

ORISSA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAWAN
UNIT-VIII, BHUBANESWAR - 751 012

Present : Shri B. K. Das, Chairperson
Shri K.C. Badu, Member
Shri B.K. Misra, Member

Case No.151/2010

M/s Shalivahana Green Energy Ltd.	....	Petitioner
Vrs.		
GRIDCO & Another	.....	Respondents

Case No.152/2010

M/s Andhavarapu Power Projects Pvt. Ltd.	....	Petitioner
Vrs.		
GRIDCO & Anothers	.....	Respondents

Case No.153/2010

M/s Prasad Bio-Energy Pvt. Ltd.	....	Petitioner
Vrs.		
GRIDCO & Another	.....	Respondents

Case No.154/2010

M/s Rashmee Power Pvt. Ltd.	....	Petitioner
Vrs.		
GRIDCO & Another	.....	Respondents

Case No.155/2010

M/s AVN Power Projects Pvt. Ltd.	...	Petitioner
Vrs.		
GRIDCO & another	.....	Respondents

In the matter of: For review of order dtd. 18.09.2010 passed in Case No.115/2010 regarding determination of tariff of biomass power plant for sale of power to GRIDCO along with review of order dtd. 14.09.2010 passed in Case No. 37/2008.

For the Petitioners : Shri R P Mohapatra for M/s Shalivahana Green Energy Ltd., Shri Bibhu Swain for M/s Prasad Bio-Energy Pvt. Ltd. and M/s Andhavarapu Power Projects Pvt. Ltd. and M/s AVN Power Projects Pvt. Ltd. Shri M K Tripathy for M/s Rashmee Power Pvt. Ltd.

For the Respondents : Shri P C Sahoo on behalf of GRIDCO, Shri A K Choudhury, Deputy Director, OREDA

ORDER

1. This petition is filed by the above five petitioners, biomass energy developers in the state of Orissa for review of the order of the Commission dtd.18.09.2010 in Case No.15/2010 regarding determination of tariff for sale of power to GRIDCO from the proposed biomass power plants along with review of order dtd.14.09.2010 in case No.37 of 2008 regarding finalization of policy on harnessing of power from Renewable Energy Sources including co-generation under Section 70 of the OERC (Conduct of Business) Regulations, 2004.

Brief history of the Case

2. The Commission in its order dtd.14.09.2010 while disposing the petition No.37 of 2008 (Suo Motu) fixed the generic tariff for Grid connected biomass power plant for a period of 13 years from 2010-11 to 2022-23 in the following manner.

Outputs for Grid-Connected Biomass Power Plant

Year	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Variable tariff	2.14	2.25	2.36	2.48	2.60	2.73	2.87	3.01	3.16	3.32	3.49	3.66	3.84
Levellised fixed Tariff	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Year Wise Tariff	4.09	4.20	4.31	4.43	4.55	4.68	4.82	4.96	5.11	5.27	5.44	5.61	5.80
Benefit of Accel. Deprn	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Year-wise tariff after Accel Deprn	3.88	3.99	4.10	4.22	4.34	4.47	4.61	4.75	4.90	5.06	5.23	5.40	5.59

3. The above tariff was calculated based on the following input towards technical and financial parameters.

Input Technical and Financial parameters

No	Technical Parameters	Value	Unit
1	Capacity of the Power Project	1	MW
2	Capacity Utilization Factor (2nd year-20 year)	80.00	%
3	Annual Gross energy Generation (during stabilization period)	56.94	Lakh kWhs
3a	Annual Gross energy generation (2nd yr-20yr)	70.08	Lakh kWhs
4	Auxiliary energy consumption	10.00	%
5	Net energy generation (during stabilization period)	51.24	Lakh kWhs
5a	Net energy generation (2nd year-20 year)	63.07	Lakh kWhs
6	Life of Plant and Machinery / Project Life	20	years
7	Station Heat Rate	3800	Kcal/Kwh
8	Gross Calorific Value	3522	Kcal/Kg

<i>No</i>	<i>Financial Parameters</i>	<i>Value</i>	<i>Unit</i>
1	Project Cost	450.00	Rs Lacs/MW
2	Non depreciable cost	10.00	% of Capital Cost
3	Debt	315.00	lacs
4	Equity	135.00	lacs
5	Interest Rate on Term Loan	12.50	%
6	Repayment Period	10	years
7	Depreciation (Straight Line Method, Company Law) (for first 10 years)	7.00	%
8	Discount Rate	15.20	%
9	O&M	21.41	lacs/MW
10	O&M Cost Escalation	5.72	%
11A	Return on Equity (Pre Tax) - in case of MAT (1-10 year)	19.00	%
11B	Return on Equity (Pre Tax) - in case of corporate tax (11-20 year)	24.00	
12	Interest on working capital	12.00	%
13	Fuel cost	1785	Rs /MT
14	Annual escalation factor for fuel cost	5.00	%

4. The proposed biomass developers have filed the petition to revise certain input parameters as above mainly relating to Gross Calorific Value (GCV), Biomass Fuel Cost, interest rate and Discount rate with consequent revision of the generic tariff pronounced for 13 years.
5. The prayer of all the petitioners is almost identical and is therefore taken together for disposal. The brief consolidated statement of prayer is given below:
 - i) Review the order dtd.18.09.2010 in Case No.112/2010 regarding determination of tariff for sale of power to GRIDCO from the proposed biomass power plant along with order dtd.14.09.2010 of Hon'ble Commission in case No.37/2008 regarding finalisation of policy on harnessing of power from Renewable Energy Sources including co-generation under Section 70 of OERC (Conduct of Business) Regulation 2004 and
 - ii) The GCV of the biomass may be considered at 3000 Kcal/Kg while fixing the generic tariff of the biomass based power plant.
 - iii) To consider the interest rate at 13.25% instead of 12.5% while determining the generic tariff of the biomass based power plant.

- iv) To consider the discount rate at 15.725% instead of 15.2% while determining the levellised fixed cost of the biomass power plant.
 - v) To consider the cost of the biomass fuel cost at Rs.2800/- per MT while fixing the tariff of the biomass power plant.
 - vi) To review the generic tariff of the biomass power plant and fix the minimum tariff for the procurement of power by GRIDCO.
 - vii) To treat all the biomass based power plant irrespective of its capacity as one category and designate them as MUST RUN plant.
 - viii) To allow payment for deemed generation in the case of application of merit order dispatch principle to biomass based power plant.
 - ix) To approve a model Power Purchase Agreement and incorporate the same in the review order.
 - x) To issue specific policy for connectivity, the voltage level and power transmission principle among the Renewable Power Plants, OPTCL, DISCOM and GRIDCO.
 - xi) Pass any such other order as this Hon'ble Commission may deem fit and proper in the facts and circumstances of this petition.
6. The Petitioners in Case No. 112-116 and 122/2010 had filed a petition under Section 61, 62 (1) (a) and 86 (1) (e) of Electricity Act, 2003 read with Regulation 10, 51 and 73 of OERC (Conduct of Business) Regulation, 2004 regarding determination of tariff of sale of power to GRIDCO from proposed Biomass Power Plant. The Commission while disposing the said petition observed the following.

“Commission heard both the petitioners and respondents and have taken into cognisance materials on record. Commission in another Petition (No. 37/2008 Suo Motu) in the matter of Suo-Motu proceeding for finalization of Policy on Harnessing of Power from Renewable Energy Sources including cogeneration had initiated the process of finalizing the Generic tariff order in respect of all the Renewable Energy Sources in the State of Orissa including the Biomass. The said order has addressed all the issues required to fix generic tariff of RE Sources including financial and technology specific parameters for each Renewable Energy technology. Accordingly the issues relating to Biomass tariff and other issues have also been dealt in the said order. Developers are, therefore, advised to refer to the said order in Case No.37 /2008 (Sou Motu) of the Commission, the copy of which is annexed for ready reference.”

7. The Commission in the present case heard the petitioners, GRIDCO and OREDA on 22.12.2010 and in its interim order dtd.27.01.2011 admitted the review petition and observed the following:

The case regarding admission of the petitions was heard by the Commission. The Commission observed that the review of the Commission's orders in Case No.115 of 2010 dtd.18.09.2010 and case No.37/2008 dtd.14.09.2010 could only be taken up for hearing in full bench. In view of such a scenario the case was not heard towards merit of the petitions. The case was however heard regarding the question of admission. Accordingly after hearing the parties on question of admission, Commission is of the view that these cases can be admitted for a detailed review in view of the latest developments and the difficulties apprehended for commercial viability of these biomass plants. The cases would be taken up for hearing on merit for review of the case No.115 of 2010 dtd.18.09.2010 and case No.37/2008 dtd.14.09.2010.

8. Commission during the hearing had also directed OREDA, respondent No.2 to submit a detailed finding on the issues of Gross Calorific Value (GCV) of the biomass fuel and cost of biomass fuel in the state of Orissa.
9. OREDA in its reply dtd.13.09.2011 submitted its views on the matter in compliance to the above direction of the Commission:

- (a) In pursuance to the direction of the Commission, OREDA collected paddy husk samples from ten different parts of Odisha and forwarded the same to the institute of minerals and material technology (IMMT), Bhubaneswar for determination of different parameters like GCV, ash content and moisture content.
- (b) IMMT in its report recommended average GCV of paddy husk at 3334.2 Kcal/kg against the GCV of 3522 Kcal/kg considered by Commission for determination of tariff.
- (c) As per information collected by OREDA from 55 millers covering 9 districts, the average selling price of paddy husk without transportation cost is Rs.2316/- per ton.
- (d) After taking into account the GCV of 3334.2 Kcal/kg and biomass fuel cost of Rs.2516/- per ton (cost of fuel Rs.2316/- plus transportation cost Rs.200/-). The proposed tariff for biomass projects is calculated as follows:

	2011-12	2012-13	2013-14
Total cost of generation	3.13	3.30	3.48
Fixed cost as per OERC order	1.95	1.95	1.95
Total unit cost	5.08	5.25	5.43

- (e) OREDA has executed implementation agreement with 9 nos. of biomass project developers for setting up biomass power plants in different districts of Odisha. The status of development of the project of different biomass developers is not encouraging as per time line agreed in the implementation order.
- (f) The major concern for the developers is the unwillingness of financiers to finance the project because of unviable tariff determined by the Commission. Consequently, financial closure for the projects is not possible.
- (g) In the states such as Rajasthan and Punjab, the tariff for biomass project for 2011-12 is Rs.5.17 and Rs.5.05 per unit respectively. A comparison of tariff in various states is given as below:

Sl No.	State	Capacity addition in last two years (MW)	Tariff (in Rs.)
1	Rajasthan	42	5.17
2	Punjab	46.5	5.05
3	Maharashtra	217.5	4.98
4	Uttar Pradesh	220	4.82
5	Tamilnadu	154.5	4.74
6	Gujarat	0	4.4
7	West Bengal	16	4.36
8	Andhra Pradesh	20	4.28
9	Bihar	9.5	4.17
10	Haryana	29.8	4
11	Chhattisgarh	75.8	3.93
12	Uttarakhand	10	3.06
13	Karnataka	71	3.66-4.13
14	Madhya Pradesh	0	3.33-5.14

- (h) In view of the above facts, the prayer of the petitioners may kindly be considered by the Commission suitably for upward revision of tariff in line with orders of the other SERCs. This would help developers to complete their financial closure and establish their project. This will also facilitate availability of renewable energy to GRIDCO to meet its RPO thereby financial burdening on state govt. exchequer will be reduced.
- (i) Commission may also consider to treat the biomass plants as must run and should not be subjected to merit order dispatch principle as the capacity of all the biomass power plant is in the range of 10-20 MW only.

10. GRIDCO in its reply stated the following:

- a) Total 9 nos. of biomass developers have executed MOU with Govt. of Odisha since October, 2009. They have also signed PPA with GRIDCO. Baring M/s. Shalivahan Green Energy Ltd. no other developer has shown much progress in setting up the plant. The date of commercial operation is not known to GRIDCO.
- b) The Commission could now take up the position on review only after commissioning the project and in case the cost of raw materials has gone up, in the next financial year i.e. FY 2012-13.
- c) GRIDCO has, therefore, prayed for no revision of tariff fixed by the Commission at least upto control period FY 2012-13.

Commission's Observations:

- 11. The Commission has gone through the prayer of the petitioners, replies of the GRIDCO and OREDA. Commission also heard all the views of the petitioners and respondents during the hearing process.
- 12. The main ground for upward revision of tariff of energy from biomass is that with the present tariff fixed by the Commission, financier not coming forward to provide loan for the project. The petitioners in their prayer, therefore, have submitted to review the generic tariff of biomass power plants proposed to be set up in Odisha by revising following four input elements considered while determining generic tariff order dtd.14.09.2010.
 - (a) Gross Calorific Value (GCV) of biomass to be reconsidered at 3000 Kcal/kg instead of 3522 Kcal/kg adopted by the Commission.
 - (b) Interest rate of 13.25% instead of 12.5%.
 - (c) Discount rate at 15.725% instead of 15.2%.
 - (d) Biomass fuel cost at Rs.2800/- per MT instead of Rs.1785 MT.

Each of these elements is discussed separately below:

- 13. **GCV** : Petitioners have submitted that the GCV of 3522 Kcal/kg is very high considering the quality of biomass fuel available in the state. By considering GCV of 3522 and station heat rate of 3800 Kcal/kwh the fuel consumption is calculated at 1.078 kg/kwh which is very low as per the standard fixed by CEA. The actual GCV of

the biomass fuel available in Odisha can be established by proximate and ultimate analysis through a proper scientific method in a science laboratory. Petitioners have therefore prayed to revise the GCV to 3000 Kcal/kg.

14. The Commission during the course of hearing directed OREDA to get conducted the assessment of GCV for the state of Odisha. OREDA in pursuance to the direction of the Commission engaged Institute of Mineral and Material Technology (IMMT), Bhubaneswar for determining different parameters like GCV, ash and moisture content of paddy husk from the samples collected by OREDA from Dhenkanal, Rayagada, Kalahandi, Nabarangpur, Ganjam, Sambalpur and Cuttack districts. In its report IMMT determined the gross calorific value of the paddy husk samples from ten locations in the following manner:

Sl No.	Paddy Husk Sample	Average Gross Calorific Value (Kcal/kg)
1	Ganjam District	3518.01
2	Rayagada District	3355.83
3	Dhenkanal District	3234.80
4	Kalahandi District	1569.93
5	Nabarangpur District	2399.20
6	Sambalpur District (Usuna)	3504.26
7	Sambalpur District (Arua)	3503.30
8	Cuttack -01 District	3515.65
9	Cuttack-02 District	3521.78
10	Cuttack-03 District	3455.01

15. IMMT have observed that the GCV of the most samples are within the range of 3200-3600 Kcal/kg except for samples from Kalahandi & Nabarangpur districts which indicated lower values. The average GCV as calculated by IMMT is 3334.20 Kcal/kg.
16. CERC in its order dtd.09.11.2010 in Petition 256/2010 (Suo motu) in the matter of Determination of generic levellised generation tariff for FY 2011-12 has considered GCV of various states in the following manner:

State	Calorific Value(kCal/kg)
Andhra Pradesh	3275
Haryana	3458
Maharashtra	3611
Madhya Pradesh	3612
Punjab	3368
Rajasthan	3689
Tamil Nadu	3300
Uttar Pradesh	3371
Other States	3467

17. As seen from the CERC order the GCV for other states has been considered at 3467 Kcal/kg whereas from the IMMT study the average GCV calculated is 3334.20 Kcal/kg. Therefore, the GCV considered by CERC at 3467 Kcal/kg and OERC at 3522 Kcal/kg is within the range of 3200-3600 Kcal/kg suggested by the IMMT. We, therefore, are of the view that there is no need of revising the already adopted GCV of 3522 Kcal/KG considered in our generic tariff order dtd.14.09.2010.
18. **Biomass fuel Cost:** - In order to determine the cost of Biomass fuel, OREDA collected relevant information such as availability of husk, self consumption by mills, approximate sale price of husk etc. OREDA in its report basing on the information received from 55 millers covering 9 districts has determined the average selling price of paddy husk at mill end to Rs.2316/-, excluding transportation and handling cost. The transportation cost has been further considered at Rs.200/- MT by OREDA in its petition. Therefore the total cost of biomass fuel as determined by OREDA is Rs.2516/- MT.
19. The Commission in its generic tariff order dated 14.09.2010 considered Cost of Biomass fuel at Rs 1785 per MT. CERC in its order dtd.09.11.2010 in Petition 256/2010 (Suo motu) in the matter of Determination of generic levellised generation tariff for FY 2011-12 has considered Biomass Fuel Cost of various states in the following manner:

State	Biomass price (Rs. /MT)
Andhra Pradesh	1,460.75
Haryana	2,434.21
Maharashtra	2,022.14
Madhya Pradesh	1,458.50
Punjab	2,348.88
Rajasthan	2,045.72
Tamil Nadu	2,046.84
Uttar Pradesh	1,704.39
Other States	2,017.65

20. As revealed from the table above the cost of Biomass fuel considered by CERC at Rs. 2434.21 MT is maximum for the state of Haryana and lowest figure is for the state of Madhya Pradesh at Rs. 1458.50. The recommendation of the OREDA for the cost of biomass fuel at Rs.2516/- MT. However this price seems to be on the higher side which exceeds the cost of Biomass fuel in any of the state in the country. In comparison, the Biomass fuel cost in our neighbouring state such as Andhra Pradesh and Madhya Pradesh is considerably less. In view of such a scenario basing on the report of the OREDA, we accept the Cost of Biomass Fuel at Rs. 2316 / MT, inclusive of all costs, instead Rs. 1785 /MT considered in our generic tariff order dated 14.09.2010.

21. As regards the review of Interest rate and discount rate considered in our generic tariff order for renewable energy sources in Orissa dated 14.09.2010. We reject the same as reviewing such rates would have larger implication as regards to the generic tariff pronounced for other renewable sources of energy in our order dtd.14.09.2010. We therefore, reiterates our norms for input technical and financial parameters in relation to fixed charge calculation same as that of our generic tariff order for all renewable projects dtd.14.09.2010.
22. After reviewing the said petition of the petitioners and inputs as discussed above the revised generic tariff for biomass sources of energy in the State of Odisha would be as follows:

Input Technical and Financial parameters

<i>No</i>	<i>Technical Parameters</i>	<i>Value</i>	<i>Unit</i>
1	Capacity of the Power Project	1	MW
2	Capacity Utilization Factor (2nd year-20 year)	80.00	%
3	Annual Gross energy Generation (during stabilization period)	56.94	Lakh kWhs
3a	Annual Gross energy generation (2nd yr-20yr)	70.08	Lakh kWhs
4	Auxiliary energy consumption	10.00	%
5	Net energy generation (during stabilization period)	51.24	Lakh kWhs
5a	Net energy generation (2nd year-20 year)	63.07	Lakh kWhs
6	Life of Plant and Machinery / Project Life	20	years
7	Station Heat Rate	3800	Kcal/Kwh
8	Gross Calorific Value	3522	Kcal/Kg
<i>No</i>	<i>Financial Parameters</i>	<i>Value</i>	<i>Unit</i>
1	Project Cost	450.00	Rs Lacs/MW
2	Non depreciable cost	10.00	% of Capital Cost
3	Debt	315.00	lacs
4	Equity	135.00	lacs
5	Interest Rate on Term Loan	12.50	%
6	Repayment Period	10	years
7	Depreciation (Straight Line Method, Company Law) (for first 10 years)	7.00	%
8	Discount Rate	15.20	%
9	O&M	21.41	lacs/MW
10	O&M Cost Escalation	5.72	%
11A	Return on Equity (Pre Tax) - in case of MAT (1-10 year)	19.00	%
11B	Return on Equity (Pre Tax) - in case of corporate tax (11-20 year)	24.00	
12	Interest on working capital	12.00	%
13	Fuel cost	2316	Rs /MT
14	Annual escalation factor for fuel cost	5.00	%

Year	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Variable tariff	2.92	3.06	3.21	3.37	3.54	3.72	3.91	4.10	4.31	4.52	4.75	4.99	5.24
Levelling fixed Tariff	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Year Wise Tariff	4.87	5.01	5.16	5.32	5.49	5.67	5.86	6.05	6.26	6.47	6.70	6.94	7.19
Benefit of Accel. Deprn	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Yearwise tariff after Accel Deprn	4.66	4.80	4.95	5.11	5.28	5.46	5.65	5.84	6.05	6.26	6.49	6.73	6.98

23. Since substantial impetus has to be given for the growth of renewable sources of energy in Odisha for setting up of renewable sources of energy, it is necessary to revise the generic tariff of energy from biomass. Unless tariff becomes attractive and assuring for debt servicing to the financiers the potential from renewable sources of energy from biomass cannot be exploited and accordingly we hereby revise the generic tariff of biomass plants as indicated in the para 22 above which has been calculated on revised parameters as analyzed in the previous paragraphs. We expect with the revised generic tariff for biomass power in Odisha pronounced in this order there would be a major fillip to the growth of Biomass plants in Odisha.

24. The petitioners have also drawn attention of the Commission regarding the status of biomass plants as 'MUST RUN' and not to be subjected to the merit order dispatch principle. They have stated that Commission in its order dt.14.9.10 has directed that all Renewable Power Plants except Biomass Power Plant and non-fossil fuel based co-generation plants with installed capacity of 10 MW and above shall be treated as 'MUST RUN' power plant and shall not be subject to 'merit order despatch' principles. But the petitioner M/s Shalivahana Green Energy Ltd. and others have stated that they are proposing to set up power plant of 20 MW capacity and hence according to the order of the Commission, they do not come under MUST RUN plant list as per the generic tariff order dt.14.9.2010 of the Commission. The Commission, therefore, should treat all the biomass based power plant irrespective of their capacity as one category and must be designated as MUST RUN plant.

The Commission in view of the petitions regarding MUST RUN and merit order dispatch principle for biomass plants observes that the availability of biomass fuel is of seasonal nature and also in order to encourage setting up of biomass projects in the State of Odisha, reconsiders the dispatch principle for electricity generated from biomass energy source. The para 17 of our generic order dtd.14.09.2010 is accordingly be amended as follows:

“All renewable energy power plants except Co-generation plants using fossil fuel with installed capacity of 10 MW and above shall be treated as MUST RUN power plants and shall not be subject to merit order dispatch principles.

However, the renewable energy power projects shall be subject to scheduling and dispatch code as specified under the Orissa Grid Code (OGC)/Indian Electricity Grid Code (IEGC) as the case may be including amendments thereto “.

25. As regards the connectivity of the renewable energy sources, this has been dealt adequately in OERC (Renewable and Co-generation Purchase Obligation and its Compliance) Regulations, 2010. The relevant para are quoted below:

“4.1 The Co-generation and renewable energy sources excepting roof-top Solar PV and bio-gas sources shall be connected to the State Grid at a voltage level of 132 KV or 33 KV or 11 KV subject to technical suitability determined by the licensee. If any dispute arises about the technical suitability of connection of such sources with the grid, the matter shall be referred to the Commission whose decision in this regard shall be final. The delivery point shall be the nearest grid sub-station having 132 KV / 33 KV / 11 KV voltage level. Synchronization point shall, however, remain at the power station end with all protection and inter-lock as agreed to between the licensee, STU and developer. Such connectivity shall also be provided for use of licensee’s system under open access. More than one such projects established by the developer located near each other are to be clustered together as far as possible in order to avail connectivity with the grid sub-station.

X X X

4.4 Communication system between grid sub-station and generating station shall be developed by the developer / developers at its / their cost. Protection schemes shall be examined by the licensee to suit the requirements. Developers of cogeneration and renewable energy sources shall abide by all applicable codes, rules, regulations etc. in regard to operational and commercial practices.

4.5 Wherever cogeneration and renewable energy sources have already been connected to the State Grid at a voltage level lower than the voltage level specified in these regulations and wherever such State Grid connection causes any bottleneck in capacity addition or causes avoidable discontinuance of generation or low voltage during peak hours or frequent outage of line or insufficient redundancy, such grid connection shall be converted into suitable voltage level preferably with double circuit line and cost for such conversion shall be borne by the developer.”

26. In accordance with the provision of OGC, and in line with our order in Case No.42/2011 between M/s.Shalivahan Green Energy Ltd. (also a petitioner in the present case) vrs. M/s. OPTCL & others we order as follows:

- (1) For 132 connectivity, loads and generators shall be monitored irrespective of capacity.

- (2) In order to provide a win-win situation to both SLDC/OPTCL and small generators including CGP (upto 25 MW) connected to STS at 33 KV can be monitored by SLDC through their metering data till establishment of ALDCs. Thereafter ALDC shall monitor them through the available metering data.
- (3) The generators (including CGP) and the consumers embedded inside the Distribution System (33 KV) can be monitored through DSOCC. The above two Cases No. (2) and (3) need not be required to communicate their data directly to the nearest SCADA interface point of OPTCL.
27. Model PPA: The petitioners have also submitted to approve a model power purchase agreement (PPA) and incorporate the same in review order for the biomass. The Commission would shortly decide on the model PPA while finalizing the orders in Case No 29/2011.
28. With these observations and directions the cases are disposed of.

Sd/-
(B.K. Misra)
MEMBER

Sd/-
(K.C. Badu)
MEMBER

sd/-
(B K Das)
CHAIRPERSON