



Your ref:

My ref: DGM(CS&RA)/TRF/TF 2024-2026

Date: February 26, 2024

Director General,
Public Utilities Commission of Sri Lanka,
6th Floor, BOC Merchant Tower,
No.28, St, Michael's Road,
Colombo 3.

DDA (CS)
D/L
26/02/24

**Revenue Requirements of the Transmission Licensee
Transmission License No. EL/T/09-002
Issued to Ceylon Electricity Board**

This has reference to Actg. GM, CEB letter no. DGM(EM)/RA/MYTF-2024-2026 dated 2023-11-29 regarding the above.

Transmission Licensee of CEB wishes to forward its revenue requirements for the 2024-2026 multi-year tariff period herewith by considering the following revisions to the model.

In our initial submission, the rate of return on assets was 12.87%. However, subsequent updates require this rate to be adjusted to 10.19%. Consequently, a revised submission has been prepared to reflect this updated rate of return on assets.

Upon reviewing the revised submission, we have observed that the calculated Transmission Revenue Cap in the model yields a value lower than the Transmission Operating Expenditure (OPEX). The Y factor given in the model is incorrect and we suspect that a technical error in the model. This discrepancy suggests that the current revenue allocation may not be sufficient to sustain operations in the upcoming years. Hence, it is understood that the formula for the calculation of the Transmission Revenue Cap is not acceptable. This was already informed PUCSL verbally and through email dated 2024-02-23.

Considering this context and the urgency of submission of the revenue requirement, only the forecasted OPEX and calculated Capital Remuneration, are forwarded herewith for your consideration.

We kindly request your attention to this matter and invite any further queries or clarifications regarding the same.

Upon clarification and rectifying the technical issues in the model, you are kindly requested to inform us of the suitable Revenue Cap for Transmission to update the same in the BST models prepared for 2024 in order to resubmit the same.

Your prompt consideration in addressing this concern before finalizing the Transmission Revenue Cap in the model would be greatly appreciated, please.

Yours faithfully

CEYLON ELECTRICITY BOARD



Eng. KVSM Kudaligama
DGM (CS&RA)

Eng. (Mrs.) KVSM Kudaligama

Deputy General Manager

(Corporate Strategy & Regulatory Affairs)

Copy to:

1. *Chairman, PUCSL* - fi & na pl.
2. *Ms. Chathurika Wijesinghe, member PUCSL* - fi & na pl.
3. *Mr. Douglas N. Nanayakkara, member PUCSL* - fi & na pl.
4. *Mr. SG Senaratne, member PUCSL* - fi & na pl.
5. *Mr. Ranjith Kaluthanthirige, member PUCSL* - fi & na pl.
6. *Chairman, CEB* - fi pl.
7. *Addl. GM (CS)* - fi pl.
8. *Addl. GM (Tr. NWO)* - fi pl.
9. *FM (SM&BSO)* - fi pl.

Assumptions

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Rate of return on asset

Parameter	Unit	Amount
Average interest rate	%	15.00%
Corporate Tax	%	30%
Cost of Debt	%	10.50%
Rate of return on equity	%	10.00%
Total Debt as on Dec 31, 2023	Million LKR	315,448
Total Equity, as on Dec 31, 2023	Million LKR	498,297
Weighted Average Cost of Capital	%	10.19%

Total CEB assets ,as on 01.Jan 2023	Million LKR	1,062,344
Total CEB debt ,as on 01.Jan 2023	Million LKR	276,742
Total CEB equity ,as on 01.Jan 2023	Million LKR	354,427

Calculated Revenue Summary

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	Unit	2024	2025	2026
Transmission Allowed Revenue				
Transmission Revenue Cap	LKR million	-	-	-
Bulk Supply and Operations Business Allowed Revenue				
BSOB Revenue Cap	LKR million	1,399.5	1,399.5	1,399.5
Total Revenue Summary				
Transmission	LKR million	-	-	-
BSOB	LKR million	1,399.5	1,399.5	1,399.5
TOTAL	LKR million	1,399.5	1,399.5	1,399.5

General Assumptions

	Unit	2022	2023	2024	2025	2026
Marginal Corporate profit Tax rate	%	24%	24%	30%	30%	30%
Real rate of return on Assets (Defined by PUCSL)	%	10.19%				

Transmission Revenue

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All expenditure and revenues are in constant January 2024 cost levels, excluding inflation, escalation and currency deprecia

Revenue Cap calculation		2023	2024	2025	2026
Unit					
Total energy input to the grid [at 132kV or 220 kV level]*	GWh	15,065	16,484	17,341	18,243
Total energy delivered to DLs and Transmission Customers	GWh	12,736	15,920	16,748	17,619
Power delivered [coincident peak demand at delivery points to DLs]	MW	2,468	2,608	2,744	2,886
Note: The above forecasts should match the forecasts of DLs					
OPEX	LKR million	10,283.1	11,924.5	12,361.1	12,894.2
Capital Remuneration					
Depreciation (CAPEX)	LKR million	4,486.2	4,656.2	6,951.3	8,747.3
Return on Assets (CAPEX)	LKR million	15,086.7	21,924.9	38,965.7	61,469.2
Total Capital Remuneration	LKR million	19,572.9	26,581.0	45,917.0	70,216.5
Revenue Requirement Summary					
OPEX	LKR million	10,283.1	11,924.5	12,361.1	12,894.2
Capital Remuneration	LKR million	19,572.9	26,581.0	45,917.0	70,216.5
Transmission Revenue Cap	LKR million				

Revenue per MWh	LKR/MWh	-	-	-	-
Revenue per kW	LKR/kw-year	-	-	-	-

Bulk Supply and Operations Business Revenue

Revenue Cap calculation		2023	2024	2025	2026
Unit					
OPEX	Mn Rs.	1,879.7	2,061.5	2,110.6	2,234.6
BSOB Revenue Cap	Mn Rs.	1,399.5	1,399.5	1,399.5	1,399.5

Allowed OPEX

Index	Actual	Forecast			Forecast at constant January 2024 cost levels, excluding inflation, escalation and currency depreciation		
		2022	2023	2024	2025	2026	2026
Transmission							
Transmission OPEX							
O&M expenses	21,831.9	10,283.12	11,924.50	12,361.13	12,894.20		
Overhead Cost I (TL)	14,522.8	3,570.30	5,777.95	5,851.27	6,063.13		
Overhead Cost II (CEB Corporate cost allocation)	2,218.6	2,052.88	3,220.97	3,371.92	3,507.93		
	5,160.56	4,649.93	2,965.59	3,137.93	3,323.14		
Total Transmission OPEX	21,831.9	10,283.12	11,924.50	12,361.13	12,894.20		
Bulk Supply and Operation Business							
BSOB OPEX							
BSOB OPEX	9,322.7	1,879.7	2,061.5	2,110.6	2,234.6		
BSOB Service OPEX							
BSOB Service OPEX	9,322.7	1,879.69	2,061.48	2,110.62	2,234.63		

Allowed Capital Remuneration

Unit	Forecast			Forecast at constant January 2024 cost levels, excluding inflation, escalation and currency depreciation		
	2022	2023	2024	2025	2026	2026
Transmission						
CAPEX						
Minor CAPEX						
- Replacement CAPEX	96.5	351.7	1,429.3	1,055.0	941.0	
- Reinforcement CAPEX						
- Quality driven CAPEX						
- Other CAPEX	96.5	351.7	1,429.3	1,055.0	941.0	
Major CAPEX						
- Replacement CAPEX	27,545.8	26,969.1	-	79,476.2	36,171.1	
- Reinforcement CAPEX						
- Quality driven CAPEX	27,545.8	26,969.1		79,476.2	36,171.1	
- Other CAPEX						
Total CAPEX	27,642.3	27,320.9	1,429.3	80,531.2	37,112.0	
Capital Remuneration						
Gross Asset Value (beginning of the year - 1st of January, only fixed assets)	171,795.7	194,339.62	247,153.3	334,121.8	589,396.2	
Fully depreciated Assets (end of the year - 31st December, only fixed assets, value of the assets that either removed from the gross value of the assets or valued at 1 LKR every year, simulated by asset or group of asset every year - provide sheet with the simulation)	34,381.3	1,719.1	1,005.0	1,895.3	1,990.0	
Gross Asset Value (end of the year - 31st December, only fixed assets)	194,339.62	247,153.3	334,121.8	589,396.2	787,448.4	
Accumulated Depreciation (end of year - 31st December, only fixed assets)	45,117.3	47,884.4	50,735.6	55,791.6	62,548.9	
WTP (end of year - 31st December, only fixed assets, should be consistent with annual CAPEX forecast)	29,283.0	27,211.9	87,344.2	176,638.4	162,930.2	
Net Asset Value (beginning of the year - 1st of January, only fixed assets)	97,998.85	122,974.9	173,021.4	257,138.8	507,357.1	
Depreciation (end of the year - 31st December) (only fixed assets) (simulated by asset or group of asset every year - add sheet with the simulation)	4,403.47	4,486.2	4,656.2	6,953.3	8,747.3	
Net Asset Value (end of the year - 31st December, only fixed assets)	122,974.87	173,021.4	257,138.8	507,357.1	698,652.1	
Real rate of Return on Assets	10.19%	10.19%	10.19%	10.19%	10.19%	

Cash Flow for Firm Transmission (Real terms)

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Calculate

At constant January 2024 cost levels, excluding inflation, escalation and currency depreciation

	Actual	Forecast	2023	2024	2025	2026
Assets						
Working capital	LKR million		1,636.1	1,690.0	-	-
Fixed assets	LKR million		173,021.4	257,138.8	507,357.1	698,652.1
Total Assets	LKR million		174,657.5	258,828.8	507,357.1	698,652.1
Capital						
Total long term Debt	LKR million		2,013.9	2,339.0	2,339.0	2,339.0
Equity	LKR million		172,447.9	256,489.8	505,018.1	696,313.1
Total Capital	LKR million		174,425.7	258,828.8	507,357.1	698,652.1
EBIT						
Revenue (should a be a proxy of the revenue for the transmission grid business only)	LKR million		20,279.90	-	-	-
- Operation costs	LKR million		21,831.9	11,924.5	12,361.1	12,894.2
- Depreciation	LKR million		4,403.5	4,656.2	6,951.3	8,747.3
+ Other income	LKR million		-	-	-	-
EBIT	LKR million		5,510.6	16,580.7	19,312.4	21,641.5
Taxes						
Interest on Long term debt (provide sheet with simulation)	LKR million		561.2	1,788.91	1,677.2	1,570.42
Coporate tax	LKR million		-	-	-	-
Free Cash Flow						
Earnings	LKR million		7,163.4	18,369.6	20,989.6	23,211.9
+ Interests*(1-t)	LKR million		426.5	1,252.2	1,174.0	1,099.3
+ Depreciations	LKR million		4,403.5	4,656.2	6,951.3	8,747.3
- Capital investment	LKR million		29,379.5	88,773.6	177,693.4	163,871.2
- Working capital variations	LKR million		501.1	53.9	1,690.0	-
Free Cash Flow	LKR million		- 32,214.0	- 101,288.7	- 188,867.7	- 177,236.5
Residual Value	LKR million		-	-	-	698,652.1
Cash Flow for Firm	LKR million		- 124,425.7	- 101,288.7	- 188,867.7	521,415.6

At constant January 2024 cost levels, excluding inflation, escalation and currency depreciation

	2022 (actual)	2023 (estimate)	2024 (forecast)	2025 (forecast)	2026 (forecast)
Total O&M - TL					
Direct O&M Expenses - TL					
Personnel	1,908,920,405	1,890,575,112	2,749,234,165	2,714,277,163	2,844,385,056
materials	188,979,186	1,212,499,976	2,323,793,300	2,441,808,640	2,473,493,572
Accomadation	65,477,389	109,208,750	126,432,500	128,994,625	138,338,656
Transport & communication	227,545,920	205,309,389	322,498,739	344,653,039	368,517,989
Finance cost					
Other cost	12,061,938,392	152,711,481	205,989,700	221,540,898	238,394,826
Total	14,452,761,291	3,570,304,707	5,727,948,404	5,851,274,364	6,063,130,100
2022 (actual)	2023 (estimate)	2024 (forecast)	2025 (forecast)	2026 (forecast)	
Total Overhead I for TL					
Personnel	798,909,962	910,382,593	1,106,850,359	1,169,538,265	1,228,427,907
materials	125,892,235	742,389,457	1,435,286,830	1,510,941,191	1,533,776,798
Accomadation	21,065,922	67,195,949	125,640,652	114,008,126	123,209,860
Transport & communication	156,547,434	270,182,873	454,616,553	486,629,446	526,110,832
Finance cost	5,120,341	10,300,000	1,030,000		
Other cost	1,111,075,738	62,429,714	107,540,924	90,805,008	96,404,064
Total	2,218,611,331	2,062,880,586	3,230,965,318	3,371,922,037	3,507,931,461
2022 (actual)	2023 (estimate)	2024 (forecast)	2025 (forecast)	2026 (forecast)	
Total Overhead II for TL					
Personnel	994,475,469	1,264,745,331	1,340,566,764	1,439,502,218	1,548,049,899
materials	276,133	4,635,222	25,731,380	26,999,399	28,330,703
Accomadation	103,773,131	93,904,971	152,280,870	158,505,612	165,016,591
Transport & communication	113,474,677	201,117,702	484,509,499	504,926,200	526,255,351
Finance cost	599,327	449,742	836,793	1,154,696	1,573,932
Other cost	347,421,429	1,647,660,112	705,825,532	727,600,598	757,349,415
Other items - Depreciation	65,353,707	93,507,349	86,339,954	92,707,314	97,073,640
Other items - Other Income	3,362,680,111	970,415,079	42,850,144	44,459,610	46,147,106
Return on Investment	172,501,260	373,496,743	212,349,330	230,992,984	245,633,580
Total (Mn Rs)	5,160,555,244	4,649,934,251	2,965,699,978	3,137,929,411	3,323,136,006
2022 (actual)	2023 (estimate)	2024 (forecast)	2025 (forecast)	2026 (forecast)	
BSOB OPEX					

CAPEX

Work in Progress Projects		2022 (Actual)	2023 (Estimate)	2024 (Forecast)	2025 (Forecast)	2025 (Forecast)
Financially committed Ongoing Projects (Source: Transmission Projects/Projects Division)						
Clean Energy Absorption Transmission Project - Project Management Unit 01		19.60	40.00	1,921.68	11,531.31	5,766.05
Clean Energy Absorption Transmission Project - Project Management Unit 02		0.34	10.00	2,310.90	14,189.00	7,094.50
Sampur - Kappatturai Transmission Development Projects (Preparatory Works)		-	1,435.61	7,584.49	815.30	-
Power System Reliability Strengthening Project - Operational Unit 1		-	-	1,584.66	9,507.60	4,763.60
Power System Reliability Strengthening Project		-	-	548.55	3,297.26	1,648.63
Power System Reliability Strengthening Project		-	-	1,110.73	6,503.99	3,251.99
Power System Reliability Strengthening Project		89.00	-	4,264.32	806.61	310.89
National Transmission and Distribution Network Development & Efficiency Improvement Project		20,604.05	9,592.00	4,954.00	-	-
Construction of Second 220kV Cable from Karwatapihiya SS to Colombo Port SS		-	-	7,599.00	2,902.00	-
Colombo City Transmission Network Development Project - Phase 02		-	-	2,754.00	19,280.00	12,852.00
Green Power Development and Energy Efficiency Improvement Investment Program (Tranche 2) and Supporting Electricity Supply Reliability Improvement Project		6,117.84	14,291.52	5,100.59	-	-
Habarana Veyangoda Transmission Line Project under Trincomalee Coal Power Project		715.00	1,600.00	2,065.00	-	-
Sub total of Major Projects WIP		27,545.83	26,969.13	41,798.92	68,833.07	35,677.66
Financially committed Ongoing Projects (Source: Transmission Construction Projects/Projects Division)						
Koimala - New Poipiliya 220/132kV FC TL		4.00	11.21	1,714.00	-	-
Construction of Dambulla - New Habarana 220/132kV FC TL		-	-	853.00	1,000.00	-
Reconstruction of Medagama Ampara 132kV TL		26.10	10.50	1,032.00	125.00	-
Augmentation of Athurugiriya - Kolonnawa 132kV TL		5.97	3.12	20.00	-	-
Supervision of Siyambalanduwa-Monaragala 132kV TL		58.20	8.50	630.00	100.00	-
Construction of Poonaryan-Kilinochchi 200kV TL - ROW clearing		26.02	6.82	150.00	-	-
Reconstruction of Kolonnawa-Pannipiliya 132kV TL		18.13	2.65	641.00	-	-
ROW clearing Victoria Rantabe 220kV TL		6.07	-	71.00	1,500.00	1,500.00
Refurbishment of Mannar - Nadukudah 220kV Transmission Line		-	0.05	965.00	50.00	-
Construction of Wagawatta Grid Substation		788.33	130.69	168.37	-	-
Extension of Kelanihisa 132kV GIS		518.80	5.87	5.40	-	-
Construction of Transformer Foundation at Koluigoda GS		25.48	32.77	6.00	-	-
Construction of 02 nos. of 33 kV Feeder Bays at Balangoda Grid Substation		4.19	0.12	62.90	-	-
Augmentation of 01 nos. of 132 kV Feeder Bays at Athurugiriya GS		26.57	0.62	4.50	-	-
Construction of 01 nos. of 132 kV Feeder Bays at Ampara Grid Substation		5.53	0.25	93.69	-	-
Construction of 01 nos. of 220 kV Feeder Bays at Victoria PS Switch Yard		1.03	12.61	437.43	200.00	20.00
Construction of Randeniya Switch Yard		220.71	13.61	50.00	-	-
33kV Protection Relay Replacement		1.03	1.24	51.00	-	-
Augmentation work at Kirindiwela GS		1.03	2.10	5.43	-	-
Construction of 02 nos. of 220 kV Feeder Bays at New Anuradhapura GS		-	-	372.70	200.00	29.00
Augmentation at Churnakam GS		-	-	355.42	150.00	117.58
Augmentation at Aniyakanda GS		-	-	180.32	120.00	57.66
Augmentation at Kukuliganga Switch Yard		-	-	212.74	93.26	-
Augmentation at Mathugama GS		-	-	431.40	146.60	-
Sub Total of Transmission Construction projects		1,737.19	242.73	8,533.30	3,694.86	1,724.26

Collector GSS at Pooneryn and 35 km, 220 kV Zeebra double circuit line	-	-	52.50		2,340.10
Construction of Kappalthurei - Sampur 220kV Transmission Line	-	-			1,794.45
N Collector Habarana 172 Km (Construction of Ncollector - Vavuniya 400kV Transmission Line (initially operated at 220kV) & Construction of Vavuniya - New Habarana 400kV Transmission Line including New Habarana 400kV Switching Station)	-	-	258.00		7,385.00
Waunathu oddamavadi 16 Km (To Connect 100 MW solar in Batticaloa to Valachchanel Grid substation)	-	-	24.00		934.50
Hambanthota 6 km (Collector Grid substation and 8 km 220 kV line to Hambanthota GSS for absorbing 304 MW of solar in Hambanthota)	-	-	9.00		833.00
Mannar 250 MW (Augmentation of Nadukuda 220/33kV GS for 200MW Wind & Construction of Nadukuda 2 GSS for 100MW wind)	-	-	-		1,169.00
Siyambalanduwa 100MW Solar PP - Monaragala GSS 132kV Tr. Line	-	-	-		1,560.30
Sub total of Transmission Planning	29,283.02	27,211.36	37,012.02	104,120.48	125,528.31
Grand Total of WIP			87,344.24	176,638.41	162,930.23

	2022 (actual)		2023 (estimate)		2024 (forecast)		2025 (forecast)		2026 (forecast)		2027 (forecast)		2028 (forecast)	
	CAPEX													
	Asset life													
	2022 (actual)	2023 (estimate)	2024 (forecast)	2025 (forecast)	2026 (forecast)	2027 (forecast)	2028 (forecast)	2022 (actual)	2023 (estimate)	2024 (forecast)	2025 (forecast)	2026 (forecast)	2027 (forecast)	2028 (forecast)
Minor Capex														
- Replacement CAPEX	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- Reinforcement CAPEX	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- Quality driven CAPEX	96.46	351.73	1,429.35	1,054.98	940.96	940.96	940.96	-	-	-	-	-	-	-
- Other CAPEX	96.46	351.73	1,429.35	1,054.98	940.96	940.96	940.96	-	-	-	-	-	-	-
Total	96.46	351.73	1,429.35	1,054.98	940.96	940.96	940.96	-	61.48	242.59	391.08	516.99	1.58	6.25
Proposed Minor Capex														
Minor CAPEX														
- Quality driven CAPEX														
3.22 SCADA System with related equipment														
Capex1														
Capex2														
Capex3														
Capex4														
- Replacement CAPEX														
Capex1														
Capex2														
Capex3														
- Reinforcement CAPEX														
Capex1														
Capex2														
Capex3														
- Other CAPEX														
3.1 Free hold Land	96.46	351.73	1,429.35	1,054.98	940.96	940.96	940.96	-	61.48	242.59	391.08	516.99		
3.1 Buildings		87.08	130.00											
3.2 Civil Works		19.79	21.00	11.10	11.21	11.21	11.21	40.00					1.58	
3.3 Hydro Power Station Account			120.00	130.00	100.00	100.00	100.00	40.00					6.25	
3.4 Combined Cycle Power Stations Account														
3.5 Diesel Power Stations Account														
3.6 Gas Turbine Power Stations Account														
3.7 Coal Power Station Account														
3.8 Sundry Assets for Generation Power Plant														
3.9 Wind Power Station Account														
3.10 Generator Set for the Emergency Power														
3.11 Expenditure of ERP														
3.12 Software	7.58	4.84	9.00	10.00	12.00	12.00	12.00	5.00	2.48	4.28	6.28	7.17		
3.13 Switchyards														
3.14 Boundary Metering			65.00	36.00	39.00	39.00	39.00	5.00		13.00	20.20	28.00		
3.15 Mobile Diesel Generators														
3.16 Free hold Motor Vehicles		40.16	286.00					14.00	2.87	23.30	23.30	23.30		
3.17 Right of Use Assets - Motor Vehicles														
3.18 Leasehold Motor Vehicles		12.58	15.50					14.00	0.90	2.01	2.01	2.01		
3.19 Radio Communication sets		0.75	0.85	1.05	2.05	2.05	2.05	5.00	0.15	0.22	0.43	0.84		
3.20 SCADA System with related equipment			206.50	600.00	500.00	500.00	500.00	7.00		29.50	115.21	186.64		
3.21 Office and Other Equipment	8.80	47.55	70.13	51.74	45.35	5.00	5.00	5.00	11.27	25.30	35.64	42.95		
3.22 Computers & IT related Equipment	10.88	41.25	195.90	111.14	122.61	122.61	5.00	5.00	10.43	49.61	71.83	94.18		
3.23 Other Sundry Assets Account		0.00	0.70	0.35	0.40	0.40	0.40	5.00	0.00	0.14	0.21	0.29		
3.24 Furniture and Fitting	1.30	2.66	13.64	10.50	11.14	11.14	5.00	5.00	0.79	3.52	5.62	7.59		
3.25 Machinery and Tools	67.89	95.07	275.63	93.11	97.20	97.20	5.00	5.00	32.59	87.72	106.34	112.20		
3.26 Electrical Vehicle Charging Unit														
3.27 Solar System			20.00					5.00		4.00	4.00	4.00		

**Financially Committed Transmission Projects
(Source: Generation and Transmission Planning
Division)**

50MW/ 50MWh Battery Energy Storage System

LKR Million	
10,037.05	10
	1,003.70