



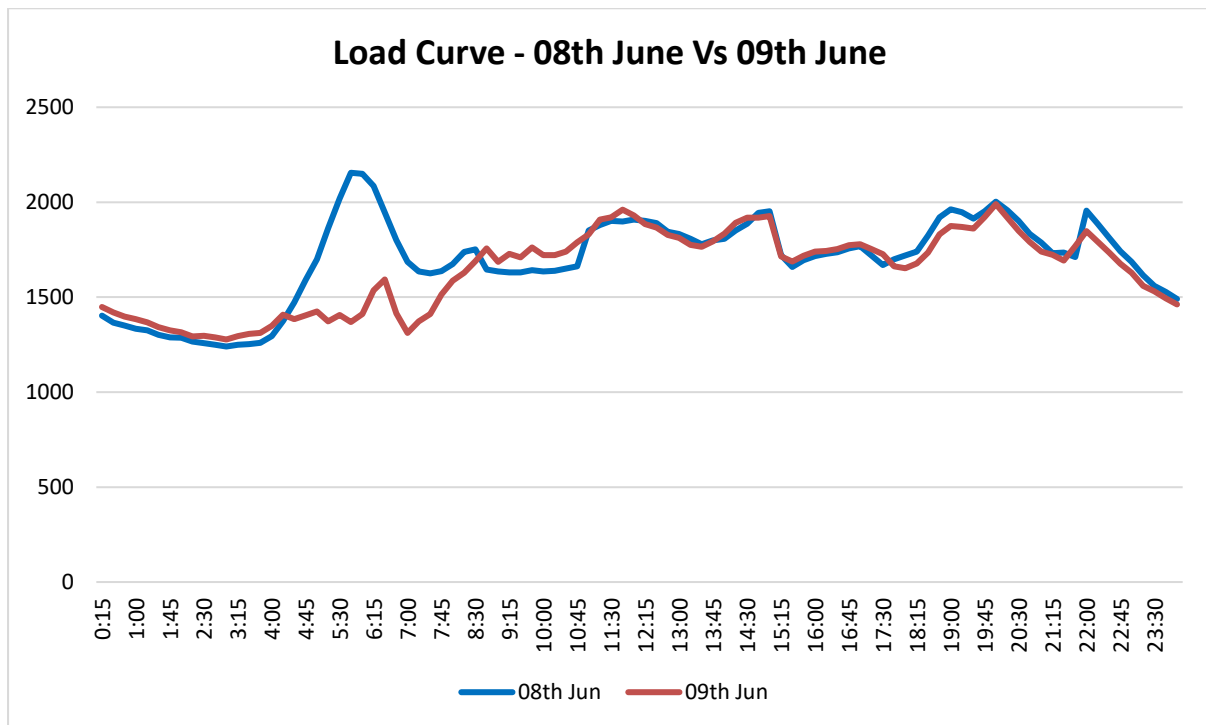
## Report on Power Failure on 09<sup>th</sup> June 2022

### Issue

The Commission has received many complaints from numerous areas of the country regarding power outages beyond the approved interruption schedule (between 4.30hrs to 8.30hrs) on 09<sup>th</sup> June 2022.

Nevertheless, the Power System Report on 09<sup>th</sup> June 2022 submitted by CEB has not mentioned anything regarding the aforesaid outages, but has mentioned that 18 Grid Substations and Samanalawewa Power Station have become dead due to tripping of 3 transmission lines at 6.41hrs and restored at 7.41hrs.

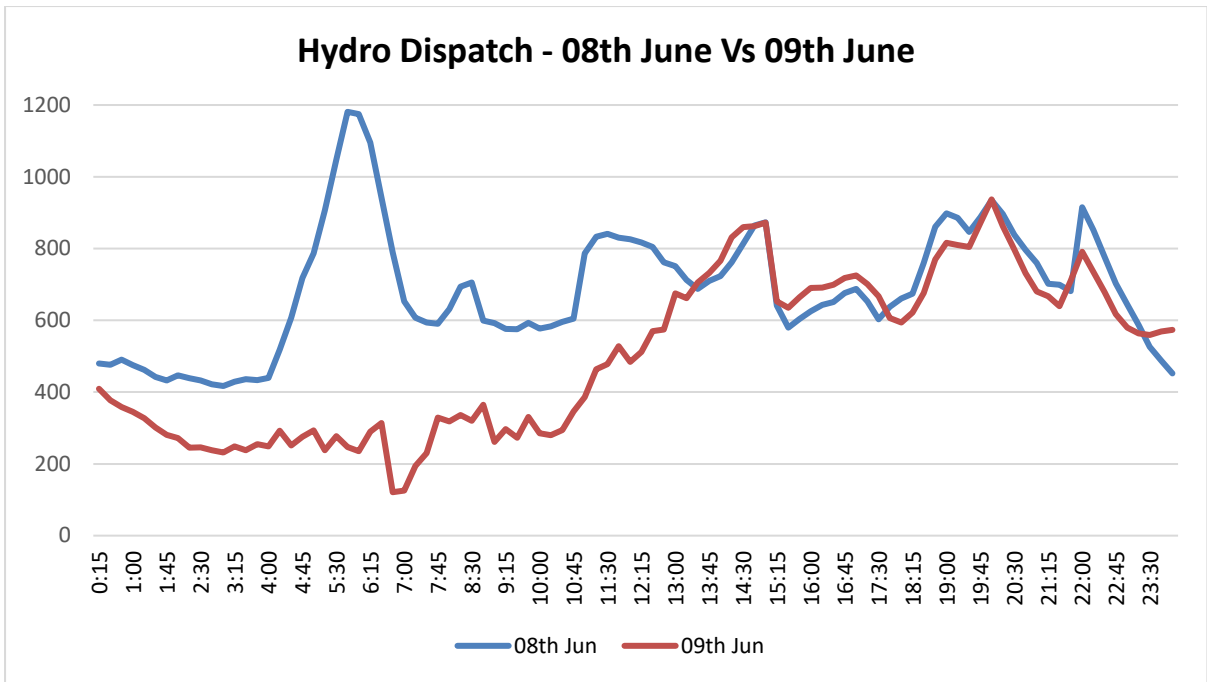
### Analysis



**Figure 1:** Load Curve - 08<sup>th</sup> June Vs 09<sup>th</sup> June

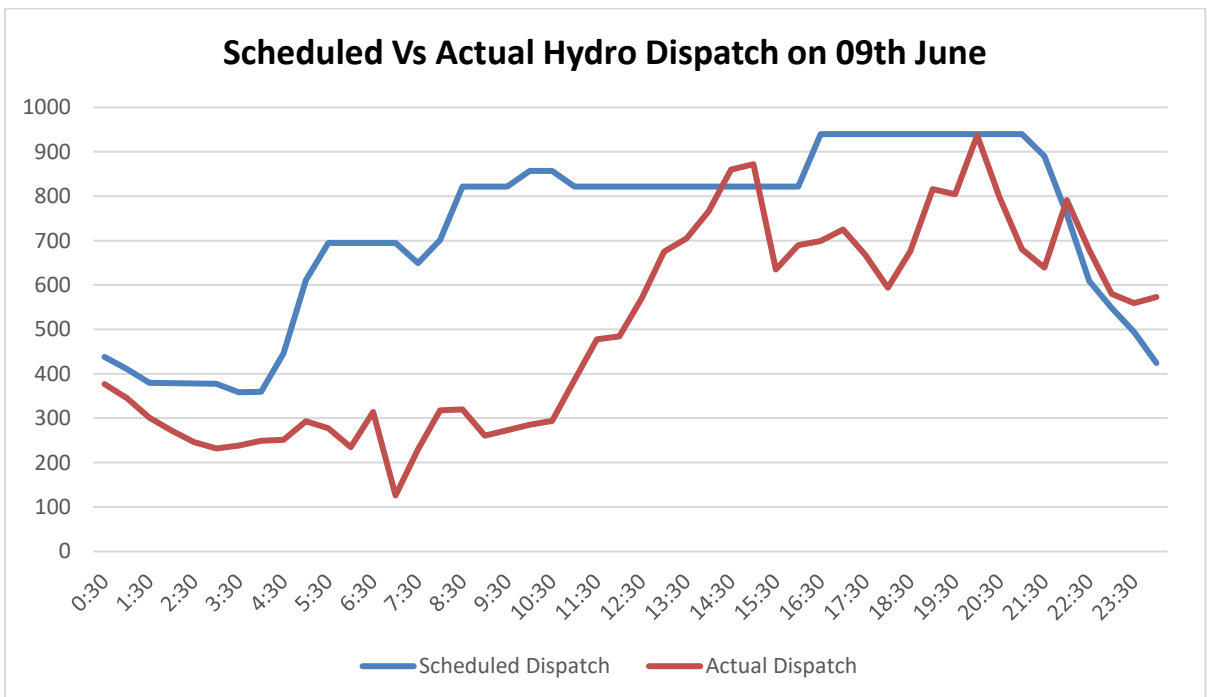
As per the comparison of the load curves of 08<sup>th</sup> June and 09<sup>th</sup> June (Figure 1), it can be observed that CEB has failed to meet the electricity demand from 4.30hrs to 8.45hrs on 09<sup>th</sup> June (Assuming the electricity demand on 09<sup>th</sup> June is similar to 08<sup>th</sup> June as both are normal week days), and as a result of that CEB has failed to serve 5.7GWh (estimated) during the said period compared to the served demand on 08<sup>th</sup> June.

Also, the system has reached only up to 1594MW during the morning peak compared to the morning peak of 2155MW on 08<sup>th</sup> June.



**Figure 2:** Hydro Dispatch Curve - 08<sup>th</sup> June Vs 09<sup>th</sup> June

As per the hydro dispatch comparison of 08<sup>th</sup> and 09<sup>th</sup> June (Figure 2), the hydro plants have contributed only 314MW during the morning peak period on 09<sup>th</sup> June compared to the hydro power contribution of 1181MW on 08<sup>th</sup> June.



**Figure 3:** Scheduled Vs Actual Hydro Dispatch on 09th June

According to the comparison of scheduled and actual hydro dispatch on 09<sup>th</sup> June (Figure 3) it can be observed that hydro generation has not been added to the system until 14.30hrs on 09<sup>th</sup> June as scheduled.

Plant	Planned Dispatch (MWh)	Actual Dispatch (MWh)	Difference (MWh)
<b>Hydro Plants</b>			
Wimalasurendra	198	0	-198
Canyon	630	0	-630
Old Laxapana	783	152	-631
New Laxapana	1,467	426	-1,042
Polpitiya	1,178	398	-781
Broadlands	0	10	10
Upper Kotmale	848	226	-622
Kotmale	0	887	887
Victoria	791	376	-415
Randenigala	784	89	-695
Rantambe	322	69	-253
Ukuwela	260	208	-52
Bowathenna	60	0	-60
Samanalawewa	1,100	1,165	64
Kukule	1,087	1,097	10
<b>Total</b>	<b>9,509</b>	<b>5,102</b>	<b>-4,407</b>
<b>Coal Plants</b>			
Lakvijaya Coal	11,555	11,545	-10
<b>CEB Oil Plants</b>			
Sapugaskanda	378	0	-378
Barge	0	0	0
Uthuru Janani	0	0	0
<b>Total</b>	<b>378</b>	<b>0</b>	<b>-378</b>
<b>Thermal Oil (IPP)</b>			
ACE (Matara)	0	0	0
Ace (Embilipitiya)	0	0	0
Sojitz CCP	0	866	866
West Coast	0	1,656	1,656
<b>Total</b>	<b>0</b>	<b>2,522</b>	<b>2,522</b>

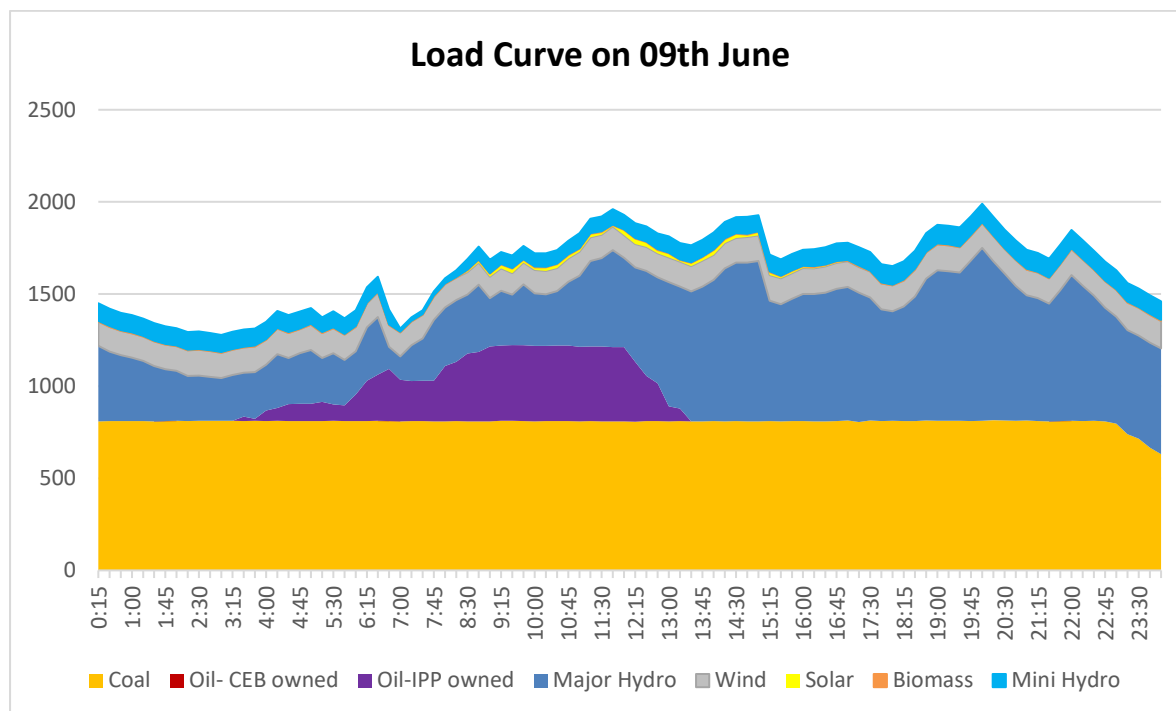
**Table 1 :** Scheduled Vs Actual Plant Dispatch from 0.00hrs to 14.30hrs on 09<sup>th</sup> June

As per the comparison of plant wise scheduled and actual dispatch on 09<sup>th</sup> June, it was observed that;

- Canyon, Wimalasurendra and Bowtenna plants have not been dispatched at all from 0.00hrs to 14.30hrs on 09<sup>th</sup> June, despite having them scheduled to be dispatch during the said period.
- Old Laxapana, New Laxapana, Polpitiya and Victoria Plants have been shut down between the period of 1.45hrs – 3.15hrs and started dispatching between the period of 10.00hrs – 12.00hrs, despite having them scheduled to be dispatched between 1.45hrs – 12.00hrs on 09<sup>th</sup> June.

- Canyon, Upper Kotmale, Randenigala and Rantambe plants which had been scheduled to start to cater the morning peak, have not been utilized for the morning peak.

Also, as per the Table 1 above, it can be observed that hydro plants have failed to generate 4.4GWh from 0.00hrs to 14.30hrs as scheduled on 09<sup>th</sup> June.



**Figure 6:** Load Curve on 09th June

As per the load curve on 09<sup>th</sup> June (Figure 6) and Table 1, it can be observed that private oil plants (Sojitz and Westcoast) have been started to dispatch from 3.30hrs onwards (this must be due to the absence of hydro generation) on 09<sup>th</sup> June and have generated 2.5GWh, which has not been even scheduled in the day ahead dispatch schedule submitted on 08<sup>th</sup> June 2022 and CEB has not even dispatched their own more economical oil plants (Sapugaskanda) instead of private oil plants.

Further, the Commission has received a copy of a complaint made by Irrigation Department to the Secretary to the Ministry of Irrigation mentioning that CEB has not dispatched the hydro power plants as scheduled to release the water for the irrigation requirements without any prior notice since the midnight on 08<sup>th</sup> June 2022 (Annexure 1).

Moreover, the Mahaweli Authority of Sri Lanka has claimed that the spill gates of Randenigala and Rantambe reservoirs were opened to release water from 10.50hrs to 12.05hrs and from 9.25hrs to 12.10hrs on 09<sup>th</sup> June for the irrigation purposes as CEB failed to release the water through Randenigala and Rantambe power plants as scheduled and as a result of that 1.1745MCM of water has been released, which can be considered as a huge waste of hydro reservoir potential which could have been utilized for power generation of 125MWh (Estimated).

## Conclusion

In this context, it can be concluded that

1. CEB has failed to serve the electricity demand from 4.30hrs to 8.45hrs on 09<sup>th</sup> June 2022 due to stoppage of hydro generation and as a result the unplanned load shedding have been imposed to prevent the system collapse.
2. CEB has failed to dispatch following hydro plants from 0.00hrs to 14.30hrs on 09<sup>th</sup> June 2022 as scheduled in the day ahead dispatch schedule submitted on 08<sup>th</sup> June 2022.
  - Wimalasurendra
  - Canyon
  - Old Laxapana
  - New Laxapana
  - Polpitiya
  - Upper Kotmale
  - Victoria
  - Randenigala
  - Rantambe
  - Ukuwela
  - Bowatenna
3. Mahaweli Authority of Sri Lanka has opened the spill gates of Randenigala and Rantambe reservoirs to release water on 09<sup>th</sup> June for the irrigation purposes as CEB failed to release the water through Randenigala and Rantambe power plants as scheduled, and as a result of that 1.1745MCM of water has been released, which could have been utilized for power generation of 125MWh (Estimated)
4. CEB has dispatched Sojitz and Westcoast power plants out of the schedule on 09<sup>th</sup> June 2022 and incurred an additional estimated cost of LKR 320 Mn (Refer Table 2)

	Sojitz	West Coast
Fuel Usage (Cubic Meters)	235.3	450.0
Fuel Cost (LKR Mn)	94.1	180.0
Start / Stop Charge (LKR Mn)	34.3	11.6
Total Cost (LKR Mn)	<b>128.4</b>	<b>191.6</b>

**Table 2:** Breakdown of the additional cost incurred to operate Sojitz and Westcoast Power Plants

5. Following power plants have been dispatched from 0.00hrs to 14.30hrs on 09<sup>th</sup> June 2022 on 09<sup>th</sup> June 2022, as per the schedule
  - Samanalawewa Hydro Power Plant
  - Kukuleganga Hydro Power Plant
  - Lakvijaya Coal Power Station (Unit I, II, III)

## Recommendations

It is recommended to conduct an inquiry on;

1. Unscheduled power interruptions made on 09<sup>th</sup> June 2022.
2. Failure to operate Wimalasurendra, Canyon, Old Laxapana, New Laxapana, Polpitiya, Upper Kotmale, Victoria, Randenigala, Rantambe, Ukuwela and Bowatenna power plants as scheduled from 0.00hrs to 14.30hrs on 09<sup>th</sup> June 2022.
3. Operation of Sojitz and Westcoast power plants out of the schedule incurring a cost of LKR 320 Mn.