PUBLIC UTILITIES COMMISSION OF SRI LANKA

Decision on Revenue Caps and Bulk Supply Tariffs

2016-2020

17 February 2016

This decision document issued as a result of the tariff review for the period 2016-2020, sets out the allowed revenue caps for Transmission and Distribution Licensees for that period and the Bulk Supply Tariffs for the period 1st January 2016 to 31st March 2016.

Introduction

In exercising the powers and functions vested with the Public Utilities Commission of Sri Lanka ("the Commission") under section 3(d) of the Sri Lanka Electricity Act No 20 of 2009 (the "Act") "to regulate tariffs and other charges levied by licensees and other electricity undertakings, in order to ensure that the most economical and efficient service possible is provided to consumers", and, in accordance with Section 30(2)(a) of the Act, the Commission, has approved a cost-reflective Methodology for Tariffs ("the Methodology") and subsequently issued the Methodology to the Transmission Licensee (TL) and to each Distribution Licensee (DLs). The Methodology is available as a separate document¹.

Each DL and TL submitted their revenue requirements for the period 2016-2020 on 28th August 2015. The Commission has reviewed the revenue requirements filed by each licensee, requested clarifications as appropriate, made revisions required to adhere to the Methodology and has made a number of adjustments to the filed revenue requirements in determining the allowed revenue caps of each licensee.

In consideration of Section 30(3)(b) of the Act, in which for the purpose of allowing consumers and other interested parties to participate in setting the tariffs in accordance with the cost-reflective methodology approved by the Commission, the Commission published a "Consultation Paper on Setting Revenue Caps for the Period 2016-2020" (Consultation Paper) dated 13th January 2016, inviting public comments on the contents therein, that concluded on 12th February 2016.

Therefore, giving due consideration to the contents in the Report of the Public Consultation, and exercising power of the Commission to set tariffs under the provisions in section 30 of the Act, the determination of the Commission is hereby published in this decision document for compliance by the licensees and for the information of the public.

¹ available upon request to the Commission or it may be downloaded from www.pucsl.gov.lk

LIST OF ABBREVIATIONS

BSOB Bulk Supply and Operations Business

BST Bulk Supply Tariffs
CAPEX Capital Expenditure
CEB Ceylon Electricity Board

DL Distribution Licensee: Ceylon Electricity Board and Lanka

Electricity Company (Pvt) Ltd

DL1 Distribution and Supply Licensee for CEB Distribution Region

1 holding license number EL/D/09-003

DL2 Distribution and Supply Licensee for CEB Distribution Region

2 holding license number EL/D/09-004

DL3

Distribution and Supply Licensee for CEB Distribution Region

3 holding license number EL/D/09-005

DL4 Distribution and Supply Licensee for CEB Distribution Region

4 holding license number EL/D/09-006

DL5 Distribution and Supply Licensee LECO holding license

number EL/D/09-052

CEB GL CEB Generation Licensee holding License number EL/GB/09-

001

GWh Gigawatt hour kVA kilovolt ampere

kW kilowatt kWh kilowatt hour

LECO Lanka Electricity Company (Pvt) Ltd.

LKR Sri Lanka Rupee
LV Low Voltage
MV Medium Voltage
MWh Megawatt hour

NCRE Non-Conventional Renewable Energy

O & M Operations & Maintenance
OPEX Operating Expenditure
PPA Power Purchase Agreement
Single Buyer A function of the BSOB
SPPs Small Power Producers

T&D Transmission and Distribution

TL Transmission and Bulk Supply Licensee holding License

number EL/T/09-002

TOU Time of Use

VAT Value Added Tax

WIP Work-in-Progress

1 Sales Forecast

Approved sales forecasts for each Distribution Licensee (DL) for year 2016 are shown in Table 1. Customer numbers forecast for year 2016 are shown in Table 2.

Table 1: Sales forecasts filed by the Distribution Licensees for year 2016

	Forec	ast sales	s to end-	use cust	omers (GWh)	Foreca	st mont	hly maxi	mum de	mand ((MVA)
Customer category	DL1	DL2	DL3	DL4	DL5	Total	DL1	DL2	DL3	DL4	DL5	Total
LV RETAIL												
Households	1,120	1,210	774	686	547	4,337	ı	-	-	-	1	-
Religious	25	20	10	10	9	74	ı	-	=	-	ı	-
General Purpose	497	360	210	207	258	1,532	-	-	-	-	-	-
Industrial	106	82	55	39	24	306	-	-	-	-	-	-
Hotel	1	1	4	0	-	6	-	-	-	-	-	-
Government	3	-	1	3	1	5	-	-	-	-	-	-
Street Lighting allowance	49	36	12	19	26	142	=	-	-	-	-	-
Total LV	1,801	1,709	1,067	964	865	6,402	-	-	-	-	•	-
LV BULK												
General Purpose 2	496	145	97	86	179	1,003	195	44	41	34	61	375
Industrial 2	304	753	538	343	189	2,127	127	206	159	130	66	688
Hotel 2	30	86	5	47	46	214	8	12	2	13	12	47
Government 2	37	44	15	24	16	136	18	11	5	7	8	49
Total LV bulk	866	1,028	656	500	430	3,480	348	274	207	185	147	1,161
MV Bulk												
General Purpose 3	175	104	20	9	4	312	49	18	7	4	0	78
Industrial 3	351	851	318	128	31	1679	99	196	64	34	11	404
Hotel 3	64	36	-	5	2	7	12	0	-	1	0	13
Government 3	2	-	-	_	-	2	0	-	-	-	-	0
Total MV	591	991	338	142	37	2099	160	215	71	38	11	495
Total sales	3,258	3,728	2,061	1,606	1,332	11,985	508	489	278	223	158	1,656

Table 2: Customer numbers forecast for year 2016

		Customer number								
Customer category	DL1	DL2	DL3	DL4	DL5	Total				
LV RETAIL										
Households	1,433,353	1,743,669	1,075,541	882,968	457,179	5,592,710				
Religious	12,502	11,868	6,508	4,909	2,578	38,365				
General Purpose	191,687	215,037	108,978	91,937	75,012	682,651				
Industrial	28,107	12,934	7,952	5,403	2,302	56,698				
Hotel	85	98	2,589	28	-	2,800				
Government	1,502	-	43	1,360	249	1,652				
Street Lighting	-	-	-	-	-	-				
Total LV	1,667,235	1,983,606	1,201,611	986,605	537,320	6,376,377				

LV BULK						
General Purpose 2	2,258	973	544	464	1126	5,365
Industrial 2	1,206	1,596	1,060	827	459	5,148
Hotel 2	55	102	13	109	46	325
Government 2	126	121	61	55	42	405
Total LV bulk	3,646	2,792	1,678	1,455	1,673	11,244
MV Bulk						
General Purpose 3	63	28	21	8	3	123
Industrial 3	48	124	38	19	1	230
Hotel 3	7	1	-	1	1	2
Government 3	1	-	-	-	-	1
Total MV	119	153	59	28	5	364
Total for each DL	1,671,000	1,986,551	1,203,348	988,088	538,998	6,387,985

Table 3: Total sales forecast for 2016 - 2020

	Forecas	st sales to	end-use c	ustomers (Forecast total consumer accounts ('000)					
Distribution Licensee	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
DL1	3,258	3,581	3,899	4,237	4,595	1,671	1,738	1,795	1,850	1,910
DL2	3,728	3,911	4,102	4,296	4,501	1,987	2,021	2,048	2,069	2,091
DL3	2,061	2,214	2,392	2,587	2,799	1,203	1,253	1,303	1,353	1,403
DL4	1,606	1,710	1,834	1,970	2,121	988	1,016	1,043	1,070	1,098
DL5	1,332	1,364	1,396	1,427	1,459	543	555	566	577	588
Total	11,985	12,780	13,623	14,517	15,475	6,392	6,583	6,755	6,919	7,090

2 Allowed CAPEX for the Tariff Review Period

Investment/ CAPEX programs approved for the period 2015-2016 for each Licensee is shown in the tales below. The network related CAPEX programs are approved as per the Medium Term Development Plans of each Licensee.

Table 4: CAPEX Forecast (Distribution Licensee 1)

CAPEX Forecast-Distribution Licens	ee 1 (LKR Mi	llion)				
	2015	2016	2017	2018	2019	2020
LV Distribution system augmentation	718	1,095	1,224	1,273	1,300	1,328
LV ABC Conversion	802	2,500	3,000	3,500	4,000	4,500
Medium voltage distribution network reinforcement [including augmentation of PSS & MV lines]	800	1,000	1,500	1,500	2,000	2,500
Medium voltage substation augmentation		400	500	600	700	800
Loss Reduction	300	300	300	300	300	300
Augmentation of Primaries	-	ı	ı	ı	-	=
Computerization and IT installation	-	-	-	-	-	-

Land	120	50	50	40	42	45
New Buildings	600	453	560	635	264	247
Motor Vehicles	461	296	248	262	267	319
Office equipment	99	111	117	133	133	193
Furniture and Fittings	20	32	37	38	44	74
Machinery and Tools	124	100	102	104	113	121
Project -RE 04	1,200	-	-	-	-	-
Project RE-08	750	200	-	-	-	-
Project Uthuru Wasanthaya	880	700	300	-	-	-
Project-Colombo city (Package-D) SCADA System	670	-	-	-	-	-
Project -Wayamba Pubuduwa	1,000	300	100	-	-	-
Project-RHCP	16	-	1	-	ı	-
Other Capital Expenditure	100	100	50	50	50	50
Sub Total	8,660	7,637	8,088	8,436	9,213	10,477
Customer Contribution for new Connection	ı	1	1	1	1	1
Third party Job (a).Bulk supply /Cost paid jobs	1,080	1,211	1,280	1,106	1,131	1,147
(b).Service connection	2,379	2,613	2,792	2,955	3,028	3,162
(c).DCB,PCB RE jobs	197	37	44	50	52	55
(d).Others	433	263	228	254	279	296
Sub Total	4,090	4,123	4,344	4,364	4,490	4,660
Total	12,750	11,760	12,432	12,801	13,703	15,137
HQ Assets	618	490	531	327	221	381
TOTAL	13,368	12,250	12,963	13,128	13,924	15,518

Table 5: CAPEX Forecast (Distribution Licensee 2)

CAPEX Forecast-Distribution L	icensee 2 (LKR Million)				
	2015	2016	2017	2018	2019	2020
LV Development Plan(System Augmentation)	1,725	2,497	2,502	2,507	2,512	2,517
MV Development Plan	1,996	2,487	3,661	933	343	1,144
LV ABC Conversion	-	2,112	2,131	2,077	2,062	2,048
Augmentation of Primary Substations (Included in MV Plan)	-	1	ı	ı	-	-
Loss Reduction	125	485	497	505	512	517
Additions from WIP	4,144	1,036	-	-	-	-
Sub Total	7,990	8,616	8,790	6,022	5,429	6,226
Other CAPEX						
IT Equipment	5	12	13	9	10	10
Land	217	235	172	200	227	178
Buildings	676	582	526	343	271	376
Motor vehicles	512	498	474	564	486	463
Office equipment	62	39	40	44	44	44
Furniture and fittings	42	28	24	26	27	27
Machinery and tools	70	72	28	38	34	104

E-shops, SCADA System & GIS	60	30	40	25	20	10
H/Q	398	749	745	270	128	191
Sub Total	2,042	2,245	2,061	1,519	1,246	1,403
Customer contribution for new connections						
Bulk Supply	671	579	530	585	575	615
Service connection	2,036	826	587	460	359	373
Sub Total	2,707	1,405	1,117	1,045	934	988
TOTAL	12,739	12,266	11,968	8,586	7,609	8,617

Table 6: CAPEX Forecast (Distribution Licensee 3)

CAPEX Forecast-Distribution Li	censee 3 (LKR N	dillion)				
	2015	2016	2017	2018	2019	2020
Network CPEX						
LV Development Plan(System Augmentation)		2,339	1,973	1,761	1,879	1,790
MV Development Plan		1,071	1,563	892	1,121	827
LV ABC Conversion	2,828	685	455	381	211	138
Augmentation of Primary Substations						
Loss Reduction						
Sub Total	2,828	4,095	3,991	3,034	3,211	2,755
Other CAPEX						
Buildings	140	182	138	68	46	38
Lands	39	77	60	-	20	_
Motor Vehicles	292	309	219	278	116	249
E-shops & Carder System	-	-	-	-	-	-
Office Equipment	62	36	6	5	10	11
Other, Fun. M&T	159	102	102	125	129	158
Sub Total	692	706	525	476	321	456
Customer Contribution						
Bulk supply	201	150	148	148	148	148
Service connections	937	1,026	1,032	1,041	1,029	1,029
DCB RE	4	4	4	4	4	4
CAPEX requirement for 63kva,75kva,95 kva	278	348	289	299	276	286
Sub Total	1,420	1,528	1,473	1,492	1,457	1,467
Total	4,940	6,329	5,989	5,002	4,989	4,678
HQ	293	260	287	133	88	115
TOTAL	5,233	6,589	6,276	5,135	5,077	4,793

Table 7: CAPEX Forecast (Distribution Licensee 4)

CAPEX Forecast-Distribution Lie	ensee 4 (LKR	Million)				
	2015	2016	2017	2018	2019	2020
Network CPEX						
LV Development Plan(System Augmentation)	1,169	790	806	846	890	939
MV Development Plan	1,728	1,353	832	23	50	265
LV ABC Conversion	-	612	695	738	784	836
Augmentation of Primary Substations	18	-	-	-	47	-
Loss Reduction	-	17	16	16	16	16
Projects	450	158	138	129	101	69

WIP 2014	3,068	767	-	-	-	-
SUB TOTAL	6,433	3,697	2,486	1,751	1,888	2,125
Other CAPEX						
Buildings	117	284	149	105	45	70
Lands	52	145	118	50	48	20
Motor Vehicles	742	357	191	212	226	276
E-shops & Carder System	-	116	169	122	128	25
Office Equipment	70	22	48	20	20	21
Other, Fun. M&T	109	72	57	55	118	84
HQ CAPEX	376	251	190	85	59	90
SUB TOTAL	1,466	1,247	922	649	643	585
Customer Contribution						
Bulk supply	500	236	229	254	282	311
Service connections	575	630	591	557	528	503
SUB TOTAL	1,075	866	820	812	809	813
TOTAL	8,974	5,811	4,228	3,212	3,341	3,523

Table 8: CAPEX Forecast (Distribution Licensee 5)

CAPEX Forecast-Distribution L	icensee 5 (LKR	Million)				
	2015	2016	2017	2018	2019	2020
Networks	1,187	1,053	1,038	1,486	1,864	1,545
Buildings	496	566	498	284	461	84
Lands	237	129	50	53	37	-
Vehicles	60	298	206	90	110	83
Computers	39	134	12	12	12	12
Furniture	13	12	12	37	62	12
Office Equipment	11	12	12	12	12	12
Plant And Machinery	189	65	65	115	65	65
Customer Support	-	-	32	-	-	-
Research And Development	13	15	15	15	15	15
TOTAL	2,244	2,283	1,939	2,104	2,638	1,828

Table 9: CAPEX Forecast (Transmission Licensee)

CAPEX Forecast-Transmission Licensee (LKR Million)										
Projects	2015	2016	2017	2018	2019	2020				
Trincomalee Coal Power Project - Sampoor	2,600	-	-	-	-	-				
Vauniya Kilinochchi Transmission Line (GOSL/JICA)	-	-	-	-	-	-				
Habarana - Veyangoda 220kv Transmission Line (GOSL/JICA)	252	200	-	-	ı	-				
Kilinochchi - Chunnakam Transmission Line Project	-	ı	-	-	I	ı				
New Galle Transmission Development -SPSS-II /Reactive Power Management (GOSL/ADB)	104	-	-	-	-	-				
North East Transmission Development -SPSS - II (GOSL/ADB)	104	100	-	-	-	-				
Clean Energy & Access Improvement Part 2 Transmission System Strengthening Transmission Line (GOSL/ADB)	57	40	-	-	-	-				

Clean Energy & Access Improvement Part 2 -Transmission System Strengthening Grid Substations - Panadura, Matara.(GOSL/ADB)	77	-	-	-	-	-
Clean Energy and Access Improvement Project Part 7 - Transmission System Strengthening in Eastern Province (GOSL/ADB)	77	195	-	-	ı	-
Clean Energy and Access improvement Part 6 - Augmentation of Grid Substations for Absorption of Renewable Energy Phase- II (GOSL/ADB)	-	-	-	-	-	-
Clean Energy & Access Improvement Part 6 - Augmentation of Grid Substations for Absorption of Renewable Energy Phase 1 (GOSL)- Rantambe. To Mahiyangana Line - Phase 1 (GOSL)	-	-	-	-	-	-
CE & NEIP P2 - Clean Energy & Network Efficiency Improvement Project -Package 2 - Construction 132 Kv Transmission infrastructure (GOSL/ADB)	288	150	-	-	1	ı
Clean Energy & Network Efficiency Improvement Project -Package 3 - Construction of 220 Kv Transmission Infrastructure (GOSL/ADB)	1,457	715	500	-	1	I
Colombo City Transmission Development & Loss Reduction Project (GOSL/JICA)	195	195	-	-	-	-
Kelaniya & Vavuniya GS Augmentation Project (ADB)	203	160	-	-	-	-
Transmission Construction-980.51/1320/ICG/SGSP/08 A3960-01	-	-	1	-	1	-
Transmission Constructon -980.51/1320/ICG/SIGSP/06 A3960-03	-	-	-	-	-	-
Transmission Construction-980.51/1320/ICG/AHGS/06 A3960-04	-	_	-	-	-	-
Transmission Construction -980.51/1320/ICG/AJGS/06 A3960-	-	-	-	_	-	-
05 Transmission Construction -980.51/1320/ICG/ARGS/06 A3960-06	-	-	-	-	-	-
Transmission Construction A3960-07	-	-	-	-	-	-
Transmission Construction A3960-08	-	-	-	-	1	-
Augmentation of Hambantota GS -119-02-04-35	103	70	-	-	-	-
Augmentation of Sri Jayewardenepura GS -119-02-04-36	242	600	-	-	-	-
Installation of Second 220/132 Kv GS -119-02-04-34 -inter bus Transformer at Rantambe Power Plant (GOSL)	628	550	1	-	1	-
Construction of Suriyawewa 132/33 Kv GS -119-02-04-34	800	-	-	-	-	-
Installation of 100 Mv Ar Capacitor Bank I Pannipitiya GS -119- 02-04-38	55	-	ı	-	1	-
220Kv Transmission inter connection line - Habarana Sampoor (GOSL/JICA)	270	=	-	-	=	=
Kalaniya Bridge Project	7	70	-	-	-	-
Green Power Development and Energy Efficiency Improvement Investment Programme - Tranche II	-	282	989	141	1	-
National Transmission & Distribution Network Development and Efficiency Improvement Project I	-	244	854	122	-	-
Power transmission facilities related to Trincomalee 2x250MW coal PS	-	-	-	208	728	104
Construction of Colombo K 132/11 kV Grid substation	-	-	-	55	194	28
Construction of Padukka 220/33kV GSS	-	-	-	16	57	8
Construction of Kalawana 132/33 kV grid substation	-	-	-	21	73	10
Augmentation of Madampe Grid Substation		-	-	5	16	2
Capacity enhancement of Samanalawewa – Embilipitiya Transmission Line	-	-	-	15	53	8
Construction of Hambantota Port 132/33kV GSS	-	-	-	20	70	10
Installation of 20MVAr capacitor bank in Hambanthota GS	-	-	-	1	3	0
Construction of Wellawaya 132/33kV GSS	-	-	-	14	49	7

Construction of Victoria –Randenigala, 2*Zebra ,220kV single circuit transmission line	-	-	-	10	36	5
Capacity enhancement of 132kV, Lynx transmission lines to Zebra - Package II	-	ı	-	29	103	15
Construction of Chemmany 132/33kV GSS	-	ı	-	16	56	8
Construction of Tissamaharama 132/33kV GSS	-	-	-	21	72	10
Augmentation of Aniyakanda GSS	-	-	-	5	16	2
Construction of Colombo P GSS	-	-	-	17	60	9
Augmentation of Pannala GSS	-	-	-	5	16	2
Augmentation of Pallekele GSS	-	-	-	5	16	2
Capacity enhancement of Badulla-Inginiyagala-Ampara 132kV TL with Zebra	-	-	-	-	-	34
Augmentation of Chunnakam GSS	-	1	-	-	-	5
Augmentation of Dehiwala GSS	-	1	-	-	1	5
Augmentation of Athurugiriya GSS	-	-	-	-	-	5
Capacity enhancement of Balangoda-Deniyaya TL to Zebra	-	-	-	-	-	14
TOTAL	7,519	3,572	2,343	726	1,619	294

Table 10: Transmission Licensee - Minor CAPEX

Minor CAPEX (LKR Million)										
Minor CAPEX	2015	2016	2017	2018	2019	2020				
Purchase of new Energy Meters	10	-	15	-	15	-				
Establishment of Meter Lab	-	-	-	-	-	-				
Fixing of Correct CT/PTs at delivery points	-	-	-	-	-	-				
Fixing of Correct CT/PTs at receiving points	-	-	-	-	-	-				
Procurement of a Portable Current Injection Unit	-	-	-	-	-	6				
Purchase of Power Transformers	-	-	-	-	-	-				
Trincomalee GS	-	-	-	-	-	-				
Kiribathkumbura GS	-	-	-	-	-	-				
Old Anuradapura GS	-	-	-	-	-	-				
Transmission Lines		-	-	-	-					
Augmantation and Rehabilitation of Grid Substations & Transmission Lines of the Network	100	-	-	-	-	-				
Capital - Vehicle, purchase of lands, Buildings, Office furniture, equipment, computers, software etc.	691	1,067	621	418	648	375				
Total	801	1,067	636	418	663	381				

3 Approved OPEX

Following changes were done to arrive at the approved OPEX for each Licensee

3.1 CEB DL 1-4 and TL

Considering over 30% salary hike done in year 2015, no real term salary/ employee cost (included on OPEX, own Division Head Office Overheads and CEB corporate Overhead) increases were allowed except for 10% increase allowed in year 2018. Non – salary related OPEX (both Distribution and Retail) were capped to forecast annual increase in customers. In case of the Transmission Licensee Non- Salary OPEX was capped to forecast annual increase in sales for each

year. In case of Overheads, non-salary related costs were kept constant over 2016-2020. In case of Bulk Supply Operations business costs related short term borrowings were allowed as filed.

3.2 LECO DL5

Though the Licensee filed annual 10% increase in OPEX, only 4% annual real terms increase in salary related costs (both in OPEX and Overheads) was allowed while the non-salary cost increase was capped to the number of consumer increase during 2016-2020. Non salary overheads were kept constant during 2016-2020.

3.3 Approved Transmission and BSOB OPEX

Table 11: Approved Transmission OPEX

Approved OPEX		2016	2017	2018	2019	2020
TL	LKR million	7,996.1	8,054.9	8,449.2	8,514.1	8,582.2

Table 12: Approved BSOB OPEX

Approved BSOB OPEX		2016	2017	2018	2019	2020
TL	LKR million	2,825.8	1,846.7	182.9	641.1	514.5

3.4 Approved Distribution OPEX and Retail OPEX

Table 13: Approved Distribution OPEX of DLs

Approved OPEX		2016	2017	2018	2019	2020
DL1	LKR million	8,074.4	8,212.1	8,765.1	8,878.2	9,001.5
DL2	LKR million	9,339.8	9,483.8	10,151.4	10,269.6	10,398.6
DL3	LKR million	5,475.9	5,559.4	5,949.7	6,018.3	6,093.0
DL4	LKR million	4,341.2	4,406.7	4,719.5	4,773.3	4,832.0
DL5	LKR million	2,586.8	2,676.4	2,769.0	2,864.7	2,963.6
Total Distribution OPEX	LKR million	29,818.0	30,338.3	32,354.7	32,804.0	33,288.7
Forecast Sales	GWh	11,985.0	12,780.6	13,622.2	14,518.0	14,519.0
Distribution OPEX per kWh sold	LKR/kWh	2.49	2.37	2.38	2.26	2.29

Table 14: Approved Retail OPEX of DLs

Approved OPEX						
		2016	2017	2018	2019	2020
DL1	LKR million	800.3	806.8	876.2	881.5	887.3
DL2	LKR million	786.5	792.8	861.0	866.2	871.9
DL3	LKR million	637.8	648.0	695.0	703.4	712.5
DL4	LKR million	589.0	593.9	644.7	648.8	653.2
DL5	LKR million	423.3	451.5	481.2	516.5	555.5
Total Retail OPEX	LKR million	3,236.9	3,293.0	3,558.1	3,616.4	3,680.4

4 Approved Revenue Cap and Retail Services Price Cap

4.1 Approved Distribution Variable Revenue Cap and Retail Services Price Cap

Table 15: Approved Distribution Variable Revenue Cap

Approved Distribution Variable Revenue Cap		2016	2017	2018	2019	2020
DL1	LKR million	10,214.5	10,783.4	11,307.9	11,838.6	12,392.3
DL2	LKR million	13,323.6	13,677.9	14,017.6	14,341.3	14,675.7
DL3	LKR million	7,580.9	7,931.6	8,313.9	8,711.6	9,125.0
DL4	LKR million	6,242.8	6,475.0	6,731.8	7,003.3	7,288.4
DL5	LKR million	3,347.7	3,407.5	3,467.0	3,526.3	3,585.3
Total Distribution Rev cap	LKR million	40,709.4	42,275.3	43,838.1	45,421.1	47,066.7

Table 16: Approved Retail Services Price Cap

Approved Retail Service Price Cap	es	2016	2017	2018	2019	2020
DL1	LKR/customer	548.49	548.49	548.49	548.49	548.49
DL2	LKR/customer	436.94	436.94	436.94	436.94	436.94
DL3	LKR/customer	595.47	595.47	595.47	595.47	595.47
DL4	LKR/customer	634.68	634.68	634.68	634.68	634.68
DL5	LKR/customer	896.92	896.92	896.92	896.92	896.92

4.2 Transmission and BSOB Revenue Cap

Table 17: Transmission and BSOB Revenue Cap

Approved Revenue Cap		2016	2017	2018	2019	2020
Transmission Revenue Cap	LKR million	11,973.2	12,063.9	12,398.2	12,502.8	12,427.5
BSOB Revenue Cap	LKR million	1,225.4	1,225.4	1,225.4	1,225.4	1,225.4
Total allowed revenue	LKR million	13,198.6	13,289.3	13,623.6	13,728.2	13,653.0

5 Clawback Provisions

5.1 CAPEX

Clawback of depreciation and Return on Equity allowed for forecast capital expenditure during 2016-2020 will be made during annual revenue cap calculation based on actual capital cost recorded submitted by each Licensee (TL and DLs). In addition any changes in the assumes initial asset base based on audited accounts for 2015 will be made in 2016. Year 2016 revenue caps were adjusted (clawback) for actual CAPEX in year 2014 as shown in Table 18.

5.2 OPEX

Total Generation

Considering very high increase in OPEX as filed for 2014-2015, clawback for actual OPEX in 2015 will be enforced when declaring adjusted revenue caps for 2016; based on audited accounts for

Table 18: Adjusted approved Distribution revenue cap for year 2016

	Unit	DL1	DL2	DL3	DL4	DL5	TL
Revenue cap for 2016	LKR million	10,214.5	13,323.6	7,580.9	6,242.8	3,347.7	11,973.2
CAPEX Clawback 2014	LKR million	-	138.2	-	31.3	-	30.5
Revenue cap approved for 2016	LKR million	10,214.5	13,185.4	7,580.9	6,211.5	3,347.7	11,942.7

GENERATION COSTS

The approved generation dispatch for Jan – March 2016 is shown in Table 19 below.

Table 19: Dispatch for Jan-March 2016 as filed by TL

Month	Code	Unit	January	February	March	Total
Independent Power Producers (IPPs)						
ASIA Power – 45 MW	DAPL	GWh	0.0	0.0	0.0	0.0
AES Kelanitissa – 165 MW	CAES	GWh	91.0	73.9	107.8	272.7
Kerawalapitiya – 270 MW	CCKW	GWh	132.9	95.9	144.1	372.9
TOTAL IPP		GWh	223.9	169.8	251.9	645.6
CEB GL's Thermal Generation ²						
Sapu Old 4 x 18 MW	DSP1	GWh	0.0	0.0	0.0	0.0
Sapu Ext. 8 x 9 MW	DSP2	GWh	38.2	34.5	38.2	110.8
KPS GT 5 x 17 MW	GT16	GWh	0.0	0.0	0.0	0.0
KPS GT 1 x 115 MW	GT07	GWh	0.0	0.0	0.0	0.0
KPS Combined – 165 MW	CCKP	GWh	87.3	78.9	94.7	260.8
Coal – Puttlam 900 MW	CPUT	GWh	441.1	475.2	526.1	1442.5
Total CEB GL's Thermal Generation		GWh	566.6	588.5	658.9	1814.1
Renewable energy SPPA	NCRE	GWh	95.8	72.6	84.5	252.9
	1	ı	ı			
Chunnakam	DCHU	GWh	0.2	0.2	0.2	0.6
New Chunnakam	DNCHU	GWh	13.5	12.3	15.2	41.0
Northern Power	DNOR	GWh	0.0	0.0	0.0	0.0
Total Northern generation		GWh	13.7	12.5	15.4	41.6
	ı					
CEB GL's Hydropower Generation		GWh	239.2	213.6	223.1	675.9

GWh

Considering relatively low investment made by the Licensee, depreciation costs filed under each generator owned by CEB was removed and 20% of that cost was allowed as a Return on Equity.

1,139.2

1,057.0

1,233.9

3,430.1

Forecast system coincident peak generation demand and the approved monthly capacity costs of each generation plant/ hydro scheme are shown in Table 20 below.

² Generation from Barge (60 MW) plant is excluded from the filed generation (and added as hydro generation) since it has not received necessary approvals from the Commission

Table 20: Forecast Capacity payments³ to Generation Licensees by TL for Jan-March 2016

Item\Month	Unit	January	February	March
System Coincident Peak demand	MW	2,101	2,119	2,315

Plant\Month	Unit	January	February	March
Mahaweli	Mn. LKR	901	901	901
Laxapana	Mn. LKR	317	317	317
Other Hydro	Mn. LKR	294	294	294
KPS Small GT	Mn. LKR	119	119	119
Sapu-old	Mn. LKR	200	200	200
Sapu - new	Mn. LKR	199	199	199
Asia Power	Mn. LKR	164	164	164
KPS-CCY	Mn. LKR	354	354	354
AES	Mn. LKR	46	43	46
Kerawalapitiya - Westcoast	Mn. LKR	673	623	666
Coal- Puttlam	Mn. LKR	1107	1107	1107
Renewable	Mn. LKR	0	0	0
KPS - GT7	Mn. LKR	161	161	161
Chunnakkkam	Mn. LKR	11	11	11
Northern Power	Mn. LKR	80	75	80
New Chunnakkam	Mn. LKR	94	94	94
TOTAL	Mn. LKR	4720	4661	4712
Depreciation Provision Excluded from CEB GL	Mn. LKR	1160	1160	1160
Return of Equity allowed for CEB GL	Mn. LKR	232	232	232
	Unit	January	February	March
Average Generation Capacity cost	LKR/MW	1,804,388.17	1,761,649.30	1,634,799.29

Forecast monthly generation from each generation plant along with approved average cost LKR/kWh is shown in Table 21 below.

Table 21: Forecast Energy Payments to Generation Licensees by TL for Jan- March 2016

Plant\Month	Unit	January	February	March
Hydro	GWh	239.2	213.6	223.1
nydro	LKR/kWh	0	0	0
	GWh	0	0	0
KPS - Small GT	LKR/kWh	0	0	0
Sapu-old	GWh	0	0	0

³ Adjusted for Depreciation and Return on Equity allowance

	LKR/kWh	0	0	0
Samu nam	GWh	38.2	34.5	38.2
Sapu-new	LKR/kWh	19.38	19.71	19.56
Asia Power	GWh	0	0	0
ASIG FOWCI	LKR/kWh	0	0	0
KPS-CCY	GWh	87.3	78.9	94.7
	LKR/kWh	21.80	20.99	20.90
AES	GWh	91.0	73.9	107.8
	LKR/kWh	26.29	26.29	26.19
Kerwalapitiya- West Coast	GWh	132.9	95.9	144.1
	LKR/kWh	22.42	22.69	22.51
Coal- Puttlam	GWh	441.1	475.2	526.1
Coal- Puttiam	LKR/kWh	5.32	5.29	5.26
Renewable	GWh	95.8	72.6	84.5
Reliewable	LKR/kWh	20.25	20.59	20.79
KPS- GT7	GWh	0	0	0
KF3- 017	LKR/kWh	0	0	0
Chunnakkam	GWh	0.2	0.2	0.2
Спиппаккат	LKR/kWh	46.14	46.14	46.14
Northern Power	GWh	0	0	0
Northern Power	LKR/kWh	0	0	0
New Chunnakkam	GWh	13.5	12.3	15.2
нем спиппаккат	LKR/kWh	20.64	20.83	20.42

TOTAL Generation	GWh	1,139.2	1,057.0	1,233.9
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Monthly Energy Cost	LKR Million	12,590.9	10,729.8	13,634.6
Total Energy cost for three-months	LKR Million	36,955.3		
Total energy dispatch for three- months	GWh	3,430.2		
Three-month average energy cost	LKR/kWh	11.11		

7 ENERGY COSTS IN EACH INTERVAL FOR TOU PRICING

Using the approved Methodology, the Commission has determined that the peak adjustment factors to be as given in Table 22 below.

Table 22: Approved Peak Adjustment Factors

Time interval for TOU pricing	Factor	Value
0530 - 1830	k1	1.0
1830 - 2230	k2	1.3
2230 - 0530	k3	0.6

The energy dispatches and costs in each interval are provided in table below. The Commission has assessed the energy dispatches in each interval using historic information on the load profile on typical weekdays, week-ends and holidays.

Table 23: Monthly Energy Dispatches and Costs in the TOU Regime (Jan-March 2011)

Average Generation Energy cost in each month

	Unit	1	2	3
Generation Energy cost	LKR/kWh	11.05	10.15	11.05

Month 1 - TOU tariffs							
Interval Energy dispatched (GWh) k Factor (#) Adjusted k Factor (LKR/kWh)							
B1 (day)	647.08	1.00	1.01	11.21			
B2 (peak)	258.60	1.30	1.32	14.57			
B3 (off-peak)	233.54	0.60	0.61	6.72			

Month 2 - TOU tariffs							
Interval Energy dispatched (GWh) k Factor (#) Adjusted k Factor (LKR/kW							
B1 (day)	600.38	1.00	1.01	10.29			
B2 (peak)	239.94	1.30	1.32	13.38			
B3 (off-peak)	216.69	0.60	0.61	6.18			

Month 3 - TOU tariffs						
Interval Energy dispatched (GWh) k Factor (#) Adjusted k Factor (LKR/IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII						
B1 (day)	700.86	1.00	1.01	11.21		
B2 (peak)	280.10	1.30	1.32	14.57		
B3 (off-peak)	252.95	0.60	0.61	6.72		

8 COMBINED COSTS OF SINGLE BUYER, AND TRANSMISSION AND BSOB

The allowed capacity costs of generation and energy costs of generation have been combined with the allowed transmission and BSOB costs to calculate the Bulk Supply Tariffs (BST) for sales by the TL to DLs. The approved average BST in each month in each TOU interval is given below and provides the six-month average. Allowed Transmission losses for the period Jan-March 2016 is 3%.

Table 24: Approved Monthly Average BST from the TL to DLs

Capacity Charge

Month	Unit	1	2	3
Capacity Charge				
Generation capacity	LKR/MW	1,804,388.17	1,761,649.30	1,634,799.29
Transmission	LKR/MW	473,600.15	469,575.63	429,930.88
Bulk Supply and Operations Business	LKR/MW	426,002.14	422,382.09	386,721.74
BST (C)	LKR/MW	2,703,990.45	2,653,607.03	2,451,451.92
BST (C) 3-Month Weighted average	LKR/MW.month	2,598,206.00		

Energy Charge

Month Unit	1	2	3
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Interval 1 (day)

BST (E1)	LKR/kWh	11.55	10.61	11.55
Generation energy Cost B1	LKR/kWh	11.21	10.29	11.21
Transmission Loss Factor B1	%	3.08%	3.08%	3.08%

Interval 2 (peak)

BST (E2)	LKR/kWh	15.14	13.91	15.14
Generation energy Cost B2	LKR/kWh	14.57	13.38	14.57
Transmission Loss Factor B2	%	3.93%	3.93%	3.93%

Interval 3 (off-peak)

Transmission Loss Factor B3	%	2.18%	2.18%	2.18%
Generation energy Cost B3	LKR/kWh	6.72	6.18	6.72
BST (E3)	LKR/kWh	6.87	6.31	6.87

Table 25: Three-month Average Bulk Supply Tariffs for Jan-March 2016

	Unit	BST (E)
BST day (E1) 3-Month weighted average	LKR/kWh	11.26
BST peak (E2) 3-Month weighted average	LKR/kWh	14.76
BST off-peak (E3) 3-Month weighted average	LKR/kWh	6.70

9 APPROVED BST FROM TL TO EACH DL

Owing to the requirement to maintain a Uniform National Tariff (UNT) and owing to the varying customer mix among Distribution Licensees, the BST to each DL was adjusted, to enable each Distribution Licensee to recover their full allowed revenues. The summary calculation, and the approved BSTs are shown in Table 26.

The Transmission Licensee is hereby directed to invoice each Distribution Licensee at the rates shown in Table 26 as (i) Approved BST for payment on Coincident Maximum, and (ii) Approved BST for energy in each TOU interval.

Table 26: Approved BST from Transmission to each Distribution Licensee

Description	Units	DL1: CEB Region 1	DL2: CEB Region 2	DL3: CEB Region 3	DL4: CEB Region 4	DL5: LECO	Total
Sales to end-use customers – 2016 (Jan-Dec)	GWh	3,209	3,692	2,049	1,587	1,306	11,843
Revenue based on approved customer tariffs (Jan-Dec)	LKR Million	59,121	62,279	30,770	25,471	25,590	203,232
Coincident peak demand for purchases from Transmission	MW	577	631	425	304	241	-
Approved BST for payment on Coincident Maximum Demand	LKR/MW/m onth	2,598,206	2,598,206	2,598,206	2,598,206	2,598,206	-
Amount payable to Transmission on account of Demand (Jan-March)	LKR Million	4,501	4,921	3,310	2,373	1,877	16,981
Allowed losses (Jan- March)		9.40%	9.40%	7.10%	9.40%	4.20%	-
Revenue to be recovered by Transmission through energy charges (Jan-March)	LKR Million	7,431	7,070	2,278	2,260	3,533	22,572
Energy sold from Transmission at MV (Jan- March)	GWh	903	1,037	560	444	355	3,299

Approved BST for energy i	n each TOU interval						
Day (0530-1830)	LKR/kWh	8.34	6.91	4.13	5.16	10.10	-
Peak (1830-2230)	LKR/kWh	10.94	9.06	5.41	6.77	13.24	-
Off Peak (2230-0530)	LKR/kWh	4.96	4.11	2.45	3.07	6.01	-

Note - The above Bulk Supply Tariffs are applicable for the period of January - March 2016.

9.1 ADJUSTMENT OF SALES TO DL5 (LECO) BY DL2, DL3 AND DL4

Sales to DL5 shall be metered at the relevant points of purchase by DL5 from DL2, DL3 and DL4. Such meter readings shall be adjusted upwards by the Transmission Licensee for the energy loss incurred by DL2, DL3 and DL4 to serve DL5. BST shown in Table 26 shall then be applied to the adjusted sales to DL5. Correspondingly, the Transmission Licensee shall deduct the sales to DL5, and energy losses to the meter readings of DL2, DL3 and DL4, and then apply the relevant BST shown in Table 26.

The loss adjustments to be applied to meter readings shall be as given in Table 27.

Table 27: Loss Adjustments to be applied to Meter Readings to account for wheeling losses to serve DL5 (LECO)

Description		DL2: CEB Region 2	DL3: CEB Region 3	DL4: CEB Region 4
	Energy (GWh)	EDL2 _{DL5}	EDL3 _{DL5}	EDL4 _{DL5}
Sum of sales to DL5 measured at metering points embedded in each licensee network	Coincident Peak Demand (MW)	CDL2 _{DL5}	CDL3 _{DL5}	CDL4 _{DL5}
Upwards adjustment for sales to DL5	Energy	2.1%	2.0%	1.9%
Energy sales to DL5 to which the Approved BST from TL to DL5 should be applied for invoicing	GWh	0.021 x EDL2 _{DL5}	0.020 x EDL3 _{DL5}	0.019 x EDL4 _{DL5}
Coincident peak demand of DL5 to which the Approved BST from TL to DL5 should be applied for invoicing	MW	2.0 + CDL2 _{DL5}	2.5 + CDL3 _{DL5}	3.0 + CDL4 _{DL5}
	Energy (GWh)	ETL _{DL2}	ETL _{DL3}	ETL _{DL4}
Sum of sales from TL to each DL	Coincident Peak Demand (MW)	CTL _{DL2}	CTL _{DL3}	CTL _{DL4}
Energy sales to each DL to which the Approved BST from TL to the respective DL should be applied for invoicing	GWh	ETL _{DL2} - (1.021 x EDL2 _{DL5})	ETL_{DL3} - $(1.020 x)$ $EDL3_{DL5}$	ETL _{DL4} - (1.019 x EDL4 _{DL5})
Coincident peak demand of each DL to which the Approved BST from TL to the respective DL should be applied for invoicing	MW	CTL _{DL2} - (2.0 + CDL2 _{DL5})	$CTL_{DL3} - (2.5 + CDL3_{DL5})$	$CTL_{DL4} - (3.0 + CDL4_{DL5})$

10 Generation Costs summary of year 2016

The depreciation costs filed under each generator owned by CEB was removed and 20% of that cost was allowed as a Return on Equity, since the total debt and part of the equity for building of these plants were aid by the Government

10.1 Forecast Total Cost and Revenue for Year 2016

Table 28: Forecast Total Cost and Revenue for Year 2016

	Units	Value
Generation Energy Cost (Jan-March 2016)	LKR Mn.	36,955
Generation Capacity Cost (Jan- March 2016)	LKR Mn.	11,310
Generation Energy Cost (April-Dec 2016)	LKR Mn.	77,151
Generation Capacity Cost (April- Dec 2016)	LKR Mn.	33,932
Transmission Revenue Cap 2016	LKR Mn.	11,943
BSOB Revenue Cap 2016	LKR Mn.	1,225
Term loan	LKR Mn.	9,517
DL1-5 Distribution Revenue Caps 2016	LKR Mn.	40,540
Retail Supply Revenue Caps 2016	LKR Mn.	3,612
Total Cost 2016	LKR Mn.	226,184
Total Sales (excluding Street lighting) 2016	GWh	11,843
Average Cost 2016	LKR/kWh	19.10
Total Estimated Sales Revenue 2016 at existing Sales Tariff	LKR Mn.	203,232
Average Sales Revenue	LKR/kWh	17.16
Estimated Revenue Surplus/ (deficit) 2016	LKR Mn.	(22,953)

	Units	Value
Generation Energy Cost	LKR/kWh	9.64
Generation Capacity Cost	LKR/kWh	3.82
Transmission and BSOB Revenue Cap (Including Term loan)	LKR/kWh	1.92
DL1-5 Distribution Revenue Caps and Retail service price cap	LKR/kWh	3.73
Total Cost	LKR/kWh	19.10
Average Sales Revenue	LKR/kWh	17.16
Estimated Revenue Surplus/ (deficit)	LKR/kWh	(1.94)