Odisha Power Sector At A Glance (As on September 2011)

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1. Some essential facts about Odisha

- Odisha is located on the eastern coast of India and has a coastline of 480 Km.
- Its geographical area covers 1,55,707 Sq.Km. (4.75% of geographical area)
- Recorded forest area – 58136.9 Sq. Km. (37.34% of the geographical area
- Odisha has nearly 17% of the total mineral reserve of India, 98% of chromite, 92% of nickel, 51% of Bauxite and 33% of iron ore of the total deposits of the country are available in Odisha

• Population (2011)	4.19 crore (3.47% of country's population)
• Rural population	83%
• ST population	22.13% (8.20% of all India average)
• SC population	16.53% (16.20% of all India average)
• ST & SC together	38.66% (24.40% of all India average
• Total No of villages	51,349 Nos.
• Inhabitant villages	47,529 Nos.
• Un-Inhabitant villages	3,820 Nos.
• No. of Gram Panchayat	6,234 Nos.
• No. of Municipality	35 Nos.
• No. of NAC	68 Nos.

- Per capita income at current price in 2010-11 is Rs.36923/ (Rs.54895 of all India average) (24.99% below the national average in 2009-10 and 32.67% in 2010-11)
- Per capita expenditure as per 63rd Rounds of NSS (2007) is as follows:

	Rural	Urban
Odisha	5503	12866
All India	8342	15750

• Below poverty line	46.41% (2004-05) (27.5% of all India average)
• Rural	46.8% (All India 28.3%)
• Urban	44.3% (All India 25.7%)
• Literacy rate	73.45% (male – 82.40% and female – 64.36%)
– All India literacy of Rate	74.04% (Male – 82.14% and female – 65.46%)

- Infant mortality rate per 1000 (2011)

Odisha	65
All India	50

- Life Expectancy (2006 – 10)

	Male	Female
Odisha	62.3	65.8
All India	64.8	68.1

- Human Development Indian (2001)

Odisha	0.404
All India	0.472
West Bengal	0.472
Andhra Pradesh	0.416
Tamilnadu	0.531
Utter Pradesh	0.388
Kerala	0.638

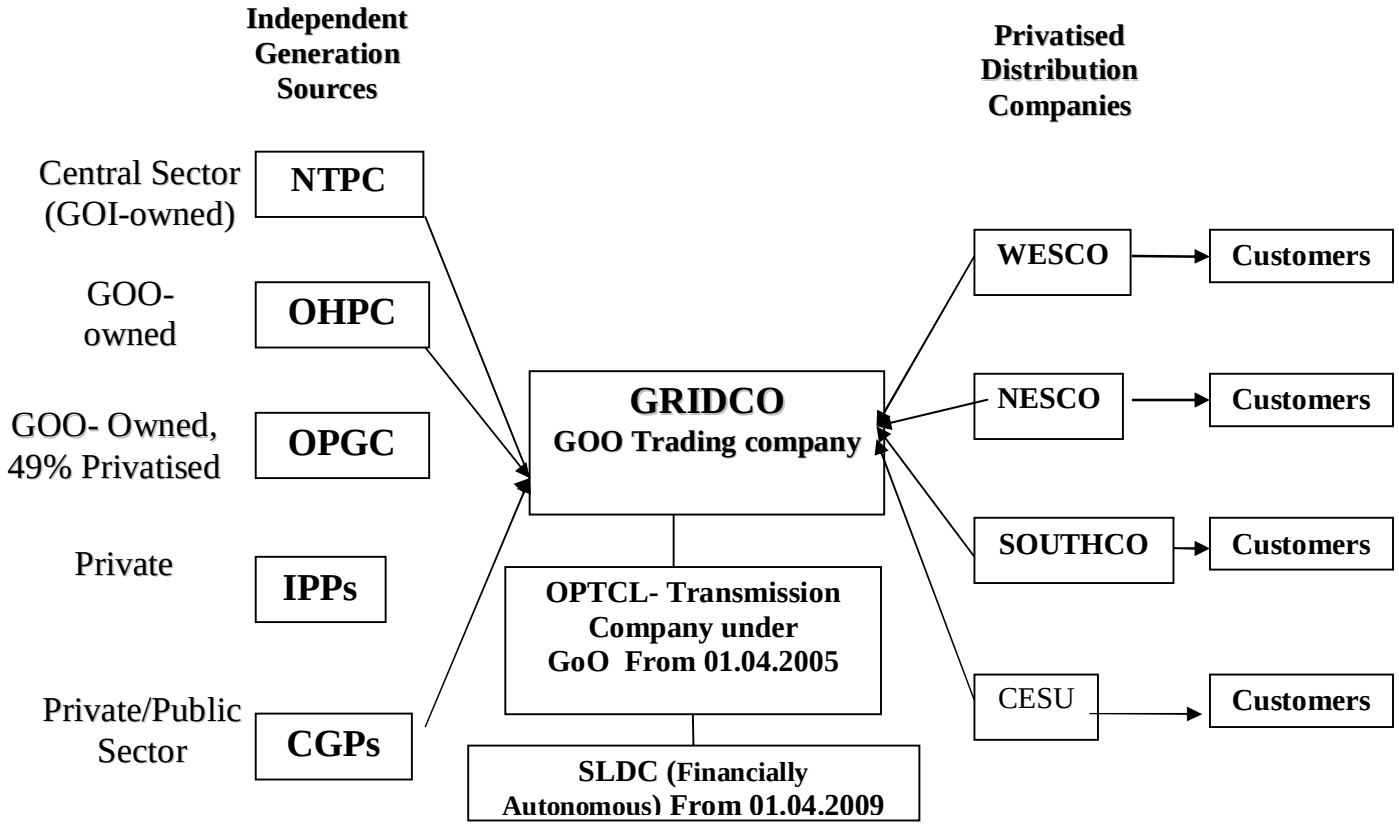
- Per capita consumption of electricity per year 2009-10 – 874.24 Kwh (All India average 778.71 Kwh.)
- Village electrification as on 31.3.2010 68.56% (32590/47529)

CONSUMERS (As on Sept. 2011)	**CESU**	**NESCO**	**WESCO**	**SOUTHCO**	**TOTAL**
EHT	**22**	**30**	**24**	**12**	**88**
HT	**1181**	**379**	**633**	**185**	**2378**
LT	**1362839**	**764769**	**696815**	**799475**	**3623898**
Total	**1364042**	**765178**	**697472**	**799672**	**3626364**

- No of Energy Police stations (34 Nos proposed/15 Operational)
- No of Ombudsman 2 (1 No. For CESU /1 No. for NESCO/WESCO/SOUTHCO)
- No. of GRFs 12
- No. of Special Energy Court 5

Sl. No	Name of the Court	Area of Jurisdiction (Revenue District)
1	Additional District and Sessions Judge, Balasore	Balasore
2	First Additional District and Sessions Judge, Berhampur, Ganjam	Ganjam
3	Additional District Judge-Cum-Additional Special Judge(Vigilance),Bhubaneswar	Khurda
4	First Additional District and Sessions Judge, Cuttack.	Cuttack
5	Additional District and Sessions Judge, Sambalpur	Sambalpur

2. CORPORATE STRUCTURE OF THE ELECTRICITY SECTOR IN ODISHA



3. Installed Capacity in Odisha as on Sept. 2011 (4756 MW)

- Total installed capacity 4734 MW (Hydro 2331 MW + Thermal 2425 MW)
- State Hydro (OHPC) 2085 MW
  (Odisha share from Machhkund 57 MW + 2028 MW)
- Small Hydro 57 MW

Sub total of State Hydro sector **2142 MW**

State Thermal Power Stations 880 MW (Ib thermal OPGC 420 MW+ Talcher Thermal NTPC 460 MW)

IPPs (SEL& Arati) 650MW

- Sub total of State Sector **3672 MW** (Hydro 2142 MW + Thermal 1530MW)
- Central Sector 1084 MW (Thermal 895 MW + Hydro 189 MW)
- Total Capacity **4756 MW** (Hydro 2331 MW + Thermal 2425 MW)

Availability of Power From Existing Stations

INSTALLED CAPACITY & NORMATIVE ENERGY AVAILABILITY OF ODISHA

GENERATING STATIONS	CAPACITY DETAILS (NOS. x MW)	Odisha Share			Ex-bus availability to GRIDCO (MU)	REMARKS	Actual for 2010-11
		%	MW	MU			
STATE STATIONS							
HYDRO (OHPC)							
HIRAKUD	2*49.5+2*32+3*37.5+3* 24 (Chipilima)	100.00	348	1,174.0	1,162.3	Design Energy less Auxulary Consumption (AC) @ 1%	905.34
BALIMELA	6*60+2*75	100.00	510	1,183.0	1,171.2		1,261.86
U.KOLAB	4*80	100.00	320	832.0	823.7		553.11
RENGALI	5*50	100.00	250	525.0	519.8		253.12
INDRAVATI	4*150	100.00	600	1,962.0	1,942.4		1,632.52
Sub Total			**2,028**	**5,676**	**5,619**		**4,605.95**
MACHAKUND	(3*17+3*21.25)=114.75MW	50.00	57	262.5	262.5	Assuming Orissa drawal of 50% energy	268.44
TOTAL HYDRO			**2,085**	**5,939**	**5,882**		**4,874.39**
SMALL HYDRO							
SAMAL S H P (OPCL)	5 * 4	100.00	20	114	113	Design Energy less Auxulary Consumption (AC) @ 1%	23.00
MEENAKSHEE HEP	2*12.5+3*4	100.00	37	142	140		227.07
TOTAL STATE HYDRO			**2,142**	**6,194**	**6,135**		**5,124.46**
THERMAL							
IBTPS	2*210	100.00	420	3,127	2,830	Considering PLF of 85% and Aux. Consumption at 9.5%	2,843.40
TTPS	2*110+4*60	100.00	460	3,304	2,957	Considering PLF of 82% and Aux. Consumption at 10.5%	3,374.97
IPPs							
M/s Staerilite Energy	600.00		600	4,205	3,784	Considering PLF of 80% and Aux. Consumption at 10%	883.23
Arati Steels	50.00		50	350	315	Considering PLF of 80% and Aux. Consumption at 10%	
TOTAL STATE THERMAL			**1,530**	**10,987**	**9,887**		**7,101.60**

STATE TOTAL			**3,672**	**17,181**	**16,022**		**12,226.06**
CENTRAL STATIONS					Central Transmission Loss (CTL) of 2.3% considered as per ARR Order for FY2011-12		
HYDRO							
CHUKHA	4*84=336 Availability to ER-270	15.19%	41	283.3	273.4	Based on Past trend and parameters taken in the ARR of GRIDCO for FY2011-12	272.02
TALA	6 * 170=1020	4.25%	43	151.3	143.2		148.07
TEESTA	3 * 170= 510	20.59%	105	529.6	511.3	Design Energyof 2573MU less Auxulary Consumption (AC) @ 1.2% & CTL @ 2.3%	519.67
TOTAL CENTRAL HYDRO			**189**	**964.2**	**927.8**		**939.76**
THERMAL							
FSTPS	3*200+2*500=1600	13.63%	218	1,623.2	1,475.8	PLF of 85% , Aux. Cons. at 6.94% & CTL @ 2.3%	1,514.10
TSTPS - I	2*500=1000	31.80%	318	2,367.8	2,163.0	PLF of 85% , Aux. Cons. at 6.5% & CTL @ 2.3%	2,155.51
TSTPS - II	4*500=2000	10.00%	200	1,489.2	1,360.4	PLF of 85% , Aux. Cons. at 6.5% & CTL @ 2.3%	1,439.51
KHSTPS - I	4*210=840	15.24%	128	953.1	847.4	PLF of 85% , Aux. Cons. at 9.0% & CTL @ 2.3%	748.18
KHSTPS - II	3*500=1500	2.05%	31	230.8	210.9	PLF of 85% , Aux. Cons. at 6.5% & CTL @ 2.3%	168.96
TOTAL CENTRAL THERMAL			**895**	**6,664.2**	**6,057.4**		**6,026.26**
SUB TOTAL CENTRAL SECTOR			**1,084**	**7,628.4**	**6,985.3**	% of State Hydro to Total availability	**6,966.02**
TOTAL (CENTRAL+STATE)			**4,756**	**24,809.1**	**23,007.1**	**30.7%**	**19,192.08**
CGP & Co-Generation							3,021.23
UI Over Drawal							795.45
Power Banking & Trading							241.11
TOTAL							**23,249.87**

4. State Demand and Energy Procurement

(Energy in MU)

	2008-09	**2009-10**	**2010-11**	**2011-12 (Projected)**
Energy Requirement	20,519	21,136	22,506	25,430
Energy Supplied	20,214	20,955	22,449	21,511
Deficit(-)/Surplus (+)	**(-)1.5%**	**(-)0.9%**	**(-)0.3%**	**(-)15.4%**

(Demand in MW)

	2008-09	**2009-10**	**2010-11**	**2011-12 (Projected)**
Peak Demand	3,062	3,188	3,872	3,700
Peak Demand met	2,987	3,120	3,792	3,836
Deficit(-)/Surplus (+)	**(-)2.4%**	**(-)2.2%**	**(-)2.1%**	**(+)3.7%**

Source :CEA LGBR

- Average demand 2215 MW & 19398MU (for 2008-09) ,
  2354 MW & 20624MU (for 2009-10)
- The Report of 17th Electric Power Survey (EPS) of India published by CEA in March, 2007 made the forecast for the power demand of Odisha for 11th, 12th & 13th Plan as shown in Table below:-

FY	**2011-12 (End of 11th Plan)**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17 (End of 12th Plan)**	**2021-22 (End of 13th Plan)**	**Remarks**
Peak Demand (MW)	**4459**	**4783**	**5130**	**5502**	**5902**	**6330**	**10,074**	As per Table 6.4 of 17th EPS of CEA, Energy Requirement and Peak Demand have been computed for 12th Plan @ 7.57% and 7.26% respectively.
Energy Requirement (MU)	**27149**	**29204**	**31415**	**33793**	**36351**	**39096**	**63,098**	
Installed Capacity Required (MW)	**6670**	**7154**	**7687**	**8245**	**8828**	**9469**	**15,069**	

GRIDCO and OPTCL have submitted before the Commission that PRDC, Bangalore made a study by Monte-Carlo Simulation Method as well as by Analytical Method to assess the quantum of surplus power during the terminal year of 11th Plan i.e. during FY 2011-12 and during 12th Plan period based on the forecast of demand made by OPTCL as well as in 17th EPS of CEA mentioned above and submitted their Report to GRIDCO in August, 2011 which observes as under:

> *"**Odisha State will not be surplus up to FY 2015-16 and Odisha Power Sector would witness a surplus scenario from FY 2016-17 onwards.**"*

The Commission has analysed the emerging power scenario of Odisha during 12th Plan as shown in table below:

Emerging Scenario of deficit/surplus of power during FY 2011-12 & 12th Plan period

(All in MW)

FY	Peak Demand as per 17th EPS of CEA	Maximum Peak Demand that can be met	Deficit(-)/Surplus(+)
2011-12	4459	3125	**(-)1334**
2012-13	4783	3650	**(-)1133**
2013-14	5130	4050	**(-)1080**
2014-15	5502	4200	**(-)1302**
2015-16	5902	5880	**(-) 22**
2016-17	6330	9768	**(+)3438**

- Odisha has signed MoU with 32 Independent Power Producers (IPPs) for setting of power plants in Odisha with a proposed capacity of 39188 MW.
- Out of which Odisha will get a share of 8193 MW

5. Power Procurement from CGPs Including Co-generation

- **Supply of surplus power by CGPs/Co-generation/ SHEP:**
  Total installed Capacity: (Grid Connected) 4454 MW
  No of CGPs supplying surplus power: to GRIDCO 27 Nos.

- **Availability of power from CGPs: 300 MW Average**
- **Power procured from CGPs: As given in table below:**

Year	CGP(MU)	Co-Gen (MU)	Total (MU)	Average Rate Rs./KWH
2005-06	475.34	75.01	550.35	1.17
2006-07	628.42	165.72	794.14	1.59
2007-08	381.60	354.45	736.05	1.88
2008-09	712.40	479.91	1192.31	2.29
2009-10	2295.48	671.61	2967.09	3.18
2010-11	2240.08	781.15	3021.23	2.91

- **Rate of procurement of power:**
  From : 01-11-2009

  CGP: Rs. 3.10/3.40/3.70/4.05 per Unit
  Co-generation: Rs. 3.20/3.40/3.70/4.05 per Unit

  From : 10-11-2010 to 31.03.2011 and continuing till date
  Both for CGP and Co-generation:

  100% Supply to GRIDCO Rs. 2.75/3.10/3.25 per Unit
  60% Supply to GRIDCO Rs. 2.75/3.00/3.20 per Unit

GRIDCO Drawal from CGPs & Co-generation Plants (Provisional)

Sl. No.	Name of CGPs & Co-generation Plants	Installed Capacity (MW)	2006-07 (Audited)			2007-08(Audited)			2008-09 (Audited)			2009-10 (Provisional)			2010-11 (Provisional)		
			Energy (MU)	Cost (Rs.in Cr)	Avg. Rate Rs./KWH	Energy (MU)	Cost (Rs.in Cr)	Avg. Rate Rs./KWH	Energy (MU)	Cost (Rs.in Cr)	Avg. Rate Rs./KWH	Energy (MU)	Cost (Rs.in Cr)	Avg. Rate Rs./KWH	Energy (MU)	Cost (Rs.in Cr)	Avg. Rate Rs./KWH
	CGPs																
1	NALCO	1,080.00	421.62	62.12	1.47	129.52	18.24	1.41	80.28	13.46	1.68	14.57	4.38	3.01	58.31	13.81	2.37
2	ICCL	108.00	19.15	1.80	0.94	3.29	0.31	0.94	42.87	11.99	2.80	187.36	57.31	3.06	47.46	13.69	2.88
3	INDAL(HINDALCO)	367.50	31.36	2.42	0.77	31.77	5.09	1.60	49.22	10.58	2.15	90.87	28.49	3.14	56.22	15.29	2.72
4	RSP	220.00	39.10	2.52	0.64	24.73	1.72	0.70	14.04	1.02	0.73	20.88	1.92	0.92	20.05	2.09	1.04
5	NBVL	95.00	2.14	0.13	0.61				176.00	42.30	2.40	230.77	69.22	3.00	177.68	49.57	2.79
6	Vedanta (jharsuguda)	1,215.00							29.27	6.17	2.11	697.10	242.49	3.48	741.93	240.76	3.25
7	JSL	263.00				23.12	2.90	1.25	280.01	70.08	2.50	874.63	292.87	3.35	916.38	284.12	3.10
8	BHUSAN (S&P)	360.00	115.05	25.11	2.18	169.17	38.28	2.26	35.38	7.40	2.09	97.76	11.51	1.18	112.80	25.18	2.23
9	Rathi Steel & Power	20.00							0.38	0.06	1.58	18.53	5.56	3.00	13.85	2.46	1.78
10	Maheswary	24.00										2.99	0.93	3.11	10.53	2.40	2.28
11	Dinabandhu	10.00										3.56	1.09	3.06	17.17	5.14	2.99
12	OSIL,Palaspanga	36.00										25.04	7.85	3.13	40.38	11.64	2.88
13	SCAW Industries	8.00							4.80	0.88	1.83				10.99	1.93	1.76
14	Shree Mahavir Ferro Alloys	12.00							0.15	0.05	3.33	31.42	9.61	3.06	14.48	3.63	2.51
15	OCL Iron &Steel	14.00													1.41	0.44	3.12
16	Maithan														0.44	0.08	1.82
	Sub Total	**3832.50**	**628.42**	**94.10**	**1.50**	**381.60**	**66.54**	**1.74**	**712.40**	**163.99**	**2.30**	**2295.48**	**733.23**	**3.19**	**2240.08**	**672.23**	**3.00**

Sl. No.	Name of CGPs & Co-generation Plants	Installed Capacity (MW)	2006-07 (Audited)			2007-08(Audited)			2008-09 (Audited)			2009-10 (Provisional)			2010-11 (Provisional)		
			Energy (MU)	Cost (Rs.in Cr)	Avg. Rate Rs./KWH	Energy (MU)	Cost (Rs.in Cr)	Avg. Rate Rs./KWH	Energy (MU)	Cost (Rs.in Cr)	Avg. Rate Rs./KWH	Energy (MU)	Cost (Rs.in Cr)	Avg. Rate Rs./KWH	Energy (MU)	Cost (Rs.in Cr)	Avg. Rate Rs./KWH
	Co-Generation Plants																
1	NINL	62.50	71.17	14.38	2.02	88.55	17.89	2.02	76.33	17.53	2.30	71.07	22.25	3.13	73.95	20.83	2.82
2	ARATI STEEL	40.00	85.65	17.55	2.05	84.09	18.49	2.20	127.39	29.85	2.34	116.21	35.52	3.06	85.18	23.32	2.74
3	TATA SPONGE	26.00	1.06	0.08	0.75	112.44	25.45	2.26	126.11	29.55	2.34	126.17	37.01	2.93	126.22	35.13	2.78
4	SMC Power	33.00							32.78	6.75	2.06	46.87	15.03	3.21	50.15	13.45	2.68
5	IFFCO,Paradeep	110.00				0.29	0.06	2.07				24.18	7.64	3.16	38.87	11.11	2.86
6	Visa Steel Duburi	50.00							1.97	0.19	0.96	8.60	2.62	3.05	24.57	5.02	2.04
7	VEDANT (Lanjigarh)	90.00	0.25	0.01	0.40	17.45	2.81	1.61	10.32	2.21	2.14	18.96	5.88	3.10	20.24	5.44	2.69
8	SHYAM DRI	30.00				8.89	1.80	2.02	31.02	6.67	2.15	28.78	8.87	3.08	111.44	29.69	2.66
9	BHUSAN (S&S)	110.00	7.59	0.35	0.46	42.74	5.15	1.20	58.80	12.69	2.16	137.95	45.59	3.30	129.62	29.75	2.30
10	Action Ispat	37.00										26.81	8.52	3.18	24.56	6.33	2.58
11	Aryan Ispat	18.00										29.88	9.62	3.22	62.06	17.66	2.85
12	Pattnaik SteeL,Palaspanga	15.00							15.19	3.35	2.21	36.13	11.19	3.10	34.29	9.38	2.74
	Sub Total	**621.50**	**165.72**	**32.37**	**1.95**	**354.45**	**71.65**	**2.02**	**479.91**	**108.79**	**2.27**	**671.61**	**209.74**	**3.12**	**781.15**	**207.11**	**2.65**
	TOTAL	**4,454.00**	**794.14**	**126.47**	**1.59**	**736.05**	**138.19**	**1.88**	**1,192.31**	**272.78**	**2.29**	**2,967.09**	**942.97**	**3.18**	**3021.23**	**879.34**	**2.91**

6. Power Transmission (OPTCL)

- ❑ Started operation from 2005-06
- ❑ Loss incurred during first three years due to inadequate tariff
- ❑ Regular in servicing loan to FIs/ Banks
- ❑ Vision Document Released
- ❑ 10-year Transmission Planning completed
- ❑ Project financing from PFC/REC – No constraints
- ❑ Manpower recruitment is in process

Existing Sub-Stations & Transmission Lines

Voltage Level	No. of Stations	Aggregate S/S Capacity in MVA	Tr. Line in Ckt. Km.
400 kV	3	2102.5	521.935
220 kV	19	4583.5	5483.925
132 kV	78	3161.5	5287.703
Total	**100**	**9847.5**	**11293.563**

New Sub-stations *Planned/Completed/Under Execution*

Voltage Level	PLANNED	COMPLETED	UNDER EXECUTION	TO BE TAKEN UP
400 kV	**5**	**1**	**1**	**3**
220 kV	**16**	**3**	**4**	**9**
132 kV	**26**	**7**	**9**	**10**
TOTAL	**47**	**11**	**14**	**22**

This needs development of massive evacuation systems to ensure full utilization of the generation capacity and meet the deficit scenario outside the state.

- ➢ The approved vrs actual transmission loss for the last five years is given below.

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Approved (%)	4.00	4.00	5.00	4.50	4.00	4.00	3.90	3.80
Actual audited (%)	4.60	5.04	4.24	4.52	**4.11**	**3.89**	**3.82 (upto Sep,11)**	

System Upgradation

- A 10 year planning for system requirement completed by optcl
- Comprehensive transmission planning for intra-state requirement has been finalised
- PGCIL has been entrusted for comprehensive inter-state evacuation planning
- Further, meetings/workshops are arranged from time to time by GRIDCO/OPTCL for discussion on the issue

400 kV System Strengthening under Regional Scheme [PGCIL]

400kV Sub-Station at Bolangir ,Keonjhar,Jatni (Uttara)

LILO of 400 kV CTU line at DUBURI 400 kV Grid S/S

Inter-State State Transmission Initiatives

About 12,000 MW is programmed to be evacuated to outside Odisha\Eastern Region.

Following Transmission System are programmed for Inter-State evacuation.

- 765 kV pooling station at Jharsuguda.
- 765 kV polling station at Angul
- 765 kV polling station at Dhenkanal
- 2 x 765 kV SC line interconnecting Jharsuguda, Angul & Dhenkanal

7. GRIDCO

a) COMPARISON OF POWER PURCHASE COST

YEAR	COMMISSION's APPROVAL			ACTUAL		
	Energy MU	Rate P/U	Total cost Rs.in Cr.	Energy MU	Rate P/U	Total cost Rs.in Cr.
1999-00	10,176.13	**103.36**	1,051.82	11,197.38	**104.10**	1,165.60
2000-01	11,011.39	**105.76**	1,164.56	12,400.01	**112.88**	1,399.72
2001-02	12,345.07	**94.60**	1,167.82	12,467.03	**95.27**	1,187.77
2002-03	13,312.22	**106.71**	1,420.60	12,025.61	**133.38**	1,603.97
2003-04	14,818.80	**115.52**	1,711.87	15,896.76	**100.33**	1,594.89
2004-05	17,395.16	**103.67**	1,803.29	17,742.93	**97.46**	1,729.31
2005-06	16,640.02	**110.36**	1,836.38	16,806.08	**120.41**	2,023.58
2006-07	15,414.79	**113.97**	1,756.84	18,866.10	**117.22**	2,211.55
2007-08	17,539.47	**119.91**	2,103.11	20,934.39	**119.91**	2,510.28
2008-09	18,460.26	**127.40**	2,351.75	20,049.27	**149.61**	2,999.64
2009-10	19,719.37	**148.27**	2,923.80	20,956.19	**196.94**	4,127.03
2010-11	21,003.75	**174.58**	3,666.85	23,249.87	**202.93**	4,718.06
2011-12	23,489.18	**210.32**	4,940.30	12,022.59 **Upto Sept 2011**	**206.29**	2480.18

b) POWER PURCHASE FROM DIFFERNET SOURCES BY GRIDCO

	COMMISSION's APPROVAL FOR 2009-10			ACTUAL FOR 2009-10			COMMISSION's APPROVAL FOR 2010-11			ACTUAL FOR 2010-11			COMMISSION's APPROVAL FOR 2011-12		
Generators	**Energy (MU)**	**Total Rate P/U**	**Total cost (Rs.Cr.)**	**Energy (MU)**	**Total Rate P/U**	**Total cost (Rs.Cr.)**	**Energy (MU)**	**Total Rate P/U**	**Total cost (Rs.Cr.)**	**Energy (MU)**	**Total Rate P/U**	**Total cost (Rs.Cr.)**	**Energy (MU)**	**Total Rate P/U**	**Total cost (Rs.Cr.)**
HYDRO (OLD)	3,948.35	52.78	208.38	2,355.39	68.74	161.92	3,676.86	58.49	215.06	2,973.43	67.03	199.32	3,676.86	63.15	232.19
Indravati	1,971.09	73.35	144.58	1,414.75	95.16	134.63	1,942.38	75.59	146.82	1,632.52	85.16	139.02	1,942.38	77.21	149.97
Machakund	265.00	13.90	3.68	285.93	9.93	2.84	262.50	21.95	5.76	268.44	19.97	5.36	262.50	22.06	5.79
Total Hydro	**6,184.44**	**57.67**	**356.64**	**4,056.07**	**73.81**	**299.39**	**5,881.74**	**62.51**	**367.65**	**4,874.39**	**70.51**	**343.70**	**5,881.74**	**65.96**	**387.96**
OPGC	2,955.66	193.70	572.51	2,646.04	151.10	399.81	2,853.53	149.04	425.30	2,843.40	157.91	452.35	2,892.49	179.22	518.39
TTPS (NTPC)	3,085.07	152.80	471.39	3,255.97	152.55	496.69	2,957.32	171.38	506.84	3,374.97	170.63	567.90	2,957.32	180.50	533.80
IPPs (Sterilite Energy ltd & Arati.)							646.23	243.54	157.38	883.23	240.67	212.57	3,357.12	275.00	923.21
Total CGPs	124.64	300.00	37.39	2,272.00	316.62	719.37	1,051.00	325.00	341.58	2,240.07	300.09	672.23	603.79	277.76	167.71
Co-Generation Plants	280.00	310.00	86.80	708.90	312.16	221.29	529.00	330.00	174.57	781.16	265.12	207.10	512.46	275.00	140.93
Total State Thermal	**6,445.37**	**181.23**	**1,168.09**	**8,882.91**	**206.82**	**1,837.16**	**8,037.08**	**199.78**	**1,605.66**	**10,122.83**	**208.65**	**2,112.15**	**10,323.18**	**221.25**	**2,284.03**
Small Hydro	250.00	224.00	56.00	155.68	295.80	46.05	300.00	305.00	91.50	250.07	294.80	73.72	300.00	320.32	96.10
TOTAL STATE	**12,879.8**	**122.73**	**1,580.73**	**13,094.6**	**166.68**	**2,182.60**	**14,218.8**	**145.22**	**2,064.81**	**15,247.29**	**165.90**	**2,529.57**	**16,504.92**	**167.71**	**2,768.08**
CHUKHA	270.26	184.65	49.90	277.80	159.00	44.17	271.79	183.32	49.83	272.02	182.47	49.64	273.36	181.38	49.58
Tala HPS	174.02	209.61	36.48	141.29	184.02	26.00	145.17	209.12	30.36	148.07	208.04	30.81	143.16	206.97	29.63
Teesta-V	490.06	186.73	91.51	529.91	212.62	112.67	507.19	186.42	94.55	519.67	180.84	101.47	511.32	172.17	88.03
Total Central Hydro	**934.34**	**190.39**	**177.89**	**949.00**	**192.67**	**182.84**	**924.16**	**189.07**	**174.73**	**939.76**	**193.58**	**181.92**	**927.84**	**180.25**	**167.24**
TSTPS St-I	2,105.51	176.25	371.10	2,255.03	189.22	426.70	2,145.54	207.08	444.29	2,155.51	271.46	594.72	2,163.00	294.27	636.51
TSTPS St-II	1,324.22	180.71	239.30	1,525.04	205.05	312.71	1,349.39	216.01	291.48	1,439.51	274.04	403.04	1,360.38	301.56	410.23
FSTPS	1,443.00	227.94	328.92	1,302.36	277.19	361.00	1,464.49	302.57	443.12	1,514.10	380.00	571.57	1,476.42	417.14	615.88
KhTPS St-I	833.86	222.35	185.41	700.24	256.11	179.34	840.63	275.32	231.44	748.18	310.24	236.59	847.47	318.82	270.19
KhTPS St-II	198.63	203.69	40.46	36.95	264.14	9.76	60.72	279.63	16.98	168.96	333.77	57.31	209.16	345.03	72.17
Total Central Thermal	**5,905.22**	**197.31**	**1,165.18**	**5,819.62**	**221.58**	**1,289.51**	**5,860.77**	**243.54**	**1,427.31**	**6,026.26**	**309.19**	**1,863.23**	**6,056.42**	**331.05**	**2,004.97**
Total Central Sector	**6,839.56**	**196.37**	**1,343.07**	**6,768.62**	**217.53**	**1,472.35**	**6,784.93**	**236.12**	**1,602.04**	**6,966.02**	**293.59**	**2,045.15**	**6,984.26**	**311.02**	**2,172.22**
UI Over Drawal				1,073.11	313.70	336.63				795.40	159.54	139.70			
Power Banking				-1.12		4.16	-			241.11	15.06	3.63	-		
IEX & Others				20.92	246.65	5.16				0.05	200.00	0.01			
PGCIL Tr. Charge					18.68	126.44					-				
TOTAL GRIDCO	**19,719.3**	**148.27**	**2,923.80**	**20,956.1**	**196.95**	**4,127.34**	**21,003.7**	**174.58**	**3,666.85**	**23,249.87**	**202.93**	**4,718.06**	**23,489.18**	**210.32**	**4,940.30**

8. Harnessing of power from Renewable Energy Sources:

As per the estimation of Odisha Renewable Energy Development Agency (OREDA), the Renewable energy power potential of Odisha state is around 2500 MW (excluding solar) as presented below .

RE power potential of Odisha

Sr No	Source	Potential (MW)
1	Wind Energy	1700
2	Biomass Power	350
3	Micro/ Mini /Small hydro	360
4	Municipal Solid / liquid waste	20 MW
5	Solar	5.5 kWh/sqm/day

The levellized generic tariff for various renewable sources of energy having "Single part tariff' is approved as in the following table:

Particular	Levellised Total Tariff (for the control period 2010-11 to 2012-13) (Rs./kWh)	Benefit of Accelerated Depreciation (if availed) (Rs./kWh)	Net Levellised Tariff (upon adjusting for Accelerated Depreciation benefit) (if availed) (Rs./kWh)	Tariff Period (Years)
Wind Energy	5.31	(0.83)	4.48	13
SHP projects of 5 to 25 MW capacity	3.64	(0.55)	3.09	13
SHP projects below 5 MW capacity	3.91	(0.60)	3.31	35
Solar PV	17.80	(3.03)	14.77	25
Solar Thermal	14.73	(2.41)	12.32	25

The levellized generic tariff for various renewable sources of energy having "Single part tariff with two components " is approved as in the following table:

Particular	Levellized fixed component of Tariff (Rs./kWh)	Variable(Fuel) Component of tariff for FY 2010-11	Effective tariff for FY 2010-11	Benefit of Accelerated depreciation (if availed) (Rs./kWh)	Net Tariff (Rs./kWh)
Biomass	1.95	2.14	4.09	(0.21)	3.88
Non-fossil fuel based co-generation	2.26	2.14	4.40	(0.28)	4.12

Note: *1. For Biomass projects the tariff approved above including levellized fixed component and variable (fuel component) for FY 2010-11 has been shown. The approved tariff year-wise for entire tariff period i.e.13 years is shown in the output table at Appendix-3 of the detailed Order.*

2. For Non-fossil fuel based co-generation projects the above approved tariff including levellized fixed component and variable (fuel component) for FY 2010-11 has been shown. The approved tariff year-wise for entire tariff period i.e.13 years is shown in the output table at Appendix-4 of the detailed Order.

OERC in its order dt 30.09.2010 vide Case No.-59/2010 has issued a Regulation fixing the RPO in the State of Odisha .

Every Obligated Entity shall purchase not less than 5% of its total annual consumption of energy from co-generation and renewable energy sources under the RPO Regulations from 2011-12 onwards with 0.5 percentage increase every year thereafter, till 2015-16 or as reviewed by the Commission even earlier, if any. Provided that 0.10 percentage out of the RPO so specified in the year 2011-12 shall be procured from generation based on solar as renewable energy source and shall be increased at a rate of 0.05 percentage every year thereafter till 2015-16 or as reviewed by the Commission even earlier, if any. Accordingly, the year and source wise RPO would be as below:

Year-wise target	**Minimum quantum of purchase in percentage (in terms of energy consumption in the State in KWH)**			
	Renewable		**Co-generation**	**Total**
	Solar	**Non-solar**		
2009-10 (Actual)	-	0.80	3.45	4.25
2010-11	-	1.0	3.50	4.5
2011-12	0.10	1.20	3.70	5.0
2012-13	0.15	1.40	3.95	5.5
2013-14	0.20	1.60	4.20	6.0
2014-15	0.25	1.80	4.45	6.5
2015-16	0.30	2.00	4.70	7.0

- The Co-generation and renewable energy sources excepting roof-top Solar PV and bio-gas sources shall be connected to the State Grid at a voltage level of 132 KV or 33 KV or 11 KV subject to technical suitability determined by the licensee. If any dispute arises about the technical suitability of connection of such sources with the grid, the matter shall be referred to the Commission whose decision in this regard shall be final.
- The Commission designated OREDA as State designated agency for accreditation and recommending the renewable energy projects for registration and to undertake to function under OERC (Renewable and Co-Gen purchase obligation and it's compliance) Regulation 2010 vide in order dated 18-11-2010.

9. Distribution

a) OVERALL PERFORMANCE OF DISCOMS

(DISCOMs of Odisha have been privatized since 1999.)

	1999-00	2008-09		2009-10 (Provisional)		2010-11 (Provisional)		2011-12 (Provisional)	
	Actual (Aud)	OERC Approval	Actual	OERC Approval	Actual	OERC Approval	Actual	OERC Approval	Actual upto Sept,2011
A. DISTRIBUTION LOSS (%)									
CESU	44.89%	29.30%	40.34%	26.30%	39.43%	25.37%	38.30%	24.00%	38.30%
NESCO	43.35%	25.50%	34.57%	23.00%	32.52%	18.46%	32.75%	18.40%	33.29%
WESCO	44.17%	25.00%	33.55%	22.50%	34.68%	19.93%	38.05%	19.70%	38.28%
SOUTHCO	41.84%	30.40%	47.78%	27.92%	48.02%	27.82%	48.00%	26.50%	48.00%
ALL ODISHA	**43.91%**	**27.00%**	**37.50%**	**24.45%**	**37.24%**	**22.22%**	**38.34%**	**21.71%**	**38.28%**
B. COLLECTION EFFICIENCY (%)									
CESU	69.72%	95.00%	91.80%	98.00%	97.09%	98.00%	95.60%	99.00%	94.30%
NESCO	79.37%	95.00%	92.50%	98.00%	95.24%	98.00%	94.34%	99.00%	92.84%
WESCO	83.36%	96.60%	93.86%	98.00%	98.38%	98.00%	93.38%	99.00%	89.31%
SOUTHCO	78.75%	94.00%	94.21%	98.00%	95.89%	98.00%	92.00%	99.00%	89.00%
ALL ODISHA	**77.19%**	**95.40%**	**92.98%**	**98.00%**	**96.96%**	**98.00%**	**93.06%**	**99.00%**	**91.89%**
C. AT & C LOSS (%)									
CESU	61.58%	32.84%	45.23%	27.77%	41.19%	26.86%	41.00%	24.76%	41.80%
NESCO	55.04%	29.23%	39.48%	24.54%	35.73%	20.09%	36.56%	19.22%	38.06%
WESCO	53.46%	27.55%	37.63%	24.05%	35.74%	21.53%	42.15%	20.50%	44.87%
SOUTHCO	54.20%	34.58%	50.80%	29.36%	50.16%	29.27%	52.00%	27.23%	53.12%
ALL ODISHA	**56.71%**	**30.36%**	**41.89%**	**25.96%**	**39.15%**	**23.77%**	**42.62%**	**22.49%**	**43.29%**
D. REALIZATION PER UNIT INPUT (P/U)									
CESU	93.00	196.28	165.73	201.72	173.98	236.73	223.08	303.03	244.67
NESCO	108.87	191.62	178.33	192.07	188.90	260.69	225.67	336.39	273.45
WESCO	130.19	211.45	201.86	203.12	200.58	257.15	218.01	328.40	256.11
SOUTHCO	116.93	157.50	141.77	169.44	138.33	196.07	165.19	259.65	185.18
ALL ODISHA	**109.85**	**195.88**	**178.27**	**196.32**	**181.98**	**244.37**	**215.19**	**313.14**	**247.10**

	1999-00	2008-09		2009-10 (Provisional)		2010-11 (Provisional)		2011-12 (Provisional)	
	Actual (Aud)	OERC Approval	Actual	OERC Approval	Actual	OERC Approval	Actual	OERC Approval	Actual upto Sept,2011
LT PERFORMANCE OF DISCOMs (Based on Performance Review Data)									
A. L T LOSS (%)									
CESU	50.48%	36.00%	52.00%	35.04%	51.97%	29.40%	50.20%	29.20%	51.60%
NESCO	62.26%	44.50%	59.40%	33.19%	55.83%	29.40%	55.36%	27.05%	55.21%
WESCO	60.64%	46.70%	65.65%	35.86%	62.49%	29.40%	63.90%	27.11%	61.96%
SOUTHCO	48.85%	33.40%	57.12%	29.50%	56.22%	29.40%	55.00%	27.75%	55.00%
ALL ODISHA	**55.11%**	**40.30%**	**58.06%**	**34.04%**	**56.26%**	**29.40%**	**56.58%**	**27.98%**	**54.99%**
B. COLLECTION EFFICIENCY IN LT (%)									
CESU	69.72%	95.00%	84.63%	98.00%	96.51%	98.00%	87.30%	99.00%	89.80%
NESCO	79.37%	95.00%	72.61%	98.00%	77.43%	98.00%	75.60%	99.00%	72.51%
WESCO	83.36%	96.60%	73.42%	98.00%	76.01%	98.00%	73.75%	99.00%	73.83%
SOUTHCO	78.75%	94.00%	89.10%	98.00%	92.77%	98.00%	88.00%	99.00%	86.00%
ALL ODISHA	**77.19%**	**95.40%**	**80.63%**	**98.00%**	**87.62%**	**98.00%**	**83.21%**	**99.00%**	**80.47%**
C. AT & C LOSS FOR LT (%)									
CESU	65.47%	39.20%	59.38%	36.34%	53.65%	30.81%	56.50%	29.91%	56.60%
NESCO	70.05%	47.28%	70.52%	34.53%	65.80%	30.81%	66.25%	27.78%	67.53%
WESCO	67.19%	48.51%	74.78%	37.14%	71.49%	30.81%	73.38%	27.84%	71.91%
SOUTHCO	59.72%	37.40%	61.79%	30.91%	59.39%	30.81%	61.00%	28.47%	64.00%
ALL ODISHA	**65.35%**	**43.05%**	**66.18%**	**35.36%**	**61.68%**	**30.81%**	**63.87%**	**28.70%**	**63.78%**

Business Plan Target for 2012-13 (Overall)

	Distribution Loss	Collection Efficiency	AT&C Loss
CESU	**23.00%**	**99.00%**	**23.77%**
NESCO	**18.35%**	**99.00%**	**19.17%**
WESCO	**19.60%**	**99.00%**	**20.40%**
SOUTHCO	**25.50%**	**99.00%**	**26.25%**
All Odisha	**21.20%**	**99.00%**	**21.99%**

b) LT – DIVISIONAL PERFORMANCE OF DISCOMS

CESU

Sl. No.	Name of Division	FY 2011-12		FY 2010-11		Change in AT & C Loss	Realization per Input-LT 2011-12	Realization per Input LT 2010-11	Percentage Improvement
		Overall Loss (%)	Overall AT & C Loss (%)	Overall Loss (%)	Overall AT & C Loss (%)				
OERC TARGET		**29.90%**	**24.80%**	**30.81%**	**26.90%**	**-2.10%**	**220**	**170.87**	**28.75%**
1	BCDD-1	8.90%	12.30%	9.30%	14.40%	**-2.10%**	382	359.92	**6.13%**
2	BCDD-2	30.10%	25.10%	25.50%	23.00%	**2.10%**	260	260.72	**-0.28%**
3	BED-Bhu	27.30%	27.10%	28.60%	29.10%	**-2.00%**	278	260.7	**6.64%**
4	NEDN-Nimapada	72.40%	73.50%	71.90%	73.20%	**0.30%**	79	79.26	**-0.33%**
5	PED-Puri	64.50%	64.30%	65.20%	65.50%	**-1.20%**	122	116.39	**4.82%**
6	NED-Nayagada	53.80%	57.00%	53.60%	50.70%	**6.30%**	128	133.1	**-3.83%**
7	KED-Khorda	61.10%	42.90%	60.20%	44.50%	**-1.60%**	129	125.45	**2.83%**
8	BED-Balugaon	61.30%	49.70%	60.40%	50.30%	**-0.60%**	112	112.57	**-0.51%**
9	CED	73.30%	53.70%	72.70%	56.90%	**-3.20%**	86	83.94	**2.45%**
10	CDD-I	33.90%	35.40%	36.90%	39.00%	**-3.60%**	258	233.79	**10.36%**
11	CDD-II	46.80%	34.80%	41.90%	33.80%	**1.00%**	204	213.27	**-4.35%**
12	AED-Athagada	77.40%	34.60%	75.40%	36.30%	**-1.70%**	65	68.88	**-5.63%**
13	SED	69.40%	71.90%	67.50%	70.20%	**1.70%**	85	91.13	**-6.73%**
14	KED-I	62.80%	65.20%	58.30%	61.50%	**3.70%**	113	120.37	**-6.12%**
15	KED-II	68.50%	70.30%	67.80%	69.70%	**0.60%**	90	91.19	**-1.30%**
16	PDP-Paradeep	67.70%	25.60%	65.20%	28.30%	**-2.70%**	100	106.12	**-5.77%**
17	JED	70.10%	72.50%	70.10%	72.50%	**0.00%**	89	85.58	**4.00%**
18	DED	75.20%	55.90%	74.20%	55.10%	**0.80%**	80	79.61	**0.49%**
19	ANED-Anugul	68.30%	60.70%	71.60%	58.20%	**2.50%**	114	98.33	**15.94%**
20	TED-Chainpal	74.20%	25.20%	75.50%	16.80%	**8.40%**	83	75.65	**9.72%**
CESU Total		**56.50%**	**41.80%**	**56.60%**	**41.00%**	**0.80%**	**150**	**143.88**	**4.25%**

NESCO

Sl. No.	Name of Division	For FY 2011-12 AT & C Loss (%)		For FY 2010-11 AT & C Loss (%)		Change in AT&C Loss	LT Realization to LT Input P/U		Percentage Change
		LT	TOTAL	LT	TOTAL		for 2011-12	for 2010-11	
OERC TARGET		**27.78%**	**19.22%**	**30.81%**	**20.09%**	**-0.87%**	227.45	143.20	58.83%
1	BED, Balasore	41.38%	30.53%	35.98%	26.79%	**3.74%**	217	220	**-1.36%**
2	BTED, Basta	71.82%	73.55%	65.18%	67.58%	**5.97%**	72	81	**-11.11%**
3	JED, Jaleswar	67.38%	52.70%	61.49%	49.58%	**3.12%**	84	84	**0.00%**
4	CED, Balasore	73.05%	24.69%	66.20%	18.89%	**5.80%**	82	96	**-14.58%**
5	BNED, Bhadrak (N)	71.11%	35.49%	70.77%	32.11%	**3.38%**	94	91	**3.30%**
6	BSED, Bhadrak (S)	81.59%	78.96%	78.67%	78.85%	**0.11%**	49	56	**-12.50%**
7	SED, Soro	61.36%	63.20%	67.03%	68.45%	**-5.19%**	109	93	**17.20%**
8	BPED, Baripada	61.59%	60.72%	63.42%	62.08%	**-1.36%**	127	114	**11.40%**
9	UED, Udala	71.54%	73.48%	72.07%	73.90%	**-0.42%**	91	81	**12.35%**
10	RED, Rairangpur	69.87%	67.77%	69.77%	66.86%	**0.91%**	101	93	**8.60%**

Sl. No.	Name of Division	For FY 2011-12 AT & C Loss (%)		For FY 2010-11 Percentage Change		Change in AT&C Loss	LT Realization to LT Input P/U		Percentage Change
		LT	TOTAL	LT	TOTAL		for 2011-12	for 2010-11	
11	JRED, Jajpur Road	72.90%	18.57%	71.92%	19.22%	**-0.65%**	92	87	**5.75%**
12	JTED, Jajpur Town	66.93%	69.58%	66.46%	69.14%	**0.44%**	88	82	**7.32%**
13	KUED, Kuakhia	66.60%	63.74%	62.70%	65.68%	**-1.94%**	102	103	**-0.97%**
14	KED, Keonjhar	69.58%	47.76%	55.60%	18.09%	**29.67%**	112	147	**-23.81%**
15	AED, Anandapur	79.41%	73.40%	80.58%	73.94%	**-0.54%**	62	58	**6.90%**
16	JOED, Joda	59.44%	14.93%				147		
NESCO Total		**67.53%**	**38.06%**	**65.74%**	**36.04%**	**2.02%**	**103**	**101**	**1.98%**

WESCO

Sl. No.	NAME OF DIVISION	FY 2011-12 AT & C LOSS (%)		FY 2010-11 AT & C LOSS (%)		Change in AT & C Loss	Realization Per Unit-LT FOR 2011-12 (Paise)	Realization Per Unit-LT FOR 2010-11 (Paise)	Percentage Change
		LT	Overall	LT	Overall				
OERC TARGET		27.84%	20.50%	30.81%	21.53%	**-1.03%**	198.1	112.07	**76.76%**
1	BARGARH(W)	82.41%	81.24%	84.33%	82.70%	**-1.46%**	46.2	39.44	**17.14%**
2	NUAPADA	80.00%	80.14%	81.84%	81.17%	**-1.03%**	63.65	52.13	**22.10%**
3	SONEPUR	80.81%	77.16%	79.46%	77.05%	**0.11%**	48.7	48.92	**-0.45%**
4	BARGARH	75.75%	71.22%	79.11%	67.75%	**3.47%**	71.63	57.75	**24.03%**
5	BOLANGIR	77.80%	75.31%	78.51%	75.25%	**0.06%**	67.3	62.38	**7.89%**
6	SUNDERGARH	75.71%	59.05%	75.28%	59.75%	**-0.70%**	72	68.69	**4.82%**
7	SAMBALPUR	71.90%	57.57%	74.34%	60.05%	**-2.48%**	99.24	82.35	**20.51%**
8	TITLAGARH	75.14%	67.70%	73.27%	63.80%	**3.90%**	75.18	73.89	**1.75%**
9	KWED	70.39%	72.87%	72.65%	74.76%	**-1.89%**	88.62	77.8	**13.91%**
10	DEOGARH	69.64%	57.32%	69.69%	50.34%	**6.98%**	85.15	83.36	**2.15%**
11	JHARSUGUDA	68.77%	27.34%	69.52%	22.88%	**4.46%**	103	91.87	**12.11%**
12	SAMBALPUR(E)	70.05%	58.26%	69.50%	57.34%	**0.92%**	102.21	97.43	**4.91%**
13	KEED	66.02%	63.37%	66.61%	62.58%	**0.79%**	105.27	100.63	**4.61%**
14	ROURKELA	63.76%	36.56%	64.87%	37.78%	**-1.22%**	121.91	109.63	**11.20%**
15	RAJGANGPUR	50.42%	14.72%	60.53%	12.45%	**2.27%**	187.89	132.37	**41.94%**
16	ROURKELA SADAR	64.25%	41.32%				127.14		
Total	**WESCO**	**71.91%**	**44.87%**	**73.38%**	**42.15%**	**2.72%**	**89.47**	**78.71**	**13.67%**

SOUTHCO

Sl. No.	Name of Division	FY-2011-12 AT & C LOSS (%)		FY 2010-11 AT & C LOSS (%)		Change in AT & C Loss	LT Realization to LT Input P/U for 2011-12	LT Realization to LT Input P/U for 2010-11	Percentage Change
		LT	TOTAL	LT	Over All				
OERC TARGET		28.47%	27.20%	30.81%	29.27%	**-2.07%**	203.00	143.70	41.27%
1	ASKA- II	82.00%	83.00%	76.63%	78.10%	**4.90%**	53.00	64.01	**-17.20%**
2	ASKA- I	72.00%	72.00%	75.43%	75.91%	**-3.91%**	86.00	67.69	**27.06%**
3	BHANJANAGAR	73.00%	74.00%	73.13%	74.96%	**-0.96%**	82.00	74.49	**10.09%**
4	MALKANGIRI	78.00%	65.00%	71.93%	66.21%	**-1.21%**	70.00	89.79	**-22.04%**
5	PURUSOTTAMPUR	74.00%	74.00%	67.98%	68.89%	**5.11%**	75.00	86.37	**-13.17%**
6	BOUDH	74.00%	70.00%	67.15%	65.54%	**4.46%**	81.00	96.50	**-16.06%**
7	CHATRAPUR	74.00%	39.00%	66.61%	37.93%	**1.07%**	78.00	93.16	**-16.27%**
8	DIGAPAHANDI	69.00%	71.00%	66.23%	68.61%	**2.39%**	87.00	91.82	**-5.25%**
9	PARALAKHEMUNDI	61.00%	62.00%	59.98%	62.35%	**-0.35%**	119.00	117.83	**0.99%**
10	KORAPUT	69.00%	33.00%	59.23%	29.18%	**3.82%**	103.00	131.74	**-21.81%**
11	NOWRANGPUR	70.00%	64.00%	58.88%	53.10%	**10.90%**	106.00	141.09	**-24.87%**
12	JEYPORE	56.00%	36.00%	56.82%	32.41%	**3.59%**	157.00	145.07	**8.22%**
13	PHULBANI	61.00%	64.00%	56.55%	59.11%	**4.89%**	125.00	135.70	**-7.89%**
14	GUNUPUR	51.00%	53.00%	54.65%	56.65%	**-3.65%**	154.00	136.55	**12.78%**
15	BERHAMPUR- I	47.00%	39.00%	45.83%	41.03%	**-2.03%**	191.00	174.75	**9.30%**
16	BERHAMPUR- II	40.00%	44.00%	41.40%	44.40%	**-0.40%**	212.00	186.91	**13.43%**
17	RAYAGADA	39.00%	28.00%	40.15%	31.08%	**-3.08%**	208.00	190.03	**9.46%**
18	BERHAMPUR- III	53.00%	51.00%	33.08%	35.10%	**15.90%**	153.00	203.19	**-24.70%**
TOTAL SOUTHCO		**64.00%**	**53.00%**	**60.87%**	**52.04%**	**0.96%**	**116.00**	**118.90**	**-2.44%**

c) Direction of the Commission to the Discoms on the Performance Review for 2011-12 (upto Sept. 2011)

1. As per Clause 7.1 of the License Conditions the licensee is required to develop and maintain an efficient, coordinated and economical distribution system in the Area of Distribution and effect supply of electricity to consumers in such area of supply in accordance with the provisions of the Act, the State Act, Rules, Regulations, Orders and Directions of the Commission. Basically the Licensee is the utility service oriented company and servicing consumers in proper manner is the primary responsibility of the Licensee.

   In this connection it must be made clear to all employees of the distribution company that collection of legitimate revenue from the consumers is one of the essential requirements for maintaining the quality service to the consumers, because without collection of revenue it shall not be possible to pay the power purchase cost, meet the expenditure on salary, operation and maintenance expenditure and other essential requirement to maintain the standard of service to the consumers. Hence, each and every employee starting from the Managing Director down below upto the Lineman is individually, jointly and severally responsible to ensure proper service to the consumers by discharging their duties which inter alia includes collection of revenue as one of the most important functions. This must be made clear to all employees of the concerned distribution companies.

2. Some employee organization of the distribution companies have demanded that Managing Director/CEO should not review the performance of JEs directly when SE, EE and SDO are there. It has been reported that some JEs have also boycotted the review meeting taken by MD, WESCO. This type of attitude and stand of the employees is simply reprehensive and totally uncalled for. In the hierarchical structure of administration of the distribution licensee, all employees down below the MD/CEO heading the organization are accountable to him/her (MD/CEO) for their performance in all respects, including proper maintenance of distribution network and collection of revenue. Hence, MD/CEO can and shall review the performance of all employees starting from SEs, EEs, Assistant Engineers, Junior Engineers and even lineman at any time. The boycotting of any performance review meeting taken by MD/CEO by any employees amounts to dereliction of duties and calls for stringent disciplinary action against such employees/group of employees. This must be abundantly made clear to all employees of the distribution companies.

Any employee indulging in anti-consumer activities or showing non-cooperation in collection of revenue must be sternly dealt with and the Commission shall not tolerate any leniency in this respect.

3. Unless the overall AT&C loss is reduced substantially and per unit input realization is improved, it would be difficult for the DISCOMs to meet the power purchase cost and other day to day expenses like salary, O&M expenses etc. in view of rising procurement cost of power. The worst division should be identified and the concerned Executive Engineer may be asked to reduce at least 30% of the present level of loss by 31.3.2012. The salary of the Executive Engineer and the other staffs upto lineman for the month of March, 2012 shall not be paid unless the minimum target of 30% of the present level of loss is reduced by 31.3.2012. Similarly, all other divisions should be asked to reduce the present level of loss at least by 20% by end of 31.3.2012, failing which appropriate action should be taken against the Executive Engineer and the staff below him upto the lineman.

4. The other important directions issued by the Commission as indicated below vide their letter No. Dir(T)-336/08/2544 dated 13.1.2012 shall be scrupulously followed and compliance reported as per the time schedule indicated therein:-

   (1) Feeder-wise responsibility should be fixed on the concerned JE and he/she should be designated as Feeder Manager. The Feeder Manager shall be personally responsible for reduction of loss in the feeder in his charge.

   (2) Routine maintenance like trimming of trees, cleaning and ensuring neutral grounding of transformer, replacement of broken wires and loose connection would reduce the loss to a substantial extent as confirmed by Chairman-cum-CEO, CESU during performance review on 27.12.2011.

   (3) In the past instruction was issued to cross check the meter reading taken by the meter readers or the employees of the agency engaged for meter reading and billing. In a large number of cases in CESU under billing has been detected. There should be regular cross checking of meter readings and the result thereof should be reported to the Commission before 15th of every month.

   (4) It is seen that the meter readers are also not covering all the consumers who have been even brought to the billing fold. Monthly review should be conducted by the concerned CEO/MD to see that all the consumers in the billing fold are covered under the billing cycle.

(5) One of the reasons for poor billing and higher loss is on account of large number of consumers having been not brought to the billing fold. All the JE/SDO (Electrical) and concerned Executive Engineer be asked to verify and bring all the consumers to the billing fold latest by 31.01.2012 and certificate to that effect should be obtained from them that all the consumers enjoying electricity have been brought to the billing fold. The correctness of such certificate should be cross checked through a senior officer and CVO from the headquarters. Particularly, in case of RGGVY and BGJY programme even though lines have been charged and the consumers are drawing power they have not been brought to the billing fold for months together. As instructed earlier as soon as the lines have been charged regular monthly bill should be issued to the consumers pending formal taking over of the documents from the central PSUs.

(6) It is generally pointed out that the loss in case of EHT consumers is zero and in case of HT consumers it is 8%. But in reality this does not take into account unauthorized abstraction of electricity by these high end consumers. 100% checking of the meters of EHT & HT consumers should be periodically ensured by MRT staff. It was reported that some of these high end consumers are using technology like remote control mechanism to tamper or disable the meter temporarily and accordingly while conducting verification of their meters, appropriate instrument should be used to detect such bypassing meters. All high end consumers of contract demand of 20 KW above be invariable covered under AMR and their consumption pattern be analyzed both at Divisional and Headquarter office. Divisional Engineers be made accountable for proper billing and collection of such high end consumers of CD 20 KW and above.

(7) Monthly report should be submitted by 15th of the succeeding month to the Commission indicating the name of high end consumers like industries, hotels, nursing homes, shopping malls, hospitals, private education institutions, cinema houses, fabricating units, vehicle showrooms etc., where verification / cross checking of meters has been done and the result of such verification/ raids. Monthly target should be fixed for the CVO and Energy Police Stations for verification and conducting raids of high value consumers.

(8) Monthly consumer Mela should be organized to bring other small consumers abstracting electricity unauthorizedly in the billing fold and the procedure for giving

new connection should be simplified. The introduction of giving new connection on Tatkal basis should be worked out so that the genuine consumers desirous of taking power supply should not face problems.

(9) From the review, it is seen that bills raised during the current financial year have not been collected fully and arrear has been added which works out to Rs.294.90 crore for the period 01.04.2011 to 30.09.2011 as indicated below:

Name of DISCOMs	NESCO	WESCO	SOUTHCO	CESU	Total
Addition of arrear (Rs. in Crore)	54.43	96.71	31.21	112.55	294.90

Special drive should be launched for collection of arrear both in respect of Govt. departments, urban local bodies, lift irrigation points, pani panchayat, urban water supply, rural water supply, hospital, etc. as well as other private consumers including HT & EHT consumers. All DISCOMs must ensure that all EHT and HT consumers not only pay the current monthly bills in time but also all arrears outstanding against them shall have to be cleared by 31.03.2012 at the latest. The DISCOMs are directed to report the monthly progress by 15th of the succeeding month.

(10) Adequate number of call centers should be opened for facility of registering complaint as well as collection and giving new connection to the consumers and taking up other activities to provide better service to the consumers.

(11) In the rural areas more Women Self Help Groups should be entrusted with billing, collection and constant liaison should be held with the District Administration to entrust number of villages to Women Self Help Groups. Each DISCOMs must cover at least 30000 consumers through Women Self Help Groups during 2011-12.

(12) As decided in the meeting held on 29.01.2011, the agencies, organizations willing to supply install smart meters which can connect/dis-connect, enhance load remotely, and facilitate meter reading along with other standard meter features should be entrusted with supply, installation, billing and collection and increase in the revenue per input should be appropriately shared keeping in view their requirement to recover the cost of capital. Preferably one or more division should be entrusted to such of the willing agencies on Build-Own-Operate-Transfer (BOOT) modality with revenue sharing basis so that they will have economy of scale to ensure economy in operation and better performance. The broad scope of the work may be as per Annexure

attached herewith subject to detail negotiation and agreement between licensees and agencies. The firms, who have participated in the presentation at OERC on the subject be approached for detailed meeting and negotiation at your end. After negotiation and formal agreement vetting of the Commission may be sought for before signing the final agreement.

(13) It is seen that the substantial amount of arrear of electricity dues are outstanding against various departments and organization under its control, including municipalities. Show cause notices should be issued to all such organization indicating the date line to clear their outstanding dues failing which no leniency should be shown to disconnect their power supply. The clear cut instruction issued by Finance Department to ensure timely payment of electricity dues by various organization should be brought to the notice of the district administration and they should be informed not to interfere in the efforts to disconnect the power supply to the defaulting organizations.

(14) In CESU area, the energy police station have made a number arrests but in WESCO area no such arrest has not been made. The number of arrests in NESCO and SOUTHCO is also very small. However, arrest of culprits does not have any perceptible impact on reduction of incident of theft of electricity. This should be possible only when the culprits are penalized by expeditious finalization of the criminal proceedings drawn against them. Addl. District & Session Judge of Balasore, Berhampur, Bhubaneswar, Cuttack & Sambalpur have been notified as Special Courts for trial and offences under section 135 to 140 and 150 of the Electricity Act, 2003 and steps may be taken to request them to devote specific days in a week for trial of offences of the Electricity Act, 2003. For the area other than those for which Special Courts have been notified, the Dist. & Session Judges/ SDJMs may also be approached for expeditious trial of the energy related cases as Rule (11) of the Electricity Rule, 2005 stipulates that the jurisdiction of such courts shall not be barred under sub-section 1 of section 154 till such time the Special Court is constituted under sub-section 1 of section 153 of the Act. In this connection, the copy of the letter No.2484 dtd.03.01.2012 addressed to Secretary, Department of Energy is enclosed for necessary follow up action in the matter.

(15) All DISCOMs must make concerted efforts to increase billing and collection efficiency to ensure that monthly current BST and transmission bills are paid in time and arrear differential BST bills are paid in full to GRIDCO before 31.03.2012.

(16) Special drive should be launched to ensure implementation of all pending orders of GRFs and Ombudsman by 31.01.2012. Besides, a monitoring mechanism should be put in place to ensure timely implementation for such orders within 30 days from the date of orders of GRFs/ Ombudsman or the time limit prescribed in such orders. As instructed in the interactive meeting held with GRFs & Ombudsman on 21.09.2011 monthly meeting should be taken up by the MD/CEO with GRFs to review the disposal of grievance cases, implementation of orders and GRF/ Ombudsman and the feed back regarding the defects/ deficiencies in service to the consumers noticed by them.

(17) Deterrent action has to be urgently taken against the official and staff for their poor performance. The Commission in their letter No.2269 dtd.03.12.2011 have already issued, necessary instructions. Action taken in this regard should be reported to the Commission by 10.02.2012 at the first stance and there after by 10.04.2012.

(18) Apart from the above, the Commission vide letter No.2527 dtd.11.01.2012 has also directed as under:

"Pending Introduction of Smart Grid Solutions deploying BOOT Model on Revenue sharing basis as stated above, I am directed to inform that the Commission desires that all consumers with a Contract Demand of 20 KW or more of your DISCOM should be covered under AMR (who are not covered under BOOT Model) undertaking a Special Programme through retrofitting wherever required within 3 months time i.e. by 15.04.2012 positively, if required, meeting such expenditure from Capex Funding. The arrangement for monitoring of such AMRs in CEO's Office, Division Office as well as in OERC shall also be made installing suitable terminals at such places so as to keep a strict vigil on the performance of AMRs and on billing of high value consumers. The road map of the completion of 100% AMR for high value consumers may please be furnished for information of the Commission."

5. All licensees are directed to ensure strict compliance of the various directions of the Commission as per the time schedule indicated above and fix responsibilities and accountability at different levels to improve the overall performance failing which stringent action should be taken against the defaulting and non-performing officers and staffs.

d) STATUS OF ARREAR (As on September 2011)

STATUS OF ARREAR - ODISHA (As on September-2011) **(Rs. Crore)**

Category	Arrear as on 31-03-2010	Arrear as on 31-03-2011	Billing for the fy 2011-12	Collection against current dues for the fy 2011-12	Colelction against arrear for the fy 2011-12	Total Collection for the fy 2011-12	Arrear as on 30-09-2011	Arrear Added during FY 2011-12	% OF ARREAR
1	2	3	4	5	6	7=5+6	8=(3+4)-7	9=8-3	
EHT	105.10	100.22	1203.85	1154.98	3.75	1158.73	145.33	45.11	18.88%
HT	92.30	103.60	690.33	659.83	8.99	668.82	125.11	21.51	9.00%
LT	2882.55	3117.19	877.43	649.51	89.77	739.28	3255.34	138.14	57.83%
Govt. PSU-LT	413.60	224.42	78.98	54.27	7.42	61.69	241.70	17.28	7.23%
Govt.PSU -HT		218.27	96.14	76.82	2.48	79.30	235.11	16.84	7.05%
Grand Total	3493.55	3763.70	2946.72	2595.42	112.40	2707.82	4002.59	238.89	100%

STATUS OF ARREAR-CESU **(Rs. Crore)**

Category	Arrear as on 31-03-2010	Arrear as on 31-03-2011	Billing for the fy 2011-12	Collection against current dues for the fy 2011-12	Colelction against arrear for the fy 2011-12	Total Collection for the fy 2011-12	Arrear as on 30-09-2011	Arrear Added during FY 2011-12
1	2	3	4	5	6	7=5+6	8=(3+4)-7	9=8-3
EHT	15.56	15.96	281.27	273.32	2.44	275.76	21.47	5.51
HT	49.69	62.83	230.03	213.24	3.42	216.66	76.20	13.37
LT	1115.74	1162.23	377.55	326.67	32.06	358.73	1181.05	18.82
Govt. Dept. & PSU -LT	194.49	137.74	37.64	21.36	3.68	25.04	150.34	12.60
Govt-HT		68.71	62.55	56.32	0.00	56.32	74.94	6.23
Grand Total	1375.48	1447.47	989.04	890.91	41.60	932.51	1504.00	56.53

STATUS OF ARREAR-NESCO (Rs. Crore)

Category	Arrear as on 31-03-2010	Arrear as on 31-03-2011	Billing for the fy 2011-12	Collection against current dues for the fy 2011-12	Colelction against arrear for the fy 2011-12	Total Collection for the fy 2011-12	Arrear as on 30-09-2011	Arrear Added during FY 2011-12
1	2	3	4	5	6	7=5+6	8=(3+4)-7	9=8-3
EHT	101.44	90.80	438.85	434.72	0.82	435.54	94.11	3.31
HT	19.42	18.88	116.19	113.96	1.33	115.29	19.79	0.90
LT	679.28	757.56	176.27	104.91	23.79	128.70	805.13	47.57
Govt & PSU	70.67	11.94	19.85	19.85	0.88	20.73	11.06	-0.88
Govt-HT		62.58	9.59	6.06	0.00	6.06	66.11	3.53
Total of above	870.81	941.76	760.76	679.51	26.82	706.33	996.19	54.43

STATUS OF ARREAR-WESCO (Rs. Crore)

Category	Arrear as on 31-03-2010	Arrear as on 31-03-2011	Billing for the fy 2011-12	Collection against current dues for the fy 2011-12	Colelction against arrear for the fy 2011-12	Total Collection for the fy 2011-12	Arrear as on 30-09-2011	Arrear Added during FY 2011-12
1	2	3	4	5	6	7=5+6	8=(3+4)-7	9=8-3
EHT	-12.63	-6.76	387.18	350.40	0.37	350.77	29.65	36.41
HT	13.30	16.89	311.67	300.19	3.65	303.85	24.72	7.83
LT	758.02	841.57	186.15	119.84	19.49	139.33	888.39	46.81
Govt & PSU	69.48	16.62	7.76	6.81	0.31	7.12	17.25	0.63
Govt-HT		60.73	11.96	5.25	1.68	6.93	65.76	5.03
Grand Total	828.17	929.06	904.72	782.50	25.49	808.00	1025.77	96.71

STATUS OF ARREAR-SOUTHCO **(Rs. Crore)**

Category	Arrear as on 31-03-2010	Arrear as on 31-03-2011	Billing for the fy 2011-12	Collection against current dues for the fy 2011-12	Colelction against arrear for the fy 2011-12	Total Collection for the fy 2011-12	Arrear as on 30-09-2011	Arrear Added during FY 2011-12
1	2	3	4	5	6	7=5+6	8=(3+4)-7	9=8-3
EHT	0.73	0.22	96.55	96.55	0.12	96.67	0.10	-0.12
HT	9.89	4.99	32.43	32.43	0.59	33.02	4.40	-0.59
LT	329.51	355.83	137.46	98.09	14.43	112.52	380.77	24.94
Govt & PSU	78.96	58.12	13.72	6.24	2.55	8.79	63.05	4.93
Govt-HT		26.25	12.04	9.19	0.80	9.99	28.30	2.05
Grand Total	419.09	445.41	292.20	242.50	18.49	260.99	476.62	31.21

10. Profit & Loss Account of Utilities (from 1999-00 to 2010-11

Profit and Loss Statement of DISCOMs (Audited)

CESU	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*
Total Income	485.53	596.78	647.27	670.2	696.2	709.5	728.6	808.59	941.72	1086.58	1230.01	1788.26
Revenue Expenditure	652.78	680.35	766.98	733.47	771.09	878.52	795.04	922.87	1036.66	1201.29	1367.64	1929.74
Other Adjustments (Add/Less)	14.25	1.44	-4.57	-0.21	20.23	9.35	-37.86	-18.94	-9.59	10.38	8.49	8.21
Total Expenditure	667.03	681.79	762.41	733.26	791.32	887.87	757.18	903.93	1027.07	1211.67	1376.13	1937.95
Profit for the year(+)/Loss(-)	**-181.50**	**-85.01**	**-115.14**	**-63.06**	**-95.12**	**-178.37**	**-28.58**	**-95.34**	**-85.35**	**-125.09**	**-146.12**	**-149.69**
Cummulative Profit (+)/Loss(-)	**-181.50**	**-266.51**	**-381.65**	**-444.71**	**-539.83**	**-718.20**	**-746.78**	**-842.12**	**-927.47**	**-1052.56**	**-1198.68**	**-1348.37**

* Provisional

WESCO	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Total Income	422.72	464.62	502.61	621.3	669.61	757.63	818.23	934.6	1121.11	1557.01	1361.33	1699.60
Revenue Expenditure	483.18	573.91	630.53	673.89	713.24	787.25	837.62	902.41	1171.77	1543.82	1388.93	1741.38
Other Adjustments (Add/Less)	0.84	1.01	1.14	-0.66	1.12	-0.06	3.57	0.37	-0.97	2.6	1.99	-1.85
Total Expenditure	484.02	574.92	631.67	673.23	714.36	787.19	841.19	902.78	1170.8	1546.42	1390.92	1739.53
Profit for the year(+)/Loss(-)	**-61.30**	**-110.30**	**-129.06**	**-51.93**	**-44.75**	**-29.56**	**-22.96**	**31.82**	**-49.69**	**10.59**	**-29.59**	**-39.93**
Cummulative Profit (+)/Loss(-)	**-61.30**	**-171.60**	**-300.66**	**-352.59**	**-397.34**	**-426.90**	**-449.86**	**-418.04**	**-467.73**	**-457.14**	**-486.73**	**-526.66**

NESCO	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Total Income	310	344.65	317.32	385.26	405.09	488.3	611.1	759.69	951.81	1060.24	983.69	1336.1
Revenue Expenditure	404.8	448.36	480.59	518.29	483.1	584.86	586.02	745.86	916.17	1059.93	1012.99	1407.74
Other Adjustments (Add/Less)	1.85	1.93	4.43	1.39	1.9	0.37	1.91	1.78	13.46	2.53	1.20	2.77
Total Expenditure	406.65	450.29	485.02	519.68	485	585.23	587.93	747.64	929.63	1062.46	1014.19	1410.51
Profit for the year(+)/Loss(-)	**-96.65**	**-105.64**	**-167.70**	**-134.42**	**-79.91**	**-96.93**	**23.17**	**12.05**	**22.18**	**-2.22**	**-30.50**	**-74.41**
Cummulative Profit (+)/Loss(-)	**-96.65**	**-202.29**	**-369.99**	**-504.41**	**-584.32**	**-681.25**	**-658.08**	**-646.03**	**-623.85**	**-626.07**	**-656.57**	**-730.98**

SOUTHCO	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Total Income	214.76	230.82	262.34	278.69	273.16	272.14	294.58	302.39	331.04	479.61	353.29	519.49
Revenue Expenditure	290.64	322.59	338.32	354.31	341.49	364.77	326.44	379.72	351.11	512.14	393.12	538.53
Other Adjustments (Add/Less)	7.14	2.5	3.99	4.93	3.25	2.37	2.03	1.82	5.73	5.12	1.62	1.66
Total Expenditure	297.78	325.09	342.31	359.24	344.74	367.14	328.47	381.54	356.84	517.26	394.74	540.19
Profit for the year(+)/Loss(-)	**-83.02**	**-94.27**	**-79.97**	**-80.55**	**-71.58**	**-95.00**	**-33.89**	**-79.15**	**-25.80**	**-37.65**	**-41.45**	**-20.70**
Cummulative Profit (+)/Loss(-)	**-83.02**	**-177.29**	**-257.26**	**-337.81**	**-409.39**	**-504.39**	**-538.28**	**-617.43**	**-643.23**	**-680.88**	**-722.33**	**-743.03**

CONSOLIDATED DISCOMS	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Total Income	1433.01	1636.87	1729.54	1955.45	2044.06	2227.57	2452.51	2805.27	3345.68	4183.44	3928.32	5343.45
Revenue Expenditure	1831.4	2025.21	2216.42	2279.96	2308.92	2615.4	2545.12	2950.86	3475.71	4317.18	4162.68	5617.39
Other Adjustments (Add/Less)	24.08	6.88	4.99	5.45	26.5	12.03	-30.35	-14.97	8.63	20.63	13.3	10.79
Total Expenditure	1855.48	2032.09	2221.41	2285.41	2335.42	2627.43	2514.77	2935.89	3484.34	4337.81	4175.98	5628.18
Profit for the year(+)/Loss(-)	**-422.47**	**-395.22**	**-491.87**	**-329.96**	**-291.36**	**-399.86**	**-62.26**	**-130.62**	**-138.66**	**-154.37**	**-247.66**	**-284.73**
Cummulative Profit (+)/Loss(-)	**-422.47**	**-817.69**	**-1309.56**	**-1639.52**	**-1930.88**	**-2330.74**	**-2393.00**	**-2523.62**	**-2662.28**	**-2816.65**	**-3064.31**	**-3349.04**

Profit and Loss account of GRIDCO (Audited)

(Rs. Cr.)

GRIDCO	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Total Income	1609.52	1824.16	1897.00	1686.34	2809.74	2950.86	2734.14	2970.37	3348.25	2825.95	4248.54	4264.02
Revenue Expenditure	1655.30	1916.93	1803.67	2294.03	2378.07	2565.96	2712.68	2725.19	2782.88	3237.11	4398.29	4894.98
Other Adjustments (Add/Less)	-59.49	-7.55	18.82	-9.6	20.55	36.34	-4.36	8.3	-0.68	-509.31	-3.22	-43.10
Total Expenditure	1595.81	1909.38	1822.49	2284.43	2398.62	2602.3	2708.32	2733.49	2782.2	2727.8	4395.07	4851.88
Profit for the year(+)/Loss(-)	**13.71**	**-85.22**	**74.51**	**-598.09**	**411.12**	**348.56**	**25.82**	**236.88**	**566.05**	**98.15**	**-146.53**	**-587.86**
Cummulative Profit for the year(+)/Loss(-)	**-1179.02**	**-1264.24**	**-1189.73**	**-1787.82**	**-1376.70**	**-1028.14**	**-1002.32**	**-765.44**	**-199.39**	**-101.24**	**-247.77**	**-835.64**

Profit and Loss account of OPTCL (Audited)

(Rs. Cr.)

OPTCL	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Total Income	382.37	372.22	427.96	715.77	441.79	430.70
Revenue Expenditure	397.49	357.19	459.21	734.83	512.04	448.80
Other Adjustments (Add/Less)	9.82	24.09	-16.02	9.47	12.06	6.52
Total Expenditure	407.31	381.28	443.19	744.3	524.10	455.32
Profit for the year(+)/Loss(-)	**-24.94**	**-9.06**	**-15.23**	**-28.53**	**-82.31**	**-24.62**
Cummulative Profit for the year(+)/Loss(-)	**-24.94**	**-34.00**	**-49.23**	**-77.76**	**-160.07**	**-184.69**

Profit and Loss account of OHPC (Audited)

(Rs. Cr.)

OHPC	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Total Income	232.54	245.57	223.03	179.27	237.3	301.77	224.2	320.85	428.99	393.49	366.9	394.86
Revenue Expenditure	183.11	273.34	226.19	221.07	228.46	235.14	245.82	263.17	276.46	366.26	349.33	346.23
Other Adjustments (Add/Less)	-0.95	-0.33	0.72	0.12	3.14	7.59	2.55	3.75	31.13	9.66	-9.58	11.06
Total Expenditure	182.16	273.01	226.91	221.19	231.6	242.73	248.37	266.92	307.59	375.92	339.75	357.29
Profit for the year(+)/Loss(-)	**50.38**	**-27.44**	**-3.88**	**-41.92**	**5.70**	**59.04**	**-24.17**	**53.93**	**121.40**	**17.57**	**27.15**	**37.57**
Cummulative Profit for the year(+)/Loss(-)	**253.23**	**225.79**	**221.91**	**179.99**	**185.69**	**244.73**	**220.56**	**274.49**	**395.89**	**413.46**	**440.60**	**478.17**

Profit and Loss account of OPGC (Audited)

(Rs. Cr.)

OPGC	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Total Income	456.52	418.03	411.59	473.28	423.11	426.69	439.82	477.07	484.69	464.87	455.94	
Revenue Expenditure	323.77	305.11	279.30	274.64	276.66	273.5	278.65	298.00	298.99	329.46	326.36	
Other Adjustments (Add/Less)	-8.36	-3.04	-0.07	-1.4	1.12	0.18	0.74	-2.20	-0.05	-2.1	-3.33	
Provision for tax	0.00	11.61	10.11	15.53	11.34	9.99	14.06	6.65	16.96	21.94	45.06	
Total Expenditure	332.13	319.76	289.48	291.57	286.88	283.31	291.97	306.85	316.00	353.50	374.75	
Profit for the year after tax(+)/Loss(-)	124.39	98.27	122.11	181.71	136.23	143.38	147.85	170.22	168.69	111.37	81.19	
Cummulative Profit for the year(+)/Loss(-)	225.71	236.14	185.20	197.11	149.26	151.82	151.63	184.22	345.51	456.88	406.49	
Less appropriation to dividend including tax	81.62	162.06	156.58	165.91	127.20	133.70	134.15	0	0	120.44	0	
Less appropriation to general reserve	6.22	10.99	13.22	18.17	13.62	14.34	14.79	0	0	11.14	0	
Balance of profit carried forward to Balance sheet	**137.87**	**63.09**	**15.40**	**13.03**	**8.44**	**3.78**	**2.69**	**184.22**	**345.51**	**325.30**	**406.49**	

11. Odisha Power Sector Reform Highlights

- Odisha is the first State in the country which initiated power sector reform in the State with enactment of the Odisha Electricity Reform Act, 1995 which came into force w.e.f. 1.4.1996
- Odisha Electricity Regulatory Commission was established under Section 3(i) of the OER Act, 1995 much before the Electricity Regulatory Commission Act, 1998 and the Electricity Act, 2003.
- OERC became functional w.e.f. 1.8.1996 with joining of three Members.
- Generation was separated from transmission and distribution with formation of Grid Corporation of Odisha Limited (GRIDCO) w.e.f. 20.4.1995.
- Subsequently distribution function has been separated from GRIDCO w.e.f.1.4.1999 and at present the distribution of electricity has been entrusted to separate four private distribution companies.
- Transmission has been separated from bulk supply and trading activity of GRIDCO from 1.4.2005.
- At present OPTCL is functioning as State Transmission Utility and SLDC but for the 1st time Commission has issued separate Annual Revenue Requirement in tariff for SLDC starting for the year 2009-10.
- Odisha is the only State where no subsidy is being provided by the Govt. of Odisha to the power sector since 1.4.1996. Before 1.4.1996 the annual subsidy was of Rs.250 crore on the average.
- It is the only State where no budgetary support is being provided by the State Govt. to the distribution companies whereas in other States the level of subsidy varies from 1000 crore to more than 5000 crore.
- In Delhi where distribution has been privatized the private distribution companies started with a clean balance sheet, the existing liabilities were assigned to a holding company. But in case of Odisha the assets and liabilities were transferred to the distribution companies. (Liabilities as on 31.03.2009 – Rs.1657.40 crore)
- In Delhi provision of transitional financing Rs.3450 crores which helped the private company which needed cushion and comfort levels to the sagging distribution companies.

- In contrast the distribution companies in Odisha had no transitional financial support. The Kanungo Committee recommended transitional support of Rs.3240 crore on 02.11.2001 but this has not been acted upon.

- On the contrary the existing assets were upvalued. The old assets value of Rs.1103 crore of GRIDCO were also upvalued by 1194 crore. Similarly the OHPC assets were upvalued by Rs.767.20 crore. However, the upvaluation of assets of GRIDCO and OHPC have been held under hold by govt. till date.

- The actual T & D loss in 1998-99 before privatisation in 1999-2000 was about 51.2% against the assessed level of 29.2%.

- **Reduction of AT&C loss from 60.90% in 1998-99 to 42.62% in 2010-11.** Though the Transmission and Distribution (T&D) loss in Odisha during the period of OSEB was being reported in the region of 23% over a number of years these figures did not take into account the losses taking place owing to non-billing, non-collection and theft of electricity. The audited accounts of OSEB, however, pointed out a different set of figure. The T & D loss was increasing from year to year but gradually declined after the distribution was privatized w.e.f 1.4.1999.

    - The T & D loss which had reached a level of 51.02% in 1998-99 has been decreased to 46.68% in 1999-00 and 39.93% in 2009-10 and 39.97% in 2010-11.

    - The collection efficiency has increased from 79.92% in 1998-99 to 96.96% in 2009-10 and 93.06% in 2010-11.

    - From 1999-00 the concept of Distribution loss and Aggregate Technical and Commercial (AT&C) loss has been introduced in place of T & D loss.

    - The Distribution Loss has declined from 43.91% in 1999-00 to 37.24% in 2009-10 and 38.34% in 2010-11. The AT & C loss was 56.7% in 1996-97, 58.8% in 1997-98 and 60.90% in 1998-99. The AT&C loss has declined from 56.71% in 1999-00 to 39.15% in 2009-10 and 42.62% in 2010-11 (38.28% in 2011-12 up to Sept. 2011)/

    - Thus while the T&D loss was increasing during OSEB period, the Distribution loss as well as AT & C loss have declined from 1999-2000, though at a slow speed. Hence, it can be said that loss level has declined in terms of T & D loss, Distribution loss as well as AT&C loss after the distribution of electricity was privatised w.e.f. 1.4.1999. The comparative position may be seen from the Table given below:-

Year	T & D Loss	Distribution Loss	Collection Efficiency	AT & C Loss	All India AT&C Loss
1990-91	45.30%	-	87.48%	52.10%	
1991-92	44.80%	-	92.02%	49.2%	
1992-93	45.01%	-	91.91%	49.5%	
1993-94	41.57%	-	86.15%	49.7%	
1994-95	46.59%	-	84.97%	54.6%	
1995-96	46.94%	-	92.12%	51.1%	
1996-97	49.47%	-	85.72%	56.7%	
1997-98	49.24%	-	81.17%	58.8%	
1998-99	51.02%	-	79.92%	60.90%	
1999-2000	46.68%	43.91%	77.19%	56.71%	
2000-01	46.90%	44.01%	78.72%	55.92%	
2001-02	50.19%	47.47%	75.55%	60.31%	
2002-03	43.78%	40.75%	82.45%	51.15%	32.54%
2003-04	43.21%	40.75%	85.49%	49.35%	34.78%
2004-05	41.59%	39.21%	91.00%	44.68%	34.33%
2005-06	42.37%	39.59%	91.58%	44.68%	33.02%
2006-07	41.67%	38.57%	92.37%	43.25%	30.59%
2007-08	41.13%	37.48%	93.41%	41.60%	29.24%
2008-09	40.33%	37.50%	92.98%	41.89%	28.44%
2009-10	39.93%	37.24%	96.96%	39.15%	NA
2010-11	39.97%	38.30%	93.06%	42.62%	NA
2011-12 (Up to Sept 2011)		38.28%	91.89%	43.29%	NA
2011-12 (Approved Business Plan/ ARR)	24.75%	21.71%	99.00%	22.49%	
2012-13 (Approved Business Plan)	24.19%	21.20%	99.00%	21.99%	

Direct accrual of Revenue to the State exchequer

- Before power sector reform in Odisha was undertaken from 1.4.1996, the subsidy to power sector on the average was Rs.250 crore per annum and this has been withdrawn from 1.4.1996. If the subsidy would have continued it would have been more than Rs.1000 crore by 2009-10 per annum. This has helped keeping the revenue deficit of Odisha on a declining path.
- In 2006-07 alone different State Governments have provided the following subsidy to their power sector.

Andhra Pradesh -	Rs.1973 cr.	Rajastan -	Rs.700 cr.
Tamil Nadu -	Rs.1330 cr	(Electricity Duty is also retained)	
Gujurat-	Rs.1767 cr.	Jharkhand -	Rs.392 cr.
Uttar Pradesh -	Rs.3105 cr.	Delhi -	Rs.92 cr.

Punjab - Rs.1845.81 cr.

- In the disinvestment process form OPGC of Rs.603.20 crore was utilized as general resources for State budget. OPGC was operating at PLF 55.14% in 1996-97 which has increased to 90.18% in 2006-07, 82.60% in 2007-08 and 86.72% in 2008-09, 80.48% in 2009-10 and 86.56 in 2010-11. It has generated about 2646.04 MU in 2009-10 and 2843.43 MU in 2010-11 (2892.49 MU estimated for 2011-12). It is now paying dividend of Rs. 75 croes on the average per annum and by now it has paid Rs.611.24 crore to the State Govt.
- OHPC have invested Rs.377 core from its own internal resources and by borrowing and have completed the then incomplete Upper Indravati Project on 19.4.2001. Its installed capacity is 600 MW. Its generation has increased from 1736 MU in 2000-01 to 2948 MU in 2007-08, 2221 MU in 2008-09, 1414.75 MU in 2009-10, 1632.52 in 2010-11 and 1942.38 MU estimated in 2011-12.
- The revenue from sale of TTPS to NTPC in 1995 has fetched 356.00 crore to the State. TTPS which was operating at less than 30% PLF is now operating at PLF of 90% (94.22% in 2010-11) and its installed capacity is 460 MW. This power is being totally available for State consumption. Its generation has increased from 1320.82 MU in 1996-97 to 3114.63 MU in 2007-08, 3339.19 MU in 2008-09, 3255.97 MU in 2009-10 and 3374.97 MU in 2010-11 (2957.32 MU estimated for 2011-12).
- Revenue from disinvestment from distribution companies of Rs.159.00 crore have been utilized to reduce the liabilities of GRIDCO.
- The sell proceeds of TTPS of Rs.356 crore has been utilized by GRIDCO to meet its past liabilities
- Collection of electricity duties has increased from Rs.121.35 crore in 1995-96 to Rs.359.38 crore in 2008-09 and Rs 459.96cr in 2009-10
- As a result of withdrawal of budgetary support to the power sector from 1996-97 together with disinvestment and other fiscal measures the State consolidated fund has been enriched and Odisha has been converted from a revenue deficit State to a revenue surplus state.
- Revenue deficit in 1999-00 was Rs.2574.19 crore (-6% of GSDP) and Odisha has been converted to a revenue surplus of Rs.481.19 crore in 2005-06 and it has increased to Rs.3419.89 crore in 2008-09 (+2.80% of GSDP) and Revenue surplus of Rs.1138.62 Cr in 2009-10 (+0.75% of GSDP) and Rs.3908.21 Cr in 2010-11 (+2% of GSDP).

- ❖ The fiscal deficit 3836.43 crore in 1999-00 (-8.94% of GSDP) has been reduced to 584.03 crore in 2008-09 (-0.48% of GSDP), Rs.2265.37 Cr in 2009-10 (-1.5% of GSDP) and Rs.657.76 Cr in 2010-11 (-0.34% of GSDP).
- ❖ This is not a small achievement considering various constraints/difficulties the power sector has passed through in Odisha.

12. Road Ahead

The Commission all along has been taking proactive steps to protect the interest of the low-end consumers like Domestic, BPL, Agriculture and LT consumers as a whole. But this would be difficult to continue at a lower tariff for such category of consumers because of mainly the following reasons:-

(i). Inevitable tariff hike on account of increase of Power Purchase Cost.

(ii) Mandatory requirement under Sec.61(g) to keep the average tariff ($\pm$ 20%) of the average cost of supply vis-à-vis lack of commitment of the State Govt. to provide subsidy under Sec.65 of the Electricity Act in order to enable the Commission to give lower tariff for relatively poor consumers.

(iii) Lack of commitment by the State Govt. to provide subsidy as required under Rural Electrification programme i.e. under RGGVY.

(iv) Want of surplus power for trading making it difficult for GRIDCO for purchasing power at a higher price but selling at a lower price to the DISCOMs to keep the Retail Tariff at reasonable level in order to safeguard the interest of the consumers.

(v) Funding under R-APDRP may necessitate for adopting the actual level of loss for the purpose of determining the tariff instead of normative distribution loss now adopted by the Commission in order to safeguard the interest of the consumers.

Inevitable tariff hike on account of increase of Power Purchase Cost

(i) The retail tariff for the consumer consist of bulk supply price of GRIDCO to the distribution companies, transmission charges payable to OPTCL by the distribution companies, SLDC charges and the distribution cost incurred by the distribution companies for maintaining their istribution network. The average tariff for the distribution companies consists of 57.33 % towards power purchase cost, 6% towards transmission & SLDC charges and 36.42% towards distribution cost. If there is increase in the cost of generation and consequently the power purchase cost of GRIDCO, the retail tariff is bound to increase. Similarly, when OPTCL invests in up gradation of the GRID substation, power transformers or construction of new grid substations and transmission lines etc., it is to service the loan obtained from different financial institutions and this has to be recovered in shape of transmission charges from the distribution companies which ultimately is passed on to the consumers.

(ii) The table given below explains as to how the average cost of supply and average retail tariff is increasing mostly because of increase in the cost of power.

TABLE-1
Comparative position of approved 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 (p/u) (3) – (4) / (4) – (3) as the case may be**	**-5.25**	**-26.07**	**-4.33**	**21.33**	
6	**Break-Up of BSP P/U vide Sl No.4**					
	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%
	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).

(iii) The table above indicates the rate approved by the Commission but actually the power purchase cost has increased from year to year compared to the rate approved by the Commission for 2007-08. While Commission had approved the average rate of purchase of hydro power by GRIDCO from OHPC power stations at Rs.57.67 paise for 2009-10 (including Machhkund) the actual rate was Rs.73.43 paise per unit. Against Commission's approval of 6184.44 MU of energy for 2009-10 from state hydro stations, because of erratic rain fall the actual amount of energy available from state hydro was only 4056.07 MU. Commission's approval was based on the normative original design energy of the hydro stations.

Similarly for 2010-11, the Commission approved 5881.74 MU from state hydrostations at an average rate of 62.51 paise per unit (including Machhkund but excluding Machhkund 64.40 per unit) , but upto to end of March, 2011, GRIDCO has purchased 4874.39 MU from state hydro stations at an average rate of 70.51 paise per unit.

For the year 2011-12 Commission has normatively estimated 5881.74 MU energy from state hydro stations based on the original design energy at an average rate of 65.96 paise per unit (including Machhkund, excluding Machhkund 68.01 paise per unit). Going by the experience of 2009-010 and 2010-11, if the generation of state hydro goes down from the level of 5881.74 MU estimated by the Commission based on the original design energy the rate of purchase of state hydro power would increase from the rate of 65.96 p/u approved by the Commission for 2011-12.

(iv) In case of purchase of energy by GRIDCO from the state thermal stations (OPGC, TTPS, IPPs, CGPs, Co-generating Plants etc.) Commission had approved 6445.37 MU at an average rate of 181.23 paise p/u for 2009-10 but actually GRIDCO purchased 8882.91 MU from state thermal stations at an average rate of 206.82 paise per unit. For 2010-11, Commission had approved purchase of 8037.08 MU from state thermal stations at an average rate of 199.78 paise per unit but actually GRIDCO has purchased 10,122.83 MU upto end of March, 2011 from state thermal (OPGC, TTPS(NTPC) IPPs, Co-generating stations etc.) stations at an average rate of 208.65 paise per unit against 199.78 pasie per unit approved for 2010-11. For the year 2011-12 Commission has approved for purchase of 10323.18 MU energy from state thermal stations at an average rate of 221.25 paise per unit. In view of the consistent increase in the cost of coal and furnace oil and in view of the past experience the rate of purchase of power from state thermal may increase from 221.25 paise per unit approved for the 2011-12.

(v) In case of purchase of power by GRIDCO from the Central Thermal Stations, it is seen that for the year 2009-10, Commission had approved 5905.22 MU energy at an average rate of 197.31 paise per unit but GRIDCO had actually purchased 5819.62 MU at an average rate of 221.58 paise per unit during the said period (2009-10). For the year 2010-11, Commission had approved 5860.77 MU from Central Thermal Stations at an average rate of 243.54 paise per unit. But by end of March, 2011GRIDCO purchased 6026.26 MU at an average rate of 309.19 paise against 243.54 paise approved for 2010-11. For the year 2011-12, Commission have approved the purchase of 6056.42 MU by GRIDCO from the Central Thermal stations at an average rate of 331.05 paise per unit and this approved rate may increase because of persistent rising cost of coal and furnace oil and in view of the experience of 2009-10 and 2010-11 as indicated above.

(vi) As a whole it may be seen that while Commission had approved for purchase of 19719.37 MU of energy by GRIDCO from different sources for state consumption at an average rate of 148.27 paise per unit for 2009-10, but the actual purchase was 20956.1 MU at an average rate of 196.95 paise per unit for 2010-11.

(vii) For 2010-11 Commission had approved for purchase of 21003.75 MU by GRIDCO from different sources from state consumption at an average rate of 174.58 paise per unit, but by the end of March, 2011 GRIDCO purchased 23249.87 MU at an average rate of 202.93 paise unit against 174.58 paise unit approved for 2010-11. Commission has approved purchase of energy of 23489.18 MU by GRIDCO from different sources for consumption within the State at an average rate of 210.32 paise per unit for 2011-12.

The position can be summarized in the table given below:-

TABLE-2
Comparative position of Power Purchase rate approved vis-à-vis the Actual Energy in MU, Rate in Paise per unit and cost in Rs. Crore

Sources of Generation	State Hydro		State Thermal		Central Thermal		Total GRIDCO	
FY 2009-10	Comm. App.	Actual	Comm. App.	Actual	Comm. App.	Actual	Comm. App.	Actual (up to Sept 2011)
Energy	6184.44	4056.07	6445.37	8882.91	5905.22	5819.62	19719.37	20956.10
Total Rate	57.67	73.81	181.23	206.82	197.31	221.58	148.27	196.65
Total Cost	356.64	299.39	1168.09	1837.16	1165.18	1289.21	2923.80	4127.34
FY 2010-11								
Energy	5881.74	4874.39	8037.08	10122.83	5860.77	6026.26	21003.75	23249.87
Total Rate	62.51	70.51	199.78	208.67	243.54	309.19	174.58	202.93
Total Cost	367.65	343.70	1605.66	2112.15	1427.31	1863.23	3666.85	4718.06
FY 2011-12								
Energy	5881.74	3416.90	10323.18	4823.73	6056.42	3453.66	23489.19	12022.59
Total Rate	65.96	62.88	221.25	200.32	331.05	357.86	210.32	206.29
Total Cost	387.96	214.85	2284.03	966.30	2004.97	1235.93	4940.30	2480.18

Though, the Commission has approved the average rate of 210.32 paise per unit of power purchase by GRIDCO, but going by the past experience and in view of the rising cost of coal and furnace oil not only the consumption of energy would increase, but the rate of purchase price may also increase substantially which is corroborated from the facts and figures of 2009-10 and 2010-11 explained in the preceding paragraphs. This is again substantiated by recent increase of price F grade and G grade coal used in thermal power by 19% and 23% respectively (average 21%) announced by Mahanadi Coal Field Limited, a subsidiary of Coal India. Added to this MCL has also started billing of excise duty of five percent from 1st March, 2011. Thus with hike in price of coal together with levy of excise duty the coal price is going to increase by 29% which has not been fully factored in the recent tariff hike approved by the Commission from 01.4.2011. Consequently, the GRIDCO's power purchase cost from NTPC thermal power stations is going to increase from Rs.3.50 to Rs.4.00 per unit. For the end consumers the hike could possibly in the range of 70-75 paise per unit keeping in view the distribution loss. In case of OPGC the on account of enhanced excise duty the additional burden would be Rs.7.50 crore per annum which would hike up the power purchase cost of GRIDCO (Business Standard dt.30.3.2011).

(viii) Further, in addition to the increase of thermal power cost because of increase in coal price and excise duty, the rising coal imports is going to push power costs by upto 70 paise a unit (Extract of Indian Express dated 21.2.2011)

"The monthly electricity budget of the common man may soon be in for a jolt, with the power ministry pointing out that jacked up prices of imported coal, coupled with deteriorating financial health of power utilities have led to a rise in electricity generation costs by 30-35 per Kwh. Stating that acute shortage of coal was having a telling effect on power utilities, the ministry, in a note to the GoM on coal, said that poor

supply from CIL has led to utilities increasingly importing thermal coal. Imports have shot up to 23.2 MT in 2009-10 as against 16 MT in 2008/09, the ministry said. Already, in 2010/11 (April-December period), due to short supply of coal, power companies have sustained a generation loss of 5.3 billion units"

Mandatory requirement under Sec.61(g) to keep the average tariff (+ 20%) of the average cost of supply vis-à-vis lack of commitment of the State Govt. to provide subsidy under Sec.65 of the Electricity Act in order to enable the Commission to give lower tariff for relatively poor consumers.

- Section 61(g) read with para 8.3.2 of Tariff Policy, 2006 stipulates "Tariff progressively reflects the cost of supply of electricity, so that latest by the end of 2010-11 the tariffs are within + 20% of the average cost of supply. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.

- On the other hand para 5.5.2 of National Electricity Policy, 2005 states that "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. Tariffs for such designated group of consumers will be at least 50% of the average (overall) cost of supply. This provision will be further re-examined after five years".

- If any class of consumers are to be subsidized the State Govt. have to pay the subsidy in advance as per Section 65 of the Electricity Act, 2003 which is extracted below:-

- "65. Provision of subsidy by State Government -If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission under section 62, the state Government shall, notwithstanding any direction which may be given under Section 108, pay, in advance and in such manner as may be specified, the amount to compensate the person affected by the grant of subsidy in the manner the State Commission may direct, as a condition for the licence or any other person concerned to implement the subsidy provided for by the State Government."

- Even though the State Government have not agreed to provide subsidy to agriculture or BPL families domestic consumers, tariffs in those cases have been fixed much below -20% of the average cost of supply of 408.87 paise unit determined for the year 2011-12.

- 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-3
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%
	Kutir Jyoti		100.00	-163.00	-61.97%
	Irrigation		110.00	-153.00	-58.17%
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%
	Kutir Jyoti		100.00	-227.37	-69.45%
	Irrigation		110.00	-217.37	-66.39%
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%
	Kutir Jyoti		100.00	-308.87	-75.54%
	Irrigation		110.00	-298.87	-73.09%

In case of BPL family the cross subsidy paid is 308.87 paise (408.87-100 tariff per unit for 30 units in a month) which is 75.54% less than the average cost of supply.

- In case of Agriculture/irrigation the cross subsidy per unit is 298.87 paise (408.87 - 100 paise per unit)which is 73.09% less than the average cost of supply.
- In case of domestic consumers the consumers consuming upto 50units per month are pay 140 paise per unit from 2001-02 which has remained unchanged for 2010-11 and 2011-12. In their case per unit subsidy is 268.87 paise (408.87-140 paise per unit) which is (-) 66% less than the average cost of supply.
- Domestic consumers consuming 200 units per month are being subsidized by -28% of the average cost of supply as for them the average per unit works out to 297 paise.
- Domestic consumers consuming 400 units per month are being subsidized by (-)11% as for them theaverage rate per unit works out to 363 paise.
- Domestic consumers consuming 600 units per month are being subsidized by (-) 1.5% as for them theaverage rate per unit works out to 400 paise.
- Only those high end domestic consumers consuming 700 units per month would be paying (+)1.22% higher than the average cost of supply of 408.87 paise as for them the average per unit works out to 413 paise against average cost of supply of 408.87 pasie per unit. This is evident from the calculation given in the following table:-

TABLE-4

Consumption/ Month	Tariff	Total Payment for Energy Charges (Rs.)	Average Per Unit Energy Charges (P/U)	Cross-Subsidy in %
50 Units	Consumption <= 50units per month 140 paise per unit	140 paise X 50 units = **Rs.70**	140	(-) 66%
200 Units	Consumption <=50units <=200 units per month 350 paise per unit	140 paise X 50 + 350 paise X 150 = **Rs.595/-**	297	(-) 28%
400 Units	Consumption >200<=200 units p/m 430 paise per unit	140 paise X 50 + 350 paise X 150 + 430 paise X 200 = **Rs.1455**	363	(-)11%
600 Units	Consumption >400 <=600 units p/m 480 paise per unit	140 paise X 50 + 350 paise X 150 + 430 paise X 200 + 480 paise X 200 = **Rs.2415**	400	(-)1.5%
700 Units	Consumption >600 <=700 units p/m 480 paise per unit	140 paise X 50 + 350 paise X 150 + 430 paise X 200 + 480 paise X 200 + 480 paise X 100 = **Rs.2895**	413	(+)1.22%

When the cost of purchase of power is increasing and the Commission is mandated to keep the average retail tariff for different categories of consumer (voltage wise i.e LT, HT & EHT) within + 20% of the average cost of supply the existing level of tariff for low end consumers will have to increase unless State Govt. come forward to provide direct subsidy in order to keep the tariff for such categories of consumers at a relatively lower level.

In obedience to Hon'ble ATE's Order the Commission has attempted to comply with the directions in the following manner. For the year 2010-11, the Commission has approved the Retail tariff adopting the normative distribution loss of 22.22% and for the year 2011-12 at 21.71%. The average technical loss of the State as per the sample study taken by the DISCOMs being 15% for LT and 8% for HT and 0% for EHT, total averaging to 14.38% for 2010-11 and 14.46% for 2011-12, the overall differential losses of 7.84% (22.22% - 14.38%) for 2010-11 and 7.25% (21.71%-14.46%) for 2011-12 are commercial losses which were earlier attributed to LT and have now been apportioned between EHT, HT & LT consumers in proportion to their energy consumption. Similarly, the distribution cost which includes Return on Equity, depreciation, O&M and Interest on Loan etc. has been equitably assigned to the respective categories based on the quantum of power supplied (gross input to that category basing on the apportionment of commercial loss and technical loss to different voltage level) to EHT, HT & LT consumers. Similarly, the power purchase cost has been apportioned among the EHT, HT and LT consumers basing on the same analogy of apportionment of distribution cost. Accordingly the cost of supply for EHT, HT & LT consumers have been worked out for the year 2010-11 and 2011-12 as indicated below. Similarly, the average tariff voltage-wise (total revenue of the voltage / total sales at that voltage) as stipulated by Hon'ble ATE vide Para 35 of their Order dtd. 30.05.2011 has been calculated and the tariff of EHT level and most of the HT categories are same in their respective voltage level.

Calculation of Cost of Power Supply at different Voltage Ends and cross-subsidy for the FY 2010-11 & 2011-12

	2010-11				2011-12			
	EHT	**HT**	**LT**	**Total**	**EHT**	**HT**	**LT**	**Total**
Approved in ARR								
Input to the system in MU				20,154.00				22,477.00
Total Distribution Loss %				**22.22%**				**21.71%**
Sale to Consumer (MU)	4,514.00	3,415.10	7,747.46	15,676.56	5,389.97	3,164.28	9,043.12	17,597.37
Total Loss MU				4,477.50				4,879.63
Based on Normative								
Technical Loss %	**0.00%**	**8.00%**	**15.00%**	**14.38%**	**0.00%**	**8.00%**	**15.00%**	**14.46%**
Input to the system in MU	20,154.00	15,640.00	10,973.70	20,154.00	22,477.00	17,087.03	12,555.79	22,477.00
Loss MU (Technical)	-	1,251.20	1,646.06	2,897.26	-	1,366.96	1,883.37	3,250.33
Sale to Consumer (MU)	4,514.00	3,415.10	9,327.65	17,256.75	5,389.97	3,164.28	10,672.42	19,226.67
Commercial Loss (MU)				1,580.19				1,629.30
Commercial Loss Prorated on Energy sale (MU)	***455.01***	***344.24***	***780.94***	***1,580.19***	***499.04***	***292.97***	***837.28***	***1,629.30***
Total Distribution Loss (Considering Tech. Loss + Commercial Loss) %	**2.26%**	**10.27%**	**24.13%**	**22.22%**	**2.22%**	**9.77%**	**23.39%**	**21.71%**
Cost at System Voltage								
Sale to Consumers (MU)	4,514.00	3,415.10	7,747.46	15,676.56	5,389.97	3,164.28	9,043.12	17,597.37
Loss %	**2.26%**	**10.27%**	**24.13%**	**22.22%**	**2.22%**	**9.77%**	**23.39%**	**21.71%**
Gross Input MU	4,618.26	3,805.85	11,729.89	20,154.00	5,512.36	3,506.76	13,457.89	22,477.00
Total Distribution Cost (Rs. Crore) (Prorated on Gross Input)	280.38	231.06	712.15	1,223.59	348.77	221.88	851.49	1,422.14
Distribution Cost (P/U)(Dist Cost/ sale)	**62.11**	**67.66**	**91.92**	**78.05**	**64.71**	**70.12**	**94.16**	**80.82**
Cost of Power Purchase +Tr. +SLDC (Rs. Crore) (prorated on energy sale)	895.60	738.05	2,274.73	3,908.39	1,415.76	900.65	3,456.44	5,772.86
Pooled **Power purchase + Tran. Charge**s + SLDC	193.93	193.93	193.93	193.93	256.83	256.83	256.83	256.83
Cost of Power Purchase Considering Loss (P/U)	**198.41**	**216.11**	**293.61**	**249.31**	**262.67**	**284.63**	**382.22**	**328.05**
Total Cost at Voltage end (P/U) (Cost of Power Purchase + Tra. + SLDC+ Dist. cost)	**260.52**	**283.77**	**385.53**	**327.37**	**327.37**	**354.75**	**476.38**	**408.87**
Average Cost of supply for the State	**327.37**	**327.37**	**327.37**	**327.37**	**408.87**	**408.87**	**408.87**	**408.87**
					With 10% rebate on avg. tariff on HT & EHT			
Avg. Trariff P/U	**416.61**	**423.59**	**219.21**		**456.28**	**472.43**	**300.34**	
Cross Subsidy (P/U) with respect to cost of supply voltage wise	156.09	139.82	(-)166.32		128.91	117.68	(-)176.04	
Cross Subsidy (%) with respect to cost of supply voltage wise	59.9%	49.3%	(-) 43.1%		39.4%	33.2%	(-) 37.0%	
Cross-subsidy with respect to average cost of supply for all consumer taken together	89.24	96.22	(-) 108.16		47.41	63.56	(-) 108.53	
Cross-subsidy (%)with respect to average cost of supply for all consumers taken together	27.25	29.39	(-) 33.03		11.59	15.54	(-) 26.54	

Lack of commitment by the State Govt. to provide subsidy as required under Rural Electrification programme i.e. RGGVY.

At present 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."

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.

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.

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. In case of BPL families the minimum tariff has to be Rs.2/- per unit as per provision of para 5.5.2 of National Electricity Policy and the balance Rs.2/- is required to be paid by State Govt. as subsidy under Section 65 of the Electricity Act, 2003. With increase in BPL consumers and average cost of supply the loss is going to increase and State Govt. is required to comply with the provisions of the Section 65 of the Electricity Act, 2003to provide subsidy on this account.

Want of surplus power for trading is making it difficult for GRIDCO for purchasing power at a higher price but selling at a lower price to the DISCOMs to keep the Retail Tariff at reasonable level in order to safeguard the interest of the consumers.

Even though GRIDCO is purchasing power from different sources at a higher cost this is not being fully factored into the retail tariff for recovery from the consumers and the BST price which forms a major component of retail tariff has been kept in some years at a level lower than the purchase price. The gap left in the ARR of GRIDCO was supposed to be filled up through profit earned from sale of surplus power but with the rise in demand of the existing consumers as well as increase in number of consumers the surplus power is not available. Still then the Commission has left gap in the account of GRIDCO to keep the BST price at a low level in order to keep the retail tariff at an affordable level. This would be evident from the table given below:-

TABLE-5
ARR GAP OF GRIDCO

Financial Year	Gap in ARR (Approved)	Actual Gap	Net Gap	Approved rate of 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	(-)1296.25	(-)1296.25	174.58	170.25
2011-12	(-)746.05			210.32	231.65

Funding under R-APDRP may necessitate adopting the actual level of loss for the purpose of determining the tariff instead of normative distribution loss now adopted by the Commission in order to safeguard the interest of the consumers.

The overall distribution loss during the year 1999-2000 was 43.91% and the distribution companies have reduced the distribution loss to a level of 37.24% by the end of 2009-10 and 37.96% by end of 2010-11. Commission has not fixing the tariff based on the distribution loss actually achieved and the projection made for the subsequent years but tariff is being fixed on the normative target fixed by the Commission from year to year. For example against 37.24% of distribution loss achieved in 2009-10 the distribution companies projected the distribution loss of 35.60% for the year 2010-11 but the Commission had approved the ARR and tariff on the normative distribution loss of 22.2%. Similarly, for the year 2011-12 though the distribution companies are showing a loss of 37.96% during the year 2010-11 provisionally and had projected distribution loss of 32.95% for the year 2011-12 Commission while determining the ARR and tariff for 2011-12 adopted distribution loss of 21.71%. Thus, it is not correct to say that the high loss incurred by the distribution companies is being loaded to the consumers. If the ARRs and the retail tariff would have been fixed on the actual distribution loss projected and proposed by the distribution companies, the tariff hike would have been much higher which the Commission has not permitted.

As per Section 61(d) of the Electricity Act, 2003 while the Commission is mandated to ensure recovery of the cost of supply to the consumers and safeguard their interest, there is also need to ensure that the power utilities perform efficiently. Their inefficiencies cannot be loaded to the consumers in the shape of higher tariff. On the other hand while fixing tariff across the different type of consumers some sort of consideration has to be given to the poor and low end consumers but that again is to be regulated as per the Section 61(g) of the Electricity Act, 2003 read with para 8.3.2 of the Tariff Policy and para 5.5.2 of the National Electricity Policy. While protecting the interest of the low end consumers it has also to be ensured that Indian industry function in a globally competitive market. Accordingly, attempts are to be made to ultimately to see that the low end consumers are subsidized within -20% while high end consumer like industry etc, should not subsidize more than 20% of the overall cost of supply. Further, para 5.5.2 of the Electricity Policy states that 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 and tariff for such designated group of consumers will be at least 50% of the "Average (overall) cost of supply".

The efficiency in performance of the distribution companies it is seen that they have not been able to make perceptible impact on reduction of Distribution loss and Aggregate Technical and Commercial Loss as well. In their tariff fling they have been pleading that the actual Distribution loss and AT&C loss should be taken into account while fixing the retail tariff. But the Commission finds that while in some years there is marginal reduction in other years there is marginal increase in distribution loss as well as AT&C loss also. This will be seen from the tables below:

TABLE-6

Years	Distribution Loss Target fixed by OERC (%)	Actual Distribution Loss (%)	Reduction in Distribution Loss (-) or increase in Distribution Loss (+) (%)
2003-04	31.86	40.75	(-) 0.00
2004-05	37.12	39.21	(-) 1.54
2005-06	34.18	39.60	(+) 0.39
2006-07	32.81	38.57	(-) 1.03
2007-08	27.11	37.48	(-) 1.09
2008-09	27.00	37.50	(+) 0.02
2009-10	24.40	37.24	(-) 0.26
2010-11	22.22 (35.60 Projected by Discoms)	38.34 (Up to Sept. 2011)	(+) 1.10
2011-12	21.71 (32.95 Projected by Discoms)	38.28 (Up to Sept. 2011)	(-) 0.06

TABLE-7

Years	AT&C Loss Target fixed by OERC (%)	AT&C Loss level achieved (%)	Rate of reduction (-) or increase (+) of AT&C Loss (%)
2003-04	37.80	49.30	(-) 1.80
2004-05	44.50	44.70	(-) 4.60
2005-06	40.50	44.70	(-) 0.00
2006-07	37.90	43.30	(-) 1.40
2007-08	31.40	41.90	(-) 1.40
2008-09	30.40	41.70	(-) 0.20
2009-10	26.00	39.15	(-) 2.55
2010-11	23.77 (37.80 Projected by Discoms)	42.62 (Up to Sept. 2011)	(+) 3.47
2011-12	22.49 (34.06 Projected by Discoms)	43.29 (Up to Sept. 2011)	(+) 0.67

PDRP Vis-à-vis Loss reduction target

With regard to the plea of accepting the loss level projected by the distribution companies it has been brought to the notice of the Commission the contents of the D.O. letter No.16/28/2008-APDRP dt.23.03.2011 of Joint Secretary, Ministry of Power addressed to Secretary, Energy, Govt. of Orissa where in it has been said that for getting the benefits of R-APDRP, utilities have to improve AT&C loss reduction over the base (starting) level not only in the project area, but also at utility level. The correct and realistic determination of base (starting) AT&C loss level is very essential to gauge the improvement in loss reduction in subsequent years after implementation of R-APDRP. The Secretary, Govt. of Orissa has been asked to take up the issue with OERC to determine the yearly loss levels of distribution utilities in Orissa accurately based on

ground realities and not on notional basis.

Commission has noted the contents of the aforesaid letter dated 23.3.2011 of Ministry of Power and the background thereof. The intension is where R-APDRP programme is to be implemented the base line data are to be determined on actual basis and in fact a component of R-APDRP is earmarked to determine base line data at the first instance. When funding under R-APDRP would be available the distribution companies would accordingly utilize the fund for firming the base line data.

It is not possible on the part of the Commission to accept whatever the Distribution and AT&C loss being projected by the distribution companies. What is disturbing is that instead of declining trend in some years the distribution loss and AT&C loss have shown to have been increased which is evident from the Table Nos.6 & 7. The Commission has to adopt a normative reduction of Distribution and AT&C loss for tariff determination purpose; as it is not desirable that the general consumers of the State is loaded due to sheer inefficiency of the licensees. For removal of doubt, the Commission would like to make it clear that the determination of actual base line data for RAPDRP funding and adopting the normative loss data for tariff determination purpose as per Multi-Year Tariff Principle (MYT-Tariff) ordered in Business Plan is two different subjects need not be mixed into. The actual loss level as a base line data for RAPDRP funding and loss reduction trajectory for RAPDRP guidelines could be followed in sanctioning phase-I and Phase-II funding of RAPDRP. In fact, for purpose of performance monitoring of the DISCOMs, the Commission is looking into the actual level of losses, Division-wise, Sub-division-wise and Section-wise. The Commission while monitoring is also looking into the actual losses of DISCOMs voltage-wise i.e. LT level loss, HT-level loss and EHT level loss as well as LT plus HT combined level losses. The Commission is constantly persuading with the DISCOMs to do the proper energy accounting to find out the 11 KV feeder-wise loss and fix accountability of the DISCOMs officials as feeder manager to arrest both technical and commercial loss. For R-APDRP funding, base line data, if needed, the Commission's review figure in the performance monitoring could be utilized by Central/State Govt. and the licensees. This has also been made clear in the multiyear tariff principle announced by the Commission in their order dated 18.06.2003 in Case No. 8/2003 as well as in the Business Plan order dated 20.3.2010 in Case No. 41, 42, 43/2007 and 22/2008.

While answering the RAPDRP issue, as above, the Commission would like to make it clear that for the tariff determiantion purpose it had approved the overall distribution loss for 2010-11 at 22.22% while in the Business Plan Order target for overall distribution loss for the year 2011-12 has been pegged at 21.71%. But the distribution companies have shown the distribution loss for 2010-11 at 37.96% whereas they had achieved a distribution loss of 37.24% in 2009-10. They have also projected distribution loss at 32.95% for the year 2011-12. Therefore, the Commission has approved the distribution loss at 21.71% for 2011-12 as stipulated in the Business Plan for the said year.

Similarly, the overall collection efficiency has been achieved at 96.96% in 2009-10 against the target of

98% fixed by the Commission for the said year. The distribution companies have shown to have achieved 94.30% during 2010-11 against target fixed at 98% for 2010-11 and projected by them at 98.34% for 2011-12. Since the Commission has approved collection efficiency of 99% for 2011-12 in the Business Plan Order, the collection efficiency, therefore, now has been approved at 99% for the same year. While working out the Annual Revenue Requirement for the said year 2011-12 the approved collection efficiency of 99% has been adopted.

Coming to the AT&C loss it is seen that against overall AT&C loss of 39.15% achieved during 2009-10, the achievement during 2010-11 is 41.50% against the target of 23.77% fixed by the Commission for the said year. Against the target of 22.49% approved in the Business Plan for 2011-12, the distribution companies have proposed overall AT&C loss of 34.06% for 2011-12 in their ARR filing. Commission has approved the AT&C loss of 22.49% for 2011-12 against 23.77% approved for 2010-11.

If the tariff would have been fixed on the distribution loss projected by the distribution companies the tariff rise would have been quite high for the 2010-11 and 2011-12. But the Commission has fixed the tariff for the year 2010-11 assuming 22.22% of distribution loss and 21.71% for 2011-12 as per the Business Plan Order approved but not on the distribution loss of 35.60% projected by the distribution companies for 2010-11 and 32.95% projected for 2011-12. The retail tariff so fixed for 2011-12 represents 19.74% increase over the tariff for 2010-11. If the distribution loss projected by the distribution companies at 32.95% would have been adopted by the Commission the retail tariff increase for 2011-12 would have been 33.20% over the tariff of 2010-11. Similarly, if the provisional distribution loss shown by the distribution companies for 2010-11 is taken into account at 37.96% and reduction of 3% is assumed i.e. if the distribution loss is adopted at 34.96% for 2011-12, the tariff increase for 2011-12 would have been 36.13% over the tariff of 2010-11 against 19.74% increase worked out in the tariff determined by the Commission for 2011-12.

In adopting the normative distribution loss 21.71% for 2011-12 the cost of supply has been worked out at 408.87 paise per unit whereas if the distribution loss of 32.95% projected by the distribution companies would have been accepted by the Commission for 2011-12 the cost of supply would have been 477.47 paise per unit. Similarly taking 37.96% as provisional distribution loss for 2010-11 and reducing 3% for 2011-12 the cost of supply would have been 492.24 paise for 2011-12 against 408.87 paise approved by the Commission for 2011-12. This is evident from the Table given below:-

TABLE - 8

IMPACT OF ACTUAL LOSS ON TARIFF

	2010-11 (Approved)	2011-12 (Approved)	2011-12 (calculated considering Dist. Loss projected by Licensees)	2011-12 (calculated considering Actual Dist. Loss for 2010-11 - 3%projected by Licensees)
Power purchase from GRIDCO by DISTCOM	20,154.00	22,477.00	22,477.00	22,477.00
Power sold by DISCOM to Consumer(MU)	15,676.00	17,597.00	15,069.12	14,616.84
EHT(MU)	4,514.03	5,389.97	5,389.97	5,389.97
HT (MU)	3,415.14	3,164.28	3,164.28	3,164.28
LT(MU)	7,747.39	9,043.12	6,514.86	6,062.59
Distribution Loss (%)	22.22%	21.71%	32.96%	34.97%
Collection Efficiency (%)	98.00%	99.00%	98.34%	99.00%
AT & C Loss (%)`	23.77%	22.49%	34.07%	35.62%
Avg BSP P/KWH	170.25	231.65	231.65	231.65
Power Purchase Cost of GRIDCO (Rs. In Crore)	3,431.19	5,206.88	5,206.88	5,206.88
Transmission Cost of OPTCL (P/KWH)	23.50	25.00	25.00	25.00
Transmission Cost of OPTCL (Rs. In Crore)	473.62	561.94	561.94	561.94
SLDC Cost (Rs. In Crore)	3.58	4.04	4.04	4.04
Net Distribution Cost excl. Misc receipt (Rs. In Crore)	1100.96	1238.67	1283.67	1283.67
ARR OF DISCOMs(Rs. In Crore)	**5,009.35**	**7,056.53**	**7,056.53**	**7,056.53**
Revenue Realised by DISCOMs through tariff (Rs. In Crore)	5,025.53	7,109.57	7,056.53	7,056.53
Avg. Tariff P/Kwh	320.58	404.01	468.28	482.77
Revenue with existing Tariff (Rs. In Crore)		5,937.60	5,297.74	5,183.83
Revenue/Tariff Rise (%)	22.20%	19.74%	33.20%	36.13%
Cost of Supply P/U		408.87	477.47	492.24

It would be thus seen from the comparative position as to how additional tariff increase would have been by 13.46% (33.20%-19.74%) or by 16.39% (36.13%-19.74%) if Commission had considered the proposal of DISCOM in its filing of ARR for 2011-12 or the actual loss level of the preceding year less 3% respectively. Similarly, the cost of supply would have been increased by 68.60 paise (477.47-408.87 approved for 2011-12) or 83.37 paise (492.24-408.87 approved for 2011-12).

In other words if we consider the ground realities by adopting the loss projected by the distribution companies, the tariff for 2011-12 would have been further increased by 144% to 16% and the cost of supply would have been further increased by 69 paise to 84 paise. Or worse, if we fix the tariff, making its justification

low due to ground realities or considering the capacity of the consumer to pay, we will be loaded with a huge 'Regulatory Asset' burdening the future consumers.

Further, the table given above will go to prove how the Commission has consistently tried to protect the interest of the consumers by not accepting the distribution loss projected by the distribution companies even though the Ministry of Power and Appellate Tribunal for Electricity have been advising the Commission to take realistic view of the distribution loss projected by the distribution companies while determining the ARR and tariff for the distribution companies. The Commission consistently fixing the normative distribution loss from year to year on a declining path in order to protect the interest of the consumers. Conceding to the instruction of the Ministry of Power and ATE would mean additional increase of tariff by about 16% (over the existing tariff hike of 19.74%) at the existing level of cost of supply for 2011-12.

The Areas of Concern and Road Map for the Power Sector

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.

Good governance is one of the important pillars of the reforms of power sector. The Discoms are required to enforce strict discipline among the staff, train then regarding the need for good behaviour and prompt services to the consumers.

Coming to the Odisha's specific problems the present high level of AT&C loss of 39.15% (2009-10) and 41.50% (2010-11) 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 (13th 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.

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 62 units are billed (dist. Loss 37.96%) and sale price of only 58.50 or say 59 units is being realized(2010-11). 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.

Against AT&C loss of 41.50% for 2010-11 and 34.06% projected by DISCOMs for 2011-12, the Commission has fixed the tariff for 2011-12 adopting a normative AT&C loss of 22.49% as approved in the business plan order dated 20.3.2010. Thus, though loss incurred by the DISCOMs have not been loaded to the consumers, in actual practice there is loss of revenue by the DISCOMs when compared to the revenue collection figures reckoned by the Commission. If we can reduce the AT&C losses to a reasonable level and prevent theft fully, it would not only mean huge revenue gains for the DISCOMs but also fairly large increases by way of Electricity Duty for the State Govt.

It is therefore, all the more necessary for the State Government to provide the required police personnel for effective functioning of the Energy Police Stations and to ensure their effective functioning by way of regular monitoring and supervision in their functioning at the level of a Sr. IPS Officer, preferably posted to Energy Department to oversee the energy related crimes in the State.

Regular monitoring of the energy related crimes at the level of State Govt. would also have deterrent effect on the unscrupulous employees of the DISCOMs who more often than not connivance with the consumers. The huge loss in the distribution sector cast a unsustainable burden on the honest and paying consumers, overloading of lines and transformers, break down of supply, load shedding, increases in tariffs, indifferent service standards and huge problems in billing and collection. While the DISCOMs must systematically set about the curbing of losses by system upgradation and proper billing and collection, they need to be aided by the State and the machinery of the police in prevention and detection of theft, with penal action against the thieves. The DISCOMs need to be backed to the hilt by the State administration in curbing such losses.

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.

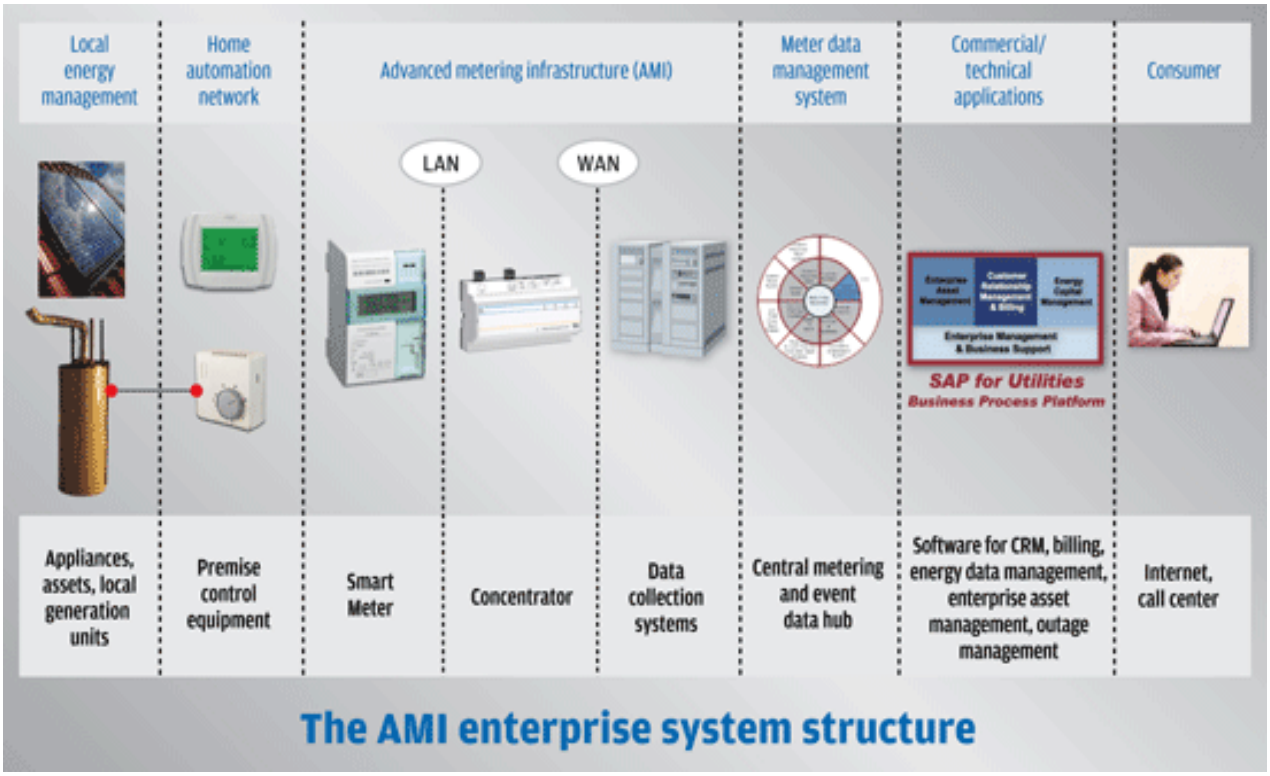
13. Odisha Experience

- Odisha did the experiment in power sector and all other states have gained from the experiment and experience of Odisha in power sector. Despite various constraints, the power sector in Odisha has achieved a commendable success when compared with other States where their State govt. continue to provide budgetary support of substantial amount.
- Going by the past experience State Govt has been advised to participate actively in the day to day development of power sector in the State.
- The present system of managing or treating the power sector in the State on an 'arms-length' basis needs to be changed to a 'hand-shake' basis.
- State Govt. have started taking initiative by deciding to private budgetary support of Rs.1200.00 crore to the four distribution companies during 2010-11 to 2013-14. The distribution companies are also to provide Rs.1200.00 crore towards their counterpart funding.

Smart Grid Initiative

SMART GRID delivers electricity from suppliers to consumers using primarily information and communication (two-way) technologies to control appliances at consumer homes to save energy, reduce cost, increase reliability and transparency and in the process does demand side management efficiently. It will help providing electricity in an economic and efficient manner – be it evacuation grids, meters, connection or disconnection process, calculation of power consumption etc. For example, when power is least expensive, a smart grid which has an intelligent monitoring system would turn on selected home appliances such as washing machines or factory processes that can run at arbitrary hours. At peak times, it could turn off selected appliances to reduce demand.

The Smart Grid's "nervous system" would be an IT network that monitors and controls the power grid. An advanced metering infrastructure (AMI) is a crucial piece of this Smart Grid technology (see figure below). The AMI connects Smart Meters, via concentrators, across the grid to central data hubs — known as meter data management systems. This enables bi-directional, real-time communication within the Smart Grid and high-speed communication with the utility companies' application systems, such as SAP's customer relationship management, billing, or enterprise asset management solutions. The AMI network also facilitates remote connection and disconnection of consumers.



Sooner or later the primitive grids of our country will be transformed into smart ones. The framework for this transformation is being worked out by the India Smart Grid Task Force (ISGTF) chaired by Mr. Sham Pitroda. Odisha, in its efforts over a decade of privatization of Distribution, has not reached anywhere near its desired goal. The AT&C loss is as high as 43.29% as on September 2011. The reasons are many, primary one being the lack of funds for capital expenditure and new initiatives in the sector.

This situation reminds of the year 1991 when India was on the brink of bankruptcy and had no other option but to implement economic reforms. Yes, in the long run it has proved to be successful and yielded handsome results. The Commission, in its wisdom, has taken up this adversarial situation at hand as a challenge and has initiated the introduction of the state-of-the-art-technology of the Smart Grid solutions adopting Advanced Metering Infrastructure (AMI) in all the discoms of Odisha. As upfront investment is a constraint, the Commission has requested a few reputed Smart Grid Solution providers to implement the AMI based solution in the Build, Own, Operate & Transfer (BOOT) mode on revenue sharing basis. The time-frame for this win-win arrangement would most likely be 5 years and the revenue that will be generated by reduction in AT&C loss from the base line figure will be suitably shared between the Service Provider and the Discom. This initiative, the Commission believes, will leapfrog the lagging Odisha Power Sector into the advanced and efficient league of states in India.