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

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

Case No. 121/2010

M./s OPTCL …. Petitioner
Vrs.
M/s WESCO, NESCO,SOUTHCO,CESU & Others ….. Respondents

In the matter of: **Application under Clause 3.8(2)(a) of OGC Regulations 2006 seeking approval of the Commission to the Long Term Demand Forecast for the period rom 2009-10 to 2018-19.**

For Petitioner : Sri N. R. Mandhata, Sr. Manager (CP) for OPTCL.

For Respondents : Sri S.D.Bhanja, DGM(RA), NESCO, Sri Sudeep Mishra, AGM, NESCO, Sri N. Nayak, Dy. Manager, CESU, Sri D. Rout, Dy. Manager, CESU, Sri D. Panda, AM, CESU, Sri S.K. Patra, DM, WESCO, Sri S.K. Choudhury, Sr. GM, SOUTHCO and Sri S. K. Mahanty, Consultant (Legal), DoE, GoO,

Date of Hearing: 31.08.2010 **Date of Order : 30.09.2010**

ORDER

As a part of statutory requirement with respect to the provisions as mentioned below under Orissa Grid Code Regulations, 2006 (OGC), Orissa Distribution Planning & Operation Code and Practice Direction, issued by the Commission in this regard, STU is required to submit the electricity demand forecast annually to the Commission for approval. This should be based on the data/information furnished by DISCOMs.The statutory provisions in this regard are as below:

Extracts of OGC-Regulations, 2006

(i) Regulation 3.8(2)(a)

"STU shall forecast the demand for power within the State in each of the succeeding five years and provide to the Commission details of the demand forecasts, data, methodology and assumptions on which the forecast is based".

(ii) Regulation 3.10(1)

"The primary responsibility of load forecasting within its area rests with each of the Distribution Companies. The Distribution Companies shall determine peak load and energy forecasts of their respective areas for each category of loads for each of the succeeding five years and submit the same ***annually by 31st December*** *to the Transmission Licensee along with details of the demand forecasts, data, methodology and assumptions on which the forecasts are based. The load forecasts shall be made for each of the External Connection Points between the STU and User and shall include annual peak load and energy projections and daily load curve. The demand forecasts shall be updated annually or whenever major changes are made in the existing forecasts or planning. While indicating requirements of single consumer with large demands (5 MW or higher) the Distribution Company shall satisfy itself as to the degree of certainty of the demand materializing".*

(iii) Regulation 3.10 (2)

"The STU is responsible for integrating the load forecasts submitted by each of the Distribution companies and determining the long term (10 Years) load forecasts for the State within ninety days of the date on which the distribution companies furnished all the required information consistent to the provisions of the OGC. In doing so the STU may apply appropriate diversity factors, and satisfy itself regarding probability of materialization of bulk loads of consumers with demands above 5 MW in consultation with that Distribution Company concerned".

(iv) Regulation 3.10 (3)

"The STU may also review the methodology and assumptions used by the Distribution company in making the load forecast, in consultation with the Distribution company. The resulting overall load forecast will form the basis of planning for expansion of generation and the transmission system".

Extracts of Orissa Distribution (Planning and Operation) Code

Clause 3.4

(i) 3.4.1 : The Licensee is required to forecast the demand for power within the Area of Supply annually or more frequently, if required by the Commission, in each of the succeeding 5 years. The Licensee shall, accordingly, prepare a demand forecast and generally follow the procedures laid herein.

(ii) 3.4.2: The Licensee shall create a database of loads for each Consumer category and for each distribution sub-station connected to its Distribution System and update it on an annual basis.

2. In the earlier load forecasting exercise for the year 2008-09 to 2017-18, due to the late submission of forecast by DISCOMs/OPTCL, the Commission vide its letter dt 14.12.2009 had asked DISCOMs to furnish their relevant data/information on demand forecast to OPTCL within 31.12.09 and OPTCL in turn to the Commission within 31.03.10. Further, on the request of OPTCL, the Commission had extended the date of submission to 31.05.2010.

3. Accordingly, OPTCL has furnished the Long Term Demand Forecast (LTDF) for the State for the period from 2009-10 to 2018-19 vide its letter dt.31.05.2010. In this regard, several rounds of discussions were held at the official level of OERC in presence of OPTCL officials during June and July, 2010. After analysis and cross checking of the submission, thereafter, the Commission had asked OPTCL and DISCOMs on 21.07.10 to submit the information/clarification on the followings in respect of their submission.

(i) Projection in case of Traction and EHT consumers.
(ii) Basis of calculation of Diversity Factor.
(iii) Assumption of growth of numbers of consumers and their specific consumption.
(iv) Basis of consideration of load factor at different interconnection points.
(v) Loss improvement measures taken by DISCOMs.
(vi) Effects of Demand Side Management (DSM).

4. Since the matter involves of wider discussion, the Commission decided to finalise the matter through a consultative hearing and had directed OPTCL on 10.08.2010 to file a

formal petition. Accordingly, in compliance to the directions of the Commission & requirement as per the provisions of OGC Regulations-2006, OPTCL has filed a formal petition. Therefore, the Commission vide its letter dated 18.08.2010 issued notice to WESCO,NESCO,SOUTHCO,CESU, IPICOL & Deptt. Of Energy, Govt. of Orissa to appear before the Commission on 31.08.2010 to furnish their considered views on the matter of demand forecasting of the State. In the hearing conducted on 31.08.2010 on the aforesaid matter the following persons were present and submitted their views:-

i) Sri N.R.Mandhata, Sr. G.M.(CP),OPTCL, ii)Sri S.K.Behera, A.M.(CP),OPTCL, iii) Sri S.D.Bhanja, DGM(RA), NESCO, iv) Sri S.Mishra, A.M. NESCO, v) Sri N.Nayak, D.M.,CESU, vi) Sri S.Rout, D.M.,CESU vii) Sri D.Panda, A.M.,CESU, viii) Sri S.K.Patra, D.M.WESCO, ix) Sri S.K.Choudhury, Sr.G.M., SOUTHCO x)Sri S.K.Mohanty, Legal Consultant, Govt. of Orissa,

5. In the beginning Sr.G.M.(C.P.) on behalf of OPTCL made a power point presentation on LTDF for the FY 2009-10 to 2010-19 for the state of Odisha and put forth the justification of load growth and explained the methodology being adopted for preparation of the forecast. The matter was heard at length in presence of above mentioned authorized representatives from OPTCL and DISCOMs.

6. The Commission while going through the submission/presentation also asked about the methodology adopted and assumptions made in preparing the report. The licensees have stated that the report has been prepared with adoption of “End Use” methodology as it is being followed by other utilities and CEA. OPTCL submitted that the demand actually achieved is nearly matching with the forecasted demand for the FY 2009-10, hence the methodology adopted can be relied upon for demand estimation for the future years hence, OPTCL has requested for approval of its submission. OPTCL has considered FY 2008-09 as the base year and FY 2009-10 as initial year of forecast. It has integrated the submission of DISCOMs for initial five years and extrapolated it for next five years. In this regard, the growth rate of consumers and their specific consumption in case of LT loads and demand growth expected in case of HT/EHT loads are being considered for forecasting the demand for future years. In addition to the submission of DISCOMs, OPTCL submitted that it has modified the anticipated demand in respect of some EHT loads as per the data furnished to them by IPICOL. OPTCL further clarified that decrease in demand in some grid S/S in

future are due to sharing of existing loads by new upcoming grid S/S. All the licensees have stated that the increase in demand is also due to the implementation of centrally sponsored RGGVY scheme and State sponsored BGJY schemes, expected to be completed by 2012 with some spill over work likely to be completed during the year 2013.

7. CESU submitted that, “End Use” methodology being reliable and consistently used by other utilities has been adopted for preparation of its load forecast. To arrive at the peak load and diversity factor, the data received from the Energy Billing Centre (EBC) of OPTCL has been considered by CESU. NESCO, SOUTHCO, WESCO have also adopted the same methodology for their demand forecast and also submitted their clarifications with reference to the Commissions letter dt.21.07.10 DISCOMs have considered the actual energy sales for the FY 2008-09 as the base year of forecast. Demand for initial year of forecast i.e. FY 2009-10 has been found out after considering the anticipated growth in number of consumers and their specific consumption along with reduction in loss. Licensees further stated that the growth in demand of DISCOMs has been estimated considering the likely increase in demand expected due to implementation of RGGVY scheme, BGJY scheme, growth in large industry, addition of new heavy industries, traction S/S in addition to the normal growth of consumers and their use due to change in life style/standards of living. All the distribution licensees agreed to the LTDF submitted by OPTCL for approval.

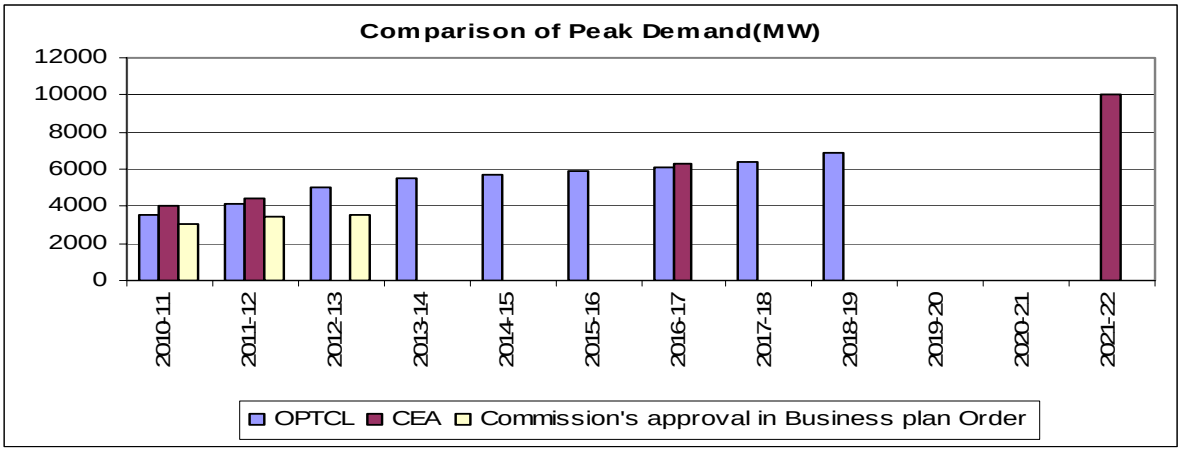
8. During the hearing, in reply to the queries of the Commission as regards to the proposal of adoption of new software tool for load forecasting developed by Infosys, OPTCL stated that the information/data so collected directly form the power transformers shall not solve their purpose at present. It may be easier and accurate to get the load at each interconnection point but it is very difficult to find out the consumption in each category of consumers, which is required as per OGC-Regulations 2006. Further, it is a part of assignment entrusted to Infosys under Entrepreneurs Resource Planning (ERP) package to collect the demand at each interconnection point and has nothing to do with load forecasting now. At the moment, it has no relation with the recent submission; as it is still under examination for implementation. OPTCL is taking up the said matter separately with Infosys and DISCOMs to address the issue of load forecasting through ERP package so that it should be in consistent with the provisions as specified in the Regulations and codes

in force. DISCOMs also stated that they are also analyzing the advantages and disadvantages of the proposal of Infosys, hence the submission of OPTCL as regards to LTDF may please be approved.

9. The Commission heard the parties and considered the suggestions/views furnished by them. While comparing the energy requirement (MU), system peak demand (MW) forecast by the Central Electricity Authority in its 17th EPS report and Commissions approval in Business Plan order dt.20.03.2010 (shown in the Table-1), it has been noted that the submission is widely varying to that submitted in Business Plan but the expected peak demand in the FY 2016-17 is nearly matching with the figures of CEA.

Table-1

COMPARISON OF ENERGY REQUIREMENT AND SYSTEM PEAK DEMAND (MW) FORECAST BY CEA, OPTCLAND COMMISSION'S APPROVAL IN BUSINESS PLAN..							
		OPTCL		**CEA**		**Commission's approval in Business plan Order dt 20.03.2010**	
Sl. No.	**Year**	Energy Demand	Peak Demand	Energy Demand	Peak Demand	Energy Demand	Peak Demand
1	2010-11	25153	3546	24508	4020	20154.0	3068
2	2011-12	29494	4119	27149	4459	22755.2	3464
3	2012-13	35877	5059			23520.7	3580
4	2013-14	38842	5466				
5	2014-15	40462	5690				
6	2015-16	41905	5889				
7	2016-17	43485	6108	39096	6330		
8	2017-18	45241	6350				
9	2018-19	49259	6909				
10	2019-20						
11	2020-21						
12	2021-22			63098	10074		



10. The primary objective of the electrical energy forecast is to assess the electricity demand in each category of loads at various load centers so that the licensees are able to plan and arrange the electrical energy to meet the demand in full alongwith the augmentation/upgradation of associated transmission and distribution network. The Commission also feels that the electricity demand forecast can also be utilized as a tool for planning the Demand Side Management (DSM) strategy on long term basis for optimizing peak demand. The Commission further feels that expected load growth in various categories of consumers is necessary to plan for provision of required infrastructures for a sustainable growth of power sector.

11. While going through the submission, it has been observed that the prposed overall growth of 20% in CESU and 13% growth in the State in each year in case of demand for EHT industries may not be achievable as most of the industries are relying on the power available from their own CGPs. Hence, while doing the load forecast, licensees should consider the demand of industries (which are having valid MOU or actual commitment to avail power) with appropriate load factor so that it will have a fair chance of materialization in future.

12. Considering the above facts into consideration and above views , the Commission hereby accords in-principle approval of the LTDF as submitted by OPTCL basing on the data submitted by DISCOMs for the period from 2009-2010 to 2018-19 as shown in Table No 2.

Table No. 2

DEMAND FORECAST (MW / MU) UP TO THE YEAR ENDING 2019.

Sl. No	Name of Distribution Company	2010-11		2011-12		2012-13		2013-14	
		Energy Demand (MU)	Peak Demand (MW)	Energy Demand (MU)	Peak Demand (MW)	Energy Demand (MU)	Peak Demand (MW)	Energy Demand (MU)	Peak Demand (MW)
1	**CESU**	8318	1133	10663	1437	13777	1862	15186	2051
2	**SOUTHCO**	3164	501	3714	586	4443	695	5140	799
3	**WESCO**	7725	1008	8130	1067	8803	1157	9242	1216
4	**NESCO**	5947	904	6986	1029	8854	1345	9273	1400
System Demand		**25153**	**3546**	**29494**	**4119**	**35877**	**5059**	**38842**	**5466**

Sl. No	Name of Distribution Company	2014-15		2015-16		2016-17		2017-18		2018-19	
		Energy Demand (MU)	Peak Demand (MW)	Energy Demand (MU)	Peak Demand (MW)	Energy Demand (MU)	Peak Demand (MW)	Energy Demand (MU)	Peak Demand (MW)	Energy Demand (MU)	Peak Demand (MW)
1	**CESU**	15979	2164	16538	2245	17181	2338	17947	2447	20225	2763

2	**SOUTHCO**	5292	823	5453	848	5621	874	5799	902	5985	932
3	**WESCO**	9619	1264	10016	1314	10432	1367	10863	1421	11316	1479
4	**NESCO**	9572	1439	9898	1482	10251	1528	10632	1579	11733	1735
System Demand		**40462**	**5690**	**41905**	**5889**	**43485**	**6108**	**45241**	**6350**	**49259**	**6909**

13. The Commission does not agree to the submission on energy requirement (MU) in future years as it is widely varying to that approved recently in their respective Business Plan orders. Further, as per the clause 3.10(3) of OGC-Regulations, 2006, the resulting overall forecast may be taken as the basis of planning for expansion of generation and transmission system. Hence, the Commission directs the Licensees that the expected peak demands for future years may be considered for the purpose of Transmission Network Planning and Generation Expansion only.

14. OPTCL & DISCOMs should adhere to the time as specified in the Regulations and Codes as regards to the submission of LTDF in future. Henceforth, non-submission / delayed submission of the demand forecast by the Licensees, which is gross violation of the Orissa Grid code Regulations 2006 shall be viewed seriously. While forecasting the electricity demand, the Licensees should rely upon the genuine demand expected in future years in different category of consumers and apply suitable diversity factor to arrive at the simultaneous peak demand.

15. Accordingly the case is disposed of.

Sd/

(B. K. Misra)
Member

Sd/

(B. K. Das)
Chairperson