

DECISION ON TRANSMISSION AND BULK SUPPLY TARIFFS

Effective from 1st July 2020

DECISION ON BULK SUPPLY TARIFFS- July- December 2020

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 2020, and hereby approved and requested the transmission licensee to implement the bulk supply tariffs effective from 1st of July 2020.

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 2020* are shown in Table 1 below.

Table 1: Approved Distribution Variable Revenue Cap and Approved Retail Services Price Cap for the year 2020

	Unit	DL1	DL2	DL3	DL4	DL5
Approved Distribution Variable Revenue Cap	LKR million	13,020.8	17,021.3	9,714.5	8,931.1	4,760.1
Approved Retail Services price cap	LKR/customer	579.89	536.96	663.38	687.57	1,102.24

The Transmission and BSOB Revenue Caps mentioned in the *DECISION ON TRANSMISSION AND BULK SUPPLY TARIFFS effective from 1st January 2020* are shown in the Table 2 below.

Table 2: Transmission and BSOB Revenue Cap for the year 2020

Approved Revenue Cap	Unit	TL
Transmission Revenue Cap	LKR million	11,397.2
BSOB Revenue Cap	LKR million	1,505.9
Total allowed revenue	LKR million	12,903.1

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 2020

Licensee	DL 1	DL 2	DL 3	DL 4	DL 5	TL
Loss target for 2020	5.60%	5.94%	6.54%	6.80%	4.02%	1.71%

3 GENERATION COSTS

The approved generation dispatch for July- December 2020 is shown in Table 4 below.

Table 4- Dispatch Approved by the Commission for July- December 2020

Plant\Month	Code	Unit	Month of the year 2020						Total
			Jul	Aug	Sep	Oct	Nov	Dec	
<u>Independent Power Producers (IPPs)</u>									
Sojitz Kelanitissa- 165 MW	Sojitz	GWh	24.4	20.8	25.7	21.2	20.3	38.4	150.7
ACE - Matara - 20 MW	DMAT	GWh	4.6	4.1	3.8	3.2	4.7	7.7	28.1
Kerawalapitiya - 270 MW	CCKW	GWh	134.8	129.5	82.3	29.2	151.6	177.8	705.2
ACE - Embilipitiya -99WW	DEMB	GWh	32.8	27.7	24.2	26.3	33.5	45.7	190.3
TOTAL IPP		GWh	196.6	182.1	136.1	79.9	210.1	269.5	1,074.3
<u>CEB GL's Thermal Generation</u>									
Sapu Old 4 x 18 MW	DSP1	GWh	29.2	30.9	29.9	29.7	30.0	31.1	180.8
Sapu Ext. 8 x 9 MW	DSP2	GWh	37.8	35.7	27.6	28.3	36.3	37.6	203.3
KPS GT 1 x 115 MW	GT07	GWh	3.8	0.9	5.4	3.5	0.0	0.0	13.6
KPS GT 5 x 17 MW	GT16	GWh	0.5	0.2	1.0	0.6	2.0	2.6	6.9
KPS Combined - 165 MW	CCKP	GWh	0.0	21.2	41.6	38.3	48.8	66.2	216.0
Coal - Puttlam 300 MW	CPUT	GWh	526.8	522.2	498.5	520.8	353.7	370.0	2,791.9
Total CEB GL's Thermal Generation		GWh	598.1	611.0	604.1	621.2	470.9	507.5	3,412.7
Rooftop Solar PV		GWh	19.0	19.1	17.2	15.5	13.2	14.1	98.1
Self generation		GWh	4.1	0.5	5.3	1.3	9.7	7.5	28.4
Renewable energy	NCRE	GWh	185.0	189.1	177.0	172.3	155.7	145.5	1,024.6
Total Renewable energy		GWh	208.1	208.8	199.5	189.1	178.6	167.1	1,151.2
Chunnakam	DCHU	GWh	0.2	0.2	0.2	0.2	0.2	0.2	1.2
New Chunnakam	DNCHU	GWh	14.1	12.8	7.2	6.7	9.2	14.5	64.5
Total Northern generation		GWh	14.3	13.0	7.4	6.9	9.4	14.7	65.7
CEB GL's Hydropower Generation		GWh	434.9	436.8	448.7	537.0	496.5	438.5	2,792.3
Total Generation		GWh	1,452.0	1,451.6	1,395.6	1,434.2	1,365.5	1,397.3	8,496.2

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 2020

Item\Month	Unit	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
System Coincidental Peak demand	MW	2,505	2,503	2,489	2,508	2,470	2,478

Table 6- Approved Capacity payments to GL by TL for July- December 2020

Plant\Month	Unit	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
Mahaweli	LKR Million	607.5	607.5	607.5	607.5	607.5	607.5
Laxapana	LKR Million	264.4	264.4	264.4	264.4	264.4	264.4
Other Hydro	LKR Million	244.2	244.2	244.2	244.2	244.2	244.2
GTSM	LKR Million	251.3	251.3	251.3	251.3	251.3	251.3
DSP	LKR Million	265.3	265.3	265.3	265.3	265.3	265.3
DSPX	LKR Million	289.4	289.4	289.4	289.4	289.4	289.4
DAPL*	LKR Million	-	-	-	-	-	-
CCKP	LKR Million	438.1	438.1	438.1	438.1	438.1	438.1
Sojitz	LKR Million	63.8	63.8	61.7	63.8	61.7	63.8
DMAT*	LKR Million	-	-	-	-	-	-
DEMB*	LKR Million	-	-	-	-	-	-
BARGE*	LKR Million	-	-	-	-	-	-
CCKW	LKR Million	897.0	897.0	868.0	897.0	868.0	897.0
CPUT	LKR Million	1,919.2	1,919.2	1,919.2	1,919.2	1,919.2	1,919.2
RENW	LKR Million	-	-	-	-	-	-
GT7	LKR Million	425.1	425.1	425.1	425.1	425.1	425.1
DCHU	LKR Million	8.9	8.9	8.9	8.9	8.9	8.9
DNOR*	LKR Million	93.8	97.0	93.8	97.0	97.0	93.8
DNCHU	LKR Million	67.6	67.6	67.6	67.6	67.6	67.6
50MW Thulhiriya*	LKR Million	-	-	-	-	-	-
50MW Kolonnawa*	LKR Million	-	-	-	-	-	-
50MW Mathugama*	LKR Million	-	-	-	-	-	-
Vpower Galle*	LKR Million	-	-	-	-	-	-
Vpower Pallekale*	LKR Million	-	-	-	-	-	-
Vpower Hambantota*	LKR Million	-	-	-	-	-	-
Vpower Horana*	LKR Million	-	-	-	-	-	-
Altaaqa Mahiyanganaya*	LKR Million	-	-	-	-	-	-
Altaaqa Polonnaruwa*	LKR Million	-	-	-	-	-	-
TOTAL	LKR Million	5,835.5	5,838.6	5,804.5	5,838.6	5,807.6	5,835.5
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

	Unit	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
Generation Capacity cost	LKR /MW	1,958,929.36	1,961,869.06	1,959,050.42	1,958,414.39	1,975,548.55	1,980,803.03

Notes:

- The Capacity costs of Asia power, Ace Matara and Ace Embilipitiya were removed as their licenses have been expired. Further the Capacity cost of Barge, 50MW Diesel power (Thulhiriya, Kolonnawa, and Mathugama), Vpower Galle, Vpower Pallekale, Vpower Hambantota, Vpower Horana, Altaaqa Mahiyanganaya, Altaaqa Polonnaruwa can't be allowed as the Licenses have 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 2020

Plant\Month	Unit	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
Mahaweli, Laxapana and Other Hydro	GWh	434.9	436.8	448.7	537.0	496.5	438.5
	LKR /kWh	-	-	-	-	-	-
GTSM	GWh	0.5	0.2	1.0	0.6	2.0	2.6
	LKR /kWh	77.74	132.81	62.38	74.87	54.86	53.16
DSP	GWh	29.2	30.9	29.9	29.7	30.0	31.1
	LKR /kWh	19.76	19.56	19.68	19.70	19.66	19.54
DSPX	GWh	37.8	35.7	27.6	28.3	36.3	37.6
	LKR /kWh	17.50	17.63	18.28	18.21	17.59	17.51
DAPL*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
CCKP	GWh	-	21.2	41.6	38.3	48.8	66.2
	LKR /kWh	-	19.34	18.75	18.52	18.62	18.64
Sojitz	GWh	24.4	20.8	25.7	21.2	20.3	38.4
	LKR /kWh	25.21	25.24	25.46	25.04	24.82	24.00
DMAT*	GWh	4.6	4.1	3.8	3.2	4.7	7.7
	LKR /kWh	11.74	11.75	11.88	10.96	13.41	13.86
DEMB*	GWh	32.8	27.7	24.2	26.3	33.5	45.7
	LKR /kWh	11.74	11.75	11.88	10.96	13.41	13.86
BARGE*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
CCKW	GWh	134.8	129.5	82.3	29.2	151.6	177.8
	LKR /kWh	19.59	19.65	20.38	23.74	19.47	19.34
CPUT	GWh	526.8	522.2	498.5	520.8	353.7	370.0
	LKR /kWh	7.80	7.80	7.83	7.80	8.09	8.05
RENW	GWh	185.0	189.1	177.0	172.3	155.7	145.5
	LKR /kWh	19.06	19.26	19.10	18.74	18.51	18.80
GT7	GWh	3.8	0.9	5.4	3.5	-	-
	LKR /kWh	43.49	63.82	41.70	44.02	-	-
DCHU	GWh	0.2	0.2	0.2	0.2	0.2	0.2
	LKR /kWh	33.87	33.87	33.87	33.87	33.87	33.87
DNOR*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-

DNCHU	GWh	14.1	12.8	7.2	6.7	9.2	14.5
	LKR /kWh	17.54	17.75	19.42	19.66	18.59	17.49
50MW Thulhiriya*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
50MW Kolonnawa*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
50MW Mathugama*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
Vpower Galle*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
Vpower Pallekale*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
Vpower Hambantota*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
Vpower Horana*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
Altaaqa Mahiyanganaya*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
Altaaqa Polonnaruwa*	GWh	-	-	-	-	-	-
	LKR /kWh	-	-	-	-	-	-
Rooftop Solar PV	GWh	19.0	19.1	17.2	15.5	13.2	14.1
	LKR /kWh	22.00	22.00	22.00	22.00	22.00	22.00
Self generation	GWh	4.1	0.5	5.3	1.3	9.7	7.5
	LKR /kWh	36.00	36.00	36.00	36.00	36.00	36.00

TOTAL generated energy	GWh	1,452.0	1,451.6	1,395.6	1,434.2	1,365.5	1,397.3
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Monthly Energy Cost	LKR Million	13,590.9	13,556.9	12,827.8	11,374.6	12,779.9	14,288.4
Total Energy cost for six-months	LKR Million	78,418.7					
Total energy dispatch for six-months	GWh	8,496.2					
Six-month average energy cost	LKR/kWh	9.39					

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, Asia power, 50MW Diesel power (Thulhiriya, Kolonnawa, and Mathugama), Vpower Galle, Vpower Pallekale, Vpower Hambantota, Vpower Horana, Altaaqa Mahiyanganaya, Altaaqa Polonnaruwa 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.

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 2020

Average Generation Energy cost							
	Unit	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
Generation Energy cost	LKR /kWh	9.36	9.34	9.19	7.93	9.36	10.23

Month 1 - Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR/kWh)
B1 (Day)	824.7	1	1.01	9.49
B2 (Peak)	329.6	1.3	1.32	12.34
B3 (Off peak)	297.7	0.6	0.61	5.70

Month 2 - Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR/kWh)
B1 (Day)	824.5	1	1.01	9.47
B2 (Peak)	329.5	1.3	1.32	12.31
B3 (Off peak)	297.6	0.6	0.61	5.68

Month 3 - Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR/kWh)
B1 (Day)	792.7	1	1.01	9.32
B2 (Peak)	316.8	1.3	1.32	12.12
B3 (Off peak)	286.1	0.6	0.61	5.59

Month 4 - Block tariffs				
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Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR/kWh)
B1 (Day)	814.6	1	1.01	8.04
B2 (Peak)	325.6	1.3	1.32	10.46
B3 (Off peak)	294.0	0.6	0.61	4.83

Month 5- Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR/kWh)
B1 (Day)	775.6	1	1.01	9.49
B2 (Peak)	310.0	1.3	1.32	12.34
B3 (Off peak)	279.9	0.6	0.61	5.69

Month 6 - Block tariffs				
Block	Energy generated (GWh)	Block Factor (#)	Adjusted Factor (#)	Charge (LKR/kWh)
B1 (Day)	793.6	1	1.01	10.37
B2 (Peak)	317.2	1.3	1.32	13.48
B3 (Off peak)	286.4	0.6	0.61	6.22

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 2020

Capacity Charge							
	Unit	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
Generation capacity	LKR /MW	1,958,929.36	1,961,869.06	1,959,050.42	1,958,414.39	1,975,548.55	1,980,803.03
Transmission	LKR /MW	379,104.84	379,431.95	381,537.66	378,763.81	384,504.19	383,337.98
Bulk Supply and Operation Business	LKR /MW	411,611.76	404,208.61	398,638.39	387,995.56	386,005.73	450,902.53
BST (C)	LKR /MW	2,749,645.96	2,745,509.62	2,739,226.46	2,725,173.76	2,746,058.47	2,815,043.54
BST (C)6-Month Weighted average	LKR/MW	2,753,358.44					

Energy Charge

Month	Unit	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
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Interval 1 (day)

Transmission Loss Factor B1	%	1.76%	1.76%	1.76%	1.76%	1.76%	1.76%
Generation energy Cost B1	LKR /kWh	9.49	9.47	9.32	8.04	9.49	10.37
BST (E1)	LKR/kWh	9.66	9.64	9.48	8.18	9.66	10.55

Interval 2 (peak)

Transmission Loss Factor B2	%	2.24%	2.24%	2.24%	2.24%	2.24%	2.24%
Generation energy Cost B2	LKR /kWh	12.34	12.31	12.12	10.46	12.34	13.48
BST (E2)	LKR/kWh	12.62	12.59	12.39	10.69	12.62	13.78

Interval 3 (off peak)

Transmission Loss Factor B3	%	1.24%	1.24%	1.24%	1.24%	1.24%	1.24%
Generation energy Cost B3	LKR /kWh	5.70	5.68	5.59	4.83	5.69	6.22
BST (E3)	LKR/kWh	5.77	5.75	5.66	4.89	5.77	6.30

Table 11- Approved Six-month Average Bulk Supply Tariffs for July- December 2020

	Unit	BST (E)
BST day (E1)		
6-Month weighted average	LKR/kWh	9.52
BST peak (E2)		
6-Month weighted average	LKR/kWh	12.44
BST off-peak (E3)		
6-Month weighted average	LKR/kWh	5.69

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.

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	DL5: LECO Region 5	Total
Sales to end-use customers	GWh	4,282	4,678	2,700	2,018	1,682	15,360
Revenue based on approved customer tariffs (Jan-Dec)	LKR Million	79,248.8	73,711.5	48,735.9	32,880.4	31,644.4	266,221.1
Coincident peak demand for purchases from Transmission	MW	661	722	486	348	276	-
Approved BST for payment on Coincident Maximum Demand	LKR/MW/month	2,753,358.44	2,753,358.44	2,753,358.44	2,753,358.44	2,753,358.44	-
Amount payable to Transmission on account of Demand (July- December)	LKR Million	10,912.3	11,930.3	8,024.6	5,752.4	4,551.4	41,170.9
Allowed losses (July-December)		5.60%	5.94%	6.54%	6.80%	4.02%	-
Revenue to be recovered by Transmission through energy charges (July-December)	LKR Million	21,802.1	15,966.2	11,134.5	5,905.4	8,634.8	63,443.0
Energy sold from Transmission at MV	GWh	2,318	2,537	1,470	1,099	913	8,338
Approved BST for energy in each TOU interval							
Peak (1830-2230)	LKR/kWh	12.46	8.34	10.03	7.12	12.52	-
Off Peak (2230-0530)	LKR/kWh	5.69	3.81	4.59	3.25	5.72	-
Day (0530-1830)	LKR/kWh	9.54	6.38	7.68	5.45	9.59	-