ශ්‍රී ලංකා මහජන උපයෝගිතා කොමිෂන් සභාව
இலங்கைப் பொதுப் பயன்பாடுகள் ஆணைக்குழு
PUBLIC UTILITIES COMMISSION OF SRI LANKA

ඔබේ අංකය உமது இல. Your No.	අපේ අංකය எமது இல. Our No.	දිනය திகதி Date
	PUC/LIC/2022/TL/93	03rd October 2022

Authorized officer
For License No. EL/T/09-002
Additional General Manager - Transmission
Ceylon Electricity Board,
Sir Chittampalam A. Gardiner Mawatha,
Colombo 02.

Re: Submission of the Draft Long Term Generation Expansion Plan 2023 - 2042

This refers to the letter dated 14th September 2022, received from Actg. General Manager with the submission of Long Term Generation Expansion Plan (LTGEP) 2023 - 2042 seeking the approval of the Commission.

The Commission require following information in order to approve the Long Term Generation Expansion Plan 2023 - 2042 according to Section 43 of the Sri Lanka Electricity Act No. 20 of 2009.

Demand Forecast

You are required to clarify/ justify the followings related to the demand forecast.

1. Non consideration of Railway Electrification project and Electrification of Transport sector in forecasting the future demand
2. Non consideration of Railway Electrification project Under the transport sub sector in MAED Model demand projection
3. Basis of forecasting a constant T&D loss of 7.25% from 2035 onwards
4. Non consideration of prospective change in demand due to tariff increase (Off grid solutions, conservations, Demand Side management, Industrial Sector contractions due to energy price & etc.)

Study Parameters

You are required to clarify/justify followings related to the study parameters.

1. The impact of using a low exchange rate (201.5 LKR/USD) to the optimization process.
2. Will the biomass plants get selected due to low fuel cost if the current exchange rate is applied?

Renewable Generation

You are required to clarify/justify followings related to the adoption of renewable generation.

1. Viability of implementing the already awarded renewable generation facilities

06.වන මහල, ලංකා බැංකු වෙළඳ කුළුණ, 28. ශාන්ත මයිකල් පාර, කොළඹ 03.
06 ஆவது மாடி, இலங்கை வங்கி வர்த்தகக் கோபுரம், 28, சென் மைக்கல் வீதி, கொழும்பு 03.
Level 06, BOC Merchant Tower, 28, St. Michael's Road, Colombo 03, Sri Lanka.
Tel : +94 11 2392607/8 Fax : +94 11 2392641 E-mail : info@pucsl.gov.lk Web : www.pucsl.gov.lk
සභාපති தலைவர் Chairman +94 11 2392606
අධ්‍යක්ෂ ජනරාල් பணிப்பாளர் நாயகம் Director General +94 11 2392606

Thermal Power Candidates

You are required to clarify/justify followings related to the thermal power candidates.

1. Source of the cost details mentioned in the Table 4.1
2. Reason for having higher net capacities than the nameplate capacities in some of the candidate thermal plants in Table 4.1
3. It is mentioned in the plan that all new natural gas fired power plants should have the capability to operate from synthetic fuels such as Hydrogen, to satisfy the policy requirement of achieving carbon neutrality by 2050. Doesn't the imposition of this requirement increase the capital cost of the technology?

Fuel Prices

You are required to clarify/justify following in related to the fuel prices.

1. Weights used in deriving the weighted averages of Crude oil, LNG and Coal prices used in the planning study
2. Non consideration of current fuel prices which are very high compared to the fuel prices used in the planning study
3. Weights used in deriving the weighted averages of auto diesel, fuel oil and naphtha prices used in the planning study

Reference Case

You are required to clarify/justify followings related to the reference case

1. Reference Case should be the case with the lowest present value cost unconstrained by policy guidelines. But the Reference Case of the plan has constraints; achieving 60 % RE by 2030, maintaining 60% RE beyond 2030 and no coal fired plant additions beyond 2030.
2. Does the present value cost come down further if the above constrains are also removed? If yes provide the revised reference case.

Base Case

You are required to clarify/justify followings related to the base case

1. The open cycle operation of Kerawalapitiya NG -1 and Kerawalapitiya NG - 2 is to be commenced in 2023 and 2024 respectively, which seems not realistic when the current status of the two plants is considered
2. Moragolla Hydro plant is to be commenced its operations in 2024, which seems not realistic when the current status of the two plants is considered.
3. A 20MW/50MWh Battery Energy Storage Facility should be available at the beginning of 2024, which seems not realistic as it needs at least 1.5 years to implement such facility.

Implementation Schedule

You are required to clarify/justify followings mismatches in the implementation timing of the generation plants in the base case and implementation plan

1. 20 MW/50 MWh Standalone Battery Energy Storage is planned to be commissioned at the beginning of 2024 in the base case. But as per the implementation plan the same plant to be completed at the end of 2024.
2. 80 MW/320 MWh Standalone Battery Energy Storage is planned to be commissioned at the beginning of 2026 in the base case. But as per the implementation plan the same plant to be completed at the end of 2026.
3. 100 MW/400 MWh Standalone Battery Energy Storage is planned to be commissioned at the beginning of 2027 in the base case. But as per the implementation plan the same plant to be completed at the end of 2027.
4. Four 350MW Pumped Storage Plants are planned to be commissioned at the beginning of 2029, 2030, 2031 and 2032 respectively in the base case. But as per the implementation plan the same four plants to be completed at the mid of 2030, end of 2030, end of 2031 and end of 2032 respectively.

General

Further you are required to clarify/justify/provide the followings.

1. Implementation plans of the proposed hydro power capacity extensions
2. Impact of delaying the required LNG infrastructure with associated natural gas distribution network which is expected from year 2025 onwards
3. Why the Battery Energy Storage System proposed for energy shifting purpose should have minimum 4-hour duration of storage?
4. Basis of considering a maximum allowable limit of 65% for the System Non-Synchronous Penetration
5. Percentage of externality costs internalized into the capital costs of each generation technology in the form of additional capital investment
6. Input data files of the OPTGEN/SDDP model of the planning study (Shall be submitted before 14th October 2022)
7. Another case (Revised base case) developed inserting the current fuel prices and considering a realistic implementation plan for the committed generation plants.

Damitha Kumarasinghe
Director General