ODISHA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAWAN
PLOT NO. 4, CHUNUKOLI, SHAILESHREE VIHAR,
BHUBANESWAR-751021
****

Present: Shri U. N. Behera, Chairperson
Shri G. Mohapatra, Member

Case No. 49/2021

OPTCL …… Petitioner
Vrs.
DoE, GoO & Others …… Respondents

In the matter of: **Application under Chapter 3 of Odisha Grid Code (OGC) Regulations, 2015 read with Clause 16 of the License Conditions of OPTCL seeking approval of the 14th Intra State Transmission Plan for Odisha (FY 2022-23 to 2026-27).**

For Petitioner: Shri Samir Swain, Dirrector (Fin.), Shri Rajib Lochan Panda, Director (Projects), Shri Sudipta Kumar Sengupta, CGM (Const.), Shri Bijay Das, Sr. GM (RT&C) and Shri Tapas Patnaik, GM (RT&C), Shri Biplab Behera, AGM (Elect.) of OPTCL.

For Respondent: Shri V. Wagle of TPCODL, Shri K. C. Nanda, DGM (Fin.), TPWODL, Ms. Malancha Ghose, Asst. GM (RA), TPNODL and Shri Binod Nayak, Asst. GM (Comm.), TPSODL, the representatives of GRIDCO and the representative of OHPC, Ms. Sonali Pattnaik, ALO, I/c, DoE, GoO and Shri R. P. Mahapatra are present.

Nobody is present on behalf of OTPC, CEA, ERPC, PGCIL and OPGC.

ORDER

Date of Hearing: 23.11.2021 **Date of Order:12.01.2022**

The Petitioner OPTCL (State Transmission Utility) is entrusted with the responsibility of preparing a long-term Transmission System expansion plan and submit it to the Commission for approval under various applicable provisions under Electricity Act, 2003, OGC 2015 and License Conditions. The state transmission proposal including the system strengthening schemes need to be based on planning studies and as mandated under Section 39(2) of the Electricity Act, 2003, to be finalised in consultation with CTU, State Govt., Generating Companies, Regional Power Committee, Central Electricity Authority and any person notified by the state govt. on this behalf. The extract of Electricity Act, 2003, License Condition and Odisha Grid Code, 2015 depicting the relevant provision are given below:

Extracts of Electricity Act, 2003

As per the Section 39(2) of the Electricity Act, 2003:

The functions of the State Transmission Utility shall be -

(a) to undertake transmission of electricity through intra-State transmission system;

(b) to discharge all functions of planning and co-ordination relating to intra-State transmission system with –

(i) Central Transmission Utility;

(ii) State Governments;

(iii) generating companies;

(iv) Regional Power Committees;

(v) Authority;

(vi) licensees;

(vii) any other person notified by the State Government in this behalf;

(c) to ensure development of an efficient, co-ordinated and economical system of intra-State transmission lines for smooth flow of electricity from a generating station to the load centres;

(d) XXX

Extract of Orissa Grid Code Regulations, 2015

3.8 ***PERSPECTIVE PLAN***

(1) The STU is charged with the responsibility to prepare and submit a long-term (10 years) plan to the Commission for Transmission System expansion to meet the future demand in accordance with the Licence Conditions and the practice direction of the Commission.

(2) For fulfilment of the above requirement the STU shall:

(a) 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 forecasts are based.

(b) GRIDCO shall prepare a least cost generation plan for the State to meet the ten years load demand as per the forecast, after examining the economic, technical and environmental aspects of all available alternatives taking into account the existing contracted generation resources and effects of demand side management.

(c) Discharge all functions of planning and co-ordination relating to the State Transmission System compatible with the above load forecast and generation plan a long-term (10 years) plan for the Transmission System in accordance with Section-39 (2) (b) of the Act, compatible with the above load forecast and generation plan in consultation with CEA. Central Transmission Utility (CTU) shall have to be consulted in connection with systems to evacuate power from inter-State Transmission System.

(3) The STU shall prepare and submit to the Commission on an annual basis, a statement showing in respect of each of the 5 succeeding financial years forecasts of circuit capacity, power flows and loading on the Transmission System under Transmission Licence General Conditions Clause-15.5 of Appendix 4B to OERC (Conduct of Business) Regulations, 2004.

Extracts of Transmission Licence Conditions

CONDITION 16.1

The Licensee shall plan and operate the Transmission System, so as to ensure that Transmission System built, operated and maintained to provide an efficient, economical and co-ordinated system of Transmission, in accordance with the Orissa Grid Code and the Overall Performance Standards.

2. OPTCL, in obedience to the provisions under Section 39 (2) of the Electricity Act, 2003 read with Regulation 3.8 (1) of Odisha Grid Code, 2015 and Conditions 16 of the Licensee Condition has filed the Intra State Transmission Plan (ISTP) report of Odisha for the period from 2019-20 to 2021-22 on 29.3.2017.

3. The Commission vide order dt.18.10.2017 in Case No. 60/2016 (Investment Proposal) had accorded in-principle approval to the feasible projects (07 sub-stations) for implementation during balance period of 13th Plan period (2019-20 to 2021-22) under the Intra-State Transmission Plan.

4. The Commission vide order dated 09.04.2019 in Case No. 18/2017 had granted in-principle approval to the feasible projects (15 sub-stations, 12 transmission lines) for implementation during the balance period of 13th plan period (2019-20 to 2021-22) under the Intra-State Transmission Plan.

5. OPTCL has filed the 5 year Business Plan for the 2nd control period i.e. FY 2019-20 to FY 2023-24 which has been registered as Case No. 63/2020. The said control period comprises of balance period of 13th Transmission Plan (FY 2019-20 to 2021-22) and 1st two years of 14th Transmission Plan (FY 2022-23 & FY 2023-24). Accordingly, 1st two years of 14th Transmission Plan has been incorporated in the aforesaid Business Plan of OPTCL. The same is yet to be approved by the Commission.

6. The present application is being filed by OPTCL in fulfilment of requirement as mandated under various provisions of the Act, OGC and License Conditions of OPTCL. The Intra-State Transmission study report covering load flow analysis, contingency analysis and short circuit study. Transient stability analysis and Light Load Study for the 14th Plan (FY 2022-23 to 2026-27) has been prepared through the

Consultant M/s. Power Research & Development Consultants Pvt. Ltd. (PRDC). The proposals of OPTCL are as follows:

(a) 12 nos. of new sub-stations along with associated lines [Khuntuni (Dist-Cuttack), Palei, Balichandrpur (Dist-Jajpur), Nayapalli (Dist-Khurda), Hinjilicut (Dist-Ganjam), Lamtaput (Dist-Koraput), Nabrangpur(Dist-Nabrangpur), Brundbahal (Dist–Kalahandi), Tarabha (Dist-Sonepur), M Rampur (Dist-Kalahandi), Nuapada (Dist-Nuapada), Athamallik (Dist-Angul), Begunia (Dist-Khurda).

(b) 8 nos. new lines to provide N-1 reliability / to mitigate N-1 contingency overloading caused due to outage of some lines and 38 nos. of substations for capacity augmentation.

7. The new transmission lines considered for 2022-23 and 2026-27 have an indicative cost of Rs.566.86 cr. The new substations considered in the study from 2022-23 to 2026-27 have an indicative cost of Rs.1129.08 cr.

8. In addition to that OPTCL proposes for inclusion of a 2X20 MVA, 132/33 KV grid substation to be constructed at Mahanga (District-Cuttack) in the said transmission plan. This proposed substation shall avail power at 132 KV from Salipur grid s/s with route length of 22 KM. OPTCL has requested to consider the said proposal as a part of the petition in Case No. 49/2021 for approval of 14th Intra-State Transmission Plan.

9. OPTCL prays that the Commission may accord approval to the 14th Intra-State Transmission Plan for Odisha (2022-23 to 2026-27) prepared and submitted by OPTCL.

The views of Respondents on the application of OPTCL are as follows:

TPSODL

10. Many of the GSS remain unloaded for many years even after commissioning due to absence of connectivity between GSS and PSS. They have requested to take up those things so that assets created can be optimally utilised and meet the objective of network stability and improvement of the voltage profile.

11. They have agreed in principal that three GSS namely, at Hinjilicut, Lamtaput and Nabrangpur may be constructed for improvement of the network stability, reliability

and quality of power. However, the connectivity work of GSS with PSS may be taken up simultaneously.

12. Buguda GSS has not been considered due to strengthening of Aska GSS. But they are experiencing low voltage problem at the tail end of PSS, beside reliability issue. Therefore, feasibility of Buguda GSS may be revisited.

13. There is requirement of a new GSS at Budhamba to address issue of reliability and low voltage. Therefore, the construction of Budhamba GSS may be considered in place of Kodala GSS.

14. The Baliguda area in Kandhamal District experiences incoming 33 KV voltages as low as 27.9 kV. This is affecting the voltage received at the customers end. The construction of Baliguda (Sirtiguda) GSS may be expedited.

TPWODL

15. On 25th March 2021 there was a joint meeting between OPTCL & TPWODL where low voltage issue & other technical problem in the licensee area were discussed. It was also emphasized to take immediate action for the low voltage areas at Saintala, Khariar, Nuapada & Kantabanji. Based on that TPWODL had proposed substations at above relevant locations vide reply to Case No.63 of 2020 on dt.8th April, 2021.

16. OPTCL has incorporated 4 nos. projects in 14th Intra State Transmission Plan for Odisha (FY 2022-23 to 2026-27) as per suggestion of TPWODL.

17. In addition to above, the link line of 132 KV from Patnagarh to Kantabanji and Kantabanji to Padampur may please be considered for enhancement of reliability of power supply & low voltage problem. On completion of these projects, TPWODL will get benefits ; (a) Eradication of the low voltage problem (b) Cater the future load demand (c) Improvement in Voltage profile & minimizing in Power Interruption (d) Availability of alternate source (e) Reduction in transmission losses (f) strengthening of Transmission network and (g) Standardisation of equipment rating.

TPNODL

18. In the 14th Intra-State Transmission plan of Odisha which is planned for intra-state transmission system for the FY 2022-23 to FY 2026-27, the respondent could not find proposal for construction of new GSS in TPNODL area. Keeping in view the present load and prospective load growth, construction of New Grid Substations are required in

following seven locations. (a) Gadi – For improvement of voltage in Tihidi and Matto area which is presently getting 27 KV (b) Basudevpur – Lengthy 33 KV line from OPTCL Grid Soro and to avoid low voltage, (c) Bhandaripokhari – There are 9 nos. of PSS on the existing Dhamnagar 33KV feeder (d) Sujanpur – Length of 33 KV line is 43 KM & another 14 KM is under construction for Bramhabarada PSS & voltage 30 KV (e) Kabatabandha – Length of 33 KV line is 30 KM (f) Ranua – Length of 33 KV line is 35 KM and tail end voltage 28 KV and (g) Jhumpura – Required to mitigate the future industrial load.

OHPC

19. Since handing over of MHEP (Jt.) scheme by Government of Odisha to OHPC it is observed that there is continuous short drawl of Odisha share of power. Due to evacuation constraints, Odisha is not getting 50% of the shareable energy on real time basis from Machhkund generation. Odisha is not in a position to draw the 50% shareable energy from Machhkund generation due to transmission and distribution constraints.

20. The issue of short drawl by Odisha due to transmission constraints had been discussed in details in 101st PSOC meeting and 13th GCC meeting on 25th May, 2016. The CMD, OPTCL had issued necessary directives as mentioned above vide his letter no.4919 dt.06.06.2016 to all the stake holders. OHPC had raised the issue of short drawl before OERC & submitted the above documents in its ARR & Tariff application in the FY 2017-18 in the interest of consumers of Odisha.

21. OHPC is constantly raising the above issues of short drawl due to inefficiency in the evacuation system of OPTCL from MHEP (Jt.) Scheme in its different Tariff Applications since FY 2017-18. But there is no specific observation of OERC in this regard.

22. The provisions of the New Machhkund Agreement 2020 relating to evacuation of Odisha share of power from MHEP(Jt.) is furnished as follows :

Clause – 9 "XXXXX Each party shall however, be responsible for modification, maintenance and operation of power evacuation system to evacuate their respective share of power beyond switchyard."

23. Thus to evacuate 50% Odisha share of power from MHEP(Jt.) scheme OPTCL shall be responsible for modification, maintenance and renovation of evacuation network from MHEP(Jt.) to Jaynagar grid.

24. A joint meeting was held between the stake holders under the Chairmanship of Principal Secretary, DoE, GoO on 24.02.2021 to discuss the implications of different provisions of New Machkund Agreement 2020.

In the joint meeting TPSODL opined that "in case the power at 33 KV level is made available from 132/33 KV Lamtaput grid of OPTCL, then the low voltage problem in Machhkund and adjoining villages can be solved. TPSODL is having 33/11 KV substation at Lamtaput which is 40 KM away from Machhkund Power House. By stringing 33 KV lines for few circuit kilometers, power can be made available in and around Machhkund with good voltage profile. Then the existing consumers getting power supply from Machhkund Power house can be switched over to TPSODL system. Regarding supply of power from the 132/33 Lamtaput grid. OPTCL intimated that the grid is under construction and shall take another one year for completion."

25. Thus OPTCL is required to construct a new 132/33 KV grid near MHEP (Jt.) or draw 33 KV line from 132/33 KV grid at Lamtaput so that independent supply can be provided to Machhkund Power House colony and its adjoining areas with a better voltage profile. This proposal may be included in the 14th Business Plan of OPTCL.

26. OHPC has also prayed before the Commission to provide necessary evacuation facilities for 3 up-coming projects namely, Jalaput, Balimela & Lower Machhkund in the 14th Transmission Plan of OPTCL.

Sri R. P. Mohapatra

27. Load flow studies has been carried out for one year only. It should have been made for four years. N-1 contingency studies may be made for both peak conditions in each year.

28. As per 6.2.2 of Transmission Planning manual in 220 kV/132 kV network, the system shall be able to survive a permanent three phase fault on one circuit, close to a bus with fault clearing time of 160 ms (8 cycles) assuming three pole opening. But, OPTCL has done transient stability studies for 220 kV only. They have to do it for 132 kV also.

29. In executive summary and also in N-1 contingency observations, it is mentioned that line loadings and bus voltages are within the acceptable limits under N-0 contingency. However, one table showing the line loading, percentage loading voltages at receiving end and sending end of the lines need to be furnished for both peak load and light load conditions in normal condition and in N-1 contingency case.

30. OPTCL has to assess the condition of old conductors which are in service for 25 years or more specially in coastal area and bring out a plan for replacement of damaged conductors with same size or with high capacity conductors. This will reduce the line loss also.

31. SLDC should examine and confirm if generators are supplying/absorbing reactive power as per the capability (performance) curves of the generators.

32. In the ARR of DISCOMs for 2021-22, Commission has allowed KVAH billing for HT consumers. Also KVARh pricing has been allowed to OPTCL from 2018-19. But such tariff for reactive energy has not been implemented for generating companies. Neither the Generation tariff regulation 2020 of OERC nor the CERC Tariff Regulation, 2019 has any provision for reactive energy charges. Some incentives are to be given to generators for reactive power support so that they will be happy to supply and absorb the reactive power as per the grid requirement. Renewable source contribution has to be considered in the study report and future ramping down/ramping up of thermal.

33. For contingency studies and stability studies, it is seen that some selective lines have been picked up. But contingency studies are to be done for all lines and substations under peak load conditions and the results are to be tabulated. Similarly for stability studies some selective lines, ICTs and generators have been picked up. The criterion for selecting some specific elements may please be mentioned by OPTCL. All state sector generators may be included in transient stability studies.

34. OPTCL has to list out the names of radial feeders and submit a plan to convert them into ring system. Nuapada is at extreme end of the state. Hence, 220/132 kV substation may be considered somewhere little inside the state. This may be done at Khariar or Padampur.

    It is learnt that OPTCL has decided to design the towers with 190 km/hr wind speed in coastal belt. But more robust towers are required. OPTCL has to design the towers for a wind speed of 198X1.3=257.4 km or say 260 km/hr.

Rejoinder of OPTCL

35. TPSODL has stated that primarily proposal for construction of new GSS are considered based on the available load proposed by DISCOMs and its location. Based on the available loads and distance from the existing GSS, feasibility of the new substations is studied as per the transmission planning criterion. Distribution planning is not a part of Transmission Planning study. Hence, 33 KV connectivity and its corresponding load transfer are to be planned by DISCOMs.

36. It has always been OPTCL's top priority that none of its assets are kept stranded. In some cases, it is observed that the downstream infrastructure of DISCOMs is not ready

to receive power from OPTCL network though the upstream networks of OPTCL are completed on time.

37. TPSODL has proposed to reconsider the 3 nos. projects i.e. Buguda, Kodala & Kabisuryanagar. It is submitted that all above mentioned projects are not technically viable as mentioned in the study report of 14th Intra-State Transmission Plan for Odisha (FY 2022-23 to FY 2026-27).

38. However, it is recommended that a 33 kV line of distance 10 KMs (apprx.) may be constructed between Polsara PSS and Buguda PSS in order to form ring mains between 220/132/33kV GSS, Aska (new) and 132/33 kV GSS at Aska (old) so that reliability and voltage issues shall be eliminated.

39. The physical progress of construction of 220/33 kV grids/s at Baliguda & 220 kV Baliguda-Kesinga DC line is around 90% & 60% respectively. The work is delayed due to forest clearance issues and is expected to be commissioned by March 2022.

40. 132 kV Nuapada-Padampur line was charged on 06.08.2021 and since the day of commissioning it is observed that the voltage profile at Nuapada and Kantabanji has improved a lot. With the commissioning of 220 kV Bolangir-Kesinga D/C line, the voltage profile at Saintala & Khariar will be improved.

41. 132 kV Patnagarh – Kantabanji line has already been considered by OPTCL in RRCP Phase-II. 132 kV Kantabanji – Padampur line may not be required as Patnagarh, Padampur, Kantabanji, Bolangir, Kesinga, Khariar etc. will be connected in ring system after commissioning of 220 kV Bolangir-Kesinga DC line, 132 kV Padampur-Nuapada SC line and 132 kV Patnagarh-Kantabanji line as mentioned above. In addition to the above, as OPTCL has already proposed 220/132 kV sub-station at Nuapada so there is no need for 132 kV line from Kantabanji to Padampur.

42. The Planning studies carried out and augmentation plan suggested are based on two extreme conditions. As no violations in grid code as well as in CEA planning criteria is observed in the extreme conditions, it is imperative that the STU network will not have operational constraints in intermediate load conditions. We have checked the results with 132 kV network. The system is stable for fault clearing time of 160ms.

43. In reply to objections of Sri R. P. Mahapatra OPTCL states that the power flow and bus voltages at both the ends are represented in the respective SLDs of N-0 and critical N-1 conditions. Putting all such lines flow details in tables will increase the volume of the

report. As stated in the report, batch mode contingency analysis is done, which implies all line outages are considered, only those results which violate the loading or voltage criteria are discussed. Analysis reports are not tabulated as it results into huge volume.

44. OPTCL has already started the process for replacement of conductor in the transmission lines giving service more than 25 years in phased manner considering the condition of conductor, insulators, hardware fitting etc. both in coastal area and other industrial area.

45. OPTCL has good amount of hydro resources and they can be operated at minimum generation condition during solar peak (11 AM to 2 PM) and any variation in the solar can be absorbed by hydro generation. As it is an operational issue and not a planning issue, OPTCL has not considered the solar generation in the studies. It should be further noted that the system peak is seen in the OPTCL system during the evening hours during which the solar generation will not be present.

46. Contingency studies are done for all lines using batch mode contingency simulation. Results are tabulated only for critical cases violating the line loadings.

47. Stability studies are done for selected lines, depending on the line loading and their vicinity to power plants. It is not required to perform the studies for those lines away from the generating stations. The OPTCL has already started the process of conversion from radial to ring lines under RRCP scheme.

48. The proposed 2X160 MVA+2X40 MVA, 220/132/33 KV grid substation at Nuapada will be constructed to cater the load demand of the locality i.e. Nuapada, Khariar, Paikmal & Padampur area in order to improve the power quality with proper voltage. Nuapada being in remote end & being a low voltage pocket, it is essential to strengthen the power stability of that area by which DISCOM as well as the Railway will be benefitted. OPTCL has initiated the process of development of cyclone resilient power infrastructure in consultation with NDMS (National Disaster Management Authority) under CDRI (Coalition for Disaster Resilient Infrastructure) projects.

49. As per the procedure for installation/addition of any new transmission elements to the existing system of OPTCL network, TPNODL may submit their proposal to OPTCL with techno-economic feasibility report along with proper justification for the construction of new GSS with associated transmission lines for further verification by OPTCL considering the transmission planning criteria.

50. A joint meeting was conducted by OPTCL on 18.09.2021 through video conferencing among the stakeholders wherein the representatives of DISCOMs, OPGC, OHPC and GRIDCO shared their views.

51. For evacuation of 50% of Odisha share power from MHEP, the proposals given by OHPC i.e. conductor upgradation of existing 132 KV Machhkund-Jaynagar line, 132 KV connectivity between Pottangi & Lamtaput and evacuation of Machhkund power in the synchronous mode will be taken care by OPTCL after proper study which are under progress.

52. Now the Commission proceed to examine the proposed sub-stations from the angle of CEA criteria of transmission planning. PRDC report submitted by OPTCL is taken into consideration. Load flow studies and short-circuit studies for the sub-stations are gone through. From the load flow studies submitted by OPTCL the proposed sub-stations appear justified to be established. The loss level (transmission and transformations) are within limit upto FY 2026-27. As per Clause 15.2 of CEA Transmission Planning Criteria the maximum short-circuit level on any new sub-station bus should not exceed 80% of the rated short circuit capacity of the sub-station. The 20% margin is intended to take care of the increase in short-circuit as the system grows. From the short-circuit studies of sub-stations it is found that three-phase to ground fault current and single line to ground fault current in kA exceed fault current breaking capacity of circuit breakers at several sub-stations such as Budhipadar, Meramundali, Anugul (PGCIL) from FY 2022-23 to 2026-27. Therefore, OPTCL have planned for establishment of following 13 nos. of sub-stations.

Sl. No.	Sub-stations	Voltage Level in KV	Year
1	Khuntuni (Dist- Cuttack)	400/220	2022-23
2	Palei, Balichandrpur (Dist-Jajpur)	220/33	2022-23
3	Nayapalli (Dist-Khurda)	132/33	2022-23
4	Hinjilicut (Dist-Ganjam)	132/33	2022-23
5	Lamtaput (Dist-Koraput)	132/33	2022-23
6	Nabrangpur(Dist-Nabrangpur)	132/33	2022-23
7	Brundbahal (Dist–Kalahandi)	132/33	2022-23
8	Tarabha (Dist-Sonepur)	132/33	2022-23
9	Mahanga (Dist.-Cuttack)	132/33	2023-24
10	M Rampur (Dist-Kalahandi)	220/33	2023-24
11	Nuapada (Dist-Nuapada)	220/132	2023-24
12	Athamallik (Dist-Angul)	132/33	2023-24
13	Begunia (Dist-Khurda)	765/400	2024-25

We approve the above.

53. They have also proposed 8 nos. of new transmission lines to be executed during the 14th Intra-State Transmission Plan period. They are as follows:

List of Transmission Lines	Year
220 kV	2022-23
220 kV D/C line from existing 220 kV Theruvali-Narendrapur D/C line to 220/132/33 kV sub-station Aska	
One circuit of Joda-TTPS 220 kV D/C line LILO at Keonjhar 220/33 kV sub-station	
220 kV D/C Zebra lines Tarkera-Bisra uprated to Zebra equivalent HTLS	
132 kV	
132 kV Parlakhemundi- R.Udaygiri D/C line	
132 kV S/C line to D/C line from Kuchei to Bangriposi	
Construction of 132 kV line 2nd circuit from Bhadrak to Anandpur	
400 kV	2023-24
400 kV D/C line from Narendrapur 400/220 kV sub-station to Jeypur PG to be LILO at 400 kV switching station at Theruvali	
132 kV	2024-25
Addition of second ckt. Between 132 kV CDA to Bidanasi	

The N-1 contingency studies have been carried out to ensure system stability. Transient stability study reports are taken on record. It is found that voltage, frequency and rotor angle of machines in the vicinity of the cases of interest are within acceptable limit after incorporation of these lines. Therefore, we approve the plan of construction of above eight lines during the 14th Transmission Plan period.

54. OPTCL has proposed transformer capacity upgradation in 38 nos. of sub-stations from FY 2022-23 to 2024-25. We perused the transformer loading of different sub-stations of the State. From the load flow studies and loading of the existing transformers we find that these augmentations are required. Accordingly, we approve the same.

55. In summary we approve the plan of establishment of 13 nos. of new sub-stations, eight nos. of new lines and upgradation of transformer capacity in 38 nos. of existing sub-stations.

56. Accordingly, the case is disposed of.

Sd/-
(G. Mohapatra)
Member

Sd/-
(U. N. Behera)
Chairperson