

DECISION ON TRANSMISSION AND BULK SUPPLY TARIFFS

Effective from 1st July 2015

DECISION ON BULK SUPPLY TARIFFS- JULY- DECEMBER 2015

In exercising 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”.

In accordance with Section 30(2)(a) of the Act, the Commission, on 15th July 2010, 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).

In accordance with the methodology, the tariffs levied by the distribution 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 1st January 2011, issuing the decision document on electricity tariffs. The transmission and bulk sale tariffs was a 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 2015, and hereby approved and requested the transmission licensee to implement the bulk supply tariffs effective from 1st of July 2015.

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 OF THE TRANSMISSION LICENSEE

Consequent to the Tariffs Filing Completed in December 2010, the Decision Document on Electricity Tariffs was issued by the Commission to all licensees and requested to implement with effect from 1st of January 2011. Allowed revenues for TL and all the DLs are as per the *DECISION ON TRANSMISSION AND BULK SUPPLY TARIFFS*, Effective from 1st January 2015.

1.1 Adjusted approved variable revenue cap and retail service price cap

Shown below in the Table 1 are the approved variable revenue caps for the year 2015 as per the Table 11 of *DECISION ON TRANSMISSION AND BULK SUPPLY TARIFFS*, Effective from 1st January 2015.

Table 1- Adjusted Approved Variable Revenue Cap

Approved revenue caps for 2015 (LKR Million)						
Licensee	DL 1	DL 2	DL 3	DL 4	DL 5	TL
2015	8,066	8,654	4,609	3,719	2,703	7,806

Retail service price cap as per the Table 3 of *DECISION ON TRANSMISSION AND BULK SUPPLY TARIFFS*, Effective from 1st January 2015.

Table 2- Adjusted Approved Retail Service Price Cap

Retail service price cap (LKR/Customer)						BSOB Revenue (LKR Million)
Licensee	DL 1	DL 2	DL 3	DL 4	DL 5	TL
2015	527.98	663.11	488.66	530.90	725.44	143.65

2. APPROVED LOSSES FOR THE PERIOD (As per the Decision on Electricity Tariffs – 2011)

Approved network loss target as per Decision on Electricity Tariff 2011 for year 2015 are shown in Table 3 below.

Table 3- Approved Network Loss For 2015

Licensee	DL 1	DL 2	DL 3	DL 4	DL 5	TL
Approved loss	8.2%	10.0%	8.2%	8.6%	5.0%	3.0%

3. SHORT TERM DEBT LEVY

Repayment of short terms debts of Ceylon Electricity Board that were budgeted for the period July – December 2015 was allowed in this decision. The Commission has approved LKR 8,622.50 Million of short term debt repayment to be added to the capacity charge for the period.

4. GENERATION COSTS

The approved generation dispatch for July - December 2015 is shown in Table 4 below.

Table 4- Dispatch Approved By the Commission for July-December 2015

Month	Code	Unit	Month of year 2015						Total
			Jul	Aug	Sep	Oct	Nov	Dec	
Independent Power Producers (IPPs)									
ASIA Power – 45 MW	DAPL	GWh	19.0	22.5	9.6	2.3	-	-	53.4
AES Kelanitissa – 165 MW	CAES	GWh	-	-	-	-	-	-	-
Barge – 60 MW	DCPL	GWh	-	-	-	-	-	-	-
Heladhanavi – Put. – 99 MW	DPUT	GWh	-	-	-	-	-	-	-
ACE – Embilipitiya – 99 MW	DEMB	GWh	-	-	-	-	-	-	-
Kerawalapitiya – 270 MW	CCKW	GWh	135.6	90.4	173.8	67.2	136.0	22.6	625.5
TOTAL IPP		GWh	154.6	112.9	183.4	69.5	136.0	22.6	678.9
CEB GL's Thermal Generation									
Sapu Old 4 x 18 MW	DSP1	GWh	33.9	33.9	31.1	0.0	0.0	0.0	99.0
Sapu Ext. 8 x 9 MW	DSP2	GWh	38.2	38.2	36.9	38.2	36.9	38.2	226.6
KPS GT 5 x 17 MW	GT16	GWh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KPS GT 1 x 115 MW	GT07	GWh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KPS Combined – 165 MW	CCKP	GWh	50.8	50.8	49.4	35.2	51.3	50.2	287.8
Coal – Puttlam 900 MW	CPUT	GWh	325.4	415.8	314.9	488.1	314.9	488.1	2,347.3
Total CEB GL's Thermal Generation		GWh	448.3	538.7	432.4	561.5	403.2	576.5	2,960.7
Renewable energy									
	NCRE	GWh	127.4	162.4	127.4	150.4	134.4	152.4	854.4
Chunnakam									
Chunnakam	DCHU	GWh	0.2	0.2	0.2	0.2	0.2	0.2	1.2
New Chunnakam	DNCHU	GWh	15.2	15.2	12.0	10.2	14.7	15.2	82.4
Northern Power	DNOR	GWh	0.0	0.3	0.0	0.0	0.0	0.0	0.3
Total Northern generation		GWh	15.4	15.7	12.2	10.4	14.9	15.4	84.0
CEB GL's Hydropower Generation									
		GWh	357.6	302.2	319.2	342.3	370.2	334.7	2026.2
Total Generation		GWh	1,103.3	1,132.0	1,074.6	1,134.1	1,058.6	1,101.6	6,604.2

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

Table 5- Approved Capacity payments to GL by TL for July-December 2015

Item\Month	Unit	Jul	Aug	Sep	Oct	Nov	Dec
System Coincident Peak demand	MW	1965	1953	1971	1981	1923	1912

Capacity Payment

Plant\Month	Unit	Jul	Aug	Sep	Oct	Nov	Dec
Mahaweli	Mn. LKR	797.1	797.1	797.1	797.1	797.1	797.1
Laxapana	Mn. LKR	273.5	273.5	273.5	273.5	273.5	273.5
Other Hydro	Mn. LKR	264.5	264.5	264.5	264.5	264.5	264.5
GTSM	Mn. LKR	82.8	82.8	82.8	82.8	82.8	82.8
DSP	Mn. LKR	177.1	177.1	177.1	199.9	199.9	199.9
DSPX	Mn. LKR	199.3	199.3	199.3	199.3	199.3	199.3
DAPL	Mn. LKR	147.1	147.1	147.1	147.1	147.1	147.1
CCKP	Mn. LKR	300.8	300.8	300.8	300.8	300.8	300.8
CAES	Mn. LKR	42.3	42.3	40.9	43.7	42.3	43.7
DCPL	Mn. LKR	-	-	-	-	-	-
DPUT	Mn. LKR	-	-	-	-	-	-
DEMB	Mn. LKR	-	-	-	-	-	-
CCKW	Mn. LKR	637.8	706.2	683.4	706.2	683.4	478.4
CPUT	Mn. LKR	997.7	997.7	997.7	997.7	997.7	997.7
RENW	Mn. LKR	-	-	-	-	-	-
GT7	Mn. LKR	112.0	112.0	112.0	112.0	112.0	112.0
DCHU	Mn. LKR	10.3	10.3	10.3	10.3	10.3	10.3
DNOR	Mn. LKR	66.9	66.9	64.8	66.9	64.8	66.9
DNCHU	Mn. LKR	75.4	75.4	75.4	75.4	75.4	75.4
TOTAL	Mn. LKR	4,184.7	4,253.0	4,226.7	4,277.3	4,250.9	4,049.5
Depreciation Provision Excluded from CEB GL	Mn. LKR	947.4	947.4	947.4	947.4	947.4	947.4
Return of Equity allowed for CEB GL	Mn. LKR	189.5	189.5	189.5	189.5	189.5	189.5
CEB HQ cost removed ¹	Mn. LKR	254.8	254.8	254.8	254.8	254.8	254.8

Generation Capacity cost

	Unit	Jul	Aug	Sep	Oct	Nov	Dec
Average Generation Capacity cost	LKR/MW	1,613,893	1,659,428	1,630,448	1,647,780	1,683,588	1,588,510

¹ Sum of short term loan allocation to the Generation (added to transmission licensee cost) and finance cost on OPEX allocation to the Generation.

Forecast monthly generation from each generation plant along with approved average cost LKR/kWh is shown in Table 6 below.

Table 6- Approved Energy Payments to GL by TL for July-December 2015

Plant\Month	Unit	Jul	Aug	Sep	Oct	Nov	Dec
Hydro	GWh	357.6	302.2	319.2	342.3	370.2	334.7
	LKR/kWh	-	-	-	-	-	-
GTSM	GWh	-	-	-	-	-	-
	LKR/kWh	-	-	-	-	-	-
DSP	GWh	33.9	33.9	31.1	0.0	0.0	0.0
	LKR/kWh	20.4	20.4	20.5	0.0	0.0	0.0
DSPX	GWh	38.2	38.2	36.9	38.2	36.9	38.2
	LKR/kWh	19.6	19.6	19.6	19.6	19.6	19.6
DAPL	GWh	19.0	22.5	9.6	2.3	0.0	0.0
	LKR/kWh	24.8	24.7	25.4	29.4	0.0	0.0
CCKP	GWh	50.8	50.8	49.4	35.2	51.3	50.2
	LKR/kWh	22.4	22.4	22.4	23.2	20.9	20.9
CAES	GWh	-	-	-	-	-	-
	LKR/kWh	-	-	-	-	-	-
DCPL	GWh	-	-	-	-	-	-
	LKR/kWh	-	-	-	-	-	-
DPUT	GWh	-	-	-	-	-	-
	LKR/kWh	-	-	-	-	-	-
DEMB	GWh	-	-	-	-	-	-
	LKR/kWh	-	-	-	-	-	-
CCKW	GWh	135.6	90.4	173.8	67.2	136.0	22.6
	LKR/kWh	23.9	24.4	23.9	24.7	23.9	28.2
CPUT	GWh	325.4	415.8	314.9	488.1	314.9	488.1
	LKR/kWh	6.2	6.1	6.2	6.0	6.2	6.0
RENW	GWh	127.4	162.4	127.4	150.4	134.4	152.4
	LKR/kWh	18.7	18.4	18.9	18.2	17.9	18.4
GT7	GWh	-	-	-	-	-	-
	LKR/kWh	-	-	-	-	-	-
DCHU	GWh	0.2	0.2	0.2	0.2	0.2	0.2
	LKR/kWh	46.7	46.7	46.7	46.7	46.7	46.7
DNOR	GWh	0.0	0.3	0.0	0.0	0.0	0.0
	LKR/kWh	0.0	43.8	0.0	0.0	0.0	0.0
DNCHU(Jaffna)	GWh	15.2	15.2	12.0	10.2	14.7	15.2
	LKR/kWh	21.0	21.0	21.7	22.2	21.1	21.0

TOTAL generated energy	GWh	1,103.3	1,132.0	1,074.6	1,134.1	1,058.6	1,101.6
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Monthly Energy Cost	LKR Million	11,026	11,197	11,514	9,206	9,740	8,514
Total Energy cost for six-months	LKR Million	61,197					
Total energy dispatch for six-months	GWh	6,604					
Six-month average energy cost	LKR/kWh	9.27					

Above mentioned Generation Costs are based on the assumption of following fuel costs for electricity generation

Table 7- Fuel Costs Relevant for the Period July-December 2015

Fuel	Unit	Cost
Coal	LKR / kg	13.43
Diesel	LKR / L	95.00
Furnace Oil	LKR / L	80.00
Heavy Fuel	LKR / L	80.00
Furnace Oil (low Sulphur)	LKR / L	100.00
Naphtha	LKR / L	74.00

5. 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	1.25
2230-0530	k3	0.75

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 2015

Average Generation Energy cost in each month

	Unit	Jul	Aug	Sep	Oct	Nov	Dec
Generation Energy cost	LKR/kWh	9.99	9.89	10.71	8.12	9.20	7.73
Month 7 - TOU tariffs							
Interval	Energy dispatched (GWh)	k Factor (#)	Adjusted k Factor (#)	Charge (LKR/kWh)			
B1 (day)	627	1	0.99	9.94			
B2 (peak)	250	1.25	1.24	12.42			
B3 (off-peak)	226	0.75	0.75	7.45			

Month 8 - TOU tariffs				
Interval	Energy dispatched (GWh)	k Factor (#)	Adjusted k Factor (#)	Charge (LKR/kWh)
B1 (day)	643	1	0.99	9.84
B2 (peak)	257	1.25	1.24	12.30
B3 (off-peak)	232	0.75	0.75	7.38

Month 9 - TOU tariffs				
Interval	Energy dispatched (GWh)	k Factor (#)	Adjusted k Factor (#)	Charge (LKR/kWh)
B1 (day)	610	1	0.99	10.66
B2 (peak)	244	1.25	1.24	13.32
B3 (off-peak)	220	0.75	0.75	7.99

Month 10 - TOU tariffs				
Interval	Energy dispatched (GWh)	k Factor (#)	Adjusted k Factor (#)	Charge (LKR/kWh)
B1 (day)	644	1	0.99	8.07
B2 (peak)	257	1.25	1.24	10.09
B3 (off-peak)	232	0.75	0.75	6.05

Month 11 - TOU tariffs				
Interval	Energy dispatched (GWh)	k Factor (#)	Adjusted k Factor (#)	Charge (LKR/kWh)
B1 (day)	601	1	0.99	9.15
B2 (peak)	240	1.25	1.24	11.44
B3 (off-peak)	217	0.75	0.75	6.86

Month 12 - TOU tariffs				
Interval	Energy dispatched (GWh)	k Factor (#)	Adjusted k Factor (#)	Charge (LKR/kWh)
B1 (day)	626	1	0.99	7.69
B2 (peak)	250	1.25	1.24	9.61
B3 (off-peak)	226	0.75	0.75	5.76

6. 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 2015

Capacity Charge

	Unit	Month					
		Jul	Aug	Sep	Oct	Nov	Dec
Capacity Charge							
Generation capacity	LKR/MW	1,613,892.76	1,659,427.63	1,630,447.56	1,647,779.93	1,683,587.63	1,588,510.04
Transmission	LKR/MW	330,951.64	333,112.35	329,973.32	328,317.37	338,181.50	340,250.40
Bulk Supply and Operations Business	LKR/MW	737,270.37	742,083.86	735,090.94	731,401.95	753,376.55	757,985.49
BST (C)	LKR/MW	2,682,114.77	2,734,623.85	2,695,511.82	2,707,499.25	2,775,145.68	2,686,745.93
BST (C) 6-Month Weighted average	LKR/MW /month	2,713,469.12					

Energy Charge

	Unit	Month					
		Jul	Aug	Sep	Oct	Nov	Dec

Interval 1 (day)

Transmission Loss Factor B1	%	3.08%	3.08%	3.08%	3.08%	3.08%	3.08%
Generation energy Cost B1	LKR/kWh	9.94	9.84	10.66	8.07	9.15	7.69
BST (E1)	LKR/kWh	10.25	10.14	10.98	8.32	9.43	7.92

Interval 2 (peak)

Transmission Loss Factor B2	%	3.93%	3.93%	3.93%	3.93%	3.93%	3.93%
Generation energy Cost B2	LKR/kWh	12.42	12.30	13.32	10.09	11.44	9.61
BST (E2)	LKR/kWh	12.91	12.78	13.84	10.49	11.89	9.99

Interval 3 (off-peak)

Transmission Loss Factor B3	%	2.18%	2.18%	2.18%	2.18%	2.18%	2.18%
Generation energy Cost B3	LKR/kWh	7.45	7.38	7.99	6.05	6.86	5.76
BST (E3)	LKR/kWh	7.62	7.54	8.17	6.19	7.01	5.89

Table 11- Approved Six-month Average Bulk Supply Tariffs for July-December 2015

	Unit	BST (E)
BST day (E1) 6-Month weighted average	LKR/kWh	9.50
BST peak (E2) 6-Month weighted average	LKR/kWh	11.97
BST off-peak (E3) 6-Month weighted average	LKR/kWh	7.06

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.

7. 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 8.3 of the Decision on electricity Tariffs 2011.

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	Total
Sales to end-use customers (annual)	GWh	3,021	3,460	2,057	1,446	1,287	11,271
Revenue based on approved customer tariffs (annual, excluding FAC)	LKR Million	54,722	53,141	30,634	23,239	25,104	186,840
Coincident peak demand for purchases from Transmission	MW	517	565	380	273	216	
Approved BST for payment on Coincident Maximum Demand	LKR/MW /month	2,713,469	2,713,469	2,713,469	2,713,469	2,713,469	
Amount payable to Transmission on account of Demand (Jul-Dec)	LKR Million	8,419	9,204	6,191	4,438	3,511	31,763
Revenue to be recovered by Transmission through energy charges (Jul-Dec)	LKR Million	14,676	12,574	6,645	5,149	7,588	46,633
Energy sold from Transmission at MV (Jul-Dec)	GWh	1,675	1,953	1,135	800	703	6,267
Approved BST for energy in each TOU interval							
Day (0530-1830)	LKR/kWh	8.71	6.40	5.82	6.40	10.73	
Peak (1830-2230)	LKR/kWh	10.98	8.07	7.34	8.07	13.52	
Off Peak (2230-0530)	LKR/kWh	6.48	4.76	4.33	4.76	7.97	

Notes:

1. Loss adjustment for energy delivered to LECO is continue to done as per the section 8.3 of Decision on Electricity Tariffs - 2011
2. The generation prices from the Single Buyer are applicable only for the period July 2015 to December 2015, after which the correction mechanisms stated in the Methodology shall be applicable. Similarly, other corrections would be effective at the time intervals stated in the Methodology.