



ORIGINAL RESEARCH PAPER

Commerce

REVVING UP THE FORTUNES OF KARNATAKA'S ESCOMS

KEY WORDS: bottom line; dedicated; drip irrigation; metered; protagonist; stakeholders

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ABSTRACT

When the power sector reforms were ushered in, many protagonists of the reforms believed that the reforms would break new ground in more ways than one. After all, generation, transmission and distribution of power would be entrusted to dedicated entities and if they failed, they could be held individually accountable and answerable. Even a hike in power tariff would be effected only after taking the stakeholder groups into confidence. But nothing of the sort happened even with the State Electricity Regulatory Commission (SERC) around. The bottom lines of the various electricity supply companies (Escoms) of the state began to turn increasingly red with each passing year. It is high time the Escoms were nursed back to financial health. An investigation undertaken by the researcher after interacting with stakeholder groups like CESCO officers and the farmer-consumers, among others, led him to conclude that a few steps must be taken immediately to arrest the falling bottom lines of the Escoms. To begin with, the government should transfer the subsidy payable to the farmer-consumers directly to the bank accounts of the latter. However, if this is to materialise, the IP sets installed by the farmer-consumers should be necessarily metered. This will ensure that the beneficiary does not take the subsidised / free supply of power for granted. Underserving beneficiaries can be easily spotted and kept out of the subsidised power / free power loop. Government should promote drip irrigation to conserve precious water table and power. Even large farmers can be considered for the purpose if they are ready to share the tariff incurred for the purpose, with the government.

1.1 Theoretical background of the topic

Like most states in India, Karnataka has been providing electricity at a subsidized cost or nil cost to its farming community. The power sector reforms, ushered in with a lot of fanfare and hope, have not generated the projected outcomes. Vested interests have been able to continue with their undesirable activities. As a result, the Escoms could, before long, get stuck in a rut and lose their direction. They may not become self-sustaining entities soon.

1.2 Statement of the problem

The government of Karnataka, like state governments elsewhere in the country, crossed a Rubicon when it decided to supply subsidised power or free power to the farming community for its farming operations. There is no going back on it now since the state governments must be politically correct too. The T&D losses incurred by the Escoms for supply of subsidised power or free power are not quantified in a fool-proof and verifiable manner, owing to various reasons. This has helped the vested interests to pull the wool over the regulator's eyes and pilfer power. In the circumstances, there is a need to arrest the falling bottom lines of the Escoms by putting in place a holistic, long term and result-oriented strategy to nurse them back to health. This must be done without affecting the livelihood of the big chunk of the population that subsists on agriculture.

1.3 Review of literature

In the following paragraphs, a few pieces of literature on the subject are reviewed.

1. Power producers' receivables from the distribution firms rose over 35 per cent to INR 1,41,621 crore in November 2020, highlighting the stress obtaining in the sector (Press Trust of India, 2021). This does not compare favourably with what the supply companies (Escoms) owed as of November 2019 -- in all, they owed a whopping INR 1,04,426 crore to power generation firms as of November 2019. In November 2020, a sum of INR 1,29,868 crore had fallen overdue, despite the generators allowing a grace period of 45 days. This compared unfavourably with the INR 93,215 crores that had fallen overdue in the year-ago period. The portal reveals that the outstanding dues in November had escalated on a month-on-month basis too. In October 2020, the total outstanding dues of

Escoms stood at INR 1,39,057 crores. The overdue amount in November 2020 rose from INR 1,26,444 crore in October 2020. The data also reveals that Escoms in Rajasthan, Maharashtra, Uttar Pradesh, Jammu & Kashmir, Telangana, Andhra Pradesh, Karnataka, Jharkhand, Haryana and Tamil Nadu account for a big chunk of dues to power generation companies (Gencos). Power sector reforms have obviously not succeeded for whatever reason. It is time the policy makers took serious note of the sorry situation and acted promptly and seriously.

2. Ramakrishnan cites the Government of India (GoI) stipulation that the free power supply scheme for farmers should be replaced with the direct benefits transfer (DBT) if the States seek a rise in their borrowing limit (Ramakrishnan, 2020). It is not the first time that the Union government has recommended DBT on the subject. By December 2020, the DBT should be introduced at least in one district of every State, according to GoI. From the next fiscal, the DBT mechanism should be rolled out fully. Tamil Nadu, the first State to introduce free power in the country (it introduced it in 1984), is strongly opposed to the move. Andhra Pradesh, Telangana and Punjab, where the free power scheme is in vogue, are likely to follow suit. In the last 15 years, Maharashtra has been the only State to scrap the scheme. It scrapped it within a year of introducing it. Karnataka, which has been implementing it since 2008, may become the first southern State to opt for the DBT regime in power supply. The power subsidy bills in the four southern States and Punjab run up to at least INR 33,000 crores. The COVID-19 pandemic-led resource crunch will make it difficult for these states to foot this humongous bill henceforth. It is practically impossible for the state governments concerned to ensure that the free power scheme is not abused and misused by vested interests. If an alternative can be found to ensure that the said malpractices do not happen even as the lofty goal of providing free power for farming activities continues to be met, one wonders why the State governments should oppose such an alternative. The DBT is such an alternative.

3. According to Shiva Kumar, the farming community fears the withdrawal of free power supply and minimum support price (MSP) by the government (Shiva, 2020). The latter's attempts to allay their fears have borne no fruit. Consequently, farmers

have taken to protest and intend to issue a call for a *Karnataka Bandh*. Sowing operations have been on, though. If this year's *Khariff* season is anything to go by, the sector is all set to witness an unprecedented boom in yield given that area under cultivation has been the highest the state has ever seen. Good pre-monsoon showers and *Unlock 1.0* have turned out to be a boon for farmers. The latter completed sowing operations in 18.99 lakh hectares (26 percent of the total area), and *Unlock 2.0* helped cover 47.01 lakh hectares, or 64 percent of the area, by July 24. As the monsoon advanced with vigour, sowing operations were completed in all the 73 lakh hectares. The operations received a boost with the return of people from urban areas to villages, consequent upon losing their jobs or failing to find adequate work. Experts believe this development alone could have contributed 5-7 percent to the rise in area under cultivation. One does not know why vested interests try to mislead the farmers. Imagined problems which are compounded by sustained campaigns on the part of the vested interests, lead the farmers to act in haste and pay the penalty for the act later.

1.4 Research gap

The researchers have rightly pointed out that the Escoms have not been promptly clearing their dues to the power generating entities. Researcher Ramakrishnan rues the fact that the free power scheme for farmers has not been replaced by the direct benefits transfer (DBT) scheme by the various States. This would have qualified them for a higher borrowing limit. Another researcher, Mr Shiva Kumar regrets that the farmer-consumers allow themselves to be misled by vested interests. However, none of the researchers has suggested strategies to rev up the fortunes of the Escoms of Karnataka. It is this gap the present study seeks to bridge.

1.5 Scope of the present study

The study will consider ways and means of nursing back Discoms of Karnataka, like the Chamundeshwari Electricity Supply Corporation (CESCO) back to health. The study considers two categories of respondents associated with the topic. They are CESCO officers, numbering 50 and farmer-consumers, numbering 100. The latter are into farming in the five districts serviced by CESCO. The study covers the period FY 2015 – FY 2020. To this study, farmer-consumers are those who have installed irrigation pump sets of up to and inclusive of 10 HP at their farms and are designated by CESCO as LT-4 (a) consumers for tariff purposes.

1.6 Objectives of the study

The objective of the study is to devise strategies to rev up the fortunes of the Escoms of Karnataka

1.7 Hypothesis proposed to be tested

The study proposes to test the following hypothesis: "Government should promote drip irrigation and consider partial recovery of tariff from large farmers"

1.8 Research design

1.8.1 Research methodology

By intent, this research is a descriptive research. Going by the methods of study, this research can be described as a survey or a social survey, to be more specific.

1.8.2 Sources of data

Data required for the research has been collected from primary as well as secondary sources. Primary data has been collected from two categories of respondents, namely, 100 farmer-consumers and 50 CESCO officers. Secondary data has been collected from the annual reports of CESCO, the publications of the department of energy of the government of Karnataka and the financial press, among others.

1.8.3 Sampling plan

Farmer-consumers: Simple random sampling under the

probability sampling method was undertaken, to select the 100 farmer-consumers from the 300 farmer-consumers hailing from the jurisdiction serviced by CESCO. To ensure true randomness, the researcher has used the table of random numbers.

CESCO officers: The researcher opted for purposive or judgement sampling under the non-probability method, since the sample units, namely the 50 CESCO officers, had to conform to a pre-determined criterion. The researcher selected such officers who, in his judgement, were the most appropriate ones for the present study.

1.8.4 Data collection instruments

Interview schedules, specially designed for the purpose, were administered to the respondents for collection of primary data.

1.8.5 Data processing and analysis plan

Manual as well as mechanical methods were employed for data processing. As for the latter, the researcher used Microsoft Excel 365 for data analysis, reporting and deployment. To collect primary data, a 5-point Likert scale was used to elicit the respondents' replies to the queries raised in the Interview Schedule.

1.8.6 Limitations of the study

Primary data has also been deduced through constant topic-oriented discussions with the respondents. It is possible that a certain degree of subjectivity, even if negligible, has influenced their views. But the researcher is confident that the level of subjectivity will be too insignificant to affect the accuracy of the findings of the study.

1.9 CESCO officers

In the following paragraphs, the primary data collected from the 50 CESCO officer respondents on the strategies needed to rev up the fortunes of the Escoms is analysed.

1.9.1 Government should instead transfer a cash subsidy directly to the bank accounts of eligible farmer-consumers, based on their actual consumption of electricity.

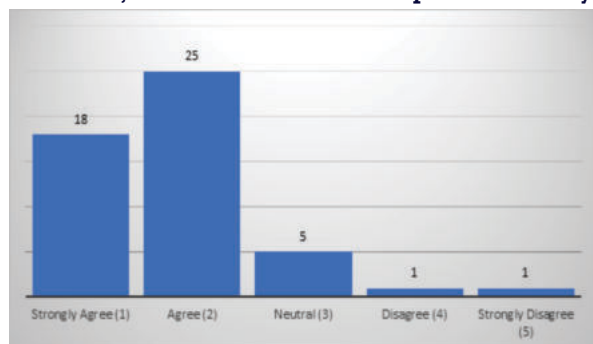
One of the strategies allegedly needed to rev up the fortunes of ESCOM is that the government should transfer cash subsidy directly to the bank accounts of eligible farmers-consumers, based on their actual consumption of electricity. Hence the researcher sought to know from the respondents if they would agree with the statement that the government should transfer cash subsidy directly to the bank accounts of eligible farmers-consumers, based on their actual consumption of electricity. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree and SD=Strongly Disagree. These levels are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

Table-1 Government should transfer cash subsidy directly to the bank accounts of eligible farmers-consumers, based on their actual consumption of electricity

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	18	36
Agree (2)	25	50
Neutral (3)	5	10
Disagree (4)	1	2
Strongly Disagree (5)	1	2
Total	50	100

Figure-1 Government should transfer cash subsidy directly to the bank accounts of eligible farmers-

consumers, based on their actual consumption of electricity



36 percent of the respondents strongly agree with the statement that the government should transfer cash subsidy directly to the bank accounts of eligible farmers-consumers, based on their actual consumption of electricity. 50 percent agree with the statement that the government should transfer cash subsidy directly to the bank accounts of eligible farmers-consumers, based on their actual consumption of electricity. Two percent disagree with the statement that the government should transfer cash subsidy directly to the bank accounts of eligible farmers-consumers, based on their actual consumption of electricity. Two percent strongly disagree with the statement that the government should transfer cash subsidy directly to the bank accounts of eligible farmers-consumers, based on their actual consumption of electricity. 10 percent remain neutral.

86 percent agree with the statement that the government should transfer cash subsidy directly to the bank accounts of eligible farmers-consumers, based on their actual consumption of electricity.

1.9.2 Government should promote drip irrigation and consider partial recovery of tariff from large farmers.

One of the strategies allegedly needed to rev up the fortunes of ESCOM is that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. Hence the researcher sought to know from the respondents if they would agree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree and SD=Strongly Disagree. These levels are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

Table-2 Government should promote drip irrigation and consider partial recovery of tariff from large farmers

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	16	32
Agree (2)	22	44
Neutral (3)	8	16
Disagree (4)	3	6
Strongly Disagree (5)	1	2
Total	50	100

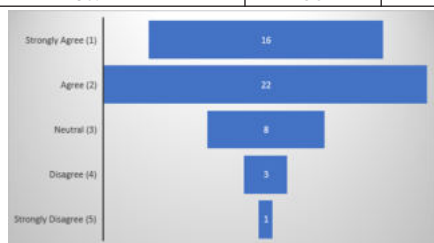


Figure-2 Government should promote drip irrigation and consider partial recovery of tariff from large farmers

32 percent of the respondents strongly agree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. 44 percent agree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. Six percent disagree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. Two percent strongly disagree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. 16 percent remain neutral.

76 percent agree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers.

1.10 Farmer-consumers

In the following paragraphs, the primary data collected from the 100 farmer-consumer respondents on the strategies needed to rev up the fortunes of the Escoms is analysed.

1.10.1 Government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets

One of the strategies allegedly needed to rev up the fortunes of Escoms is that the government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets. Hence the researcher sought to know from the respondents if they would agree with the statement that the government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree and SD=Strongly Disagree. These levels are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

Table-3 Government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	20	20
Agree (2)	52	52
Neutral (3)	13	13
Disagree (4)	8	8
Strongly Disagree (5)	7	7
Total	100	100

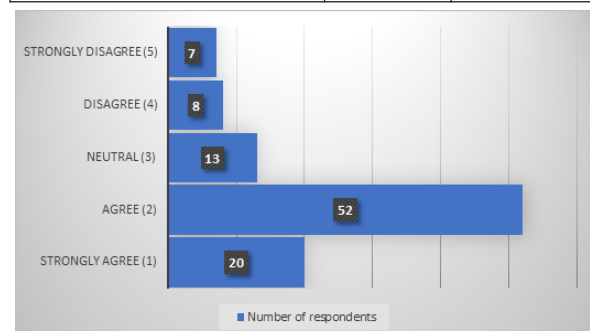


Figure-3 Government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets

20 percent of the respondents strongly agree with the statement that the government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets. 52 percent agree with the statement that the government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets. Eight percent disagree

with the statement that the government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets. Seven percent strongly disagree with the statement that the government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets. 13 percent remain neutral.

72 percent agree with the statement that the government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets.

1.10.2 Government should promote drip irrigation and consider partial recovery of tariff from large farmers

One of the strategies needed to rev up the fortunes of Escoms is that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. Hence the researcher sought to know from the respondents if they would agree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. The respondents' agreement / otherwise with the statement is expressed at five levels, namely, SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree and SD=Strongly Disagree. These levels are assigned the values 1, 2, 3, 4 and 5 respectively. Their levels of agreement with the statement are reflected in the following Table and Figure.

Table-4 Government should promote drip irrigation and consider partial recovery of tariff from large farmers

Levels of Agreement (Values)	Frequency	Percentage
Strongly Agree (1)	16	16
Agree (2)	41	41
Neutral (3)	24	24
Disagree (4)	13	13
Strongly Disagree (5)	6	6
Total	100	100

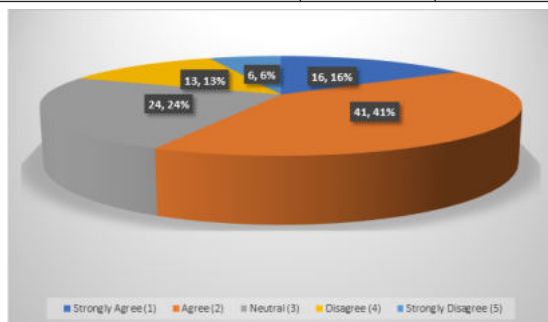


Figure-4 Government should promote drip irrigation and consider partial recovery of tariff from large farmers

16 percent of the respondents strongly agree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. 41 percent agree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. 13 percent disagree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. Six percent strongly disagree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers. 24 percent remain neutral.

57 percent agree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers.

1.11 Summary of findings

In the following paragraphs, a summarised version of the findings arrived at in respect of the two categories of respondents is furnished.

1.11.1 CESCO officer respondents

- 86 percent agree with the statement that the government should transfer cash subsidy directly to the bank accounts of eligible farmers-consumers, based on their actual consumption of electricity.
- 76 percent agree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers.

1.11.2 Farmer-consumer respondents

- 72 percent agree with the statement that the government should ensure replacement of old and inefficient pump sets with new energy-efficient pump sets.
- 57 percent agree with the statement that the government should promote drip irrigation and consider partial recovery of tariff from large farmers.

1.12 CONCLUSIONS

Conclusions relate to the hypotheses. They are answers to the research questions. As already explained, the hypothesis reads as follows:

“Government should promote drip irrigation and consider partial recovery of tariff from large farmers”

Hence H0 and H1 are as follows:

H0: Government should not promote drip irrigation; nor should it consider partial recovery of tariff from large farmers

H1: Government should promote drip irrigation and consider partial recovery of tariff from large farmers

Based on the primary data collected from the respondents, vide Tables: 2 and 4, a chi-square test was applied to ascertain the association, if any, between the two variables. The following Table reveals the computation made using MS-Excel:

Category	Observed Values		
	Yes	No	Total
CESCO officers	38	12	50
Farmer-consumers	57	43	100
Total	95	55	150
Category	Expected Values		
	Yes	No	Total
CESCO officers	31.6667	18.3333	50
Farmer-consumers	63.3333	36.6667	100
Total	95	55	150
	Yes	No	
o-e	6.3333	-6.3333	
2	-6.3333	6.3333	
(o-e) ²	40.1111	40.1111	
	40.1111	40.1111	
((o-e) ²)/e	1.2667	2.1879	
	0.6333	1.0939	
CV	1.9000	3.2818	5.1818
TV			3.8415
P			0.0228

The calculated value of χ^2 is 5.1818, higher than the table value of 3.8415 for an alpha of 0.05 at one degree of freedom. Hence the null hypothesis is rejected, and the research hypothesis is not rejected. $p=0.0228$ is the inverse of the one-tailed probability of the chi-squared distribution.

1.13 Researcher's recommendations

1. Government to instead transfer the subsidy in the form of cash to the bank accounts of the subsidy-deserving farmer-consumers. The subsidy must be computed based on the power consumed by the metered IP sets of the subsidy-deserving farmer-consumers. This will ensure that the subsidy reaches the deserving farmer-consumers, commensurate with the power they have

drawn. Concomitantly, it will ensure that the farm power subsidy is not taken for granted by vested interests.

2. Government should promote drip irrigation .It will lead to conservation of power and precious water. Large farmers should be mandated to share the tariff with the government.
3. Government should ensure the replacement of old and inefficient pump sets with new, state-of-the-art, energy-efficient pump sets.

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