## TAMIL NADU ELECTRICITY REGULATORY COMMISSION

## (Power Procurement by Distribution Licensee from Bagasse Based Co-Generation Power Plants and Allied Issues relating to Captive Use and Third Party Sale) Order No. 7 of 2012, Dated 31-07-2012

| SI.<br>No. | Description                                    | Summary                                                                                                                                                                                                                                                                                                           |
|------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.         | Subject                                        | TNERC order No 7of 2012 dated 31-07-2012 for Power Procurement by Distribution Licensee from Bagasse Based Co-Generation Power Plants and Allied Issues relating to Captive Use and Third Party Sale.                                                                                                             |
| 2.         | Tariff Control Period                          | 01-08-2012 to 31-07-2014                                                                                                                                                                                                                                                                                          |
| 3.         | Type of Tariff                                 | Two Part Tariff Comprising of Fixed and Variable Components                                                                                                                                                                                                                                                       |
| 4.         | Financial Parameters<br>(i) Capital Cost       | Rs. 4.20 crores/MW inclusive of evacuation Cost, 85% on machineries and 15% on land & civil works.                                                                                                                                                                                                                |
|            | (ii) Plant Load Factor<br>(PLF)                | 55% as normative PLF. 10% of the fixed charges for that year applicable as incentive for extra generation beyond normative PLF.                                                                                                                                                                                   |
|            | (iii) Debt Equity<br>Ratio                     | 70:30                                                                                                                                                                                                                                                                                                             |
|            | (iv) Term of Loan                              | 10 years with a moratorium of one year                                                                                                                                                                                                                                                                            |
|            | (v) Interest Rate for<br>Loan                  | 12.25% р а                                                                                                                                                                                                                                                                                                        |
|            | (vi) Return on Equity                          | 19.85% Pre-tax                                                                                                                                                                                                                                                                                                    |
|            | (vii) Life of Plant and<br>Machinery           | 20 years                                                                                                                                                                                                                                                                                                          |
|            | (viii) Depreciation                            | 4.5% p.a. SLM by reckoning 85% of Capital Cost as machinery Cost and accumulated depreciation limited to 90%                                                                                                                                                                                                      |
|            | (ix) Operation and<br>Maintenance<br>Expenses  | 3% on 100% of Capital Cost with annual escalation of 5%. from second year.                                                                                                                                                                                                                                        |
|            | (x) Station Heat<br>Rate                       | 3700 kCal/kWhr                                                                                                                                                                                                                                                                                                    |
|            | (xi) Gross Calorific<br>Value                  | 2300 kcal/Kg                                                                                                                                                                                                                                                                                                      |
|            | (xii) Specific fuel<br>Consumption<br>(SFC)    | 1.61 Kg/kWhr                                                                                                                                                                                                                                                                                                      |
|            | (xiii) Fuel Cost                               | Rs.1050/MT for 2012-13.                                                                                                                                                                                                                                                                                           |
|            | (xiv) Components of<br>Working Capital         | Full Stock – one month, O&M expenses – 1 month<br>Receivables – 1 month                                                                                                                                                                                                                                           |
|            | (xv) Interest on<br>Working Capital            | 12.5%                                                                                                                                                                                                                                                                                                             |
|            | (xvi) Auxiliary<br>Consumption                 | 9%                                                                                                                                                                                                                                                                                                                |
|            | (xvii) Transmission<br>and Wheeling<br>Charges | 60% of transmission charges and 60% of wheeling Charges of Conventional Power to<br>Bagasse based Co-generation Plants. Actual line losses in kind are applicable.<br>For generators who are availing Renewable Energy Certificates, normal transmission<br>charges, Wheeling Charges and line losses will apply. |

|                        | ss Subsidy<br>rges                                                         | 50% of the applicable Cross subsidy surcharge for Bagasse based Co-generation projects.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (xix) CDN              | A benefits                                                                 | 100% to the developers in the first year, reducing by 10% every year till sharing becomes equal (50:50) between the developer and Consumer in the sixth year.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                        | ictive Power<br>rges                                                       | 10 Paise/KVARh as per tariff order No 2 of 2012, dated 30-03-2012, to be revised when order amended.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                        | I Availability<br>rges                                                     | Start Up Power<br>Distribution Licensee to supply start up Power if generator is an open access Customer,<br>for a maximum period of 42 years in a year subject to demand not exceeding 15% of<br>the capacity of the generator who shall pay at the rate applicable for temporary supply<br>of that voltage category<br>Stand By Power<br>Energy Charges – If the Captive user or Third Party User is a Consumer of Licensee,<br>user to Pay at the applicable tariff to that category on net energy Consumption.<br>If the user is not a consumer of Licensee, user to pay charges as applicable for temporary |
|                        |                                                                            | supply of that voltage category.<br>Demand Charges – No demand charges are payable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| (xxii) Adju<br>Enel    | stment of<br>rgy Generated                                                 | Adjustment of Energy Generated shall be as per Open Access regulations in force.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (xxii) Sch<br>Syst     | neduling and<br>tem Operation<br>rges                                      | As per open access charges from time to time.<br>Presently, it is Rs. 2000/ day irrespective of capacity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                        | plication<br>s and<br>eement Fees                                          | Whenever there is a change in usage of energy from Bagasse based co-generation or change in drawl point etc. additional fees equivalent to the application fees and agreement fees shall be leviable by the licensee on the generator.                                                                                                                                                                                                                                                                                                                                                                           |
| (xxv) Billi<br>Pay     | ng and<br>ment                                                             | <ul> <li>(a) In case of Payment within one month, 1% rebate shall be allowed, payment delayed beyond 30 days is liable for interest @ 1% per month</li> <li>(b) The distribution licensee shall raise bill for net energy separately for peak hours (0600 to 0900 hrs. and 1800 to 2100 hrs. and off peak hours (2200 to 0500 hrs) Balance hours are normal hours.</li> </ul>                                                                                                                                                                                                                                    |
|                        | /ment<br>urity and<br>urity deposit                                        | (c) Two times the maximum net energy supplied by the distribution licensee in any month<br>in the proceeding financial year to be paid as security deposit by the consumers.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| (xxvii) Po             | wer Factor                                                                 | Captive or third party consumers of Bagasse based Co-generation plants shall be liable for disincentive based on average power factor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| (xxviii) Me            | etering                                                                    | Metering and Communication arrangements shall be as per CEA Regulations (2006),<br>Tamil Nadu Electricity Distribution Code (2004), TNE Grid Code 2004 and Tamil Nadu<br>Electricity Regulatory Commission Intra State Open Access Regulations (2005)                                                                                                                                                                                                                                                                                                                                                            |
| e al E                 | onnectivity<br>nd<br>vacuation of<br>ower                                  | <ul> <li>As per Act, Codes, Regulations and orders in force.</li> <li>As per specified in Commission's Regulations in force</li> <li>EPA to be valid for a minimum period of 20 years, to be executed within 1 month of receipt of application from the generator.</li> <li>EWA terms of agreement to be as per Open Access regulations.</li> </ul>                                                                                                                                                                                                                                                              |
| P<br>A<br>(E<br>W<br>A | nergy<br>urchase<br>greement<br>EPA) and<br>/heeling<br>greement<br>EWA)   | The generator shall follow scheduling procedure as specified in Indian Electricity Grid Code, Tamilnadu Electricity Grid Code and other Regulations, Codes and orders of the Commission.                                                                                                                                                                                                                                                                                                                                                                                                                         |
| G<br>(xxxii) Ta<br>P   | heduling<br>f Power<br>eneration<br>ariff Review<br>eriod/Control<br>eriod | Control period shall be two years from 01-08-2012 and tariff period is 20 years.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| 5. | Tariff                                                                       | <ul> <li>Tariff for new plants</li> <li>Fixed cost shall vary from Rs. 2.11 per unit in first year to Rs. 1.79 per year in 20<sup>th</sup> year.</li> <li>A reduction of 10% in the fixed cost for use of Steam in Sugar mills.</li> <li>Variable cost shall be applicable with reference to financial year.</li> <li>These fixed charges to be applicable to the Plants Commissioned on or after 01-08-2012 and the variable cost as on or after 15-05-2006.</li> </ul> |
|----|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6. | Determination of<br>Tariff for Plants<br>Commissioned prior<br>to 15-05-2006 | To be dealt with while disposing the petition No. PPAP8 of 2011 filed by TANGEDCO.                                                                                                                                                                                                                                                                                                                                                                                       |
| 7. | Tariff for Plants tied up with other Industries                              | Orders in this regard shall be issued separately in case of petition PPAP No. 1 of 2011.                                                                                                                                                                                                                                                                                                                                                                                 |