

Introduction to Law on Electricity
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Lecture 18
Distribution and Retail Competition

Welcome to all of you. We have been studying. We have been trying to understand that how the distribution segment has been reformed under the Electricity Act 2003. What are the promises which have been made, and how those promises are getting fulfilled? And ultimately, the consumer getting benefits from the reform, from the liberalization of the segment.

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So, in today's class, we will study and learn that what are the challenges for bringing in reform in the real sense in the distribution segment. What are the attempts made? What shall be the benefit of bringing in retail competition for the consumers of the power market? So, that is what we will be reading today; that is what we will be trying to understand.

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➤ **Legislative Scheme of Retail Supply –**

- Recognizes the entire value chain of electricity i.e. generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail (Sec. 86 (1))
- supply and distribution both are recognized under common activity of 'distribute' (Sec. 12 (b))
- Retailer and Wholesaler was not recognised as a separate entity (Sec.14)
- Distribution licensee is responsible for distribution of electricity - as retail service provider or wholesaler, supplies electricity to retail consumer

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Now, when you look at the very scheme of the law, how retail supply has been defined. Now, if you look at the language section 86, section 86 describes complete supply chain of the power system. It highlights that what all sectors are involved, it highlights that what all sets of activities are involved and accordingly, it confers the authority on the appropriate commission to determine the tariff. Now you can look at Section 86 (1).


It says; what entire value chain of electricity is all about; it talks about generation; it talks about supply; it talks about transmission; it talks about wheeling of electricity; it talks about wholesale bulk or retail supply of electricity. So, the law acknowledges the retail supply of electricity. That is what is indicated in the scheme of the law. But then, when you look at the provision related to licensing, if you can recall, we have discussed that under the Electricity Act, three activities are now regulated, for which license is to be obtained from the appropriate commission; transmission, generation and trading.

Section 12 (b) says that the supply and distribution, both are recognized under common activity of distribution. So, to distribute electricity and supplementing with the section 14, which talks about retailer and wholesaler, when you look at it, they are not been recognized as a separate entity. So, though, in the value chain of electricity, wholesale supply is being considered from both the perspectives, from bulk supplier as well as retail supplier. But then, when it comes to operating in the market, when it comes to participating in the power market, one has to go and obtain license, and for that, section 12 read with section 14 says that supply and distribution, they are one integrated set of activity.

So, what do we infer from this reading of the law? That, as far as the activity of distribution licensee is concerned, they are into both the businesses and they are integrated one. What are those businesses? That they buy electricity and they supply it to the end consumer. So, this end factor brings in the challenge for the growth of the retail market in the power sector.

Though the law says, and we have read, that distribution licensee can very well supply electricity through any other person and that person can be a franchise, and that franchise need not take the license. But then again, as far as license is concerned, license has been given for both the activities together. So, technically speaking, distribution licensee is responsible for both, to arrange the supply and to ensure that it reaches to the end consumer. So, it is all about responsibility for distribution of electricity as a retail service provider, or as wholesaler to the consumer. So, they have this responsibility, and that is what we have read also under Section 42 of the Act.

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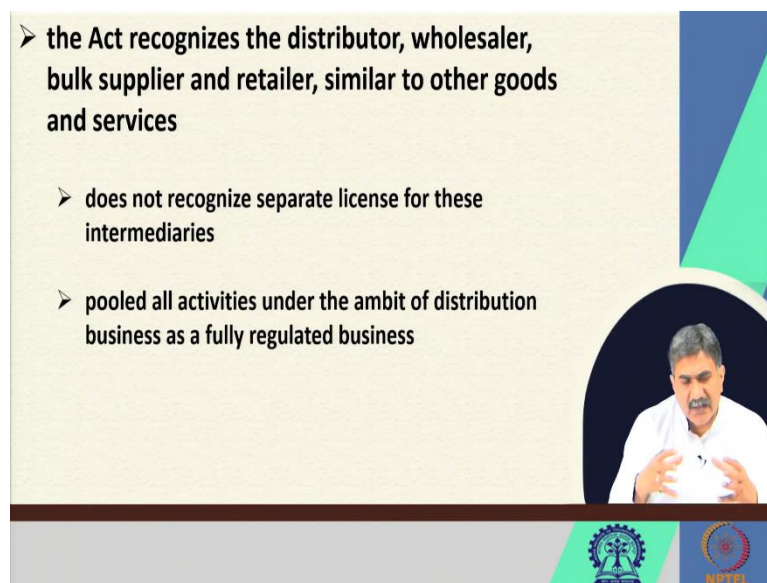
- **the role of a distribution licensee is a combination of a service provider as well as distributor of electricity**
- **Undertakes the role of a retailer and distributor when it supplies electricity to consumer as retail service providers**
- **The distribution licensee supplies electricity to another distribution licensee, the position of former distribution licensee can be considered as a distributor or wholesaler**

We have read that they do have an obligation; section 42 read with the section 43 Universal Service Obligation. When you look at the role of the distribution licensee, you would find that their role is of both; They do have a role as a service provider and they do have a role of distribution of electricity. So, they are into dual function here.

They are getting the electricity from the generating units, getting it transported through the transmission network, and then they are also responsible for installing necessary electrical equipments for the consumption of electricity by the consumer, be it the substation, transformer, meter and they are also responsible for billing & collections.

They do have all the responsibilities under the Act. So, distribution licensee undertakes the role of a retailer and distribution. So, when distribution licensee is into retail supply, please do understand that they are doing both the functions. They are maintaining and operating the distribution network, and they are also responsible for supplying electricity to the end consumer. There could also be a situation where distribution licensee could be a wholesaler, where it can supply electricity to another distribution licensees. Then in such a situation, it can be distributor, or it can be wholesaler. It can also be a supplier for bulk consumer, big industries, consortium of industries, and it can very well supply electricity for them.

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- **the Act recognizes the distributor, wholesaler, bulk supplier and retailer, similar to other goods and services**
- **does not recognize separate license for these intermediaries**
- **pooled all activities under the ambit of distribution business as a fully regulated business**

Now, when you look at the 2003 Act, the 2003 Act very well recognizes electricity on the lines of other commodities, other goods, and other services. The idea is to bring in the benefit of liberalization. The idea is to facilitate the growth of the power market with the help of private players. The idea is to bring in competition which ultimately will cater the interest of the consumers.

That is why the Act recognizes the distributor, wholesaler, bulk supplier or retailer on the similar lines. But then, when you talk about the license, what is the license given for? How the authorization to operate in the market is been dealt under the law? Because one can operate in the market only on the basis of the license given. So, how is it happening?

For that, it says that there is no separate license for entering into supply business. So, to distribute and to supply is one integrated activity, and all these are considered to be a regulated business under The Electricity Act, and this comes under the umbrella of distribution business.

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➤ **Distribution Licensees – nature of business**

- Wire Business
- Supply Business (Retail Business)

➤ **Wire business - monopolistic in nature - regulated-return earning business**

➤ **Supply Business – choices to the consumer – purchase as it involves purchase of electricity in bulk from generators and selling it to consumers**

Now, how it is creating a sort of bottleneck for the growth of distribution segment? And as I said in the last session, that distribution segment is the most vital segment to strengthen the power market because it is this sector which earns revenue for all the players. The final reading of the business of the distribution licensee, when you look at what is the nature of business they are engaged into? What all activities are they doing? You will find that they are into two set of activities. One is they are into wire business, and they have a distribution network; and the second one is that they are into supply business, and retail business. Now, as per the scheme existing as on date, these two activities are integrated, interconnected for the purpose of licensing. Now, as it has been said for the transmission segment that it is monopolistic in nature, the same is the case with the wire business at the distribution segment, that it is monopolistic in nature. Why monopolistic in nature? Because you cannot expect all the players to have its own network.

So, better to allow an entity to operate and operate in a transparent manner, fair manner and at the same time that entity should be ensured regulated return on the investment. So that as far as margin of profit is concerned, that should not be a matter of concern, and that should not adversely affect also the growth of that segment. So, wire per se appears to be monopolistic in nature, where there is all possibility that the one who has already been there will continue to have an edge. And absolutely fine, if that infrastructure, wire, and network is available in a fair and transparent manner to other players by paying charges. When you recall the provisions with regard to parallel licensee, which I was discussing in the last class, I

highlighted that how the provision of laying down one's own distribution system is creating a hurdle.

But, because for laying down one's own distribution system, for establishing one's own distribution system would involve cost. And that cost will certainly bring in harmful effect on the growth of the market, and that too when you have consumers divided into different categories based on their ability to pay. So, the idea is to look at these two natures of activities of the distribution licensees as a distinct set of activities. One is the wire business, and other is the supply business. Now supply business, retail business, how do you look at it? Where you are giving a choice to the consumer.

That consumer has a choice from whom to buy. Purchaser will have a choice that from whom the purchaser wants to buy electricity. And then obviously, it is all about buying in bulk from the generating stations and then selling it to consumers or the big consumers directly. Buying it from the generating units, which already we have in place where large consumers, they do get the benefit of buying the electricity directly from the generating units under open access scheme which we will be discussing.

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- **Business by single entity – conflict of interest in open access and retail competition**
- **Segregation of wire and retail business – will facilitate multiple companies to operate in supply business**
 - Enhance operational efficiency and inputs cost
- **Competitive power retailers - buy electricity from generators/in the wholesale market**
 - Strengthen the retail market
 - Improve commercial viability

Now, when you look at the very idea of segregation, why is it needed? Because one can always make the argument that you have an open access provision in the law, which allows the consumer to choose the seller. One can always bring in this argument that we have moved away from a single-buyer model to multi-buyer model. But then, the problem is that in order to get that access, particularly for smaller business entities, particularly for smaller consumer,

not the large consumer, the very sort of agreement, a sort of consensus, a sort of facilitative approach needed from the distribution licensee.

Why? Because distribution licensee would be losing out its customer and the customer which are regular payee of the electricity bill. Those who are really bearing the cost of residential consumers or agriculture consumers that they would be losing out those set of consumers. And thus, there will be a kind of conflict of interest. Conflict of interest in what sense? That distribution licensee may not encourage the application for open access in the fear that it may lose out the industrial or commercial consumer if other players are allowed to enter the market. So, that conflict of interest is there because distribution licensee always has a Universal Service Obligation.

So, obviously, it cannot do the cherry picking. It cannot identify to whom to supply and to whom not to supply, but that perhaps may be a situation for the new players, a new licensee which is entering into the market. So, then what will happen to the revenue model? From where the distribution licensee will earn the revenue, earn the value or the price? So, the conflict of interest is there. Why is there a conflict of interest? Because on the one hand, it has to ensure supply of electricity to every consumer and on the other hand, it also has to facilitate open access, meaning thereby allow other players to enter the market.

Now, because distribution licensee has interest in both wire and supply business, it would prefer to not to lose supply business, particularly of large consumer. Because if it loses the business, if large consumers are not buying electricity from the distribution licensee, meaning thereby that cross subsidy payment is getting imbalanced. So, conflict of interest is there. Now, this conflict of interest can very well be avoided when you do the segregation, when you make these two activities separate.

When you segregate wire with retail business, what will happen? Then, you will have a wire business which will be run by a licensee, and then you will see multiple players entering the supply business, and certainly, this will increase competition. This will give choices to the consumer and no denial that it will certainly lead to the operational efficiency. Quality of electricity supply will be better because the one who will be assuring quality supply will get better market and, in that perspective, all the players will like to compete with each other to give the best service.

The way the open market promises consumer welfare, and then, if you allow retail business to operate independently of wire business, it will certainly give the necessary growth to

wholesale market. There, the distribution licensee will go and buy electricity for the retail supply.

So, the growth of wholesale market will certainly have a positive impact on the retail market where you would find that in that scenario, much more business will happen, not through long term power purchase agreement but through shorter kind of agreement between the generating units and the distribution licensee. And it will also improve the commercial viability of the distribution licensees; what do we mean by commercial viability; there will be considerable volume of exchange of electricity in the open market.

It is possible because nowadays, the way we are using home appliances, the pattern of electricity consumption is changing in every household. The way the government is planning for electric vehicle; the consumption pattern is going to change. And, all this will bring in a competitive price only when you have a very robust retail market in place. So, that is what is the benefit of bringing in this.

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➤ **Measures needed –**

- Consider distribution business - a distinct and regulated business with assured returns
- The main task of the distribution network operator - to maintain and strengthen the network
- A separate wire business can remain a natural monopoly with regulator-determined tariffs
- The retail supplier - power procurement and consumer interface (billing, revenue collection, metering, customer care)
- Phase wise opening of the retail market for customer

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Now, what are the measures needed? That when you consider wire as a monopolistic activity, as a monopolistic trade, then there must be a scheme for assured return. That is what is needed because it must be a regulated business. Why regulated business? Because the infrastructure needs to be made available to the retail licensees in a fair and transparent manner. Therefore, the responsibility of the one who has got a license to get into wire business is just to maintain and strengthen the network.

So, you can very well imagine that aggregate technical and commercial loss will also get addressed and the better infrastructure in place. Let the tariff be determined by the independent regulatory body as it has been happening. Let the power procurement, consumer interface when it comes to billing, revenue collection, metering, and all be the responsibility of the licensee of retail business. But then, there is a need to draw a caution.

What is the caution here? The caution is that, as we know very well that a large segment of the consumer belongs to residential and agricultural sector, and they are not paying the cost of supply, they are getting the benefit of subsidy. Therefore, what we need to do is that we need to really open up the market in a phase manner, so that lead to strengthening of the market.

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➤ **Whole sale market – is desirable for – retail market**

➤ **Issues -**

- Bulk supply – bilateral and multilateral agreements
- Surplus power - Trading is marginal
- More trading – good for retail supply
- Absence of demand – side factor
- Cross – subsidy

➤ **Situation is improving with energy mix – renewables**

So, if you create a kind of ecosystem where wholesale market will grow, you would find that it will have a direct impact on the growth of retail market. That is what is certainly going to happen. Generating companies selling the electricity to the distribution utilities in wholesale and then distribution utilities identifying the retail suppliers. There is something similar to what you see in telecom sector.

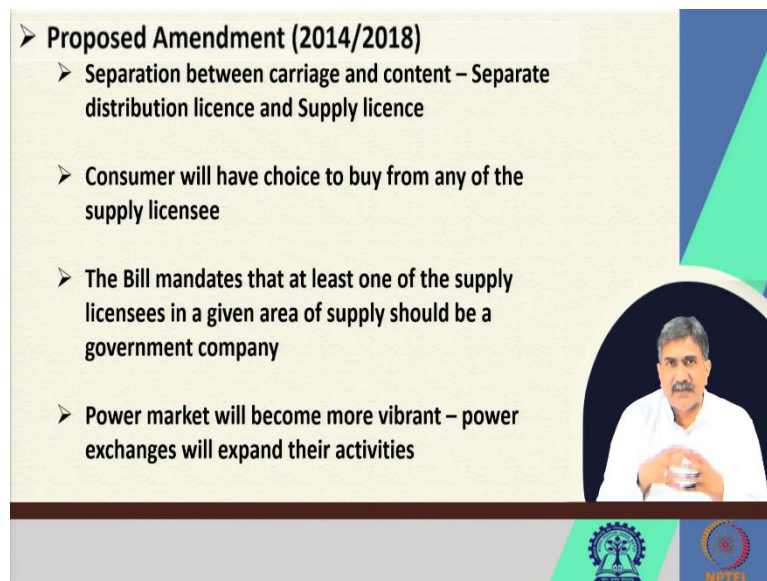
Now what are the issues? What are the challenges which are happening? One important one as on date; you have only two prominent processes in place which deals with buying and selling of electricity, that is, either it is a multilateral agreement or bilateral agreement meaning thereby that there is a sort of long-term commitment. So, the necessary flexibility is missing, and because necessary flexibility is missing, the trading of electricity as a commodity is very minimal. It is only with regard to what is surplus, not of all the electricity

which is getting generated. All may not be desirable also, but substantial portion is what is needed, and that is what is the innovation of the distribution licensee because they have entered into a PPA with the generating units, and now they have an obligation to supply electricity, so they are discouraging any kind of open access. So, they are discouraging any kind of participation of little players. Obviously, some metro cities have advantage of this like Bombay, Calcutta, and all, but then, it is not really percolating to other cities. More is the trading, good for the retail market and good for the retail market is better for the generating units, better for the consumer for getting quality supply of electricity.

Retail market will also bring in the demand side management instead of supply side management. Demand side supply, what would be the benefit? Then, in accordance with the demand there will be buying and selling would take place. So, if a particular city gets a good number of electric vehicles, obviously, demand would be high. Accordingly, the distribution licensee can deal and buy the electricity from the generating units to meet the requirements of charging those electric vehicles.

The other important factor is cross-subsidy. Obviously, the law says that it should be reduced in a phase manner so that ultimately, it is the actual cost which should be recovered, but then it will take time, and that is why it has been suggested that let there be a phased implementation of this. And the way the renewables are contributing to the energy mix, and the way the electricity from renewables are becoming competitive, there is a higher hope for retail market getting success.

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➤ **Proposed Amendment (2014/2018)**

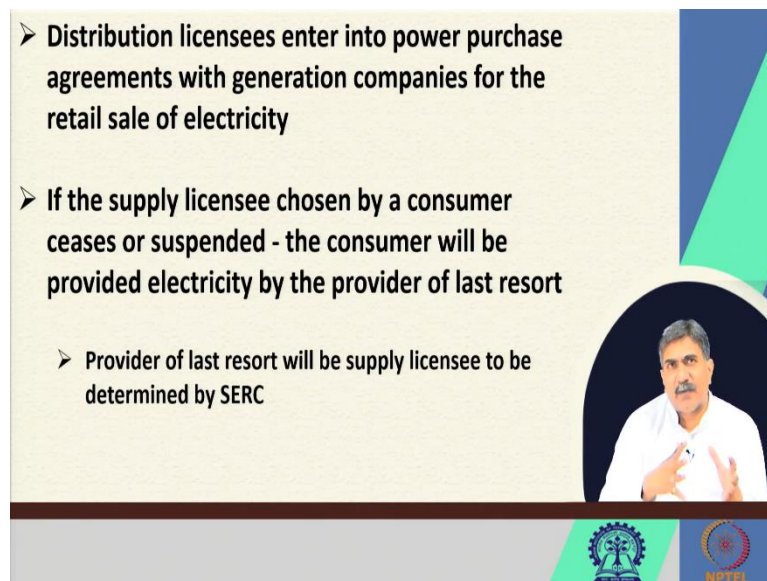
- Separation between carriage and content – Separate distribution licence and Supply licence
- Consumer will have choice to buy from any of the supply licensee
- The Bill mandates that at least one of the supply licensees in a given area of supply should be a government company
- Power market will become more vibrant – power exchanges will expand their activities

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Now, in order to promote this, it was suggested to change the law. In 2014, there was an amendment suggested, where it was said that let this wire and supply business be segregated. Let there be a choice with the consumer that they can buy from any supply licensees. But then the bill also suggested that, at least, there should be one government company which shall be into supply business. Now it has its own pros and cons.

Pros, in the sense that at least it will ensure the supply of electricity to the marginalized section & Cons in a sense that if you have a government company, there is all possibility that government company may not supply electricity as per the actual cost. Therefore, that would bring a sort of the imbalance in the market. But then, the idea is that if you allow this segregation to happen, then the market will become very vibrant. It will widen the very activities, more the trading in the market, better is for the sector.

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- Distribution licensees enter into power purchase agreements with generation companies for the retail sale of electricity
- If the supply licensee chosen by a consumer ceases or is suspended - the consumer will be provided electricity by the provider of last resort
 - Provider of last resort will be supply licensee to be determined by SERC

Then again, you find that this in the 2018 amendment where again this was suggested, where it was said that distribution licensees enter into their power purchase agreement with generation companies for the retail supply electricity, and it says that if, for some reason, the license is being suspended or seized then, the consumer will get the electricity from the provider of last resort, and who shall be the provider of last resort, this is what the regulatory commission will determine. That is what it says.

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- CERC/SERC will determine tariff for -
 - supply of electricity by a generating company to a supply licensee
 - purchase of electricity by the supply licensee from the intermediary company
 - transmission of electricity
 - wheeling of electricity
 - the retail sale of electricity to the end consumer – ceiling of the tariff

It says that it is a regulatory commission, which shall determine the tariff for supply of electricity by generating company to supply licensee. Then, there shall be intermediary

company for purchase of electricity by the supplier licensee from intermediary company. This is all about how the transmission shall happen.

Transmission and wheeling charges are to be determined again by the regulatory commission. Then for retail, it says that okay, what commission shall be doing, it is that only fixing the maximum ceiling. That is what they need to do. Fix the maximum ceiling, and then allow a kind of bandwidth to the supply licensee to supply electricity at a reasonable cost to the consumer. So, this is what they would be doing.

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- Introduce real pricing of electricity
- Quality will improve
- More private players will be interested
- Network sharing by supply licensees – ensure efficient utilisation of assets
- Supply side procurement – competitiveness
- Cross-subsidy will be reduced

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It will introduce real pricing of electricity as I said, quality of electricity will get improved, you will find more investments, more private players coming into picture. And if network setting is done by the supply licensees, obviously, they will have better utilization of assets, and then with the assured return, there will be enough liquidity at hand to maintain the network.

So, as I said, if you strengthen the supply side procurement, it will bring in competitiveness. Then, when supply side procurement is somewhere getting driven through the competitiveness, obviously, it will have direct impact on the cost factor. All this is doable, all this is to be done considering this very fact that every consumer pays for what the consumer is consuming. Not that one set of consumers is bearing the cost for the other set of consumers, this is what is very important.

So, this is all for this session; that how retail supply is important. Obviously, one may argue that how do you look at the losses which distribution licensees are in, whether it would be

something about the State owning the debt and allowing the market players to only earn the profit. So, these are the questions that are certainly to be debated and deliberated: how this segregation would not cost the public exchequer on the one hand, and on the other hand, how it will also guarantee consumer welfare. Thank you.