Note on Issues before Farmers on Electricity

There are many problems being faced by farmers in Andhra Pradesh in relation to electricity.

Primarily, farmers are being vilified as being the source of problems facing the power sector in the State principally because of free power supply to agriculture pump sets assured by the government. Even though, most of the farmers with electrified pump sets get free power, DISCOMs in the State do not supply it free as they receive the cost incurred in supplying electricity to pump set farmers in the form of subsidy from the State government and cross subsidy from subsidizing industrial and commercial consumers. The DISCOMs are duty bound to supply quality power to pump set farmers. But these farmers are at the receiving end.

Free power to agriculture was promised to keep the pump set farmers on equal footing with farmers under surface irrigation. In fact budgetary allocation to power sector is always less than to irrigation sector, even while well irrigation accounts for more land than surface irrigation. Under the budget for the year 2014-15 the GoAP allocated Rs. 8,454.48 crore towards power sector and Rs. 23,311.98 crore towards irrigation sector. At the same time it has to be kept in mind that only a portion of allocation to power sector goes towards subsidizing power supplied to agriculture pump sets.

PERIOD/TIME OF POWER SUPPLY

DISCOMs in their filings before the Commission claimed that they are supplying 7 hour power to agriculture pump sets. But this is far from truth. In most of the cases farmers are not receiving even 5 hour power supply. Farmers were being forced to come on to the roads to highlight the pathetic state of crops under well irrigation. The following table provides information on power supply under one substation in Chittoor district under SPDCL.

Table: Number of Days of Power Supply to Agriculture under Pakala Sub-station

Number of Hours	Nendragunta	Kothakota	Gorpadu	Bandarlapalli
1-2	2	4	-	1
2-3	5	5	2	6
3-4	22	12	8	17
4-5	276	280	288	274
5-6	17	15	17	17
6-7	43	49	50	50

The above table shows the extent of power supply to agriculture under Pakala 33/11 kV Sub-station in Chittoor district under SPPDCL. Relevant information was obtained through RTI. Power supply was examined for one year from 1st December 2012 to 30th November 2013. It

shows that in more than 80% of the time power to agriculture was supplied for five hours or even less in a day. Agriculture received 7 hour power supply only during less than 14% of the time. Farmers received 7 hour power supply only during the months of October and November 2013. This mirrors the experience of the farmers all over the state.

But DISCOMs estimate power consumption estimates on the basis of 7 hour power supply to agriculture. What is more they claim to supply more electricity to agriculture than allowed by the Commission. According to DISCOMs agriculture consumption increased from 8,659 MU in 2012-13 to 9,126 MU in 2013-14. In the background of extensive power cuts during the year (official power cuts in rural areas extended to 12 hours in a day under R&C measures approved by the Commission) it is difficult to believe the numbers provided by the DISCOMs.

The DISCOMs in the State received the given subsidy and cross subsidy on the basis of their assurance that farmers would be given 7 hours power supply. As these DISCOMs failed to supply the assured power to agriculture we request the Commission to examine what happened to the amounts provided for the same.

Also, electricity received by the farmers was of uneven quality with unpredictable interruptions. Power supply timings announced by the Licensees are not being adhered to. It is the responsibility of the Commission under Section 86 (1) (i) of the Electricity Act, 2003 to enforce standards with respect to quality, continuity and reliability of service by licensees.

ISSUING NEW CONNECTIONS

It has become an uphill task for farmers to obtain new electricity connections. Even after paying the required amount through DD farmers are made to run from pill to post. There is rampant corruption in issuing new connections. Officials do not follow any method in allotting new connections. There is complete lack of transparency in issuing new connections.

DEATHS DUE TO SHOCKS /ANIMALS DEATHS

Every year hundreds of farmers are meeting death due to electrical shocks. This is highly avoidable.

Table: Deaths Due to Electric Shocks

	2012-13		2013-14 (Up to September 2013)	
	Shock Deaths	Responsibility taken by DISCOM	Shock Deaths	Responsibility taken by DISCOM
CPDCL	489	53	350	58
EPDCL	114	50	97	41

NPDCL	195	52	96	27
SPDCL	101	18	44	6
Total	899	173	587	132

During the year 2012-13 the number of deaths due to electrical shocks stood at 899. Out of this DISCOMs took responsibility for 173 deaths only. During the first half of 2013-14 these deaths stood at 587 and DISCOMs took responsibility for 132 deaths only. In most of these cases it was the farmers who met this tragic end. These deaths could have been avoided if there were timely and sufficient technical support at the ground level and good quality electrical network. Most of the technical posts like linemen in rural areas are vacant and farmers are forced to attend to repair work on their own with fatal consequences. According to DISCOMs, more than 8,000 technical posts like line men are lying vacant since a long time. Under EPDCL alone 2,904 O&M staff posts are lying vacant.

The Commission each year is allowing the DISCOMs to spend Rs. 5 crore each as special appropriation to improve safety of electrical network in the state. These DISCOMs did not care to spend these amounts. If the safety of DTRs were improved many of these deaths could have been avoided.

Even in the electrocution deaths that the DISCOMs had taken responsibility the amount paid (about Rs. 1 lakh per person) is very meager. Even this meager amount was not paid properly. There is need to revise the compensation upwards like in the case of railways.

There shall also be separate mechanism to pin responsibility for deaths due to electricity shocks. In the present case problem is with the person who decides. To avoid this anomaly a committee comprising different stakeholders shall go into these deaths and pronounce whether DISCOMs are responsible for these tragedies or not.

BILLING

The DISCOMs continue the process of issuing single bill for domestic as well as agriculture services in the rural areas. When there were delays in paying the bill for agriculture service domestic connection is being disconnected. This is highly objectionable and goes against the rules. We request the Commission to direct the DISCOMs to issue separate bills for domestic and agricultural services. For example, in Bakkamunthala Gudem village of Mattampalli mandal in Nalgonda district (with area code : 53022) 115 farmers at a time received bills ranging from Rs. 20,000 to Rs. 45,000 and they were told that if they do not pay their domestic connections would be disconnected. Similarly, Mamidi Narayana Reddy (Service No. 53150-00557) and Mamidi Laxmi (Service NO. 53150 – 01292) of Tadwai village in Nizamabad district, for the month of November 2013, received electricity bills with Rs. 1,400 as additional amount.

DISCOMs are also not notifying the farmers to which sub-category they belong to. A large number of farmers were receiving notices asking them to pay huge amounts as they belong to a paying sub-category. For example, Nalgonda circle of CPDCL mentioned 3,067 services as falling under wet land farmers holding more than 2.5 acres for the year 2012-13. In the previous year it mentioned only 86 services under this sub-catgory.

DTR FAILURE/REPAIR

DISCOMs are also not attending to maintenance of DTRs properly. Farmers are being forced to incur expenditure in transporting the DTRs. DTRs are also not being repaired in time. DISCOM staff are also collecting money from farmers to repair DTRs. They are not attending to repairs until the farmers pay up. In Kanugutta village of Both mandal in Adilabad district it took 10 days to repair the DTR. In Madaka village of Odelu mandal in Karimnagar district it took more than one week to repair the transformer while under Standards of Performance DTRs in rural areas shall be repaired within 48 hours.

DSM Measures

One of the stipulations is that farmers with more than 2.50 acres of land under major and medium irrigation schemes will not be eligible for free power. Here it is to be noted that farmers at the tail end of these projects and under projects like Sreeramsagar whose irrigation potential has drastically come down, though these lands are localized under these irrigation schemes never or rarely get water from the canals. Because of this, they are forced to go in for well irrigation. Though they are treated as irrigated farmers in the government records (irrigation as well as revenue) they do not get benefits of this irrigation. Taking this fact into account we request that the farmers irrespective of their holding size under the irrigation schemes shall be treated as eligible for free power.

Another condition imposed to be eligible for free power is that farmers with more than 3 pump sets will not be eligible for free power. In many cases, old wells - dug wells as well as bore wells - have gone out of use due to declining ground water and the electricity connections issued to them are not in use at present. But DISCOM records show these as active connections. While reckoning the number of pump sets of each family connections which are not in use shall not be taken in to account.

To be eligible for free power, farmers have to undertake demand side management (DSM) measures i.e., installation of capacitors, ISI marked pump sets, HDPE or RPVC piping and frictionless foot-valve. These measures are proposed to bring down quantum electricity consumption in the agriculture sector there by reducing financial burden both on the state government and farmers. Farmers also would like to contribute this endeavor. Though farmers

are interested in taking them up they are facing hurdles in implementing them. We would like to bring these to your notice for remedial measures.

DISCOM officials are claiming that more than 90% of the farmers have installed capacitors. But truth is that not even 10% of the farmers installed capacitors. Farmers do not have technical assistance in the form of access to linemen or assistant linemen, to take this up. Even where linemen or assistant linemen are available they do not have proper knowledge in installation of capacitors. Installation of capacitors at a wrong point led to burning of pump sets, which scared other farmers from doing the same. Officials also seem to be not very interested in taking this forward. According to the officials, nearly 8,000 linemen or assistant linemen posts are vacant in the State and most of them are in rural areas. This figure is based on earlier sanctions. In the meantime, electricity consumption as well as transmission and distribution network expanded several times. Keeping load growth in mind actual vacancies would be more than 20,000.

Effective implementation of installation of capacitors requires filling up of these vacancies at the earliest. Installation of capacitors not only helps improve voltages but also bring down line losses considerably. The presence of linemen or assistant linemen at the ground level all over the State would contribute in bringing down distribution losses. In other words, filling up of these vacancies will help in bringing down transmission and distribution (T&D) losses. This measure will also help to improve metering and billing performance in the State. The income accruing from these measures will be more than the expenditure incurred in filling the linemen or assistant linemen vacancies. Here care shall also need to be taken that these people are properly trained to take up the works efficiently. Awareness on these aspects is also needed at the level of officials also. The Energy Department has to take the overall responsibility for implementation of this measure.

Use of ISI standard pump set is another important DSM measure. Present pump set efficiency in the State is only 25% and this could be increased to 50% by using ISI standard motors. For proper operation of ISI standard pump sets minimum voltages are required. Under prevailing low voltages in the state these ISI motors do not work. Because of this low voltage, farmers are forced to go in for locally made pump sets which operate even under low voltages. One of the reasons for low voltage is overloading of distribution transformers (DTR) installed for agricultural purposes. This overload is to the extent of 25 to 50%. If this overload problem is addressed successfully farmers can think of using ISI standard motors. This can be addressed by increasing the number of DTRs of adequate capacity in the agriculture sector. We request the state government and DISCOMs to install additional DTRs to solve low voltage problem so that farmers will be emboldened to go in for ISI standard motors.

Though the farmers may be willing to install ISI standard motors in the event of voltages improving the financial burden on them will be onerous and it will be good to explore the ways

of minimizing burden on them in replacing the non-standard motors with ISI standards motors. In Tamil Nadu, the State government and utilities are said to have taken up a programme where a third party – Electricity Service Company (ESC) – takes the responsibility of replacing the motors and is given a share in the savings of electricity consequent to installation of standard motors. We request the State government to explore this option also as it will not burden the state government as well as the farmers.

Since 2005 HVDS programme is taken up in the state as a solution to the low voltage problem. Until now thousands of crores of rupees were spent on this but not even 10% of the pump sets were covered. A HVDS transformer is five times costlier than the regular DTRs being used at present. It was felt that if the same amount was spent on adding regular DTRs by this time the low voltage problem would have been solved. Even if the present additional load on existing DTRs is assumed as 50% then the estimated expenditure would be 50% of the cost of the existing DTRs. If we want to replace all the DTRs with HVDS DTRs the expenditure would be five times. The question is why spend 550% more when we could achieve with 50% only. We may be wrong in these calculations. Farming community in the state does not have any information on or insight in to this HVDS programme. Farming community in the state should have been taken in to confidence while formulating solution to low voltage in rural areas. This is not too late. We request the state government as well as the DISCOMs to place all the information related to HVDS before the public including farmers for an informed discussion on the problems being faced by both the DISCOMs and farmers in the state that will lead to a solution that is beneficial to all stakeholders.

Low quality of power in rural areas is also because of crumbling transmission and distribution network in rural areas. Decades old conductors are hanging low endangering lives as well as resulting high transmission losses. Many of the DTRs are more than decade old and should have been replaced. Added to this many of these DTRs do not have even AB switches. Depreciated and old parts of T&D network shall be replaced in keeping with prudent maintenance of the network in good health.

Another DSM measure is related to use of HDPE or RPVC pipes for suction and delivery. While the debate on relative benefits of HDPE/RPVC pipes and GI/iron pipes is not well settled farmers are facing practical problems in the use of HDPE/RPVC pipes for suction in bore wells. In the case of open wells the shape and situation of the wells do not always lend to use of HDPE/RPVC pipes. Implementation of this measure shall be left to the discretion of the farmers. They can decide the steps to be taken in consultation with the officials/experts.

In the case of frictionless foot-valves, it applies only to open wells. Already most of the wells use frictionless foot-valves.

Of late it has become a fashion to blame agriculture for all ills of power sector in the state. In fact farmers shall be complemented for their contribution to the State's economy by pumping their own money in digging wells or drilling bore wells. Wells account for more than 50% of the gross irrigated area in the state. But it receives less government support in the shape of subsidy for free power compared to budgetary allocations to the Irrigation department. Inflated estimation of power consumption in agriculture is leading to this misunderstanding. In general, DISCOMs add up all the agricultural connections released since the beginning.

However, more than 20% of these connections are not in operation. Even among those in operation nearly 50% of them are not used during Rabi season due to unavailability of groundwater. While DISCOMs assume 7 hours of power supply farmers do not receive even 5 hours of supply in a day (as an example, we are enclosing the number of hours of power supply under a substation in Chittoor district). This demands a relook at the way power consumption in agriculture sector is estimated and the picture is set right. We suggest fresh counting of wells under each substation.

(Note submitted to Chairman, APERC on 18th February, 2014 on behalf of farmers' organizations)