

QUARTER 02
2025



RENEWABLE GENERATION REPORT



Public Utilities Commission of Sri Lanka

APR 2025 - JUN 2025

Introduction:

This report offers comprehensive insights into the quarterly performance of renewable energy generation in Sri Lanka. The data and analysis presented herein aim to guide investment decisions within the country's electricity sector. The main focus is on Non-Conventional Renewable Energy (NCRE) sources, including Mini Hydro, Wind, Solar PV, Biomass, and Municipal Solid Waste.

Most solar PV systems tend to be either utility-scale installations with a capacity usually above 1 megawatt (MW) or rooftop PV typically below 1 MW. Residences may be limited to small systems usually up to 20 kilowatts (kW), while larger public, commercial, and industrial buildings may have systems with a capacity as large as 1 MW or even more. Land based wind power projects have been implemented so far while offshore wind projects are considered in the pipeline.

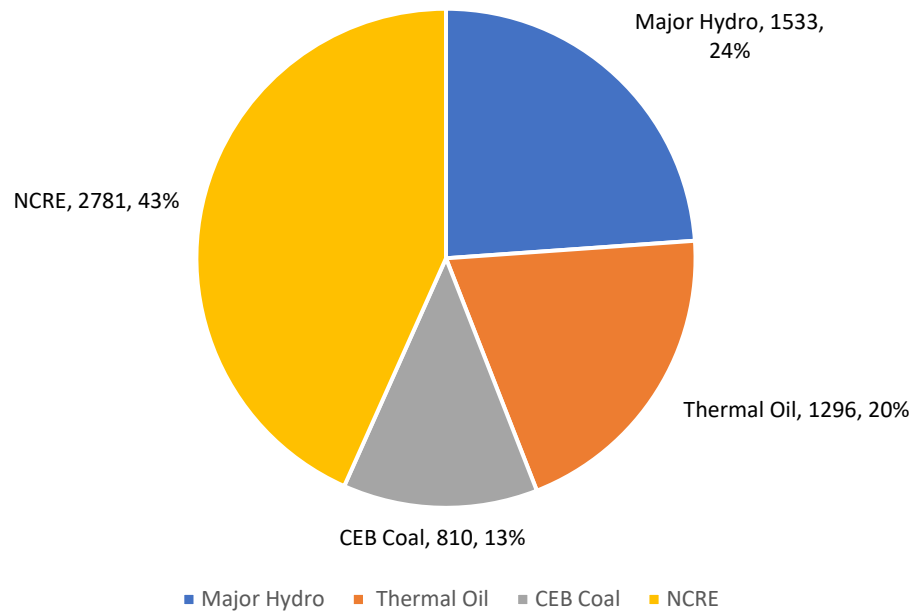
In 2019, the Minister of Power, Energy, and Business Development published the National Energy Policy & Strategies of Sri Lanka, prepared after reviewing and revising the National Energy Policy and Strategies of Sri Lanka published in the Gazette Extraordinary No. 1553/10 of 10.06.2008. The primary objective of the energy policy is to ensure energy security through supplies that are cleaner, secure, economical, and reliable, and to provide convenient, affordable energy services to support the socially equitable development of Sri Lanka.

Policy guidelines such as the 'General Policy Guidelines on the Electricity Industry' as required under Sri Lanka Electricity Act No. 20 of 2009 statutorily required to be issued for each sub-sector, are expected to be prepared and issued, based on this national energy policy.

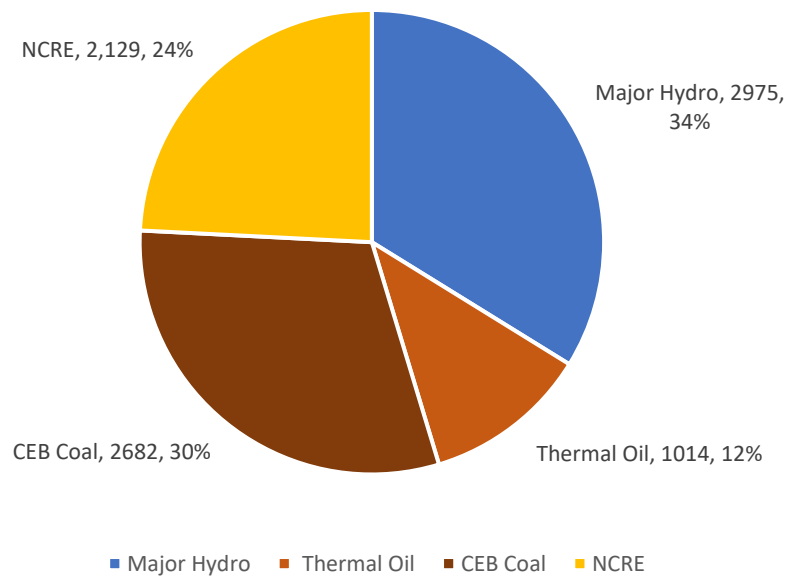
Sri Lanka's power sector development is carried out based on the Long-term generation expansion plan (LTGEP) prepared by the Transmission Licensee (ie. Ceylon Electricity Board (CEB)) and approved by the Public Utilities Commission of Sri Lanka (PUCSL). LTGEP is a rolling plan prepared in every two years incorporating the changes introduced by the varying economic and technical parameters used in the planning process.

**Target: To increase the renewable energy (RE) share
from 50% to 70% by 2030.**

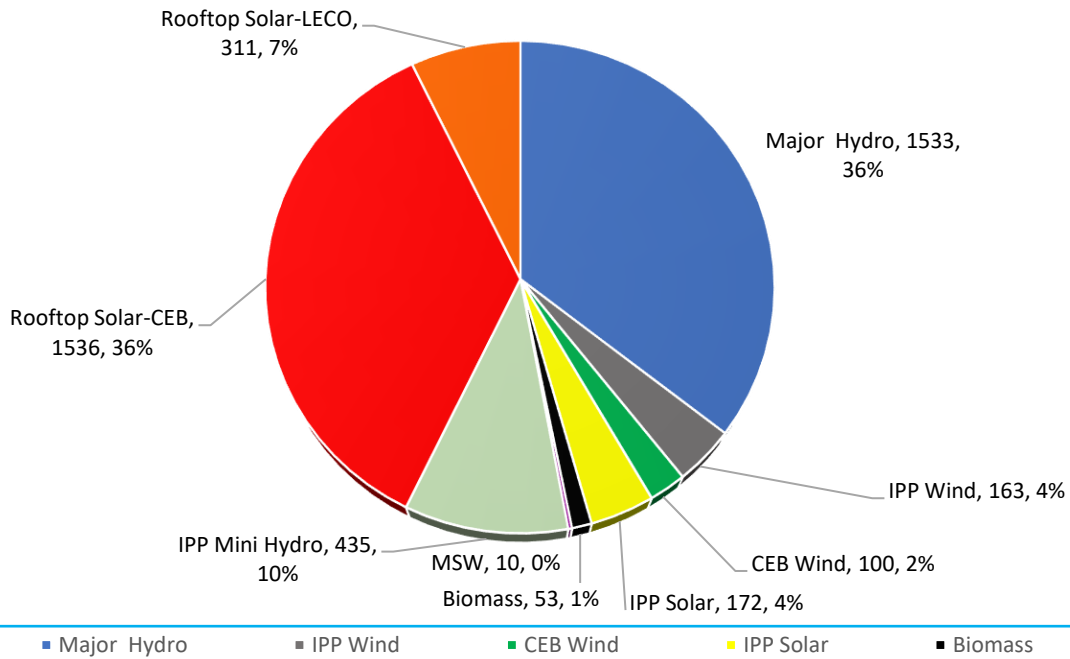
Installed Capacity (MW) by Source - as at 30.06.2025



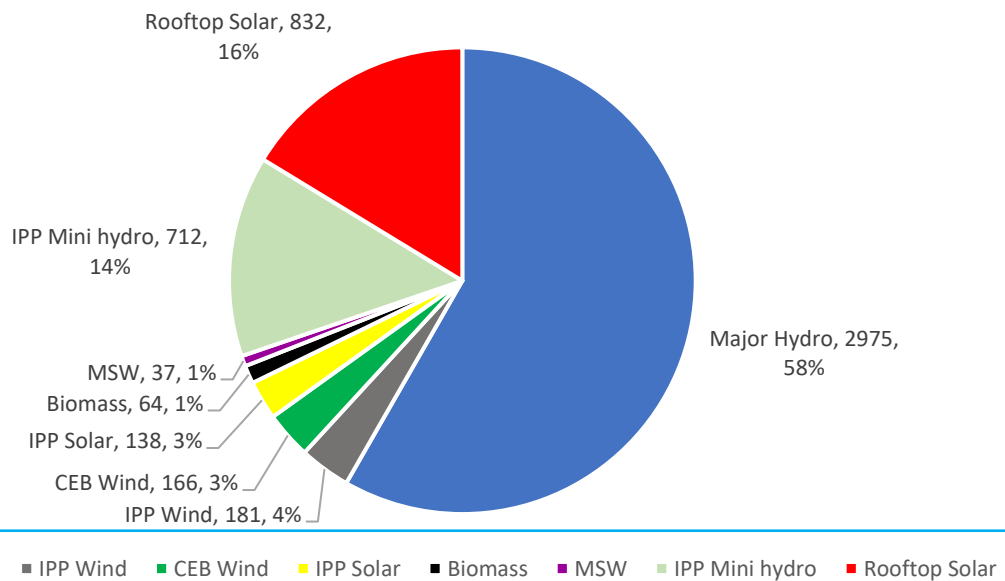
Annual Cumulative Generation by Source (GWh) as at 30.06.2025



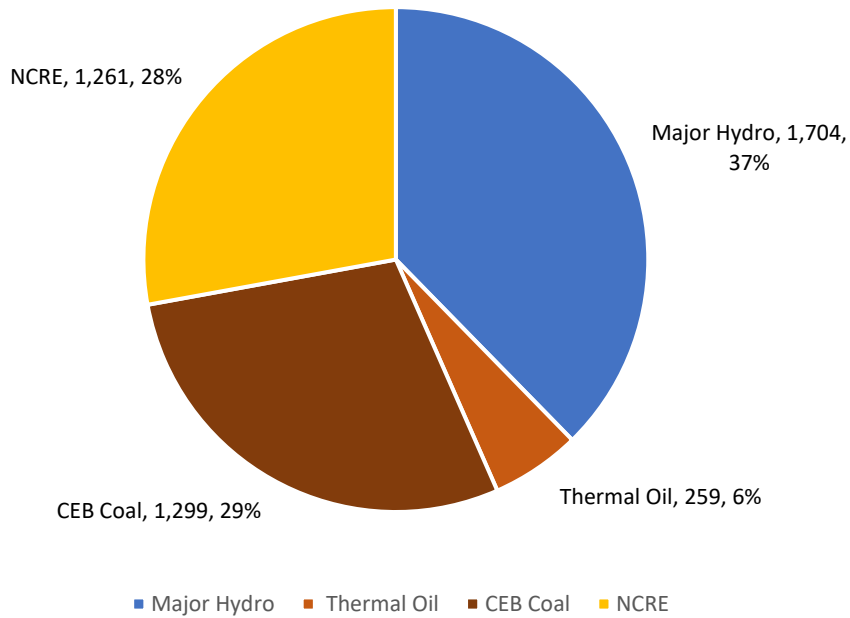
Renewable Energy Capacity (MW) as at 30.06.2025



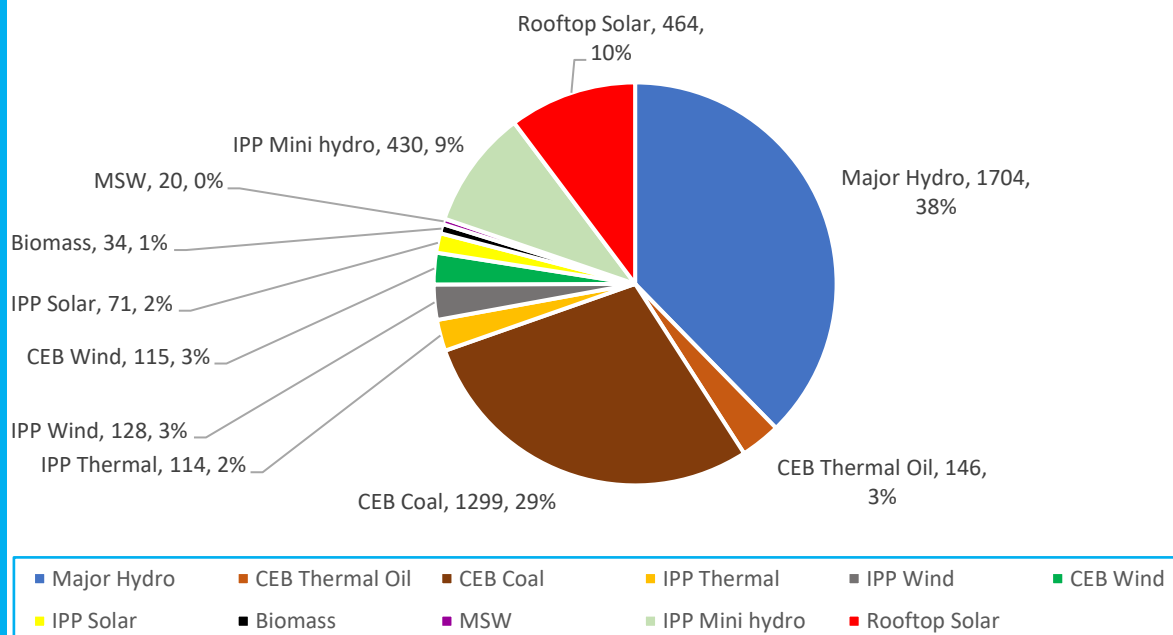
Annual Cumulative Renewable Generation (GWh) 01.01.2025 to 30.06.2025



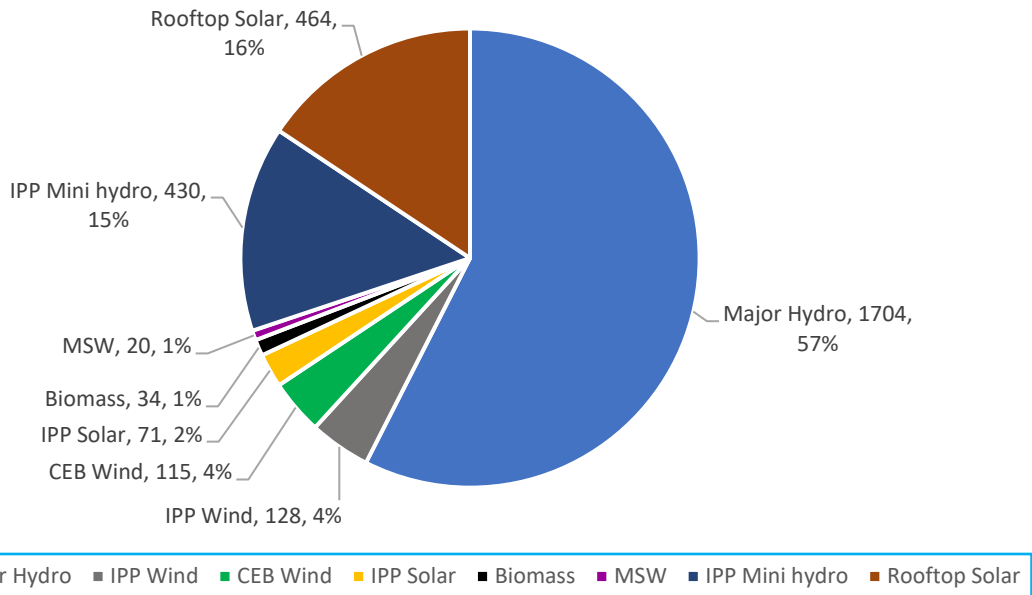
Generation by Source (GWh) - 2nd Quarter 2025



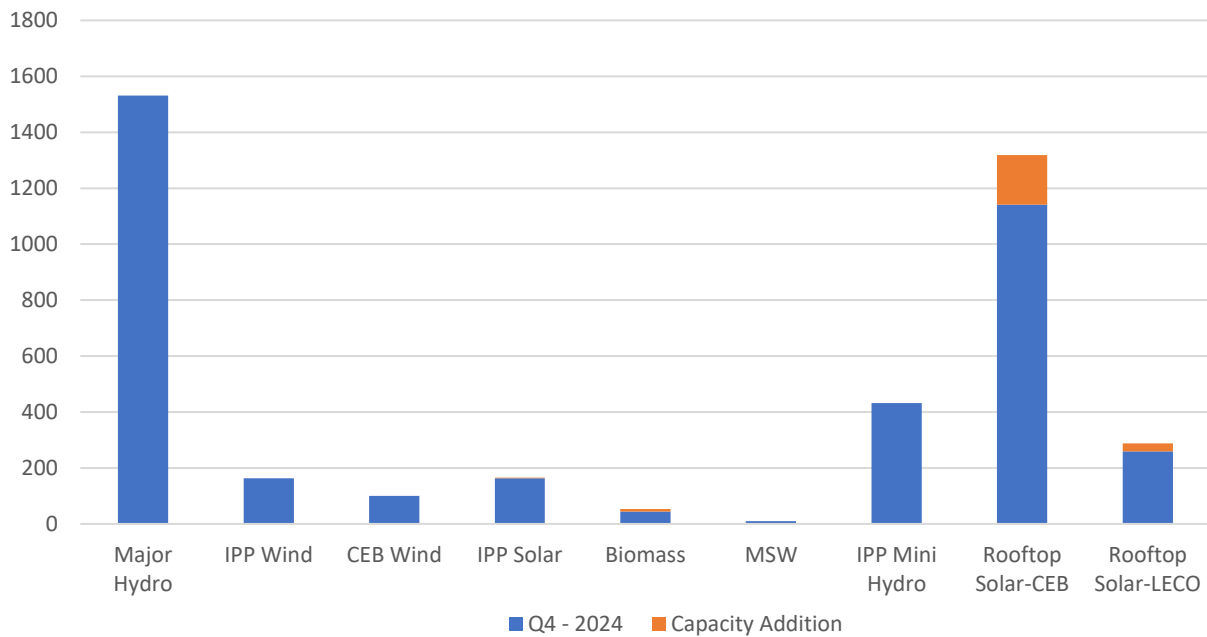
Generation Mix by Technology (GWh) - 2nd Quarter 2025



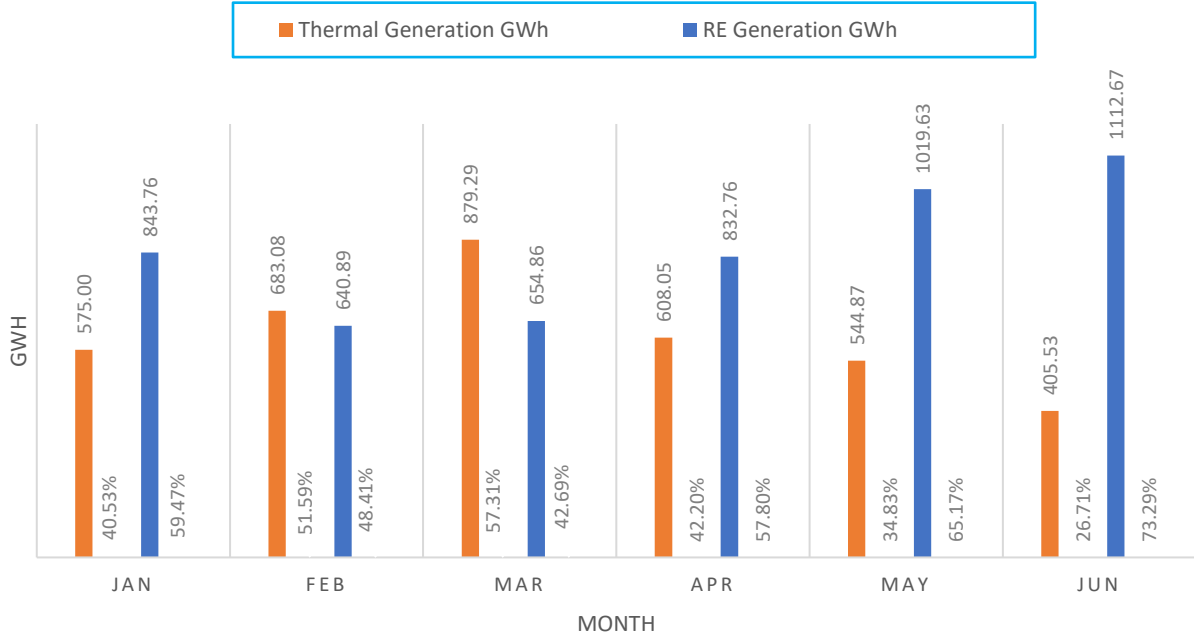
Renewable Generation Mix by Technology (GWh) - 2nd Quarter 2025



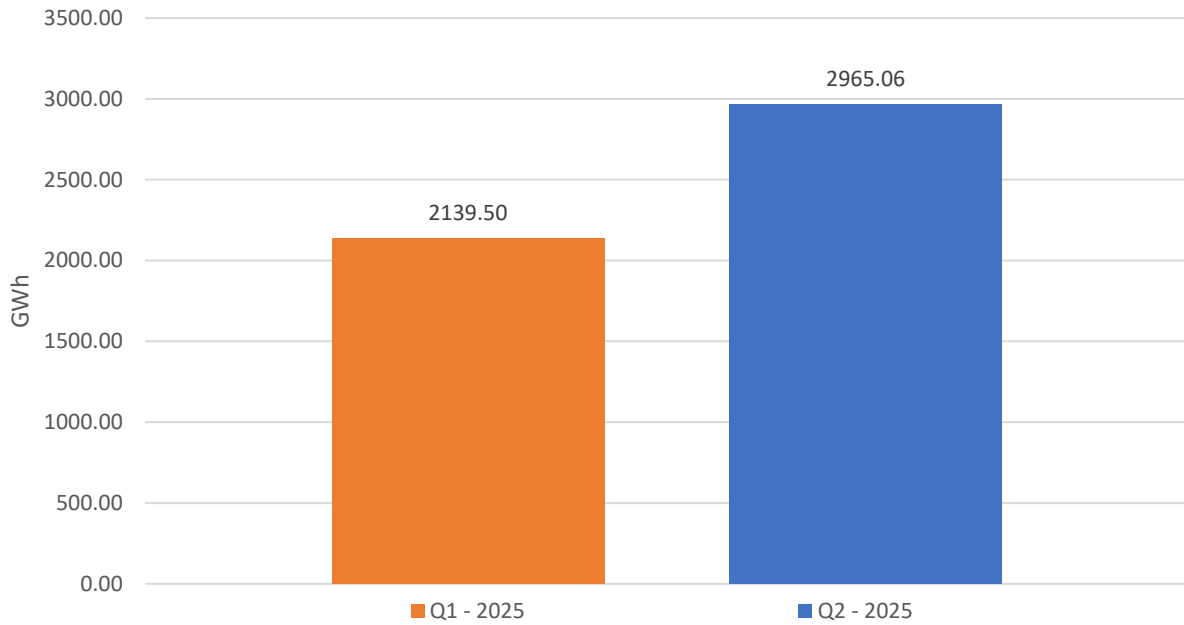
Capacity Addition by compared to 1st Quarter of 2025



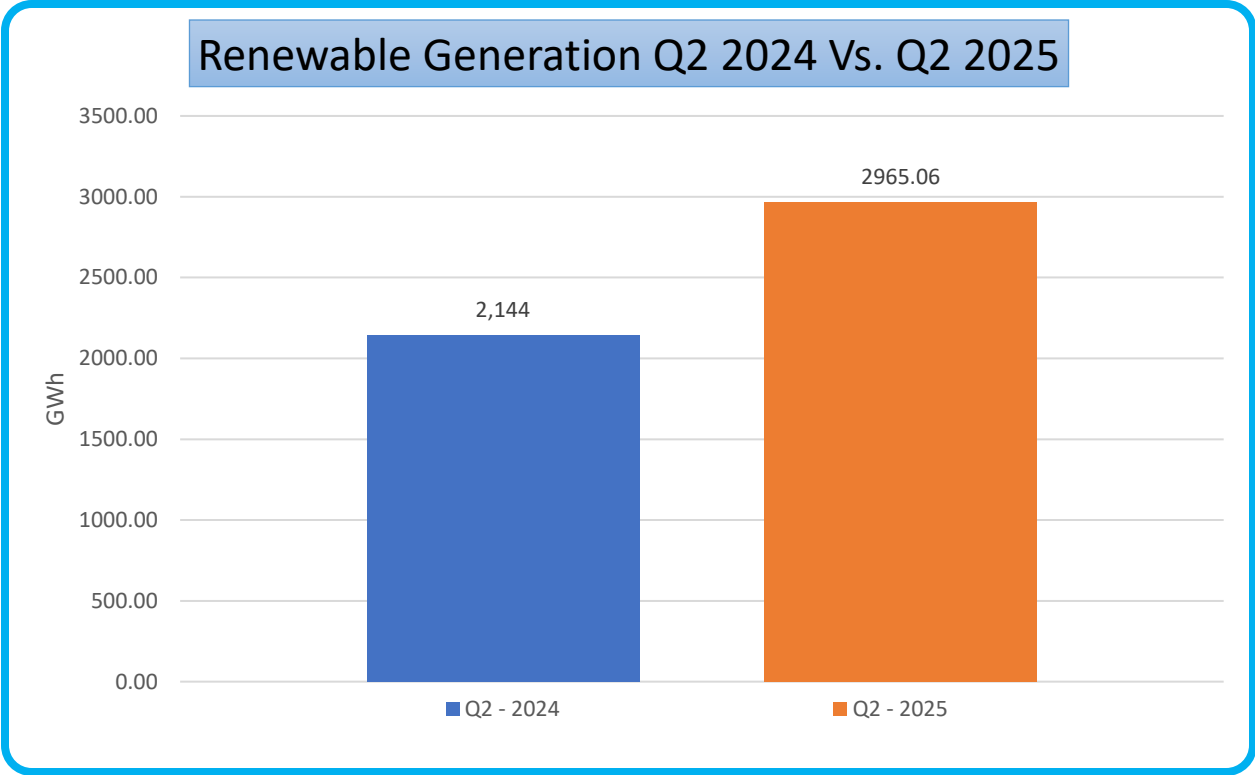
MONTHLY GENERATION COMPARISON - 2025



Renewable Generation Q1 2025 Vs. Q2 2025



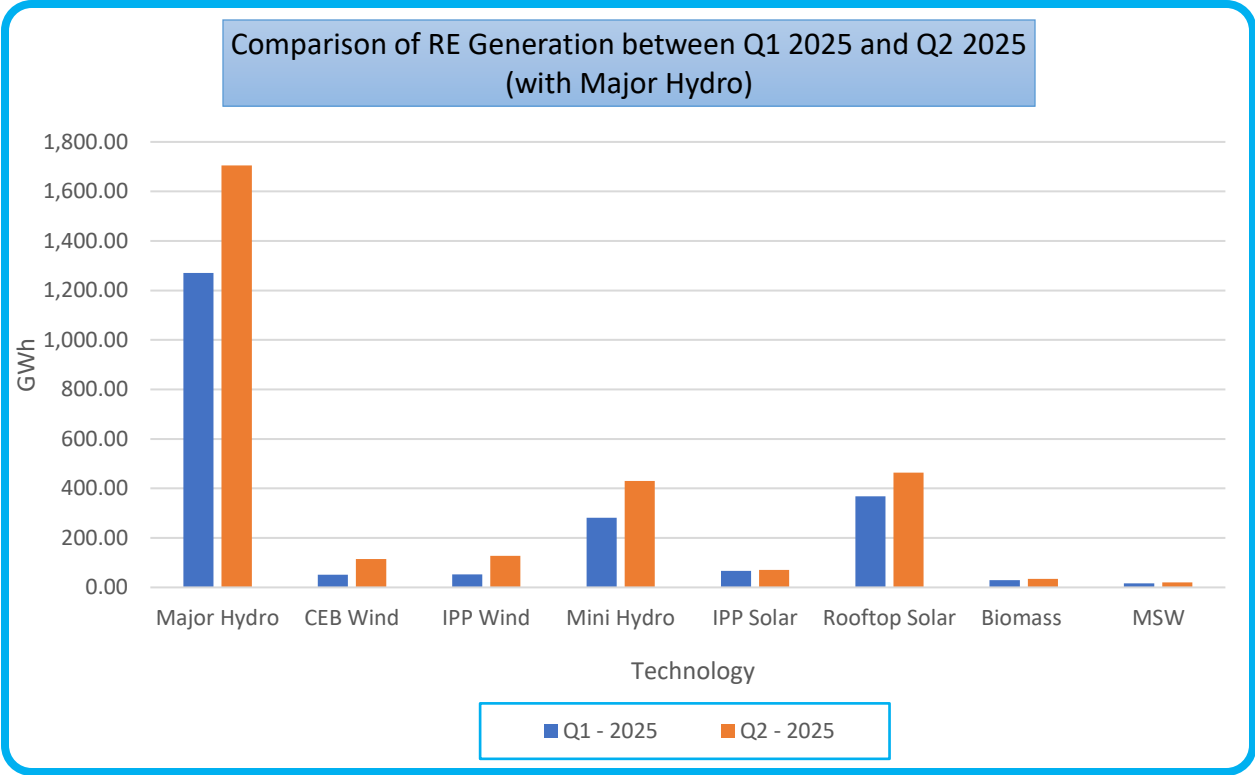
RE Generation in Q2 - 2025 increased by 38.58% as compared to Q1 – 2025



RE Generation in Q2 - 2025 increased by 38.28% as compared to Q2 – 2024

Renewable Generation (GWh) – 1st Quarter 2025 Vs 2nd Quarter 2025

Technology	Q1 - 2025	Q2 - 2025	Deviation (%)
Major Hydro	1,271.02	1,704.45	34%
CEB Wind	51.82	114.53	121%
IPP Wind	52.80	127.72	142%
Mini Hydro	281.49	429.67	53%
IPP Solar	67.16	70.69	5%
Rooftop Solar	368.11	463.65	26%
Biomass	29.63	33.97	15%
MSW	16.67	20.36	22%

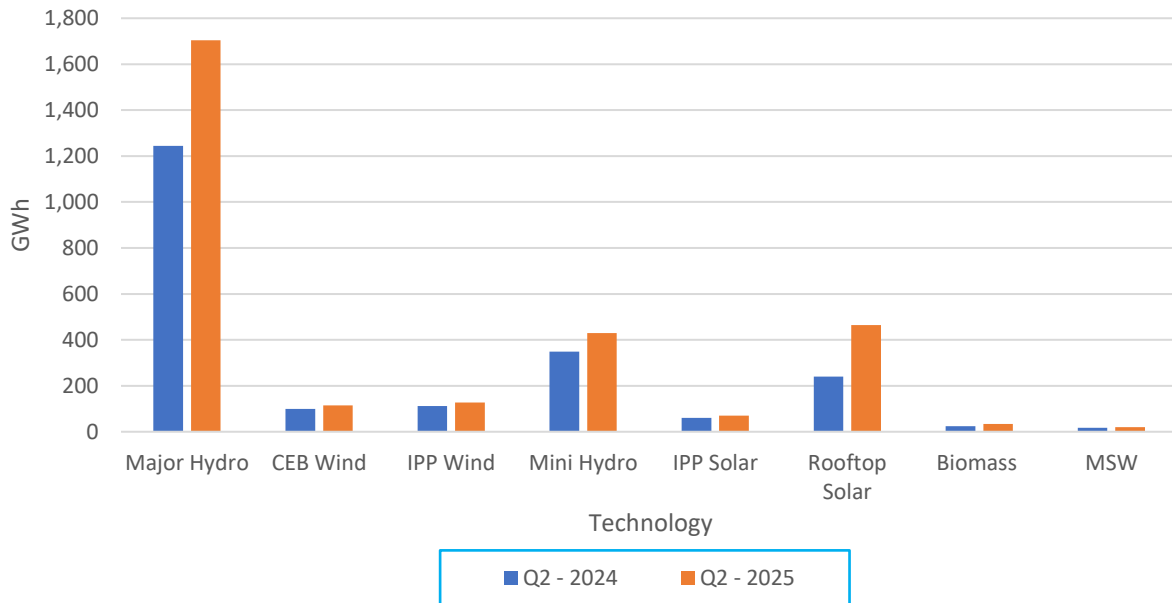


Renewable Generation Comparison

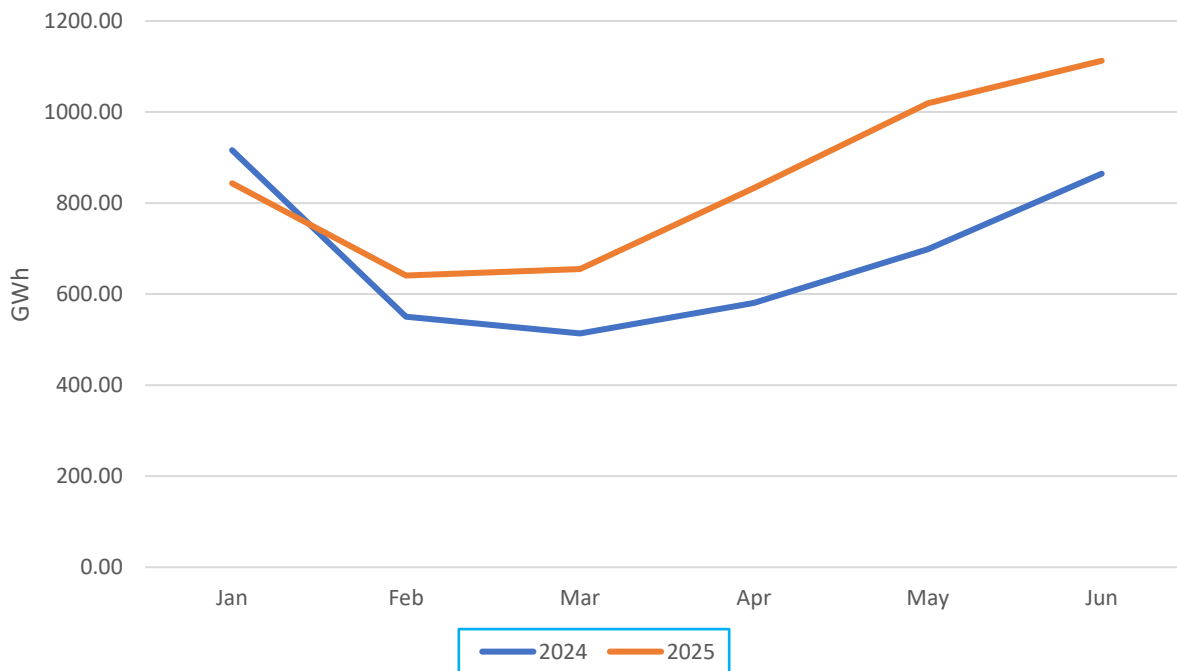
Renewable Generation (GWh) – 2nd Quarter 2024 vs 2nd Quarter 2025

Technology	Q2 - 2024	Q2 - 2025	Deviation
Major Hydro	1,244	1,704	37%
CEB Wind	100	115	15%
IPP Wind	111	128	15%
Mini Hydro	349	430	23%
IPP Solar	60	71	18%
Rooftop Solar	240	464	94%
Biomass	24	34	43%
MSW	17	20	17%

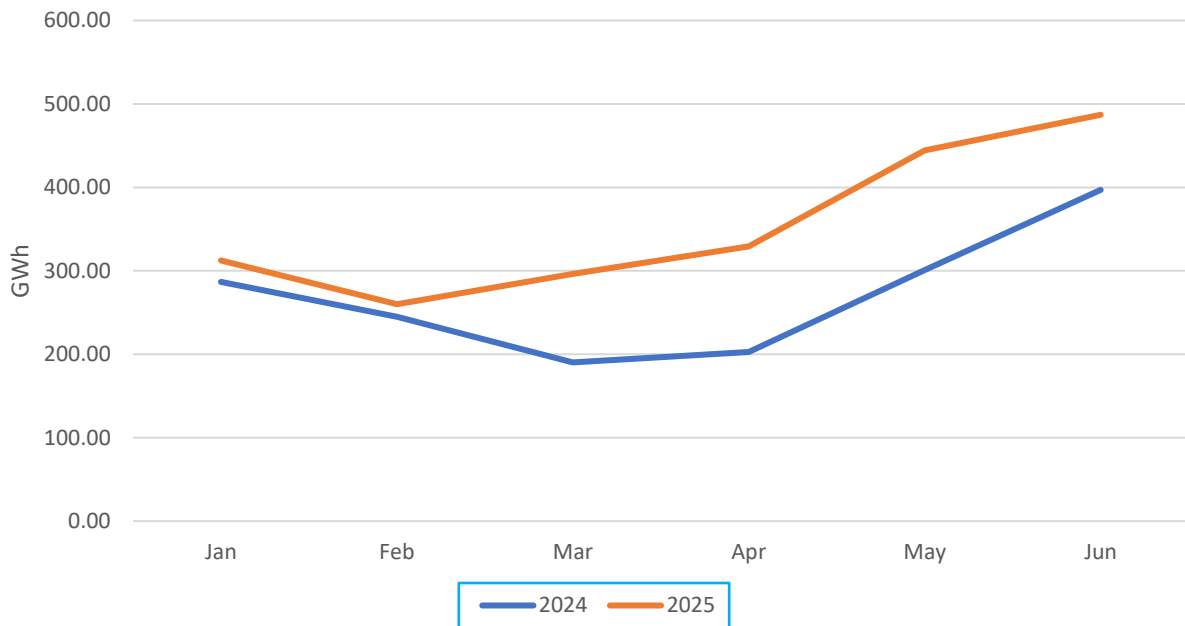
Comparison of RE Generation between Q2 2024 and Q2 2025 (with Major Hydro)



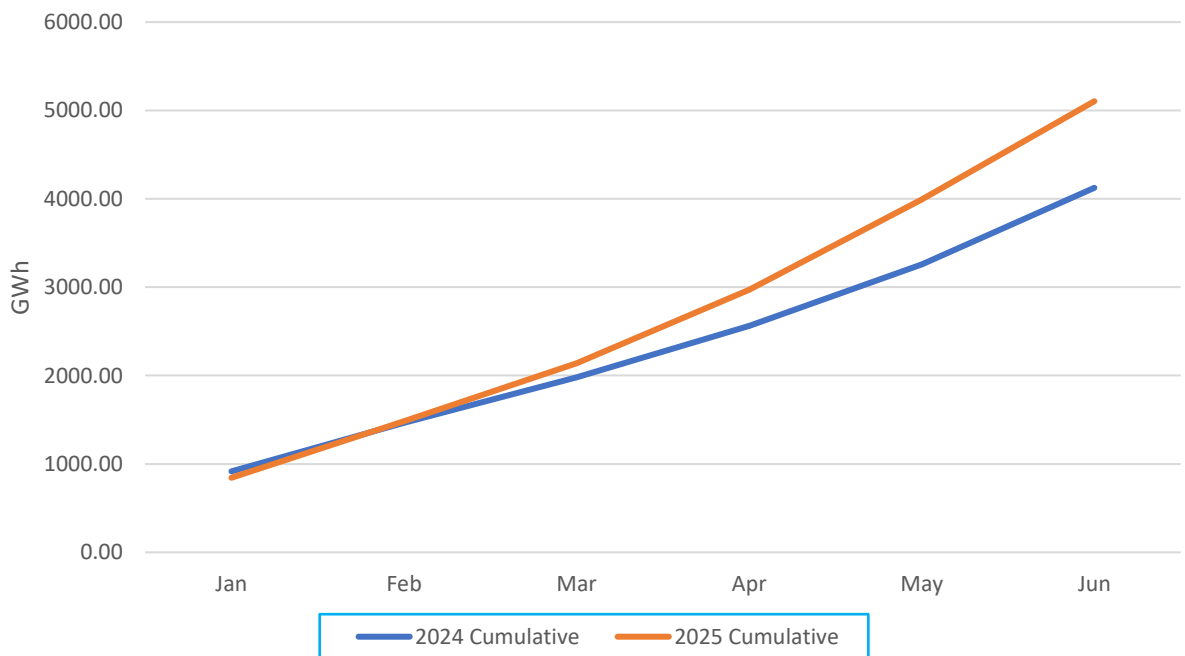
Monthly Renewable Energy Generation - 2024 vs 2025



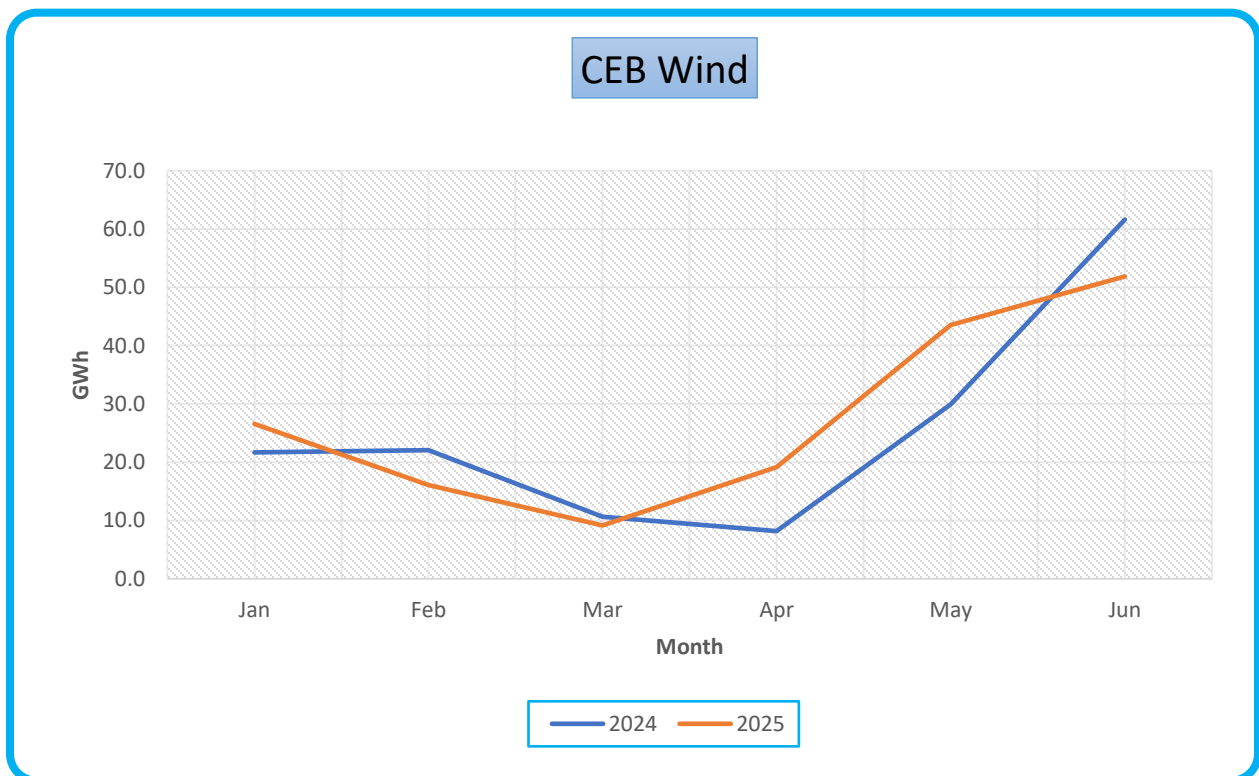
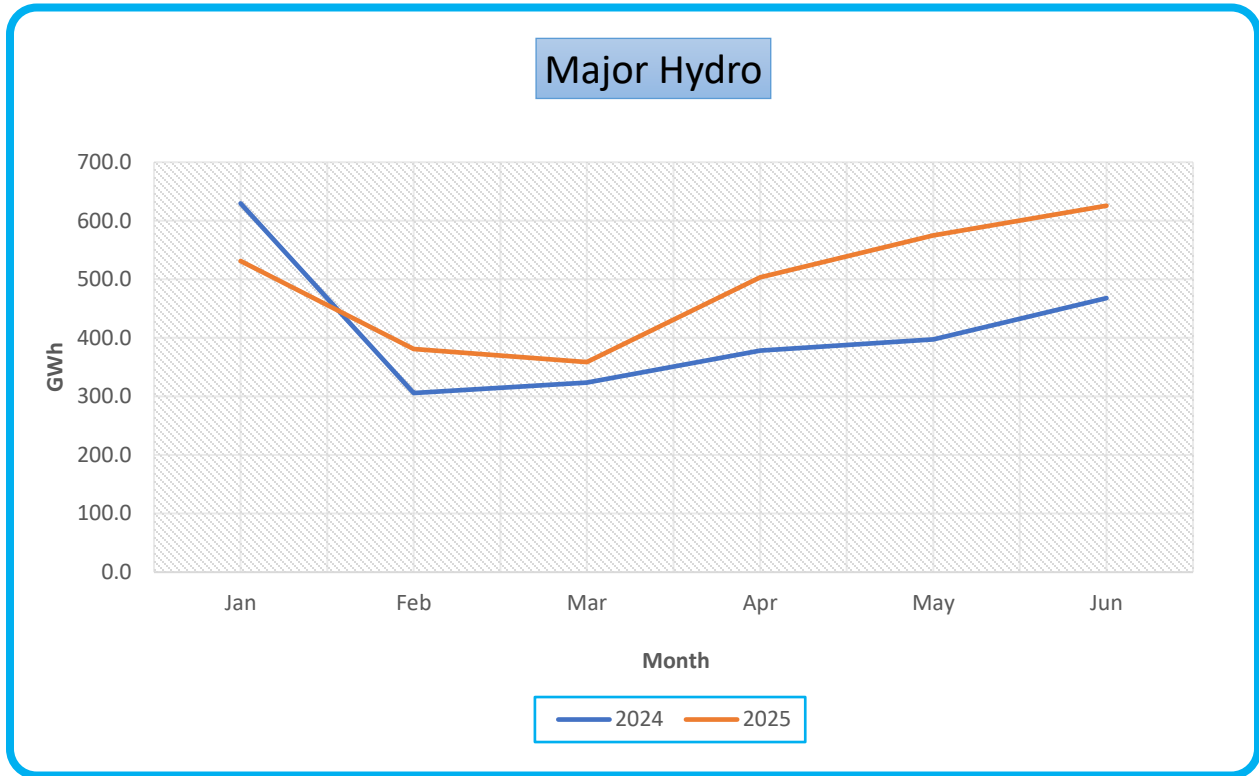
Monthly Renewable Energy Generation (without Major Hydro) - 2024 vs 2025



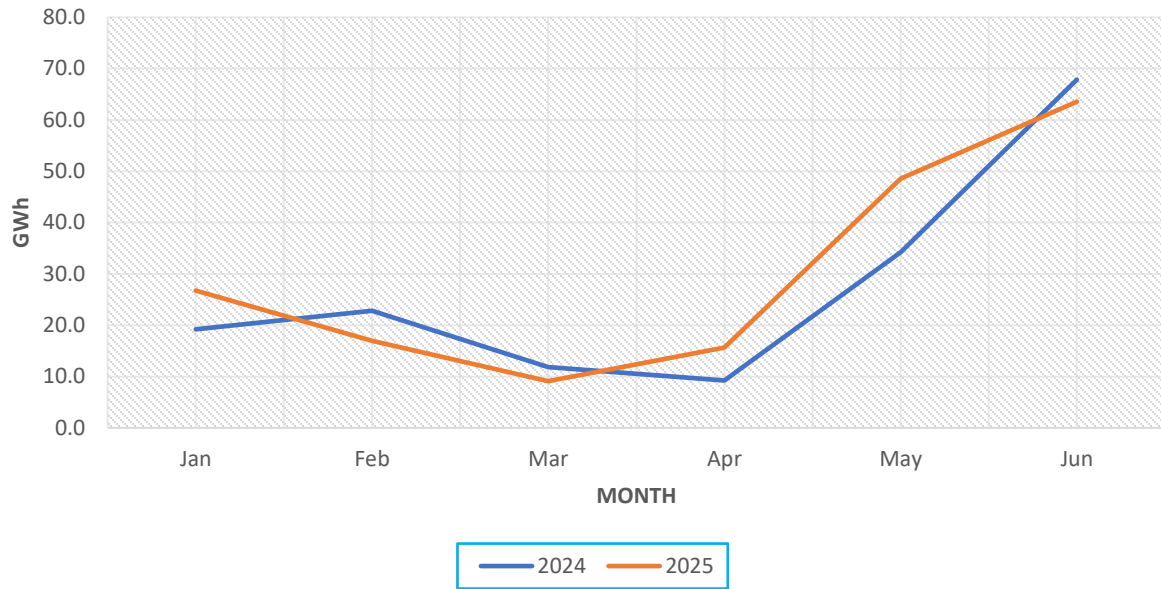
Monthly Cumulative RE Generation - 2024 vs 2025



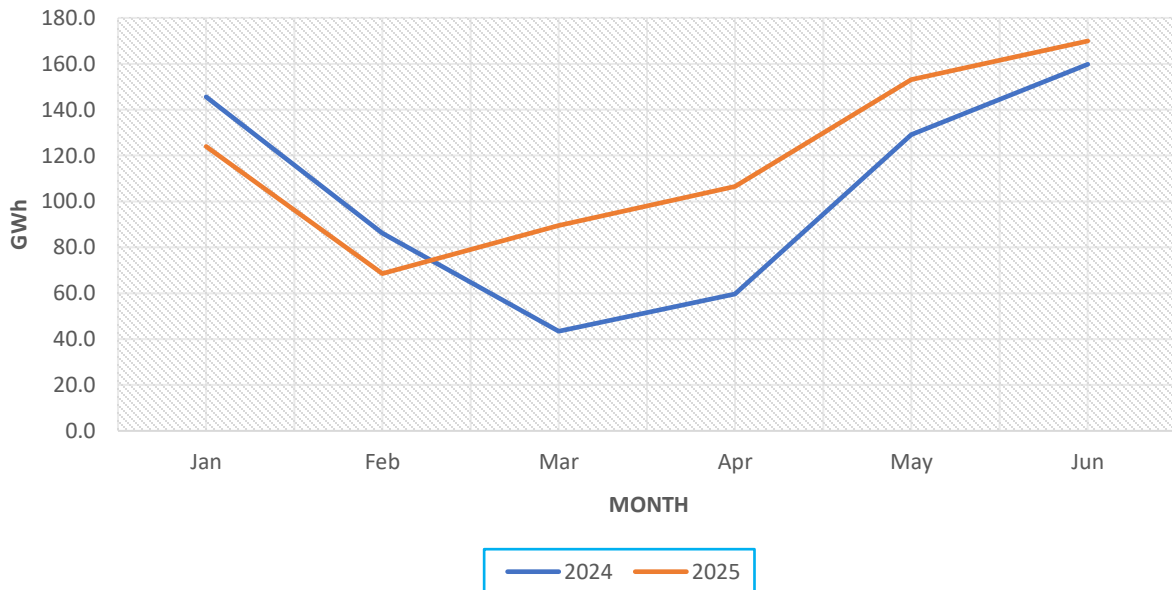
Monthly Variation of RE Generation - 2024 vs 2025 – Technology Wise



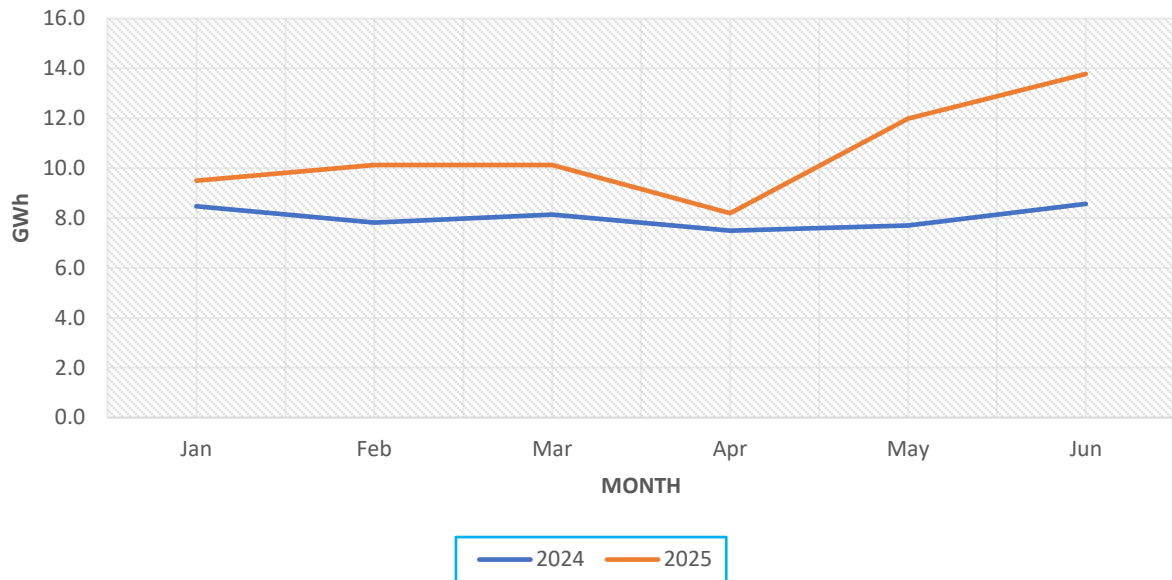
IPP Wind



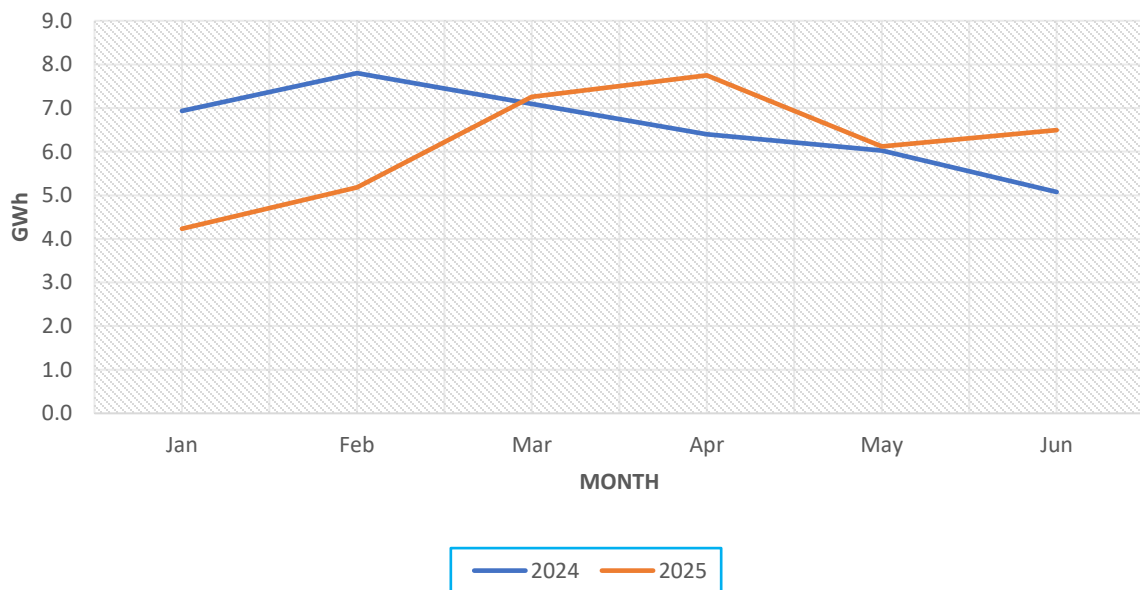
Mini Hydro



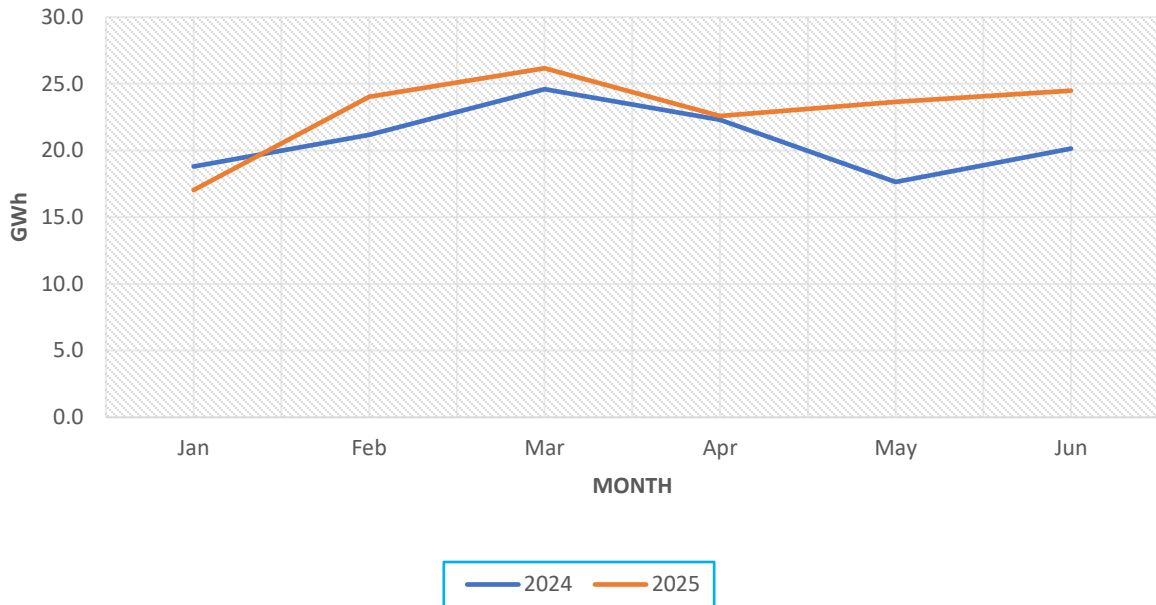
Biomass



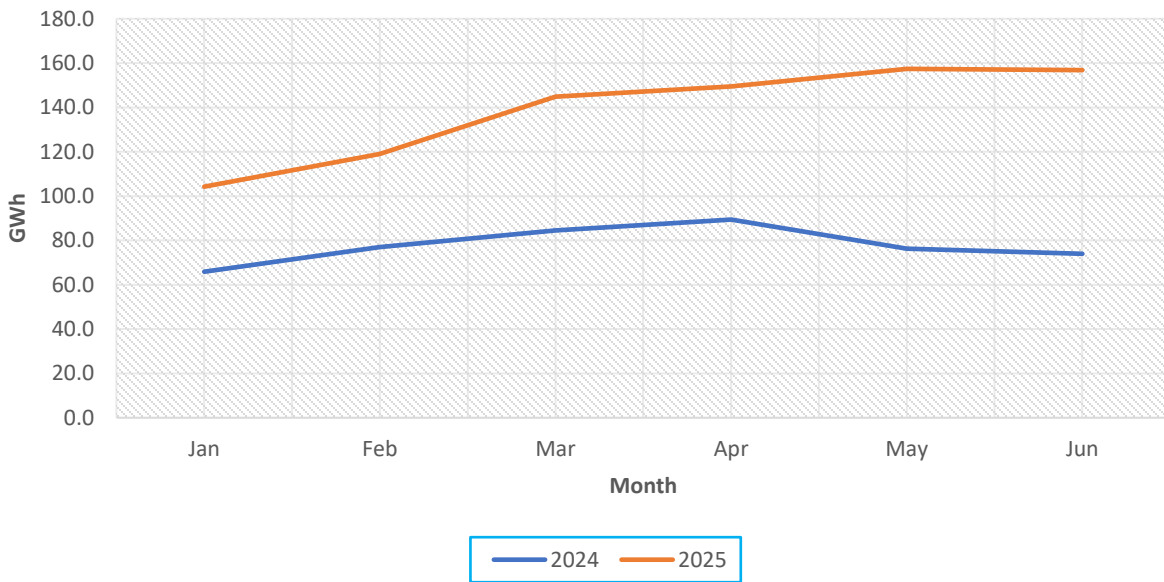
MSW



IPP Solar

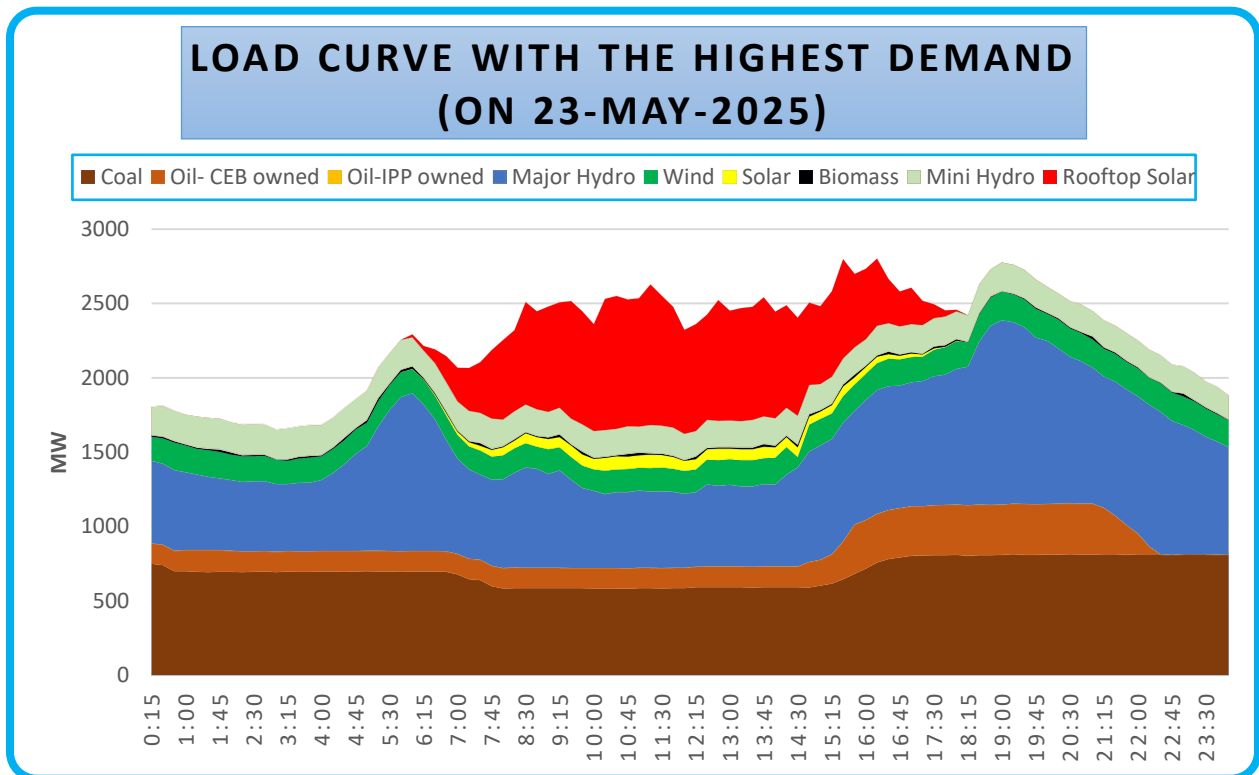
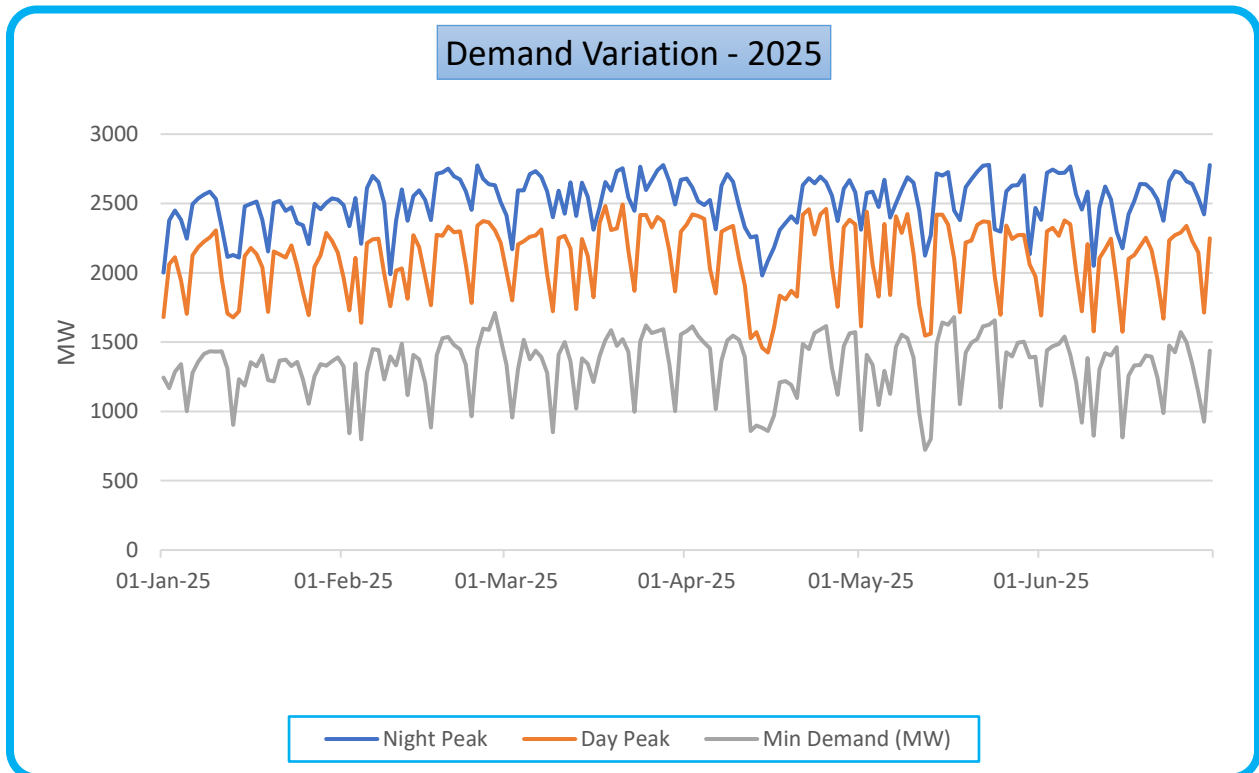


Rooftop Solar PV



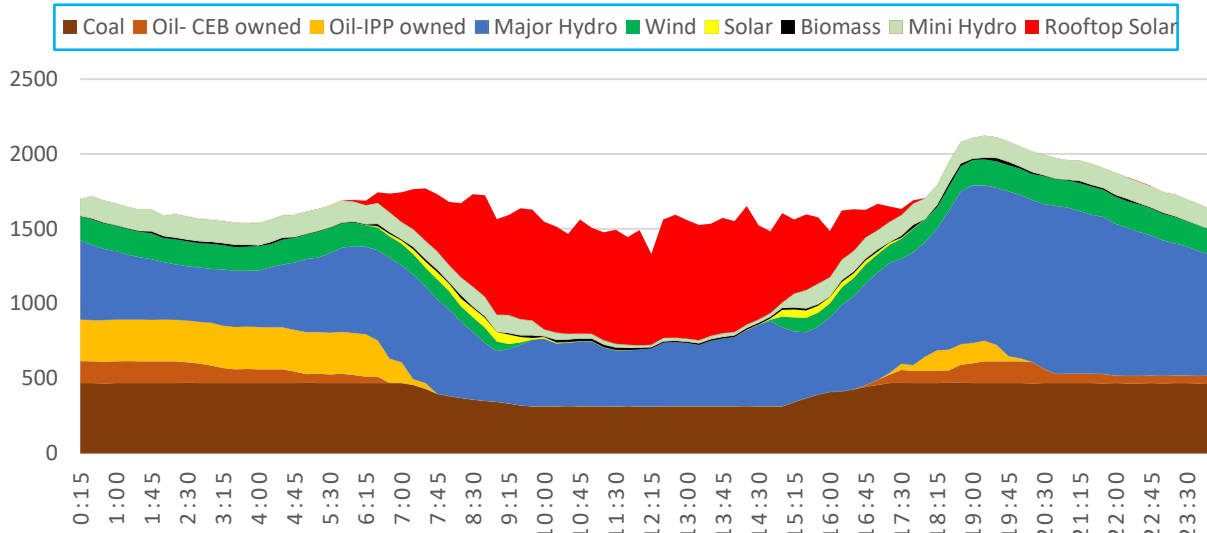
Source: CEB monthly Review Report

Daily Demand Variation



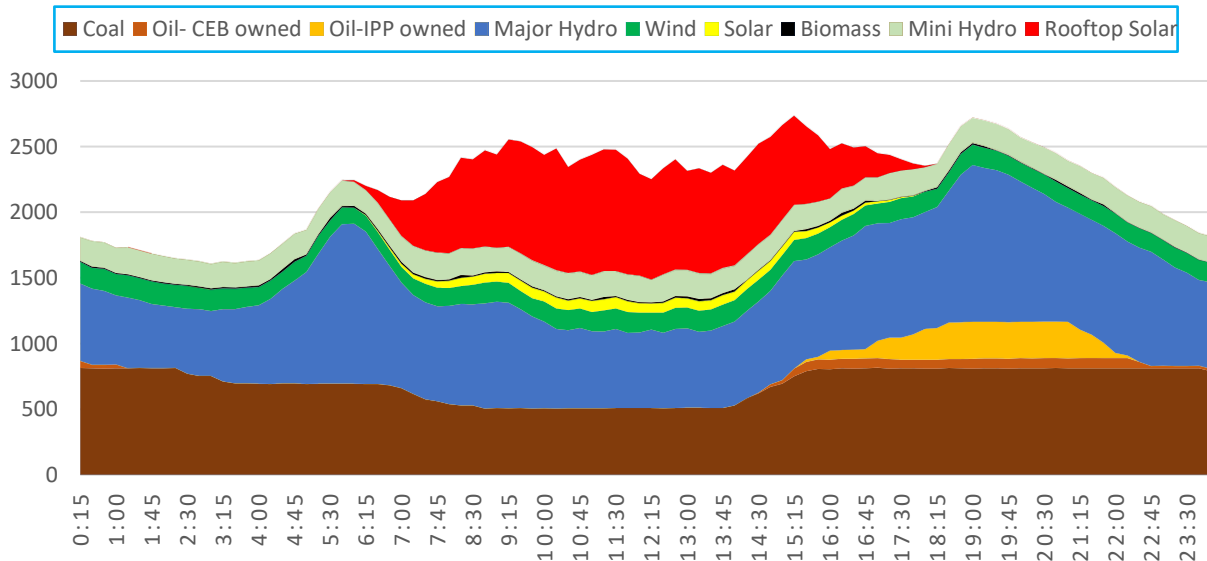
Note: Contribution from Rooftop Solar PV, IPP Solar (1MW), and Non-telemetered Mini Hydro is estimated based on the relevant actual generation and modelled in the generation profile

LOAD CURVE WITH THE RT SOLAR GENERATION AT THE DATE OF THE LOWEST DEMAND (ON 12-MAY-2025)



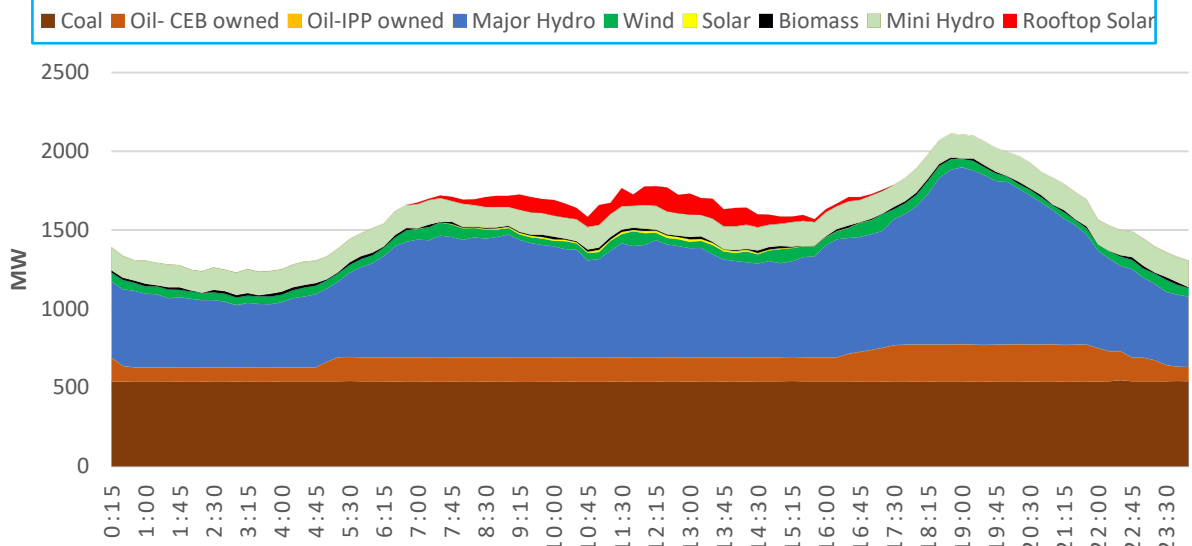
Note: Rooftop Solar PV, IPP Solar (1MW), and Non-telemetered Mini Hydro daily generation for Load Curves are calculated relative to actual monthly generations.

LOAD CURVE WITH THE RT SOLAR GENERATION AT THE DATE OF HIGHEST SOLAR GENERATION (ON 04-JUNE-2025)



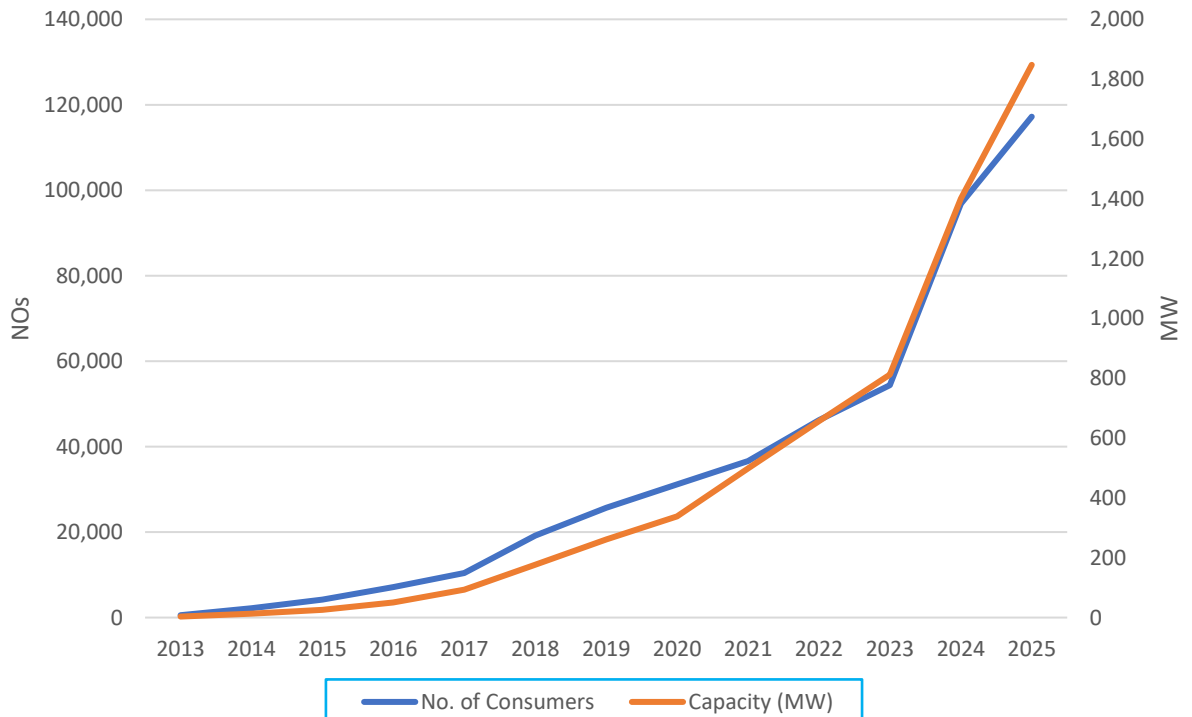
Note: Rooftop Solar PV, IPP Solar (1MW), and Non-telemetered Mini Hydro daily generation for Load Curves are calculated relative to actual monthly generations.

LOAD CURVE WITH THE RT SOLAR GENERATION AT THE DATE WITH THE LOWEST SOLAR GENERATION (ON 14-JANUARY-2025)

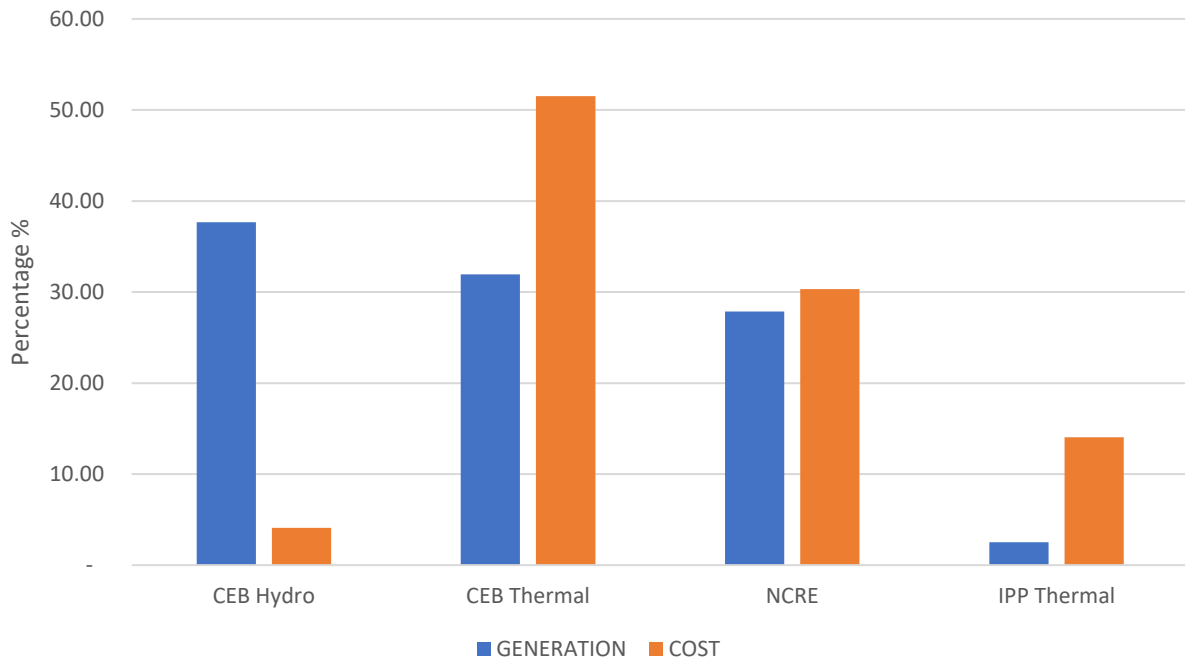


Note: Rooftop Solar PV, IPP Solar (1MW), and Non-telemetered Mini Hydro daily generation for Load Curves are calculated relative to actual monthly generations.

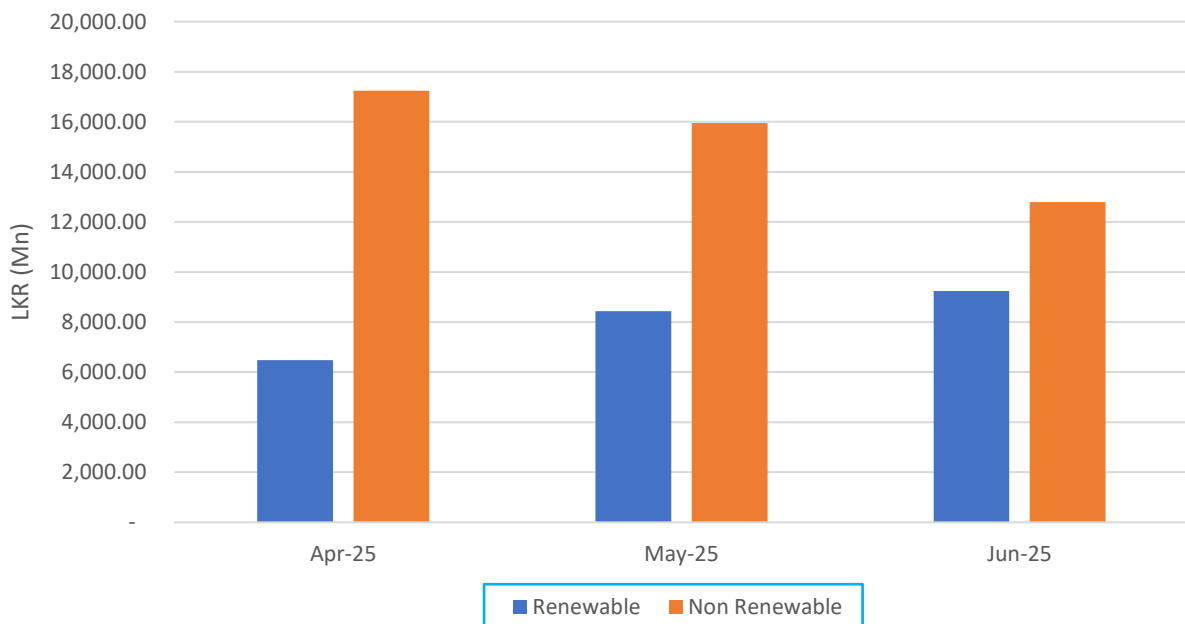
Rooftop Solar PV Growth



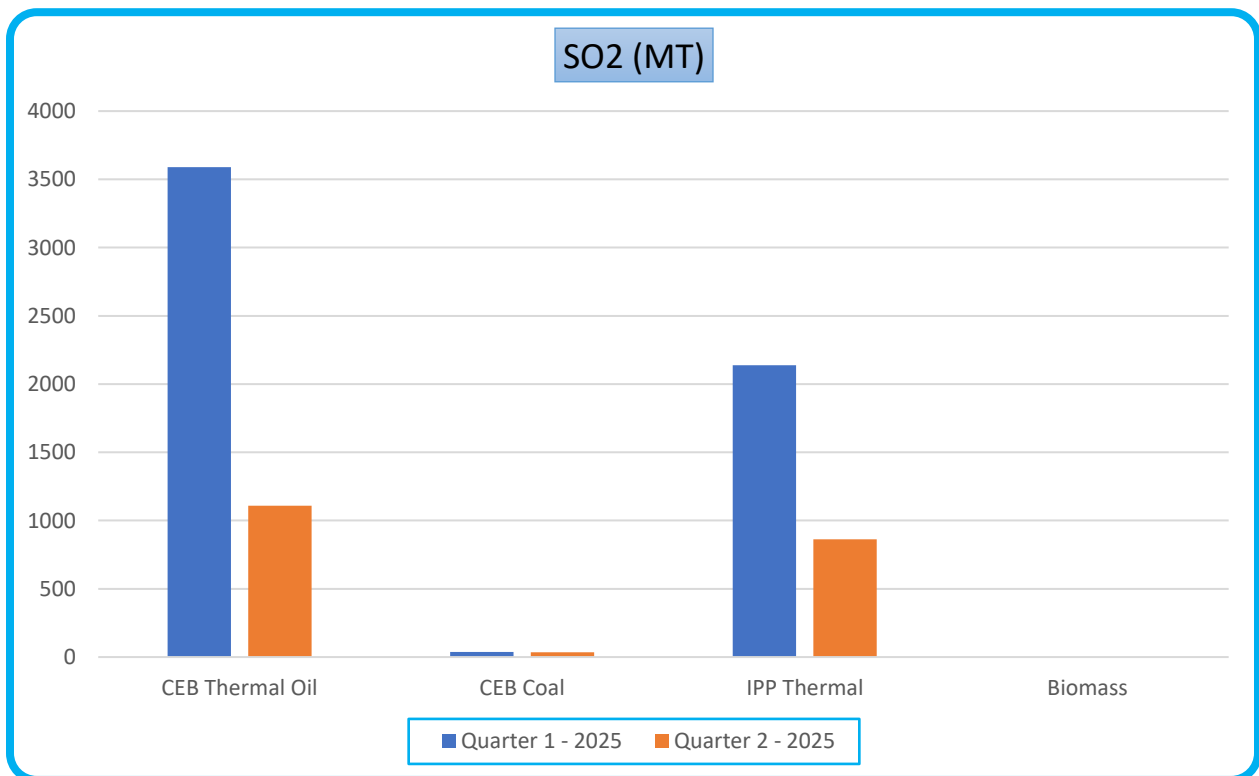
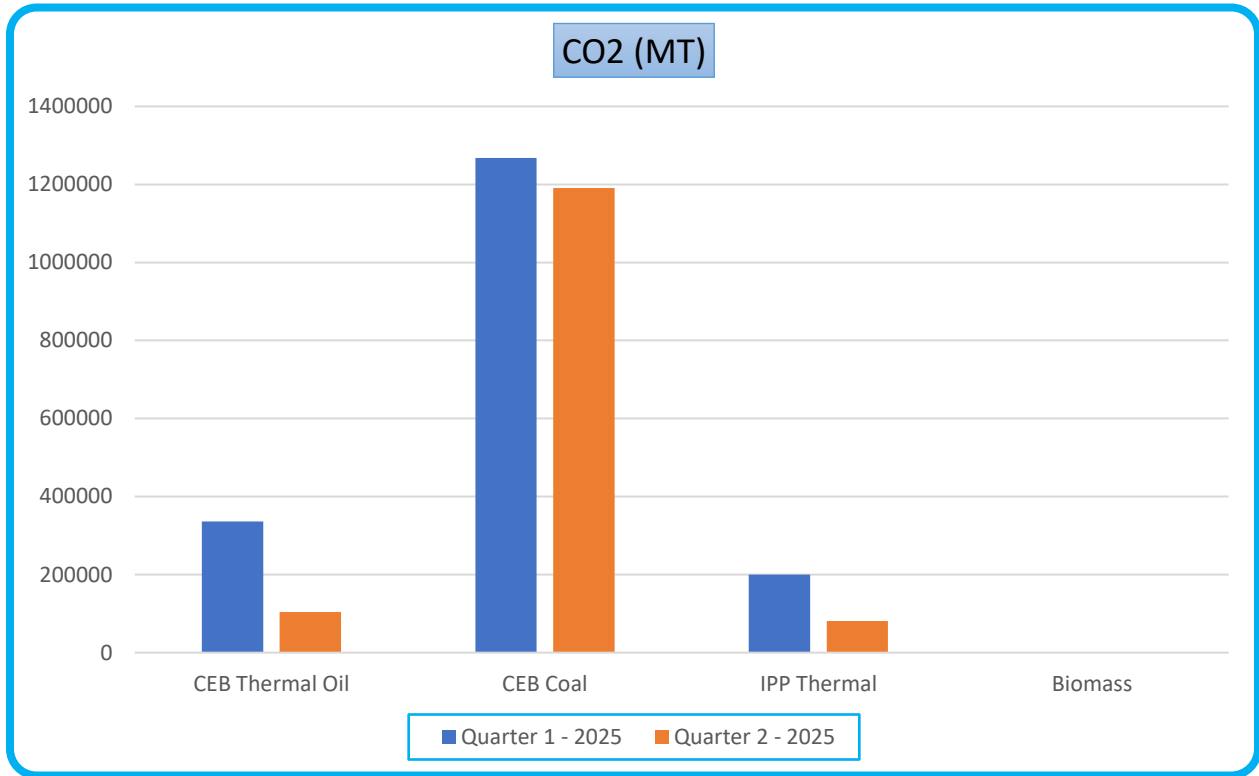
Comparison : Generation vs Cost for 2nd Quarter 2025

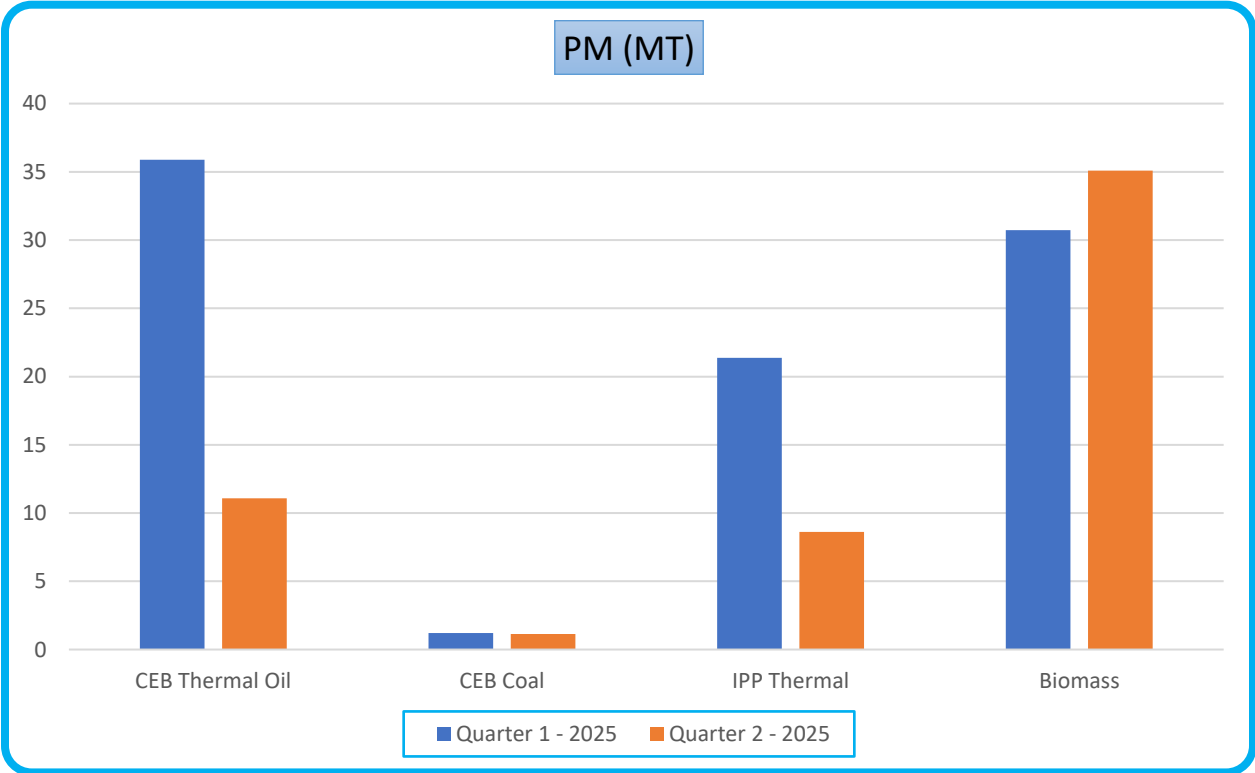
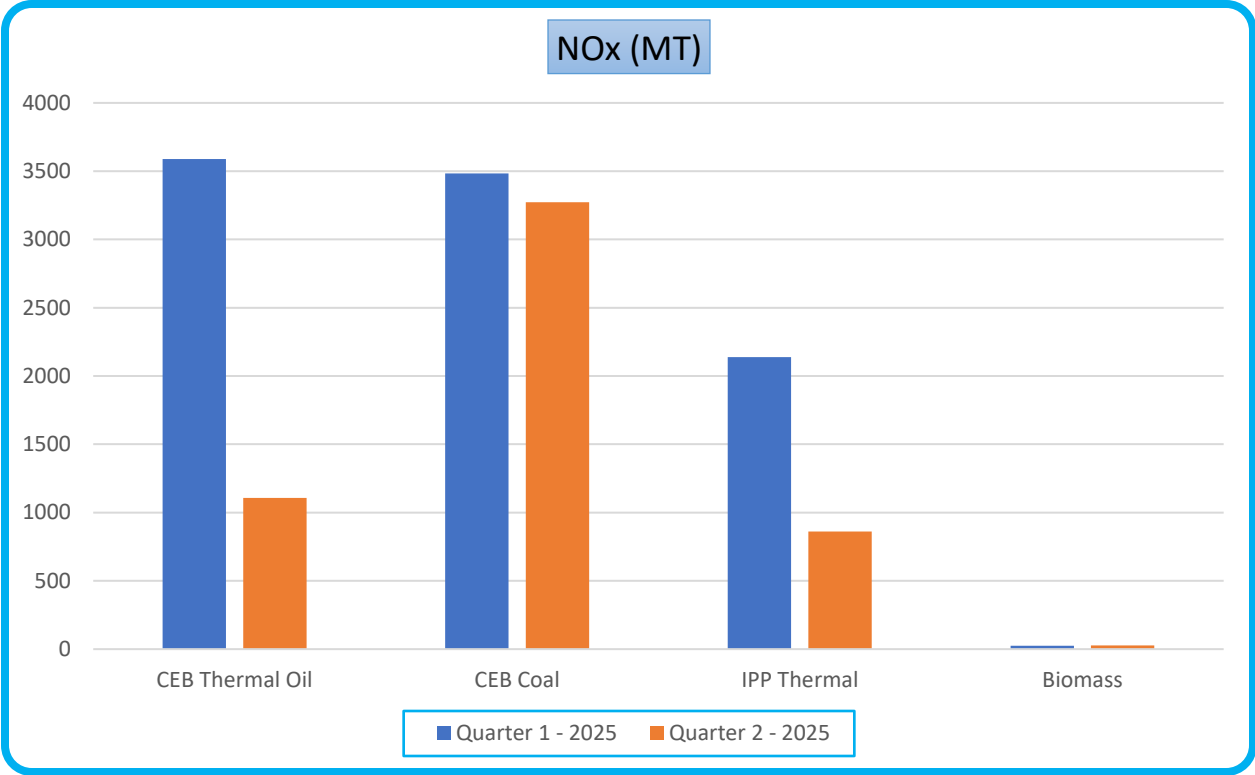


Generation Cost Comparison between RE and Non RE in 2nd Quarter of 2025



Generation Source wise Emission Q4 2024 vs Q1 2025





Source: Estimated based on actual generation

Proposed Capacity Additions & Retirements in 2025 according to LTGEP 2025 -2044			
Proposed Capacity Additions	Capacity	Proposed Retirements	Capacity
Distribution Connected Embedded Solar	150 MW		
Grid Connected Solar	50 MW		
Wind	10 MW		
Mini Hydro	10 MW		
Biomass	10 MW		
Battery Energy Storage	5 MW		
Steam Turbine of Sobadhanavi Natural Gas Combined Cycle Plant (Kerawalapitiya)	115 MW		

Generation Licensees - 2025

Generation License details can be found via the following.

Link: <https://www.pucsl.gov.lk/electricity/licensee/list-of-licensees/>

Renewable Generation Power Plants in Sri Lanka

Locations of the Renewable Power plants can be found via the following link.

<https://www.pucsl.gov.lk/electricity/quality/environment-and-renewable-energy/>

Electricity Dispatch Data Dashboard

Electricity Dispatch Data can be found via the following link.

<https://gendata.pucsl.gov.lk/home>

Long Term Generation Expansion Plan for 2025 – 2044

Latest Long Term Generation Expansion Plan can be found via the following link.

<https://www.pucsl.gov.lk/wp-content/uploads/2025/05/LTGEP-2025-2044-FINAL.pdf>