

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

**Appeal No. 197 of 2010 &  
I.A. nos. 276 & 277 of 2010**

**Dated: 16th September, 2011**

**Present: Hon'ble Mr. Rakesh Nath, Technical Member  
Hon'ble Mr. Justice P.S. Datta, Judicial Member**

**In the matter of:**

Solapur Bioenergy Systems Pvt. Ltd.  
501, Lakhani Centrium, Plot no. 27,  
Sector – 15, CBD Belapur ,  
Navi Mumbai 400 614.

.... Appellant

Versus

1. Maharashtra Electricity Regulatory Commission,  
World Trade Centre,  
Centre No. 1, 13<sup>th</sup> Floor,  
Cuffe Parade, Mumbai- 400 005.
2. Maharashtra State Electricity Distribution Company Ltd.,  
Plot No G-9, Prakashgad,  
Prof Anant Kanekar Marg, Bandra (E)  
Mumbai 400051.
3. Tata Power Company Limited (Distribution),  
Corporate Centre,  
B 34, Sant Tukaram Road,  
Carnac Bunder,  
Mumbai 400 009.
4. Reliance Infrastructure Limited (Distribution),  
Reliance Energy Centre,  
Santacruz (East), Mumbai 400 055.

5. The B.E.S & T Undertaking,  
BEST Bhavan, BEST Marg,  
FORT, Mumbai 400 001

6. Municipal Commissioner,  
Solapur Municipal Corporation,  
Park Chowk, Solapur 413001

... Respondents

Counsel for the Appellant(s):      Mr. M.G. Ramachandran  
   Ms. Sneha  
   Mr. Gaurav Juneja  
   Mr. Sanjeev K. Kapoor

Counsel for the Respondent(s):      Mr. Buddy A Ranganadhan  
   Ms. Richa Bhardwaj for R-1  
   Mr. Samir Malik &  
   Mr. Abhishek Mitra for R-2

## **JUDGMENT**

### **HON'BLE MR. RAKESH NATH, TECHNICAL MEMBER**

This appeal has been filed by Solapur Bioenergy System Private Ltd. assailing the order dated 3.9.2010 passed by Maharashtra Electricity Regulatory Commission ("State Commission") determining the tariff for supply of electricity from Municipal Solid

Waste Power Project of the appellant to the distribution licensee in Maharashtra.

2. The appellant is a company set up to put up a Municipal Solid Waste Treatment Plant in the municipal limits of Solapur city to treat and process the Municipal Solid Waste and in the process generate Bio-gas and compost. The respondent no. 1 is the State Commission. The respondent nos. 2 to 5 are the distribution licensees operating in the State of Maharashtra. The respondent no. 6 is the Municipal Commissioner, Solapur Municipal Corporation.

3. The brief facts of the case are as under:

3.1. In April, M/s. CICON Environment Technologies Ltd. (hereinafter referred to as "CICON") was selected for the development of a Treatment Plant for Municipal Solid Waste after following competitive bidding process

by the Solapur Municipal Corporation, respondent no.6 herein. A concession agreement in this regard was signed between the CICON and the respondent no.6.

3.2. Under the above agreement, the respondent no. 6 agreed to allow CICON to form a Special Purpose Vehicle ('SPV'). Thereafter, M/s Solapur Bio Energy Systems Pvt. Ltd, the appellant herein, was set up as a Special Purpose Vehicle to execute the Municipal Solid Waste Project at Solapur on Built-Own-Operate-Transfer ("BOOT") basis. Under the agreement the respondent no. 6 has assured supply of a minimum of 300 tonnes of Municipal Solid Waste (hereinafter referred to as 'MSW') to the appellant. The Project which is based on Bio Methanation Technology will process about 150 tonnes per day of bio-degradable waste and the resultant biogas will enable a 2.83 MW

capacity generating unit to generate 19.56 million units of electrical energy per annum. Besides biogas used for production of electricity, the post-treatment products also include organic manure.

3.3. The appellant filed a Petition before the State Commission for approval of tariff for the electricity to be supplied to the distribution licensees from the MSW Power Project. The State Commission by its order dated 3.9.2010 determined the tariff. Aggrieved by the order of the State Commission, the appellant has filed this appeal. The appellant is aggrieved by non-conclusion of pre-treatment activities and related costs, inclusion of post-treatment activities and related revenue and non-consideration of actual debt equity ratio and interest rate.

4. The learned counsel for the appellant has raised the following points relating to the above four issues:

4.1. Reducing capital expenditure relating to pre-treatment of municipal waste:

The State Commission while accepting the pre-treatment facility to be an integral part of the MSW power project wrongly disallowed the capital cost of Pre-Treatment Plant on the ground that it is a statutory responsibility entrusted to the Municipal Corporation. The nature of pre-treatment required to be undertaken on the municipal solid waste for power generation is different than what the Municipal Corporation is required to do under the MSW Handling Rules. The pre-treatment of MSW under the MSW Handling Rules is not to the extent that it should become a fuel useable in power generation. The Municipal Corporation would have fulfilled its

obligation by undertaking the basic aspects of segregation of MSW and violation of MSW Handling Rules does not involve any cash compensation to be paid by the Municipal Corporation.

#### 4.2. Post-treatment of Residue:

The residue of MSW after the power generation after detailed post-treatment can be converted into compost or pellets to be used as manure. The appellant had pleaded before the State Commission that neither the capital cost of post-treatment nor the revenue from the post-treatment activities should be included for the purpose of tariff and should be treated as an independent business of the appellant. However, the State Commission has erroneously included the capital cost of post-treatment plant in tariff determination while considering the revenue from sale of the compost or pellets at an assumed rate of

Rs. 1000/- per tonne for reducing the tariff. The price of compost or pellets has been decided by the State Commission at the same rate as payable by the appellant to the Municipal Corporation as per the concession agreement for the agreed quantum of compost which is not aligned to the market price.

4.3. Debt Equity Ratio: The banks are not willing to advance money more than 55% of the project cost to MSW Power Projects. Thus, 45% of the capital cost has to be secured by the project through the shareholders fund. However, the State Commission has mechanically adopted a simplistic approach by deciding the debt equity ratio of 70:30 as per the Regulations without considering the need for relaxation or need for removal of difficulties.



4.4. Interest rate: The State Commission has applied the Regulation 14 dealing with interest on loan in a simplistic manner without considering the power to relax and power to remove difficulties, thus denying the actual interest rate of 14.75% to the appellant.

5. The State Commission in its counter affidavit has submitted as under:

5.1. The MSW (Management & Handling) Rules, 2000 (hereinafter referred to as the 2000 Rules) stipulate the responsibility of the Municipal Corporation for collection, storage, segregation, transportation, processing and disposal of MSW. Thus, unless the cost of pre-treatment facilities, which would aid in processing and disposal of MSW, is deducted for tariff computation, it would amount to loading such cost on to the entire electricity consumers in Maharashtra.

5.2. The post-treatment facilities and production of compost is very much part of the Project Scheme submitted by the appellant as part of its detailed Project Report and concession agreement entered into with the Municipal Corporation. According to this agreement, the appellant is obliged to pay for the cost of free compost of 15 tonne per day at the rate of Rs. 1000/tonne to the Municipal Corporation in advance before commencement of every year. While the sale of compost is not part of power generation business, it shall form part of other business of the generating company and revenue for such sale will have to be shared with power business as the assets/infrastructure/establishment and man power would be used for undertaking such activity.

5.3. The State Commission has assumed the debt equity ratio and interest rate according to the provision of the Renewable Energy Tariff Regulation, 2010. There is no scope for the State Commission to grant any higher debt equity ratio since the norms specified in the Tariff Regulations are the ceiling norms.

6. After hearing the contentions of the learned counsel for the parties and examining the documents submitted by them, we frame the following questions for our consideration:

- i) Whether the State Commission is correct in excluding the capital cost of the pre-treatment of the Municipal Solid Waste in the tariff of the MSW Power Plant considering that the pre-treatment is the responsibility of

the Municipal Corporation under the 2000 Rules?

- ii) Whether the State Commission has erred in including the capital cost of post-treatment of the MSW residue and the revenue from sale of the compost or pellets for the purpose of determining the electricity tariff?
- iii) Whether the State Commission should have allowed relaxation in norms for debt equity ratio and interest rate as per actuals keeping in view of the difficulties expressed by the appellant in obtaining debt from the Bank at more favourable conditions?

7. The first issue is regarding the cost of the pre-treatment plant.

7.1. The learned counsel for the appellant pointed out the differentiation in pre-treatment required for power generation as compared to the segregation which the Municipal Corporation may do under the 2000 Rules.

The learned counsel has placed the following table on record in this regard:

MSW (Management and Handling) Rules, 2000	Pre-treatment in plant	Municipal Corporation
<p>· “Every municipal authority shall, within the territorial area of the municipality, be responsible for the implementation of the provisions of these rules, and for any infrastructure development for collection, storage, segregation, transportation, procession and disposal of municipal solid wastes”.</p> <p>· segregation required at low level</p>	<p>· After waste delivery manual separation for large inserts materials</p> <p>· Size reduction and pulverizing for complete homogenizing the organics</p> <p>· Density separation that is fuel preparation essential for maximum gas production and thereby electricity generation.</p>	<p>· Basic source segregation is also not in place</p> <p>· Even if it is done, still it would not be sufficient and pre-treatment in Plant will have to be followed.</p> <p>· Due to its capital intensive nature, most of the Municipal Corporations are not able to ensure compliance due lack of financial ability.</p>

7.2. Let us first examine the Regulations. The relevant Regulation 7.1 (a) and 7.2 of the 2010 Renewable Energy Tariff Regulations are reproduced below:

*"7.1 Project Specific Tariff, on case to case basis, shall be determined by the Commission for the following types of projects:-*

*(a) Municipal Waste based Projects.*

*....*

*7.2 Determination of Project Specific tariff for generation of electricity from such renewable energy sources shall be in accordance with such terms and conditions as stipulated under relevant Orders of the Commission: Provided that the financial norms as specified under Chapter-2 of these Regulations, except for Capital Cost and O&M cost, shall be ceiling norms while determining the project specific tariff."*

Thus, the capital cost of MSW Project will be determined on case to case basis. Accordingly, in the impugned order the State Commission has determined the project specific cost and tariff.

7.3. Let us now examine the 2000 Rules. The responsibility of the municipal authority is described in the Rules as under:

*“1. Every municipal authority shall, within the territorial area of the municipality, be responsible for the implementation of the provisions of these rules, and for any infrastructure development for collection, storage, segregation, transportation, processing and disposal of municipal solid wastes.*

*2. the municipal authority or an operator of a facility shall make an application in Form-I, for grant of authorisation for setting up waste processing and disposal facility including landfills from the State Board or the Committee in order to*

*comply with the implementation programme laid down in [Schedule-I](#)*

*3. the municipal authority shall comply with these rules as per the implementation schedule laid down in [Schedule-I](#).*

*4. The municipal authority shall furnish its annual report in Form-II”.*

*“Management of Municipal Solid Wastes:*

*(1)Any municipal solid waste generated in a city or a town, shall be managed and handled in accordance with the compliance criteria and the procedure laid down in [Schedule-II](#).*

*(2) The waste processing and disposal facilities to be set up by the municipal authority on their own or through an operator of a facility shall meet the specifications and standards as specified in [Schedule-III](#) and [Schedule-IV](#)”.*



Thus, while the responsibility of implementation of provisions of the rules, and any infrastructure development for collection, storage, segregation, transportation, processing and disposal of MSW is that of the municipal authority, the setting up of waste processing and disposal facility can be done by the municipal authority itself or through an operator.

7.4. The MSW has to be managed and handled as per Schedule-II of the 2000 Rules. The collection of MSW is entirely the responsibility of the municipal authority according to the Rules. Under Schedule II the provision of segregation of MSW stipulates that in order to encourage the citizens, the municipal authority shall organize awareness programmes for segregation of waste and undertake phased programme to ensure community participation in waste segregation.

7.5. The provision on processing of MSW stipulates that the municipal authorities shall adopt suitable technology or continuation of such technologies to make use of wastes so as to minimize burden on land fill and the municipal authority or the operator of facility has to use the technology as per the standards laid down by the Central Pollution Control Board.

7.6. Schedule IV of the 2000 Rules lays down the standards for composting Treated Leachates and Incineration. It stipulates that in case of engagement of a private agency by the municipal authority, a specific agreement between the municipal authority and the private agency shall be made particularly for supply of solid waste and other relevant terms and conditions. Accordingly, a concession agreement was signed

between the appellant and the Solapur Municipal Corporation on 8.4.2004.

7.7. According to the concession agreement between the appellant and the Solapur Municipal Corporation, the appellant has to undertake the project to treat and process the MSW to be supplied by the Municipal Corporation on Built-Own-Operate-Transfer (BOOT) basis and also in the process, generate bio-gas to produce electricity and compost. The relevant clause-7 of the agreement is reproduced below:

*“(7) AND WHEREAS the above objective is envisaged to be achieved by CICON by undertaking the said project on a Built-Own-Operate-Transfer (BOOT) basis in furtherance to which SMC shall, by handing over the site on lease to CICON along with the granting it the right to set up the ‘Plant’ thereon as well as the right to receive, collect, acquire and own the Guaranteed MSW, be able to dispose the*

*said 'Guaranteed MSW' in an efficient manner which, on the one hand, being vital from the point of protecting the environment, would satisfactory dispose the said wastes and, on the other hand, would not entail any financial burden on SMC towards capital expenditure for setting up on any such plant".*

Thus, according to agreement, the Municipal Corporation would not bear any financial burden towards the capital expenditure of the plant.

7.8. Clause 1.10 of the agreement describes the contents of the MSW which would be heterogeneous mixture of various organic and inorganic materials. Thus, according to the agreement, the MSW would also contain plastic, rubber, rags, glass, ceramics, inerts, etc. Admittedly, non-biodegradable contents of MSW can not be used in the process for generation of biogas/electricity.

7.9. Clause 1.11 describes the guaranteed MSW as under:

*“1.11. GUARANTEED MSW: It shall mean providing at least 300 tonnes of MSW per day (with a variation of not more than 20% plus or minus on a particular day, but fortnightly average shall not fall below 300 tonnes) not later than 18 months as provided in aforesaid clause (11) of Pre-amble, from the date of this agreement at MSW receipt point. Provided that in case of short fall in net organic contents as hereinbefore specified in the MSW, SMC shall arrange to provide additional MSW in such quantities as are necessary to make up the shortfall of organic contents”.*

The above clause provides that if there is a short fall in net organic contents in the MSW, the Municipal Corporation shall arrange to provide additional MSW to make up the shortfall of organic contents.

7.10. According to clause 2.1 of the agreement, the Municipal Corporation is responsible for supply and delivery of the guaranteed MSW at the MSW receipt point at its own cost. According to clause 2.1 (c), the dumping of the remnants shall be done by the appellant at its own cost by the process of “Sanitary Land Fill”.

7.11. According to clause 7.1 of the agreement, the appellant shall accept MSW on ‘as it is’ as described in clause 1.10. Thus, the appellant has to accept MSW which will be heterogeneous mixture of organic and inorganic materials.

7.12. Learned counsel for the State Commission has argued that the bare reading of the various clauses of the concession agreement would indicate that the responsibility for segregation of bio-degradable and

non bio-degradable waste is that of the municipal authority. We do not think that the conclusion drawn by the State Commission is correct. The concession agreement clearly provides for guaranteed MSW of 300 tonnes/day on 'as it is' basis which will be heterogeneous mixture of various degradable and non-degradable materials indicated in clause 1.10 and only in case the shortfall in organic content of the delivered MSW, the shortfall will be made up by supplying additional MSW in such quantity as necessary to make up the shortfall in organic content. The requirement of organic content for power generation is of the order of 150 tonnes/day. Thus, if there is shortfall in the required organic content then additional MSW, which will again be a heterogeneous mixture of various organic and inorganic contents, will be supplied over and above 300 tonnes/day.

7.13. We have also looked into the Thermophillic Biomethanation technology and the process used by the appellant in generation of electricity from MSW. After study of the process we have found that the function of the Pre-Treatment Plant is manual sorting, size reduction and pulverization for complete homogenizing the organics and feed preparation. Thus the Pre-treatment Plant is not just for segregation of MSW.

7.14. The pre-treatment process involves the following:

- a) The MSW is collected in the Receiving Shed where it is stored for 2 days in order to leach out excess moisture that is undesirable. The waste is then fed to the Pre-treatment Shed through Apron Conveyors. The Apron Conveyor is employed in



order to transfer the waste to elevate level on to the Belt conveyor. Platform is provided on either side to the conveyor to manually remove inert/recyclable material, if any.

- b) The organic fraction is fed to the Pulverizing Drum where homogenization of the waste is done keeping control on the desirable moisture content. After a retention time of a few hours, the waste is screened over a screen with appropriate diameter removing mainly large and sturdy objects.
- c) The undersized material is then passed via Belt conveyor with overhung Magnetic Separator for removing magnetic materials.
- d) The Organic stream is conveyed to Ballistic Separator where it further disintegrates into higher and heavier fractions.

- e) The organic material obtained through in-depth pre-treatment is stored in the Buffer Tank and is fed to the Anaerobic Digesters for further processing.

7.15. Thus, the activities carried out and in the Pre-Treatment Plant are different from and more exhaustive than mere segregation which the Municipal Corporation would do for disposal of MSW . Ever if the Municipal Corporation carried out the segregation, the Pre-Treatment Plant would be required for efficient operation of the MSW Power Project. Thus, the Pre-Treatment Plant is an integral part of the MSW Power Project.

7.16. The State Commission while accepting in paragraph 3.4.12 of the impugned order that the pre-treatment facility is a integral part of the MSW Project

has felt that the statutory responsibility of the Municipal Corporation can not be ignored and ignoring such statutory duty would amount to burdening the distribution licensee and the consumers. In our view the reasoning given by the State Commission is not correct.

7.17. We accept the argument of the learned counsel for the appellant that the Municipal Corporation would fulfill its obligation under the 2000 Rules once it has done the simplistic segregation for environment point of view, processing and disposal of the municipal waste. The Municipal Corporation is not required to undertake specified segregation for making MSW ready as a fuel. There is no obligation of the Municipal Corporation in absolute term that all wastes should be completely processed and utilized to the full extent. The utilization of MSW under the 2000

Rules is not of an extent that it should supply a fuel useable in power generation. As already discussed above, in the pre-treatment plant not just manual separation but other functions such as size reduction and pulverization are carried out. It also has the conveyor system for transfer of MSW from the Receiving Shed to Anaerobic Digesters, which is an essential part of the power project.

7.18. Learned counsel for the appellant has argued that there is no financial liability on the Municipal Corporation, either according to the 2000 Rules or the concession agreement signed with the appellant, to carry out perfect segregation. We are of the opinion that even if there is a financial liability on the Municipal Corporation, the Pre-Treatment Plant is very much required for efficient operation of the power plant.

7.19. The Pre-Treatment Plant of MSW Power Plant is analogous to Coal Handling Plant in a coal based Thermal Power Station which provides for unloading, storage, removal of extraneous material, sizing of coal by crushing and conveying and feeding the coal to the main plant. The cost of Coal Handling Plant is included in the capital cost of the Thermal Power Project.

7.20. Learned counsel for the State Commission has argued that if under the law the segregation processing and disposal of MSW is the responsibility of the municipal authority, there is no valid reason to incur the capital cost of the project beyond the normal capital cost of Rs. 5 to Rs. 10 Crores per MW, as indicated in the Integrated Energy Policy. If the contentions of the appellant are accepted the capital

cost of the Project would amount to Rs. 14.45 Crores per MW.

7.21. We feel that the State Commission can determine the capital cost of the MSW project based on its own Regulation or Central Commission's Regulations or on the basis of cost of similar projects commissioned in the country and in the absence of adequate number of projects in the country project data of other countries, by prudence check of the expenditure incurred by the appellant, inputs from study conducted by Ministry of New & Renewable Energy or other Government agencies, cost data available from the manufacturers/suppliers, etc. Admittedly, the Regulations of the State and the Central Commissions do not stipulate capital cost for MSW Power Project and the same has to be determined on case to case basis. As already decided

earlier, the Pre-Treatment Plant is an integral part of the MSW Power Project and its cost has to be included in the capital cost of the Project. It is not the correct approach to exclude the capital cost of the Pre-Treatment Plant on the basis of the indicative range of capital cost of MSW plant given in the Integrated Energy Policy Report. It is also not made clear if the Integrated Energy Policy Report included a study of capital cost of the composite MSW Projects which can be adopted for determination of tariff. In our opinion, the State Commission should carry out the exercise of determination of the capital cost of the appellant's project.

7.22. We find that the State Commission in paragraph 3.4.14 of the impugned order has recorded that in the absence of any similar reference project cost available in India, it will not be possible to

compare and comment whether the proposed capital cost stated by the appellant is appropriate. Thereafter, instead of determining the capital cost, the State Commission considered the cost data submitted by the appellant in four alternatives viz. including the pre-treatment and post-treatment, including pre-treatment but excluding post-treatment, excluding both pre-treatment and post-treatment and excluding pre-treatment but including post-treatment and adopted the alternative with excluding the capital cost of the pre-treatment and including post-treatment. We do not agree with the approach of the State Commission. In our opinion, the State Commission has to determine the capital cost as per paragraph 7.21 above.

7.23. We find that the appellant has also not given adequate data to establish that the capital cost claimed by the appellant is reasonable. It is, therefore,



necessary that the State Commission should carry out the exercise of determination of capital cost de novo after providing opportunity to the appellant to submit the supporting data.

7.24. We, therefore, remand the matter to the State Commission to re-determine the capital cost of the project including the pre-treatment plant according to the directions given in paragraphs 7.21 to 7.23. As regards inclusion of cost of post-treatment we shall answer the same while examining the second issue.

8. The second issue is regarding treatment to capital cost of post-treatment and revenue earned from post treatment activities.

8.1. According to the learned counsel for the appellant the State Commission should have directed either of

the following two alternatives:

- “a) exclude the post-treatment capital cost and leave the business of post-treatment to the risk of the Appellant and not burden the consumer with the risk;*
- b) if the post-treatment capital cost is included, the net revenue actually derived by the Appellant from time to time should be directed to reduce from the tariff”.*

8.2. According to the learned counsel for the State Commission, the revenue for sale of compost is the revenue from the sale of the bye-product of the generating process and directly relatable to the generating process. Hence, the revenue earned on such account must be passed on to the consumers through reduction in tariff. He also referred to Sections 41 and 51 of the 2003 Act under which the income receivable by a licensee by the use of

transmission and distribution assets is to be taken into account in the Annual Revenue Requirement. On a parity of reasoning, revenue to a generator realized directly from the generation of electricity is necessarily to be taken into account for the purpose of tariff.

8.3. There are specific provisions for transmission and distribution licensees in the Act under Section 41 and 51 for considering a proportion of the revenue derived from other business of the licensee by optimally utilizing the assets for reducing the charges. However, there is no provision for such sharing of revenue for generating company in the Act.

8.4. We have examined the process of making compost or pellets to be used as manure. The residue of MSW after the production of biogas is not a marketable

commodity. The residue is subjected to detailed post-treatment to make organic manure.

8.5. The State Commission has decided to include the capital cost and O&M charges for post-treatment plant in the capital cost alongwith the assessed revenue from sale of compost/pellets after deducting for the payment to be made by the appellant for 15 tonnes per day to the Municipal Corporation as per the concession agreement.

8.6. The learned counsel for the State Commission has argued that the compost is a by-product of biomethanation based power project and all associated capital cost, operating cost, etc., has been factored while determining the tariff.

8.7. We find that the concession agreement envisages a composite MSW Project for treatment and processing of MSW and in the process generate Bio-gas and compost. The relevant extracts of the concession agreement are reproduced below:

*“(5) AND WHEREAS, in consequence of such treatment, the said “Guaranteed MSW” shall be treated and processed in the said Plant so as to render the same environmentally and hygienically innocuous and, it shall, in the process, also generate Bio-gas and compost.*

*(6) AND WHEREAS the Bio-gas so produced shall in turn be employed by CICON to generate electrical power by constructing, installing, commissioning a Power Plant on the site (hereinafter referred to as the ‘Power Plant’) at its own cost consequent to which the said Power Plant would also be operated and maintained by CICON and if so desired by CICON using if necessary dual fuel engines”.*

*“PLANT: The entire composite industrial unit inclusive of Civil and Engineering Works together with all machinery and equipments, structures, buildings and other industrial installations constructed, erected, installed, fabricated and assembled which together or in part performs the functions of Solid Waste Treatment Plant and process remnant treatment plant, to be constructed, erected, commissioned, owned, operated and maintained by CICON on ‘Site’ consequent to which the MSW shall be treated up to its ‘targeted capacity’ in the manner as provided herein.*

*By way of explanation the term Plant shall always be deemed to exclude the ‘Power Plant’ mentioned herein”.*

*“POWER PLANT: The entire composite industrial unit inclusive of Civil and Engineering Works together with all machinery and equipment, structures, buildings and other industrial installations constructed, erected, installed,*

*fabricated and assembled which together or in part performs or is related to the functions of generation of electric power from Bio-gas and/or other fuel and transmission of same power to be constructed, erected, commissioned, owned, operated and maintained by CICON on the 'Site' for the Tenure of the Agreement”*

Thus, the appellant has to set up a plant to produce bio-gas and manure and power plant to generate electricity. The bio-gas used for generation of electricity and manure are both post-treatment products and should be treated as composite business of the appellant.

8.8. In our opinion, if the consumers of electricity are bearing the cost of equipment and machinery installed for pre-treatment, biomethanation, etc. they should also get the benefit of revenue generated from sale of

compost. Thus, we do not find fault in the approach of the State Commission to include the capital cost of post-treatment and taking into account the revenue from sale of compost to reduce the tariff.

8.9. The learned counsel for the appellant has argued that in view of uncertainties in marketing of the compost it would not be correct to assume the price at the same level at which the appellant has to compensate the Municipal Corporation for 15 tonnes of compost. We do not agree with the contention of the learned counsel for the appellant because organic manure is not a new product and can be used extensively in agriculture farms. The State Commission has also adopted the same price as agreed by the appellant in the concession agreement for compensating the Municipal Corporation. The



appellant has also not placed any document on record to establish that the rate agreed in the concession agreement is unviable.

8.10. In view of the above, we reject the contention of the appellant regarding accounting of the revenue for sale of compost.

9. The third issue is regarding debt equity ratio and interest rate.

9.1. The learned counsel for the State Commission has argued that the debt equity ratio and interest rate have been determined as per the Regulations. On the other hand, the learned counsel for the appellant has argued for relaxation in norms.

9.2. According to Regulation 7 of the 2010 Renewable Energy Regulations, while the project specific tariff on

case to case basis is to be determined by the State Commission in respect of MSW projects, the financial norms as specified under Chapter 2 of the Regulations which are applicable to other Renewable Energy Projects, shall be the ceiling norms except for capital cost and O&M expenses.

9.3. The provisions for debt equity ratio under Chapter 2 is reproduced below:

*“13.2 For project specific tariff, the following provisions shall apply:*

*If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.*

*Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff”.*

In the present case the equity is more than 30%. Thus, the equity in excess of 30% will be treated as normative loan. The appellant has sought allowing equity of 45% as it could secure debt of only 55%.

9.4. The relevant Regulation 14.2 for interest rate is as under:

**“14.2 Interest Rate:**

*The loans arrived at in the manner indicated above shall be considered as gross normative loan for calculation of interest on loan. The normative loan outstanding as on April 1st of every year shall be worked out by deducting the cumulative repayment up to March 31st of previous year from the gross normative loan.*

*For the purpose of computation of tariff, the normative interest rate shall be considered as average of State Bank Advance Rate (SBAR) prevalent during the previous year plus 150 basis points”.*

Thus, the interest rate will be on normative basis as average State Bank of India Advance Rate prevalent during the previous year plus 150 basis points.

Accordingly, the State Commission has allowed the normative interest rate of 13.25% p.a. instead of 14.75% p.a. claimed by the appellant as per actuals.

9.5. Learned counsel for the State Commission has argued that the appellant had not prayed for use of power to relax by the State Commission in the petition filed before them and, therefore, the appellant cannot plead for the same before the Tribunal. Also Regulation 7.2 clearly mandates that the financial norms except for capital costs and O&M costs shall be “ceiling norms” while determining the project specific tariff. Hence, no power of relaxation could be utilized which could effect the amending Regulation 7.2.

9.6. We find that the State Commission has determined the debt equity ratio as per the Regulations. The Regulations clearly prescribe that the equity actually deployed in excess of 30% shall be treated as normative loan. Thus the appellant cannot demand ROE which is higher than the interest rate on the equity deployed in excess of 30% of the capital cost. The appellant has also not furnished adequate material to establish that loan was not available from the various banks/financial institutions within the rate specified in the Regulations. Therefore, we do not find any abnormal circumstances in the case for invoking the powers to relax by the State Commission. The application of provision of power to remove difficulties is not applicable in the present case. Accordingly, these issues are decided against the appellant.

10. Before concluding, we would like to add that there is need to promote MSW based projects for production of Bio-gas/electricity and compost for efficient and environmentally benign disposal of municipal solid waste. Determination of electricity tariff on cost plus basis with provision for sharing of revenue from sale of compost in the absence of benchmark costs may result in disputes, as happened in the present case. It may, therefore, be advisable to develop such projects on tariff based competitive bidding by the distribution licensees in coordination with the Municipal Authorities. It may also facilitate obtaining competitive rates for electricity. We would, therefore, advise the distribution licensees to take initiative in this direction. The State Commission may also give

necessary directions to the distribution licensees under Section 86(e) of the 2003 Act in this regard.

## **11. Summary of our findings**

**11.1. The appellant succeeds in establishing its case that the Pre-treatment Plant is an integral part of the MSW based Power Project and its capital cost should be included in the capital cost of the project considered for determination of electricity tariff. We also do not agree with the approach adopted by the State Commission in determining the capital cost and remand the matter to the Commission to re-determine the same on the basis of the directions given in paragraphs 7.21 to 7.23 of the judgment.**

**11.2. We do not find any fault with the approach of the State Commission to include the capital cost**

**of post-treatment and revenue from sale of compost in tariff determination as the Project is a composite project for generation of biogas/electricity and compost.**

**11.3. Regarding debt equity norms and rate of interest, we find that the State Commission has decided the same in consonance with the Regulations and there is no case for relaxation of norms and reject the contentions of the appellant.**

**11.4. We have also given some suggestion for development of MSW Projects for future in paragraph 10 for further necessary action.**

12. The appeal is allowed in part as indicated above without any cost. The impugned order is set aside to the extent indicated above. The State Commission is



directed to give effect to the directions given in the judgment within a period of three months of the date of this judgment.

13. Pronounced in the open court on this **16<sup>th</sup> day of September, 2011.**

**(Justice P.S. Datta)**  
**Judicial Member**

**( Rakesh Nath)**  
**Technical Member**

REPORTABLE / NON-REPORTABLE

vs