



ORDER

OF THE

WEST BENGAL ELECTRICITY REGULATORY COMMISSION

IN CASE NO. OA-121/11-12

IN RE THE APPLICATION SUBMITTED UNDER REGULATION 2.8.1.4.9 OF THE WEST BENGAL ELECTRICITY REGULATORY COMMISSION (TERMS AND CONDITIONS OF TARIFF) REGULATIONS, 2011 BY HALDIA ENERGY LIMITED (HEL) FOR APPROVAL OF OPERATING PARAMETERS FOR 2 X 300 MW COAL BASED THERMAL POWER PROJECT AT HALDIA, DIST. EAST MIDNAPORE.

PRESENT:

SRI R. N. SEN, CHAIRPERSON

SRI SUJIT DASGUPTA, MEMBER

SRI AMITAVA BISWAS, MEMBER

DATE: 20.01.2016 _____

In re the application submitted under regulation 2.8.1.4.9 of the West Bengal Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2011 by Haldia Energy Limited (HEL) for approval of operating parameters for 2 x 300 MW coal based thermal power project at Haldia, dist. East Midnapore.

Noting by Office or Advocate	Date	Office notes, reports orders or proceedings with signature
	20.01.2016	<p style="text-align: center;"><u>ORDER</u></p> <p>1.0 This is in regard the application submitted by Haldia Energy Limited (HEL) on 23rd April, 2014 for approval of Operating Parameters in respect of 2 x 300 MW coal based thermal power project set up by Haldia Energy Limited at Baneswar Chak near Jhikurkhali Village, Haldia, Midnapore (East), West Bengal in terms of regulation 2.8.1.4.9 of West Bengal Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2011 (in short “Tariff Regulations”).</p> <p>2.0 Haldia Energy Limited (in short “HEL) have submitted the detailed operating parameters through their petition for determination of tariff order for the years 2014 – 2015, 2015 – 2016 and 2016 – 2017 in terms of regulation 2.8.1.4.9 of the Tariff Regulations, based on which HEL have arrived at the generation cost for the above generating station. Details of various operating parameters along with guaranteed parameters item wise, as furnished by HEL and the decision of the Commission, are as follows.</p> <p>3.0 Plant Availability Factor (PAF):</p> <p>It is submitted by HEL that they will endeavour to achieve 85% PAF and therefore HEL prayed for fixing the norms for PAF at 85% which is in accordance with the norm set in the Tariff Regulations for similar generating stations. Considering the generating station of HEL very new and that there remains certain uncertainty / gap between predicted maintenance schedule and actual failure occurrences, the Commission accepts the PAF as 85% for the new generating station of HEL for the years 2014 – 2015 to 2016 – 2017 under fourth control period as per provision in paragraph 5 in Schedule 9D of the Tariff Regulations.</p>

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		<p>4.0 Plant Load Factor (PLF):</p> <p>HEL have submitted that PLF depends upon the requirement of the buyer and also on the smooth availability of required quantity and quality of coal. Considering that scarcity of coal is a national phenomenon and the monopolistic nature of the primary supplier – Coal India Limited – does not provide the desired degree of freedom for a generating company, HEL projected PLF as 75%. It is observed by the Commission that the entire power from the generating unit of HEL is tied up for sale to CESC Limited through approved Power Purchase Agreement. It is also observed that the availability of coal is not a constraint as the same is also managed by other generating units in India as well as in West Bengal. The Commission observed that the dates of Commercial Operation (COD) of two units of HEL generating station are 28.01.2015 and 21.02.2015 respectively. The Commission considers PLF for the generating unit of HEL for the years 2015 – 2016 and 2016 – 2017 as 80% as per provision in paragraph 4 in Schedule 9D of the Tariff Regulations. In 2014-15 no deviation can be allowed as according to Tariff Regulations the Units are supposed to be synchronized with all load bearing equipment. Commission thus also considers the PLF for 2014-15 at 80% as per provisions Tariff Regulations.</p> <p>5.0 Auxiliary Consumption:</p> <p>HEL have submitted that the auxiliary consumption rate at 100% load works out to more than 10% considering the guaranteed values of consumption of auxiliary equipment of various packages like BTG package, BOP package and Intake package. It is also submitted by HEL that additional quantum of energy would require considering the guaranteed parameters of the Intake pump house package and the Balance of plant package. HEL have further submitted that although the auxiliary consumption under the stabilized period of generation has been provided at 9% in Schedule – 9D of the Tariff</p>
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		<p>Regulations, additional 0.5% auxiliary consumption rate may be allowed to HEL during the stabilization period. The Commission finds that in case of new 300 MW Sagardighi generating station of WBPDCCL the auxiliary consumption was considered as 9% according to the norm as specified in Schedule – 9D of the Tariff Regulations. The Commission thus considers 9% auxiliary consumption for the generating unit of HEL for the years 2014 – 2015 to 2016 – 2017.</p> <p>6.0 Station Heat Rate:</p> <p>HEL submitted that the gross Turbine Cycle Heat Rate (TCHR) at generator terminal of each units of the station is 1908.20 Kcal / kWh. Steam temperature and steam pressure are 538 degrees centigrade and 16.67 MPa or 170 Kg/cm² respectively. HEL has also given the details of extent of variation of such TCHR under various loading conditions. It is also submitted that the alternator efficiency is 98.8%. The generating station has two identical 300 MW units and therefore, the station parameters for TCHR and generator efficiency are the same for the two identical units. HEL have submitted that such TCHR at generator terminals, considering efficiency of the generator, is well within the figure specified in the Tariff Regulations. HEL further submitted that the station heat rate is computed based on the guaranteed data provided by the manufacturer and in accordance with the Tariff Regulations and also considering the expected level of continuous blow down. HEL have projected the station heat rate of 2388.00 Kcal/kWh during stabilized operation for the years 2014 – 2015 to 2016 – 2017. It is also mentioned by HEL that although the Tariff Regulations provides additional margin of 50 Kcal/kWh during the stabilization period, HEL will endeavour to operate within 2438.00 Kcal/kWh during the period of stabilization. It is further submitted by HEL that the heat rate of a unit in actual running conditions may vary on account of different parameters like change in ambient conditions, change in</p>
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		<p>loading factor, coal quality, etc. These factors have an adverse impact on heat rate, particularly considering the effects of coastal corrosive environment.</p> <p>The Commission observed that the station heat rate as projected by HEL is on the higher side The station heat rate as projected by HEL is greater than Sagardighi Thermal Power Station (SgTPS) Stage-I (2x300 MW) of West Bengal Power Development Corporation Limited (WBPDC). The generating station of HEL is far newer than SgTPS. Hence, it is general expectation that units at HEL generating station shall not be inferior to the units at SgTPS. Thus the Commission restricted the station heat rate at 2345 Kcal/kWh at par with SgTPS for the years 2014-15, 2015-16 and 2016-17 under the fourth control period. The station heat rate during the stabilization period will be considered as per provision in note below the table at paragraph A in Schedule 9A of the Tariff Regulations.</p> <p>7.0 Transit Loss:</p> <p>HEL have submitted that considering the distance of the generating station from Mahanadi Coalfields Limited, from which coal linkage have been granted for the project, the transit loss of coal would be around 0.8% following prudent utility practice and accordingly they have projected transit loss as 0.8% for the years 2014 – 2015 to 2016 – 2017, which is admitted by the Commission as per provisions in paragraph 6 in Schedule 9D of the Tariff Regulations.</p> <p>8.0 Oil Rate:</p> <p>HEL submitted that oil consumption rate during stabilized operation is mainly a function of level of utilization as indicated by the PLF and the actual coal quality. HEL have also submitted that although HEL will endeavour to run the station with prudent utility practice to attain the norm of 1 ml / kWh towards specific oil consumption during stabilized operation as specified in Schedule – D of the Tariff Regulations, the despatch of the station and quality of coal are</p>
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		<p>beyond their control. During stabilization period, various tests are required to be performed at full load and various control loops are to be proved at part load or at varying load conditions. This would require significant interruptions in terms of warm and hot starts as well as some cold starts. There will also be requirement of low load ignition support for actual coal received being different from design coal. The oil requirement under various cold start, warm start and hot start conditions leads to an additional requirement of secondary oil to the tune of 3.5 ml / kWh during the stabilization period as provided for in case of new units of existing generating stations under the Tariff Regulations. The Commission considers to admit the rate of secondary fuel oil consumption at the rate of 1.00 ml/kWh for stabilized operation as per norms specified for coal based generating station in Schedule – 9D of the Tariff Regulations. The norms of secondary fuel oil consumption during the stabilization period will be determined as per note given below the table under paragraph A in Schedule – 9A of the Tariff Regulations</p> <p>9.0 Operation and Maintenance (O&M):</p> <p>HEL have submitted that considering the ambient corrosive conditions, raw water quality and additional maintenance, required specialized materials and equipment are to be procured as spares for the station. HEL have also submitted that the generating station at Haldia being located in the vicinity of the sea, river water at Haldia is brackish in nature and such characteristics of raw water would have significant influence on operation and maintenance of the plant. Apart from the above requirement, the generating station also would require various routine maintenance, administration practices including safety and security arrangements, compliance with environmental and statutory requirements, training and human resource development activities as well as testing, control and monitoring activities. HEL have submitted that considering the above, the O&M cost is assessed based on OEM quotes, market</p>
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		<p>information and present level of rates and taxes. The O&M cost of Rs. 8.07 lakh / MW is prayed for by HEL for the year 2014 – 2015. The escalation of O&M cost for subsequent years i.e., 2015 – 2016 and onwards has been claimed at a minimum rate of 9%. The Commission admits the O&M expenses for HEL generating station for the years 2014 – 2015, 2015 – 2016 and 2016 – 2017 at Rs. 7.05 lakh / MW, Rs. 7.47 lakh / MW and Rs. 7.92 lakh / MW respectively at par with the other 2 x 300 MW generating station at Sagardighi in the State</p> <p>10.0 Man / MW Requirement:</p> <p>HEL have submitted that based on prudent utility practices, overall manpower requirement including own regular employment and contracted manpower, can be contained to 888 persons (i.e., 1.48 / MW) and the same is accordingly prayed for towards Man / MW ratio. The Commission, however, considers to admit Man / MW ratio of 1.3, the maximum ceiling as per paragraph 8 in Schedule – 9D of Tariff Regulations</p> <p>11.0 The above norms fixed by the Commission for the years 2014 – 2015, 2015 – 2016 and 2016 – 2017 will be considered in determination of generation tariff of HEL for the respective years. The norms of HEL generating station will, however, be incorporated in the Tariff Regulations whenever amendment is made following the statutory procedures.</p> <p>12.0 With the above conclusions the petition of Haldia Energy Limited is disposed of.</p> <p>13.0 Let a copy of this order be served upon Haldia Energy Limited.</p> <p style="text-align: center;">Sd/- (AMITAVA BISWAS MEMBER</p> <p style="text-align: center;">Sd/- (S. DASGUPTA) MEMBER</p> <p style="text-align: center;">Sd/- (R. N. SEN) CHAIRPERSON</p> <p>Dated : 20.01.2016</p>
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