Exclusive DISCOMs for agriculture –to further the agenda of privatizing the power supply industry?

K Ashok Rao
Patron, All India Power Engineers Federation (AIPEF)

1.0 Setting up separate discoms exclusively for agriculture. Would it resolve the crisis?

DISCOM, is a distribution company created by breaking up integrated State Electricity Boards. It is responsible for purchasing electricity from generators and transmitting it to end-users. It acts as the final link in the power supply chain, managing local grids and billing.

Since electricity supply to agriculture is essentially loss making and deeply involved in political expediency to expect that administrative restructuring would resolve complex and deeply embedded problems is foolhardy. At a technical level, supply to agriculture is unpredictable and often concentrated load from agriculture makes grid stability and load dispatch challenging. Debt reconstruction is one of the most important concerns since most DISCOMS are loss making organisations. How would further bifurcation and bunding together of loss making businesses resolve the problem faced by the state exchequer through the DISCOMS is an open question.

Agriculture is a major consumer of electricity in India, accounting for approximately 18-20% of the total electricity consumption in the country. This share can be as high as 30-40% in major agrarian states like Punjab, Haryana, Rajasthan, and Tamil Nadu. The primary use is for groundwater irrigation, powering over 21 million electric pump sets. It is seasonal with consumption spikes during the dry summer months (April-July) and the post-monsoon period (October-November) for the kharif and rabi cropping seasons.

Electricity consumption in Indian agriculture is a critical and a complex issue tied to food security, farmer livelihoods, groundwater sustainability, and the financial health of the power sector.

There can be no argument that commercial units like the electrical power supply industry must function on the basis of hundred percent cost recovery, both fixed and recurring costs - plus reasonable profit.

The same logic must then be extended to the farmers and the agriculture sector. Even the bare minimum recommended by the Swaminathan commission have not been accepted and implemented. The committee recommended a minimum support price structure based not only 100% recovery of recurring cost, but also 100 % percent recovery of the capital cost of land. There has to be parity between the need for a public service to earn and the ability of the farmer to pay.

Unlike agriculture, industries are provided sufficient fiscal support. For example, the private promoter in the guise of promoting investment is provided, cheap land, PLI subsidies, tax subvention, etc. to cover 75% of the project cost, making a mockery of the distinction between “private” and “public” sectors.

Cross-subsidization is an integral part of electrical supply industry, fragmenting the electrical power supply industry into profitable areas and non-profit areas is essentially counter-productive. Attempts to set up separate feeders exclusively for agriculture have not been very successful. Despite this experience to create an agro-based entity is foolhardy.

There is a growing tendency, starting with Telangana and Maharashtra, to address the problems of electrical supply to agriculture as a problems that could be resolved though administrative measures - create separate DISCOMS.. It is an attempt to resolve through administrative restructuring what is a complex commercial techno-commercial problem.

2.0 Creating an Agro -DISCOM in Telangana

In Telangana a Telangana Rythu Distribution Company Ltd. (TGRPDCL)has been formed. It would be responsible for supply to i) Agriculture, ii) Lift irrigation schemes, iii) Composite protected water supply schemes (Mission Bhagiratha), iv) Hyderabad Water Supply and Sewerage Board and v) Municipal Water connections with separate DTRs

Telangana has given birth to a still born baby that would be perpetually in financial losses. Technically, the TGRPDCL will have no control on any aspect of supply of electricity. While being responsible for supply of electricity it would have no direct control over generation, transmission and largescale distribution. The distribution network would not be exclusive. For example, what control would the new entity have over the transmission and distribution network while being responsible for supplying electricity to the Hyderabad Water Supply and Sewerage Board and v) Municipal Water connections.

The creation of TGRPDCL goes completely against the Objects and Reasons of Electricity Act 48, piloted by Dr. B.R. Ambedkar:

"*The coordinated development of electricity in India on a regional basis is a matter of increasingly urgent importance for post-war re-construction and development. The absence of coordinated system, in which generation is concentrated in the most efficient units and bulk supply of energy centralized under the direction and control of one authority is one of the factors that impedes the healthy and economic growth of electrical development in this country. Besides, it is becoming more and more apparent that if the benefits of electricity are to be extended to semi-urban and rural areas in the most efficient and economical manner consistent with the needs of an entire region, the area of development must transcend the geographical limits of a municipality, a cantonment board or notified area committee, as the case may be.*

3.0 Analysis of the Maharashtra segregation of solarization

In Maharashtra, the newly formed MSEB Solar Agro Power Ltd. (MSAPL) would be a wholly owned subsidiary of MSEB. It is aimed at solarizing agriculture feeders to provide daytime electricity to farmers. The goal is to clean up the balance sheet of the main DISCOM the MSEDCL.

The constant, yet unsubstantiated claim is that under various schemes including PM-KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan) Solarizing existing grid-connected agricultural pumps standalone solar agricultural pumps Separate Agriculture Feeders (Feeder Separation) Energy Efficient Pump Sets Smart Metering have been introduced with varying degrees of success.

The stated and sole aim of the newly created subsidiary of MSEDCL is to solarize agriculture feeders to provide daytime electricity to farmers. The goal is to clean up the balance sheet of the main DISCOM the MSEDCL There is no clue as to how the two contradictory goals would be met through an administrative order creating a new subsidiary.

The assumption that creating a new entity would by itself lead to successful largescale installation of, at the consumer's premises, solar modules thereby avoiding transmission over such long distances. There are no convincing cost benefit analysis justifying this assumption. Solar power is inherently variable. It is highly dependent on weather conditions (clouds, dust, fog) and the time of day (it stops generating at sunset). This creates sudden swings in power supply. On the other hand, any variation in the timing and duration of watering of the fields directly affects productivity and production.

The logic of largescale expansion of solar power needs serious examination. Large, sudden changes in solar generation (e.g., a fast-moving cloud bank) can cause sudden frequency dips or spikes. Similarly, solar inverters (which convert DC to AC) can introduce harmonics and impact voltage stability if not properly managed.

The Govt. of India creating the Solar Energy Corporation of India (SECI). SECI became essentially a tendering agency that got almost exclusively embroiled in tenders and competitive bidding. Recently, the SECI's transfer of 2,333 MW of power commitment illegally repudiated by Azure to the Adani Group, without competitive bidding, in violation of Section 63 of the Electricity Act, 2003 hit the headlines. These precedents do not seem to justify the Maharashtra Government's decision.

The important question is could solarization not have been achieved without creating a new entity? Every new entity involves additional administrative and overhead costs as we have witnessed in the fragmentation of the State Electricity Boards.

What is of vital and urgent importance is self-reliance. India's solar sector imports reached $7 billion in FY 2024, of which $3.89 billion came from China alone. This heavy import dependence not only inflates costs but also exposes India to supply chain disruptions, price fluctuations, and geopolitical risks. Self-reliance in this sector is the most cortical and central question.

4.0 Conclusion

There seems to be no clear technical, commercial or financial logic in unbundling the integrated electricity supply industry into various entities linked only to a single commodity – *'water'* as is the case in Telangana and a single energy source -*'solar energy'* as in the case in Maharashtra.

The operating philosophy of further unbundling the electrical power industry, this time either through creation of a separate DISCOM or localising the production of electricity is merely an extension of change in the legislation relating to the electricity supply industry that resulted in unbundling and privatisation. The motivation is ideological not the benefits that may accrue to agriculture or the farmer.