Chandrawat & Partners

RENEWABLE ENERGY INDUSTRY IN INDIA

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CURRENT SCENARIO

Given its size and tremendous potential for growth and development, India's energy demand is anticipated to rise more than that of any other nation in the next decades. The majority of this additional energy demand must therefore be satisfied by renewable, low-carbon sources. An important turning point in the global fight to tackle climate change has been reached with India's announcement that it plans to achieve net zero carbon emissions by 2070 and to meet 50% of its electricity needs from renewable sources by 2030.

Renewable energy is defined as energy that comes from resources, which are naturally replenished on their own. The major renewable energy sources presently are solar energy, wind energy, hydroelectric power (large and small units), wave energy, ocean thermal energy conversion and tidal energy and biomass power.

India is the world’s 3rd biggest renewable energy producer (136 GW out of 373 GW) of total installed energy capacity in 2021 coming from renewable sources. The Indian renewable energy sector is the fourth most attractive renewable energy market in the world. India was ranked fourth in wind power, fifth in solar power.

The market for renewable electricity is expanding the quickest in India, where new capacity additions are anticipated to double by 2026.

The following is the breakup of the total installed capacity for Renewables, as of 31 December 2021-

1.Small Hydro Power: 4.83 GW
2.Large Hydro: 46.51 GW
3.Wind power: 40.08 GW
4.Solar Power: 49.34 GW
5.Biopower: 10.61 GW

Benefits of renewable energy:

- Private sector involvement: The government's goal of using 450 GW of renewable energy presented a significant opportunity for the private sector to get involved in the design and production of parts for renewable energy technologies in India solely and earn profits.

- Low cost of maintenance: Renewable energies like wind energy, biopower or solar energy requires almost zero maintenance and thus provide longer working hours and reduced labour cost.

- Environment friendly: The combustion of fossil fuels for energy results in a significant amount of greenhouse gas emissions that contribute to global warming. Most sources of renewable energy result in little to no emissions, even when considering the full life cycle of the technologies.

Affordable: Renewable energy, such as solar panels, is more affordable for most people. In addition, there are various financing options to help people transit to renewable energy. Even though some of the installation costs and the cost of purchasing the equipment might be costly, renewable energy is cheaper in the long run.

Created jobs: Renewable energy has been able to directly and indirectly employ millions of people. As a result of the increase in inventions, businesses, organisations, and schools have flourished and opened their doors. By the year 2030, there may be 25 million people working in the renewable energy industry worldwide.

GOVERNMENT POLICIES

Renewable energy certificate ("REC"):

The REC mechanism is a market-based instrument to promote renewable energy and facilitate the compliance of renewable purchase obligations ("RPO"). It aims to fix the mismatch between the availability of renewable energy resources in the state and what is required by aN RPO.

Release of green hydrogen mission:

The mission aims to aid the government in meeting its climate targets and make India a green hydrogen hub. This will help in meeting the target of production of 5 million tones of green hydrogen by 2030 and the related development of renewable energy capacity.

Launch of production linked incentive scheme:

A Production Linked Incentive ("PLI") Scheme called "National Programme on Advanced Chemistry Cell ("ACC") Battery Storage" to promote renewable energy storage infrastructure and manufacturing capacity.

Green term ahead market:

As a first step towards greening the Indian short-term power market, the government has launched the pan-India Green Term Ahead Market ("GTAM") in electricity, which is an alternative new model introduced for selling off the power by the renewable developers in the open market without getting into long-term power purchase agreements.

International efforts:

An India Energy Modeling Forum was launched under the United States-India energy partnership. Also, India has launched the International Solar Alliance, which is a treaty-based international intergovernmental organization and aims to mobilize more than $1 trillion of investment needed by 2030 for the massive deployment of solar energy.

The setting up of the Solar Energy Corporation of India ("SECI"):

With the mandate of the SECI allows wide-ranging activities to be undertaken with an overall view to facilitating the implementation of the National Solar Mission and the achievement of targets set therein. The SECI has the objective of developing renewable energy (RE) technologies and ensuring inclusive RE power development throughout India.

National Offshore Wind Energy Policy, 2015:

Offshore wind energy harnessing is still an underdeveloped sector in the country and the policy aims to change that.

Under this policy, the Ministry of New & Renewable Energy ("MNRE") has been authorized to explore and promote the deployment of offshore wind farms in the Exclusive Economic Zone ("EEZ").

KEY INSTITUTIONS IN INDIA FOR THE ENERGY SECTOR

Ministry of New and Renewable Energy ("MNRE")

The ministry is responsible for the development of the policies for renewables in electricity, transport, and heat in India. The National Institute of Solar Energy and the National Institute of Energy come under the Ministry of New and Renewable Energy. The MNRE also covers bioenergy for electricity. MNRE also provides financial support to those involved in the renewable energy sector. The Indian Renewable Energy Development Agency (IREDA) comes under MNRE which works as a non-banking financial institution for providing loans for renewable energy projects.

Solar Energy Corporation of India ("SECI")

SECI is responsible for implementing various schemes of MNRE, like the solar park scheme and grid-connected solar rooftop scheme.

Ministry of Power ("MOP")

This ministry governs and regulates the electricity sector in the country. This includes using renewables for electricity. The Central Electricity Authority ("CEA") is the main advisor to MOP. The MOP is also responsible for various important schemes like the UDAY program, which aims to help and provide them with financial assistance.

Central Electricity Regulatory Commission ("CERC")

The commission regulates the tariffs for generation companies and transmission utilities. They also grant licences for interstate transmission and trading.

Ministry of Petroleum and Natural Gas ("MoPNG")

This ministry is responsible for the development of biofuels and the implementation of national policies on biofuels. Thus, these are a few key institutions related to the energy sector in India.

RENEWABLE ENERGY CERTIFICATES (REC'S)

(Renewable Energy Certificates (RECs) represent the attributes of electricity generated from renewable energy sources. One REC represents that 1 MWh of energy is generated from renewable sources. RECs can be used by the obligated entities to demonstrate compliance with regulatory requirements, such as Renewable Purchase Obligations ("RPO"). The REC is exchanged only on the power exchanges approved by CERC within the band of a floor price and a forbearance (ceiling) price as notified by CERC from time to time.

There are two categories of certificates:

1. Solar REC's: issued to eligible entities for the generation of electricity based on solar as a renewable energy source. Solar RECs include both photovoltaic (PV) and Concentrated solar power ("CSP") technologies.
2. Non-solar REC's: issued to eligible entities for the generation of electricity based on renewable energy sources other than solar. Non-solar RECs include renewable energy technologies such as biomass, wind, biofuel, cogeneration, and small hydro.

Who can buy REC'S?

RECs are traded on the Indian Energy Exchange (IEX) and the Power Exchange of India Ltd (PXIL). Corporates and individuals can buy Renewable Energy Certificates voluntarily. RECs are issued to those generators who have generated electricity through renewable sources like solar, wind, biomass, small hydro, municipal solid waste etc. For the electricity part, the generator receives the cost equivalent to that from any conventional source while the environment attribute is sold through the exchanges at the market determined price.

Who are eligible to sell REC'S?

Eligible entities are those renewable generators who meet the following criteria:

1.This type of renewable source has been approved by MNRE and the respective State Commission.

2.It does not have any Power Purchase Agreement (PPA) for the capacity related to such generation to sell electricity at a preferential tariff determined by the appropriate commission.

3.Not having an agreement to sell electricity to a local distribution company at a price not exceeding the pooled cost of power purchase of that distribution company.

4.It sells electricity to the:

At a price not exceeding such distribution licensee's pooled cost of power purchase, or

- To an open access consumer at a mutually agreed price, or through a power exchange at a market determined price. selling electricity to any entity other than a local distribution company at market-driven prices or otherwise.

Renewable Purchase Obligation (RPO)

Renewable Purchase Obligation (RPO) is a mechanism by which the State Electricity Regulatory Commissions oblige entities to purchase a certain percentage of power from renewable energy sources.

Following entities are generally obligated in the State:

1.Distribution Licensees

2.Captive Consumers

3.Open Access Consumers

REVOCATION OF REGISTRATION

If the central agency, after making an enquiry or based on the report of the compliance auditors, is satisfied that public interests so require, it may revoke registration of the eligible entity in any of the following cases:

(a) where the eligible entity, in the opinion of the central agency, commits willful and prolonged non compliance with any requirement imposed by or under these regulations;

(b) if the eligible entity violates any of the terms and conditions of its accreditation or registration, the violation of which is expressly declared by such accreditation or registration to be grounds for revocation;

(c) where the eligible entity fails within the period required in this behalf by the central agency-(i) to show, to the satisfaction of the central agency, that it is in a position fully and efficiently to discharge the duties and obligations imposed on it by its accreditation or registration; or (ii) to make the deposit or furnish the security, or pay the fees or other charges required by its accreditation or registration.

FEES AND CHARGES FOR ACCREDITATION, REGISTRATION, ISSUANCE AND REDEMPTION.

The Central Electricity Regulatory Commission (CERC) has issued the Draft Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022. The National Load Dispatch Centre (NLDC) shall be the central agency for the purpose of these regulations. The process involves accreditation and registration for certificates and (ii) issuance, exchange, and redemption of certificates, as specified in the regulations.

Within fifteen days of receiving a complete application for the issuance of a certificate from an eligible entity, the central agency shall either issue the certificate or reject the application, recording the reason for such rejection and informing the concerned entity. The commission may, based on the proposal from the central agency, determine the fees and charges payable by the eligible entities for accreditation, registration, issuance of certificates and other matters connected therewith.

The details of fees and charges for different procedures of REC are as under:

Fee and Charges towards Accreditation	Amount in ₹
Processing Fees (One Time)	5,000
Accreditation Charges (One Time)	30,000
Annual Charges	10,000
Revalidation Charge at the end of five (5) years	15,000
Fee and Charges towards Registration	**Amount in ₹**
Processing Fees (One Time)	1,000
Registration Charges (One Time)	5,000
Annual Charges	1,000
Revalidation Charge at the end of five (5) years	5,000
Fee and Charges towards Issuance of REC	**Amount in ₹**
Fees per Certificate	02

REC Mechanism

- Accreditation through State Nodal Agency.
- Registration through Central Agency NLDC.
- Issuance through Central Agency NLDC.
- Trading and redemption through power exchanges.

POLICIES FOR RENEWABLE ENERGY INDUSTRY

The primary objectives for deploying renewable energy in India are to advance economic development, improve energy security, improve access to energy, and mitigate climate change.

The government has developed various policies to promote renewable energy sources in the country. These policies are largely financial, fiscal incentives or special directives aimed at encouraging renewable energy. The policies are constantly working towards achieving the target set for 2022. The policy measures are administered through the Ministry of New and Renewable Sources of Energy (MNRE). Some of the policies and fiscal measures in India for renewable energy are discussed below.

Foreign investment policy

As the world rapidly invests in renewables in a bid to transition away from fossil fuels to a greener future, companies and governments are not just funding projects at home but also abroad. Several companies around the globe have highlighted India as a key market for their renewable energy investments.

India has seen greater foreign investment in its renewable energy sector after the Indian government highlighted the need for increased funding from overseas at the climate summit in 2021 and again at the G7 summit in June. In fact, foreign direct investment in India's renewable energy sector increased by 100 percent to $1.6 billion in FY2021-2022, compared to $797.21 million the previous year.

The policy promotes foreign investors' entering into a joint venture with Indian companies for financial or technical collaboration and for setting up renewable energy-based power generation projects.

The government promotes foreign investors to set up renewable energy-based projects on a build, own, and operate basis.

The Reserve Bank of India ("RBI") has permitted Indian companies to accept investment without obtaining prior approval from the RBI to set up renewable-based projects.

A Foreign Investment Implementation Authority (FIIA) has been established to translate Foreign Direct Investment (FDI) approvals and implementations into english. This will promote foreign investment in renewable energy-based projects.

OTHER IMPORTANT POLICIES

The government realized the need for research and development activities in the field of renewable energy. The government established a Commission for Additional Sources of Energy (CASE) in 1981. CASE seeks to promote research and development activity in the field of renewable energy.

The Ministry of New and Renewable Energy was set up later. India became the first country to have an exclusive ministry for renewable energy development.

The Cabinet Committee on Economic Affairs (CCEA) approved financial support of up to USD 6.5 billion by 2022 to promote the use of solar energy among farmers.

The Atal Jyoti Yojana (AJAY) phase II programme was initiated in 2018 to provide financial support for the installation of over 3 million solar street lights in selected areas.

The MNRE introduced the National Wind-Solar Hybrid Policy in 2018 to promote large-grid-connected wind-solar PV hybrid systems for the optimal and efficient use of land and transmission infrastructure.

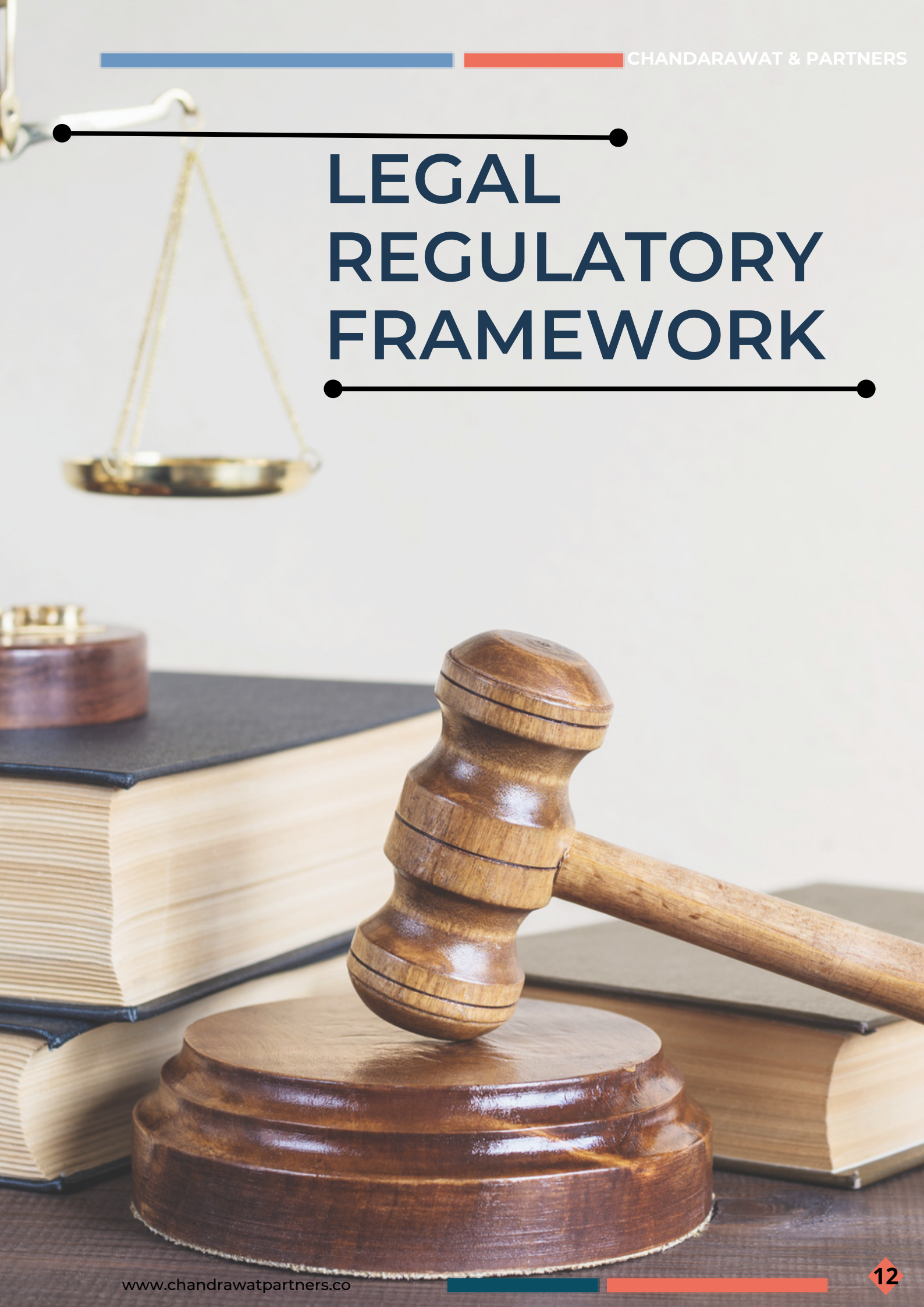
The government introduced the Safeguard Duty (SGD) on solar panels to promote the domestic production of solar cells.

The legal provisions relating to renewable energy are mentioned in Section 86(1) of the Electricity Act, 2003.

The section imposes a duty on state commissions to promote the generation of electricity from renewable sources of energy.

Thus, these were a few key policies adopted by the government in India seeking to promote, research, and develop the renewable energy sector in the sector.

LEGAL REGULATORY FRAMEWORK

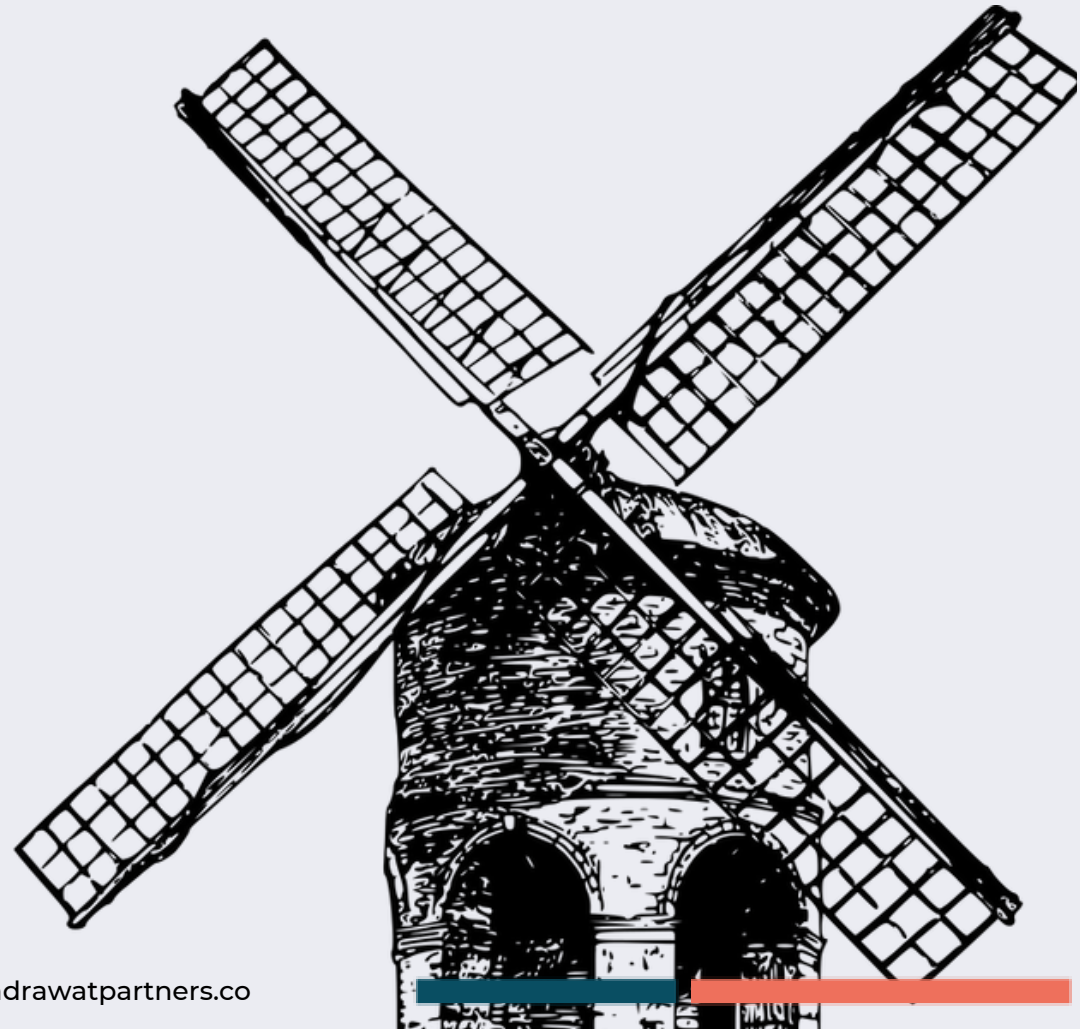


In India, the primary legislation governing electricity (including renewable energy (RE)) is the Electricity Act 2003 (EA 2003). The power to legislate on matters concerning electricity is shared between the central government and the state governments. However, in the event of inconsistency between the two, central legislation will prevail over state legislation.

Unlike for transmission, distribution and trading of electricity, the generation of electricity itself is a delicensed activity under the Electricity Act 2003, provided that a generating station complies with all technical standards for grid connectivity. However, during the lifetime of the project (including the pre-construction and construction phases), there are numerous approvals that are required by the developer from government authorities for other activities, including for adoption of the tariff discovered through competitive bidding, connectivity with the grid, utilising the transmission utility's network, charging the electrical infrastructure, laying of overhead transmission lines, etc. Further, if the project is situated within a certain distance from an airport or a defence base, approval from the relevant ministry will also be required. Additionally, developers are required to ensure compliance with the industrial and labour laws prevalent in the area where the project is being undertaken.

During the process of land acquisition, there are state-specific permits and approvals required to be obtained. There are also certain restrictions on setting up a power project within sensitive areas – such as sanctuaries, national parks and reserve forests – that must be kept in mind.

With respect to environmental approvals, solar and wind projects have been exempted from obtaining typical environmental clearances that are required for other projects and industries such as the environmental clearance from the Ministry of Environment, Forest and Climate, and the consent to establish (CTE) and the consent to operate (CTO) from the state pollution control board. In relation to the CTE and the CTO, an intimation to the relevant state pollution control board will suffice.



TAX IMPLICATIONS ON SOLAR POWER BASED DEVISES

All renewable energy devices, including solar devices or solar power projects, are covered under the ambit of Goods and Service Tax .

All renewable energy devices are taxed at 12% GST. But, if the project includes erection, procurement, and commissioning of a solar generating system, it will fall under 'Works Contract Services'. In this case, 12% GST will be applicable on 70% of the total contract value and 18% on the remaining 30% value.

Type of suppy	**01/10/2021 – till date**
Goods falling under Chapters 84, 85 or 94	12%
Any other goods	Applicable GST rates
Pure Services	18%
Composite Supply (except maintenance services)	13.80% (70% of 12% + 30% of 18%)
Renewable Energy Certificates	18%
Composite Supply (maintenance services / AMC)	

Note: Chapters 84, 85, and 94 deal with nuclear reactors, boilers, machinery, and mechanical appliances; parts thereof; electrical machinery and equipment; parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers; and parts and accessories of such articles. furniture; bedding; mattresses; mattress supports; cushions and other stuffed furnishings; lamps and lighting fixtures .

CAN ONE CLAIM INPUT TAX CREDIT (ITC) ON THE SUPPLIES?

Manufacturers of Renewable Energy goods:

Businesses that manufacture renewable energy goods will be eligible to claim the ITC as available subject to fulfilment of restrictions. Usually, these manufacturers are solely engaged in the manufacture and sale of complete units such as solar panels, wind turbine fans, etc.

Dealers /Contractors of Renewable Energy goods and services:

Businesses engaged in the procurement and installation of Renewable Energy goods and services shall be eligible for claim of ITC. There is a possibility of inversion of input goods and services in this regard, as the effective GST rate for supply is currently 13.80% whereas the procurement of goods not falling under 84, 85, or 94 and individual services may attract higher GST rates.

End customers of Renewable energy goods:

Businesses that obtain or procure renewable energy-related goods or services for their business will be eligible to claim ITC as follows:

A. Factories / Commercial buildings:

In the case of renewable energy units, set-up in factories or commercial buildings for captive generation of electricity, then the restriction of Section 17(5)(c) & (d) of CGST Act, 2017 for construction of buildings will not be attracted as such units can be treated on par with 'Plant and Machinery' and not 'Building' because according it states that ITC is not available for composition taxable persons, whether or not supplying goods or services

B. Sale of captively generated electricity:

In the event that the captively generated electricity is more than the requirements of the business entity, then any supply of such electrical energy goods is exempt under GST. Hence, the common input tax credit incurred for such electricity generation, including the ITC on the renewable energy units, should be reversed in terms of Rule 42 for input goods and services and Rule 43 for capital goods.

C. Generation and sale of electricity:

In the case of businesses involved only in the generation and sale of electricity in the market, the sale of electrical energy will be considered as the sale of goods as per notification no. 02/2017 dated June 28, 2017. As a result, the input tax credit incurred for such an exempt sale is reversed in Section 17(3) and Rule 42/43. Hence, the input tax credit incurred will effectively be the cost of the project and will impact the pricing of the electrical energy as well. With the increase in GST rates by 4.9% on the composite supply of renewable energy goods, the cost to such businesses for setting up the project has increased further.

DISPUTES FRAMEWORK

The legal framework applicable to disputes between renewable power market participants, related to pricing or otherwise.

There are no separate bodies or framework for disputes relating to renewable energy in particular. Jurisdiction over interstate and intrastate electricity regulatory issues is exercised by the Central Electricity Regulatory Commission and the State Electricity Regulatory Commission, respectively.

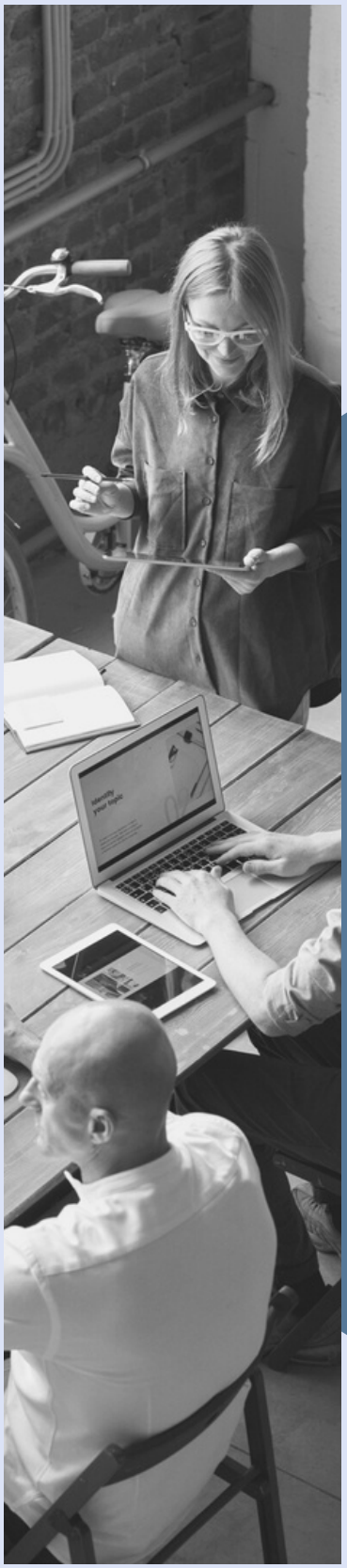
The Central Electricity Regulatory Commission has the power to adjudicate upon disputes involving generating companies (either owned or controlled by the Government of India or that have entered into a composite scheme for generation and sale of electricity in more than one state) or transmission and trading licensees concerning the determination of tariff and regulation of inter-state transmission and trading of electricity.

The State Electricity Regulatory Commission has the power to adjudicate disputes between licensees and generating companies within their respective jurisdictions. Both the Central Electricity Regulatory Commission and the State Electricity Regulatory Commission have the authority to refer disputes to arbitration.

The Appellate Tribunal for Electricity (APTEL) is the appellate body and possesses suo moto jurisdiction to examine the validity of any order made by the Central Electricity Regulatory Commission or State Electricity Regulatory Commission.

Decisions of the Appellate Tribunal for Electricity (APTEL) may be challenged before the highest court, the Supreme Court of India.
Concerning specific disputes of time extension, the Ministry of New and Renewable Energy, in June 2019, issued an order regarding the setting up of a dispute resolution committee to resolve disputes related to appeals against decisions given by Solar Energy Corporation of India and National Thermal Power Corporation Limited on the extension of time requests based on the contracts executed and requests for extension of time not covered under such contracts.

On September 20, 2019, the Ministry of Renewable Energy issued the procedural guidelines for effectuating the dispute resolution mechanism.



How we can help?

We provide a full range of legal counsel needed to permit, build, purchase, and operate on-site generation, from small to utility-scale generating facilities.

This includes negotiations with the utility, regulatory approvals, land leasing, project financing, siting and permitting, and interconnection to the grid.

We review factors such as particular industry, load, location and advise on the regulatory scheme applicable to client's facility in order to achieve the objectives.

We have the depth of experience to help an organization explore and advance opportunities.

We are, at times, more than professionals; we are advisers, bringing new ideas to light.

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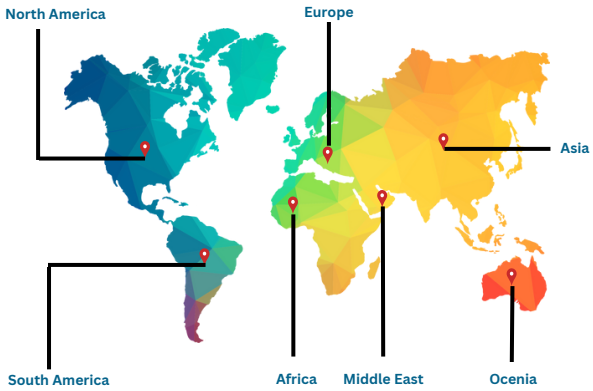

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