



**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION**

4<sup>th</sup> Floor, Singareni Bhavan, Red Hills, Hyderabad - 500 004

Present

**Sri Justice G. Bhavani Prasad, Chairman**  
**Sri P. Rama Mohan, Member**

SATURDAY, THE SEVENTEENTH DAY OF AUGUST, TWO THOUSAND AND NINETEEN

In the matter of

**Approval of tariff for excess energy injected into the grid by farmers who were provided grid connected solar brushless DC (BLDC) agricultural pump sets under the pilot project**  
**O.P.No.47 of 2019**

**BETWEEN:**

M/s. Eastern Power Distribution Company of Andhra Pradesh Ltd

... Petitioner

**AND**

NIL

... Respondent

A petition seeking approval of the Commission for the pilot project & purchase of the excess energy that will be injected into grid at a tariff of Rs.1.50 per unit from the grid connected solar brushless DC (BLDC) agricultural pump sets which were provided to farmers availing supply from Savaravilli (R) agricultural feeder of Bhogapuram section, Vizianagaram Circle, Andhra Pradesh under this pilot project, came up for final hearing on 03-08-2019 in the presence of Sri G.V. Brahmananda Rao, learned counsel representing Sri P. Shiva Rao, learned standing counsel for the petitioner. After carefully considering the material available on record and after hearing the submissions of the learned counsel for the petitioner, the Commission passed the following:

## ORDER

1. M/s. Eastern Power Distribution Company of Andhra Pradesh Ltd (EPDCL), the petitioner, has made, inter alia, the following submissions in the petition:

- i. The Government of Andhra Pradesh (GoAP) has been providing free power supply to agriculture sector and the DISCOMs are compensated through subsidy support annually. GoAP has committed a total subsidy of Rs.7,064 Cr for the FY2019-20.

The subsidy support provided by the GoAP to the agriculture segment has been on the rise and is as shown in the table below:

Financial Year	Cost of Service (CoS) per unit as per the Tariff Orders (Rs./kWh)	Agricultural subsidy per unit (Rs./kWh)
2014-15	5.25	2.97
2015-16	5.38	3.00
2016-17	5.33	2.82
2017-18	5.54	3.37
2018-19	5.88	5.57
2019-20	6.06	6.06

As shown in the above table, agricultural subsidy per unit is on rise and is gradually equated to Cost of Service (CoS) for FY19-20. Further, CoS is increasing by 2.91% year-on-year in last 5 years and the levellised CoS for next 25 years is estimated to be Rs.7.64 per unit. At levellised CoS of Rs.7.64 per unit, annual subsidy per pump set is estimated to be Rs.50,806 assuming annual consumption per pump set is at 6,650 units based on historic data.

- ii. Grid connected solar pump sets help harness solar energy to meet the power requirements of the farmers during the day time. The distributed solar power generation also enables in reducing power losses in the network. In addition, some of the other benefits of replacing the existing pump sets with solar powered grid connected pump sets include:

- a) Could reduce power consumption
- b) Agriculture subsidy reduction for the Government
- c) Additional income for the farmers
- d) Conservation of ground water

The existing pump set at the farmer-end can be replaced either by an energy efficient AC pump set or Brushless DC (BLDC) motor pump set together with solar panel system.

BLDC motors have lower inertia and better torque control and are 20-25% more efficient than conventional AC motors. Another key advantage of installing a DC pump set is that drawl of power from the grid for operating the pump is not possible, thereby preventing the load on the grid and requiring the pump to be operated by the solar panels only. Accordingly, it is proposed to leverage the DC pump technology together with solar panels to replace existing pump set at farmer-end. MNRE has issued specifications for Solar BLDC motor pump sets and states like Chhattisgarh, Madhya Pradesh, UP, Rajasthan, Haryana have already invited tenders for procurement of Solar BLDC motor pump sets.

The benefits for famers include the following:

- a) Energy efficient solar pump sets for free of cost
  - b) Reliable water discharge for 8-9 hours during the day-time
  - c) Additional income generation
- iii. As per the instructions of Government, a tender was floated by APEPDCL for replacement of existing AC Agricultural pump sets with Grid connected Solar BLDC pump sets as a pilot project and entire capital expenditure would be borne by APEPDCL. APEPDCL has identified one agriculture feeder of Savaravilli Rural covering about 250 number of agriculture services across 32 villages for the pilot project with the consent of farmers.

In the tenders, L1 price of Rs.3,30,000 and Rs.4,00,000 was discovered for 3HP and 5HP grid connected Solar BLDC pump sets respectively. An

amount of Rs. 9.3 Cr. was already incurred by APEPDCL towards energization of 216 nos. Solar BLDC pump sets approximately.

- iv. The implementation of grid connected Solar BLDC pump sets pilot program in the area of Savaravilli feeder in APEPDCL would result in an annual amortization cost of Rs.49,625 per 5 HP pump set at estimated capital cost of Rs.4,00,000 per 5 HP pump set, at 100% debt, at interest rate of 9% per annum with loan tenure of 15 years.

As explained supra, levelled agricultural subsidy per pump set is Rs. 50,806 which is equivalent to annual outflow for APEPDCL for the capital cost incurred to install grid connected Solar BLDC pump set during the loan tenure of 15 years. Therefore, GoAP/APEPDCL will have annual savings due to avoided subsidy of Rs. 50,000 per 5 HP pump set after complete payment of loan for next 10 years as life of grid connected Solar BLDC pump set is 25 years. In terms of Net Present Value (NPV), the savings for 5 HP pump set is as shown in below table.

<b>S.No.</b>	<b>Parameter</b>	
1.	Capital cost of 5 HP Grid connected Solar BLDC pumpset	Rs.4,00,000
2.	Net Present Value (NPV) of annual subsidy*	Rs.4,60,927
3.	NPV of savings to APEPDCL due to avoided subsidy	Rs. 60,927

*\*Annual consumption by pump at 6,650 units, CoS of INR 6.06/kWh escalated 2.91% y-o-y for 25 years*

Further, surplus energy generated from solar panels after consumption by BLDC pump sets if any can be injected into grid. This excess energy injected into grid will decrease power purchase cost for APEPDCL.

The Govt has announced in public for payment of Rs. 1.50 per unit to the farmers for the excess energy injected into the grid. Farmer is providing lease free land for installation of grid connected solar BLDC pump set in his field and is maintaining the same by washing and cleaning solar panels regularly. Hence purchase of excess energy from farmers at Rs.1.50 per unit of energy injected into grid is a win-win situation for APEPDCL and farmers.

Following table illustrates estimated savings to APEPDCL from the pilot project.

<b>S.No.</b>	<b>Parameter</b>	<b>Units</b>	<b>Value</b>
1.	Marginal variable cost per unit in FY19-20	Rs	3.58
2.	Year on year escalation in variable cost	%	4.00%
3.	Levellised variable cost per unit for 25 years	Rs.	4.96
4.	Transmission loss as per Tariff order FY19-20	%	3.03%
5.	Distribution loss as per Tariff order FY19-20	%	10.11%
6.	Levellised marginal cost per unit including T&D losses	Rs.	5.69
7.	Power purchase cost per unit for excess energy injected into grid by farmers	Rs.	1.50
8.	Levellised savings per unit to APEPDCL for excess energy injected into grid	Rs.	4.19

Further, Net Present Value (NPV) of savings to APEPDCL due to power purchase from farmer varies based on excess energy injected into the grid by farmer.

Following table illustrates estimated savings per annum per pump set to APEPDCL and revenue to farmer in different scenarios of excess energy injection.

<b>S. No.</b>	<b>Parameter</b>	<b>Units</b>	<b>Value</b>	<b>Value</b>	<b>Value</b>
1.	Excess energy injected into grid by farmer per annum*	kWh	2,000	3,000	4,000
2.	Levellised annual savings to APEPDCL	Rs.	8,380	12,570	16,760
3.	NPV of 25 years savings to APEPDCL	Rs.	76,066	1,14,099	1,52,131
4.	Annual revenue to farmer	Rs.	3,000	4,500	6,000

\* With CUF of 15%, 5 HP Grid connected Solar BLDC pump set with 5 kW solar panels is estimated to generate 6,720 units annually.

From the above tables, it can be inferred that the pilot project is estimated to result in subsidy savings of Rs.60,297 after completion of loan payment and power purchase savings of Rs. 75,000 to Rs.1,50,000 in terms of NPV per each 5HP pump set. Further, pilot project is estimated to provide additional income of Rs. 3,000 to Rs. 6,000 per annum to each farmer for 25 years for excess energy injected into grid by them.

Further, Government of India (GoI) has issued draft guidelines for 'Kisan Urja Suraksha evam Utthaan Mahabhiyan (**KUSUM**)'. Scheme to promote solarisation of existing pump sets. As per KUSUM scheme, Central Financial Assistance (CFA) of 30% by MNRE, subsidy of 30% of benchmark cost of MNRE shall be provided by State Government. CFA by MNRE, subsidy by State and fall in capital cost of grid connected Solar BLDC pump sets will result in increased subsidy savings to the tune of Rs. 240,000 and power purchase savings of Rs. 75,000-Rs. 1,50,000 in terms of NPV per each pump set for all upcoming projects.

2. In view of the reasons explained above, the Commission is prayed to:
  - i. approve and consent for the BLDC pump sets Pilot Project on Savaravilli feeder of Vizianagaram District, and
  - ii. approve tariff Rs. 1.50 per unit for excess energy injected into grid by farmers since installation of grid connected Solar BLDC pump sets in June 2018.
3. The petition submitted by the petitioner has been admitted by the Commission and assigned number as O.P.No.47 of 2019. As there was no named respondent and as the matter involved general public interest, the petition along with the public notice was placed on the website of the Commission for seeking views/objections/suggestions from all the stakeholders. It is also notified in the public notice that public hearing is scheduled on the subject petition on 03.08.2019 at 11 a.m. in the court hall of the Commission, Hyderabad for the stakeholders desired to be heard

in person or to submit their views in writing to the Commission directly. The Commission also directed the licensee to place the petition and public notice on its website and submit responses to the views/objections/suggestions received from various stakeholders on or before 03.08.2019 the date of public hearing.

4. In response to the public notice, the Commission has not received any views/objections/suggestions from any stakeholders at its Office before and during the public hearing. However, the Commission has received objections/suggestions from Sri B. Tulasi Das, Vijayawada after the petition was reserved for orders. The main suggestions of Sri B.Tulasi Das are that :

- a) The farmers of Bhogapuram area under Savaravilli substation have been utilising the solar pump sets for the last one year and more. They raise crops as usual and also supplying power to the grid. They were not paid anything towards the cost of purchase of power from them and hence, violating the assurances given by the officials and the Government.
- b) The DISCOMs were purchasing solar power from big companies at an exorbitant rates of about Rs.4.88 to Rs.6.00 per unit, but the farmers were offered a meagre Rs.1.50 per unit. This is sheer discrimination towards the farming community.
- c) One may argue that the capital investment was provided by the DISCOM and Govt. of AP and so the rate shall be less. The industrialists are also not getting money from their home. They lend the capital from Public sector Banks and other State run financial organisations. The IPPs were paid highest rate for the power purchased from them in addition to the concessions and exemptions by the governments.
- d) The farmers are in dire distress and they have to be supported by the society and the Government. Hence, the farmers have to be given a higher amount than the IPPs for the power generated in their farms.

**Commission's decision:**

5. The consideration before the Commission is the request to approve the pilot project and the tariff of Rs.1.50 per unit payable to the farmers for the excess energy injected into the grid from their pump sets.
6. The Commission has examined all the submissions made by the petitioner in detail and kept in mind the following provisions before arriving at its conclusions:
  - i. Section 61 of the Electricity Act 2003 provides that *“The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely:-“Clause (c) “the factors which would encourage competition, efficiency, economical use of resources, good performance and optimum investment”.*
  - ii. Andhra Pradesh Solar Power Policy, 2018 (G. O. Ms. No. 1, Dated: 03-01-2019)

**3 E. Solar pump sets**

The State government in collaboration with the Central Govt/MNRE/MOP/ Multilateral agencies will undertake measures to enable gradual replacement of conventional pump sets with solar powered pump sets through subsidy support. Nodal agency will facilitate with government agencies for availing subsidies, grants and/ or incentives on behalf of APDISCOMs.

It is envisaged that 50,000 solar powered pump sets will be operational in the State in the next five years without any additional financial burden on the farmers. The modalities of the scheme will be developed in consultation with all the stakeholders within 30 days from the date of issue of this policy.

The Government will encourage Grid Connected Solar Pump sets to benefit the farmer community by way of sale of surplus energy to the DISCOMs.



iii. Guidelines for Implementation of Pradhan Mantri Kisan Urja Suraksha evem Utthan Mahabhiyan (PM KUSUM) Scheme, dated:22-07-2019

3.III. Component C: Solarisation of 10 Lakh Grid Connected Agriculture Pumps

Under this Component, individual farmers having grid connected agriculture pump will be supported to solarise pumps. Solar PV capacity up to two times of pump capacity in kW is allowed under the scheme. However, State may specify lower solar PV capacity in kW, which in any case shall be not be less than pump capacity in HP e.g. for 2 HP pump it will not be less than 2 kW. The farmer will be able to use the generated solar power to meet the irrigation needs and the excess solar power will be sold to DISCOMs. Water User Associations and community/cluster based irrigation system will also be covered under this component. However, priority would be given to small and marginal farmers. In order to minimize the water usage for irrigation purpose, preference will be given to the farmers using Micro irrigation systems or covered under Micro irrigation schemes or who opt for Micro irrigation systems.

Possibilities would be explored by implementing agencies for convergence of present scheme with schemes on promotion of micro irrigation system and replacement of agriculture pumps with energy efficient pumps and they may work out the modalities in coordination with respective Ministries/Departments.

It will be mandatory to use indigenously manufactured solar panels with indigenous solar cells and modules. Further, the balance of system should also be manufactured indigenously. The vendor has to declare the list of imported components used in the solarisation system.

CFA of 30% of the benchmark cost or the tender cost, whichever is lower, of the solar PV component will be provided. The State

Government will give a subsidy of 30%; and the remaining 40% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 30% of the cost as loan. In case the State Government provides subsidy more than 30%, the beneficiary share will reduce accordingly.

However, in North Eastern States, Sikkim, Jammu & Kashmir, Himachal Pradesh and Uttarakhand, Lakshadweep and A&N Islands, CFA of 50% of the benchmark cost or the tender cost, whichever is lower, of the solar PV component will be provided. The State Government will give a subsidy of 30%; and the remaining 20% will be provided by the farmer. Bank finance may be made available for farmer's contribution, so that farmer has to initially pay only 10% of the cost and remaining up to 10% of the cost as loan. In case the State Government provides subsidy more than 30%, the beneficiary share will reduce accordingly.

Further, the CFA will be limited to Solar PV capacity up to two times of pump capacity in kW for pumps up to 7.5 HP. Solarisation of Pumps of capacity higher than 7.5 HP may be allowed, however, the CFA will be limited to the CFA applicable for pump of 7.5 HP in the respective State/UTs. This will help to create an avenue for extra income to the farmers, and for the DISCOMs to meet their RPO targets. The solar power fed in to the grid and solar power utilized by farmer both will be accounted for fulfillment of solar RPO by the DISCOM.

DISCOM may adopt any of the modalities for solarisation of pumps viz,

- (i) Net-metering: in this case the agriculture pump will continue to run at rated capacity taking power from solar panels and balance power from grid, if required, and in case solar power generation is higher than required by pump, the additional solar power would be fed to the grid;
- (ii) Pump to run on solar power only: in this case the pump will run from the solar power as in case of stand-alone solar pump and no

power will be drawn from the grid for operation of pump. In case solar power generation is higher than required by pump, the additional solar power would be fed to the grid.

DISCOMs /GENCO/ any other Department designated by State Government will be the implementing agencies. 2% of the eligible CFA will be provided as total service charges to all agencies implementing the scheme including the designated State Implementing Agencies. In case of centralised tendering, some percentage/fixed amount out of service charges (to be decided by MNRE) shall be given to the central agency. MNRE may also retain a certain amount from service charge for nation-wide centralised IEC activities.

This component will be applicable to farmers already connected to grid. Feeder-wise implementation is proposed to be carried out. All agriculture pumps in a feeder will be solarised; however, States may impose a minimum solarisation requirement for a feeder in terms of minimum % of pumps solarized on that feeder.

In case of dark zones/black zones only existing grid connected pumps will be solarized provided they use micro irrigation techniques to save water.

Possibilities would be explored by implementing agencies for convergence of present scheme with schemes on promotion of micro irrigation system and replacement of agriculture pumps with energy efficient pumps and they may work out the modalities in coordination with respective Ministries/Departments.

DISCOMs will purchase excess power from the farmer at the rate decided by the respective State/SERC. The DISCOMs will ensure “must-run” status to the solarised feeders and will keep such feeders ‘ON’ during sunshine hours of a day.

It will be mandatory for implementing agency to create remote monitoring system to monitor performance of the system post-installation.

States may also formulate state specific policy for grid connected solar pumps, customised to needs of the respective State, keeping the broad framework provided by MNRE intact.

**a. Allocation of solarisation capacity and procurement**

State-wise allocation for solarisation of pumps will be issued by MNRE once in a year, after approval by a Screening Committee under the chairmanship of Secretary, MNRE. In the beginning of every financial year during the Scheme tenure, MNRE will call for submission of feeder-wise demand for solarisation. Based on overall target for the year and the demand received from implementation agencies, MNRE will allocate solarisation capacity to the implementation agencies in the States. On acceptance of the allocated quantity by the implementation agencies and submission of detailed proposal as per MNRE format, within a given time, final sanction will be issued by MNRE.

As per approval, the component is to be implemented on pilot mode for initial one lakh grid connected agriculture pumps and accordingly, initially this capacity will be allocated by MNRE to implementing agencies based on their demand and readiness for implementation of the component. Pilot projects will be continuously monitored during implementation and also on completion to evaluate the success of pilot run and a detailed report will be prepared for recommending further scaling up of the capacity under this component. Such evaluation may be done internally or through external agency as per decision of the MNRE.

Implementing agencies will submit proposals through online portal to MNRE for approval. Offline proposals will not be accepted, unless MNRE has given a general exemption from the requirement of online submission for any specific period of time.

Proposals for new installations will only be considered by the Screening Committee. Proposals wherein the pumps are already solarised prior to sanction of MNRE will not be considered for approval under the Scheme by the Screening Committee.

MNRE may specify either a centralized tendering of solarisation system through Central PSUs or by the State Implementation Agencies. These CPSUs or State Implementation agencies will carry out tendering process as per the Guidelines, standards and specifications issued by MNRE. Any deviation shall normally be not permissible except in specific cases with the approval of Secretary, MNRE

In case of centralized procurement the designated CPSUs may come out with region- wise/State-wise tenders, however, their role will be limited to selection of bidders. The selection of beneficiaries and implementation of scheme would be the responsibility of the State Implementation Agency.

In all cases, the bids shall require the successful bidder to provide for AMC for five years from the date of installation, helpline, district level service centres and comply standards of performance in dealing with complaints.

The Implementation Agency would also be responsible for carrying out publicity of the scheme so as to increase awareness amongst potential beneficiaries. For this purpose, apart from their own publicity content, they shall also be guided by advice of MNRE on this matter.

**b. Installation timeline and Penalties**

Projects for solarisation of pumping systems shall be completed within 12 months from the date of sanction by MNRE. However, for North Eastern States including Sikkim, Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Lakshadweep and A&N Islands this time limit will be 15 months from the date of sanction. Extension in project

completion timelines, up to a maximum period of three months, will be considered at the level of Group Head in MNRE and upto 6 months at the level of Secretary in MNRE on submission of valid reasons by the implementing agency. However, such extension will attract reduction in service charges to implementing agency as under:

- a. 10% reduction in applicable service charges for delay of more than one month in completion of project.
- b. Further reduction of 10% of service charges for delay of more than two month and up to three months.
- c. Further reduction of 10% of service charges for delay of more than three month and up to six months
- d. No service charges for delay in completion of more than six months.

No extension will be granted beyond six months and only the systems which are installed in all respects and commissioned within stipulated time period will be considered for release of CFA.

The implementing agencies after submitting proposal to MNRE may choose to start the preparatory activities including tendering process. However, the Letter of Award/Purchase Order shall be placed to the selected vendor(s) only after the issue of sanction letter by MNRE. Further, MNRE will not be responsible for any liabilities arising out of a situation where the proposal is eventually rejected.

**c. Release of funds**

Funds up to 40% of the applicable CFA for the sanctioned quantity would be released as advance to the implementing agency only after placement of letter of award(s) to the selected vendors. The implementing agencies may pass on this fund to the selected vendors in different stages on achievement of various milestones as per terms and conditions of letter of award(s). Second installment up to 30% of the applicable CFA would be released on submission of UCs and SoE for the first release. The balance eligible CFA along with applicable service charges would be released on acceptance of the Project Completion Report in the prescribed format, Utilization Certificates as per GFR and other related documents by the Ministry.

#### **d. Monitoring and maintenance**

Selected vendors shall be responsible for all aspects of solarisation viz., design, supply, installation and commissioning. Vendors will mandatorily provide AMC for a period of 5 years from the date of commissioning of the systems including insurance coverage for the installed systems against natural calamities and theft. AMC will include submission of quarterly inspection report of the installation as per prescribed format. To ensure timely maintenance of the systems the vendor shall have one authorised service centre in each operational district and a helpline in local language in each operational State.

Under the Programme along with solarisation, the vendor shall also provide a remote monitoring system. It will be mandatory to submit quarterly maintenance report along with performance data of solar power plant online to MNRE in a manner and format prescribed by MNRE.

Monitoring of the Scheme and its implementation will be carried out during the period of implementation of the Scheme as is given below:

- i. The implementing agency would be responsible for monitoring parameters such as end-use verification and compilation of statistical information.
- ii. Implementing agencies will submit monthly progress report for the sanctioned projects.
- iii. Funds may be released by implementing agency to the vendor on submission of bank guarantee equivalent to 10% of the cost of systems installed by that vendor for a period of five years. Alternatively, BG may be provided initially for a period of two years which may be extended on year to year basis thereafter.
- iv. The Ministry officials or designated agency may inspect the ongoing installation or installed plants. In case the installed systems are not as per standards, non-functional on account of poor quality of

installation, or non-compliance of AMC, the Ministry reserves the right to blacklist the vendor. Blacklisting may inter-alia include the following:

- a. The Vendor/Firm will not be eligible to participate in tenders for Government supported projects.
- b. In case, the concerned Director(s) of the firm/company joins another existing or starts/joins a new firm/company, the company will automatically be blacklisted.

#### **e. Responsibilities of Implementation Agency**

The Implementing Agencies will be responsible for the following activities:

- i. Issue additional instructions/ conditions such as minimum solarisation level of feeder.
- ii. Issue connectivity standards/regulations, if required, and facilitate connection to the grid.
- iii. Selection of feeder for solarisation and demand aggregation for solarisation of pumps.
- iv. Prepare proposal and submit to MNRE for sanction
- v. Conduct tendering process as per MNRE guidelines
- vi. Oversee installation of systems.
- vii. Inspection of installed systems and online submission of completion reports to MNRE.
- viii. Disbursement of MNRE CFA and submission of utilization certificates and audited statement of expenditure through EAT module.
- ix. Online submission of monthly and quarterly progress reports.
- x. Ensure project completion within the given timelines and compliance of MNRE Guidelines and Standards.
- xi. Online and offline maintenance for records.
- xii. Real time monitoring through dedicated web-portal



- xiii. Performance monitoring of installed system through third party
- xiv. Ensure compliance of AMC and training of locals by the vendors.
- xv. Carrying out publicity of the scheme so as to increase awareness, for which purpose advice of MNRE may also be adopted apart from its own publicity.
- xvi. Any other activity to ensure successful implementation of the programme.

7. The petitioner has already implemented the pilot project and incurred required investment. As the pilot project involves the interest of farmers and the petitioner, it needs to be accepted as a desirable and well conceived measure of required support and social security for farmers.

- a) Therefore, the Commission hereby approves the pilot project.
- b) The petitioner proposed to pay at Rs.1.50 per unit to farmers for the excess energy injected into the grid and placed sufficient analysis to support the proposal. With respect to any Demand side management project, it is the duty of the petitioner to prepare & design the project, make technical potential evaluation, economic potential assessment and cost benefit analysis, monitor and report progress of such projects etc. The petitioner has not submitted any detailed calculation in this regard in support of its proposal. However, the Commission has relied on the petitioner's submissions for the present and accordingly approved the tariff of Rs.1.50 per unit to pay farmers for the excess energy injected into the grid from their pump sets from the installation date as envisaged in Andhra Pradesh Solar Power Policy, 2018 and KUSUM scheme promoted by Government of India.
- c) However, In this regard, Sri B.Tulasi das, the objector has submitted his suggestions and requested to approve tariff for the excess energy injected into grid by the farmers on par with tariff at which the existing solar power developers are paid. **Therefore, the state government and the petitioner shall submit their considered views on the objector's suggestions within one month from this order to the Commission under intimation to the objector for**

**reconsideration of this issue, if found necessary and such reconsideration, if taken up, will be by hearing the objector, the petitioner and the State Government and passing appropriate orders on merits, after such hearing, in accordance with law.**

- d) Further, the petitioner has not explained how the farmers' interests would be protected in case the pump sets fail before its life period of 25 years. Therefore, the Commission directs:
- i. The DISCOM shall designate some officers to periodically inspect installed pump sets. In case the installed systems are not as per standards, non-functional on account of poor quality of installation, or non-compliance of AMC, they shall be attended promptly. In this regard, Quarterly reports shall be submitted to the Commission starting from September 2019.
  - ii. The petitioner shall ensure repair and maintenance of the solar pump sets including the smart control panel within two days from the date of noticing the defect or failure of the pump set and in default the petitioner shall recover agreed penalty as stipulated under the Terms and Conditions of supply of the pump set, except if the petitioner is satisfied that any delay beyond two days is for reasons beyond the control of the person responsible for repair and maintenance.
  - iii. The DISCOM will ensure "must-run" status to the solarised feeder and will keep feeder 'ON' during sunshine hours of a day.
  - iv. The farmers shall be at liberty to install their own old pump set in case solar pump set fails and they shall not be deprived of subsidised power in any case.
  - v. The petitioner shall submit performance report on working of the project, more particularly about the actual energy savings and cost benefit analysis within one month from this order.

vi. The petitioner will be better advised hereafter to approach the Commission in advance for prior approval of any such pilot or regular project after it is conceived and before it is executed, but not for post facto approval as done in this case, though the Commission refrained from invoking any penal provisions under law in respect of such indiscretion in this case in view of the pilot project being farmer friendly and the Commission being committed to the cause of poor farmers' welfare.

8. The petition is ordered accordingly, no costs.

**Sd/-**  
**P. Rama Mohan**  
**Member**

**Sd/-**  
**Justice G. Bhavani Prasad**  
**Chairman**