

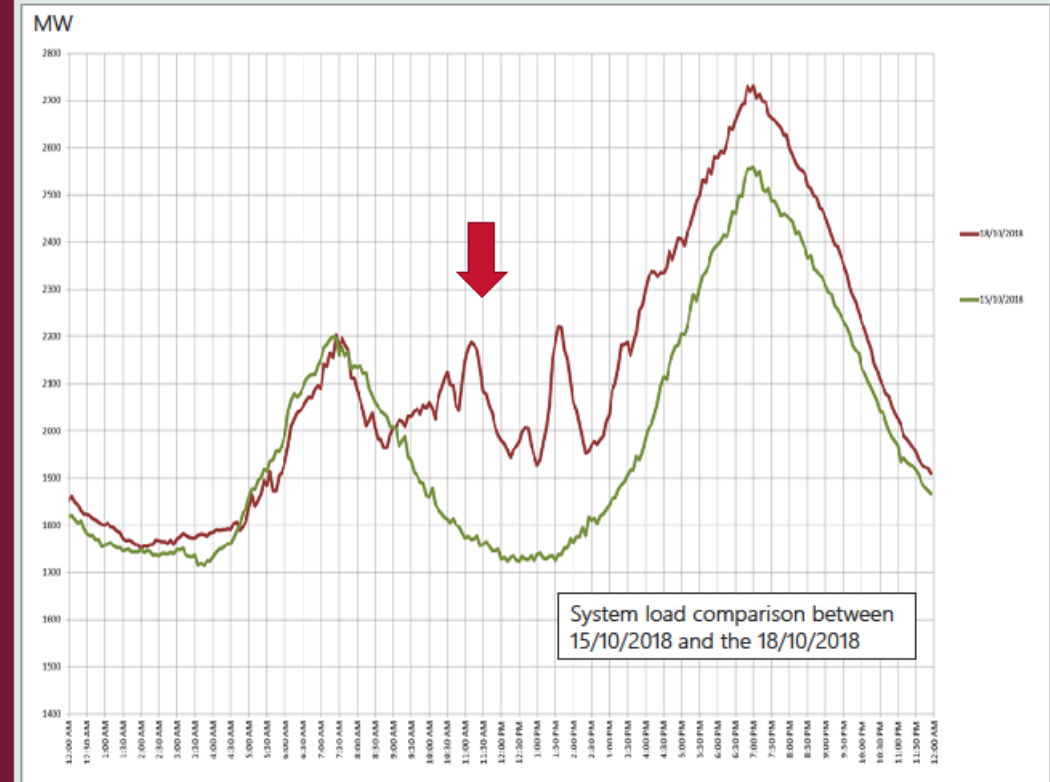
# Rooftop Solar Generation Volatility

# The first call for backup LFAS

- In late 2018 AEMO presented insights into the first call for Backup LFAS due to wind and solar volatility. This event occurred on 18<sup>th</sup> October 2018
- 50 MW up/down backup LFAS was procured for this event

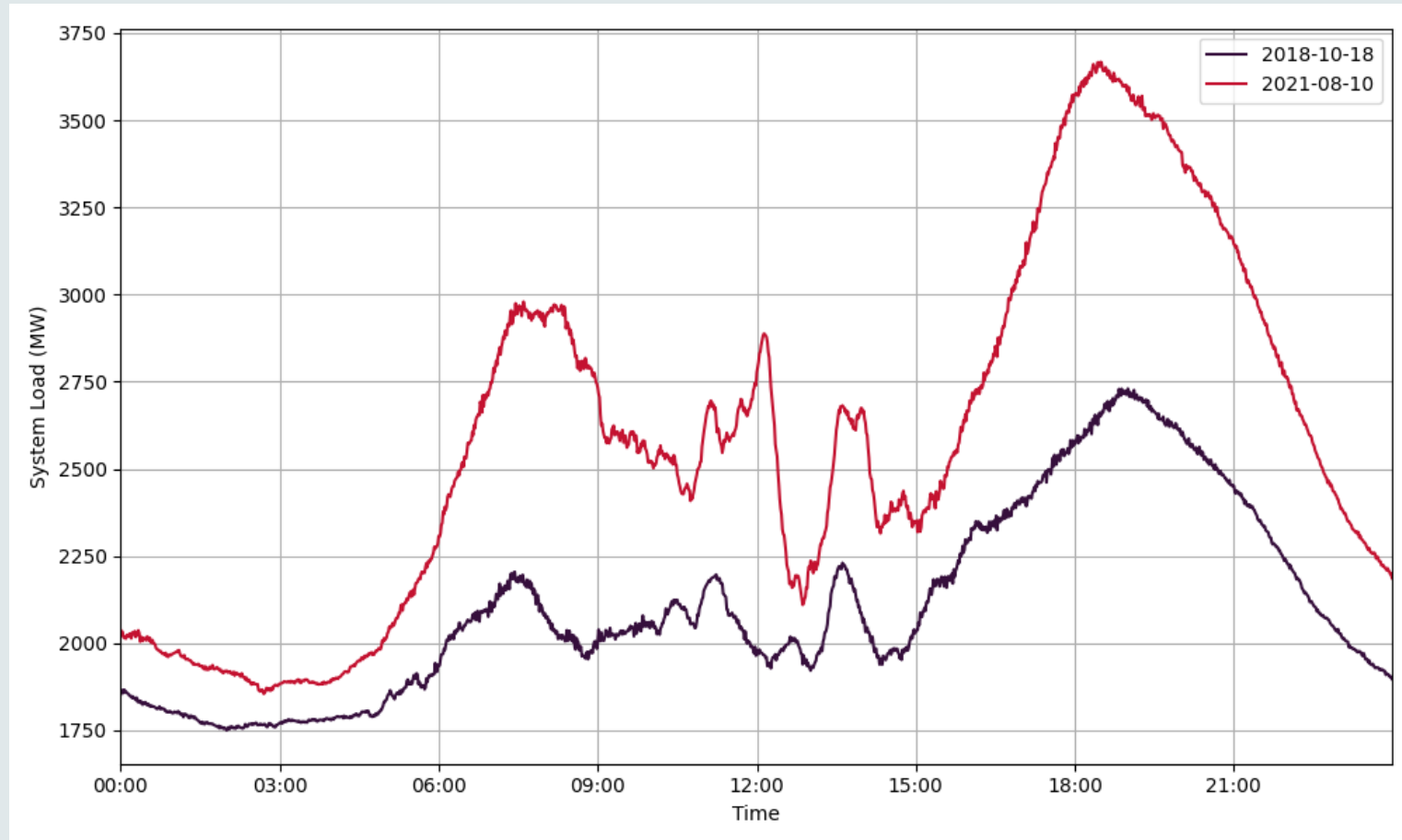
## 18/10/2018 System Load

- PSO's forecast that this would continue through the day due to the weather conditions
- 11:00 - Determined that the published quantity of LFAS was insufficient for current and forecast conditions.
- 11:30 - Enabled +/- 50 MW BackUp LFAS and issued a Dispatch Advisory to the market.



# A more recent call for backup LFAS

- Since then, we have called for backup LFAS more than 25 times for NSG volatility
- In the 20/21 FY, there were 8 calls for backup LFAS up/down due to NSG volatility
- So far in this FY, there have already been 8 calls for backup LFAS up/down due to NSG volatility
- More recently, on 10<sup>th</sup> August 2021, 50 MW up/down backup LFAS was procured at 09:30, followed by an increase to 80 MW up/down from 12:30 to 16:00



# 10<sup>th</sup> August 2021 – PV fluctuation

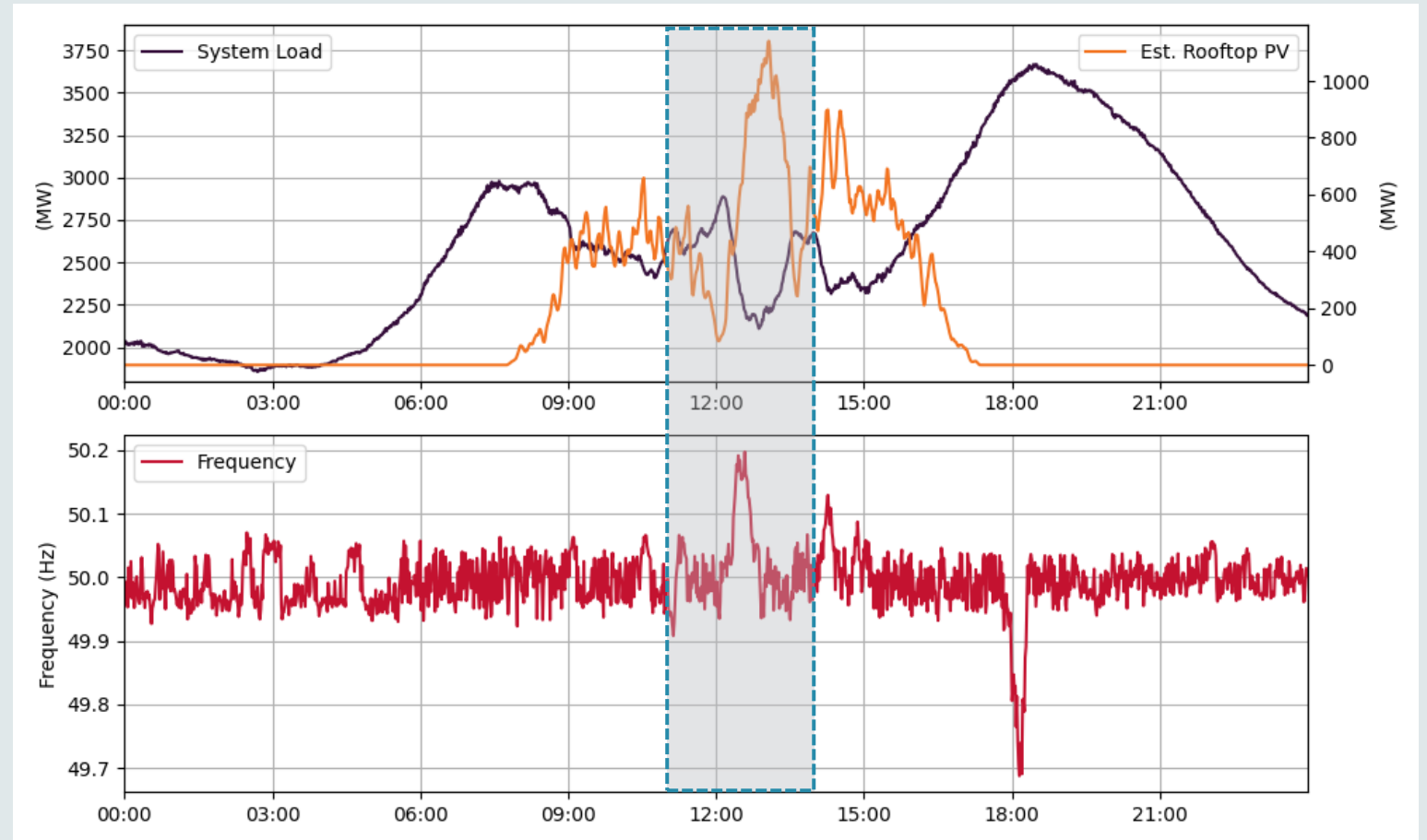
From 12:10 to 12:40:

- System load decreased by 723 MW
- Rooftop PV increased by ~787 MW

The frequency deviation near 18:00 was due to the following factors:

- Load higher than forecast
- GIA constraints to wind farms
- Changes in participant bids

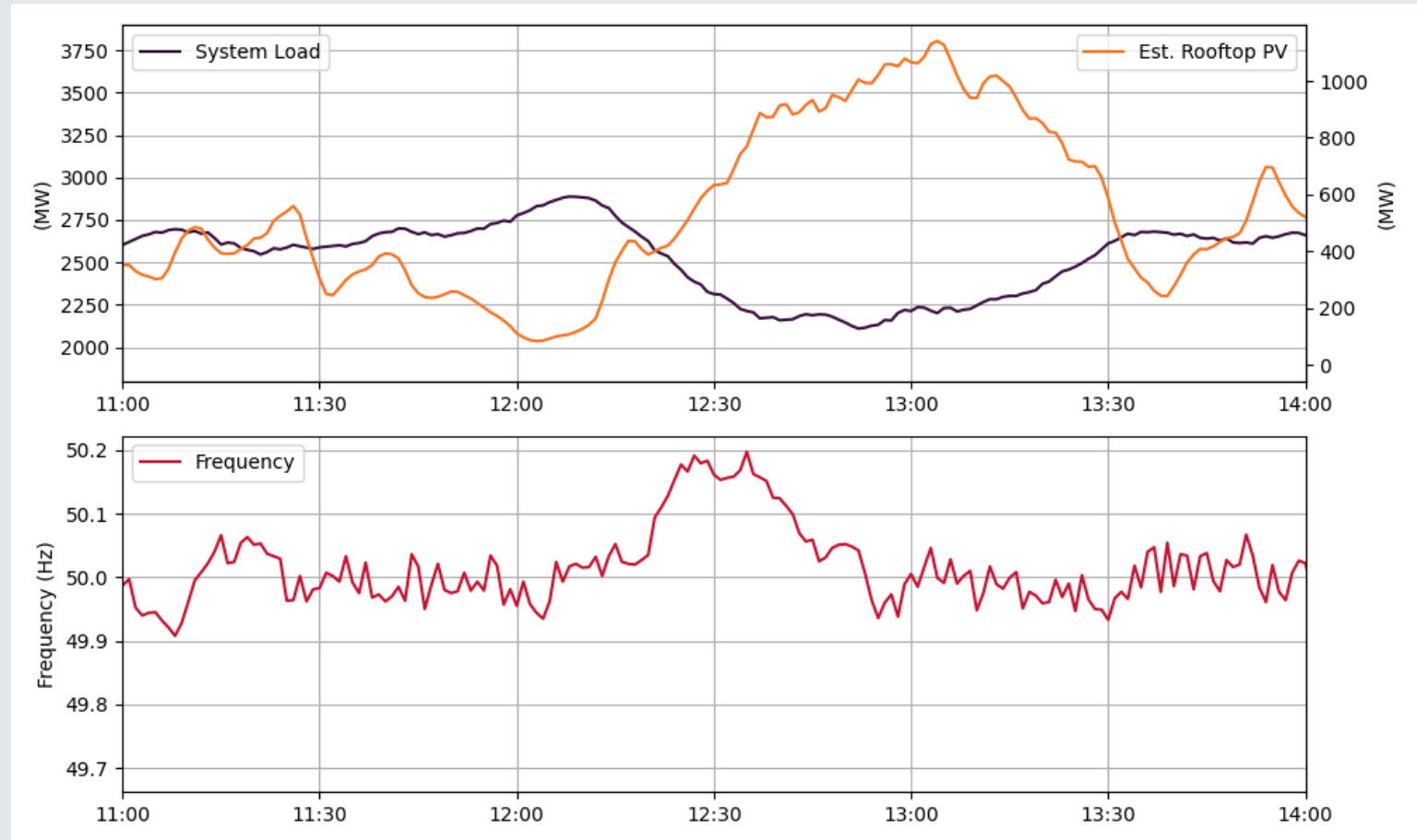
As a result Controllers dispatches out-of-merit (for additional generation) to ensure Ancillary Service reserves



# 10<sup>th</sup> August 2021 – PV fluctuation

From 12:10 to 12:40:

- System load decreased by 723 MW
- Rooftop PV increased by ~787 MW



# Going forward



- Without intervention or adaptation the frequency and magnitude of conditions such as these will increase.
- In the future DER will play a fundamental role in maintaining safe, reliable, secure and affordable energy moving forward.
- Drawing on the DER roadmap actions, AEMO's WA DER Program will implement the changes necessary to orchestrate distribute energy resources (including rooftop solar) within future WEM arrangements.
- Major actions that AEMO is undertaking to support the future role of DER in the WEM and SWIS include:
  - Implementing the DER Orchestration pilot to enable technical demonstration of capability.
  - Developing planning and operational tools to enable better visibility of DER, and operations under high DER penetration.
  - Defining and implementing market arrangements to enable DER to be aggregated to provide services to the WEM and the network, enhancing the value proposition of solutions such as battery storage and load control, alongside rooftops solar PV.