ORISSA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAWAN
UNIT-VIII, BHUBANESWAR-751 012
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Present : **Shri D.K.Roy, Chairman**
Shri H.S. Sahu, Member

Case No.25 of 2001

M/s Western Electricity Supply Co. of Orissa Ltd. …. **Petitioner**

- Vrs. -

M/s Indian Aluminium Company Ltd. … **Respondent**

For Petitioner	:	Shri N.D. Chawla, Managing Director & Shri S.C. Lal, Advocate
For Respondent	:	Mr. M. George, Vice-President & Mr. R. Mishra, C.G.M. of INDAL
For Affected Parties	:	Mr. N.C. Nayak, Sr. G.M. (R&T), GRIDCO Mr. B.K. Nayak, Advocate for NESCO & SOUTHCO.

Date of argument : **08.06.2001**

Date of Order : **02.07.2001**

O R D E R

1. This order arises out of an application made by the licensee M/s. Western Electricity Supply Company of Orissa Ltd. (herein after, for short, WESCO), Burla, Dist. Sambalpur for the approval of the Commission for its entering into a special agreement with M/s. Indian Aluminium Company Ltd. (herein after, for short, INDAL), Hirakud for supply of power.

1.1 The Commission admitted the application and issued notice to INDAL for appearance and filing of reply. As a special agreement by the licensee with a potential and big consumer like INDAL may effect the general tariff structure of the Bulk Supply Licensee and commercial relationship of other Distribution Licensees with their industrial consumers, Commission considered it appropriate to implead M/s. Grid

Corporation of Orissa Limited (herein after, for short, GRIDCO) and other three Distribution Licensees of the State as affected parties. Accordingly notices were issued to GRIDCO, SOUTHCO, NESCO, CESCO for appearance and filing of the respective replies. In response to the Commission's aforesaid notices all respondents appeared in this case through their authorised representatives, INDAL, GRIDCO and SOUTHCO furnished their written submissions and were heard.

1.2 Although no reference has been made in the application to any specific provision/ Regulations, the approval as has been sought for is purportedly under Regulation 81 of the OERC Distribution (Condition of Supply) Code, 1998, which reads as follows:-

"The licensee may, having regard to the nature of supply and purpose for which supply is required, fix special tariff and conditions of supply for the consumers not covered by the classification enumerated in this Code. For such purpose licensee may enter into special agreements with the approval of the Commission with suitable modifications in the Standard Agreement Form. The tariff in such cases shall be separately approved by the Commission."

2. WESCO in its application to the Commission stated that INDAL is operating an aluminium smelter at Hirakud, Orissa with a Captive Power Plant of 67.5 MW capacity and has taken power supply as a consumer of WESCO with a contract demand of 40 MVA to back up their captive supply. INDAL proposes capacity expansion of their aluminium smelter by 35000 tons per year and has been granted permission under Section 44 of the Supply Act, 1948 by OERC vide OERC Case No. 10/97 for installation of an additional 77 MW of CPP. WESCO approached INDAL to avail power for the proposed smelter from the State grid at a reasonable tariff to be approved by the Commission instead of establishing a CPP, as the State is surplus in power.

3. The ground for special agreement given by WESCO are as follows.

3.1 The State is surplus in power. There is gradual reduction of consumption of power due to industrial recession which requires encouragement for utilisation of surplus power.

3.2 Cross subsidisation is a fact of tariff today and likely to be continued in the future also. Cross subsidy can come only from the HT and EHT group of consumers for which it is necessary that industries like INDAL are attracted to the consumers fold who can provide necessary cross subsidy to the low voltage classes of consumers and dissuaded from setting up of CPP.

3.3 The load requirement of INDAL will be around 50 MW with effect from 01.8.2002. Induction of a load with a high load factor of +90% for aluminium smelter will give an additional firm load for the grid and the consumer will also undertake not to reduce the existing contract demand of 40 MVA.

3.4 The proposed smelter of INDAL is only 6 KM away from Hirakud Hydro Power Generation Station and the high power factor of supply will have a stabilising effect on the system voltage at EHT.

3.5 Use of power in the State will promote more economic activities and should be a preferred alternative over trading of power outside the State.

3.6 The proposed arrangement will help reduction of the revenue expenditure gap and will improve the financial condition of WESCO as it will generate steady stream of revenue.

3.7 These benefits will be lost if INDAL chooses to go for captive generation.

3.8 WESCO has further stated that for overall development of the State including the need for creating employment potential, such large power consuming industry should not only be attracted but also should be given incentive by way of attractive tariff. This will encourage industrialisation of the State and also dissuade them from setting CPP and continuing with the grid.

3.9 WESCO further states that an arrangement of this nature will have a stabilising effect on the process of power reform in Orissa as the scheme takes care of the interests of State, the licensees and of the consumers.

3.10 WESCO has requested for concessional tariff similar to the tariff approved by the Commission in its last tariff order for a contract demand of 100 MVA and above with a guaranteed monthly load factor of 80% as expenditure on electricity constitute a significant component in the cost of its production.

3.11 The special feature of the tariff proposal for INDAL is that consolidated energy charge @ Rs.1.82/kWH for guaranteed monthly energy consumption corresponding to 50 MW contract demand at 90% load factor shall be payable even in case the actual consumption is lower in any month. The consolidated rate of Rs.1.82/unit will vary only to the extent of variation in BST to WESCO over the present reference tariff of 101.74 paise/unit and demand charge of Rs.200/KVA. The special rate of Rs.1.82 paise is after taking into consideration any discount for prompt payment within 48 hours of billing and thus no further discount shall be admissible making it obligatory for the consumer to pay within 48 hours.

3.12 The proposal is not to modify or override the prevailing tariff order as the proposed plant of INDAL will consume electricity only from August, 2002.

3.13 It was pleaded that major policy decision and business plan of INDAL to set up the expansion phase of the plant at Hirakud in Orissa depends on this; and considering the gestation period for setting up the plant, Commission decision was urgently needed.

4. **Salient feature of the Draft Agreement**

Purpose of supply : For supply of electrical energy to the aluminium smelter of 35000 TPY capacity being installed by consumer situated at Hirakud, Orissa.

Date of power supply : 01.8.2002

Duration of Agreement : From 1st of August, 2002 and shall continue to be in force until the expiry of 5 years.

Termination of the Agreement : Thereafter shall so continue until the same is terminated by either party by giving to the other two calendar months notice in writing to terminate the agreement.

If the power supply remains disconnected for a period of two months for non-payment of tariff or non-compliance of directions issued under the OERC Distribution (Conditions of Supply) Code, 1998 and no effective steps are taken by the consumer for removing the cause of disconnection and for restoration of power supply, the agreement shall be deemed to have been terminated on expiry of two months period from the date of disconnection without further notice.

Condition of Supply : OERC Distribution (Conditions of Supply) Code, 1998 as modified from time to time to the extent they are applicable shall be deemed to form a part of this agreement.

Quantum of Supply : Supply upto but not exceeding a contract demand of 50 MW with a guaranteed monthly consumption corresponding to load factor of 90% for contract demand of 50 MW irrespective of the actual level of consumption if found to be lower in any month.

Maximum Demand : When it exceeds 50 MW the contract demand will be reviewed and revised with higher maximum demand and the corresponding guaranteed energy consumption will be calculated with 90% load factor with new contract demand.

Reduction of contract demand : The consumer will not reduce the contract demand of 50 MW within the five year period of agreement.

The consumer also undertakes not to reduce the existing contract demand of 40 MVA.

Voltage of Supply : 132 KV

Security Deposit : Rs.10 crores in pursuant to OERC Distribution Code, 1998 to be paid in favour of WESCO by INDAL and INDAL undertakes to make any additional security deposit as and when called upon by the engineer.

Charges to be paid : Consolidated energy charge of Rs.1.82/kWH for guaranteed monthly energy consumption corresponding to 50 MW contract demand at 90% load factor and shall be payable even in case the actual consumption is lower in any month.

A (Minimum guaranteed monthly charges in Rs.) = 1.82 x 50000 x 0.9 x 24 x D

Where D is the number of calendar days in the concerned month

The consolidated rate of Rs.1.82/kWH will vary only to the extent of variation in BST to WESCO over the present reference tariff of 101.74 paise/kWH and demand charge of Rs.200/KVA.

The special rate of Rs.1.82 paise is after taking into consideration any discount for prompt payment within 48 hours of billing and thus no further discount shall be admissible. Accordingly the consumer shall pay within 48 hours.

If the maximum demand is less than or equal to contract demand certain stipulations have been provided in the draft agreement. There is also a provision about payment of monthly minimum charge or demand charge.

The agreement provides the consumer to pay electricity duty or such other levy or tax as may be prescribed under any other law in addition to the charges, fuel surcharge and transformer loss payable under OERC Distribution (Condition of Supply) Code, 1998.

5. INDAL in its rejoinder almost repeated all the points raised by WESCO for signing of the special agreement and pointed out that the commissioning of their plant will take place from 14th to 20th month from the date of approval by OERC. As the investment would be over Rs.200 crores, a firm commitment would be required from OERC so that INDAL can go ahead with investment.

5.1 INDAL has stated that if it expands its captive base to meet the additional power requirement for proposed expansion, the state's captive generation would increase and the State would lose a potential EHT consumer to that extent and at the same time the energy drawal for the existing smelter (about 100 mu per annum) also will be eroded.

5.2 T&D loss in Orissa is presently as high as 42% (proj. 2000-01). When INDAL as a bulk consumer draws more than 50 MW at negligible transmission loss (nearest supply sub-station being Burla P/H at 6 Kms on EHT line), it will result in overall reduction of T&D loss, by about 1.5%.

5.3 INDAL has stated that the petition filed before the Hon'ble OERC, WESCO has indicated its interest to supply power to INDAL at Rs.1.82 per kWh but internationally, power is available to aluminium producers at a rate of 20 mils/kWh which translates to Rs.0.90/kWh. In our country, other aluminium producers have their own power with energy cost close to Rs.0.80/kWh. INDAL estimates that upto twice that rate, i.e. say Rs.1.65/kWh may enable them to remain viable and beyond that it may be unacceptable. They requested to consider the case favourably and provide power at a total effective rate close to Rs.1.65/kWh so that INDAL can produce aluminium at a competitive rate and can expand its industrial activity in Orissa with concomitant benefits to the State.

5.4 INDAL had originally planned a capacity addition of 35000 TPY. However, due to certain constraints the present expansion will be 27,200 TPY. Further expansion is planned based on economics of the present expansion.

5.5 INDAL proposes starting of commissioning of the new smelter from 01.8.2002. As the expenditure involved is over Rs.200 crores, construction can start only after approval of a reasonable power tariff by OERC. The commissioning will take place from 14th-20th months from the date of approval by OERC. Consequently the power requirement will gradually build up starting from 14th month, reaching the full requirement in the 20th month. Accordingly during this period the minimum energy charges payable may be based on actual demand and the corresponding consumption and not based on 50 MW.

5.6 INDAL has suggested that to encourage Power Intensive Industries to enable them to help in the growth of the state, a graded tariff be made available to them. Based on 90% load factor the following tariff is proposed by INDAL.

> 100 MVA and above	Rs.1.50/KWH
> 50 to < 100 MVA	Rs.1.65/KWH
> 25 to < 50 MVA	Rs.2.00/KWH
< 25 MVA	Rs.2.50/KWH

5.7 INDAL suggested that the standard agreement clauses may be allowed to be changed covering the duration of agreement, condition of supply, quantum of supply, type of supply, security charges and the rate to be paid by the consumer.

6. GRIDCO in their rejoinder dtd.24.5.01 stated that since the proposal of the petitioner shall be effective from 01.8.02 there may not be any impact on the BST of WESCO

for the year 2001-02 whereas the same shall have an impact on the BST of 2002-03 as GRIDCO is bound to procure power from costlier sources.

6.1 GRIDCO requested that in their revenue requirement for FY 2001-02 the estimated sale to DISTCOs is 11917 MU including transmission loss and estimated energy procurement from the State generator is 10730 MU thus requiring GRIDCO to procure 1187 MU from costlier sources. In view of the above scenario the extra 50 MW power required by INDAL will have to be procured from costlier sources from 01.08.2002.

6.2 GRIDCO prayed that any additional requirement of power by WESCO on account of sale to INDAL should be allowed to be billed at the costliest rate of procured power together with transmission and any other charges applicable to them. GRIDCO further in a rejoinder dtd. 04.6.01 provided statistical data about the justification for procuring 420 MU of power from costlier sources i.e. from the central sector stations and stated that GRIDCO has no objection if OERC considers the prayer of GRIDCO to meet extra demand of INDAL to allow GRIDCO to purchase costlier power from central sector which may be taken into consideration at the time of determination of BST.

7. The Managing Director, SOUTHCO in the written reply submitted that SOUTHCO will not be affected after execution of the said agreement and SOUTHCO has no objection for execution of agreement in question.

8. The Executive Director, NESCO in his written submission of 31.5.01 had stated that he has no objection to the special agreement to be executed between WESCO and INDAL as the execution of the special agreement is for the benefit of the company and for the benefit of the State.

9 The representative of INDAL during the course of the hearing on 08.6.01 submitted a calculation stating that the rate proposed by Director (Tariff) is based on consideration of cost of supply but has not taken into consideration the revenue impact on account of power supply to an industry with a contract demand of 100 MVA. The representative of INDAL has supplied the following calculation.

Units available for sale based on 100 MVA power, 80% load factor and 90% power factor = 100 x 0.8 x 0.9 x24 x 365 = 630.7 MU
Revenue generation at Rs.2/kWh = 2 x 630.7 = Rs.1261.4 Million

Units available for sale based on 100 MVA power, 90% load factor and 98% power factor = 100 x 0.9 x 0.98 x24 x 365 = 772.6 MU

Additional units available = 772.6 – 630.7 = 141.9 MU
Variable cost of these additional units = 141.9 x Rs.1.017 = Rs.144.3 Million
where Rs.1.017 is the purchased energy sale for WESCO. Though this is taken, for actual evaluation the average sale to all DISTCOs should be considered. This is lower.

Revenue generation required to maintain same profitability
= 1261.4 + 144.3 = Rs.1405.7 Million
Therefore, equivalent rate per unit = 1405.7 / 772.6 = Rs.1.82/kWh
The above calculation has not considered prompt payment rebate.

9.1 In the above calculation INDAL has tried to establish that the net profit as would have been available to WESCO by selling 100 MVA power at 80% load factor remains same if WESCO sales 100 MVA at 90% load factor and 98% power factor at a rate of 182 paise/unit.

10. During the course of the hearing on 25.5.01, it was pointed out that with the introduction of Availability Based Tariff there will be an availability of 632 MW of installed capacity of NTPC stations. This will require an annual fixed cost payment by GRIDCO of about Rs.340 crores. Since the annual fixed cost becomes the liability of GRIDCO, it is necessary that GRIDCO utilises to the best extent the Orissa share of installed capacity of NTPC to reduce the overhead of fixed charges.

10.1 Commission finds from reporting of GRIDCO that during 2000-01 there was a total drawal of 12303 MU from the various generating stations which included export of 875 MU to Andhra Pradesh. After implementation of ABT the total availability from various sources to GRIDCO excluding surplus power of captive generation may be around 14000 MU. After meeting the requirement of AP there will be a still surplus of about 1700 MU possibly during 2001-02. Therefore, it is extremely relevant that large industries should come to the State with higher level of consumption which will provide a continuous revenue stream for the licensee and at the same time provide necessary cross-subsidy to the low voltage class of consumers. GRIDCO's contention that it will need to contract 420 MU of power from costlier sources to meet the increased demand of Indal has no merit under post ABT scenario.

10.2 Export of power outside the State is susceptible to regulatory risk and other uncertainties. Contracts for export of power even at marginally higher rate can be a short term solution to deal with the surplus power position of the State and in any case the requirement of the consumers of Orissa and the interests of industrialization of the State has to take precedence. We have to protect and promote industries who propose to set up new plants in the state and also interests of the existing industries of the State. In this context WESCO's proposal to supply power to INDAL at a reasonable tariff level has good merit.

10.3 The Commission had made a beginning and given signal to industries by prescribing a tariff with a composite rate of 200 paise/unit for any industry with a contract demand of 100 MVA and above operating at the power factor of 90% with a guaranteed load factor of 80%. Even though a composite rate of 200 paise/unit has been prescribed for such an industry, it has an in-built component of fixed cost and a variable cost rolled into one. A separate fixed cost to cover the demand charge and a separate energy charge has not been prescribed as the industry is to operate with an assured load factor of 80%. With the existing rate of Rs.200/KVA of demand charge translated to unit cost at a load factor 80% it works out to 38.05 paise/unit. Therefore, the in-built energy component of the composite tariff of 200 paise/unit is 161.95 paise/unit or 162 paise/unit.

10.4 If the industry operates at a load factor and power factor of 90% the volume of energy consumption will go up with the fixed cost component remaining fixed which implies that the cost per unit charge at 90% LF and 90% power factor will work out to 33.82

paise/unit. So the composite rate for operation of an industry with a load factor of 90% and a demand charge of Rs.200/KVA will be 162+33.82 = 195.82 paise/unit.

10.5 A table giving an analysis of comparative rates at different power factor and load factor will amplify the position further.

Demand charge : Rs.200/KVA Billing Demand – 100% of Contract Demand

Energy charge : 162 paise/unit

Power Factor	Load Factor	Demand Charge/ unit	Energy Charge/ unit	Total Charge/ Unit	Incentive for P.F.	Incentive for prompt payment	Net payable (p/u)
90%	80%	38.05	162	200.05	NIL	1%	198.05
90%	90%	33.82	162	195.82	NIL	1%	193.87
98%	80%	34.95	162	196.95	0.5%	1%	194.00
98%	90%	31.06	162	193.06	0.5%	1%	190.18

10.6 The nature of supply for the proposed industry is that it can provide a sustained load and revenue to the licensee and hence stands on a different footing from similar other power intensive industries who are not in a position to provide a guaranteed load factor and large contract demand of 50 MW.

10.7 The next logical step may be special agreement in terms of Condition 81 of the Code, 1998 which provides that having regard to the nature of supply and purpose for which supply is required special tariff may be fixed for consumers not covered by the classification enumerated in the Code, 1998.

10.8 It will be extremely logical that a special tariff may be provided for this kind of industry who assures a monthly guaranteed load factor with its consequential benefits and a guaranteed off take of reasonably large load to get a reduced tariff compared to other industries who do not provide such guaranteed off take. In this perspective special agreement may be permitted for consumers of installed capacity of 50 MW and above with a guaranteed off take of 90% load factor.

10.9 In order to attract industries to the State it is perhaps necessary to give a signal to the intending industries to set up their plants with an attractive rate to utilise the present power situation in the State in particular and the region in general.

11 The Commission examined Condition 81 of the OERC Distribution (Condition of Supply) Code, 1998 regarding special agreements which provides that the licensee may having regard to the nature of supply and purpose for which supply is required, fix special tariff and condition of supply for the consumers not covered by the classifications enumerated in the Code. For such purpose the licensee may enter to the special agreement with the approval of the Commission with suitable modification in the standard agreement form. The tariff in such cases shall be separately approved by the Commission.

11.1 After having examined the submissions made by the licensee, INDAL and other participants in the proceeding, the Commission is of the opinion that the licensee has tried to establish that very large consumers with a guaranteed load factor and guaranteed off take should be treated on a different footing from industries engaged in similar activities but not capable of operating their plants on a sustained load factor basis. The licensee has also established that there is necessity for suitable modification to the standard agreement form to accommodate very large industries with guaranteed load factor.

11.2 Even while entering into special agreement the tariff for such cases need to be separately approved by the Commission as required under the regulation without an amendment to the existing tariff notification.

12. INDAL is asking for a tariff that will make its product internationally competitive or at least allow it to survive. But the tariff it is asking for is much less than the cost of any new thermal generation plant. If GRIDCO were to purchase power to meet this additional load then the tariff at which they are asking that power would have meant a loss of revenue to GRIDCO. But the Commission has to think of accepting a tariff less than the marginal cost of generation as the State is required to meet the obligation of fixed cost of dedicated generating stations and central allocation in the post ABT scenario. Therefore, the comparison has to be made between the variable cost of these dedicated generating stations versus the tariff the industry is asking for in a surplus

situation. The Commission is not in favour of approving a tariff only because such a tariff will make the industry competitive in the market – nationally or internationally. But if lower tariff can result in lessening the overall burden of fixed cost for the Bulk Supply licensee arising out of long term contract and central sector allocation, the Commission would consider it approvingly.

12.1 If the tariff now being offered to consumers with contract demand of 100 MVA and above at a guaranteed load factor of 80% and power factor of 90% is recalculated based on a load factor of 90% and power factor of 98% of contract demand of 50 MW with the rebates as applicable for prompt payment and incentive for maintenance of high power factor, the composite rate will come to 190.18 paise per unit. In this background the composite special rate of 182 paise per unit as proposed by WESCO to attract new industry and win it away from installation of a CPP is quite reasonable and can be approved in the overall interest of the State.

12.2 This price has, however, to be linked to the prevailing bulk supply tariff and the fuel price adjustment. The duration of agreement should not exceed four years as earlier proposed by WESCO and the principle of tariff setting may be reviewed thereafter. The principle now adopted should find incorporated in the tariff proceeding so as to be effective for the year 2002-03 as a special tariff in pursuance of a special agreement. This is accepted with the objective of attracting large investment to the State to provide a base load for the grid, prevent over frequency conditions, bring in a steady stream of revenue to the licensee, ensure availability of cross subsidy to the various classes of consumers, create conditions for drawal of power from the grid, dissuade installation of CPP, help reduction in payment of fixed overhead charges for NTPC stations after implementation of the ABT and help utilisation of the surplus power in the State and region.

13 The Commission does not consider it necessary to go into the details of the draft agreement submitted by the licensee and the modifications proposed by INDAL which has to be mutually worked out by the parties within the broad parameters now approved by the Commission. In view of the facts and circumstances as discussed and detailed above, the applicant Licensee WESCO is permitted to enter into a special

agreement with the consumer INDAL in consonance with the observations made herein before and submit the same within three months from the date of this order.

The petition is allowed accordingly.

Sd/-	Sd/-
(H. S. SAHU)	**(D. K. ROY)**
MEMBER	**CHAIRMAN**