

Odisha Power Sector and Tariff for 2019-20

1. Constitutional Provision on Electricity

Electricity is a subject in the Concurrent List, Entry 38, in the 7th Schedule of the Constitution:

- Both Union and State may make law on the subject.
- If the Union law conflicts with a State law, the former will prevail, unless the State law having been reserved for consideration of the President, receives his assent. (Art.254)

Electricity supply arrangement is a basic infrastructure of the national economy. It must serve the national economy like roads, railways, currency circulation etc. Though States can make laws, subject to Art.254, the need for a Central, comprehensive, consolidated, and self-contained legislation is obvious.

2. Passing the OER Act, 1995

The Orissa Electricity Reform Act, 1995 (Orissa Act 2 of 1996) was enacted for the purpose of restructuring the electricity industry, for rationalization of Generation, Transmission, Distribution and Supply of Electricity, for opening avenues for participation of private sector entrepreneurs and for establishment of a Regulatory Commission for the State independent of the State Government. The Electricity Act, 2003 (Act No. 36 of 2003) which came into effect from 10.06.2003 has been modeled on the basis of provision of OER Act, 1995.

3. Establishment of OERC

An important component of power sector reform was establishment of an independent autonomous Regulator, the Orissa Electricity Regulatory Commission for achievement of objectives enshrined in the OER Act, 1995. It became functional on 01.08.96 with the joining of its three members.

4. Function of the State Commission

As per Section 86 of the Electricity Act, 2003, the State Commission shall discharge the following functions, namely:-

- Determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within State: Provided that where open access has been permitted to a category of consumers u/S. 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
- Regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
- Facilitate intra-state transmission and wheeling of electricity;
- Issue licenses to person seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- Promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such

sources, a percentage of the total consumption of electricity in the area of a distribution license.

- Adjudicate upon the disputes between the licensees, and generating companies and to refer any dispute for arbitration;
- Levy fee for the purposes of this Act;
- Specify State Grid Code consistent with the Grid Code specified under clause (h) of sub-section (1) of Section 79;
- Specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
- Fix the trading margin in the Intra-State trading of electricity, if considered, necessary; and
- Discharge such other functions as may be assigned to it under this Act.

As per Section 86 (2) of the Electricity Act, 2003, the State Commission shall advise the State Government on all or any of the following matters, namely:-

- Promotion of competition, efficiency and economy in activities of the electricity industry;
- Promotion of investment in electricity industry;
- Reorganization and restructuring of electricity industry in the State;
- Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.

S. 86 (3) The State Commission shall ensure transparency while exercising its power and discharging its functions.

S. 86 (4) In discharge of its functions the State Commission shall be guided by the National Electricity Policy , National Electricity Plan and tariff policy published under Sec.3.

- All proceedings before the Commission is judicial proceedings (Section 95) within the meaning of Section 193 and 228 of the IPC and Commissions are to be a Civil Court for the purpose of Section 345 and 346 of Cr. PC.
- Direction of the State Government regarding Policy matter (Sec. 108).

5. Consumers as on 31.03.2019

Table - 1

	CESU	NESCO	WESCO	SOUTHCO	TOTAL
EHT	30	39	34	15	118
HT	2173	482	882	392	3929
LT	2530201	1962795	1752524	2068172	8313692
Total	2532404	1963316	1753440	2068579	8317739

6. Installed Capacity in Odisha as on March,2019 (5710 MW)

State Hydro (OHPC)	2088 MW
	(Odisha share from Machhkund 60 MW + 2028 MW)
Small Hydro	57 MW

Sub total of State Hydro sector	2145 MW

State Thermal Power Stations	880 MW (Ib thermal OPGC 420 MW+ Talcher Thermal NTPC 460 MW)
IPPs	1137 MW
Solar & Biomass	158 MW (Solar-138MW & Biomass-20MW)
Sub total of State Sector	4320 MW
Central Sector	1390 MW (Hydro 189 MW +Thermal 1201 MW)
Total Capacity	5710 MW (Hydro 2334 MW + Thermal 3218MW + Solar & Biomass 158 MW)

7. State Demand and Energy Procurement :

Table - 2

Year	ENERGY (MU)				Peak Demand (MW)			
	Requirement	Availability	Suplus(+) / Deficit (-)		Requirement	Availability	Suplus(+) / Deficit (-)	
2010-11	22,506	22,449	-57	-0.3%	3,872	3,792	-80	-2.1%
2011-12	23,036	22,693	-343	-1.5%	3,589	3,526	-63	-1.8%
2012-13	25,155	24,320	-835	-3.3%	3,968	3,694	-274	-6.9%
2013-14	24,958	24,546	-412	-1.7%	3,727	3,722	-5	-0.1%
2014-15	26,482	26,052	-430	-1.6%	3,920	3,892	-28	-0.7%
2015-16	26,763	26,600	-163	-0.6%	4,091	4,091	0	0
2016-17	26759	26756	-3	0.0	4012	4012	0	0
2017-18	28801	28706	-95	-0.3%	4652	4402	-250	-5.4%
2018-19 (anticipated)	29756	27829	-1927	-6.5%	4400	4511	111	2.5%

Source :CEA LGBR

8. Distribution: Overall Performance of DISCOMs (DISCOMs of Odisha have been privatized since 1999.)

Table – 3

	1999-00	2016-17		2017-18		2018-19	
	Actual (Aud)	OERC Approval in ARR	Actual	OERC Approval in ARR	Actual	OERC Approval in ARR	Actual
A. DISTRIBUTION LOSS (%)							
CESU	44.89%	23.00%	32.57%	23.00%	31.72%	23.00%	28.16%
NESCO	43.35%	18.35%	23.50%	18.35%	22.28%	18.35%	18.74%
WESCO	44.17%	19.60%	31.63%	19.60%	25.81%	19.60%	21.14%
SOUTHCO	41.84%	25.50%	34.46%	25.50%	32.70%	25.50%	29.76%
ALL ORISSA	43.91%	21.34%	30.50%	21.34%	28.03%	21.32%	24.25%
B. COLLECTION EFFICIENCY (%)							
CESU	69.72%	99.00%	96.56%	99.00%	96.56%	99.00%	96.75%
NESCO	79.37%	99.00%	96.25%	99.00%	93.38%	99.00%	94.10%
WESCO	83.36%	99.00%	93.21%	99.00%	89.99%	99.00%	86.30%
SOUTHCO	78.75%	99.00%	90.00%	99.00%	91.42%	99.00%	86.95%
ALL ORISSA	77.19%	99.00%	94.73%	99.00%	93.15%	99.00%	91.67%
C. AT & C LOSS (%)							
CESU	61.58%	23.77%	34.89%	23.77%	34.07%	23.77%	30.49%
NESCO	55.04%	19.17%	26.37%	19.17%	27.43%	19.17%	23.53%
WESCO	53.46%	20.40%	36.27%	20.40%	33.24%	20.40%	31.94%
SOUTHCO	54.20%	26.25%	41.01%	26.25%	38.47%	26.25%	38.93%
ALL ORISSA	56.71%	22.13%	34.16%	22.13%	32.96%	22.11%	30.57%

Table - 4
Proposed and Approved Loss of DISCOM Utilities (in %)

	FY 2017-18 (Actual)	FY 2018-19 Approved	FY 2018-19 Estimated by licensees	FY 2019-20 Proposed by licensees	FY 2019-20 (Approved) by the Commission
CESU					
Distribution Loss	31.72	23.00%	28.79%	25.99%	23.00%
Collection Efficiency	96.56	99.00%	99.00%	99.00%	99.00%
AT and C Loss	34.07	23.77%	29.50%	26.73%	23.77%
NESCO Utility					
Distribution Loss	22.28	18.35%	20.00%	19.00%	18.35%
Collection Efficiency	93.38	99.00%	96.00%	97.00%	99.00%
AT and C Loss	27.43	19.17%	23.20%	21.43%	19.17%
WESCO Utility					
Distribution Loss	25.81	19.60%	25.23%	23.12%	19.60%
Collection Efficiency	89.99	99.00%	94.00%	96.00%	99.00%
AT and C Loss	33.23	20.40%	29.72%	26.19%	20.40%
SOUTHCO Utility					
Distribution Loss	32.70	25.50%	29.76%	26.35%	25.5%
Collection Efficiency	91.42	99.00%	93.00%	96.00%	99.00%
AT and C Loss	38.48	26.25%	34.68%	29.47%	26.25%
ODISHA					
Distribution Loss	28.03	21.32%	25.96%	23.69%	21.36%
Collection Efficiency	93.15	99.00%	96.03%	97.27%	99.00%
AT and C Loss	32.96	22.11%	28.90%	25.78%	22.15%

9. The T&D Loss, Distribution Loss and AT&C Loss for the pre-reform to post reform period may be seen from table below:

Table - 5

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%

Year	T & D Loss	Distribution Loss	Collection Efficiency	AT & C Loss	All India AT&C Loss
2006-07	41.67%	38.57%	92.37%	43.25%	30.59%
2007-08	40.49%	37.48%	93.41%	41.60%	29.24%
2008-09	40.33%	37.52%	92.38%	42.28%	28.44%
2009-10	39.95%	37.37%	94.28%	40.96%	-
2010-11	40.77%	38.34%	92.05%	43.24%	
2011-12	40.95%	38.56%	92.69%	43.05%	
2012-13	40.19%	37.81%	92.69%	42.25%	
2013-14	38.31%	35.88%	94.27%	39.55%	
2014-15	36.90%	34.46%	94.37%	38.16%	
2015-16	34.98%	32.50%	93.80%	36.69%	
2016-17	32.99%	30.50%	94.73%	34.17%	
2017-18	30.43%	28.03%	93.15%	32.96%	
2018-19	26.74%	24.25%	91.67%	30.56%	
2019-20 (Approved)	23.72%	21.36%	99.00%	22.15%	

10. The commission prescribes various efficiency parameters for functioning of the distribution companies while approving the prospective business plan for the next five years. Based on loss parameters prescribed by the commission in the business plan as well as in the determination of annual revenue requirement (commonly known as tariff fixation), the commission determines tariff but not on the loss level incurred by the distribution companies in the previous years or projected for the subsequent years. Similarly, the Commission does not accept the loss level shown by the DISCOMs between expenditure and receipt, the Commission redetermines the same on the performance target/normative basis and accordingly fixes the tariff for subsequent years.

Table-6
Distribution Loss in Percentage

Year	Distribution loss projected by the distribution companies	Distribution loss approved in the business plan	Distribution loss approved in the tariff fixation	Actual distribution loss at the end of the year
2008-09	33.4	27.00	27.00	37.5
2009-10	33.56	24.5	24.45	37.24
2010-11	35.6	22.2	22.2	38.34
2011-12	32.59	21.7	21.7	38.56
2012-13	34.69	21.2	21.30	37.81
2013-14	34.13	21.2	21.30	35.88
2014-15	32.04	21.3	21.38	34.62
2015-16	33.19	-	21.35	32.50
2016-17	30.51	-	21.34	30.39
2017-18	29.22	-	21.34	28.03
2018-19	26.32	-	21.32	24.25
2019-20	23.69		21.36	

Table-7
AT&C Loss in Percentage

Years	AT&C Loss projected by the distribution companies	AT&C loss approved in the business plan	AT&C loss approved in the tariff fixation	Actual AT&C loss at the end of the year
2008-09	36.80	30.4	30.4	41.9
2009-10	36.40	26.00	26.00	39.20
2010-11	37.80	23.80	23.80	43.24
2011-12	34.06	22.50	22.50	43.06
2012-13	36.30	22.00	22.09	42.25
2013-14	35.34	22.00	22.09	36.52
2014-15	33.17	22.00	22.17	37.98
2015-16	35.29	-	22.14	36.69
2016-17	32.70	-	22.14	34.55
2017-18	31.14	-	22.13-	32.96
2018-19	28.13	-	22.11	30.57
2019-20	25.78		22.15	

11. Implementation of Renewable Purchase Obligation (RPO) in the State:

Promotion of renewable energy sources is being done through a host of policies. The latest policy tool which is about to join the bandwagon is the proposed Renewable Energy Certification mechanism. The proposed mechanism, if implemented appropriately, could go a long way in overcoming the hurdles currently being faced by obligated entities in fulfilling their Renewable Purchase Obligations. An effective implementation of this mechanism would help increase flexibility for all the players and would help in overcoming the geographical constraints to harness renewable energy sources.

One of the policy tools being put to practice is the Renewable Purchase Obligations (RPO). As per an RPO mandate, State Electricity Regulatory Commissions (SERCs) under section 86 of the Electricity Act, 2003 (Act) and clause 5.12 of the National Electricity Policy are empowered to specify a percentage of electricity to be procured by obligated entities from renewable sources of energy. This policy of mandating the compulsory purchase of electricity generated through renewable sources is not unique to India but has proliferated among other nations as well to reduce the dependence on conventional sources of energy.

In the above backdrop and in exercise of powers conferred under Section 61, 66, 86(1)(e) and 181 of the Electricity Act, 2003 and all other powers enabling it in this behalf, Orissa Electricity Regulatory Commission has notified the OERC (Renewable and Co-generation Purchase Obligation and its Compliance) Regulations, 2010 on 30th September, 2010 and published the same in the Official Gazette. Further, OERC has repealed the said Regulation and published new Regulation named as OERC (procurement of Energy from renewable sources and its Compliance) Regulations, 2015 during Sept, 2015. The year and source wise RCPO Target & Achievement is as mentioned below:

Table – 8

	2015-16		2016-17		2017-18		2018-19	
	<i>RPO target as per Regulation</i>	Achievement	<i>RPO target as per Regulation</i>	Achievement	<i>RPO target as per Regulation</i>	Achievement	<i>RPO target as per Regulation</i>	Achievement
Non Solar (%)	2.50%	1.21%	3.00%	1.26%	4.50%	1.27%	5.00%	1.54%
Solar (%)	0.50%	0.67%	1.50%	0.99%	3.00%	0.92%	4.50%	1.26%
Total (%)	3.00%	1.88%	4.50%	2.25%	7.50%	2.19%	9.50%	2.80%

12. OERC approves ARR and Tariff Application of different Power Utilities of the State for the FY 2019-20:

As per Section 61, 62, 65, 86 of Electricity Act, 2003, National Electricity Policy, 2005, Tariff Policy, 2016 (notified on 28.01.2016) and OERC Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2014, the Annual Electricity Tariff is determined by Odisha Electricity Regulatory Commission (OERC) in respect of generation, transmission and retail supply to the consumers of the state taking into account the operational efficiency & commercial viability of the generators & licensees. The OERC balances the interest of all stake holders, while determining such tariff. The OERC, taking into account the proposal filed by the utilities, advice of the State Advisory Committee, opinion of the State Govt. and conducting a Public Hearing, has passed the Aggregate Revenue Requirement (ARR) and Tariff Order for the FY 2019-20 on 29.03.2019 which will be effective from 1st June, 2019.

13. Tariff Philosophy

- While fixing retail supply tariff for different type of consumers, Commission is mandated to follow the provision of the Electricity Act, 2003, Electricity Tariff Policy notified on 06.01.2006 and National Electricity Policy notified on 12.02.2005. Mainly Section 61, 62, 65 & 86 of the Electricity Act, 2003 deals with principles and guidelines of tariff fixation. The important parameters for tariff fixation are as follows:-
 - The generation, transmission, distribution and supply of electricity should be conducted on commercial principles: Section 61 (b) of Electricity Act, 2003.
 - The factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments: Section 61 (C).
 - Safeguarding the consumers interest and at the same time recovering of the cost of supply electricity in a reasonable manner: Section 61 (d)
 - The principles regarding efficiency in performance: Section 61 (e)
 - The tariff progressively should reflect the cost of supply of electricity and also reduce cross subsidies in the manner specified by the appropriate Commission : Section 61 (g)
 - ❖ The Para 8.3 (2) of the Tariff Policy enjoins upon the State Regulatory Commission to notify road map with a target that

latest by end of the year 2010-11 tariffs are within $\pm 20\%$ of the average cost of supply.

- The National Electricity Policy envisages existence of some amount of cross-subsidy. As per Para-1.1 of National Electricity Policy, 2005, the supply of electricity at reasonable rate to rural India is essential for its overall development. Equally important is availability of reliable and quality power at competitive rates to Indian Industry to make its globally competitive and to enable it to exploit the tremendous potential of employment generation.
 - Similarly, as per para 5.5.2 of the national electricity policy, a minimum level of support may be required to make the electricity affordable for consumers of very poor category. Consumers below poverty line who consume below a specified level, say 30 units per month, may receive special support in terms of Tariff which are cross-subsidized. Tariff for such designated group of consumers will be at least 50% of the “average (overall) cost of supply”.
 - Promotion of Co-generation and generation of electricity from renewable sources of energy: Section 61 (h) Section 86(1)(e) casts responsibilities on the state commission to promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee.

14. Highlights of Tariff for FY 2019-20:-

- The Retail Supply Tariff for 2019-20 remains unaltered. There was no tariff rise from 2001-02 to 2009-10, 2014-15, 2016-17 & 2018-19. The tariff rise during 2010-11, 2011-12, 2012-13, 2013-14, 2015-16 and 2017-18 were 22.20%, 19.74%, 11.84%, 2.40% , 4.64% & 1.44% respectively.
- There is no rise in tariff for Kutir Jyoti (BPL consumers) & agriculture consumer.
- There is no change in Monthly Minimum Fixed Charge (MMFC) and Demand Charge.
- There is no change in meter rent.
- No change in transmission charges during 2019-20, remained same as 25 paise per unit as in 2018-19.
- The Commission has introduced special rebate for the following categories of consumers:
 - The rural LT domestic consumers shall get 5 paise per unit rebate in addition to existing prompt payment rebate who draw their power through correct meter and pay the bill in time.
 - 2% rebate over and above normal rebate shall be allowed on the bill to the LT domestic category of consumers only over and above all the rebates who pay through digital means. This rebate shall be applicable on the current month bill if paid in full.
 - The Educational Institution (Specified Public Purpose) having attached hostel and / or residential colony who draw power through a single meter in HT

shall be eligible to be billed 15% of their energy drawal in HT bulk supply domestic category.

- A Special rebate to the LT single phase consumers in addition to any other rebate he is otherwise eligible for shall be allowed at the end of the financial year (the bill for month of March) if he has paid the bill for all the 12 months of the financial year consistently without fail within due date during the relevant financial year. The amount of rebate shall be equal to the rebate of the month of March for timely payment of bill.

- Power factor incentive above 97% has been retained.
- The Commission has not accepted the proposed ARR of DISCOMS of Rs. 11664.33 Cr. and approved an amount of Rs.10443.87 Cr.
- The Commission has approved the distribution loss of 21.36 % against the proposed distribution loss 23.69% by DISCOMs. Similarly, the Commission has approved AT&C loss of 22.15 % instead of 25.78 % proposed by DISCOMs.
- While rejecting the proposal of DISCOM's proposed AT&C loss, the Commission has approved 22.15% AT&C loss taking into account all efficiency parameters and carrying out the prudent check on the data/information furnished by DISCOMs. The tariff could have been increased manifold, if the loss proposed by DISCOMs have been accepted.
- Cross subsidy has remained within $\pm 20\%$ for all categories (LT/HT/EHT).
- The average cost of supply for DISCOMs has increased from 489.47 Paise/unit in 2018-19 to 499.71 paise/unit in 2019-20.
- The average power purchase price of GRIDCO has slightly increased from 259.34 Paise/unit in 2018-19 to 259.88 Paise/unit in 2019-20 against the Gridco's proposal of 266.15 Paise/unit. The Commission has left a gap of Rs. 172.94 crore in the ARR of GRIDCO which will be bridged by GRIDCO through UI & Trading of power .
- Average BSP of the State has decreased from 276.66 paise/unit in 2018-19 to 270.47 paise/Unit in 2019-20 against the GRIDCO's proposal of 290.39 paise/unit.
- Out of average bulk supply price of 270.47 paise /unit of GRIDCO, CESU is required to pay 261.00 paise/unit, NESCO 298.00 paise/unit, WESCO 304.00 paise/unit and SOUTHCO 186.00 paise/unit. All the distribution companies to pay 25 paise/unit as Transmission cost to OPTCL.
- Section 61(g) Electricity Act, 2003 read with para 8.3.2 of Tariff Policy, 2016 stipulates that the tariff should be within $\pm 20\%$ of the average cost of supply. Hence, average tariff of any consumer should not be more than 599.65 paise and less than 399.78 paise. With this mandate, the Commission has fixed 406.21 paise in case of LT (-18.71% of average cost of supply of 499.71 paise), 579.38 paise for

HT(+15.94% of average cost of supply of 499.71 paise) and 577.21 paise for EHT (+15.51% of average cost of supply of 499.71 paise).

Table – 9
Cross Subsidy Table for FY 2019-20

Year	Level of Voltage	Average cost of supply for the State as a whole (P/U)	Average Tariff P/U	Cross-Subsidy P/U	Percentage of Cross-subsidy above/below of cost of supply	Remarks
1	2	3	4	5= (4) – (3)	6= (5 / 3)	7
2015-16	EHT	488.81	572.03	83.22	17.03%	The tariff for HT and EHT category has been calculated based on average tariff.
	HT		575.59	86.78	17.75%	
	LT		396.53	-92.28	-18.88%	
2016-17	EHT	480.40	572.36	91.96	19.14%	
	HT		575.86	95.46	19.87%	
	LT		393.36	-87.04	-18.12%	
2017-18	EHT	488.26	580.45	92.19	18.88%	
	HT		581.60	93.34	19.12%	
	LT		398.95	-89.31	-18.29%	
2018-19	EHT	489.47	576.88	87.41	17.86%	
	HT		579.18	89.71	18.33%	
	LT		398.72	-90.76	-18.54%	
2019-20	EHT	499.71	577.21	77.49	15.51%	
	HT		579.38	79.67	15.94%	
	LT		406.21	-93.50	-18.71%	

15. Tariff rise during different years

15.1 In the past there was average rise varying from 29% (1993-94) to 10.23% (2000-01) there has been no rise in the average tariff from 2001-02 to 2009-10. There has been rise in tariff by 22.20% for the year 2010-11 after gap of nine years. The average increase in retail tariff for 2011-12, 2012-13 and 2013-14 has been kept 19.74%, 11.84% and 2.40% respective (Revenue to Revenue basis). This may be seen from the table given below.

Table-10

Year	Average Tariff Rise (%)
1993-94	28.58
1994-95	15.73
1995-96	17.47
1996-97	17.00
1997-98	10.33
1998-99	9.30
1999-2000	4.50
2000-01	10.23
2001-02 to 2009-10	0
2010-11	22.20
2011-12	19.74
2012-13	11.84
2013-14	2.40

2014-15	0
2015-16	4.64%
2016-17	0
2017-18	1.44%
2018-19	0
2019-20	0

15.2 The table below explains as to how the average cost of supply and average retail supply tariff is increasing because of increase in the cost of power purchase.

Table-11

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Quantum of Power Purchase by GRIDCO (MU)	25,496	25,776	25,493	26,052	26,804	28,731
Quantum of Power Purchase by DISCOMs (MU)	24,530	24,800	24,540	25,140	25,990	27,840
Quantum of Power Sold by DISCOMs (MU)	19,284	19,505	19,302	19,775	20,448	21,893
Avg Cost of OHPC Including Machakund Power P/U	81.17	80.42	83.54	83.78	87.96	86.10
Avg Cost of Cetral Thermal Power P/U incl PGCIL charge	365.53	357.23	360.09	353.96	370.87	387.29
Avg Power Purchase cost of GRIDCO P/U	227.05	229.97	229.44	246.42	259.34	259.88
Avg. BSP P/U	263.21	284.29	273.14	277.21	276.66	270.47
Break-Up of BSP P/U						
CESU	265.00	285.00	270.00	274.00	274.00	261.00
NESCO	280.00	302.00	297.00	301.00	301.00	298.00
WESCO	286.00	310.00	296.00	301.00	300.00	304.00
SOUTHCO	185.00	200.00	197.00	199.00	197.00	186.00
TOTAL	263.21	284.29	273.14	277.21	276.66	270.47
Avg. Transmission Charge P/U	25.00	25.00	25.00	25.00	25.00	25.00
Avg. RST P/U (Revenue)	449.87	471.54	461.87	469.64	468.64	477.21
EHT	552.64	572.03	572.36	580.45	576.88	577.21
HT	553.15	575.59	575.86	581.60	579.18	579.38
LT	369.63	396.53	393.36	398.95	398.72	406.21
TOTAL	449.87	471.54	461.87	469.64	468.64	477.21
Avg. Cost of Supply P/U	461.07	488.81	480.40	488.26	489.47	499.71

16. Open Access in Odisha:

- OERC had issued OERC (Terms and Conditions for Open Access) Regulations, 2005 on 06.06.2005 for introduction of Open Access to the intra-state transmission and distribution system in Odisha effective from 21.06.2005.
- As per that Regulation, consumers seeking Open Access to the distribution and/or intra-state transmission system can avail supply of electricity exceeding 1 MW from any licensee other than the Distribution Licensee of the respective area of supply w.e.f. 01.04.2008 and from a generating company w.e.f. 01.01.2009.
- There are two types of OA customer i.e. long term and short term. The long term OA customer is one who avails OA for more than 25 years. The short term customer is one who avails OA maximum upto one year.
- Nodal agency for processing and allowing OA application for short term OA is SLDC and for long term is STU or DISCOM as the case may be.

- The Commission has also issued OERC (Determination of Open Access Charges) Regulations, 2006 on 06.06.2006 and made effective from 18.07.2006.
- As per this Regulation transmission charges (payable to STU), wheeling charges and cross-subsidy surcharges (payable to DISCOMs) are being notified by the Commission for OA consumers every financial year w.e.f. FY 2008-09.

(A) Present status of Open Access

- All the STOA applications for inter-State /intra-State Open Access have been processed by SLDC.
- The details of Open Access allowed by SLDC are furnished below:

Table – 12

Year	No. of applications received	No. of approval allowed	No. of applications rejected	Reason of rejection
2014-15	1297	1243	54	Applications not complying with the required provisions
2015-16	1416	1321	95	
2016-17	1645	1496	149	
2017-18	1697	1599	98	
2018-19	1731	1701	30	

- Generally the status of the applications is conveyed to the applicant by SLDC within the stipulated time as per the Regulations.
- There are two nos. of Intra-State long term Open Access consumers such as M/s ICCL and NALCO who have been availing Open Access in State Transmission System since OSEB days.

(B) Surcharge, Wheeling Charge & Transmission Charge for Open access consumer 1MW & above w.e.f. 1st April, 2019

1. In exercise of the powers conferred under Sections 39,40 and 42 of the Electricity Act, 2003 read with the provisions of Chapter II of OERC (Determination of Open Access Charges) Regulations, 2006, the Odisha Electricity Regulatory Commission has passed Common order on 29.03.2019 in Case Nos.78,79,80, & 81 of 2018 with regard to approval of Open Access Charges (Transmission/wheeling Charges, Surcharge and Additional Surcharge applicable to open access customers for use of Intra-state transmission/ distribution system) which shall be effective from 1st April, 2019.
2. The wheeling charge and surcharge as indicated in Table below shall be applicable w.e.f. 01.06.2019.

The Open Access Charges i.e. Cross Subsidy Surcharge, Wheeling and Transmission Charge for Open Access consumer of 1MW and above for FY 2019-20 as determined by the Commission are given in the table below:

Table –13

Name of the licensee	Cross Subsidy Surcharge (P/U)		Wheeling Charge P/U applicable to HT consumers only	Transmission Charges for Short Term Open access Customer (applicable for HT and EHT consumers)
	EHT	HT		
CESU	149.88	94.53	67.97	Rs. 1500/MW/day or Rs.62.5/MWh
NESCO Utility	126.57	57.58	86.41	Rs. 1500/MW/day or Rs.62.5/MWh
WESCO Utility	122.79	71.82	57.28	Rs. 1500/MW/day or Rs.62.5/MWh
SOUTHCO Utility	197.13	135.40	84.62	Rs. 1500/MW/day or Rs.62.5/MWh

3. No additional surcharge has been determined by the Commission to meet the fixed cost of distribution arising out of his obligation to supply as provided under Sub-Section 4 of Section 42 of the Act.
4. The normative transmission loss at EHT (3.00%) and normative wheeling loss for HT level (8%) are applicable for the year 2019-20.
5. Additional Surcharge: No additional surcharge over and above the Cross-subsidy Surcharge needs to be given to the embedded licensee.
6. No Cross Subsidy Surcharge are payable by the consumers availing Renewable power.
7. 20% wheeling charge is payable by the consumer drawing power from Renewable source excluding Co-generation and Bio mass power plant.
8. As per Clause 8.5.1 the cross subsidy surcharge shall not exceed 20% of the tariff applicable to the category of the consumers seeking open access. For the state as a whole, the above cross subsidy surcharge works out to 16.28% in case of HT and 27.46% in case of EHT consumers as against 17.42% for HT and 27.56% for EHT consumers for FY 2018-19.
9. The charges as notified for the FY 2019-20 will remain in force until further order.

17. Initiative by OERC

- Since its establishment OERC in the last 20 years has framed about 27 Regulations for proper Regulatory governance.
- OERC have been issuing tariff orders each year within stipulated time period without fail since its inception.
- OERC has managed to keep electricity tariff competitive in the State without any subsidy.
- There has been no tariff hike from 2001-02 to 2009-10.
- Multi-Year Tariff Principle has been adopted in the State before any other State of the country.

- Promoted renewable energy in the State through RPO way back in 2005-06 much before GoI guideline in 2010.
- Regular monitoring of the performance of licensees.
- OERC has made provisions in the tariff order for introduction of Smart Grid/ SCADA in the State.
- Advised DISCOMs to introduce franchisee.
- Advised State Government to invest in development of electrical infrastructure to improve quality of supply.
- Advised State Government to take effective steps to curb theft of electricity in various ways in different levels by posting a dedicated IPS Officer in the rank of IG/ Additional DG in the West Bengal, Andhra Pradesh model to monitor the working of Energy Police station.

18. Initiative by the State Government

18.1

- The up valuation of asset of GRIDCO by Rs.1194 Crore and OHPC by Rs.766.20 Crore have been kept in abeyance.
- Moratorium on debt servicing by GRIDCO and OHPC from 2001-02 to 2005-06
- Govt. has declared that GRIDCO and OHPC shall not be entitled to any return on equity till the sector become viable on cash basis of 2005-06
- One bank loan was passed on to GRIDCO and DISCOMs as 70% loan @ 13% interest/annum and balance 30% would be treated as grant.
- Tax free bond @8.5% interest would be granted by State Govt. in respect of PFC and REC loan repayment.
- Govt. would had exempted water cess on the volume of water used by OHPC
- The outstanding dues payable to OHPC by GRIDCO till 31.03.2001 on account of power purchase would be securitized through issue of power bond by GRIDCO & OHPC.

18.2 State Govt. is investing substantial amount to improve power supply infrastructure and to provide quality power. Rs.2200.4105 crore has been provided on the budget of FY2019-20 for the above purpose. The detail particulars are given in the Table 14 given below:

Table -14

PROPOSED INVESTMENT IN THE POWER SECTOR DURING 2019-20 TO IMPROVE POWER SUPPLY INFRASTRUCTURE AND IMPROVE QUALITY OF SUPPLY TO THE CONSUMERS

SL.NO.	NAME OF THE SCHEME	PROVISION (Rs. in crore)
1	RAPDRP	0.0001
2	Equity share investment in OPTCL	55.00
3	Underground Cabling	4.00
4	System Strengthening for Elephant corridor	100.00
5	Procurement of equipment, furniture & fixture for STL Building	1.50
6	Energy Conservation	3.00
7	BSVY	10.00
8	Biju Gram Jyoti Yojana	75.00
9	RGGVY	212.50
10	Shifting of transformer located in schools & Anganwadi Centers	10.00

11	Construction of 33/11 KV New Grid Substation	443.00
12	State Capital Region Improvement of Power System (SCRIPS)	330.00
13	Construction of Shakti Bhawan	0.0001
14	Redial Ring Conversion Project	54.95
15	Disaster Response Centre	61.33
16	Disaster Resilient Power System	106.43
17	Infrastructure Assistance to GEDCOL	10.00
S18	Equity infusion to OHPC	49.00
19	Smart Grid	14.70
20	Integrated Power Development Scheme (IPDS)	100.00
21	Dindayal Upadhyaya Grama Jyoti Yojana(DDUGJY)	240.00
22	Equity infusion for OPGC expansion report	0.0001
23	Odisha Transmission System Improvement Project-EAP(JICA)	50.00
24	Power supply to new bank branches in unbanked GPS	0.0001
25	DISCOMs IT infrastructure	20.00
26	IEC Activities (NW)	0.30
27	UMPPBEDABAHAL	89.70
28	AMA GHARE LED Light	10.00
29	Sahaj Bijli Har Ghar Yojana (Saubhagya)	150.00
30	Acquisition of land for GEDCOL	0.0001
	Total	2200.4105

19. Overall Investment in the Power Sector upto 2018-19

1. Investment in power sector upto 2018-19 (Rs. In crore)

	<u>Equity</u>	<u>Loan</u>	<u>Total</u>	<u>Dividend Paid</u>
(I) GRIDCO	576.7114	-	576.7114	Nil
(II) OPTCL	790.01	-	790.01	Nil
(III)OHPC	298.85	522.6190	821.4690	Nil
(IV)OPGC	1822.4974	-	1822.4974	
(Unit-I & II)	929.4737	(State Govt. share 51%	736.16	(State sector 51%)
	893.0237	(AES 49%)	674.92	(AES 49%)
Total	1822.4974		Total	1411.08

OPGC

- Initial State Govt. investment Rs.450 crore which has increased to 929.4737 crore by now.
- PLF factor of OPGC in 2018-19 is 83.86%
- Dividend paid till 2017-18 is Rs.736.16 crore (declared upto 2016-17)

- Expansion of OPGC by addition of Unit 3 & 4 with installed capacity 1320 MW (660X2) is Rs.10165 crore which consists of equity of Rs.2541.00 crore (25% and Debt Rs.7624.00 crore (75%)

Expenditure already incurred	To be incurred	Total (Rs. in crore)
Upto March, 2019		
Equity	2160.52	380.48
Debt	6886.48	737.52
Total	9047.00	1118.00

OPGC Unit I IB Thermal Plant (ITPS) 210 W commissioned on 21.12.1994

OPGC Unit 2 IB Thermal Plant (ITPS) 210 W commissioned on 01.07.1996

Net payment of OPGC after tax payment

Year	Net profit after tax (Rs. in crore)
2012-13	167.43
2013-14	127.57
2014-15	150.57
2015-16	114.83
2016-17	67.92
2017-18	5.72

II. Loans outstanding as on 31.03.2018 (Rs. in crore)

GRIDCO	2196.57
OPTCL	415.00
OHPC	1163.19
OPGC	0.00
TOTAL	3774.76

20. Increase in Power Purchase Cost

- 20.1 After 1999-2000 it is invariably seen that GRIDCO has been purchasing power from different sources at an average cost which is higher than the rate approved by the Commission. As a result, additional burden is being borne by GRIDCO in order to meet the requirement of the consumers of the State. In case of thermal power, cost of coal is a major component and if the price of coal increases, then power purchase cost would be increases. The table below gives a comparative picture of quantum energy, the rate and total power purchase cost approved by the Commission against which the actual quantum of energy purchased, the average rate and the total power purchase costs which are substantially higher.

Table-15
Comparison of power purchase cost of GRIDCO Approved by the Commission in the ARR vs. Actual

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

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.
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	20,956.17	196.94	4,127.03
2010-11	21,003.75	174.58	3,666.85	22,868.95	197.77	4,522.71
2011-12	23,489.18	210.32	4,940.30	22,828.84	228.35	5,213.00
2012-13	24,096.88	236.17	5,691.02	24,084.17	236.66	5,699.88
2013-14	24,058.42	229.01	5,509.51	25,350.10	244.27	6,192.21
2014-15	25,495.71	227.05	5,788.75	25,794.18	222.56	5,740.85
2015-16	25,776.23	229.97	5,927.67	25,037.61	247.16	6,188.32
2016-17	25,492.87	229.44	5,849.16	25,729.54	259.34	6,672.61
2017-18	26,051.63	246.42	6,419.56	26,030.65	262.47	6,832.34
2018-19	26,803.81	259.34	6,951.38	27,446.40	266.61	7,377.50
2019-20	28,731.03	259.88	7,466.64			

20.2 There is a heavy financial liability of GRIDCO which is the bulk power supplier to distribution companies which may be seen in the below:

1. Loans Outstanding as on 31.03.2019 Rs.2196.57 CR.
2. Status of Guarantee availed by GRIDCO from Govt. of Odisha Rs.3820.29 Cr. as on 31.05.2019

Table – 16

A: Towards Bonds with @1% One Time Commission to Government			
Particulars	With @1% One Time		Balance as on 31.05.2019
	Availed	Surrendered/Repaid	
Government Guarantee	1190.350	1062.850	127.500
B:: Towards Term Loan with 0.5% Commission paid annually to Government			
Government Guarantee	7331.00	3638.21	3692.79
Total	8521.35	4701.06	3820.29

3. Losses sustained by GRIDCO Ltd. as on 31.03.2019 Rs.4491.20 Cr.

Particulars	FY 2014-15 (As on 31.03.2015)	FY 2015-16 (As on 31.03.2016)	FY 2016-17 (As on 31.03.2017)	FY 2017-18 (As on 31.03.2018)	FY 2018-19 (As on 31.03.2019) (Provisional)	Cumulative Losses as on 31.03.2019 (Provisional)
Profit/(Loss)	(120.35)	(406.66)	(378.37)	(197.50)	(60.73)	(4491.20)

4. Outstanding dues payable by the DISCOM utilities to GRIDCO Ltd.(as on 31.03.2019) (Provisional)						
Particulars	WESCO Utility	NESCO Utility	SOUTHCO Utility	Sub-Total	CESU	Total
1.Bulk Supply Price(BSP) Bills	1,118.92	833.15	714.13	2,666.20	1,075.92	3,742.12
2.A Securitised Dues	226.69	207.67	227.96	662.32	750.78	1,413.10
2.B. DPS	58.72	87.20	32.02	177.94	526.41	704.35
2. Securitised Dues including DPS	285.41	294.87	259.98	840.26	1,277.19	2,117.45
3.12.50% Power Bond Dues(Rs.400 Cr.)	-	48.91	146.45	195.36	-	195.36
4.Deferred Credit	-	-	-	-	174.00	174.00
5. Other Dues including Transfer Scheme Receivables	12.10	6.74	29.91	48.75	118.85	167.60
Total(1+2+3+4+5)	1,416.43	1,183.67	1,150.47	3,750.57	2,645.96	6,396.53

21. The damages caused by the sever cyclonic storm "FANI" causing disaster power supply infrastructure

21.1 The Extremely Severe Cyclone "FANI" hit Odisha coast on 03.05.2019 and made landfall near Puri with an estimated wind speed of more than 200 kilometers per hour. Extreme wind gusts coupled with maximum storm surges of 1.6 meter height completely ruined the coastal district of Puri and critically affected other districts namely Ganjam, Khurda, Cuttack, Kendrapada, Jagatsinghpur, Jajpur, Bhadrak and Balasore as the system coursed its path northwards. Apart from these 9 districts, Nayagarh, Angul, Dhenkanal, Keonjhar & Mayurbhanj districts are also widely affected. Whirling winds also damaged the electrical infrastructure in Gajapati, Kandhamal & Rayagada districts partially. Electrical infrastructure of the State capital Bhubaneswar and major cities of Puri & Cuttack are totally wiped off.

Around 7.26 lakh electricity consumers are affected only in above 3 cities and in all 17 districts as much 46.27 lakh consumers are affected. The severity witnessed is considered as more than very severe cyclone 'PHAILIN' struck the coast of Ganjam in 2013 and at par with the Super Cyclone in the year 1999 in the context of damage to power supply infrastructure.

21.2 Damage and Restoration Work

Extensive damage occurred to both electrical transmission and distribution infrastructure starting from extra high tension towers, extra high voltage grid stations, high voltage lines & poles, primary sub-stations to low tension poles and lines, which require fresh construction.

As much as 115 nos. 220 K v & 132 KV transmission towers and 250 Kms. transmission lines have been damaged and 31 nos. EI-IV Grids affected due to the cyclone. In distribution sector 26 nos. power transformers, 1,13,034 Kms conductor, 12,042 nos. DTRs and 2,19,405 nos. poles have been damaged. The cyclone has affected 441 nos. 33111 KV Sub-stations, 1898 HT feeders, 66,084 DTRs and power supply to around 46, 27, 883 consumers has been disrupted.

Immediately after the cyclone receded, restoration works were taken up on war-footing basis. Manpower was mobilized from other DISCOMs, Electrical Contractors CPUSs, like NTPC, PGCIL & NALCO, Corporate like Tata power and L & T and other State Power Companies from West Bengal, Andhra Pradesh, Kerala & Kamataka. Aound

6000 nos. workmen engaged for restoration of the distribution infrastructure and around 800 nos. workmen engaged in reviving the transmission infrastructure.

Restoration works particularly in Puri districts under CESU was expedited in war footing basis by engaging technically gangs from different States, existing man power from OPTCL, different DISCOMs (SOUTHCO, NESCO, WESCO) and action was taken for restoration of power supply to consumers as well as other categories of consumers. Immediate steps were taken restore power supply to Lord Jagannath Temple including Badadanda and its peripheral areas.

21.3 Physical and Financial Damage of Electrical Infrastructure and Rs.1159.77 Crore required to restore the same.

Due to the effect of cyclone, heavy wind & rain, the HT & EHT lines have been damaged, poles are uprooted, stay wires & stay sets we damaged. Power Transformer, Distribution Transformer including Sub-station auxiliary equipment become inoperative. The power cable, cable tray, general con~ of switchyards, boundary walls, control room buildings, earth pits etc. have also been damaged. Extensive damage has occurred to energy transmission & distribution infrastructure like EHT towers & lines, power transformers, HT (33 & 11 KV) conductors, electric poles and other associated equipment during the cyclonic storm.

Utility wise requirement of funds for Repair & Restoration works at DISCOMs (CESU, NESCO, SOUTHCO) and OPTCL are furnished below:-

Table - 17

Sl. No.	Utilities/DISCOMs	Funds Required (Rs. in crore)
1.	OPTCL	91.00
2.	CESU	924.23
3.	NESCO	109.42
4.	SOUTHCO	35.12
TOTAL		1159.77

The above requirement by different organizations have given their requirement for damages in details which is taken care of for formulating the requirement of funds for restoration of power supply in the existing system.

22. Tackling of theft of electricity is crucial for ensuring quality of supply:

Consumers are the central point in the chain of electricity distribution. Their active participation, co-operation and help are crucial to the successful operation of electricity supply. While their grievances are to be solved promptly they must be apprised of need to conserve energy and economic use of electricity. They may be convinced that theft of electricity in their neighbourhood is actually affecting quality service to them only. Unless theft of Electricity at various levels and in different ways are effectively tackled in a time bound manner, no amount of investment for improvement of electrical infrastructure will ensure quality of service to the consumers for which State Government, GRIDCO, DISCOMs and OERC are to work as a team to eradicate the menace of rampant theft of electricity in the State. This is to be tackled both technologically and administratively.
