

# PRIVATIZATION OF CESU AS A SUSTAINABLE TOOL FOR REDUCING AT&C LOSS

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## ABSTRACT

*The study focuses and enlighten the management to explore advantages of the privatization of power sector erstwhile central electricity supply utility of orissa .The Distribution sector is the most challenging and worst performer in the present context.The utility witnessed AT&C Loss 30.49%,Distribution Loss 28.15% as per FY 2018-19 .Due to absence of Tariff revision of consumer tariffs followed by rise in power purchase cost, Establishment cost, Employee Cost due to implementation of 7<sup>th</sup> pay revision coupled with inadequate reduction of AT&C losses has serious financial implication on the sustainability and viability of utility in the future investment and capacity addition front.It is imperative to restore the financial position healthy,minimizing Transmission Distribution loss,cash flow maintenance, operation ,reliability powersupply ,upgrading Distribution network.uninterrupted supply to regulated consumers,improved customer satisfaction.The objective is to ensure zero power cut,Reduced Transmission and Distribution losses,affordable tariff consistent with electricity Act.This will enable consumer protection, significant improvement in voltage supply and consumer interface. .The Utility is committed to ensure capital Investment for improving operational efficiency by augmenting transformer capacity network,added value addition by eliminating power theft,poor maintenance,Replacement of old age conductor,installation of smart meter, prepaid meter,modern transmission system..Both primary and secondary data interview,questionnaire has been collected and indepth analysis done to contribute how the Operation will efficiently make the utility commercially viable and will be growth engine for both industrial and agricultural sector of the state.This article will provide new dimension and academic support to make the power utility vibrant,efficient,and bring down the AT&C loss to 15% FY 2028.*

**Key Words-**AT&C Loss,T&D Loss,L.T H.T,PPP,Utility,Turnaround ,SPV.Distribution Franchisee,

## I. INTRODUCTION

The power sector is the growth engine for sustained growth and diversified form undergoing a significant change that has redefined, the industry outlook and global perspective. The electricity Act 2003 was enacted to consolidate acts governing generation, transmission, distribution, trading and metering. The new act aim at development of power sector by promoting competition and bringing in transparency for opening avenues for participation of private sector entrepreneurs. The utility adopted various strategies to reduce. Overall AT&C loss. Basing upon past performance and accumulation of arrear 25,194.87 Lakhs up to FY2011-12 and taking into account of negative networth ,and requirements of fund to meet addition and up gradation of infrastructure like construction of new lines and Sub-stations,less realization of revenue from sale of power with due approval of Regulator (Orissa Electricity Regulatory commission) after deliberations with potential franchisee a unique model has been developed in 14 divisions where loss level is very high as present revenue realization per unit(RPU) is less than Bulk supply Price (BSP).This is called input based franchisee with incremental Revenue sharing(IBF-IRS).The franchisee will carry all out operational commercial activities with new technology for metering and bring down AT&C loss to 15% within 60 months..The revenue realization is only 1.57 against power purchase cost 2.11 besides Administrative maintenance and operational cost which make the utility financial bankruptcy., Restructuring electricity industry for rationalization of generation, transmission, distribution and supply of electricity,

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Development of industry in an efficient, economic and competitive manner, Provide avenue for participation in the industry by private entrepreneurs, attract private investment, . The system witness heavy AT & C Loss at LT level. In exercise power u/s 19 of the Electricity Act 2003 license of CESCO revoked. A new scheme was formulated under section 22 of the electricity act 2003 called Central Electricity Supply Utility of Orissa(CESU) .. The utility adopted engagement of Franchisee operation in fourteen division as outlined.

### **DISTRIBUTION OF FRANCHISEE (DF) OPERATION IN CESU**

Engagement of Input Based Franchisees is one of the AT & C Loss reduction Strategies adopted by CESU, since Financial Year 2012-2013. Four Numbers of Input Based Franchisees on Incremental Revenue Sharing (IBF-IRS) Model have been engaged in Fourteen (14) Divisions of CESU Covering 12,85,669 LT Consumers out its Total LT Consumer Base of 16,69,716 (76.99%) at the time of Franchisee Engagement (2012-2013). M/s Enzen Global Solutions Private Limited (M/s ENZEN), M/s Feedback Electricity Distribution Company Private Limited (M/s FEDCO), M/s Riverside Utilities Private Limited (M/s RUPL) and M/s Seaside Utilities Private Limited (M/s SUPL) have been engaged in the Fourteen (14) Divisions of CESU out of its Twenty (20) Division to bring down AT & C Losses to a level of 15% within a Period of 5 Years (Starts from April 2014 to March 2019). All the Four Franchisee and their respective Electrical Divisions are tabulated below.

#### **FRANCHISEE OPERATION UNDER CESU (w.e.f 2013 to 2020)**

Sl.	Name of Franchisee	Name of Electrical Division	Date of Starting Operation	No. of LT Consumers (As on 01.04.13)	No. of LT Consumers (As on 31.03.2019)	Franchisee Engagement Status
1	M/S FEDCO (M/S Feedback Electricity Distribution Company Private Limited)	KED, Khurda	01.02.2013	109086	176327	Initially CESU has engaged Franchisee (M/s FEDCO) for 4 Electrical Divisions from April 2013 to 31 <sup>st</sup> March 2019 and then engagement was extended up to 31 <sup>st</sup> March 2020
		BAED, Balugaon	01.02.2013	72268	106788	
		PED, Puri	01.02.2013	107908	171368	
		NAED. Nayagarh	01.04.2013	145542	200838	
2	M/S SUPL (M/S Seaside Utilities Private Limited)	NED. Nimapada	01.02.2013	109442	172566	Initially CESU has engaged Franchisee (M/s SUPL) for 1 Electrical Divisions from April 2013 to 31 <sup>st</sup> March 2019 & thereafter no further Extension was given. Nimapada Electrical Divisions was taken back under CESU control.
3	M/S RUPL (M/S Riverside Utilities Private Limited)	CED, Cuttack	01.02.2013	82243	148454	Initially CESU has engaged Franchisee (M/s RUPL) for 3 Electrical Divisions from April 2013 to 31 <sup>st</sup> March 2019 & thereafter no further Extension was given. Respective Electrical Divisions was taken back under CESU control.
		AED, Athagarh	01.02.2013	69030	118929	
		SED, Salepur		65470	109606	
4	M/S ENZEN (M/S ENZEN)	DED, Dhenkanal	01.11.2012	106738	177453	Initially CESU has engaged Franchisee (M/s ENZEN) for 6
		ANED, Angul	01.11.2012	86170	141405	

Global Solutions Private Limited)	TED, Chaipal	01.11.2012	82956	134532	Electrical Divisions from April 2013 to 31 <sup>st</sup> March 2019 and then engagement was extended up to 31 <sup>st</sup> March 2020
	KED-I, Kendrapada	01.04.2013	117351	187631	
	KED-II, Kendrapada	01.04.2013	52069	86024	
	JED, Jagatsinghpur	01.05.2013	79396	119663	

The odisha Electricity Regulatory commission (OERC) invited applications for sale of utility of CESU U/S 20(1)(a) of the Act. As per terms of Request for proposal dated 24.11.2017 (the “RFA”) issued by the commission. As per RFP upon completion of sale, the utility of CESU shall vest in a special purpose vehicle (the “SPV”). After evaluation of Bid The Tata power company limited (the TPCL) issued letter of intent. The commission directed GRIDCO to incorporate the SPV to which utility of CESU shall be vested and license of CESU transferred. TPCODL was incorporated on 6.04.20 as wholly owned subsidiary of GRIDCO with an authorized share capital of Rs 1000 crores (one thousand crores) and paid up capital Rs 5 lakhs, TPCODL shall be SPV in which TPCL and GRIDCO shall hold 51% and 49% equity shares after completion of sale. TPCL submitted the performance Guarantee equivalent 51%. Of the purchase price of Rs 350 crore. As per terms of RFA TPCL shall provide AT&C loss level in the third and five year from takeover shall not be higher than 27% and 23.70% respectively. In a major development TaTa power emerged as successful bidder for acquisition of CESU. The TPCODL entered into successful PPP (Public private partnership) in generation, Transmission, Distribution business. The stakeholders expect superior service due to advance technology With implementation of new scheme transfer of distribution system with 24\*7 reliable power and unmatched customer service using existing experience I electricity distribution in Delhi, Mumbai, Ajmer. TP central odisha Distribution Limited serves population 1.36 crores with customer base 26 Lakhs and vast Distribution area of 29.354 sq km benchmark performer in delhi for 17 years where loss brought down from 53% in 2002 to 7.9% in march 2019. Loss reduction, customer experience has been enhanced by providing call centers, customer care by providing reliable power supply. TPCODL aims at upgrading the present distribution infrastructure, adopting new technologies and provide various digital services to our esteem customers. Tata power india's largest integrated power company with a growing international presence. The company together with its subsidiaries and jointly controlled entities installed gross generation capacity of 10,613 MW in presence in all the segments of power sector, fuel security and logistic generation (Thermal, Hydro, solar and wind) Transmission, Distribution and trading. Population served-1.36 crore, Customer base-26 lakhs, Distribution area-29354 sqkm, Total energy (MU)-8783.92, Aggregate Technical & commercial loss-30.49%, 33kv lines-3717 circuit km, 11kv lines-35719 circuit km, Low tension line-53941 circuit k.m, Regular Employee- 4917, Contractual employees-435 (as on 31.5.20). All the staffs shall form part of TPCODL shall not be made inferior to their existing service condition. Distribution operations in the state. privatization is an policy initiative as power is an strategic sector some radical changes and structural restructuring in the sector is required as per the regulatory framework

### IMPORTANCE OF STUDY

The main importance of my study is to evaluate and analyze how the private participation (Application of franchisee model as an aid to micro privatization) will bring about a positive transformation in Central odisha by deploying smart Grid technology to supply reliable quality supply. customer centric approach aims to imparting valuable customer services with smooth and efficient power. The system witness transparency, sustainable growth make the operation competitive and commercially viable. The privatization no doubt will pave way to improve modernize system, improve reliability, reduce AT&C Loss and offer excellent customer service. privatization of the utility aims at to achieve successful turnaround of CESU (the Utility) as an substitute to Government way of functioning.

## II. LITERATURE REVIEW

A plethora of literature on the electricity distribution and transmission (T&D) are available in the energy

research expert. Some authors explained that the cause of the inefficiency and poor governance in the electric sector. Industry and Energy Department, World Bank(1996) focused that the experience of banks for formulation of driving force for power sector reform. expected benefits of proposed reforms.

Martino(1996) Reforms initiated in Brazil study revealed that influence in change allows increase in revenue generation in favour of consumer related power services and growth of utility distribution sector..

The Venkataraman Committee (1964) analyzed and evaluated the working pattern of the State Electricity Boards. It emphasized upon the requirement of improvement in the rate of return, and supported by organisational effectiveness and efficiency of the State Electricity Boards predominant for sectoral growth.

Nil And Lloyd (2013) elaborates that Small island developing States (SIDS) have very extensively rely upon energy based on fossil fuel in the field of transportation and generation of electricity. The economy of these type of islands are thus particularly vulnerable under the influence of peak oil and also to the changes in climate which ultimately hamper the economic development of a particular region in addition to severely affecting the quality of life of localities. There is an urgent requirement of transition towards renewable sources of energy in order to reduce the vulnerability of Small island developing States (SIDS) to peak oil.

Nweze (2013) illustrates that sufficient supply of power is an important requirement for the development of a particular nation. This paper further revealed that generation of electricity, transmission and distribution (T&D) are amongst those intensive activities which require huge amount of funds and huge resources of capacity. This paper further revealed that persistent power failures in Nigeria have resulted into non-regular production of electricity in addition to under utilisation of industry resources and resources in educational institutes.

ElecJain, Garg&Sadaka (2013) analyzed in their study, that operational efficiency is the main factor responsible for the success in the operation of distributing companies in different states.

SohamGhosh (2012) studied that the mindset, of the policy makers who are responsible for ongoing reforms in power sector has rightly been shifted towards the up gradation of the sub-transmission and the distribution system. This paper further studied that ongoing power sectors reforms have been able to improve the efficiency of the organizations dealing in power thereby reducing Aggregate Technical and Commercial losses(AT&C)

Remme, Trudeau, Graczyk and Taylor (2011) illustrates that number of challenges will be faced by the power sectors in India over the next forty years. There is no excess to electricity supply to more than one-third of Indian population. There is an urgent requirement to overcome the problem of energy poverty existing at present in the country. it has also been projected that due to rapid economic growth of the country the electricity demand will certainly increase to 5-6 times from now onwards to 2050. There will be a requirement of huge investments for meeting this increased demand

Rajeev Anantaram (2010) found that power sector in India have touched height and have attained dynamism spirit after the initiation of recent legislation in the shape of electricity acts and amendments in the existing rules & regulations governing electricity. The possibility of a return to autarchy under pressure from household lobbies is equally unlikely as Indian private companies in power sector are also successfully competing with the foreign power companies in all sphere of electricity sector. The issues which have previously been discussed can be daunting but to impart a high degree of transparency and to have a level playing field, the regulatory era is evolving (AT &C) Losses

Malhotra and Negi (2009) research focused specifically on Delhi. Especially its outcomes and conclusions after implementation of privatization in the Power sector in Delhi. The paper further studies the power reforms undertaken by the Government of Delhi analyzing the results of these reforms in the power sector and to check the Delhi

government claims as regards to sufficiency in power by the year 2010. The study also suggests futuristic thoughts regarding next stage of reforms. The study indicates that, if the proposed power plants are commissioned in time and energy efficiency measures .

Tanchuco (2008) elaborates about the possibilities of learning by the Philippines from the experiences of different countries in the field of power sector reforms. This paper further identified the similarities and differences in the power sector reforms which were implemented by different countries by defining a relationship with respect to the Philippines. It further elaborates about the possible short term requirement ed to curb the demand of electricity.

Bhattacharyya (2007) identified that there is hardly any significant contribution of a successful power reform in the South Asian developing countries despite some initiations of power sector reforms implemented in the 1990s. It further revealed that no substantial progress has been achieved by these countries often under the influence of pressure of external lending agencies.

Belt (2006) identified the need for implementation of three types of activities, which includes: (a) establishment of a regulatory agency, establishing the “rules of the game”, and increase in tariffs;(b) to enhance the efficiency and effectiveness of state-owned companies in the field of power sector, implementation of incentive-based management system;(c) unbundling and privatization.

#### **RESEARCH GAP**

- Fewer study has been done factor contributing role model of Privatization success with limited parameter
- Early study has not done justification on privatization of utility in centralodisha context
- In Odisha consumer behavior and mix is different and its impact not measured successfully by any Research scholar

#### **Objectives of study**

The main objectives of the study

- a) To focus on management practices and adoption of Digitalization and New technology of Pre and post Franchisee operation.
- b) To study power distribution system and application of new methods for AT&C Reduction Tool.
- c) To study Revenue sustainability and enhancing viability of the Distribution utility and.comparative study on pre and post Franchisee after adoption ofinput based franchisee with incremental Revenue sharing (IBF-IRS).

Based on objectives present study have following Hypothesis

H<sub>0</sub>There is no significant difference in Revenue Generation and AT&C Loss reduction after Privatization.and operation of franchisee model.

H<sub>1</sub> There is significant difference in Revenue collection followed by substantial reduction in AT&C Loss after adoption of franchisee model.

### **III. Research Methodology**

Instrument development and validation

A survey questionnaire will be designed to study the impact made by the above identified factors on privatization model of operation due to franchisee mode of operation of utility.. The instrument will measure operational factor ,environmental factor, consumer perception ,economic growth, logistic analysis. effective communication, Behavioral approach ,employee motivation, governmental support, technical presentation, engineering economics, competitive advantage, value addition .employee morale, policy directives, . Public private partnership ,s performance will measure to compensate to commercial as well as technical loss will attract long term prospects and service provider as performance measure .

#### IV. DATA ANALYSIS & INTERPRETATION

**YEARWISE LT+HT PERFORMANCE OF CESU AS A WHOLE (Table-1)**

YE R	Input in Million Unit = (IMU)	Billed in Million Unit = (BMU)	Billing in Rupees (Crores) = BR	Collection in Rupees (Crores) = CR	Billed in Efficiency in Percentage (%) = BE = (BMU/IM U) x 100	Collectio n Efficienc y in Percentag e (%) = CE = (CR/BR) x 100	Distributio n Loss in Percentage (%) = DL = (100-BE)	Aggregate Technical & Commerci al Loss in Percentage (%) = AT & C = (1- BE x CE/10000) x 100	Realizatio n Per Unit (RPU) (Rs./Unit) = RPU = (CR/IMU ) x 10
2005- 2006	4184.504 3	2391.580 0	713.0602	631.78826 5	57.153 %	88.602 %	42.847 %	49.361 %	1.509
2006- 2007	4623.650 0	2611.390 0	782.5935	723.8092	56.478 %	92.488 %	43.522 %	47.756 %	1.565
2007- 2008	5203.600	3045.110	917.0649	846.6585	58.519 %	92.322 %	41.481 %	45.974 %	1.627
2008- 2009	5672.600 0	3384.300 0	1027.4578	943.2672	59.660 %	91.805 %	40.340 %	45.229 %	1.662
2009- 2010	6232.671 0	3775.130 0	1138.4443	1105.2604	60.570 %	97.085 %	39.430 %	41.195 %	1.773
2010- 2011	7069.343 0	4361.450 0	1648.9911	1537.2833	61.695 %	93.225 %	38.305 %	42.484 %	2.174
2011- 2012	5923.277	3160.47	1258.5188	1220.5029	53.356 %	96.963 %	46.644 %	48.264 %	2.060
2012- 2013	6134.698	3395.772	1686.6173	1519.4753	55.353 %	90.090 %	44.647 %	50.132 %	2.476
2013- 2014	6354.913	3593.65	1806.3558	1724.9585	56.549 %	95.493 %	43.451 %	45.999 %	2.714
2014- 2015	6705.030	3916.520	1912.3577	1727.2153	58.411 %	90.318 %	41.589 %	47.244 %	2.575
2015- 2016	7137.020 0	4340.890	2193.6482	2012.5748	60.822 %	91.745 %	39.178 %	44.198 %	4.636
2016- 2017	7164.710	4557.82	2297.0565	2180.9486	63.614 %	94.945 %	36.386 %	39.601 %	3.044
2017- 2018	7463.520	4778.32	2441.6325	2329.8163	64.022 %	95.420 %	35.978 %	38.910 %	3.121
2018- 2019	7539.033	5047.161 0	2593.5672	2481.1519	66.947 %	95.665 %	33.053 %	35.955 %	3.291
2019- 2020	7121.835 7	5232.92	2715.3930 7	2383.8824	73.477 %	87.791 %	26.523 %	35.493 %	3.347

Division wise performance prior to Franchisee operation below.(Table-2)

**DIVISIONAL BASE YEARWISE LT+HT PERFORMANCE OF CESU AS ON 2011-12(Prior to Franchisee operation)**

DIVISION NAME	Input in Million Unit = (IMU)	Billed in Million Unit = (BMU)	Billing in Rupees (lakhs) = BR	Collection in Rupees (Lakhs) = CR	Billed in Efficiency in Percentage (%) = BE = (BMU/IMU) x 100	Collection Efficiency in Percentage (%) = CE = (CR/BR) x 100	Distribution Loss in Percentage (%) = DL = (100-BE)	Aggregate Technical & Commercial Loss in Percentage (%) = AT & C = (1-BE x CE/10000) x 100	Realization Per Unit (RPU) (Rs./Unit) = RPU = (CR/IMU) x 10
AED ANUGUL	258.80	93.60	3592.12	3172.49	36.18 %	88.32 %	63.82 %	68.05 %	1.23
DED DENKANAL	480.80	226.60	9144.05	7935.19	47.12%	86.78%	52.88 %	59.11 %	1.65
TED CHAIPAL	337.90	128.10	5463.70	4920.81	37.91%	90.06 %	62.09 %	65.86 %	1.46
SED SALIPUR	155.90	59.20	1773.87	1290.94	37.99 %	72.78 %	62.01 %	72.35 %	0.83
CED CUTTACK	368.30	164.60	6805.23	5933.73	44.69 %	87.19 %	55.31 %	61.03 %	1.610
AED ATHAGAR	245.10	84.06	2972.95	2461.14	34.30 %	82.78 %	65.70 %	71.61 %	1.00
NED NIMAPARA	299.00	106.10	3291.66	2578.56	35.49 %	78.34 %	64.51 %	72.20 %	0.86
KED KENDRAPAR A-1	236.50	108.80	3545.00	3045.85	45.98 %	85.92 %	54.02 %	60.50%	1.29
KED KENDRAPAR A-11	91.0	33.6	1047.24	938.38	36.96%	89.61 %	63.04 %	66.88%	1.03
JED JAGATSINGPUR	181.00	75.60	2378.63	1759.08	41.74 %	73.95 %	58.26%	69.13 %	0.97
KED KHURDA	430.00	250.00	11073.60	9855.42	58.28 %	89.00 %	41.72 %	48.13 %	2.29
NAED NAYAGARH	203.50	110.90	3808.06	2871.82	54.50%	75.41%	45.50%	58.78%	1.41
PED PURI	345.50	153.30	5989.00	4730.18	45.22 %	70.08 %	54.78 %	64.24 %	1.37
BAED BALUGAON	175.20	80.50	2616.43	2302.02	45.94 %	87.95 %	54.06 %	59.58 %	1.31

Collection Efficiency after Franchisee operation.(Table -3)

**FRANCHISEE COLLECTION EFFICIENCY OF ELECTRICAL DIVISIONS (LT+HT)**

FRANCHISE E	FRANCHISED DIVISION	COLLECTION EFFICIENCY IN PERCENTAGE (%) = CE = COLLECTION IN RUPPEES (CR) / BILLING IN RUPEES (BR) X 100						Increase(%)
		2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2011-12	
FEDCO	PED, PURI	89.550	87.696	93.791	98.347	93.1566	70.08	23.07

	<b>KED, KHURDA</b>	92.982	91.997	186.962	99.056	99.637	89.00	10.63
	<b>NED, NAYAGARH</b>	88.812	90.628	94.657	97.418	96.307	75.41	20.89
	<b>BAED, BALUGAON</b>	88.237	82.777	89.323	94.557	93.018	87.95	5.06
<b>SUPL/RUPL</b>	<b>CED, CUTTACK</b>	77.881	87.180	90.474	82.527	83.352	87.19	(-)3.84
	<b>AED, ATHAGARH</b>	68.826	73.121	80.413	75.840	76.150	82.78	(-)6.63
	<b>SED, SALEPUR</b>	48.043	69.489	73.353	66.867	54.983	72.78	(-17.8)
	<b>NED, NIMAPADA</b>	62.880	76.128	81.441	75.543	76.222	78.34	(-2.12)
<b>ENZEN -DKL</b>	<b>DED, DHENKANAL</b>	83.274	88.336	93.476	97.180	98.569	86.78	11.78
	<b>ANED, ANGUL</b>	86.608	84.356	87.298	89.357	94.719	88.32	6.39
	<b>TED, CHAINPAL</b>	80.047	79.783	86.663	86.069	90.323	90.06	0.26
<b>ENZEN -PDP</b>	<b>KED-I, KENDRAPARA I</b>	88.370	90.571	96.240	97.281	97.276	85.92	11.35
	<b>KED-II, KENDRAPARA II</b>	92.529	90.012	95.7531	96.359	93.973	89.61	4.36
	<b>JED, JAGATSINGHPUR</b>	81.372	83.977	90.224	86.131	96.439	73.95	22.48

Billing efficiency after Franchisee operation(Table-4)

**FRANCHISEE BILLING EFFICIENCY OF ELECTRICAL DIVISIONS (LT-HT) Comparative view**

FRANCHISEE	FRANCHISED DIVISION	BILLING EFFICIENCY IN PERCENTAGE (%) = BE = BILLED IN MILLION UNIT (BMU) / INPUT IN MILLION UNIT (IMU) X 100								
		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	11-12(Base year)	increase
<b>FEDCO</b>	<b>PED, PURI</b>	45.562 %	50.075 %	54.752 %	56.865 %	61.725 %	58.957 %	63.824 %	45.22 %	18.604
	<b>KED, KHURDA</b>	58.192 %	72.785 %	63.484%	68.927 %	71.101 %	70.148 %	73.768 %	58.28 %	15.488
	<b>NED, NAYAGARH</b>	58.980 %	64.095%	66.177 %	69.399 %	72.611 %	70.745 %	77.662 %	54.50%	23.162
	<b>BAED, BALUGAON</b>	46.112 %	72.306 %	58.096 %	65.873 %	68.231 %	65.148 %	67.637 %	45.94 %	21.69
<b>SUPL/RUPL</b>	<b>CED, CUTTACK</b>	42.865 %	58.020 %	44.695 %	46.566 %	48.834%	53.708 %	54.862 %	44.69 %	10.172
	<b>AED,</b>	39.617 %	103.933 %	32.775 %	34.348 %	37.510	40.920 %	42.765 %	34.30 %	<b>8.465</b>



	<b>ATHAGARH</b>					%				
	<b>SED, SALEPUR</b>	39.026 %	43.192 %	46.400 %	43.018 %	46.519 %	46.500 %	51.285 %	37.99 %	<b>13.295</b>
	<b>NED, NIMAPADA</b>	31.359 %	35.596 %	35.596 %	34.873 %	37.473 %	40.765 %	43.628%	35.49 %	8.138
<b>ENZEN - DKL</b>	<b>DED, DHENKANAL</b>	45.364 %	45.123 %	46.268 %	49.308 %	50.819 %	51.149 %	52.400 %	47.12%	5.28
	<b>ANED, ANGUL</b>	39.780 %	37.819 %	39.621 %	42.997 %	46.149 %	48.736 %	50.526 %	36.18 %	14.346
	<b>TED, CHAINPAL</b>	38.147 %	27.988 %	39.927 %	42.187 %	43.155 %	43.689 %	46.885 %	37.91%	8.975
<b>ENZEN - PDP</b>	<b>KED-I, KENDRAPARA I</b>	48.501 %	48.926 %	52.745 %	52.562 %	56.328 %	59.394 %	62.157 %	45.98 %	16.177
	<b>KED-II, KENDRAPARA II</b>	41.416 %	39.997 %	45.291 %	47.535 %	50.033 %	52.093 %	56.3793 %	36.96%	19.41
	<b>JED, JAGATSINGH PUR</b>	46.377 %	49.901 %	55.003 %	56.551 %	56.502 %	54.997 %	58.188 %	41.74 %	16.44

## V. CONCLUSION

From the above analysis we conclude that billing efficiency improved in all post franchisee operation as compared to base line parameter as outlined in Table(4) followed by increase in collection efficiency as per (Table-3), except four division which shows negative collection trend because of non acceptability by the consumers and poor strategic plan and lack of field experience and rejected by the utility. The realization per unit also gone up we conclude the Billing and Rupees significantly improved in post franchisee operation. No doubt privatization is an initiative to make the utility commercially viable and turnaround. The operation of Distribution Franchisee prior to privatization was also in ppp mode and micro privatization has reduced AT&C loss and increased RPU .At present TPCODL has embarked upon journey of excellence to provide value added service to all its stake holders including affordable tariff, quality service work for vigorous improvement in customer service and focused on reduction of AT&C Loss and make the operation ,Erstwhile (CESU) self sustainable after complete privatization .moreover the study focuses on Post franchisee effectively reduced AT&C Loss because of improvement in billing and collection efficiency and revenue sustainable.

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