

Introduction to Law on Electricity
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Lecture 36
Renewable Energy (Contd.)

Welcome to all the learners. We have started discussing on renewable energy. What are the laws related to it? What are the policies related to renewable energy, and how the Electricity Act deals with the issues of renewable energy? Carrying the clue from the last session, now, let us look at some of the significant interventions made to promote renewable under the Electricity Act.

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So, in today's session, we will be discussing about Renewable Purchase Obligation, we will be discussing about Feed-in-Tariff, and we will also discuss about Renewable Energy Certificates. And we will just look at some cases to understand that how the court has dwelled upon the issue of the promotion of renewable energy.

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- Electricity Act, 2003 – two specific instruments to promote renewable
 - Renewable Purchase Obligations (RPO) and Feed-in-Tariff (FIT)
 - Renewable Energy Certificate (REC) – the responsibility of the Regulators to promote the development of power market
- FIT and REC are mutually exclusive to each other
 - Investor can choose either route for investment
 - A buyer can meet renewable purchase obligation by either or both of the instruments

When you look at the Electricity Act, as I have discussed in the last session, that the state regulatory commission has been specifically authorized to identify the obligation, to put up an obligation on the licensee to procure a certain percentage of the requirement from renewables. And in that perspective, you would find that two specific instruments have been brought into notification by the regulatory commission. One is Renewable Purchase Obligation (RPO), and the other is Feed-in-Tariff.

Now, Renewable Purchase Obligation and Feed-in-Tariff is about encouraging the developer to invest in renewable and assuring a market for them. That is what the design promises. Renewable Energy Certificate (REC) is a sort of creativity to promote renewable in a form which can be tradable without buying and selling off electricity, where there is an obligation but there is no electricity available, or the procurement is more than the obligation, then how to enjoy a leverage upon the same. REC is a mechanism suggested for enjoying the dividend on the premium paid.

Feed-in-Tariff and Renewable Energy Certificate, they are mutually exclusive because of the very fact that in one case, there is a generation happening and that is being sold; in other case, there is no generation, and there is a notional consumption taking place. So, investor can choose other route for investment. Either one can install a generating unit and then get the fixed feed-in-Tariff or one can invest and get the Renewable Energy Certificate and credit in the power

exchange. So, buyer can meet renewable purchase obligation by both the means. So, it can either go for feed-in-tariff or it can go for REC.

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➤ Renewable Purchase Obligations

- Functions of SERCs - promotion and cogeneration of electricity from renewable sources of energy - setting of RPO targets (Section 86(1)(e))
- to specify renewable purchase obligation for the obligated entities
- obligated entities include distribution companies, open access consumers and captive power producers
- RPO is determined at the state level by SERCs/JERCs

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Now, let us look at what is renewable purchase obligation, as I expressed on section 86, and I said that how renewable purchase obligation enjoys the legal status. Because the state commission has been entrusted with the task. If you look at the language, the very subheading of the section 86 says functions of the regulatory commission.

So, they have the task entrusted upon them and in pursuant to the same, good number of state regulatory commissions have come up with the renewable purchase obligation. And what is renewable purchase obligation? It says that the regulatory commission specifies that the obligated entities are having a bounden duty to procure a certain percentage of electricity from the renewable generators, bounden duty.

So, if distribution licensees requirement is 1 megawatt and if it has been said that 10 percent of the requirement has to be met from renewable then licensee has a responsibility to get that 10 percent from renewable sources. That is what is the duty which is being imposed. And who are obligated entities? It says obligated entities are distribution companies, open access consumers and captive power producers. It is not only distribution companies which are obligated entities, even open access consumers; they also do have the responsibility to meet RPO.

And RPO is to be determined at the state level by the regulatory commissions. Though there is an attempt made, which I have discussed earlier that how the central government is now proposing that RPO is to be determined or to be aligned on the lines of tariff policy which the central government formulates. It is to be seen that how the suggestion is going to get received by the state governments.

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The slide contains the following text:

- Mandate to purchase power from renewable energy source was meant to create demand and address market risk for the investors
- RPO was meant to boost demand side of the renewable energy segment
- National Tariff Policy, 2016 - set the target of solar purchase obligation at 8% in energy terms (excluding hydro) by 2022
- Non-compliance of RPO attracts penalty under SERCs' regulation – the compliance level of the Distribution Licensees is not encouraging

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Now, RPO is being designed with the very idea to create demand and address the risk which is being posed in the investment on the sector. So, here what RPO is doing, RPO is compelling the distribution licensees that because the generation is happening from renewable, they have a duty to buy it. One may argue that this may not be in complete compliance with the idea of free market where you give the choices. But then it can very well be justified by advocating the cause of environment.

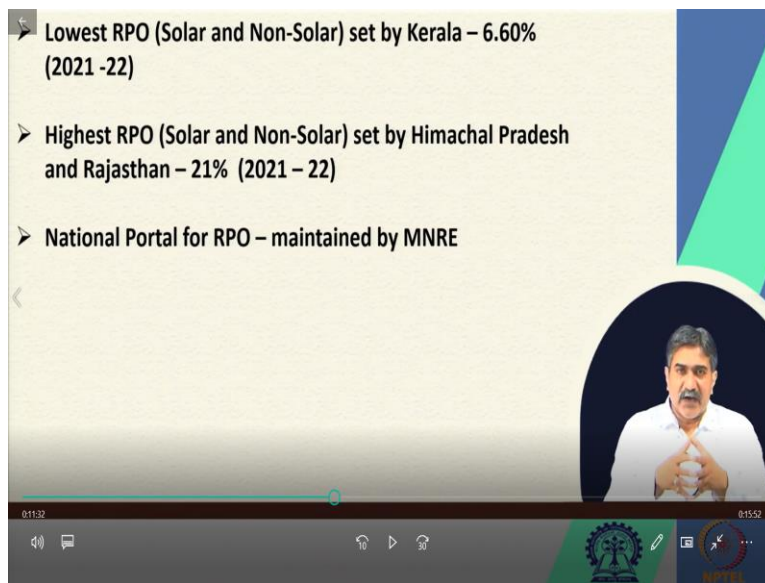
So, there is a mandate to purchase power. And what this mandate is doing, this mandate is ensuring that what is being generated, there is a demand for the same. So, RPO is, in a way, a mechanism to encourage demand side of renewable energy segment. The distribution licensee cannot run away from the responsibility, it has to procure. And National Tariff Policy 2016 says that the Solar Purchase Obligation should be at 8 percent in energy terms by 2022.

Because renewable purchase obligation, generally, categorized based on solar energy and non-solar energy. And because it is an obligation under the law, it is not difficult to imagine that non-

compliance of the legal mandate would attract the penalty. And that is what precisely has also been provided. Now, it is entirely a different story that how the state regulatory commission is imposing penalty on DISCOMS for non-compliance. Because please do take note of the fact that the state DISCOMS are still working under the control of the government.

And therefore, they do have a responsibility to address or cater to the interest which government indirectly presents before them. And that way, compliance is not very successful; it is not up to mark. But legally speaking, it suggests that there has to be penalty for the same.

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Lowest RPO (Solar and Non-Solar) set by Kerala – 6.60% (2021 -22)

Highest RPO (Solar and Non-Solar) set by Himachal Pradesh and Rajasthan – 21% (2021 – 22)

National Portal for RPO – maintained by MNRE

As I said that generally, the state which identifies the RPO, Kerala Regulatory Commission has set the lowest RPO, 6.6 is the RPO fixed by Kerala Regulatory Commission. Highest one when you look at the Himachal and Rajasthan Regulatory Commission, they have fixed the highest one, and there is 21 percent of the total procurement. You would find that the Ministry of New and Renewable Energy maintains a portal for RPO, and you would find complete detail there. National portal for RPO is maintained there that what is the performance of the state and what percent is the state has identified.

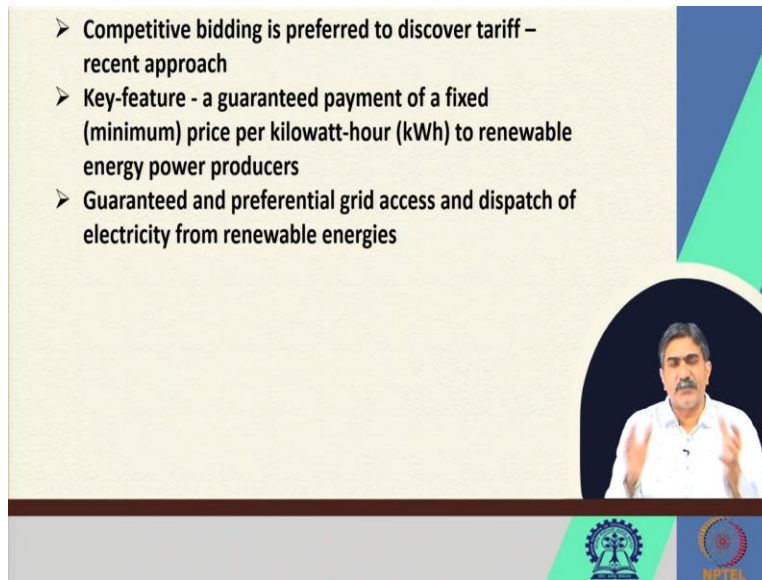
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- Principles for Tariff Determination - the promotion of co-generation and generation of electricity from renewable sources of energy (Sec.61(h))
- Feed-in-Tariff
 - FIT was aimed at giving supply side push
 - Regulatory Commission to fix FIT on the basis of which the generators would enter into a long term Power Purchase Agreement (20 – 25 years) with DISCOMS
 - Regulatory Commission to accord 'a must run status'
 - Required for attracting investments
 - Cost plus approach – determine FIT
 - Capital cost - RE technologies and thereafter determine the levelized tariffs for the electricity generated

Now, there is a regulation also for feed-in-tariff, that is getting its legal approval from the language of section 61, as I discussed. Where it says that while formulating the guidelines on tariff, the promotion of renewable sector has to be kept in mind. And perhaps in pursuant to the same, the very regulation on feed-in-tariff has come into existence. Now, renewable purchase obligation is contributing on demand side; feed-in-tariff is contributing on supply side. Because, in this case, the generator has been encouraged to generate from renewable sources and to get a fixed tariff as determined by the regulatory commission.

And generally, it has been said that feed-in-tariff is fixed for longer duration. So, you can very well appreciate that investor would get the confidence to come and invest in the sector because there will be certainty in terms of getting the revenue, long term power purchase agreement with a defined tariff. And also, the regulatory commission is according, approving, and acknowledging “must run” status on the lines of conventional thermal power. Feed-in-tariff was initially to be determined on the basis of cost-plus approach where it is to be seen that what is the cost of the technology which has been involved and then to look at the operational factors, the maintenance factors. So that the investor would get the return.

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➤ Competitive bidding is preferred to discover tariff – recent approach

➤ Key-feature - a guaranteed payment of a fixed (minimum) price per kilowatt-hour (kWh) to renewable energy power producers

➤ Guaranteed and preferential grid access and dispatch of electricity from renewable energies

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Now it is being encouraged that let the buying and selling have been on the basis of competitive bidding. And we have learned from the experiences based on competitive bidding that it guarantees better pricing to the consumers. We have read that in recent past, the tariff has come down; it is lesser than what is there for the conventional sources. Now, what is the key feature for feed-in-tariff? It says that a guaranteed payment of fixed price; guaranteed payment; that is why this is, in a way communicating to the investor that you will get the return on your investment.

And additionally, it says that you will also get a preference in grid access and dispatch of electricity from renewable energies. All these measures are needed, all these measures are needed for promoting renewables in order to make it competitive and in order to also minimize the dependence on import of fuels.

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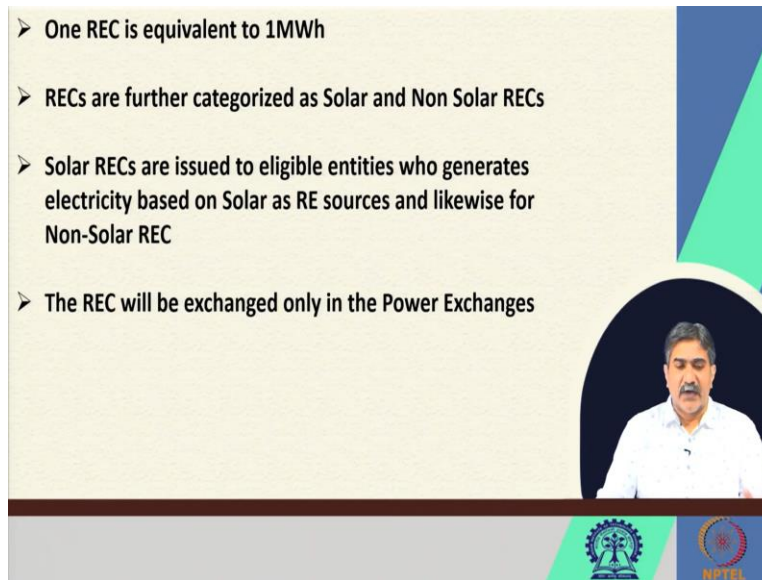
- Renewable Energy Certificate – introduced in 2010
 - Envisaged as an alternate mechanism to FIT for both investors and buyers
 - For the investors - an additional avenue for investment - for the buyers - to serve as an alternate mechanism for RPO compliance
 - Mechanism suggested - the investor could set up a plant and sell the electricity component and the clean attribute separately
 - To address the mismatch between availability of RE resources in state and the requirement of obligated entities to meet RPO

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Now, feed-in-tariff, renewable purchase obligation is all about generating electricity. Renewable Energy Certificate presents a mechanism where there is no generation happening, but there is a trading happening, which is supporting the growth of renewable sector. So, this is a mechanism which has been suggested. What is the mechanism that you buy the certificate and then credit, credit, who shall be interested in that trade, the one who is not meeting the renewal purchase obligation? Because if the obligation has not been met, a penalty is there. And there may be a possibility that renewable source of energy is not available in that part of state or in that geographical location. And instead of getting electricity from far flung places, it is better to buy REC.

In that process, the obligated entities would also meet the requirement of RPO and then renewable will also get a necessary push. So, that is what is the benefit. So, mechanism suggested is that the investor could set up a plant and sell the electricity component. So, investor is asked to set up the plant, and then a mechanism has been designed so that generated electricity is one component to be sold in the power market, and the other is the green attribute which is not about generated electricity which is about contributing in the energy mix. So, that is also to be traded. So to address the mismatch between availability, there is no availability. But then, there is a requirement to meet REC and how to do that. REC is a solution for the same.

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- One REC is equivalent to 1MWh
- RECs are further categorized as Solar and Non Solar RECs
- Solar RECs are issued to eligible entities who generates electricity based on Solar as RE sources and likewise for Non-Solar REC
- The REC will be exchanged only in the Power Exchanges

What is the value which is given? It says one renewable energy certificate would be equivalent to one megawatt hour. That is what it says. And then, renewable energy certificate, as in the case of renewable purchase obligation categorized between solar and non-solar. Even in the REC, it has been said that let it get. And further, it says that solar REC is to be issued to eligible entities who are eligible to generate solar energy. Likewise, other renewable energy certificates need to be given to those entities who are eligible to generate electricity from other renewable energy sources.

So, who is eligible to issue REC? It is the one who has got the eligibility to generate. And then it is also said that REC is to be exchanged only in the power exchange. And as we have studied that we have two power exchanges which facilitate power trading. REC has not become very popular, but then there is a huge potential in the sea.

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- **Hindustan Zinc v. Rajasthan Electricity Regulatory Commission (2015 – SC)**
 - Rajasthan ERC – notified regulations of RPO on captive power plants
 - CPP and Open Access Users – argued – RERC has no jurisdiction as generation is de-licensed activity
 - **Held:**
 - Imposing RPO is desirable in the larger public interest
 - the application of the renewable purchase obligation on captive power plants – justification - Art. 51A(g) and Art. 21 – right to clean environment
 - The object of imposing RE Obligation is protection of environment and preventing pollution by utilising RE sources in public interest

Look at this phenomenal judgment, Hindustan Zinc versus Rajasthan Electricity Regulatory Commission, decided by the Supreme Court in 2015; why it is phenomenal, revolutionary, and remarkable landmark because the very reason. In this case, captive power plants, they said that they do not have to follow the requirement of renewable purchase obligation. There is no mandate on them because they are getting the electricity for their own use. So, where is the question of meeting the requirement of RPO?

Now, this is something which has been argued and said that Rajasthan Electricity Regulatory Commission does not have necessarily jurisdiction to provide a legal requirement to get RPO for captive power plants. They said the captive power plant is being dealt under generation, and it has been delicensed. So, where is the question of treating them at power with distribution licensees when it comes to fulfilling the obligation for RPO? They are not distribution licensees, and ideally, RPOs are meant for distribution licensees.

Now, the matter went all the way to the Supreme Court, and Supreme Court said that RPO is not only about ensuring the return to the investor; it is more of fulfilling the larger public interest. And what is that larger public interest, that is clean environment. And the court has displayed the creativity and taken assistance from the constitutional values, constitutional provisions Article 51 A(g) and Article 21. Article 51 A(g), which talks about improvement of environment, the state shall make necessary endeavors to improve environment. And Article 21 talks about the right to

life and liberty, where Article 21 has been expanded to include the right to clean environment, the right to health.

So, the court, with the support of these constitutional provisions, has said that RPO is for a larger purpose. And therefore, the regulatory commission is not wrong on imposing an obligation on captive power plant and make them equivalent to distribution licensees for the purpose of meeting this RPO. That is what the Court has said. So, look at the way, the court has taken the support of rights-based argument for promoting renewables. That is what is the significance; that is what is the highlight of this case.

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➤ **ReNew Power Limited v. the State of Andhra Pradesh (2019 - Andhra HC)**

- the Generators executed PPAs with DISCOMS to produce solar power – on invited to generate solar and wind
- the APERC determined the tariffs for the PPAs and the Generators subsequently began generating power and supplying the same to the DISCOMS
- the Government of Andhra Pradesh was of the view that these tariffs were exorbitant – issued order to reduce the tariff
- **Held:**
- Government is not party to the PPA – thus cannot give directions to alter the terms of PPA – Sec. 108 not applicable
- PPA did not permit unilateral alteration or at the behest of the third party

Now, this is another case which deals with a proposal to reduce the tariff with a retrospective date by the government. ReNew Power Limited versus State of Andhra Pradesh. In 2019, Andhra Pradesh government suggested that the tariff fixed through competitive bidding is on a higher side, and DISCOMS are not in a position to pay the same. When the tariff was fixed through a transparent and fair process, and PPA was agreed upon or entered, in 2014, Andhra Pradesh government invited the bid; developers shown the interest and established the power plant based on solar and wind. And they started generating also, they started supplying the electricity. But then they are not being paid by the DISCOMS, and later on, the state government has instructed to reduce the tariff.

Now, this was contested by the developers. They said that the tariff was being determined based on agreement. And how can the state government now interfere and instruct to reduce the same? Matter went to the High Court, High Court categorically said that government is not a party to the power purchase agreement. Government is a third party. And unilaterally, there cannot be any alteration on the terms of agreement.

On the argument advanced by the government of invoking power under Section 108, which enables the government to give necessary directions in public interest; the Andhra Pradesh High Court turned down this argument. The court said that there is no public interest involved here because you have to also look at the sanctity of the contract entered between the parties.

Now, this matter is pending before the Supreme Court, and it would be interesting to see that how the Supreme Court addresses the issue. Why? Because the matter involves sanctity of the power purchase agreement entered between the developer and the DISCOMS. Why? Because the tariff determined through that agreement is apparently on a higher side, which ultimately not catering to the interest of the consumers.

So, it would be interesting to see that how the Supreme Court decides on it. Whether the Supreme Court goes by the sanctity of the contract or the court comes up with the kind of formula to balance the competing interest. So, this is on renewable purchase obligation, feed-in-tariff, and renewable energy certificates. Thank you very much.

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➤ **References:**

- Sushanta K Chatterjee, The Renewable Energy Policy Dilemma in India: Should Renewable Energy Certificate mechanism compete or merge with the Feed-in-Tariff Scheme?, M-RCBG Associate Working Paper Series | No. 79, August 2017
- Legal Frameworks for Renewable Energy, Federal Ministry for Economic Cooperation and Development, Germany, <https://www.icafrica.org/fileadmin/documents/Knowledge/GIZ/Legal%20Frameworks%20for%20Renewable%20Energy.pdf>

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These are the references for the session.