Critical Issues and Road ahead for Power Sector in Odisha

Salient information about Odisha Power Sector

1. Installed capacity – 4734 MW

   ✓ Installed capacity in Odisha as on 31.3.2010 is 4734 MW which consists of Odisha's own internal capacity of 3672 MW and Odisha's share from the Central installations of 1062 MW.

Table-1

	Odisha's own internal capacity	Share from the central installations	Total
Hydro Power	2142 (2085+57 from small hydro)	189	2331
Thermal Power	1530 Ib Thermal – 420 Thalcher Thermal – 460 Sterlite Energy – 600 Arati Steels – 50	873	2403
TOTAL	**3672**	**1062**	**4734**

   ✓ During 2009-10 against the peak demand of 3188 MW and average demand of 2354 MW the availability was 3120 MW during peak period (Peak demand deficit 2.1%). Peak demand for the year 2010-11 upto January,2011 around 3300 MW and upto August around 2550 MW.

   ✓ Actual energy availed by GRIDCO for supply to the distribution companies from different sources during 2009-10 was 21040.17 MU (against 19719.38 MU approved) which consists of as follows:-

		2009-10	2010-11 Prov. upto Dec.'10
State sector	-	10013.76 MU	8870.29 MU
Central sector	-	6575.73 MU	5355.30 MU
Total	-	16589.49 MU	14225.59 MU
CGP and co-generation within the State	-	2967.09 MU	2500.48 MU
UI over drawal from the grid	-	1257.76 MU	690.81 MU
Power banking and trading	-	125.83 MU	125.35 MU
Grand Total	**-**	**21140.17 MU**	**17542.23 MU**

- ✓ While 18460.26 MU for 2008-09, 19719.38 MU for 2009-10 and 21003.75MU for 2010-11 was approved, the Commission has approved 23489.18 MU for purchase by GRIDCO to supply to the distribution companies for 2011-12.
- ✓ After transmission loss the purchase by DISCOMs (sale by GRIDCO) approved by the Commission has increased from 17620.00 MU in 2008-09 to 18921.00 MU in 2009-10, 20154.00 MU in 2010-11 and 22477.00 MU in 2011-12.
- ✓ During 2009-10 against energy requirement of 21136 MU, Net Energy available was 19556.58MU (deficit 7.4%) (excluding UI drawal, power banking, etc.)
- ✓ As per the 17th EPS, the energy requirement of Odisha is estimated to be 27149 MU and peak demand is estimated to be 4459 MW by 2011-12.
- ✓ Odisha has signed MoU with 30 Independent Power Producers for setting of power plant in Odisha with proposed installed capacity of 39000 MW from which Odisha's share would be 7023.9 MW. The total investment has been estimated at Rs.155672.42 crore.
- ✓ During the year 2011-12 the following six IPPs are likely to start generation and estimated energy is 4135.12 MU as per the details given below :-

	2011-12(Proposed)(MU)
- Arati Steel and Power Ltd. (50 MW)	175.20
- Sterlite Energy Ltd. (600 MW)	3181.92
Sub-Total :	*3357.12*
- Shyam DRI Ltd. (400 MW)	407.00
- Maa Durga Thermal Power Capacity Ltd. (35 MW)	35.00
- Ind. Barat Energy Ltd. (27 MW)	237.00
- GMR Kamalanga Energy Ltd. (99 MW)	99.00
Sub-Total :	*778.00*
Grand Total :	**4135.12**

Table-2
Village Electrification as on 15.2.11 under
RGGVY Projects & Under BGJY as on 25.2.11

Total Census Villages	Villages Electrified	% of Electrification
47529		
Under RGGVY	13566	29
Under BGJY	7269	15
Others	15514	33
Total	**36349**	**77**

2. **Tariff Philosophy – Need for recovery of cost of Supply**

While fixing retail tariff for different type of consumers, Commission is mandated to follow the provision of the Electricity Act, 2003, Electricity Tariff Policy notified on 06.1.2006 and National Electricity Policy notified on 12.2.2005. Mainly Section 61, 62, 65 and 86 of the Electricity Act, 2003 deals with principles and guidelines of tariff fixation. The important parameters for tariff fixation are as follows:-

(i) The generation, transmission, distribution and supply of electricity should be conducted on commercial principles : Section 61(b) of Electricity Act, 2003.

(ii) The factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments : Section 61(c).

(iii) Safeguarding the consumers interests and at the same time recovering of the cost of supply electricity in a reasonable manner : Section 61(d)

(iv) The principles regarding efficiency in performance : Section 61(e)

(v) The tariff progressively should reflect the cost of supply of electricity and also reduce cross subsidies in the manner specified by the appropriate Commission : Section 61(g)

- The para 8.3.(2) of the Tariff Policy enjoins upon the State Regulatory Commission to notify road map with a target that latest by end of the year 2010-11 tariffs are within ± 20% of the average cost of supply.

(vi) The National Electricity Policy envisages existence of some amount of cross-subsidy. As per para 1.1 of National Electricity Policy, the supply of electricity at reasonable rate to rural India is essential for its overall development. Equally important is

availability of reliable and quality power at competitive rates to Indian Industry to make it globally competitive and to enable it to exploit the tremendous potential of employment generation.

- Similarly, as per para 5.5.2 of the National Electricity Policy, a minimum level of support may be required to make the electricity affordable for consumers of very poor category. Consumers below poverty line who consume below a specified level, say 30 units per month, may receive special support in terms of Tariff which are cross-subsidized. Tariff for such designated group of consumers will be at least 50% of the "average (overall) cost of supply".

(vii) Promotion of Co-generation and generation of electricity from renewable sources of energy : Section 61(h)

- Section 86(1)(e) casts responsibilities on the State Commission to promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee.

Accordingly, OERC has fixed 5% of the total purchase from renewable and co-generation sources for the year 2011-12 (solar – 0.10 + non-solar – 1.20 + co-generation – 3.70). This would go on increasing by 0.5% per annum to reach 7% in 2015-16 (solar 0.30 + non-solar 2.00 _ co-generation 4.70). In case the actual purchase from renewable sources falls below the percentage specified by the Commission, the obligated entities (GRIDCO, DISCOMs) are required to purchase the renewable certificate at higher cost. This implies that energy to the existing requirement is to be purchased apart from higher cost over and above the renewable purchase certificate. This would result in higher tariff implication to the consumers. In order to avoid or minimize such higher tariff implication it is necessary to exploit the existing potential from small and mini hydro projects where there is possibility of exploiting around 2000 MW from such sources.

3. Observations/Recommendations of the 13th Finance Commission regarding need for recovery of the cost of supply

3.1 The 13th Finance Commission had made a study on the impact of power sector performance on the finances of the States. The Commission has noted with concern the enormous financial losses incurred by the power utilities, particularly the distribution utilities. This is adversely affecting the State finances by way of burgeoning quantum of subsidy paid by different state government. The key reasons for the increasing gap in the cost of supply and cost of recovery among other things have been summarized by 13th Finance Commission follows:-
[Para 7.105]

(i) Inability of the state utilities to enhance operating efficiencies and reduce T&D losses adequately.

(ii) High cost of short term power purchase. Several utilities have not planned capacity addition in time and are relying on short term purchases at high rates (an average of Rs.7.31 per kwh as compared to Rs.4.52 per kwh in 2007-08). The inability to reduce T&D losses has increased the purchase levels and supply costs.

(iii) Absence of timely tariff increases has increased the gap and has impaired utility operations further. Some states have not raised tariffs for the past eight to nine years in spite of increasing deficits.
[In Odisha there was no average tariff increase for 9 years from 2001-02 to 2009-10]

3.2 The tariff increase requirements to bridge the gap, even in the better performing states, are as much as 7% per annum on an average and in some of the poorly performance states the increase in requirements is as much as 19% per annum (Para 7.106),

The Commission has also recommended that (vide para 7.121) there is need for massive capacity building efforts to strengthen the regulatory institutions and help them discharge their functions effectively. There is also need to promote consumer education to appraise consumers on

the imperative for such increases. Tariffs should be linked to service levels and performance improvement.

3.3 While fixing the tariff Commission have also to take note of the observations of the 13th Finance Commission which has been communicated by the Ministry of Power to the Chairman, Appellate Tribunal for Electricity in their D.O. letter No.14/06/2010/APDRP dt.21.1.2011. The relevant extract is indicated below:-

> "Most of the State distribution utilities are under financial strain due to the gap between the Average Revenue Realized (ARR) and Average Cost of Supply (ACS). On an aggregate basis, the gap between the average cost of supply and tariff is 107.32 paise per KWHr which results in financial loss for every unit of power sold……
> The debt trap of distribution utilities has serious implication on the financial health of electricity sector as a whole. The distribution utilities should generate adequate internal resources to honour the Power Purchase Agreement (PPA) made with the generating companies and hence any default in payment will have repercussions on the financial institutions lending to generating companies and future investments in capacity addition. One of the most important reasons for poor financial health of DISCOMs is the inadequacy of tariff to cover the cost incurred by the utilities to procure and supply electricity to the public. In a study conducted by Forum of Regulators of ten States for assessment of tariff revision and financial viability of DISCOMs (published in November 2010), it is estimated that additional increase to the tune of 1% to 39% is required to fully recover the cost of supply."

4. Factors having a direct bearing on increase in Retail Tariff

4.1 Reduction of ratio of hydro power to the total requirement :

Earlier about 60% of the State total demand was being met from the low cost hydro generation upto 2004-05 and around 40% of the State demand was being met from relatively costly thermal generation. With rise in demand and in the absence of new addition to the existing State hydro generation together with declining in hydro generation on account of erratic rainfall, silting of the water reservoirs etc. against 60% from the State hydro only 17% is being met from relatively costly thermal power. To site an example when the State demand was 100 MW in 2004-05 about 57 MW was being met from State hydro and only 43 MW was being met from relatively costly thermal

power which ultimately increases the power purchase cost of GRIDCO. Now the demand has almost double and in that case out of total demand of 200 MW only about 34 MW is being met from relatively cheaper hydro sources and the balance 166 MW is being met from comparatively costly thermal power which ultimately increases the power purchase cost of GRIDCO. This is evident from the given table below:-

Table-3

Declination of Hydro generation in over all Power Pool

	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11 (Upto Sept-10)	FY 11-12 (Approved)
State Demand (in MU)	12499.45	13483.75	15119.93	17212.51	18771.82	19480.85	10554.45 (actual)	22477
State Hydro Generation for Sale (incl. small Hydro) (in MU)	7087.82	5234.48	7357.58	7885.81	5826.12	4211.86	1769.70 (actual)	6181.74 (based on normative assessment)
% of state hydro to total state demand	56.71	38.82	48.66	45.81	31.04	21.62	16.66	27.50
Hydro Generation contribution has reduced from 57% to 17% which is a cheaper source of power								

4.2 Absence of surplus power for trading

In the previous years surplus power was available with GRIDCO for trading outside the state after meeting the state demand and accordingly Commission was keeping a gap in the revenue account of GRIDCO for being filled up from the profit from sale of surplus power. The retail tariff was kept at low because supply of power by GRIDCO to the distribution companies was kept at a lower level even though the GRIDCO was purchasing at higher cost, leaving a gap in its revenue account which was being filled through profit from sale of surplus of power with increase in the demand of the existing consumers as well as substantial increase in the consumers level the state is facing power shortage from the later part of 2008-09. There is hardly any scope for GRIDCO to earn profit from sale of surplus power. This is evident from the table given below:-

Table-4
ARR GAP OF GRIDCO

(Rs. in crore)

Financial Year	Gap in ARR (Approved)	Actual Gap	Net Gap	Rate approved & power purchase by GRIDCO(P/U)	BST Rate approved for sale to DISCOMs (P/U)
2006-07	(-) 504.52	547.55	43.03	113.97	120.85
2007-08	(-) 464.86	1052.34	587.48	119.91	121.59
2008-09	(-)410.05	528.62	118.27	127.40	122.15
2009-10	(-)882.85	(-)1673.70	(-)1673.70	148.27	122.20
2010-11	(-)806.16	(-)598.87 (Up to 9/2010	(-)598.87 (Up to 9/2010)	174.58	170.25
2011-12	(-)746.05			210.32	231.65

- The cumulative gap upto September, 2010 is Rs.2430.77 crore
- GRIDCO has proposed unmanageable gap of Rs.3088.85 crore alone during 2011-12 if there is no increase in Bulk Supply price to Distribution companies.

4.3 Rising Cost of Generation

- Due to rise in price of coal available within the State and also rising cost of imported coal there is substantial increase in cost of thermal power in respect of the state thermal generating stations as well as central thermal generating stations. In case of central thermal power generating stations the rise on account of fuel price adjustment varies from 113.1% to 43.5% as may be seen from the table given below.

Table-5
Variations of Fuel Price Adjustment (FPA) of CGS for 2011-12

(Figures are Paise/Unit)

	Actual Avg. FPA for April,09 to Jan,2010	Approval for 2010-11 (escalating 10% over previous average)	Actual Avg. FPA for 04/2010 to 01/2011	GRIDCO Proposal for 2011-12	Max. FPA from 4/2010 to 01/2011	Min FPA from 4/2010 to 01/2011	Actual FPA for Jan, 2011	% variation (Approval Vrs. Actual Jan, 2011)
TSTPS-I	65.34	71.88	123.22	142.97	152.72	107.02	129.70	80.4%
TSTPS-II	47.81	52.59	105.58	123.40	134.93	89.39	112.08	113.1%
FSTPS	110.86	121.95	190.52	209.11	208.78	170.31	195.28	60.1%
KHSTPS-I	69.48	76.42	97.09	117.45	134.56	75.36	98.56	29.0%
KHSTPS-II	47.23	51.96	74.49	90.44	123.28	52.13	74.58	43.5%

- Besides increase in cost of thermal power mainly because of sub-substantial rise in coal and fuel price, the generation cost of hydro power is also increasing because of increase in cost of equipments, operation and maintenance together with rising salary, pension and wages, etc. The average actual cost of generation from state hydro generation has increased from 50.10 per unit in 2007-08 to 63.57 in 2008-09, 73.43 in 2009-10, 68.58 in 2010-11(upto Sept., 2010) and 65.96 in 2011-12 (approval).
- The Average actual cost of supply from Central Thermal Power Stations has increased from 164.76 paise per Unit in 2007-08 to 182.74 p/u in 2008-09 and 226.58 p/u in 2009-10 and 307.21 p/u in 2010-11(actual upto Sept., 2010) and 331.05 p/u in 2011-12 (approval). **The Indian Express in its edition dated 21.2.2011 has reported "Rising coal imports push power cost upto 70 paise a unit")**
- In order to improve the quality of supply and to ensure uninterrupted power supply there is need for investment in transmission as well as distribution network. For this to happen OPTCL and the distribution companies are to incur loan and this loan is to be serviced i.e. payment of principal and payment of interest. This financing cost for loan servicing has to be factored into transmission and distribution price.
- The transmission tariff has increased from 22.00 p/u in 2007-08, 21.00 p/u in 2008-09, in 2009-10, 23.5 p/u in 2010-11 and 25.00 p/u in 2011-12.
- There is also increase in the wholesale and in consumer price annually. When there is increase in the cost of generation, transmission, distribution the additional cost has to be ultimately reflected in the rise in the retail tariff price for the consumers.
- The Bulk Supply Price by GRIDCO has increased from 121.59 p/u paise per unit in 2007-08, 122.15 p/u in 2008-09, 122.20 p/u in 2009-10, 170.25 P/U in 2010-11 and 231.65 p/u in 2011-12.
- In the past when there was average tariff rise varying from 29% (1993-94) to 10.23% (2000-01) there has been no rise in the average tariff from 2001-02 to 2009-10. There have been rise in tariff by 22.20% for the year 2010-11after gap of nine years. The average increase in retail tariff for 2011-12 has been kept 19.74% (Revenue to Revenue). This may be seen from the table given below:-

Table-6
Tariff Rise in the Past

Year	Average Tariff Rise (%)
1993-94	28.58 %
1994-95	15.73 %
1995.96	17.47 %
1996-97	17.00 %
1997-98	10.33 %
1998-99	9.30 %
1999-00	4.50 %
2000-01	10.23 %
2001-02 to 2009-10	0%
2010-11	22.2%
2011-12	19.74%

5. Highlights of Tariff for 2011-12

- As per Sections 61, 62, 65 & 86 of the Electricity Act, 2003, Para 8.3.2 of the National Tariff Policy, 2006 and Para 5.5.2 of the National Electricity Policy, 2005 the Electricity Regulatory Commission has to determine tariff keeping in view, commercial viability and operational efficiency of the Generation, Transmission, Supply and Distribution utilities as well as the interest of consumers. While determining the Energy Tariff for FY 2011-12, the Commission has balanced the interest of all stake holders and passed its Order on 18.03.2011
- In the FY 2011-12 the Energy Tariff for Irrigation, Agriculture and Allied Activities, Agro-based Industries and BPL families up to 30 units remains unchanged. The Tariff for BPL consumers has remained constant from FY 2001-02 to FY 2010-11 at Rs.30.00 per month.
- The rate for LT connections in Irrigation and Agriculture remains unchanged at 110 p/u, 120 p/u for Agriculture related activity and 320 p/u for Agriculture and Agro based industries. Similarly in HT connections, the Tariff for the above categories remains unchanged at 100 p/u, 110 p/u and 310 p/u, respectively.
- While the Energy Tariff rate for domestic consumer was 140 p/u upto 100 units from FY2001-02 to FY2010-11 and the average cost of supply per unit has been estimated at 408.87 p/u for FY2011-12, the new Tariff rate for domestic consumers in FY2011-12 will be remain unchanged for the first 50 units, 350 p/u beyond 50 units and up to 200units, 430p/u beyond 200units and up to 400 units

and 480 p/u beyond 500 units. In FY 2011-12 the Bulk Domestic Supply Tariff has risen from 410 p/u to 420 p/u, i.e. by 10 p/u.

- In FY 2011-12 there has been a minimum hike of 0 paise and maximum of 70 p/u in the domestic category. Similarly in industry, there has been minimum hike of 90 p/u and maximum of 130 p/u.
- HT Industries who have their own Captive Power Plants but purchase energy from GRIDCO will have to pay Energy Tariff @ 650 Energy Tariff while EHT units in the same category will have to pay Energy Tariff @ 640 p/u. This rate was 530 p/u for HT and 510 p/u for EHT respectively, in FY 2010-11. Thus, the Tariff hike for HT supply in Industrial category is 120 p/u and for EHT it is 130 p/u respectively.
- The average Energy Tariff for EHT consumers has gone up from 379.93 p/u in FY 2010-11 to 477.43 p/u in FY 2011-12 and in HT category; it has risen from 383.68 p/u in 2010-11 to 482.43 in 2011-12. Similarly, for LT consumers, the average Energy Tariff has risen from 219.21 p/u to 300.34 p/u.
- The average energy tariff for all categories of consumers is approximately 404.01 p/u in FY 2011-12 compared to 320.58 p/u last year.
- Of this Retail Tariff of 404.01 P/u, GRIDCO's Power Purchase Cost is 231.65 paisa, 25 paisa is OPTCL's Transmission Tariff, the SLDC;s cost is .18 paisa and the remaining 147.18 paisa is the Distribution Cost.
- Out of GRIDCO's Power Purchase Cost of 231.56 paisa, CESU's Bulk Supply Cost is 219 p/u, NESCO's and WESCO's BST is 262 p/u each and SOUTHCO's is 135 p/u, but the four DISTCOMs will pay uniform transmission cost of 25 paisa to OPTCL.
- The Generation Tariff of Orissa Hydro Power Corporation for 2011-12 has been hiked to 65.96 p/u against 62.51 p/u in 2010-11.
- Against approval of 57.67 p/u for 2009-10 and 62.51 p/u for 2010-11 for state hydro power the actual was 73.43 p/u and 71.44 p/u upto December, 2010 respectively.
- For State thermal against approval of 181.23 p/u for 2009-10 and 199.78 p/u for 2010-11 the actual was 216.77 p/u and 212.77 upto December, 2010 respectively, while the approved rate state thermal generation for 2011-12 is 221.25 p/u.
- For Central thermal against approval of 197.31 /u for 2009-10 and 243.54 p/u for 2010-11 the actual was 226.58 p/u and 305.55 p/u upto December, 2010 respectively while for 2011-12 the rate approved is 331.05 p/u.

- As a whole from all sources of purchase by GRIDCO against approval of 148.27 p/u for 2009-10 and 174.58 p/u for 2010-11 the actual rate paid was 201.72 p/u and 203.35 p/u upto December, 2010 respectively while the rate approved for 2011-12 is 210.32 p/u.
- While the Commission approved Power Purchase cost of 174.58 p/u from different sources for GRIDCO in 2010-11, by September 2010-11 GRIDCO had purchased power @ 208.49 p/u. In 2011-12 (upto December 2010 203.35 p/u) a Power Purchase Cost of 210.32 p/u had been approved which is a hike of 20.47% over last year. GRIDCO sold power to the DISCOMs at an overall average Bulk Supply Tariff rate of 170.25 p/u (CESU-157 p/u, NESCO-195 p/u, WESCO-194 p/u and SOUTHCO-90 p/u) in 2010-11. In 2011-12 an overall average BST of 231.65 p/u (CESU-219 p/u, NESCO-262 p/u, WESCO-262 p/u and SOUTHCO-135 p/u) has been approved which is 36.06% higher than last year. In other words, the overall average BST has gone up by 61.40 p/u.
- In 2010-11, OPTCL's transmission cost was approved at 23.50 p/u and in 2011-12 this has been increased to 25 p/u which means a hike of 1.50 p/u.
- Retail Tariff for consumers is determined after taking into consideration the Power Purchase Cost, Establishment Cost, Transmission Cost and Distribution Cost. The Retail Tariff approved by the Commission for FY 2010-11 was 320.58 p/u and for FY 2011-12 it is 404.01 p/u. There has been average hike of 83.43 paisa in the Retail Tariff this year of which 61.40 p/u will go to GRIDCO and 1.50 p/u to OPTCL and the remaining 20.53 p/u will be the share of the DISCOMs. Out of this amount, the DISCOMs will bear increased cost of repair and maintenance of lines and Sub stations, interest payment, employees' salary and pension, inspection fees for inspection of distribution network etc.
- **The Commission cannot fix the tariff in any manner for different types of consumers. It is mandated under Section 61(g) of the Electricity Act, 2003 para 8.3.2 of Tariff Policy, 2006(GoI), Para 1.1 and 5.5.2 of National Electricity Policy to ensure that tariff progressively reflect the cost of supply of Electricity and reduces cross subsidy in a manner that tariffs are within ±20 % of the cost of supply by end of 2010-11. When the average cost of supply for 2011-12 has been determined at 408.87 paise per unit, the tariff for the relatively poor consumers cannot be less than 327.07 paise (i.e. -20% of 408.87) and more than 490.67 paise per unit (+20% of 408.87). However, while the attempt has been made to reduce this cross subsidy by gradually increasing tariff for LT consumers, because of special treatment for Agriculture, allied agricultural activities allied agro industries, BPL families (fixed charged of Rs.30.00 paise per month upto 30 Units) and domestic consumers in the first slab (upto 50 unit per month 140 paise per unit) the target of reduction of cross-subsidy has not yet been achieved). For LT category of consumers the cross subsidy is by (-) 26.54% while for EHT it is +16.77% and for HT it is +17.90% which is evident from the table given below**:-

Table-7
Cross Subsidy in 2011-12

Year	Level of Voltage	Average cost of supply for the State as a whole (P/U)	Tariff P/U	Cross-Subsidy P/U	Percentage of Cross subsidy above/below or cost of supply
1	2	3	4	5 (4) – (3)	6
2009-10	EHT	263.00	295.05	32.05	12.19%
	HT		308.68	45.68	17.37%
	LT		179.99	-83.01	-31.56%
2010-11	EHT	327.37	379.93	52.56	16.06%
	HT		383.68	56.31	17.20%
	LT		219.21	-108.16	-33.04%
2011-12	EHT	408.87	477.43	68.56	16.77%
	HT		482.43	73.56	17.99%
	LT		300.34	-108.53	-26.54%

Table-8
Tariff for 2010-11 and 2011-12 proposed vis-à-vis Approved

Name of Licensee/Generator	OHPC	GRIDCO	OPTCL	SLDC	DISCOMs
Proposed ARR for FY10-11 (Rs. Cr)	422.96	5,484.42	1,443.52	14.91	6,513.42
Approved ARR for FY 10-11 (Rs. Cr)	361.88	4,242.44	480.93	7.77	5,009.35
Proposed ARR for FY11-12 (Rs. Cr)	443.97	6,926.91	1,573.69	13.85	7,875.10
Approved ARR for FY 11-12(Rs. Cr)	382.16	6016.92	572.43	8.80	7056.53
% Rise proposed for 2011-12 over approved 2010-11	22.7%	63.3%	227.2%	78.3%	57.2%
% Rise approved for 2011-12 over approved 2010-11	5.6%	41.83%	19.0%	13.3%	40.87%
Proposed tariff for 2010-11(P/U)	75.27	262.89	68.72	0.71	284.2*
Approved Tariff for FY 10-11 (P/U	64.40	170.25	23.50	0.38	320.58
Proposed tariff FY 2011-12(P/U)	79.01	304.41	68.68	0.60	510.34**
Approved Tariff for FY 11-12 (P/U)	68.01	231.65	25.00	0.38	404.01
% Rise proposed in Tariff for 2011-12 over approved 2010-11	22.7%	78.8%	192.3%	57.9%	59.2%
% Rise approved in tariff of 2011-12 over approved 2010-11	5.6%	36.06%	6.4%	0.0%	19.74%***

* Based on BST, transmission tariff rate of 2009-10
** Based on existing BST, transmission tariff of 2010-11
*** On Revenue to Revenue basis 22.20% in 2010-11 and 19.74% in 2011-12 (Tariff to tariff 26.02% IN 2011-12 AGAINST 21% IN 2010-11)

Table-9
Comparative Bulk Supply, Transmission and Retail Tariff approved by the Commission

		2008-09	2009-10	2010-11	2011-12	% increase
1	Avg. Cost of OHPC Power P/U	53.35	59.36	64.40	68.01	6%
2	Avg. Cost of OHPC Including Machhakund Power P/U	52.01	57.63	62.51	65.96	6%
3	Avg. Power Purchase cost of GRIDCO P/U	127.40	148.27	174.58	210.32	20.47%
4	Avg. BSP P/U	122.15	122.20	170.25	231.65	36.06^
5	**Difference between BSP & Power purchase (3) – (4) / (4) – (3) as the case may be**	**-5.25**	**-26.07**	**-4.33**	**21.33**	
6	**Break-Up of BSP P/U**					
	CESU	101.50	101.50	157.00	219.00	40%
	NESCO	125.00	130.00	195.00	262.00	35%
	WESCO	157.25	154.00	194.00	262.00	35%
	SOUTHCO	70.00	70.00	90.00	135.00	50%
	TOTAL	**122.15**	**122.20**	**170.25**	**213.65**	**36.06%**
7	Avg. Transmission Charge P/U	21.00	20.50	23.50	25.00	7%
	DISCOMS					
	Average cost of supply	**272**	**263**	**327.37**	**408.87**	**25.00%**
8	Avg. RST P/U (Revenue)	281.40	265.15	320.58	404.01	26.02%*
9	Avg. BSP (P/U)	122.15	122.20	170.25	231.65	36.06%
10	Transmission Cost incl. SLDC (P/U)	21.00	21.00	23.68	25.18	7.0%
11	***Difference to DISCOMs (8 – 9 – 10) (P/U)***	***138.25***	***121.95***	***126.65***	***147.18***	***17%***
12	**Break-up of the Retail Tariff voltage wise**					
	EHT	***295.05***	***295.05***	***379.93***	***477.43***	***26&***
	HT	***308.68***	***308.68***	***383.68***	***482.43***	***26%***
	LT	***212.00***	***179.99***	***219.21***	***300.34***	***37%***
	Overall	***281.40***	***265.15***	***320.58***	***404.01***	***19.74%*****

* Revenue based 19.74% for 2011-12 against 22.22% in 2010-11

** Revenue to Revenue 19.74% (Tariff to Tariff 26.02% in 2011-12 against 21% in 2010-11).

6. Tariff Rise vis-à-vis Reduction in distribution loss, AT&C loss etc.

6.1 It is a fact that if the distribution companies reduced the distribution loss and take strong anti theft measures there may not be need for consequential rise in tariff even though rise in tariff cannot be avoided

altogether because of rising cost of generation, transmission and distribution. But however, in case of Odisha Commission has not been fixing nor is fixing the tariff based on the distribution loss shown by the distribution companies. It is fixing the tariff based on normative level of distribution loss target fixed by the Commission on year to year basis on a declining path. It may be seen from the table given below:-

Table-10

	FY 2009-10		FY 2010-11				FY 2011-12		
	Appro. by OERC	Actual	Prop. by DISCOMs	Appro. by OERC	Actual shown by DISCOMs (upto 9/2010)	Latest esti. for 10-11	Prop. by DISCOMs for 2011-12	Approved for 2011-12 by OERC in the Business Plan order dt.20.3.10	Appro. in ARR
Dist. Loss (%)	24.45	37.24	35.60	22.22	37.54	35.50	32.95	21.70	21.71
Collection Efficiency(%)	98.00	97.00	96.60	98.00	88.28	96.6	98.34	99.00	99.00
AT&C Loss (%)	25.96	39.15	37.80	23.80	44.86	37.8	34.06	22.48	22.49

6.2 If the tariff would have been fixed on the distribution loss projected by the distribution companies for 2010-11 or 2011-12, the tariff rise would have been substantial. But Commission has fixed the tariff for the year 2010-11 assuming 22.22% of distribution loss for 2010-11 and 21.70% for 2011-12 (as per the Business Plan) but not on the distribution loss of 35.60% projected by the distribution companies for 2010-11 and 32.95% projected for 2011-12.

6.3 When the distribution companies would be able to reduce the distribution loss from the level approved by the Commission then this would necessarily minimize the rise in tariff since at present revenue requirement of the distribution companies is being worked out on the normative level of distribution loss approved by the Commission but not based on the distribution loss projected by the distribution companies. They are unable to collect the required amount of revenue as approved by the Commission as a result there is shortage of cash for distribution companies for taking timely operation and maintenance, payment of salary, pension and wages, payment of principal and interest, etc.

7. Performance of the distribution companies in the matter of reduction of Loss.

Table-11

OVERALL PERFORMANCE OF DISCOMs											
	1999-00	2007-08		2008-09		2009-10 (Provisional)		2010-11 (Provisional)		2011-12	
	Actual (Aud)	OERC Approval	Actual (Aud)	OERC Approval	Actual	OERC Approval	Actual	OERC Approval	Actual upto Sept,2010	DISCOMs Proposal	OERC Approval
A. DISTRIBUTION LOSS (%)											
CESU	44.89%	29.30%	41.48%	29.30%	40.34%	26.30%	39.43%	25.37%	37.59%	34.59%	24.00%
NESCO	43.35%	26.00%	31.17%	25.50%	34.57%	23.00%	32.52%	18.46%	32.76%	27.66%	18.40%
WESCO	44.17%	25.00%	36.13%	25.00%	33.55%	22.50%	34.68%	19.93%	37.20%	31.29%	19.70%
SOUTHCO	41.84%	30.40%	45.49%	30.40%	47.78%	27.92%	48.02%	27.82%	47.79%	42.67%	26.50%
ALL ORISSA	**43.91%**	**27.10%**	**37.48%**	**27.00%**	**37.50%**	**24.45%**	**37.24%**	**22.22%**	**37.54%**	**32.95%**	**21.71%**
B. COLLECTION EFFICIENCY (%)											
CESU	69.72%	92.00%	94.05%	95.00%	91.80%	98.00%	97.09%	98.00%	91.47%	99.00%	99.00%
NESCO	79.37%	94.00%	93.16%	95.00%	92.50%	98.00%	95.24%	98.00%	84.39%	98.00%	99.00%
WESCO	83.36%	96.00%	92.91%	96.60%	93.86%	98.00%	98.38%	98.00%	88.85%	98.00%	99.00%
SOUTHCO	78.75%	94.00%	94.05%	94.00%	94.21%	98.00%	95.89%	98.00%	85.10%	98.00%	99.00%
ALL ORISSA	**77.19%**	**94.10%**	**93.41%**	**95.40%**	**92.98%**	**98.00%**	**96.96%**	**98.00%**	**88.28%**	**98.34%**	**99.00%**
C. AT & C LOSS (%)											
CESU	61.58%	34.96%	44.96%	32.84%	45.23%	27.77%	41.19%	26.86%	42.91%	35.24%	24.76%
NESCO	55.04%	30.44%	35.88%	29.23%	39.48%	24.54%	35.73%	20.09%	43.25%	29.11%	19.22%
WESCO	53.46%	28.00%	40.65%	27.55%	37.63%	24.05%	35.74%	21.53%	44.21%	32.66%	20.50%
SOUTHCO	54.20%	34.58%	48.73%	34.58%	50.80%	29.36%	50.16%	29.27%	55.57%	43.82%	27.24%
ALL ORISSA	**56.71%**	**31.40%**	**41.60%**	**30.36%**	**41.89%**	**25.96%**	**39.15%**	**23.77%**	**44.86%**	**34.06%**	**22.49%**

LT PERFORMANCE OF DISCOMs (Based on Performance Review Data)											
	1999-00	2007-08		2008-09		2009-10 (Provisional)		2010-11		2011-12	
	Actual (Aud)	OERC Approval	Actual	OERC Approval	Actual	OERC Approval	Actual	OERC Approval	Actual upto Sept,2010	DISCOMs Proposal	OERC Approval
A. L T LOSS (%)											
CESU	50.48%	34.40%	53.18%	36.00%	52.00%	35.04%	51.97%	29.40%	50.11%	46.20%	29.20%
NESCO	62.26%	51.10%	59.31%	44.50%	59.40%	33.19%	55.83%	29.40%	54.94%	42.39%	27.05%
WESCO	60.64%	52.00%	65.33%	46.70%	65.65%	35.86%	62.49%	29.40%	62.55%	48.95%	27.11%
SOUTHCO	48.85%	33.20%	54.44%	33.40%	57.12%	29.50%	56.22%	29.40%	54.52%	49.85%	27.75%
ALL ORISSA	**55.11%**	**42.30%**	**57.94%**	**40.30%**	**58.06%**	**34.04%**	**56.26%**	**29.40%**	**55.04%**	**46.60%**	**27.98%**
B. COLLECTION EFFICIENCY IN LT (%)											
CESU	69.72%	92.00%	88.35%	95.00%	84.63%	98.00%	96.51%	98.00%	83.6%	99.00%	99.0%
NESCO	79.37%	94.00%	72.69%	95.00%	72.61%	98.00%	77.43%	98.00%	59.9%	98.00%	99.0%
WESCO	83.36%	96.00%	77.91%	96.60%	73.42%	98.00%	76.01%	98.00%	64.9%	98.00%	99.0%
SOUTHCO	78.75%	94.00%	88.21%	94.00%	89.10%	98.00%	92.77%	98.00%	76.3%	98.00%	99.0%
ALL ORISSA	**77.19%**	**94.10%**	**83.09%**	**95.40%**	**80.63%**	**98.00%**	**87.62%**	**98.00%**	**73.9%**	**98.34%**	**99.0%**
C. AT & C LOSS FOR LT (%)											
CESU	65.47%	39.65%	58.63%	39.20%	59.38%	36.34%	53.65%	30.81%	58.26%	46.74%	29.91%
NESCO	70.05%	54.03%	70.42%	47.28%	70.52%	34.53%	65.80%	30.81%	73.02%	43.54%	27.78%
WESCO	67.19%	53.92%	72.99%	48.51%	74.78%	37.14%	71.49%	30.81%	75.69%	49.97%	27.84%
SOUTHCO	59.72%	37.21%	59.81%	37.40%	61.79%	30.91%	59.39%	30.81%	65.31%	50.85%	28.47%
ALL ORISSA	**65.35%**	**45.70%**	**65.05%**	**43.05%**	**66.18%**	**35.36%**	**61.68%**	**30.81%**	**66.80%**	**47.49%**	**28.70%**

NB : (I) AT& C Loss for LT(OERC approval) has been calculated based on overall collection efficiency data.

(II) The Overall collection percentage for 1999-00 has been assumed as LT Collection Efficiency for FY 1999-00 for Calculating AT & C Loss

8. Rural Electrification vis-à-vis requirement of revenue subsidy by the State Govt.

8.1 It has been submitted by the DISCOMs that BPL consumers are paying at flat rate of Rs.30 per month for consumption of 30 units. Due to RGGVY & BGJY the number of BPL consumers will rise from 89250 to 6.50 lakhs at the end of 2010-11 and this may further increase upto 40 lakhs by end of 2011-12. As the State govt. is committed to ensure 100% rural electrification and provide electricity connection to all BPL families the distribution companies have submitted that since they are realizing only Rs.1 per unit and the cost of supply would be more than Rs.4 during 2011-12 and in subsequent years they would incur substantial loss on account of consumption by the BPL families. In this connection they have also drawn attention to the provision of clause (H) and (I) of the agreement entered into between NTPC, REC, DISCOMs and the State Govt. which is extracted below:-

"H. Government of Orissa and NESCO commit that they shall ensure:

(a) Determination of bulk supply tariff for franchisees in a manner that ensures their commercial viability.

(b) Provision of requisite revenue subsidy by the State Government to the State Utilities as required under the Electricity Act, 2003.

I. (ii) The provision of requisite revenue subsidy to the State Utilities, as required under the Electricity Act, 2003 - Revenue sustainability arrangement shall be ensured in the project area and based on the consumer mix and the prevailing consumer tariff and likely load, the Bulk Supply Tariff (BST) for the franchisee would be determined after ensuring commercial viability of the franchisee. This Bulk Supply Tariff would be fully factored into the submissions of the State Utilities to the State Electricity Regulatory Commissions (SERCs) for their revenue requirements and tariff determination" The State government under the Electricity Act, 2003 is required to provide the requisite revenue subsidies to the state utilities if it would like tariff

for any category of consumers to be lower than the tariff determined by the SERC"

(iii) *Adequate arrangement for supply of electricity without any discrimination in the hours of supply between rural and urban households.*

8.2 In this connection, it is to be noted that while fixing tariff for BPL category consumers or other vulnerable sections of the society, Commission has to be guided by the provision of para 5.5.2 of the National Electricity Policy which states that a minimum level of support may be required to make electricity affordable for consumers of very poor category. Consumers Below Poverty Line (BPL) who consume below a specified level say, 30 units per month may receive special support in terms of tariff which are cross subsidized. Tariff for such designated group of consumers will be at least 50% of the average (overall) cost of the supply.

8.3 Thus, as per the provision of para 5.5.2 of the National Electricity Policy Commission is required to fix a tariff for BPL consumers which should not be less that 50% of average cost of supply and the balance has to be borne by the state government as a revenue subsidy as per the Section 65 of the Electricity Act, 2003.

8.4 However, before providing any subsidy actual consumption by the BPL families and the loss arising due to low level of tariff for such BPL families have to be verified and ascertained by a third party. The loss incurred by the distribution companies because of other reasons or due to theft by other consumers cannot be loaded on the state government in the name of loss arising out of subsidizing rate of tariff for the BPL consumers. But with increase in number of BPL consumers the loss level is definitely going to increase which cannot be absorbed by higher tariff, better performance and better collection in respect of other consumers. Because as per Section 61(g) of the Electricity Act, 2003 read with para 8.23 of the Tariff Policy Commission has been mandated to keep the cross subsidy within ± 20% of the average cost of supply by end of 2010-11. It means that if the average cost of supply is Rs.4 per unit the highest tariff rate for high end consumers like industry, etc. should not be more than 4.80 per unit whereas for low end consumers it should not be less than Rs.3.20 per unit.

9. The Areas of Concern and Road Map for the Power Sector

9.1 The distribution sector is the most vital but weakest link in the entire value chain of the power sector. If the distribution sector doesn't become financially viable, the transmission and generation would be seriously affected. It is, therefore, necessary that all out efforts should be made to strengthen and to ensure the financial viability of the distribution sector. For this to happen, the power utilities should be allowed to operate on commercial principle. In other words the costs of generation, transmission and distribution have to be recovered from the beneficiaries.

9.2 Good governance is one of the important pillars of the reforms of power sector. The Discoms are directed to enforce strict discipline among the staff, train then regarding the need for good behaviour and prompt services to the consumers. This also includes inter-alia good economic governance and strengthening the institutions of the Regulatory Commission. It should be a part of the initiative of the State Govt. For the power sector, reform to take up, there is a need for reforms in the down stream sector of coal, petroleum and natural gas and transportation.

9.3 Coming to the Odisha's specific problems the present high level of AT&C loss of 39.15% (2009-10) is quite unsustainable. 50% of this loss can be ascribed to theft of electricity at different levels with/without the connivance of the employees of the distribution companies. There is urgent need to tackle this menace of theft of electricity at different levels. Balance 50% of loss arising out of the old and dilapidated distribution network can be prevented by system upgradation for which the Govt. have already launched a Capex programme of Rs.2400 crore starting from FY 2010-11 to 2013-14. Out of Rs.2400 crore the State Govt. will provide Rs.1200 crore (Rs.666.67 crore with 0% interest, Rs.533.33 Cr with 4% interest) and the balance Rs.1200 crore would be provided by the distribution companies as a counter part funding. If they achieve reduction of 3% AT&C loss per annum on the average Rs.833.34 crore (13^{th} Finance Commission grand Rs.500 Cr + State Govt. Share Rs.166.67 Cr. + GRIDCO's Share Rs.166.67 Cr as a counter part funding) can be converted to grant.

9.4 Expected benefits of the Power Sector Reforms in the State would materialize only if the utilities bring in efficiency in operations, optimize cots, reduce commercial and technical losses, improve quality of service delivery in

order to ensure greater customers' satisfaction and take strong measures, whenever and wherever required, to make the consumers pay for the electricity used. Regrettably, at present out of every 100 units of electricity sold to the consumers in the State, only 63 units are billed and sale price of only 61 units is being reaslised. Obviously, this business model is unsustainable and unviable. The distribution segment would be financially and operationally viable only when the energy actually consumed is metered, billed and the electricity charges are collected in full. While the billing and collection efficiency of the distribution companies has to improve substantially; they also have to effectively tackle the malady of theft of electricity.

9.5 A multi pronged approach that incorporates all areas of utilities performance improvement is the need of the hour. It surely has the potential to turn around the distribution segment of the sector besides resulting in other benefits. Such initiatives should be accorded high priority at the utilities level with dedicated teams both at management level and operation level so that there are no hindrances in implementation and there is complete commitment from top management to effect changes. Once this happens, the impact of reform shall be felt to a much great extent and benefits will trickle down to all stakeholders.