DECISION ON TRANSMISSION AND BULK SUPPLY TARIFFS

Effective from 1st July 2021

DECISION ON BULK SUPPLY TARIFFS- July- December 2021

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 2021, and hereby approved and requested the transmission licensee to implement the bulk supply tariffs effective from 1st of July 2021.

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
0 & 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 Revenue Caps and Bulk Supply Tariffs 2021-2023 are shown in Table 1 below.

Table 1: Approved Distribution Variable Revenue Cap and Approved Retail Services Price Cap for the year 2021

	Unit	DL1	DL2	DL3	DL4	DL5
Approved Distribution Variable Revenue Cap	LKR million	23,700.0	20,059.4	13,447.7	10,578.4	6,927.4
Approved Retail Services price cap	LKR/customer	1,831.5	2,292.4	1,533.3	1,429.6	2,092.0

The Transmission and BSOB Revenue Caps mentioned in the Decision on Revenue Caps and Bulk Supply Tariffs 2021-2023 are shown in the Table 2 below.

Table 2: Transmission and BSOB Revenue Cap for the year 2021

Approved Revenue Cap	Unit	TL
Transmission Revenue Cap	LKR million	17,326.0
BSOB Revenue Cap	LKR million	2,945.8
Total allowed revenue	LKR million	20,271.9

2 **APPROVED LOSSES FOR THE PERIOD**

The approved network losses for 2021 are shown in Table 3 below.

Table 3- Approved Network Loss For 2021									
Licensee	DL 1	DL 2	DL 3	DL 4	DL 5	TL			
Loss target for 2021	6.50%	9.50%	8.14%	7.43%	3.99%	2.82%			

3 GENERATION COSTS

The approved generation dispatch for July- December 2021 is shown in Table 4 below.

				м	onth of th	e year 202	21		
Plant\Month	Code	Unit	Jul	Aug	Sep	Oct	Nov	Dec	Total
Independent Power Producers (IPPs)									
Sojitz Kelanitissa – 165 MW	Sojitz	GWh	6.2	8.7	31.0	39.1	58.7	30.1	173.8
Kerawalapitiya – 270 MW	CCKW	GWh	177.1	159.9	0.0	178.6	166.9	177.3	859.7
TOTAL IPP		GWh	183.3	168.6	31.0	217.7	225.5	207.4	1,033.5
<u>CEB GL's Thermal</u> Generation									
Sapu Old 4 x 18 MW	DSP1	GWh	30.4	30.4	29.4	30.4	29.4	30.4	180.2
Sapu Ext. 8 x 9 MW	DSP2	GWh	38.2	37.6	36.5	38.2	36.8	38.2	225.4
KPS GT 1 x 115 MW	GT07	GWh	0.6	0.5	3.4	4.7	3.9	2.9	15.9
KPS GT 5 x 17 MW	GT16	GWh	0.0	0.1	0.3	0.8	0.6	0.3	2.3
KPS Combined – 165 MW	ССКР	GWh	9.7	40.7	55.3	63.2	56.5	66.4	291.8
Coal – Puttlam 300 MW	CPUT	GWh	444.8	531.5	511.0	354.4	342.8	444.8	2,629.2
Total CEB GL's Thermal Generation		GWh	523.6	640.8	635.8	491.6	469.9	582.9	3,344.6
Chunnakam	DCHU	GWh	0.2	0.2	0.2	0.2	0.2	0.2	1.2
New Chunnakam	DNCHU	GWh	15.2	14.0	9.1	10.2	9.7	15.2	73.3
Total Northern generation		GWh	15.4	14.2	9.3	10.4	9.9	15.4	74.5
CEB GL's Hydropower									
Generation		GWh	508.4	402.8	503.9	496.1	465.7	412.4	2,789.4
Rooftop Solar PV		GWh	24.7	24.8	22.4	20.2	17.2	18.4	127.
Renewable energy	NCRE	GWh	191.2	197.0	182.6	176.2	156.7	146.1	1,049.8
Total Renewable energy		GWh	215.9	221.8	205.0	196.4	173.9	164.5	1,177.
Self-generation		GWh	0.0	0.1	0.2	0.7	1.7	0.6	3.2
Sen generation	1		0.0	0.1	0.2	0.7	1.7	0.0	5.2
Total Generation		GWh	1,446.6	1,448.3	1,385.2	1,412.9	1,346.6	1,383.1	8,422.7
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 Table 4- Dispatch Approved by the Commission for July- December 2021

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 2021

Item\Month	Unit	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
System Coincidental Peak demand	MW	2,528	2,520	2,503	2,491	2,476	2,491

Plant\Month	Unit	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Mahaweli	LKR Million	684.1	684.1	684.1	684.1	684.1	684.1
Laxapana	LKR Million	368.0	368.0	368.0	368.0	368.0	368.0
Other Hydro	LKR Million	291.0	291.0	291.0	291.0	291.0	291.0
Mannar Wind*	LKR Million	-	-	-	-	-	-
GTSM	LKR Million	58.2	58.2	58.2	58.2	58.2	58.2
DSP	LKR Million	83.8	83.8	83.8	83.8	83.8	83.8
DSPX	LKR Million	91.4	91.4	91.4	91.4	91.4	91.4
ССКР	LKR Million	109.7	109.7	109.7	109.7	109.7	109.7
Sojitz	LKR Million	69.7	69.7	67.4	69.7	67.4	69.7
BARGE*	LKR Million	-	-	-	-	-	-
CCKW	LKR Million	979.0	979.0	947.4	979.0	947.4	979.0
CPUT	LKR Million	1,715.6	1,715.6	1,715.6	1,715.6	1,715.6	1,715.6
RENW	LKR Million	-	-	-	-	-	-
GT7	LKR Million	95.7	95.7	95.7	95.7	95.7	95.7
DCHU	LKR Million	11.2	11.2	11.2	11.2	11.2	11.2
DNCHU	LKR Million	55.0	55.0	55.0	55.0	55.0	55.0
Thulhiriya (1MW×10) *	LKR Million	-	-	-	-	-	-
Kolonnawa (1MW×20) *	LKR Million	-	-	-	-	-	-
Mathugama (1MW×20) *	LKR Million	-	-	-	-	-	-
Vpower Valachchenei*	LKR Million	-	-	-	-	-	-
TOTAL	LKR Million	4,612.4	4,612.4	4,578.6	4,612.4	4,578.6	4,612.4
Depreciation provision excluded from CEB GL*	LKR Million	1,159.8	1,159.8	1,159.8	1,159.8	1,159.8	1,159.8
Return of Equity allowed for CEB GL*	LKR Million	232.0	232.0	232.0	232.0	232.0	232.0

Table 6- Approved	Capacity p	avments to	o GL b	v TL for Jı	uly- December 2021

	Unit	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Generation Capacity cost	LKR /MW	1,457,357.67	1,462,128.84	1,458,676.46	1,479,359.68	1,474,238.36	1,478,935.52

* Notes:

- The Capacity cost of Mannar wind, Barge, 50MW Diesel power (Thulhiriya, Kolonnawa, and Mathugama) and Vpower Valachchenei can't be allowed as the licenses have not been issued.
- 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.

Plant\Month	Unit	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Lludae	GWh	508.4	402.8	503.9	496.1	465.7	412.4
Hydro	LKR /kWh	-	-	-	-	-	-
	GWh	-	-	-	-	-	-
Mannar Wind*	LKR /kWh	-	-	-	-	-	-
OTOM	GWh	0.0	0.1	0.3	0.8	0.6	0.3
GTSM	LKR /kWh	0.0	282.03	131.38	78.15	88.86	115.18
DCD	GWh	30.4	30.4	29.4	30.4	29.4	30.4
DSP	LKR /kWh	20.82	20.82	20.98	20.82	20.98	20.82
DCDV	GWh	38.2	37.6	36.5	38.2	36.8	38.2
DSPX	LKR /kWh	18.44	18.48	18.58	18.44	18.55	18.44
	GWh	9.7	40.7	55.3	63.2	56.5	66.4
ССКР	LKR /kWh	23.23	18.69	18.24	18.35	18.41	18.04
A	GWh	6.2	8.7	31.0	39.1	58.7	30.1
Sojitz	LKR /kWh	30.77	27.84	24.92	24.07	23.64	24.06
	GWh	-	-	-	-	-	-
BARGE *	LKR /kWh	-	-	-	-	-	-
001/11/	GWh	177.1	159.9	-	178.6	166.9	177.3
CCKW	LKR /kWh	19.60	19.74	-	19.60	19.68	19.61
CPUT	GWh	444.8	531.5	511.0	354.4	342.8	444.8
	LKR /kWh	8.98	8.89	8.90	9.12	9.18	8.98
D 51114	GWh	191.2	197.0	182.6	176.2	156.7	146.1
RENW	LKR /kWh	15.56	15.51	15.36	15.63	15.81	15.99
077	GWh	0.6	0.5	3.4	4.7	3.9	2.9
GT7	LKR /kWh	88.81	106.71	47.12	45.17	46.83	50.07
DOUL	GWh	0.2	0.2	0.2	0.2	0.2	0.2
DCHU	LKR /kWh	36.73	36.73	36.73	36.73	36.73	36.73
DNCIUL	GWh	15.2	14.0	9.1	10.2	9.7	15.2
DNCHU	LKR /kWh	17.50	17.67	18.91	18.54	18.70	17.50
Thulhiriya	GWh	-	-	-	-	-	-
(1MW×10)*	LKR /kWh	-	-	-	-	-	-
Kolonnawa	GWh	-	-	-	-	-	-
(1MW×20)*	LKR /kWh	-	-	-	-	-	-
Mathugama	GWh	-	-	-	-	-	-
(1MW×20)*	LKR /kWh	-	-	-	-	-	-
Vpower	GWh	-	-	-	-	-	-
Valachchenei*	LKR /kWh	-	-	-	-	-	-
	GWh	24.7	24.8	22.4	20.2	17.2	18.4
Rooftop Solar PV	LKR /kWh	22.00	22.00	22.00	22.00	22.00	22.00
	GWh	-	0.1	0.2	0.7	1.7	0.6
Self generation	LKR /kWh	36.00	36.00	36.00	36.00	36.00	36.00

 Table 7- Approved Energy Payments to GL by TL for July - December 2021

TOTAL generated	GWh	1,446.6	1,448.3	1,385.2	1,412.9	1,346.6	1,383.1
energy	•	_,	_,	_,	_,	_,	_,

Monthly Energy Cost	LKR Million	13,082.8	14,144.4	11,304.6	13,864.0	13,496.1	13,942.8
Total Energy cost for six- months	LKR Million	79,834.8					
Total energy dispatch for six- months	GWh	8,422.7					
Six-month average energy cost	LKR/kWh	9.75					

* Notes:

• Due to the absence of the licenses, energy generation of Mannar wind, Barge, 50MW Diesel power (Thulhiriya, Kolonnawa, and Mathugama) and Vpower Valachchenei were 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.

Time interval for TOU pricing	Factor	Value
0530-1830	k1	1
1830-2230	k2	1.3
2230-0530	k3	0.6

Table 8- Approved Peak Adjustment Factors

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, weekends, and holidays.

 Table 9- Monthly Energy Dispatches and Costs in the TOU Regime for July- December 2021

Average Generation Energy cost									
	Unit	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21		
Generation energy cost	LKR /kWh	9.04	9.77	8.16	9.81	10.02	10.08		

Month 1 - Block tariffs								
Block	Energy generated			Charge				
	(GWh)	(#)	(#)	(LKR/kWh)				
B1 (Day)	839.0	1	1.03	9.32				
B2 (Peak)	285.0	1.3	1.34	12.12				
B3 (Off peak)	322.6	0.6	0.62	5.59				

Month 2 - Block tariffs								
Block	Energy generated	Block Factor	Adjusted Factor	Charge (LKR/kWh)				
	(GWh)	(#)	(#)					
B1 (Day)	840.0	1	1.03	10.07				
B2 (Peak)	285.3	1.3	1.34	13.09				
B3 (Off peak)	323.0	0.6	0.62	6.04				

Month 3 - Block tariffs								
Block	Energy generated	Block Factor	Adjusted Factor	Charge				
	(GWh)	(#)	(#)	(LKR/kWh)				
B1 (Day)	803.4	1	1.03	8.41				
B2 (Peak)	272.9	1.3	1.34	10.94				
B3 (Off peak)	308.9	0.6	0.62	5.05				

Month 4 - Block tariffs								
Block	Energy generated	Block Factor	Adjusted Factor	Charge				
	(GWh)	(#)	(#)	(LKR/kWh)				
B1 (Day)	819.5	1	1.03	10.12				
B2 (Peak)	278.3	1.3	1.34	13.15				
B3 (Off peak)	315.1	0.6	0.62	6.07				

Month 5- Block tariffs								
Block	Energy generated	Block Factor	Adjusted Factor	Charge				
	(GWh)	(#)	(#)	(LKR/kWh)				
B1 (Day)	781.0	1	1.03	10.33				
B2 (Peak)	265.3	1.3	1.34	13.43				
B3 (Off peak)	300.3	0.6	0.62	6.20				

Month 6 - Block tariffs								
Block	Energy generated	Block Factor	Adjusted Factor	Charge				
	(GWh)	(#)	(#)	(LKR/kWh)				
B1 (Day)	802.2	1	1.03	10.39				
B2 (Peak)	272.5	1.3	1.34	13.51				
B3 (Off peak)	308.4	0.6	0.62	6.24				

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.

Capacity Cha	rge						
	Unit	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
Generation capacity	LKR /MW	1,457,357.67	1,462,128.84	1,458,676.46	1,479,359.68	1,474,238.36	1,478,935.52
Transmission	LKR /MW	571,073.11	572,942.72	576,886.14	579,694.71	583,040.65	579,528.50
Bulk Supply and Operation Business	LKR /MW	524,740.54	526,458.47	530,081.95	532,662.65	535,737.13	532,509.93
BST (C)	LKR /MW	2,553,171.31	2,561,530.03	2,565,644.56	2,591,717.04	2,593,016.14	2,590,973.95
BST (C)6- Month Weighted average	LKR/MW	2,575,899.45			-		

Table 10- Combined Transfer Price from TL to DLs for July- December 2021

Energy Charge

Month Unit Jul-21 A	-21 Sep-21	Oct-21	Nov-21	Dec-21
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Interval 1 (day)

Transmission Loss Factor B1	%	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%
Generation energy Cost B1	LKR /kWh	9.32	10.07	8.41	10.12	10.33	10.39
BST (E1)	LKR/kWh	9.59	10.36	8.66	10.41	10.63	10.69

Interval 2 (peak)

Transmission Loss Factor B2	%	3.70%	3.70%	3.70%	3.70%	3.70%	3.70%
Generation energy Cost B2	LKR /kWh	12.12	13.09	10.94	13.15	13.43	13.51
BST (E2)	LKR/kWh	12.57	13.57	11.34	13.64	13.93	14.01

Interval 3 (off peak)

Transmission Loss Factor B3	%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%
Generation energy Cost B3	LKR /kWh	5.59	6.04	5.05	6.07	6.20	6.24
BST (E3)	LKR/kWh	5.71	6.17	5.15	6.19	6.33	6.36

	Unit	BST (E)
BST day (E1) 6-Month weighted average	LKR/kWh	10.06
BST peak (E2) 6-Month weighted average	LKR/kWh	13.17
BST off-peak (E3) 6-Month weighted average	LKR/kWh	5.98

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 11 of the Decision on Revenue Caps and Bulk Supply Tariffs 2021-2023.

Description	Units	DL1: CEB Region 1	DL2: CEB Region 2	DL3: CEB Region 3	DL4: CEB Region 4	DL5: LECO Region 5	Total
Sales to end-use customers	GWh	4,277	4,745	2,626	2,043	1,740	15,431
Revenue based on approved customer tariffs (Jan-Dec)	LKR Million	79,613.3	78,664.4	47,646.2	34,193.3	36,026.4	276,143.5
Coincident peak demand for purchases from Transmission	MW	663	725	488	350	277	-
Approved BST for payment on Coincident Maximum Demand	LKR/MW/ month	2,575,899.45	2,575,899.45	2,575,899.45	2,575,899.45	2,575,899.45	-
Amount payable to Transmission on account of	LKR Million	10,247.6	11,203.6	7,535.8	5,402.0	4,274.2	38,663.2

Table 12- Approved BST from Transmission to each Distribution Licensee

Demand (July-								
December)								
Allowed losses		6.50%	9.50%	8.14%	7.43%	3.99%	-	
Revenue to be recovered by Transmission through energy charges (July- December)	LKR Million	16,071.3	15,642.9	8,629.1	5,682.4	9,749.4	55,775.2	
Energy sold from Transmission at MV	GWh	2,326	2,661	1,447	1,115	940	8,488	
Approved BST for energy in each TOU interval								
Peak (1830- 2230)	LKR/kWh	9.33	7.94	8.06	6.88	14.01	-	
Off Peak (2230- 0530)	LKR/kWh	4.24	3.61	3.66	3.13	6.36	-	
Day (0530-1830)	LKR/kWh	7.12	6.06	6.15	5.25	10.70	-	