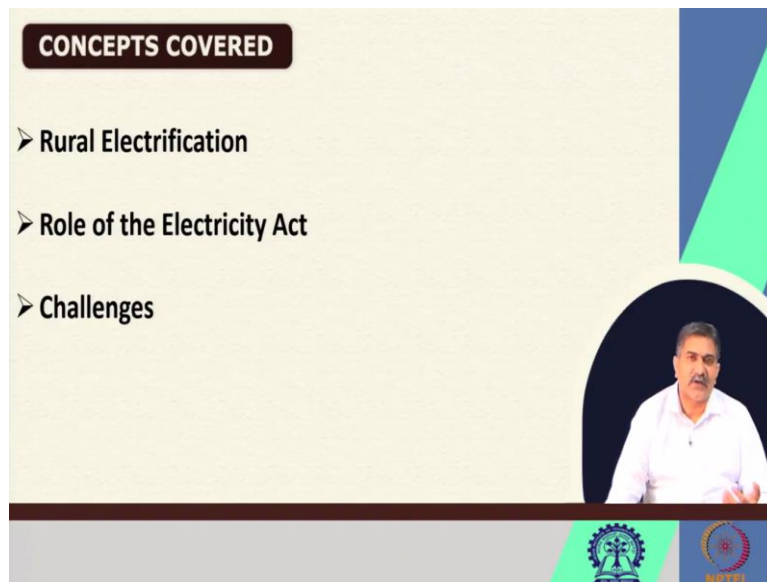


**Introduction to Law on Electricity**  
**Professor Uday Shankar**  
**Rajiv Gandhi School of Intellectual Property Law**  
**Indian Institute of Technology Kharagpur**  
**Lecture 08**  
**Rural Electrification**

Welcome again to all of you. In today's session, we will be discussing on Rural Electrification. Before we move to the session on these provisions related to distribution, transmission generation, and what are the salient provisions, salient features which are incorporated there in relation to those segments. In today's session, we will try to understand that, how the rural electrification has been governed in this country.

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Obviously, this takes us to this question that why we are talking about rural electrification as a separate category. And in this, we will try to understand that how rural electrification has been dealt with and what exactly it signifies in the Indian context. And then we will also look into the provisions of the electricity act that how the Act has addressed the issue of electrification in villages in remote areas. And then, we will also try to understand that what are the different plans or schemes which the government has formulated till date on these issues. And also, along with that, we will try to understand what are the challenges which have come forward and then the issues connected therewith.

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➤ **Focus of Rural Electrification – inclusiveness**

➤ **Rural Electrification signifies –**

- Basic infrastructure such as Distribution Transformer and Distribution lines are provided in the inhabited locality
- For Rural – including Dalit Basti
- Electricity is provided to public places like Schools, Panchayat Office, Health Centres, Dispensaries, Community centers
- The number of households electrified should be at least 10% of the total number of households in the village

Now, when you talk about rural electrification, as I said that, why are we talking about electrification as a separate category? What is the need of that, and why electrification in general is not been talked about? And perhaps, it has to do with the very possibility of providing the infrastructure at every corner of this country, which certainly involves the cost. To large extent, the spread of electricity has been a successful drive under the 1948 Act, Electricity Supply Act, where one of the aims was to ensure broader reach of the electricity to see that even electricity reaches to other semi-urban cities as well as to rural areas, I would say.

So, the requirement, infrastructure requirement, perhaps at one go, it is not possible to provide electricity in the rural areas, the requirement of electricity for industrial use, for commercial use, setting a sort of priority about where the generated electricity should be diverted to or transported to. Now, when we have enough installed generation capacity, I think there is a need to do away with this segregation between rural electrification and the rest.

This is one way of looking at it that let us not acknowledge the distinction, let us not acknowledge the segregation. Because the moment we acknowledge it impliedly we are accepting a different process for electrification; impliedly, we are accepting that strategies need to be different. And, when we say that, obviously, it has a linkage with the resource allocation. When we say this, certainly it has a connection with prioritization.

And in that, you would agree with me that rural electrification has not been truly addressed till date. With this categorization, with privatization, our villages are still not been supplied with quality electricity. Though in recent time, there has been success of providing electricity to every household, that is what the data of the government also says. But then the question comes is all about providing electricity for lighting purposes, providing electricity for lighting as well as the use of household appliances and then ensuring of reliabilities that the electricity what is being supplied is reliable in nature.

Now, how do you understand rural electrification? The ministry suggests that when we talk about rural electrification, we are talking about basic infrastructure such as a distribution transfer distribution lines, which are provided in the area where population is there. That is what it says. And then, in order to ensure inclusiveness, in order to ensure that the access to electricity reaches even to the marginalized section of the society, it has been suggested that for rural areas, it has to be considered also that where people belonging to Scheduled Castes, Scheduled Tribe, they are residing.

So, that if infrastructure is laid down, if necessary arrangements are being made, then it must not be used only by influential sections of the society, only by the ones who are well off in the society. And that is why this, categorically, this provision has been there. It also says that if public places are being electrified, if the electric connection has reached there, for example, schools, hospitals, obviously hospitals, what we mean is primary health centers, dispensaries, panchayat office, community centers, then that also is something which testifies the fact that, electrification has done.

And in terms of quantification, it says that if number of households electrified is at least 10 percent, then it is to be considered that that area, that village, is electrified. Though this is I would say, an older understanding, now, it is no more with regard to the 10 percent. Now, we are talking about ensuring the access to electricity at every household.

So, this understanding has now been moved to a larger and more, I would say, nearer to the very argument of the very debate discourse on connecting electricity with dignified life. Because we cannot say that if 10 percent of the household, they are enjoying electricity, then for the purposes of government planning, that village is connected, and that village is completely given the

electric connection. So, now, obviously, as I said, the understanding has graduated, and now it is every household. And, as I said, that there is a very huge success in ensuring that every household gets an electric connection.

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➤ **Electricity Act, 2003**

➤ **Sec. 4 -**

- CG to prepare and to notify – on consultation with SGs – stand alone system, including renewables – acknowledgement of the lack of grid connected electricity

➤ **Sec. 5 –**

- CG shall formulate
  - rural electrification policy
  - for bulk purchase of power
  - Decentralised distribution - Local distribution through Panchayat Institutions, User's Association, Cooperative Societies, NGOs or franchises

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Now, how is the law placed? When you look at the electricity act, what is the contribution of the legislative framework provided under the electricity act, and how it has been done? So then, in that regard, it says that Section 4 says that central government shall prepare a kind of policy, which is needed, prepare and notify on consultation with the state governments policy on a standalone system including renewables. A standalone system is something which is not grid connected.

Now, you can very well understand that somewhere it has been acknowledged that let us not wait until the grid connection reaches to villages. Make a plan of providing electricity even before grid connection reaches there. And how it is possible, that is what the mandate given on the Act. It says that let there be a policy made by the central government, where we can talk about a standalone, standalone where the generation is not connected with grid.

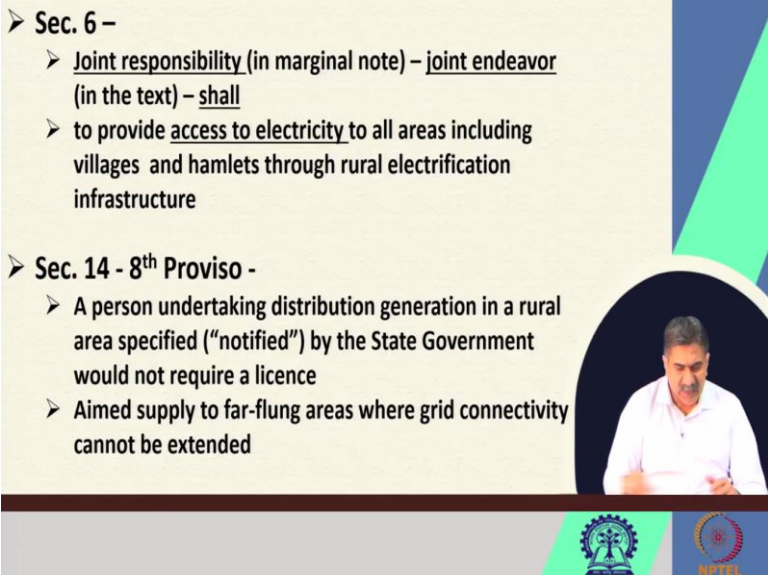
And this is, I would say, kind of realistic goal; why realistic goal that laying down the infrastructure, coming up with a specification which requires a grid connection, all this involves the cost. And when it comes to the basic necessity, I have been saying this that electricity is one

of the basic necessities of human being. Then we cannot make that let the resources gets located first, and then only we can talk about the access.

And then, moving further, when you look at Section 5, Section 5 further says that let the central government formulate a policy in order to suggest a pathway to all the stakeholders. And that policy must also contain about the bulk purchase of power, bulk purchase of power in a sense that where you need not wait for the distribution licensees to come there. Because again once you expect that the distribution licensees will come there, they will establish their own infrastructure and all it will take time.

So, there is a way out suggested, and what is the way out? It says that let the local distribution happened through panchayats, through user associations, through cooperative societies, through NGOs, and through franchises. Why? Because if we really make a kind of timeline and plan something the way it has been happening in urban areas, then it will take unreasonably longer time for ensuring the availability of electricity in rural areas. Therefore, it has been suggested that let there be a distributed generation, let there be a decentralized distribution, let it not be connected with grid, and let the local community come forward for the same.

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➤ **Sec. 6 –**

- Joint responsibility (in marginal note) – joint endeavor (in the text) – shall
- to provide access to electricity to all areas including villages and hamlets through rural electrification infrastructure

➤ **Sec. 14 - 8<sup>th</sup> Proviso -**

- A person undertaking distribution generation in a rural area specified (“notified”) by the State Government would not require a licence
- Aimed supply to far-flung areas where grid connectivity cannot be extended

Even if it is connected with grid, do not wait for the DISCOM to come. You give this platform to the users association, and panchayats, and let them operate as distribution licensees. And interestingly, when you look at Section 14 8th Proviso, it says that the one who is there in

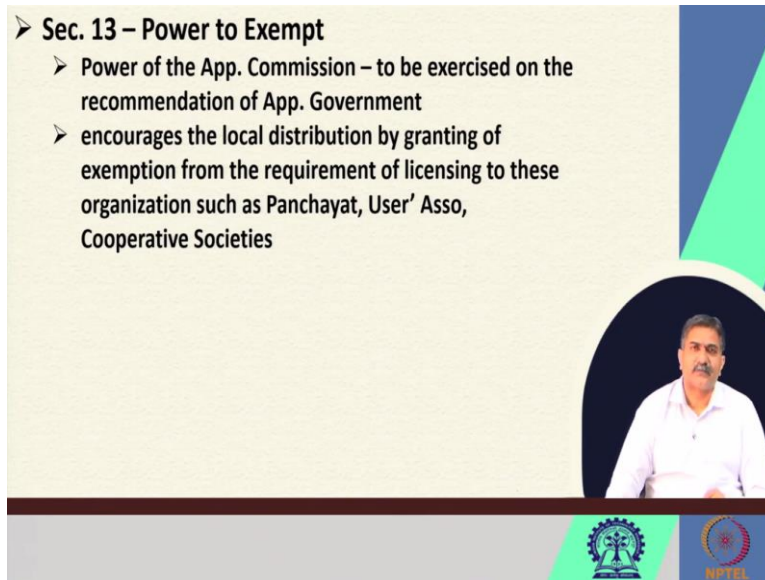
distributed generation in rural areas, they need not take a license. So, that has also been done away with. So, the law, in a way, promotes the availability of electricity in that area.

And then, it says what is the aim and why distributed generation has been suggested? That, when you talk about or when you accept the reality that in far-flung areas, in remote areas, it will take time for grid-connected electricity to reach. Then meanwhile, let this be also the responsibility of the government. Now, for the responsibility, you look at what Section 6 says.

Section 6 is very differently worded, I would say. When you look at the marginal note, the marginal note suggests joint responsibility of the central government and the state government. Obviously, it goes with the very constitutional scheme where electricity falls in the concurrent list, as you are fully aware about it. Now, when you read the text of the Act, what Section 6 is, it says it shall be a joint endeavor. Now, joint endeavor and joint responsibility as a law student, I would say that it would convey two different nature of obligation. The degree varies, endeavor is a softer approach. I would say responsibility to me appears to be a kind of strong note that you have to do this.

And I would prefer to give that interpretation, which will be imposing higher obligation on the center and the state. Not only because of the very fact that electricity must reach to every household, but also because of this very understanding that access to electricity, as we have studied, is fundamental for fulfilling many rights; education, health, and social security, many rights are connected with that. And that is how I look at the responsibility which is given under Section 6.

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➤ **Sec. 13 – Power to Exempt**

- Power of the App. Commission – to be exercised on the recommendation of App. Government
- encourages the local distribution by granting of exemption from the requirement of licensing to these organization such as Panchayat, User' Asso, Cooperative Societies

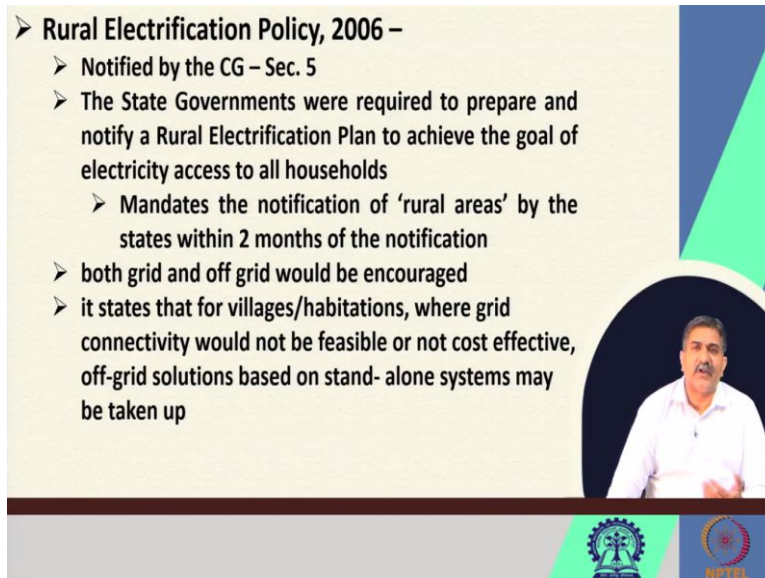
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Again, I said when you look at Section 13, Section 5, and 6 talk about making a policy. You make a policy, and involve the local population, no need to wait for the DISCOM, involve the local population. And, if local population is getting involved, then they need not obtain the license. That is what Section 13 says, and that has to be done.

Because now, we have, through the 2003 Act, made a regulation where decisions are to be made on a much more transparent way. Appropriate commission has been given this authority, given this responsibility that you identify whether local distribution by granting exemption is fulfilling the purpose or not, is it really required or not? And but, that is something which is to be done only when the appropriate government is recommending.

Now, why this involvement of the appropriate government, because one of the objectives of the Act is to promote power market. So, the promotion and the growth of power market will happen only when there is very well-defined revenue channel and revenue flow. And somewhere, these exceptions must be subject to those minimum standards, minimum requirement, which will ensure the flow of revenue and for this, appropriate government certainly has a role to play.

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➤ **Rural Electrification Policy, 2006 –**

- Notified by the CG – Sec. 5
- The State Governments were required to prepare and notify a Rural Electrification Plan to achieve the goal of electricity access to all households
  - Mandates the notification of ‘rural areas’ by the states within 2 months of the notification
- both grid and off grid would be encouraged
- it states that for villages/habitations, where grid connectivity would not be feasible or not cost effective, off-grid solutions based on stand- alone systems may be taken up

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In pursuant to Section 5, right after the notification of National Electricity Policy, the government has notified rural electrification policy in the year 2006. Now, when you look at it, it says it is largely the responsibility of the state governments, where they are required to prepare a rural electrification plan to achieve the goal, and again here you look at it what is the goal access to all households.

This is something which, again and again, I am stressing reflects on the nature of this commodity; this is not to be seen as a commodity only for leading a luxurious life, no not at all. And there were, I would say, the benefit of electricity falling under the concurrent list. Then it becomes the responsibility of central and the state government. The state government nearer to the population can very well come up with an effective plan, and that plan can be supplemented by the effort of the central government.

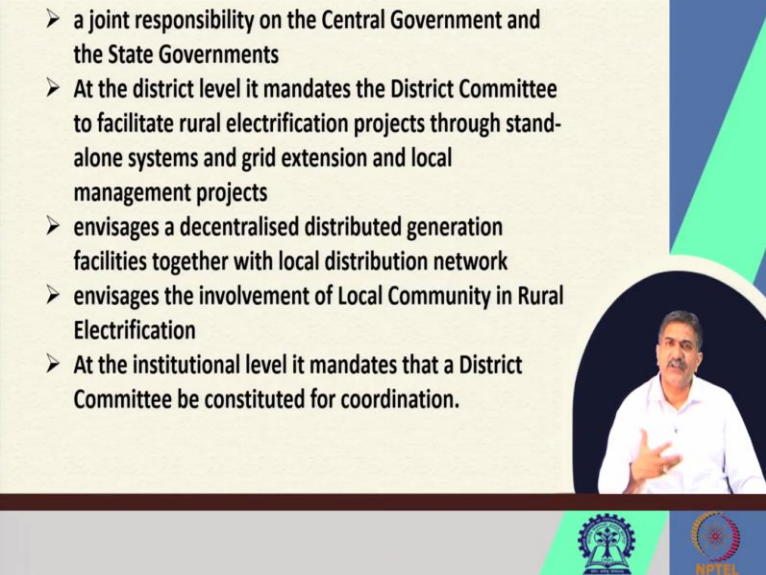
Now, the policy says that you notify your areas as rural areas and that you should do it within two months of the notification. And I was looking at the literature that how the state government has discharged this responsibility, which has been suggested in rural electrification policy in 2006. And obviously, the data was not very pleasant; it was not very encouraging.

Policy of 2006 also takes up a very practical approach; it says that let there be a kind of promotion of both off-grid and on-grid electricity generation. Because it will take time when we only focus on grid-connected electricity, therefore, let there be off-grid also be equally promoted.



And then further it says obviously, taking clue from Section 5, when you look at that, that standalone system is something which is important, where the geographical constraints are there, where it will take time for laying down the transmission infrastructure, substations and all this. Then till that time, let there be standalone system also work. And why till that time, the way the renewables are becoming more competitive, perhaps a standalone system is a viable alternative for ensuring the access to electricity.

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- a joint responsibility on the Central Government and the State Governments
- At the district level it mandates the District Committee to facilitate rural electrification projects through stand-alone systems and grid extension and local management projects
- envisages a decentralised distributed generation facilities together with local distribution network
- envisages the involvement of Local Community in Rural Electrification
- At the institutional level it mandates that a District Committee be constituted for coordination.

It says that, again, the joint responsibility in pursuant to that, and interestingly it further trickles down, it further brings down, the participation of the stakeholders. It says that at the district level, let there be a district committee, and there is a provision in the Act for entrust in the responsibility of the district committee. So, every stakeholder should be involved. And then, it says it is district committee which shall have a responsibility to notify, notify through the standalone system and grid extension.

It says that distributed generation is another important alternative where generation is taking place, and with that, generating units also engaging in distribution or supply of electricity. And for that, obviously, as we have discussed, the license is not required. We read more about distribution generation when we will take up renewable energy as a module. There, we will have a detailed discussion that what are the benefits of distributed generation. As I said that, the

responsibility is given to the local committee to the district committee, this is all to ensure that let every stakeholder gets involved in the whole process.

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➤ **Electrification in rural areas**

- **initiative of pre-2003 Act**
  - Rural Electrification Corporation – 1969 - to reduce dependency of agriculture on monsoons by promoting agricultural pump-sets
  - provides finance for rural electrification projects
- **The 5th Five Year Plan (1974) – Minimum Needs Programme –**
  - rural electrification was identified as basic need

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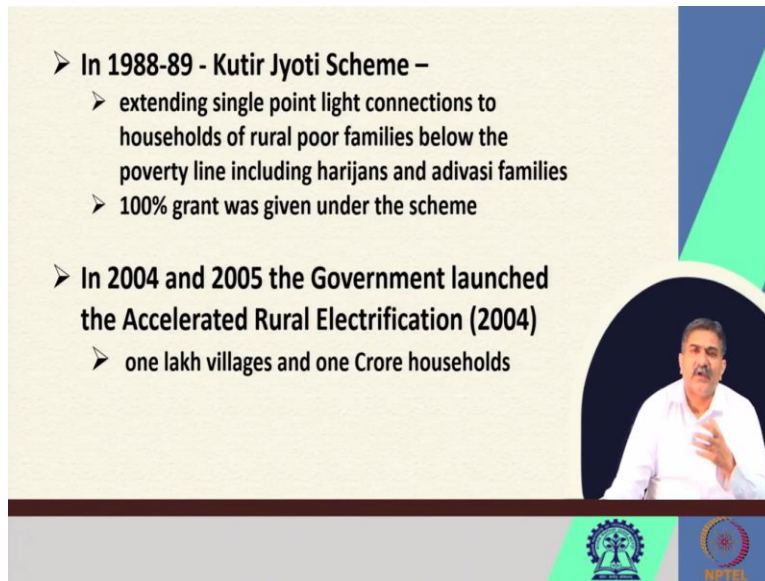
Now, it is not true that the focus on rural electrification started with the enactment of the 2003 Act. Rural electrification has been the agenda of this government right after independence. And this is very much established when you just leave through the initiatives taken by the government. 1969 appears to be one such year where a big initiative was taken where this rural electrification corporation was established.

And this electrification corporation is till date, playing a phenomenal role in ensuring the availability of electricity in remote areas of the country. In fact, it is the nodal agency for flagship programs of the government. In 1969, this corporation was established with an idea that, let there be an institution which shall give loans, which shall give financial assistance for setting up pump sets for irrigation.

It was realized when drought affected this country that agriculture cannot depend upon monsoon alone. There has to be some other plan to be made. And in order to implement that, it was suggested that let there be an institution which shall be responsible for extending the financial support for electrification projects. So, it started way back in 1969.

The fifth five-year plan (1974) identified minimum needs, and I find it a very great contribution of a fifth five-year plan; what is that, that it says that it is one of the basic needs. The very expression basic need reflects that this is something which is nonnegotiable, and non-delegable. You cannot visualize a human existence in the absence of this.

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- **In 1988-89 - Kutir Jyoti Scheme –**
  - extending single point light connections to households of rural poor families below the poverty line including harijans and adivasi families
  - 100% grant was given under the scheme
- **In 2004 and 2005 the Government launched the Accelerated Rural Electrification (2004)**
  - one lakh villages and one Crore households

In 1988-89, you have a Kutir Jyoti Scheme, which says that single point light connections to households of rural poor families, and then it also says that let there be 100 percent grant to be given under this scheme. And then 2004-05, the Government of India launched another renowned program called Accelerated Rural Electrification, where it was said that one lakh villages and one Crore households are to be provided electricity.

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➤ **In 2005 - Rajiv Gandhi Grameen Vidyutikaran Yojana (2005)**

- with the objective of 100% electrification of villages and electricity access to all households

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In 2005, again, a very significant plan was announced, “Rajiv Gandhi Grameen Vidyutikaran Yojana,” where in the object was said that 100 percent electrification of villages are to be achieved with access to households.

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➤ **In 2014, Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY), which subsumed the RGGVY – launched**

- separation of agricultural and non-agricultural electricity feeders to improve supply for consumers in rural areas
- improving sub-transmission and distribution infrastructure in rural areas
- The central government provides 60% of the project cost as grant, the state power distribution companies (discoms) raise 10% of the funds, and 30% is borrowed from financial institutions and banks.

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Now, the Rajiv Gandhi Grameen Vidyutikaran Yojana has been subsumed in the Deendayal Upadhyaya Grameen Jyoti Yojana; that is why I am highlighting this, what are the main features of this scheme? You find that here in this scheme, it was suggested that let the purpose be

distinguished for understanding the consumption pattern; non-agricultural purposes are to be identified separately from agricultural purposes.

Because if you considered them in one single frame, then the financial viability of DISCOMS would be a big concern. As we have discussed while discussing the introductions of the Act and introduction of this subject, that discoms are really in a poor financial position. And one reason is their ability to recover the cost from the residential consumers, agricultural consumers, and rural consumers; therefore, it is suggested that let there be a different feeder.

So, that at least the government can plan depending upon the season, depending upon the timeline, depending upon the crop pattern, that what kind of electricity, and what volume of electricity is to be supplied in what region? It further says that let there be substantial improvement done on distribution and sub-transmission infrastructure in rural areas.

Because that is one of the concerns, if you go to villages, obviously, this may not be the scenario now, but 10 years ago, you would find that there are no transformers in villages or there is a transformer, but it is catering a large population. So, infrastructure is to be augmented; that is what is needed. And for this, it was suggested that let 60 percent come from the government, state discoms to be given, they have to raise 10 percent of fund, and 30 percent is to be borrowed from financing institutions and banks, that is what it says.

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➤ **Pradhan Mantri Sahaj Bijli Har Ghar Yojana (or Saubhagya) – 2017**

- to ensure universal household electrification (in both rural and urban areas) by providing last mile connectivity
- beneficiaries will be identified using the Socio Economic and Caste Census (SECC) 2011 data
- The identified poor households will get free electricity connections.
- Other households not covered under the SECC, will be provided electricity connections at a cost of Rs 500.
  - This amount will be collected by the electricity distribution companies in 10 instalments

In 2017, we have another scheme which the government has announced, that is Saubhagya Scheme, Pradhan Mantri Sahaj Bijli Har Ghar Yojana. This is again to ensure universal household electrification. So, universal signifies very important meaning; universal is something which is that accessibility must be based on the principle of equity or equality.

And then it says that, how do you understand that, to whom to prioritize in terms of providing electricity. It said that let the marginalized section get priority, and that has to be done on the basis of 2011 data which the government has collected. And the government said that these beneficiaries, let them get free electricity. Now, free electricity is, I would say, certainly a matter to be properly and very diligently evaluated that who all are eligible to get free electricity. And then it says that for other households, the connection should be 500 rupees, and this can be collected in installments, that is what it says.

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➤ While DDUGJY has focused on the village as the principal unit to measure electrification, the new scheme shifts the targets to household electrification

Now, Deendayal Upadhyaya Yojana is something which is very broad, it is something which has a focus of the village, but then obviously, it is more on making it more deeper and connecting it with households. Not only confining it to bigger pockets, not only confining it to a group, but then, they going to the real users of the electricity.

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➤ **Challenges –**

- What shall be realistic definition of electrification – apart from quantitative approach – qualitative perspective is needed
- Infrastructural improvements need to be backed by quality supply of electricity – DISCOMS poor financial condition is a big challenge
- Residential use v. Agriculture Use
- Subsidized tariff
- High maintenance and operation cost
- Retaining of electricity

With all these schemes, with all these acts, still what you find that there are challenges; what are the challenges? First and foremost is that with this scheme, the government has successfully established the infrastructure for the supply of electricity. Now, there is the electric connection in

every household. But then the question comes in, is that connection reliable and qualitative, is it 24 into 7 quality supply of electricity? So, that becomes a big challenge.

Now, in order to ensure qualitative supply, infrastructure is needed, and the distribution licensees need to invest. And we know very well that the financial condition of distribution licensees are not very sound. So, if they do not have enough money in their pocket, they are not going to really invest in rural electrification infrastructure. And that is something which is a big challenge.

Another is, as I said, when you look at the use of electricity for agricultural purposes, for irrigation purposes, we need to make a plan very strategically. Why? Because, if you give free electricity for irrigation purposes, there is all possibility of wastage of not only electricity but also of water. Because then, in that case, with free electricity, the pump sets will be on, even when it is not needed.

Therefore, this residential versus agriculture use, as I said, it has already been attempted to address in one of these schemes. Then the issue of Subsidized Tariff that has to be rationalized. It is not that everyone who resides in village, they are having inability to pay electricity bill. We need to plan the subsidy in a very fair and transparent manner, that how it should be done.

And then High Maintenance and Operation Costs in villages because of maybe issues of non-availability of manpower at the block level, at the tehsil level, the issues of theft. So, all this involves cost. And then the very capability to retain electricity, the government has given the electricity supply. Now, there is electric connection in a house which is located in the remotest part of the country.

But then whether the owner of the house is interested to retain that electricity or not. The connection has come, but whether that person is interested to retain, that is very important. Because when you are connecting it, connecting access to electricity with all kinds of socio-economic entitlements, then that person must also be interested to retain and interested to retain has to do with the ability to pay also. So, these are the challenges for Rural Electrification. Thank you very much.