

**Introduction to Law on Electricity**  
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**Lecture 20**  
**Open Access (Contd.)**

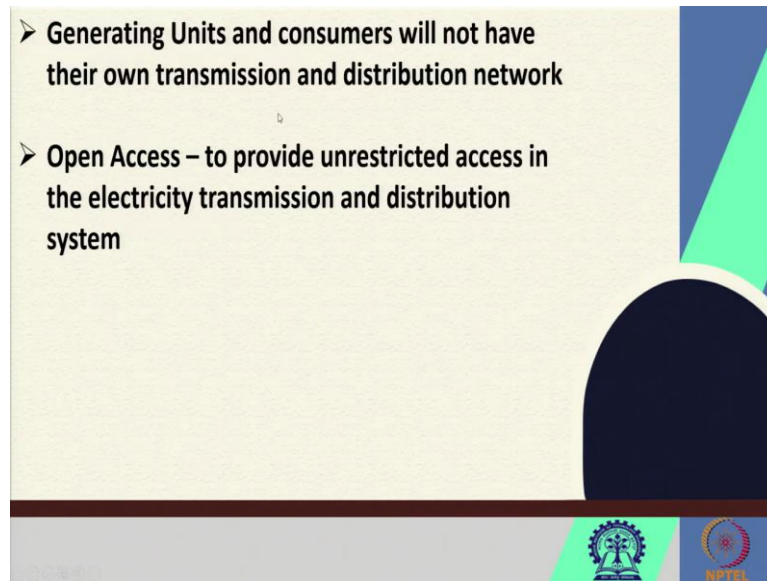
In the last class, we have tried to look at the regulations that have come into effect for promoting open access. Now, let us try to understand the legal provisions on open access, what all law mandates for making it operational and then what the issues are with regard to the same.

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So, that is what we will be studying in this session.

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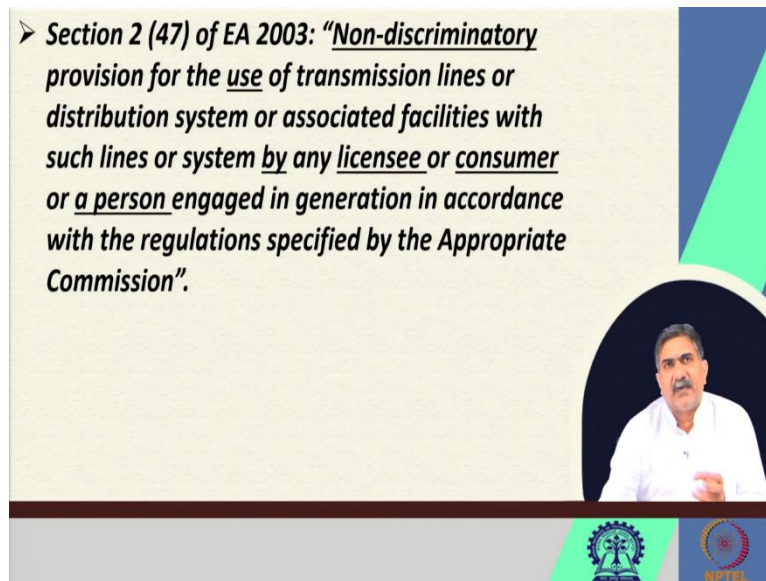


Now, why open access? We have learned that in the last 17 years or so, the government has come up with a policy document where it has advised the regulatory commissions and suggested to the generating units and the consumers to adopt the very process of open access. And the reason being that generating units and the consumers cannot be expected to create their own infrastructure for buying and selling of electricity. Because in that case, the cost of supply would be very high, and it would certainly be a kind of impractical proposition.

But at the same time, a mechanism is to be designed, a mechanism is to be thought, where the existing network can be used for the larger benefits of all the consumers and all the generating units. And in a nutshell, the mechanism to ensure the benefit through the use of the existing network is what you can call it as open access.

So, open access is about unrestricted access, unrestricted access in what domain?; In the domain of the transmission system and in the domain of the distribution system. If you can recall, we discussed it while discussing on generation & transmission that generating units generate electricity. Then it gets scaled up, and then it gets transported through the transmission network up to the distribution network, and then it gets scaled down and then goes to the end consumer. You cannot expect the generating units to bear the cost to invest in creating this infrastructure, and the same for the consumer. And that is why the idea of open access is to ensure unrestricted access.

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➤ **Section 2 (47) of EA 2003: “Non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission”.**

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Section 2, subsection 47 of the 2003 Act defines open access. I read it says, non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations as specified by the appropriate commission.

So, who has the responsibility to come up with the regulation? It is the appropriate commission. Why appropriate commission? Because the commission is expected to bring in the rules in an objective manner because it is the commission which has a responsibility to develop the market. And therefore, they have the interest in bringing in a rule which will be operational, practical, and acceptable to all. That is why the responsibility is of the appropriate commission that you come up with the regulation. So, that biasness cannot be alleged.

Please do take note of the fact that what we are talking about is the sharing of the network, use of the network and use of the network when there could be a possibility of vested interest; why? Because DISCOMS are losing business with open access and therefore there could have a vested interest.

There may be a situation where technically transmission licensee may not have any preference but then may have some soft approach. If it is a State-owned enterprise, and we know very well that as far as transmission utilities are concerned, the majority of them are State-owned. Majority, in a sense, at the center and when you look at the States, obviously, we do have private players also nowadays.

So, it says non-discriminatory use. Why non-discriminatory? So, this element of biasness must not be a guiding factor. The element of biasness, which I have just highlighted. DISCOM has an interest in

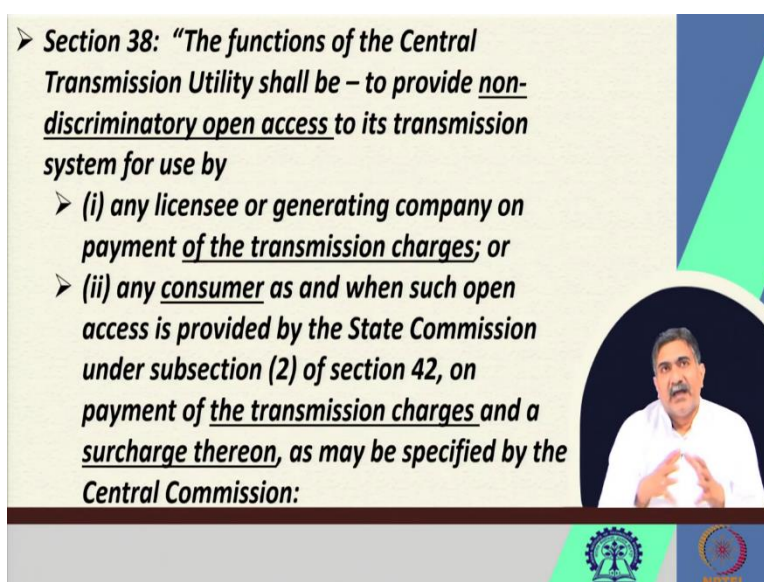
keeping its customer and consumers intact. Therefore DISCOM somehow influences the decision-making and discourages open access, or the very charges to get the open access are so unscientific that it is keeping the generating units and the consumer away from availing of open access.

So, it says non-discriminatory; Non-discriminatory here certainly would mean fairness and transparency in laying down the guidelines. It should not prefer the generating units; it should not prefer the DISCOMS. It should prefer only the benefit of the consumer. And open access is available for whom you look at it.

It is available for any licensee; it is available for consumers; it is available for generating units. So, there could be a possibility where there is a DISCOM, and DISCOM may get cheaper electricity by availing open access. Then why not the DISCOM should also get that electricity and supply it to the consumer.

So, through this open access, what has been suggested, is an establishment of an unbiased system, an establishment of a system where it is only the interest of the market, it is only the welfare of the consumer, which shall guide all the players. And who has responsibility? The appropriate commission has the responsibility with regard to this. This is what it says.

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➤ **Section 38: "The functions of the Central Transmission Utility shall be – to provide non-discriminatory open access to its transmission system for use by**

- (i) **any licensee or generating company on payment of the transmission charges; or**
- (ii) **any consumer as and when such open access is provided by the State Commission under subsection (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the Central Commission:**

Look at it; what it says with regard to transmission segment, you have open access for the transmission and open access for the distribution segment. Now for the transmission, Section 38 says that the functions of the central transmission utility shall be to provide non-discriminatory open access to its transmission system. That shall be on the payment, i.e., transmission charges or any consumer

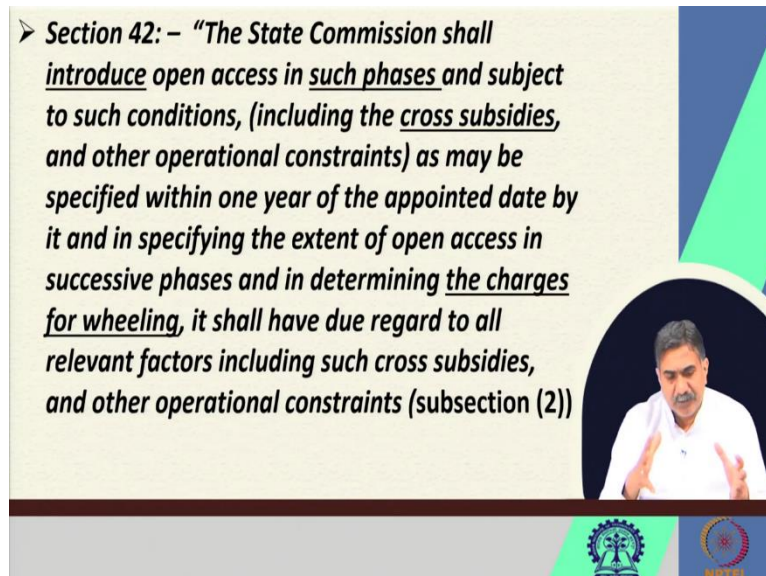
when such open access is provided by the state commission under section 42 subsection 2. (Section 42 subsection 2 is with regard to the duties of the distribution licensee.)

So, in order to allow the transmission network to be used for open access, a charge is to be levied, a charge is to be paid, and that is for very obvious reason because, after all, you are creating a market, you are creating a situation where the network is being used by the third party. For using the network, the third party has to bear the expenses.

Since the transmission network has not been planned considering the use of the third party, so accordingly, when visualising the transmission licensee has to now upgrade the network in order to facilitate the third party and for the same cost will be needed, and that is to be taken from the third party. So, that is why the charge has to be paid.

When it is for distribution licensee then transmission charge and surcharge have to be paid. That is what it says. And the similar, if you recall in the last session, I said that when you look at open access, there is a special division where you have intrastate and interstate. So, intrastate, it is the state commission which has a responsibility to identify the charges that shall be the charges.

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Section 42 becomes very important. Section 42 says that it is the responsibility of the state commission to introduce open access. So, open access has not been envisaged as a matter of right in the first instance itself. It has a responsibility to introduce, and that is very obvious. Why? Because already, you have a symmetrical arrangement on the tariff in the electricity market. One set of consumers pays for another set of consumers.

So, if open access is introduced, the large consumer would take advantage of open access, and then DISCOM would be only left to supply the electricity to the set of customers who are getting subsidized electricity or electricity at a subsidized price. So, therefore, it has been said that the state commission shall introduce open access in such phases. In one go, it is not advisable, and that is what I have also discussed in one of the sessions, that it has to be done in an incremental manner.

This is very methodological provision, and that is why it has been suggested. In 2009, big consumers, they could have open access to those whose requirement is more than 1 megawatt. Further, while opening up the market while introducing open access, the state commission shall also look into the factors of cross-subsidy.

Why is the factor of cross-subsidy to be looked at? Because of the very reason that DISCOM has a universal service obligation. What is that universal service obligation? To supply electricity to every applicant, so if the applicant is falling under the category of the customer who is not paying the actual cost, which is paying the cost which is subsidized one. Then that DISCOM will continue to have that obligation. He cannot run away. He cannot say that no, now we do not have a large consumer with us. Therefore we are not going to supply electricity to you because that is what is the mandate under the Act & Section 43 makes it very clear.

So, with open access, what would happen is that the distribution licensee, the DISCOMS, would be losing the large consumers, and losing large consumers has a very phenomenal impact. What is the phenomenal impact? That the very source of revenue is getting drained because the large consumer who is also paying for the other set of consumers, and that is why cross-subsidy and other charges are to be kept into mind.



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➤ **Charges for Open Access –**

- **Cross Subsidy Surcharge**
  - computation of cross subsidy surcharge - needs to be done in a manner that while it compensates the distribution licensee - not constrain introduction of competition through open access
- **Transmission Charges**
  - Users of the transmission system – share the transmission cost in proportion to their respective utilization
- **Wheeling Charges –**
  - help the distribution company to recover the costs that it has incurred for distribution of electricity

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Now what are the charges for open access? This is all to bring in the balance in the market. This is all to ensure that no one should take undue advantage of the situation. So, the first and important one is the cross-subsidy surcharge. As we have studied and read, that cross-subsidy is one where one set of consumers pays for another set of consumers, and with this universal service obligation, the obligation to supply electricity is already there; it is bounden duty under the law.

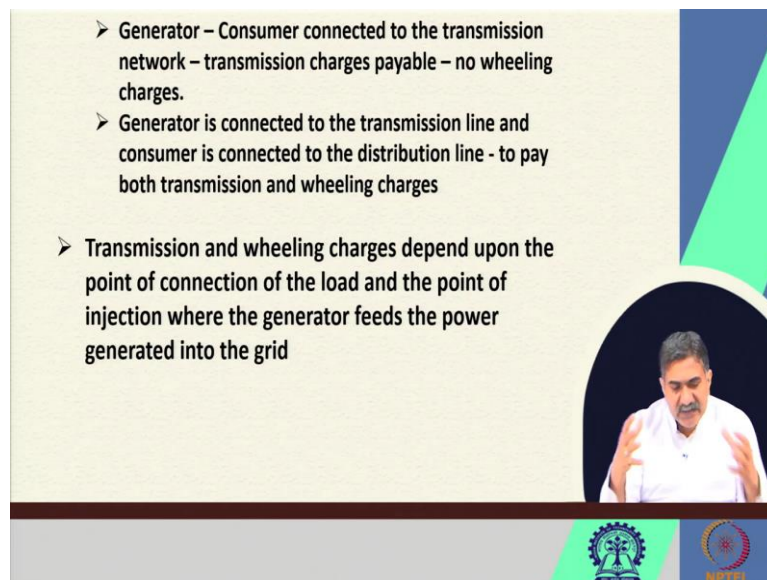
So, as I said, if the DISCOMS loses a big customer, then what would happen to the supply of electricity to those set of consumers who are getting electricity at a lesser price? After all, that compensation has to be made, and that is why this provision of cross-subsidy surcharge. This cross-subsidy surcharge is basically to compensate for that revenue deficit. But then, it is also to be taken note of that the whole mechanism to compensation should be drawn in such a manner, should be planned in such a manner, so that it should not make open access an unworkable solution. The moment cross subsidy surcharge is being suggested, the applicant is saying no, no, I am not interested because it is going to cost us more. So, it has to be planned in such a manner so that it should compensate the distribution licensee, but then not at the cost of competition. And that is what is important to keep in mind.

So, the cross-subsidy surcharge has to be paid by the one who intends to avail open access. The second is the transmission charges, transmission system is being used. Therefore, it is desirable that they share the transmission cost in proportion to their respective utilization. The network is being used by the generating units or by the consumer, and therefore transmission charges are to be paid since the transmission licensee will also need revenue for maintaining the network.

As I said, in open access, there is a situation where either the generating unit or the consumer is additionally getting connected with the network. Then the wheeling charge, wheeling charges are all about transporting electricity and therefore wheeling charges help the distribution utilities to recover the cost that it has incurred for distribution of electricity.

What does it mean? That distribution utility has laid down the infrastructure for distribution of electricity. Let us say; for example, there is a cement plant which has been located on the outskirts of a city, so distribution utility, as per the responsibility given under section 43, lays down the wire. It installs transformer; there may be a case where it has also installed substation. Now, all these provisions are to be met by the distribution licensee as per the law. Now, if the cement plant decides to go for open access, then the cement plant has to pay the cost, pay the charges for getting the electricity through that infrastructure, and that is why the wheeling charges.

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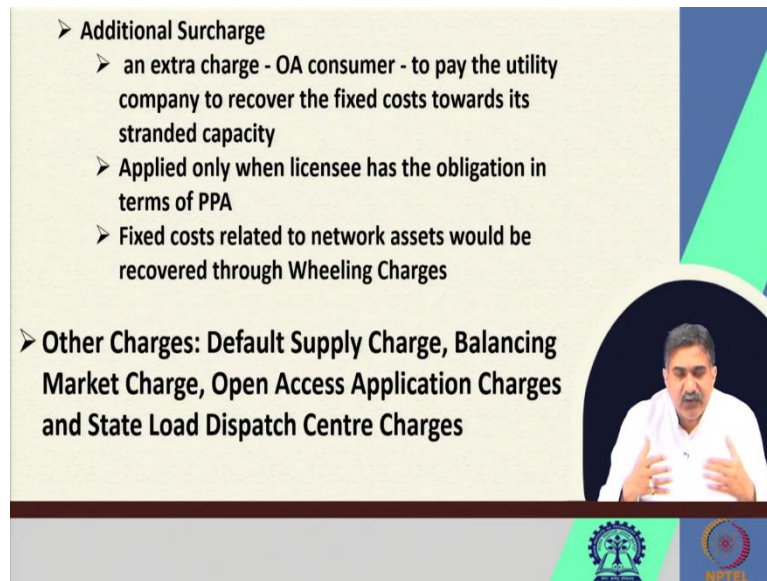


- Generator – Consumer connected to the transmission network – transmission charges payable – no wheeling charges.
- Generator is connected to the transmission line and consumer is connected to the distribution line - to pay both transmission and wheeling charges
- Transmission and wheeling charges depend upon the point of connection of the load and the point of injection where the generator feeds the power generated into the grid

So, if the generator and consumer are connected through the transmission network, they need to pay transmission charges and no wheeling charges. If a generator is connected to the transmission line and the consumer is connected to the distribution line, then they need to pay both transmission and wheeling charges. And how do we understand that it says that transmission and wheeling charges all depend on the point of connection of the load? What is the load from where it is going to the end consumer and where the generator feeds the power into the grid? That is how it is to be determined as to what the transmission charges and what shall be the wheeling charges to be paid.



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- **Additional Surcharge**
  - an extra charge - OA consumer - to pay the utility company to recover the fixed costs towards its stranded capacity
  - Applied only when licensee has the obligation in terms of PPA
  - Fixed costs related to network assets would be recovered through Wheeling Charges
- **Other Charges: Default Supply Charge, Balancing Market Charge, Open Access Application Charges and State Load Dispatch Centre Charges**

In addition to that, the law also mandates the payment of the additional surcharge. It also mandates the payment of the additional surcharge. What is that additional surcharge? It is to be paid to the distribution utility to recover the fixed cost towards a standard capacity. As I said, many a time, what happens is that it is the distribution licensees which enter into a power purchase agreement, and that is a long-term agreement and accordingly, the distribution licensee plans its networking.

Accordingly, it invests and then, with the open access; there may be a situation in which whatever was being planned by the distribution licensee is no more being used. It is a standard one. But at the same time, even for maintaining that standard, one has to invest money, and for that, this additional surcharge is there. So, an additional surcharge, as I said generally what you would find where the distribution licensee (DISCOMS) they are entering into a power purchase agreement which is of a longer duration.

And then, this is about the network cost; as I said, DISCOMS plans to create the infrastructure to facilitate the customer and the consumer. Now the consumer is interested in getting the electricity not from the distribution licensee but through open access, and then in such a situation; the consumer has to pay a surcharge.

Apart from that, there are other charges also to be paid. Default supply charge, balancing market charge, open access application charges and then charges for load dispatch centers. Now when you look at this, you can very well visualize that open access is not a very streamlined, not a very smooth process. There are challenges into it.

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➤ **Issues**

- Frequent shifting of Open Access Consumers
- Cross Subsidy Surcharge – not sufficient to cover the loss of cross subsidy
- Additional Surcharge – Due to PPAs – to under recovery of power procurement expenses incurred by DISCOM

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Now what are the challenges? When you look at the challenges, one challenge could be the choice of the consumer to oscillate between the distribution licensee and open access. In one season, the consumer decides to get the electricity through open access and then decides to switch over and get electricity from distribution licensee. And please take note of the fact that distribution licensee has a universal service obligation.

So, then, in that case, there will be an obligation to supply electricity. It cannot say that now you have left me, you cannot return back to me no; that situation is not something which has been foreseen under the law. So, this frequent shifting will be a big challenge. It is a challenge. Why is it a challenge? Not only for stability, not only for quality but also for planning and strategizing.

Then even though cross subsidy surcharge is there, the way it is being planned, the way it is being designed, the way it is being calculated, it is happening so that the cost is not getting recovered. Because, after all, that amount which the DISCOMS are getting from the large consumers on behalf of the smaller consumer has to be recovered in order to pay it to generating units, in order to make the market sustainable, but that is not happening.

So, if cross subsidy surcharge is not effectively covering that loss, then either cross subsidy surcharge has to be increased, and that increase perhaps may be detrimental for the open access, or the whole idea would be sort of non-operational in the interest of the market. And then, the additional surcharge,

as I said, the additional surcharge is another important issue where you find that DISCOMS, they have already planned and accordingly they have spent.

Now, how to recover it? In fact, you would find there are a lot of imbalances in calculating the same. Moreover, the state commission is not really very forthcoming in approving the application of open access since that approval, in a way, in the implied sense, would be a loss for the DISCOMS. Since open access application is to be submitted, to be forwarded by the large consumer and losing the large consumer would be a fatal one for the DISCOM.

So, in that process, perhaps the state regulatory commission may look for technical bottlenecks for delaying the application or for rejecting the application. So, these are the issues with regard to open access. These are the provisions with regard to open access. With this, we conclude today's session. Thank you.