development activities within and beyond the borders. Indirect, if not direct, initiatives have been being taken place in most of the parts of the globe, ranging from South America, Africa to Asia and other parts of developed world to give due credit to the use and promotion of RE for sustainable developments. Global and regional legal institutions have also been actively promoting RE and its potential contribution to promote sustainable development for all. Thus, in many ways, the sustainable development are being facilitated by the use and consumption of RE. The UN adopted SDGs have set out the significance of RE in achieving affordable and clean energy for all with legal framework. Overall, in the context of 21st Century, the preference and dependency on RE is a domestic, regional and global reality that cannot be refused or negated in any manner

CONSTITUTIONAL PROVISIONS[3]

The Electricity Act, 2003

The need for the enactment of the Electricity Act, 2003 (Electricity Act) was felt by the Central Government, due to the ongoing economic reforms in the country and power sector reforms in the various states. The poor performance of the State Electricity Boards (SEBs), which were formed under the IEA, 1910, and the ESA, 1948, forced the GOI to bring out a uniform and unified law to take care of the current needs of the power sector, in the areas of the generation, transmission, trading, and distribution of electricity.

- To consolidate the laws relating to the generation, transmission, distribution, trading, and use of electricity;
- To take measures conducive to the development of the electricity sector;

[3] https://elplaw.in/wp-content/uploads/2019/05/ELPs-Energy-Sector-Book.pdf

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- To promote competition and protect interest of consumers in the sector;
- To rationalize electricity tariffs and ensure the supply of electricity to all areas;;
- To establish Regulatory Commissions and an Appellate Tribunal for Electricity;
- To rationalize the tariff and lower the cross-subsidization levels;
- To provide for new concepts such as power trading and open access in transmission and distribution.

The Indian Electricity Act, 1910:
The Indian Electricity Act, 1910 was the earliest statute to govern generation, supply and distribution of electricity in India. The 1910 Act provided for grant of license to any person or group to supply energy in a given area, as well as supply of energy by non-licensees with the sanction of the Government in certain cases. Provisions were made to facilitate laying down of electric supply lines and carrying out of works by such licensees.

The Electricity (Supply) Act, 1948:
The Electricity (Supply) Act, 1948 provided for the rationalization of the production and supply of electricity and generally for taking measures conducive to electrical development. Under the Electricity (Supply) Act, 1948, the Central Electricity Authority was constituted as a nodal authority for technical planning and development in the country. State Electricity Boards were constituted and made responsible for arranging for supply of electricity within various States. This Act dealt with the statutory powers and functions of the Central Electricity Authority, State Electricity Boards, and Generating Companies.

The Electricity Regulatory Commissions Act, 1998:
The Electricity Regulatory Commissions Act, 1998 provided for the establishment of a Central Electricity Regulatory Commission (CERC) as well as State Electricity Regulatory Commissions (SERCs), with the objective of distancing State Governments from determination of tariffs. It also provided for the rationalization of electricity tariff, transparent policies regarding subsidies, promotion of efficient and environmentally-benign policies, and matters connected thereof.

The Electricity (Amendment) Bill, 2014
The Electricity (Amendment) Bill, 2014 (2014 Bill) was introduced in the Lok Sabha on December 19, 2014 by the Minister of Power with the objective of amending the Electricity Act. This bill proposed a number of amendments to the Electricity Act, in various areas of the power sector.
The following were the major thrust areas:

- ✓ Introducing carriage and content separation, i.e. segregation of wires and the supply business;
- ✓ Further enabling open access, competition and the markets;
- ✓ Greater impetus for renewable energy;

National Renewable Energy Act 2015[4]
The purpose of this Act is to promote the production of energy through the use of renewable energy sources in accordance with climate, environment and macroeconomic considerations in order to reduce dependence on fossil fuels, ensure security of supply and reduce emissions of CO_2 and other greenhouse gases. This Act shall in particular contribute to ensuring fulfillment of national and international objectives on increasing the proportion of energy produced through the use of renewable energy sources.

National Renewable Energy Act, 20xx
An Act to promote the production of energy from renewable energy sources, in order to reduce dependence on fossil fuels, ensure energy security and reduce local and global pollutants, keeping in view economic, financial, social and environmental considerations, and for matters connected therewith or incidental thereto.

Renewable Energy (RE) Sources includes the following sources:-
Wind, Solar radiation, Mini hydro, Biomass, Biofuels, Landfill & Sewage gas, Municipal solid waste, Industrial waste, Geothermal energy, Ocean energy, Any other energy source, as may be notified by the Ministry; and Hybrids of above sources.

RESEARCH GAPS

- ❖ Risks concerning lenders is also highlighted but there is no study which includes the perception of various stakeholders like developers, lenders as to various risks affecting debt financing.
- ❖ Various legal framework affecting the financing of RE sector in general and solar sector.

[4] https://mnre.gov.in/img/documents/uploads

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❖ There is a comprehensive list of risk management options and instruments but there is no study which refers to the extent of usage of actual tools employed to manage risks and also about the effectiveness of various risk mitigating measures available and employed.

❖ Usage of actual legal framework employed to manage risks and also about the effectiveness of various risk mitigating are not measured properly.

❖ This study is a humble and maiden attempt to study the process of Risk Management of risks specifically affecting debt financing in Renewable Energy Sector with reference to Solar Power Projects (PV) exclusively in India.

RESEARCH METHOLODOGY

Legal research may be defined as 'systematic' finding law on a particular point and making advancement in the science of law. However, the finding law is not so easy. It involves a systematic search of legal materials, statutory, subsidiary and judicial pronouncements. For making advancement in the science of law, one needs to go into the 'underlying principles or reasons of the law'. These activities warrant a systematic approach. An approach becomes systematic when a researcher follows scientific method.

The term 'renewable energy sources' has been further defined to mean natural renewable resources such as hydro, wind, solar including its integration with combined cycle, biomass, biofuel cogeneration, urban or municipal waste and other such sources as may be approved by the MNRE which are available free of cost. In other words, a renewable energy source means energy that is sustainable - something that can't run out, or is endless, like the sun. It means sources of energy that are alternative to the most commonly used non-sustainable sources - like coal, etc.

STATEMENT OF PROBLEM

"Legal Frame Work Related to Renewable Energy in India- A Critical Study".

DEFINITIONS OF IMPORTANT TERMS[5]

"Renewable energy can be defined as energy flows which are continuously replenished by natural processes".

By M.A. Hersh

"Renewable energy sources could provide alternative choices for generating electricity, producing heat, and manufacturing transport fuels".

By Tadas Jakstas

"A framework is a particular set of rules, ideas, or beliefs which you use in order to deal with problems or to decide what to do".

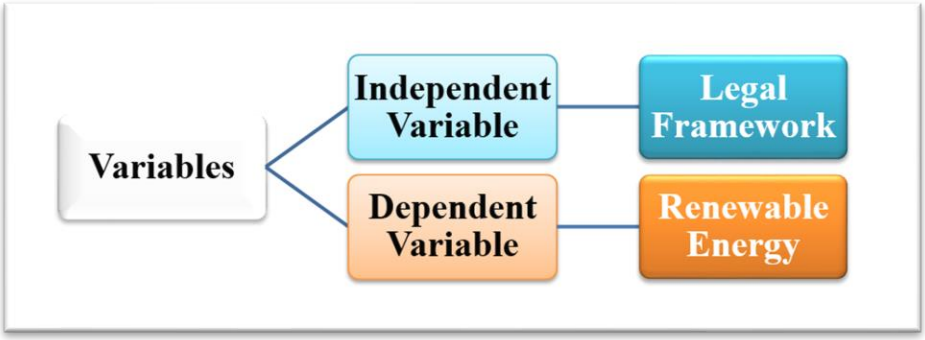
By English Dictionary

"*Legal frameworks comprise a set of documents that include the constitution, legislation, regulations, and contracts*".

By NRGI

VARIABLE OF THE STUDY

Variables are names and characteristics that are given to the variance we wish to explain. A variable (Independent) is either a result of some force or is itself the force that causes a change in another variable (Dependent).



[5] https://www.seforall.org

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OBJECTIVES OF THE STUDY

Aims & Objectives are the specific statements that define measurable outcomes.

- To study the legal framework for renewable energy in India.
- To study the legal framework which are not suitable to renewable energy in India.
- To study of the adverse impact of legal framework on the renewable energy production.
- To gain familiarity with a phenomenon or to achieve new insights into renewable energy legal framework.
- To test causal relationship between legal framework and renewable energy.
- To 'know' and 'understand' a phenomenon with a view to criticize the problem.

HYPOTHESIS OF THE STUDY

A hypothesis is a fact statement that introduces a research question and proposes an expected result. It is an integral part of the scientific method that forms the basis of scientific experiments.

- There is no relation between legal framework and renewable energy.
- There is no requirement of any legal framework for renewable energy.
- There is no adverse impact of legal framework on renewable energy.

POPULATION OF THE STUDY

Population in a research is also known as a well-defined collection of individuals or objects known to have similar characteristics. All individuals or objects within a defined population usually have a common, binding characteristic or trait.

SAMPLE OF THE STUDY

A sample represent the group of people, objects, or items that are taken from a larger population for measurement. The sample should be representative having same characteristics of the population to ensure that we can generalize the findings from the research sample to the whole population.

TOOL OF THE STUDY

In a legal research, Articles, Research papers, Thesis and Dissertations, Reports of Commissions, Court judgments and Case commentaries etc. are tools of the study. General source materials relating to legal problem, their background knowledge and knowledge of previous findings in similar studies are easily read in numerable available material in the library.

RESEARCH METHODOLOGY

There are essentially 2 main methods of legal research, doctrinal and non-doctrinal. Doctrinal or non-empirical legal research is a type of research wherein the subject material for the research is found in existing material such as books, articles, statutes, judgments etc. In the present study researcher used doctrinal research methodology.

FINDINGS

- Our Indian government plans to establish renewable energy capacity of 523 GW (including 73 GW from Hydro) by 2030. As of July 2021, India had 96.96 GW of renewable energy capacity, and represents **25.2%** of the overall installed power capacity, providing a great opportunity for the expansion of green energy.
- We can trace solar powers panels on roofs of our neighbor which is increasing day by day.
- One of the arguments against alternative energy is the high cost of production as well as conducive legal framework.
- The most significant and well-known obstacle to renewable energy adoption right now are low production efficiency and higher cost, in particular, the costs associated with building and installing facilities like solar or wind farms.

Like:-Transmission, Related Stories, Barriers to Entry, Politics, and Oversupply.

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BARRIERS TO THE USE OF RENEWABLE ENERGY ARE AS UNDER

- The most obvious and widely publicized barrier to renewable energy is high cost and low productivity specifically, capital costs, or the upfront expense of building and installing solar and wind farms.
- The most important challenge for further scaling up renewables in India with poor financial condition and low efficient technology with power distribution companies.
- India has so far contributed relatively little to the world's cumulative greenhouse gas emissions in atmosphere, but the country is already feeling their effects.
- The aims and strategies of India is to quadrupling renewable electricity capacity by 2030, more than doubling the share of natural gas in the energy mix, enhancing energy efficiency and transport infrastructure, increasing domestic coal output, and reducing reliance on imports.
- The Stated Policies Scenario (STEPS) provides a balanced assessment of the direction in which India's energy system is heading, based on today's policy settings and constraints and an assumption that the spread of Covid-19 is largely brought under control in 2021.
- The India Vision Case is based on a rapid resolution of today's public health crisis, environmental issues and a more complete realization of India's stated energy policy objectives, accompanied by a faster pace of economic growth than in the STEPS.
- The Delayed Recovery Scenario analyses potential downside risks to India's energy and socio-economic development in the event that the COVID-19 pandemic is more prolonged.
- The Sustainable Development Scenario explores how India could mobilize an additional surge in clean energy investment to produce an early peak and rapid subsequent decline in emissions of greenhouse gases, consistent with a longer-term drive to net zero, while accelerating progress towards a range of other sustainable development goals.
- **Solar power is set for explosive growth in India.** As things stand, solar accounts for less than 4% of India's electricity generation, and coal close to 70%. By 2040, they converge in the low 30%s in the STEPS, and this switch is even more rapid in other scenarios. The rise of utility-scale renewable projects is underpinned by some innovative regulatory approaches that encourage pairing solar with other generation technologies, and with storage, to offer "round the clock" supply.

SUGGESTIONS

In India, nature of operation of renewable energy projects varies across with efficient technologies. Almost all the wind and small hydro based RE projects are grid connected, either directly or through the distribution licensee's network private and public both. While in some cases, the biomass and bagasse based projects operates on off-grid mode which we were using since ancient time in India. Further, most of the solar projects currently installed in the country are off-grid projects, although recent initiatives by MNRE and significant developer interest is likely to see Grid connected Solar Power to be developed in big way with high yield production. **Three issues need to be addressed:**

- Whether REC scheme should cover the only new projects, commissioned after the introduction of REC mechanism or existing projects should also be covered under this scheme?
- Whether grid connected or off-grid projects both should be covered under legal framework and REC scheme?
- Whether participation in REC scheme should be made mandatory or it should be on voluntary basis?
- **Various challenges to integrate the REC scheme to off-grid projects with small grid project is due to the following reasons:**

Challenges in clean energy accounting of the generated electricity due to lack of visibility to the SLDC. In such case, an independent metering arrangement will have to be put in place and a detailed verification system for such power generation will have to be institutionalized. At international level, net metering facility was provided to account the energy generated by the small scale renewable energy projects. Otherwise it is challenging to quantify the quantum of electricity generated or displaced by off-grid technologies in India.

RECOMMENDATIONS WHICH HELP TO INTEGRATE RENEWABLES BETTER INTO THE GRID

- Move toward time-of-day pricing for bulk supply, including peak pricing (this is easier than consumer time-of-day pricing, and can come first).
- Need suitable legal framework to enhance clean energy storage solutions and deployments.
- Improve measurements, predictions, and analysis for wind and solar generation, including data sharing from various part of the country.
- Begin ancillary services in the grid with high productivity with legal framework.

- Deploy smart movable grids to make demand more dynamic and grids robust.
- Improve planning, distributing and accounting for renewables (rather, all generation), factoring in their burden on the rest of the grid such as transmission congestion.
- Renewables have been called the energy source of the future. With proper effort and planning, we can start that future much sooner.
- To manage risk, all stakeholder need to take suitable insurance product to cover losses.

CONCLUSION

Renewable Energy (RE) with suitable legal framework is considered to be of great help for the developing nations, and countries with economic transitions. However, it may espouse with some tricky challenges that those countries may find difficult to tackle with. Certainly, intellectual property rights in the RE legal regime is one critical and emerging issue. To reduce the hurdle and make those countries self-sufficient, global technological super powers and developed nations should provide financial, legal and technological support to those developing and poor countries. Thus, technology transfer with liberal legal provisions, capacity building and infrastructural development in developing countries at their RE sector should be facilitated by the developed world. A definite and precise global legal regime of RE will assist the developing nations to claim these as entitlement not just as charity.

As per researcher opinion, "*Renewable energy means to re-adopt our old Indian tradition which were used by our great grandparents to fulfilled energy need without degrading environment*".

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