

DECISION ON TRANSMISSION AND BULK SUPPLY TARIFFS

Effective from 1st July 2018

DECISION ON BULK SUPPLY TARIFFS- July- December 2018

In exercising the powers and functions vested with the Public Utilities Commission of Sri Lanka (Commission) under section 3 (d) of the Sri Lanka Electricity Act, No. 20 of 2009 (SLEA) 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 SLEA, the Commission has approved a Tariff Methodology.

In accordance with the methodology, the tariffs levied by the transmission licensee for the transmission and bulk sale of electricity (the transmission and bulk sale tariffs) and tariffs levied by the distribution licensee for the distribution and supply of electricity were approved by the Commission and requested licensees to implement with effect from 20th of June 2013, issuing the decision document on electricity tariffs. The transmission and bulk sale tariffs were forecasted tariffs issued to determine the end use customer tariffs. The forecasted transmission and bulk sale tariffs are calculated and filed once every six months by the transmission license following the procedure defined in the methodology.

The Commission reviewed the transmission and bulk supply tariffs filed by the transmission licensee for the period from July to December 2018, and hereby approved and requested the transmission licensee to implement the bulk supply tariffs effective from 1st of July 2018.

List of Acronyms

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
FSA	Fuel Supply Agreement
CEB GL	CEB Generation Licensee holding License number
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
WIP	Work-in-Progress

1 ALLOWED REVENUE

Approved Distribution Variable Revenue Cap and Approved Retail Services Price Cap of each distribution licensee as per the *DECISION ON TRANSMISSION AND BULK SUPPLY TARIFFS effective from 1st January 2018* are shown in Table 1 below.

Table 1: Approved Distribution Variable Revenue Cap and Approved Retail Services Price Cap for the year 2018

	Unit	DL1	DL2	DL3	DL4	DL5
(Revised) Approved Distribution Variable Revenue Cap	LKR million	11,378.0	15,351.2	8,142.8	7,586.2	4,227.6
Approved Retail Services price cap	LKR/customer	538.06	498.23	615.53	637.98	1,022.73

The Transmission and BSOB Revenue Caps mentioned in the *DECISION ON TRANSMISSION AND BULK SUPPLY TARIFFS effective from 1st January 2018* are shown in the Table 2 below.

Table 2: Transmission and BSOB Revenue Cap for the year 2018

Approved Revenue Cap	Unit	TL
Transmission Revenue Cap	LKR million	9,979.1
BSOB Revenue Cap	LKR million	1,397.3
Total allowed revenue	LKR million	11,376.3

2 APPROVED LOSSES FOR THE PERIOD

Approved network loss targets as per the *Revision of Network Loss Targets, effective from 24th May 2016*, are shown in Table 3 below.

Table 3- Approved Network Loss For 2018

Licensee	DL 1	DL 2	DL 3	DL 4	DL 5	TL
Loss target for 2018	6.75%	7.58%	7.30%	7.67%	4.54%	2.08%

3 GENERATION COSTS

The approved generation dispatch for July- December 2018 is shown in Table 4 below.

Table 4- Dispatch Approved By the Commission for July- December 2018

Month	Code	Unit	Month of year 2018						Total
			Jul	Aug	Sep	Oct	Nov	Dec	
Independent Power Producers (IPPs)									
ASIA Power – 51 MW	DAPL	GWh	21.5	17.9	15.9	21.2	16.3	20.5	113.3
Sojitz Kelanitissa – 165 MW	CAES	GWh	50.3	44.3	37.7	47.7	35.4	48.0	263.5
Kerawalapitiya – 270 MW	CCKW	GWh	176.2	136.6	107.3	155.2	140.7	126.3	842.4
ACE - Embilipitiya -99WW	DEMB	GWh	58.8	57.7	55.4	57.4	55.6	59.2	344.2
ACE - Matara - 20 MW	DMAT	GWh	10.6	10.4	10.1	10.4	10.2	10.6	62.2
Emergency 60MW	EMG	GWh	38.0	39.4	33.9	34.9	0.0	0.0	146.2
TOTAL IPP		GWh	355.5	306.3	260.2	326.8	258.3	264.6	1771.8
CEB GL's Thermal Generation									
Sapu Old 4 x 18 MW	DSP1	GWh	33.9	30.2	32.8	33.9	31.8	33.6	196.2
Sapu Ext. 8 x 9 MW	DSP2	GWh	38.2	37.9	36.9	38.2	36.9	38.0	226.1
KPS GT 4 x 17 MW	GT16	GWh	1.0	0.3	0.3	0.3	1.3	2.3	5.4
KPS GT 1 x 115 MW	GT07	GWh	8.1	5.8	9.6	4.7	36.8	37.4	102.3
KPS Combined – 165 MW	CCKP	GWh	46.3	92.3	97.5	100.1	82.6	95.9	514.7
Coal – Puttlam 300 MW	CPUT	GWh	295.4	423.5	409.8	295.4	285.9	295.4	2005.3
Total CEB GL's Thermal Generation		GWh	422.9	589.8	586.9	472.6	475.2	502.6	3050.0
Renewable energy	RENW	GWh	216.4	210.7	199.6	195.3	173.3	159.0	1154.3
Chunnakam	DCHU	GWh	0.2	0.2	0.2	0.2	0.2	0.2	1.2
New Chunnakam	DNCHU	GWh	13.7	12.8	9.8	10.2	8.8	13.2	68.5
Total Northern generation		GWh	13.9	13.0	10.0	10.4	9.0	13.4	69.7
CEB GL's Hydropower Generation		GWh	400.0	293.0	311.7	387.0	405.7	424.3	2221.8
Total Generation		GWh	1408.6	1412.8	1368.5	1392.2	1321.6	1363.8	8267.6

Forecast system coincident peak generation demand and the approved monthly capacity costs of each generation plant/ hydro scheme are shown in Table 5 and Table 6 respectively.

Table 5- Forecast system coincident peak demand for July- December 2018

Item\Month	Unit	Jul	Aug	Sep	Oct	Nov	Dec
System Coincidental Peak demand	MW	2,401	2,421	2,433	2,410	2,390	2,427

Table 6- Approved Capacity payments to GL by TL for July- December 2018

Plant\Month	Unit	Jul	Aug	Sep	Oct	Nov	Dec
Mahaweli	LKR Million	650.7	650.7	650.7	650.7	650.7	650.7
Laxapana	LKR Million	322.9	322.9	322.9	322.9	322.9	322.9
Other Hydro	LKR Million	315.2	315.2	315.2	315.2	315.2	315.2
GTSM	LKR Million	80.4	80.4	80.4	80.4	80.4	80.4
DSP	LKR Million	105.5	105.5	105.5	105.5	105.5	105.5
DSPX	LKR Million	115.1	115.1	115.1	115.1	115.1	115.1
DAPL	LKR Million	173.9	173.9	173.9	173.9	173.9	173.9
CCKP	LKR Million	258.7	258.7	258.7	258.7	258.7	258.7
CAES	LKR Million	51.3	51.3	49.6	51.3	49.6	51.3
CCKW	LKR Million	811.9	811.9	785.7	811.9	785.7	811.9
CPUT	LKR Million	1521.1	1521.1	1521.1	1521.1	1521.1	1521.1
GT7	LKR Million	135.9	135.9	135.9	135.9	135.9	135.9
DCHU	LKR Million	10.0	10.0	10.0	10.0	10.0	10.0
DNOR	LKR Million	72.7	75.1	72.7	75.1	75.1	72.7
DNCHU	LKR Million	44.9	44.9	44.9	44.9	44.9	44.9
Emergency Power	LKR Million	184.7	184.7	178.7	35.7	0.0	0.0
TOTAL	LKR Million	4854.9	4857.3	4821.1	4708.4	4644.8	4670.2
Depreciation Provision Excluded from CEB GL	LKR Million	1159.8	1159.8	1159.8	1159.8	1159.8	1159.8
Return of Equity allowed for CEB GL	LKR Million	232.0	232.0	232.0	232.0	232.0	232.0
	Unit	Jul	Aug	Sep	Oct	Nov	Dec
Average Generation Capacity cost	LKR/MW	1,635,434.69	1,623,071.23	1,600,375.77	1,568,416.66	1,555,371.34	1,542,220.03

Notes:

- The Capacity costs of Ace Matara and Ace Embilipitiya were removed as their licenses have been expired. Further the Capacity cost of Barge can't be allowed as the License has not been issued.
- Though Northern Power Pvt Ltd power plant is not operating as per a Court order, capacity cost was allowed.
- Depreciation on CEB generation plants was removed and a Return on Equity was allowed.

Forecast monthly generation from each generation plant along with approved average cost LKR/kWh is shown in Table 7 below.

Table 7- Approved Energy Payments to GL by TL for July- December 2018

Plant\Month	Unit	Jul	Aug	Sep	Oct	Nov	Dec
Hydro	GWh	400.0	293.0	311.7	387.0	405.7	424.3
	LKR /kWh	-	-	-	-	-	-
GTSM	GWh	1.0	0.3	0.3	0.3	1.3	2.3
	LKR /kWh	77.40	149.60	145.61	119.32	63.71	63.47
DSP	GWh	33.9	30.2	32.8	33.9	31.8	33.6
	LKR /kWh	23.99	24.59	24.15	23.99	24.31	24.04
DSPX	GWh	38.2	37.9	36.9	38.2	36.9	38.0
	LKR /kWh	21.21	21.24	21.31	21.21	21.31	21.23
DAPL	GWh	21.5	17.9	15.9	21.2	16.3	20.5
	LKR /kWh	23.16	23.50	23.19	23.18	23.62	23.21
CCKP	GWh	46.3	92.3	97.5	100.1	82.6	95.9
	LKR /kWh	23.06	22.82	22.88	22.91	22.70	22.86

CAES	GWh	50.3	44.3	37.7	47.7	35.4	48.0
	LKR /kWh	21.73	21.83	22.84	21.77	22.96	21.76
DMAT	GWh	10.6	10.4	10.1	10.4	10.2	10.6
	LKR /kWh	17.22	16.17	16.32	17.50	17.83	17.83
DEMB	GWh	58.8	57.7	55.4	57.4	55.6	59.2
	LKR /kWh	17.22	16.17	16.32	17.50	17.83	17.83
CCKW	GWh	176.2	136.6	107.3	155.2	140.7	126.3
	LKR /kWh	21.77	22.05	22.27	21.78	21.98	22.15
CPUT	GWh	295.4	423.5	409.8	295.4	285.9	295.4
	LKR /kWh	9.16	8.72	8.75	9.16	9.21	9.16
RENW	GWh	216.4	210.7	199.6	195.3	173.3	159.0
	LKR /kWh	18.30	19.14	19.70	19.27	17.63	17.40
GT7	GWh	8.1	5.8	9.6	4.7	36.8	37.4
	LKR /kWh	43.47	45.59	42.65	47.37	39.32	39.30
DCHU	GWh	0.2	0.2	0.2	0.2	0.2	0.2
	LKR /kWh	34.77	34.77	34.77	34.77	34.77	34.77
DNCHU	GWh	13.7	12.8	9.8	10.2	8.8	13.2
	LKR /kWh	21.98	22.17	23.00	22.88	23.41	22.07
Emergency Power	GWh	38.0	39.4	33.9	34.9	-	-
	LKR /kWh	23.66	23.66	23.66	23.66	-	-
TOTAL generated energy	GWh	1,408.6	1,412.8	1,368.5	1,392.2	1,321.6	1,363.8

Monthly Energy Cost	LKR Million	17,615.7	18,401.8	17,499.4	17,804.7	16,329.0	16,752.4
Total Energy cost for six-months	LKR Million	104,403.0					
Total energy dispatch for six-months	GWh	8,267.6					
Six-month average energy cost	LKR/kWh	12.90					

Notes:

- Due to the expiration of the licenses, only the weighted average energy costs of the thermal power plants were allowed as the energy costs of Ace Matara and Embilipitiya.
- Due to the absence of the license, energy generation of Barge was removed and added to Hydro.

4 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 8 below.

Table 8- Approved Peak Adjustment Factors

Time interval for TOU pricing	Factor	Value
0530-1830	k1	1
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 9- Monthly Energy Dispatches and Costs in the TOU Regime for July- December 2018

Average Generation Energy cost							
	Unit	Jul	Aug	Sep	Oct	Nov	Dec
Generation Energy cost	LKR /kWh	12.51	13.03	12.79	12.79	12.36	12.28

Month 1 - Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR /kWh)
B1 (day)	800	1	1.01	12.68
B2 (peak)	320	1.3	1.32	16.49
B3 (off-peak)	289	0.6	0.61	7.61

Month 2 - Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR /kWh)
B1 (day)	802	1	1.01	13.21
B2 (peak)	321	1.3	1.32	17.17
B3 (off-peak)	290	0.6	0.61	7.93

Month 3 - Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR /kWh)
B1 (day)	777	1	1.01	12.97
B2 (peak)	311	1.3	1.32	16.86
B3 (off-peak)	281	0.6	0.61	7.78

Month 4 - Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR /kWh)
B1 (day)	791	1	1.01	12.97
B2 (peak)	316	1.3	1.32	16.86
B3 (off-peak)	285	0.6	0.61	7.78

Month 5 - Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR /kWh)
B1 (day)	751	1	1.01	12.53
B2 (peak)	300	1.3	1.32	16.29
B3 (off-peak)	271	0.6	0.61	7.52

Month 6 - Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR /kWh)
B1 (day)	775	1	1.01	12.46
B2 (peak)	310	1.3	1.32	16.19
B3 (off-peak)	280	0.6	0.61	7.47

5 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.

Table 10- Combined Transfer Price from TL to DLs for July- December 2018

Capacity Charge

Month	Unit	Month					
		Jul	Aug	Sep	Oct	Nov	Dec
Capacity Charge							
Generation capacity	LKR/MW	1,635,434.69	1,623,071.23	1,600,375.77	1,568,416.66	1,555,371.34	1,542,220.03
Transmission	LKR/MW	346,314.77	343,485.42	341,833.06	344,995.52	347,979.09	342,692.39
Bulk Supply and Operation Business	LKR/MW	700,299.82	588,012.65	502,766.68	652,619.60	658,263.56	905,820.42
BST (C)	LKR/MW	2,682,049.28	2,554,569.30	2,444,975.51	2,566,031.78	2,561,614.00	2,790,732.84
BST (C) 6-Month Weighted average	LKR/MW/month	2,599,939.61					

Energy Charge

Month	Unit	Jul	Aug	Sep	Oct	Nov	Dec

Interval 1 (day)

Transmission Loss Factor B1	%	2.14%	2.14%	2.14%	2.14%	2.14%	2.14%
Generation energy Cost B1	LKR /kWh	12.68	13.21	12.97	12.97	12.53	12.46
BST (E1)	LKR /kWh	12.95	13.49	13.24	13.25	12.80	12.72

Interval 2 (peak)

Transmission Loss Factor B2	%	2.73%	2.73%	2.73%	2.73%	2.73%	2.73%
Generation energy Cost B2	LKR /kWh	16.49	17.17	16.86	16.86	16.29	16.19
BST (E2)	LKR/kWh	16.94	17.64	17.32	17.32	16.73	16.64

Interval 3 (off-peak)

Transmission Loss Factor B3	%	1.51%	1.51%	1.51%	1.51%	1.51%	1.51%
Generation energy Cost B3	LKR/kWh	7.61	7.93	7.78	7.78	7.52	7.47
BST (E3)	LKR/kWh	7.72	8.05	7.90	7.90	7.63	7.59

Table 11- Approved Six-month Average Bulk Supply Tariffs for July- December 2018

	Unit	BST (E)
BST day (E1)		
6-Month weighted average	LKR/kWh	13.08
BST peak (E2)		
6-Month weighted average	LKR/kWh	17.10
BST off-peak (E3)		
6-Month weighted average	LKR/kWh	7.80

BST = Bulk Supply Tariff, means the average transfer price from Transmission to Distribution Licensees

E1, E2, E3 refer to the energy delivered in the three time intervals in the time-of-use tariffs regime. ie 0530-1830, 1830-2230 and 2230-0530, respectively.

6 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 as per section 5.2.1 of the tariff methodology, and the approved BSTs are shown in Table 12.

The Transmission Licensee is hereby directed to invoice each Distribution Licensee at the rates shown in Table 12 as (i) Approved BST for payment on Coincident Maximum, and (ii) Approved BST for energy in each TOU interval. In addition, adjustment of sales to DL5 by DL2, DL3 and DL4 shall be done as per section 9.1 of the Decision on Revenue Caps and Bulk Supply Tariffs 2016-2020.

Note:

There was a delay in the submission of the Bulk Supply Tariff filing for the period – 1st July to 31st December 2018. Hence the approved BSTs of Lanka Electricity Company for the first half of the year 2018 were presumed to be applicable for the second half as well.

Table 12- 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	Total
Sales to end-use customers	GWh	3,930	4,591	2,380	1,852	14,424
Revenue based on approved customer tariffs (Jan-Dec)	LKR Million	72,052.0	76,320.3	37,174.9	31,650.4	247,928.5
Coincident peak demand for purchases from Transmission	MW	640	699	470	337	-
Approved BST for payment on Coincident Maximum Demand	LKR/MW/month	2,599,939.61	2,599,939.61	2,599,939.61	2,599,939.61	-
Amount payable to Transmission on account of Demand (July- December)	LKR Million	9,979.6	10,910.6	7,338.7	5,260.7	37,033.7
Allowed losses (July-December)		6.75%	7.58%	7.30%	7.67%	-
Revenue to be recovered by Transmission through energy charges (July-December)	LKR Million	20,094.8	19,269.7	6,892.2	6,532.4	62,311.4
Energy sold from Transmission at MV	GWh	2,154	2,534	1,305	1,018	7,924
Approved BST for energy in each TOU interval						
Peak (1830-2230)	LKR/kWh	12.37	10.08	7.00	8.51	-
Off Peak (2230-0530)	LKR/kWh	5.64	4.60	3.19	3.88	-
Day (0530-1830)	LKR/kWh	9.46	7.71	5.35	6.51	-