

**Present:** Shri S. P. Nanda, Chairperson  
Shri B. K. Misra, Member  
Shri S. P. Swain, Member

1

has examined the economic, technical system and environmental aspects of all the alternatives.

2. OPTCL has justified all the proposals from the view point of improvement of power supply position, reducing loading on certain line section of the network, reducing the overall/ transmission losses and improvement of voltage profile at different locations. As submitted by the Petitioner, they have submitted this investment proposal taking into account the fundamental requirement of approval such as concomitant improvement in quality of supply and appropriate economic viability. The Techno Economic Analysis of the Projects as submitted by OPTCL are as given below:
3. They would construct new 2X20 MVA, 220/33 kV S/S at Narasinghpur in Cuttack District along with associated 3 Kms. 220 KV LILO line from existing 220 KV Bhanjanagar to Meramundali line with an estimated cost of Rs.27.45 crores with funding from Govt. grant/own resources and from suitable financial institutions. With this, OPTCL has projected the reduction of average annual loss to the extent of 0.97 MW, which with consideration of Rs.2.17/ Kwh, comes to the savings Rs.72.30 lakh in monetary term. Considering 60% utilization of 2x20 MVA capacity at the proposed grid S/S and with 3.8% transmission loss shall make available additional 1274.18 Lakh Unit, which shall cause OPTCL to earn additional annual revenue of Rs 318.55 lakhs at the wheeling cost of 25 paise. Thus, OPTCL expects total annual revenue from this investment to the tune of Rs.390.84 lakhs. The average rate of annual return has thus been found to be 14.19%.
4. OPTCL has proposed to construct new 2X20 MVA, 132/33 kV S/S at Muniguda (Rayagada District) along with associated 2.1 Kms 132 KV LILO line from existing 132 KV Theruvali to Kesinga line with an estimated cost of Rs.20.69 crores with funding from Govt. grant/own resources and from suitable financial institutions. With this, OPTCL has projected the reduction of average annual loss to the extent of 0.63 MW, which with consideration of Rs.2.17/ Kwh, comes to saving Rs.47 lakh in monetary term. Considering 60% utilization of 2x20 MVA capacities at the proposed grid S/S and with 3.8% transmission loss it shall make available additional 1274.18 lakh units, which shall cause OPTCL to earn additional annual revenue of Rs 318.55 lakhs at the wheeling cost of 25 paise. Thus, OPTCL expects total annual revenue from this investment to the tune of Rs.365.53 lakhs. The average rate of annual return has thus been found to be 17.67%.

5. OPTCL would construct new 2X20 MVA, 132/33 kV S/S at Pottangi( Koraput District) along with associated 33Kms 132 KV line from existing Sunabeda Grid S/S with an estimated cost of Rs.28.62 crores which is being proposed with funding from Govt. grant/own resources and from suitable financial institutions. With this OPTCL has projected the reduction of average annual loss to the extent of 0.28 MW, which with consideration of Rs.2.17/ Kwh, comes to the saving of Rs.20.89 lakh in monetary term. Considering 60% utilization of 2x20 MVA capacity at the proposed grid S/S and with 3.8% transmission loss shall make available additional 1274.18 Lakh units, which shall enable OPTCL to earn additional annual revenue of Rs 318.55 lakhs at the wheeling cost of 25 paise. Thus, OPTCL expects total annual revenue earning from this investment to the tune of Rs.339.44 lakhs. The average rate of annual return has thus been found to be 11.86%.
6. The Licensee would construct new 2X40 MVA, 132/33 kV S/S at Baliguda (Phulbani District) along with associated 73 Kms 132 KV LILO line from existing 132 KV Bhanjanagar-Phulbani line which is being proposed with an estimated cost of Rs.50.56 crores with funding from Govt. grant/own resources and from suitable financial institutions. With this OPTCL has projected the reduction of average annual loss to the extent of 0.51 MW, which with consideration of Rs.2.17/ Kwh, comes to Rs.38.28 lakh savings in monetary term. Considering of 60% utilization of 2x40 MVA capacity at the proposed grid S/S and with 3.8% transmission loss shall make available additional 2548.36 Lakh Units, which shall cause OPTCL to earn additional annual revenue of Rs 637.09 lakhs at the wheeling cost of 25 paise. Thus, OPTCL expects total annual revenue earning from this investment to the tune of Rs.675.37 lakhs. The average rate of annual return has thus been found to be 17.89%.
7. OPTCL has proposed construction of new 2X20 MVA, 132/33 kV S/S at Podagada (Koraput District) along with associated 7.8 Kms 132 KV LILO line from existing 132 KV Jayanagar to Rayagada line with an estimated cost of Rs.26.25 crores with funding from Govt. grant/own resources and from suitable financial institutions. With this investment OPTCL has projected the reduction of average annual loss to the extent of 0.65 MW, which with consideration of Rs.2.17/ Kwh, comes to Rs.48.45 lakh saving in monetary term. Considering 60% utilization of 2x20 MVA capacity at the proposed grid S/S and with 3.8% transmission loss shall make available additional 1272.86 Lakh units which shall cause OPTCL to earn additional annual revenue of Rs 318.21 lakhs at the wheeling cost of 25 paise. Thus, OPTCL expects total annual revenue

from this investment to the tune of Rs.366.66 lakhs. The average rate of annual return has thus been found to be 13.97%.

8. OPTCL would construct new 2X12.5 MVA, 132/33 kV S/S at Bangiriposhi (Mayurbhanj District) along with associated 0.7 Kms 132 KV LILO line from existing 132 KV Kuchei(PGCIL) to Rairangpur line which is proposed with an estimated cost of Rs.16.46 crores with funding from Govt. grant/own resources and from suitable financial institutions. With this OPTCL has projected the reduction of average annual loss to the extent of 0.62 MW, which with consideration of Rs.2.17/ Kwh, comes to Rs.45.96 lakh saving in monetary term. Considering 60% utilization of 2x12.5 MVA capacity at the proposed grid S/S and with 3.8% transmission loss shall make available additional 796.82 Lakh Units, which shall cause OPTCL to earn additional annual revenue of Rs 199.09 lakhs at the wheeling cost of 25 paise. Thus, OPTCL expects total annual revenue from this investment to the tune of Rs.245.05 lakhs. The average rate of annual return has thus been found to be 14.88%.
9. Construction of new 2X20 MVA, 132/33 kV S/S at Bhogarai (Baleswar District) along with associated 27.5 Kms 132 KV LILO line from existing 132 KV Kuchei(PGCIL) to Jaleswara line with an estimated cost of Rs.35.26 crores with funding from Govt. grant/own resources and from suitable financial institutions is proposed. With this OPTCL has projected the reduction of average annual loss to the extent of 0.91 MW, which with consideration of Rs.2.17/ Kwh, comes to Rs.68.27 lakh saving in monetary term. Considering 60% utilization of 2x20 MVA capacity at the proposed grid S/S and with 3.8% transmission loss shall make available additional 1274.18 Lakh Units, which shall cause OPTCL to earn additional annual revenue of Rs 318.55 lakhs at the wheeling cost of 25 paise. Thus, OPTCL expects total annual revenue from this investment to the tune of Rs.386.89 lakhs. The average rate of annual return has thus been found to be 10.97%.
10. Construction of new 2X40 MVA, 132/33 kV S/S at CDA, Cuttack along with associated 1 Kms 132 KV LILO line from existing 132 KV Choudwar-Bidanasi line is proposed with an estimated cost of Rs.19.09 crores with funding from Govt. grant/own resources and from suitable financial institutions. With this OPTCL has projected the reduction of average annual loss to the extent of 0.64 MW, which with consideration of Rs.2.17/ Kwh, comes to Rs.47.75 lakh saving in monetary term. Considering 60% utilization of 2x40 MVA capacity at the proposed grid S/S and with 3.8% transmission loss shall make available additional 2649.02 Lakh Units, which shall cause OPTCL to earn additional annual revenue of Rs 637.09 lakhs at the wheeling cost of 25 paise.

Thus, OPTCL expects total annual revenue from this investment to the tune of Rs.684.84 lakhs. The average rate of annual return has thus been found to be 35.87%.

11. Construction of new 2X12.5 MVA, 132/33 kV S/S at Ghatagaon (Keonjhar District) along with associated 38.85 Kms 132 KV line from Anandpur Grid S/S with an estimated cost of Rs.30.70 crores is proposed with funding from Govt. grant/own resources and from suitable financial institutions. With this OPTCL has projected the reduction of average annual loss to the extent of 1.00 MW, which with consideration of Rs.2.17/ Kwh, comes to Rs.74.61 lakh savings in monetary term. Considering 60% utilization of 2x20 MVA capacity at the proposed grid S/S and with 3.8% transmission loss shall make available additional 1274.18 Lakh Units, which shall cause OPTCL to earn additional annual revenue of Rs 318.55 lakhs at the wheeling cost of 25 paise. Thus, OPTCL expects total annual revenue from this investment to the tune of Rs.393.16 lakhs. The average rate of annual return has thus been found to be 12.8%.
12. Construction of new 2X20 MVA, 132/33 kV S/S at Champua (Keonjhar District) along with associated 0.7 Kms 132 KV LILO line from existing 132 KV Kuchei(PGCIL) to Rairangpur line is proposed with an estimated cost of Rs.24.61 crores with funding from Govt. grant/own resources and from suitable financial institutions. With this OPTCL has projected the reduction of average annual loss to the extent of 0.67 MW, which with consideration of Rs.2.17/ Kwh comes to Rs.49.99 lakh savings in monetary term. Considering 60% utilization of 2x20 MVA capacity at the proposed grid S/S and with 3.8% transmission loss shall make available additional 1274.18 Lakh Units, which shall cause OPTCL to earn additional annual revenue of Rs 318.55 lakhs at the wheeling cost of 25 paise. Thus, OPTCL expects total annual revenue from this investment to the tune of Rs.368.54 lakhs. The average rate of annual return has thus been found to be 14.97%.

13. The summary of the proposals for the above ten projects are tabulated below:

Sl. No	Name of the S/S	Voltage Rating	Capacity Proposed in MVA	Cost of the Project (Rs Cr)	Average Rate of Annual Return	Starting Date	Schedule Date of Completion
1	Narasinghpur	220/33 KV	2X20	27.45	14.19%	Nov., 2012	Mar-15
2	Muniguda	132/33 KV	2X20	20.69	17.67%	Dec., 2012	Mar-15
3	Pottangi	132/33 KV	2X20	28.62	11.86%	Dec., 2013	Mar-15
4	Baliguda	132/33 KV	2X40	50.56	17.89%	Dec., 2013	Mar-15
5	Podagada	132/33 KV	2X20	26.25	13.97%	Dec., 2012	Jun-15
6	Bangiriposi	132/33 KV	2X12.5	16.45	14.88%	Dec., 2012	Mar-15
7	Bhogarai	132/33 KV	2X20	35.26	10.97%	Jan., 2013	Mar-15
8	CDA	132/33 KV	2X40	19.09	35.87%	Dec., 2013	Mar-15
9	Ghatagaon	132/33 KV	2X12.5	30.7	12.80%	Feb., 2013	Jun-16
10	Champua	132/33 KV	2X20	24.61	14.97%	April, 2013	Mar-16

14. As stated by OPTCL, forest and environment clearance are not required for these projects. OPTCL has also submitted the Environmental Impact Assessment (EIA) Study for three projects. OPTCL has stated that the procurement of materials and services for these projects shall be taken up through National Competitive Bidding. The entire work for these proposed projects shall be treated as individual sub-station package and the award would be made on Turn-key basis for the these individual proposals.
15. Since, the rate of annual return is more than bank rate in all the projects, they are financially viable from investment point of view. The benefits of the projects shall also be available to the consumer of the State. Therefore, we give in-principle approval of the investment to all the above projects.
16. The case is accordingly disposed of.

Sd/-

**S. P. Swain**  
(Member)

Sd/-

**B. K. Misra**  
(Member)

Sd/-

**S.P. Nanda**  
Chairperson