

**Before the Appellate Tribunal for Electricity
(Appellate Jurisdiction)**

Appeal No. 129 of 2005 and Appeal No. 41 of 2006

Dated the May 14 , 2007.

Present: - Hon'ble Mr. Justice Anil Dev Singh, Chairperson
Hon'ble Mr. A.A. Khan, Technical Member
Hon'ble Mr. H.L. Bajaj – Technical Member

Appeal No. 129 of 2005.

The South Indian Sugars Mills Association (Karnataka)
Bangalore

...Appellant

Versus

- 1.Karnataka Electricity Regulatory Commission (KERC).
Bangalore
2. Karnataka Power Transmission Corporation Ltd.
Bangalore
3. Bangalore Electricity Supply Company, Bangalore
4. Mangalore Electricity Supply Company, Mangalore
5. Chamundeswari Electricity Supply Company,
Mysore
6. Gulbarga Electricity Supply Company, Gurbarga
7. Hubli Electricity Supply Company, T.B.Road, Hubli
8. Karnataka Renewable Energy Development Ltd., BangaloreRespondents

For the Appellants : Mr. Sitesh Mukherjee,Advocate
Mr. Rajiv Yadav, Advocate

For the Respondents : Mr. T.G.N.Nair, Advocate
Mr. Ramesh Babu M.R.,Advocate

Mr. M.G.Ramachandran and Mr. K.Ganesan,
Advocates
Ms Saumaya Sharma ,Advocate
Ms Taruna S. Baghel, Advocate
Mr. Arunabh Suman, Advocate
Mr. K.Ganeshan, Advocate with
Mr. V.Hiremath, Director(Law)

Appeal No.41 of 2006

Hassan Biomass Power Company (P) Ltd.
Bangalore

...Appellant

Versus

1. Karnataka Power Transmission Corporation
Limited, Bangalore

2. Karnataka Renewable Energy Development Ltd.
Bangalore

3. Karnataka Electricity Regulatory Commission
Bangalore

.....Respondents

For the Appellants : Mr. G. Ramakrishna Prasad,
Mr. Venkat Subramonium and
Mr. Suyodhan Byrapaneni, Advocates
Mr. Mohd. Wasay Khan, Advocate

For the Respondents : Mr. M.G.Ramachandran with Mr.Anand
K.Ganesan, Advocates
Mr. B.K. Kahavi and Mr. Neil Hildveth,
Advocates
Ms Taruna Singh Baghel, Advocate
Mr. L.K. Bhushan

Judgment

Per Hon'ble Mr. H.L. Bajaj, Technical Member

Appeal No. 41 of 2006:

This appeal has been preferred by the appellant, Hassan Biomass Power Co. (P) Ltd. (Hassan Biomass, in short) against the Impugned Orders dated January 18, 2005 of the Karnataka Electricity Regulatory Commission (For short KEREC or the Commission) in the matter of determination of tariff in respect of renewable sources of energy and also order dated July 20, 2005 passed by KEREC in Review Petition No. 02 of 2005.

Appeal No. 129 of 2005

2. This appeal has been preferred by the appellant, South India Sugar Mills Association (for short SISMA) and is directed against the order dated July 20,2005 of the Karnataka Electricity Regulatory Commission (KEREC) rejecting Review Petition filed by the appellant against KEREC Tariff Order dated January 18, 2005 whereby the Commission had fixed a tariff of Rs. 2.80 per unit for Co-generation Power Plants of the appellant.

3. As the abovementioned two appeals are directed against the aforesaid common Tariff Order and the orders passed in Review Petitions filed against, we have taken up these two appeals together.

The facts leading to these appeals are briefly stated as under:-

4. The Government of India formulated a policy framework 1993-94 for promotion of generating capacity from Non-Conventional Energy Sources with the objective of conserving fossil fuels and to reduce environmental pollution. The policy framework provided for certain incentives and facilities for promoting capacity addition by generation through Non-Conventional Energy Sources (for short NCES) including Renewables. The incentives also included interest subsidy. The tariff payable for power from NCES was pre-determined in 1993-94 with year on year escalation. In order to promote NCES and formulate necessary framework, the Government of India constituted Ministry of Non-Conventional Energy Sources (MNES) and Indian Renewable Energy Development Agency (IREDA) to extend financial assistance on softer terms to NCE projects based on the policy framework of the Government of India. Karnataka Government also set up Karnataka Renewable Energy Development Ltd. (KREDL).

5. Section 62(1) of The Electricity Act, 2003 (the Act) empowers the KERC to determine the tariff for supply of electricity by a generating company to the distribution licensee in accordance with the provisions of the Act. Section 61 of the Act stipulates that the Commission shall specify the terms and conditions for the determination of tariff and in so doing shall be guided by the principles listed in Clauses (a) to (i) of the said Section. Accordingly, in pursuance of Section 86 (1) (e) read with Section 181 of the Act, the Commission issued KERC (Power

Procurement from Renewable Sources by Distribution Licensees) Regulations, 2004 vide Notification dated September 27,2004. These Regulations also specify the quantum of purchase of electricity from renewable sources of energy by a distribution licensee in his area of supply.

6. As per Clause 5.6 of the KERC Regulations 2004, the Commission followed the following stipulated procedure for determination of the tariff for renewable energy projects:

- (I) Invited tariff proposals from licensees/generating company for different categories of renewable energy projects.
- (II) Invited public response by issuing public notices in five National/State Newspapers
- (III) Held public hearings

7. The Commission vide its order dated January 18,2005 determined the tariff applicable for Mini Hydel, Wind, Co-generation and Biomass projects. Tariff determined by the Commission in this order is to be further reviewed after five years which shall be applicable to agreements to be entered into after that date. It is also clarified by the Commission in this order that in respect of Power Purchase Agreement already approved by the Commission in respect of PPAs received in the Commission upto June 10,2004, the tariff and all the terms and conditions so approved by the Commission in those PPAs shall hold good for the period specified therein.

8. M/s Hassan Biomass Power Company Ltd. and the South India Sugar Mills Association (SISMA), in addition to Karnataka Power Transmission Corporation Ltd, Karnataka Renewable Energy Development Ltd, and M/s Dev Power Gen. Pvt. Ltd. filed petitions seeking review of the Commission's order dated January 18,2005 in the matter of tariff determination by the Commission in respect of NCE. The Commission in their order dated July 20,2005 held that there is no mistake/error apparent on the face of the record or discovery of any fresh evidence or any other sufficient reason warranting review of the Impugned order and, therefore, dismissed the Review Petition.

9. Aggrieved by the Impugned Orders dated January 18,2005 and July 20, 2005 the appellants have filed the present appeals. The appellant, SISMA in appeal No. 129 of 2006 has sought the following relief:-

(a) Set aside and quash the impugned order dated January 18, 2005 and July 20, 2005 of the KERC, in the matter of determination of Tariff in respect of Renewable Sources of Energy.

(b) Determine the Tariff for the cogeneration plants operated by the members of the Appellant Association at the rate of Rs. 3.83 per unit with 5% annual escalation on compounded basis applicable with effect from the date of determination of Tariff.

(c) In the alternative, direct the KERC to frame appropriate Regulations, providing for the norms for Tariff determination in respect of electricity generated by captive cogeneration power plants using Bagasse and further direct the KERC to determine the tariff for the petitioner cogeneration plants in accordance with such Regulations.

10. The learned counsel for the appellant (SISMA) In appeal No. 129 of 2006 alleged that the Commission has determined tariff specifically on the basis of certain parameters without giving any cogent reason on record and contrary to established data and scientific evidence furnished by them. The main objections brought out by the appellant in the fixation of tariff at Rs. 2.80 per unit are:-

(i) **Project cost:** The Commission has grossly underestimated the project cost for setting up the co-generation plant at Rs. 3.00 crores per MW. The brief reason given by the Commission in the Impugned Order is that the Commission “feels” that the project cost of the co-generation plants should be quite less because such co-generation plants have come into existence to exploit available infrastructure and the fuel and further that to some extent the co-generation projects have already helped the sugar mills to become financially viable.

(ii) **Plant Load Factor:** The Commission has grossly erred in fixing the annual Plant Load Factor (PLF) at 60% for the co-generation plants and that no reasons have been given. This is despite the fact that the appellant and the KPTCL, the 2nd respondent herein had proposed a PLF of 75% for the operating days of the co-generation plants; the difference of opinion, is only regarding the duration of operation of co-generation plants. Whereas KPTCL has assumed 280 days to be the duration of the operational period, the actual operation period is only of about 240 days. The appellant submitted past data showing the average number of days in which sugarcane was crushed by the sugar factories in Karnataka in the last 14 years. The learned counsel also submitted that the efficiency of co-generation plants is not consistent throughout the period of operation; it being relatively better during season of 180 days when in-house bagasse is available as compared to the off season, when the co-generation plants have to rely on purchased bagasse and alternate fuel. Learned counsel highlighted that annual PLF of 60% fixed by the Commission, means that the co-generation plants would be running at more than 90% PLF for 240 days. The learned counsel asserted that according to data furnished in respect of 5 representative sugar mills, the actual average annual PLF is 47.34%. Appellant, citing reasons as: limited and uncertain

availability of bagasse; supply of fuel and high maintenance outage involved, pleaded that the Commission ought to have considered an annual PLF of 49.3% for determination of tariff.

- (iii) Auxiliary consumption:** The auxiliary consumption of 8% fixed by the Commission on the assumption that the power consumption in fuel processing in cogeneration plants is lower as compared to conventional coal based thermal plants is not justified. The Regulations of Central Electricity Regulatory Commission (CERC) do not prescribe a uniform norm for coal based power plants; the normative auxiliary power consumption ranges from 7% to 11%. Learned counsel argued that the auxiliary power consumption, as a percentage of total power generation, is higher in the case of plants of smaller generation capacity since the power generation capacity of co-generation plants is generally in the range of 6 to 30 mega watts, therefore, determining their auxiliary power consumption on the basis of norms for high capacity conventional coal based thermal plants is neither correct nor reasonable.
- (iv) Fuel consumption:** Appellant submitted that fuel consumption of 1.60 kg. per unit determined by the Commission on the basis of Andhra Pradesh Electricity Regulatory Commission (APERC) approved figure of 1.60 kg. per unit as the rated average of specific

fuel consumption during crushing and non-crushing season based on a calorific value of 2300 kcal/kWh and station heat rate of 3700 kcal/kWh. is not correct. In this regard an extract of this Tribunal judgment in Appeal No. 20 of 2006 was quoted as proof of concern of the Tribunal on the practice of the state Commissions to rely *“on the policies pursued in other states in determining the basis for tariff parameters, not caring to know as to what extent the development of Non-Conventional Sources of Energy has been successful in these states”*. Learned counsel submitted that the fuel consumption for a co-generation plant works out to 2.32 kg per unit in the season and 1.86 kg per unit in the off-season; the average annual fuel consumption works out to 2.0 kg per unit.

- (v) **Base Year:** The Commission has erroneously adopted the year of commissioning of the project as the base year for determination of escalation. This is opposed to commercial principles, if in determining escalation, the year of commissioning of the project is taken as base year, as it is a matter of common knowledge that the cost would necessarily go up due to inflation. By way of an example learned counsel cited that if a power plant is set up in 2009 the tariff of Rs. 2.80 per unit would be applicable without any escalation in the first year of operation of the new plant. The escalation of 2% per year allowed by the Commission on such

base tariff would be applicable only from the subsequent year onwards. Thus the Commission in the Impugned Order has not taken into consideration the cost of escalation that would inevitably occur in the period between the passing of the order and the commissioning of the new power plant.

Appeal No. 41 of 2006.

11. The appellant Hassan Biomass have sought the following relief:-
 - (a) To set aside the tariff order passed by the 1st Respondent herein dated January 18, 2005 in respect of power generated through Renewable Sources of Energy.
 - (b) To set aside the order passed by the 1st Respondent herein dated July 20, 2005 passed in Review Petition No. 2 of 2005 passed by the Karnataka Electricity Regulatory Commission, Bangalore.

12. Though the appellant Hassan Biomass, has raised number of issues in the memo of appeal, learned counsel for the appellant, mainly pressed the following issues during the pleadings
 - (i) **Plant Load Factor:** Annual Plant Load Factor (PLF) of 75% for biomass power plants determined by the Commission in the

Impugned Order is very high and should be reduced to a level of 75% of 330 working days as suggested by KPTCL before the Commission in view of the following reasons:-

- a) Boilers utilized by biomass power plants are prone to constant failures in view of the constantly changing fuel parameters. In addition, the equipments need regular maintenance which is conducted monthly, quarterly, semi annually and annually, during which normally the power plant has to be shut down.
- b) The plants suffers from special wear and tear due to the presence of sodium salts in fuel, which cause ash deposition and erosion of the super heaters.
- c) Biomass Power Plants have to be shut down during rainy season since the fuel is stored in open yard and becomes wet rendering it unfit for combustion.
- d) Reduced availability of biomass during rainy season as rain hampers the activity of collection and transportation of biomass.
- e) During summer there is reduced availability of biomass as some quantity of biomass is used as cattle feed.
- f) The biomass plants are located in rural areas where the grid is weak and therefore it is a challenge to stay connected to the grid.
- g) Biomass plants have to stop during summer due to non availability of water.

- h) Erratic variation in calorific value and moisture content in fuel leads to improper combustion and hence it is a challenge to maintain air fuel ratio,.
- i) The varying bulk density and size of biomass hampers the free flow of fuel which tends to get jammed in the bunkers thus causing constant fluctuation in temperature, pressure and airflow.

(ii) Fuel Consumption Per Unit.

(A) Learned counsel for the appellant submitted that whereas Central Electricity Authority (CEA) in its report had suggested fuel consumption of 1.36 kg/kWh and KPTCL had suggested 1.33 kg per unit, the Commission has adopted fuel consumption level of only 1.16 kg per unit. The counsel further submitted that the quantity of fuel required to generate one unit of electricity depends on the station heat rate and the heat content in the fuel which, in turn, greatly depends on :

- (a) The type and combination of biomass used.
- (b) Moisture content in Biomass
- (c) Net calorific value of Biomass
- (d) Bulk density, physical and chemical properties of fuel
- (e) Cost of processing and presence of foreign material such as sand, stones etc. in Biomass

(B) Learned counsel also expressed the views of Prof. P.J. Paul, Chief Programme Executive, ABETS, Combustion and Gasification and Propulsion Lab, Department of Aerospace Engineering of the Indian Institute of Science, Bangalore, who is also doing research on Biomass Projects. Prof. Paul has specifically mentioned that the average calorific value of the Biomass with 30% moisture is 2700 K cal./ Kg and the heat rate required for power plants of 6-8 MW is about 4100 kca/kWh. Learned counsel pleaded that since the Biomass at the time of collection will normally contain not less than 30% moisture, the fuel consumption per unit should have been calculated as per the observations of Prof. P.J. Paul. A copy of the letter of Prof. Paul has also been submitted. Learned counsel submitted that CEA, after extensive study of Biomass Power plants had suggested a specific fuel consumption of 1.36 kg. per unit instead of 1.16 kg. per unit suggested by the Commission.

iii) Auxiliary Power Consumption.

Learned counsel submitted that as per CEA report, the auxiliary consumption recommended for Biomass plants is 10% and not 9% as approved by the Commission in the Impugned Order.

13. The appellant has prayed that the appeal may be allowed and the tariff of Rs. 3.10 per unit may be directed to be paid to it as provided to other units.

14. Learned counsel, Shri M.G. Ramachandran appearing for KPTCL in both the appeals submitted that the impugned order was not an order passed in respect of any specific energy developer and is also not an order determining tariff for any particular energy developer under a specific Power Purchase Agreement. The Order has been passed generally applicable to non-conventional energy sources of different kinds such as Mini – Hydel, Wind, Co-generation and Biomass Projects.

15. Learned counsel for KPTCL further submitted that the order of the Commission does not apply to any existing Power Purchase Agreement or arrangement between the Non-Conventional Energy Developer and KPTCL. The order specifically states at Para 11 that tariff determined under the order shall be applicable to all the Power Purchase Agreements filed before the State Commission on or after June 10, 2004. It also states that the terms and conditions for determination of tariff shall not be applicable in respect of Power Purchase Agreements already approved by the Commission up to June 10, 2004. The Order has been passed after the Commission has heard the Energy Developers, KPTCL, KREDL, the Nodal Agency in the State of Karnataka for development of renewable sources of energy and IREDA, similar development agency at the Central level and also SISMA, the Association of Non-conventional Energy Developer and after issuing a consultation paper. The consultation paper was issued and the proceedings were held by the Commission to get information from the various sources including the concerned stake holders so that the State

Commission can determine an appropriate tariff for various types of non-conventional energy sources.

16. Learned counsel for KPTCL further submitted that the proceedings held by the Commission and the order passed are not by way of adjudication of disputes between the non-conventional energy developers and KPTCL as provided under Section 86 (1) (f) of The Electricity Act, 2003, in respect of Power Purchase Agreements signed between the two. It is also not a determination of tariff under a validly executed Power Purchase Agreement as envisaged under Section 86 (1) (a) and (b) of said Act. The order is only a decision on the part of the Commission to facilitate the Non-conventional Energy Developers to decide on the issue whether they should enter into an agreement with KPTCL on the basis of tariff provided in the Order. There is no compulsion that the Developer should enter into a Power Purchase Agreement. Mr. Ramachandran asserted that this aspect is important and it is necessary to appreciate that the legality and validity of the impugned order cannot be challenged on grounds of adjudication of any rights or obligation of either of the parties. The order has been passed as a promotional measure under Section 86 (1) (e) of The Electricity Act, 2003. The Commission in its wisdom had specified the terms and conditions under which KPTCL will be required to purchase electricity offered by the Non-conventional Energy Developers.

17. Learned counsel argued that the impugned order cannot be challenged on grounds of lack of detailed analysis as to how the Commission has reached the applicable norms and parameters. The Commission has exercised an inquisitorial jurisdiction and has decided on the particular norms based on its wisdom and not based on any detailed adjudication of the rights and obligations. He submitted that the Commission's order cannot be tested on the ground that it records only the conclusion without reasoning.

18. The counsel drew our attention to The Electricity Act, and the Tariff Policy issued by the Central Government which give certain preferential treatment for procurement of electricity from the Non-conventional Energy Developers in comparison to the Conventional Developers. He cited clause 6.4 of the Tariff Policy reproduced as under:

“6.4 Non-Conventional sources of energy generation including

Co-generation:

- (1) *Pursuant to provisions of Section 86(1)(e) of the Act, the Appropriate Commission shall fix a minimum percentage for purchase of energy from such sources taking into account availability of such resources in the region and its impact on retail tariffs. Such percentage for purchase of energy should be made applicable for the tariffs to be determined by the SERCs latest by April 1, 2006.*

It will take some time before non-conventional technologies can compete with conventional sources in terms of cost of electricity. Therefore, procurement by distribution companies shall be done at preferential tariffs determined by the Appropriate Commission.

- (2) *Such procurement by Distribution Licensees for future requirements shall be done, as far as possible, through competitive bidding process under Section 63 of the Act within suppliers offering energy from same*

type of non-conventional sources. In the long-term, these technologies would need to compete with other sources in terms of full costs.

- (3) *The Central Commission should lay down guidelines within three months for pricing non-firm power, especially from non-conventional sources, to be followed in cases where such procurement is not through competitive bidding.”*

19. Learned counsel for KPTCL emphasized that in accordance with the above, the Non-conventional Energy Developers are now required to offer electricity under a competitive bidding process to be initiated by the Distribution Companies based on the guidelines to be issued by the Commission. We were urged that the Tribunal may direct the Commission to issue guidelines for procurement of electricity through a competitive bidding process as envisaged under Section 63 of The Electricity Act, 2003, in relation to Non-conventional Energy sources of different types.

20. The counsel stated that in the aforesaid circumstances, there is a change in the method and manner of procurement of energy through non-conventional sources in respect of those procurements where no Power Purchase Agreement has been entered into with KPTCL till date. In respect of Power Purchase Agreements entered into before 10th June, 2004, the terms and conditions of the Power Purchase Agreement govern the procurement and in respect of any Power Purchase Agreement entered after 10th June, 2004, the terms of the impugned order dated 18th January, 2005 issued by the Commission apply.

21. Mr. Ramachandran also brought to our attention that Hon'ble Supreme Court in CA No. 12 of 2007, against the Judgment of this Tribunal's

dated 7th September, 2006 titled Chhattisgarh Biomass Energy Developers Association and others Vs Chhattisgarh State Electricity Regulatory Commission and others, has dismissed the second appeal with the following directions.

“Heard both sides.

As the matter has been remitted to the Commission, we are not inclined to interfere with the impugned order. Accordingly, the Civil Appeal is dismissed. However, we make it clear that the State would be at liberty to raise all the contentions before the Commission and the Commission shall decide the same, untrammelled by any observations made in the impugned judgment”.

22. On a consideration of the submissions made on behalf of appellants as well as respondents and the contentions advanced we now proceed to decide various issues in the two appeals before us.

Appeal No. 41.

23. In Appeal No. 20 of 2006 vide its judgment dated September 7, 2006, this Tribunal has decided as under in case of Biomass Plants.

“ Keeping in view the principle that the generation of electricity from renewable sources of energy needs to be promoted, we accept these operational norms as recommended by the CEA’s report as basic norms and the Appropriate Commission to act upon them subject to minor adjustments relating to the local site conditions and further refinement after operational data of 5 years operation of biomass plants in the state aggregating to 100 MW is available. The following normative figures as recommended by CEA be adopted .

(a) *Capital cost at the rate of Rs. 4 crores/MW*

- (b) *O&M expenses including insurance to be 7% of the cost of capital with the annual escalation at the rate of 5%.*
- (c) *Auxiliary power consumption to be taken as 10%.*
- (d) *Normative Gross Heat Rate (Kcal/Kwh)- 4500 (Station Heat Rate to be taken based on the actual P.G. Test report of the projects).*
- (e) *Plant Load Factor (PLF) of 80% for recovery of the full fixed cost*
- (f) *Depreciation at the rate of 7.84% p.a. until the debt is repaid. Beyond that 20% is to be spread over the remaining life of the plants. (As permitted by the GOI notification relating to depreciation norms for generating companies dated March 29, 1994)*
- (g) *Specific fuel consumption of 1.36 Kg/Kwh with average calorific value of fuel as 3300 cal/Kg.*

24. The above judgment of this Tribunal squarely applies to the facts of the present appeal and therefore we decide that the abovementioned decision of this Tribunal should be implemented in this case of Karnataka before us also for all Power Purchase Agreements entered after June 10, 2004. Therefore, it will be necessary to remand the matter to the Commission for redetermination of tariff for Biomass plants as per the aforesaid judgment of the Tribunal.

Appeal No. 129 of 2005

25. The gravamen of the argument of the appellant is that Tariff of Rs. 2.80 per unit in the first year of Commission's operation has been fixed for the

cogeneration plants of the appellant assuming project cost of Rs. 3.00 crores per MW, an annual plant load factor of 60%, Auxiliary Consumption of 8% and Fuel Consumption of only 1.60 kg/ per unit. It is also alleged that KERC has erroneously adopted the year of commissioning of the project as the base year for determination of escalation. We now proceed to examine each issue raised before us:

(i) Project Cost.

We observe that unlike in the case of Biomass Power Plants, KERC is handicapped by any study carried out by CEA for cogeneration plants and therefore, it has relied upon project cost figure given by KPTCL even though KREDL had intimated a figure of Rs. 350 lakhs per MW and SISMA had estimated a cost of Rs. 375/- lakhs per MW. In the absence of any study available, it will be appropriate to go by the figure given by KREDL who are a nodal agency in Karnataka for development of renewable energy sources and are not an affected party and their figure of project cost is worthy of credence. In the circumstances we direct that a figure of Rs. 350 lakhs per MW be taken as project cost for cogeneration plants.

(iii) Plant Load Factor:

KPTCL has proposed a PLF of 75% based on 280 days of cogeneration plant operation, which works out to 57.5% annually. KREDL has proposed a figure of 60% which has been accepted by KERC. We do not

find any justification in interfering with this decision of KERC wherein it has relied upon KREDL who are a nodal development agency in Karnataka for Renewable Energy.

(iii) Auxiliary Power Consumption

KPTCL has not proposed any auxiliary consumption but both KREDL and SISMA had proposed an auxiliary consumption of 10%. In view of the fact that fuel processing is lower in the case of cogeneration plants, when compared to conventional Coal Based Thermal Plant, KERC has approved a figure of 8% for auxiliary consumption. We agree with the reasoning of KERC and, therefore, uphold the decision of the KERC.

(iv) Fuel Consumption

KREDL has not furnished any information on Fuel Consumption but as per KPTCL specific fuel consumption for season and off-season periods works out to 1.33 kg. per unit. In the absence of any specific study available with KERC, the Commission has approved a figure of 1.60 kg. per unit which is based on the figure approved by APERC. We cannot find fault with the decision of the KERC who, in the absence of any study or contribution by KREDL, have relied upon figure of an adjoining state regulator.

26. The appellant is basically aggrieved by the fact that though an annual escalation of 2% on the base tariff has been allowed, the base tariff of Rs. 2.80 per unit does not escalate irrespective of the date of the Commissioning. This means that even if a cogeneration plant is commissioned 3 years from today,

the tariff will still be Rs. 2.80 per unit during the first year without taking into account the escalation that occurs during the intervening 3 years. We find such an approach by the Commission is not reasonable because the entrepreneurs will be denied legitimate escalation upto the year of commissioning. Accordingly, we order that escalation over the basic tariff be allowed upto the date of commissioning. This relief would be available for all types of renewable sources covered by the impugned order.

27. As far as Biomass and Co-generation plants are concerned it is well recognized that no two plants could be compared and, therefore, each plant requires to have its own operational parameters based on its technology, machinery, location, requirement of steam, characteristic of the Biomass used, supplementary firing etc. Moreover, renewables based power generators can also secure carbon credits for reduction in carbon emissions under carbon reduction projects and can bring down cost of generation under competitive environment. Therefore, so as to promote renewable technologies as also to ensure competitive cost of procurement of power, it would be desirable to introduce competitive bidding process, as envisaged in the tariff policy for all future requirement of renewable based power. To facilitate this the KERC should issue guidelines within six months for procurement of electricity through a competitive bidding process from non-conventional energy sources separately for different types i.e., Biomass, Cogeneration, Wind, Mini-Hydro etc. We order that with effect from April 1,2008, future procurement of electricity generated from Renewable Sources including Biomass and Cogeneration plants will be

through competitive bidding basis. This decision will not be applicable to all Power Purchase Agreements entered before March 31, 2008 for the period specified therein.

28. In the result, both the appeals viz Appeal 129 of 2005 and Appeal 41 of 2006 are partly allowed to the extent indicated above. Matters are remanded to the Commission for redetermination of tariff for Bio-mass and Co-generation plants in the light of our observations. For future, procurement of power based on renewable energy sources shall be through competitive bidding process. For this purpose the Commission is directed to issue guidelines within six months of this order thereby enabling such procurements with effect from April 1,2008. This decision will not be applicable to Power Purchase Agreements entered before March 31, 2008 for the period specified therein.

29. Before parting with the judgment we wish to record our appreciation for the Karnataka Electricity Regulatory Commission for issuing a comprehensive order for determination of tariff in respect of various Renewable Sources of Energy. We also recognize the valuable assistance rendered by learned counsel for the parties.

(H.L. Bajaj)
Technical Member

(A.A. Khan)
Technical Member

(Anil Dev Singh)
Chairperson