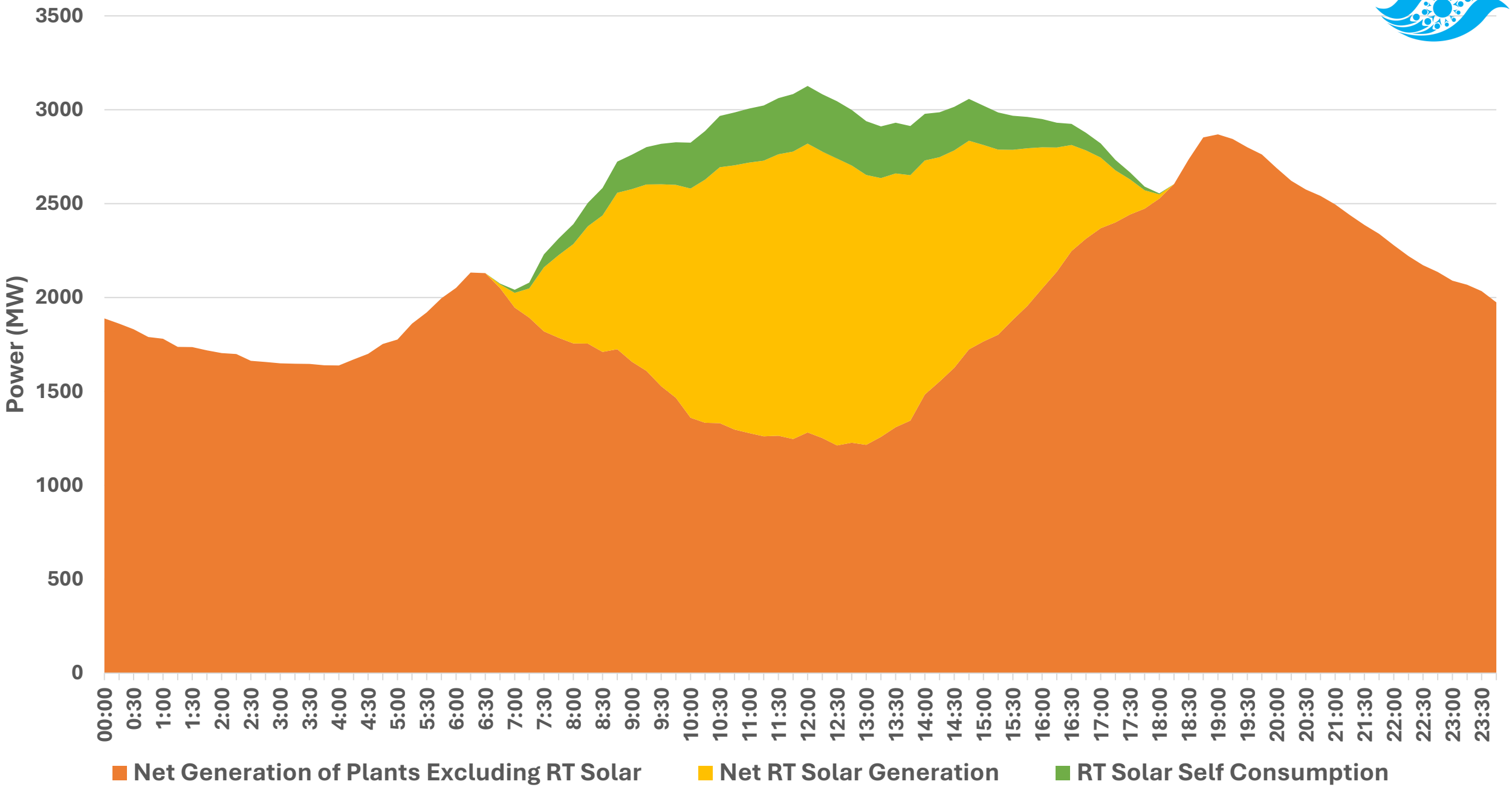
Solar Contribution to Electricity Sector of Sri Lanka

Solar Energy Programme, Recent Policy and Regulatory Changes, and Measures to Expand the Sector

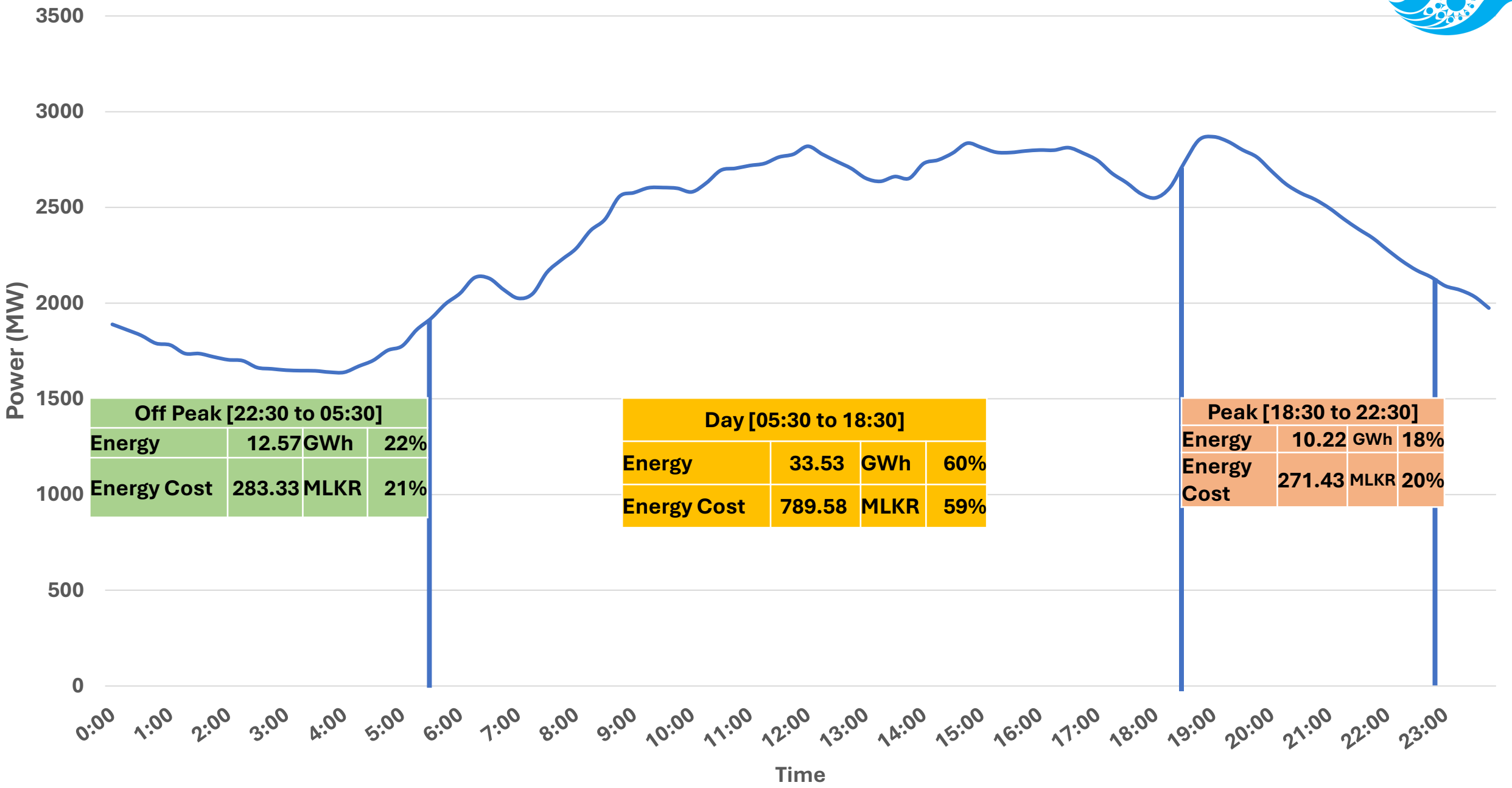
PUBLIC UTILITIES COMMISSION OF SRI LANKA

October 21, 2026

Overall Electricity Generation Demand [August - 2026]



Indicative System Load Profile [August-2026]

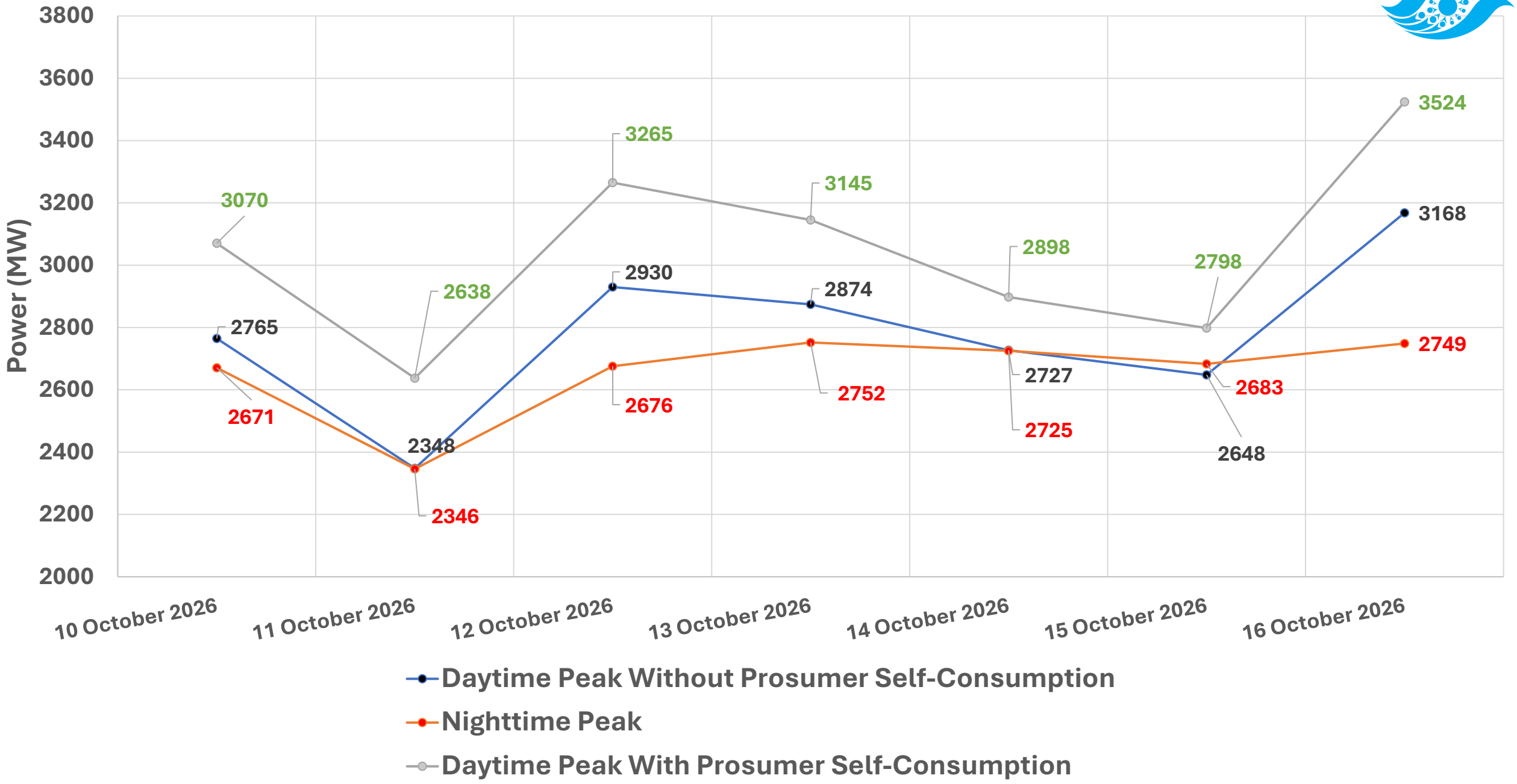


Off Peak [22:30 to 05:30]			
Energy	12.57	GWh	22%
Energy Cost	283.33	MLKR	21%

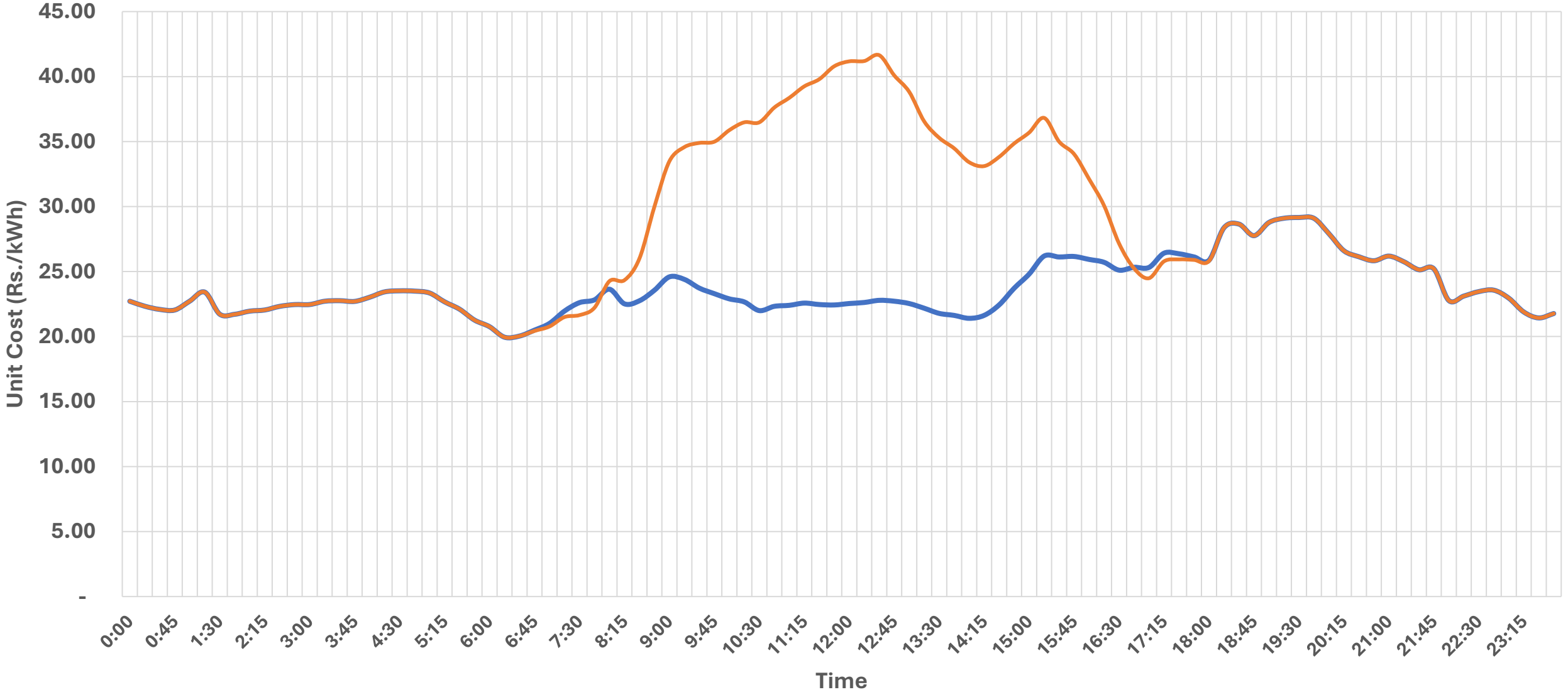
Day [05:30 to 18:30]			
Energy	33.53	GWh	60%
Energy Cost	789.58	MLKR	59%

Peak [18:30 to 22:30]			
Energy	10.22	GWh	18%
Energy Cost	271.43	MLKR	20%

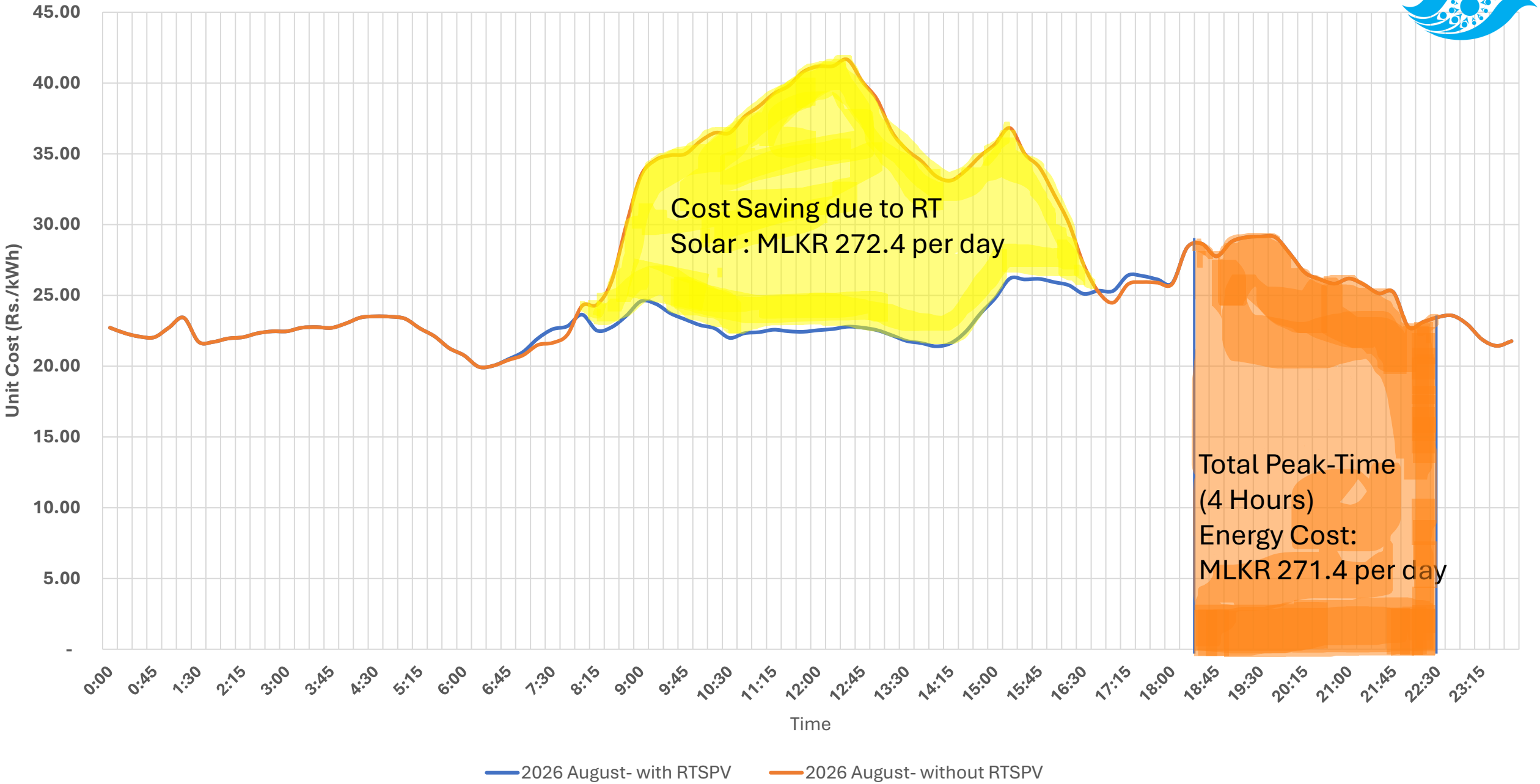
Day time Peak Demand and Night time Peak Demand



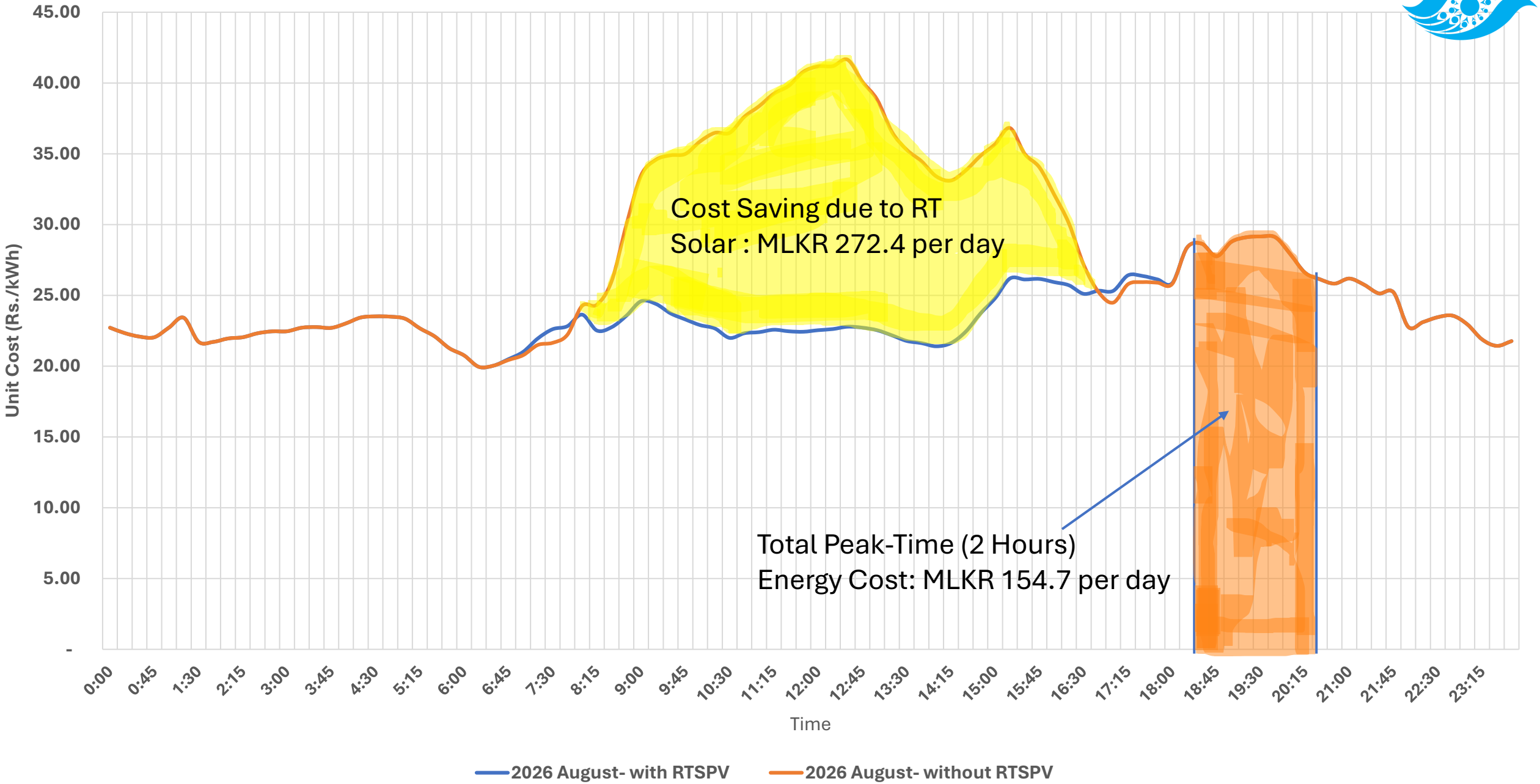
Average Energy Unit Cost – 2026 August



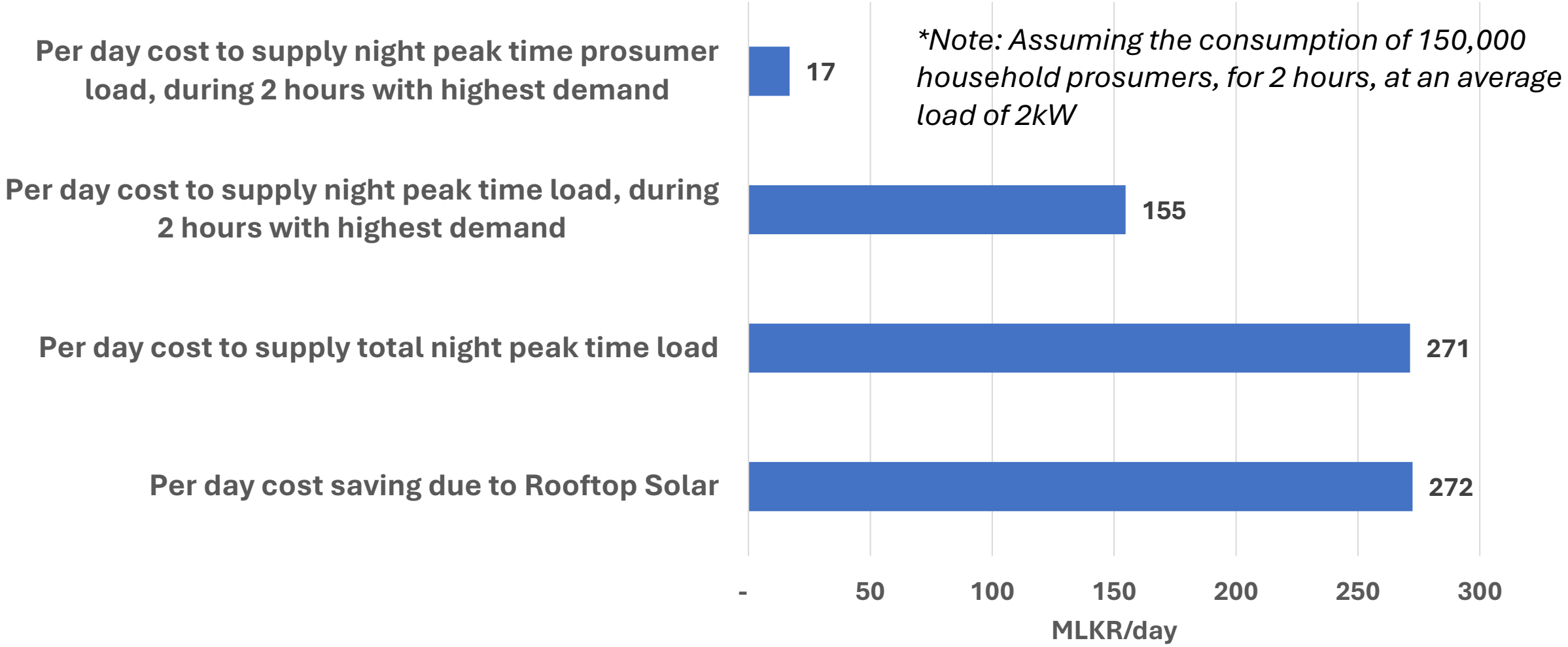
Average Energy Cost -2026 August



Average Energy Cost -2026 August



Cost Impact Due to Solar Prosumers

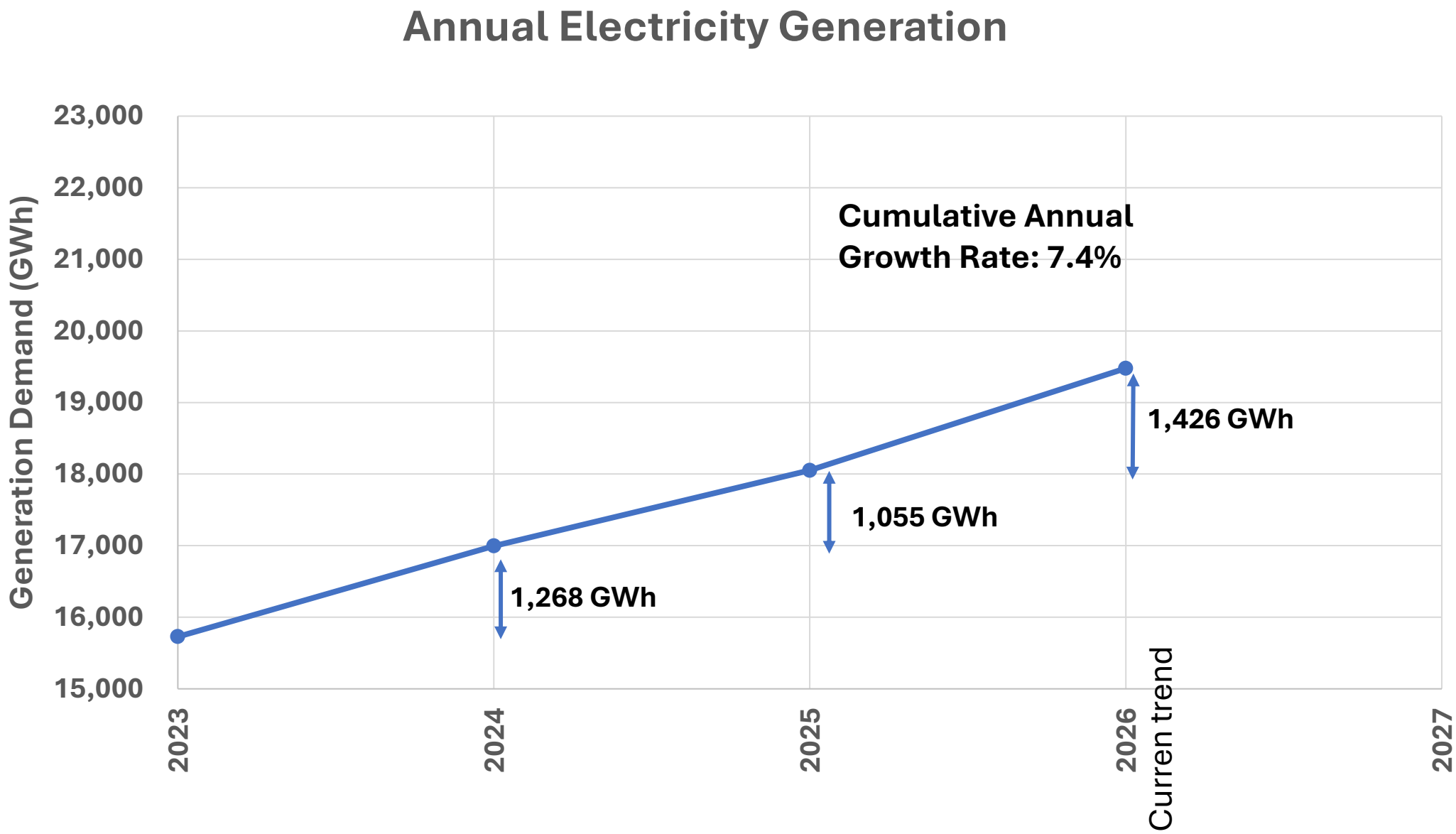


External Exposure of Oil based Electricity Generation

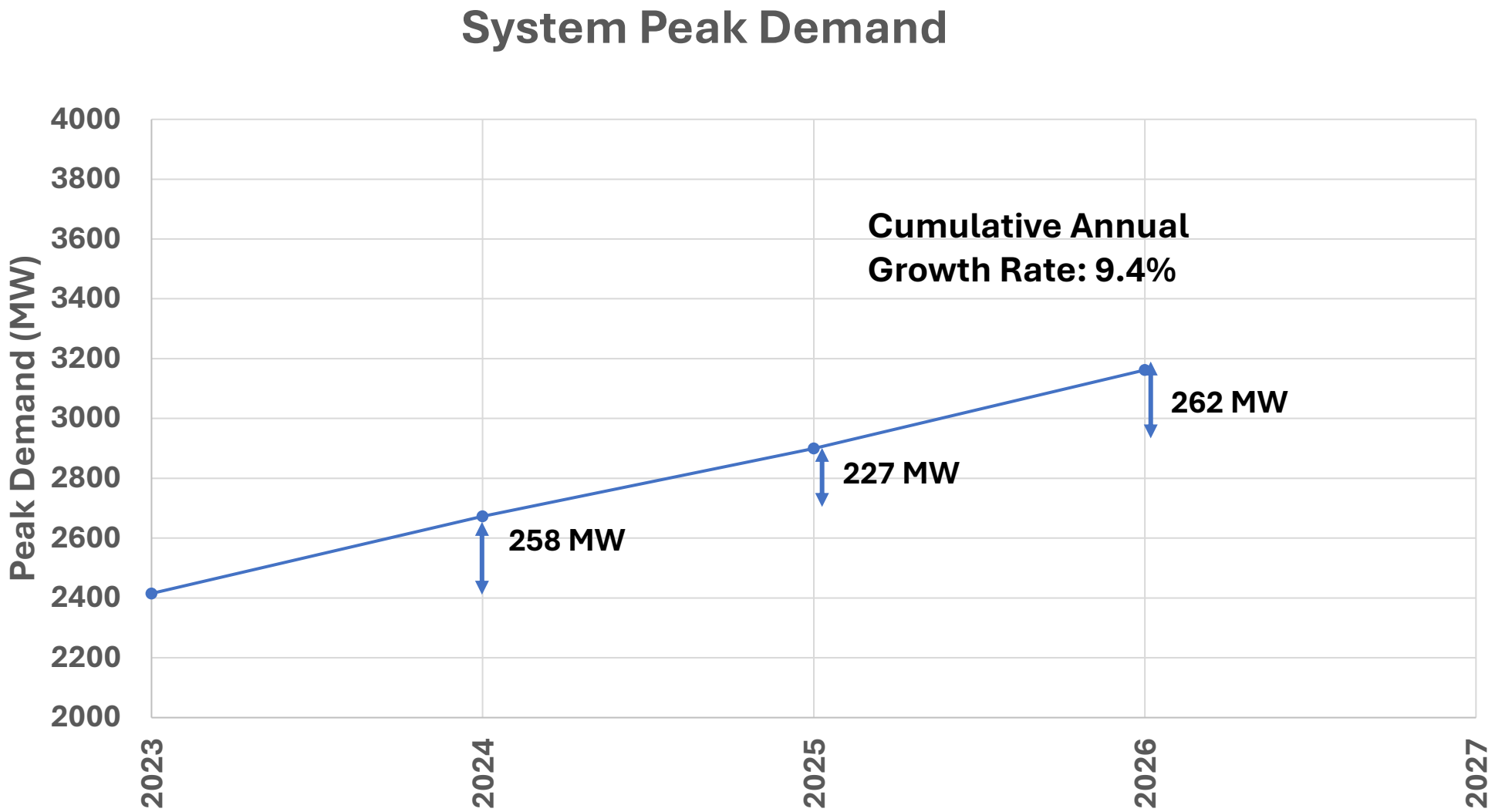
Description	Unit	Levelized Cost of Electricity for 15 Years (LCOE)
Constant Rate of Rs. 55/kWh	Rs./kWh	55.00
Starting Rate of Rs. 55/kWh and Annual Inflation of 10%	Rs./kWh	98.14

2010 January Furnace Oil price is Rs 32.70 per Liter
2026 May Furnace Oil price is Rs 210.00 per Liter
Annual Increase is 10%

Annual Energy Demand Increase



Annual Peak Demand Increase



System Capacity Requirements

- Interim Long Term Power System Development Plan (LTPSD) of NSO, forecasts the requirement of 450MW of additional BESS capacity for the 1st Quarter of 2027, under contingency condition of Dry Hydro, Major plant outage, while the demand is high

- NSO letter dated July 31, 2026, states the inadequacy of capacity for the 1st Quarter of 2027, with the ongoing power procurement process

Planned Vs. Actual Capacity Additions

Year	Ground Mounted Solar Capacity Additions (MW)		Rooftop Solar Capacity Additions (MW)	
	Planned	Actual	Planned	Actual
2022	94	15	160	160
2023	147	27	160	150
2024	323	26	160	590
2025	340	90	165	886
2026	220	134 (Up to June)	150	220 (Up to June)

Legal Requirement for Feed in Tariffs

- Section 29(3) of Sri Lanka Electricity Act:
  - The feed in tariff, determined and updated every six months, to be included in standard power purchase agreements

Feed in Tariff Determination Process

Activity	Timeline
Stakeholder consultation on Feed in Tariff Methodology	May 8 – May 18, 2026
Oral stakeholder consultation on the Feed in Tariff Methodology	May 25, 2026
Collecting data from stakeholders to calculate Feed in Tariffs	May 29 – June 5, 2026
Publication of proposed Feed in Tariffs for stakeholder consultation, along with the approved Feed in Tariff Methodology	July 11 – July 22, 2026
Oral stakeholder consultation on the proposed Feed in Tariffs	July 22, 2026
Issuance of final decision on Feed in Tariffs	August 24, 2026

Key Takeaways

- Sri Lanka's load curve exhibits a persistent daytime peak that is higher in magnitude than the nighttime peak and lasts for a longer duration
- Accordingly, daytime power demand is higher, and total energy demand is significantly greater than that of the nighttime peak
- Integration of rooftop solar has contributed to meeting the above daytime demand economically and sustainably, at a relatively low cost and with minimal investment by utilities
- Rooftop solar has flattened the variation in energy costs throughout the day, which otherwise would have resulted in much higher day time cost
- Accordingly, the average unit cost during nighttime is at a level comparable to that during the daytime.
- Total cost attributable to prosumer consumption during the nighttime peak is significantly lower than the daytime cost savings attributable to prosumers
- Daytime peak is observed to be continuously on the rise, and the cost will also continue to rise, if not for economical capacity expansions
- Solar is the most economical option to cater the above daytime demand growth

Thank You!