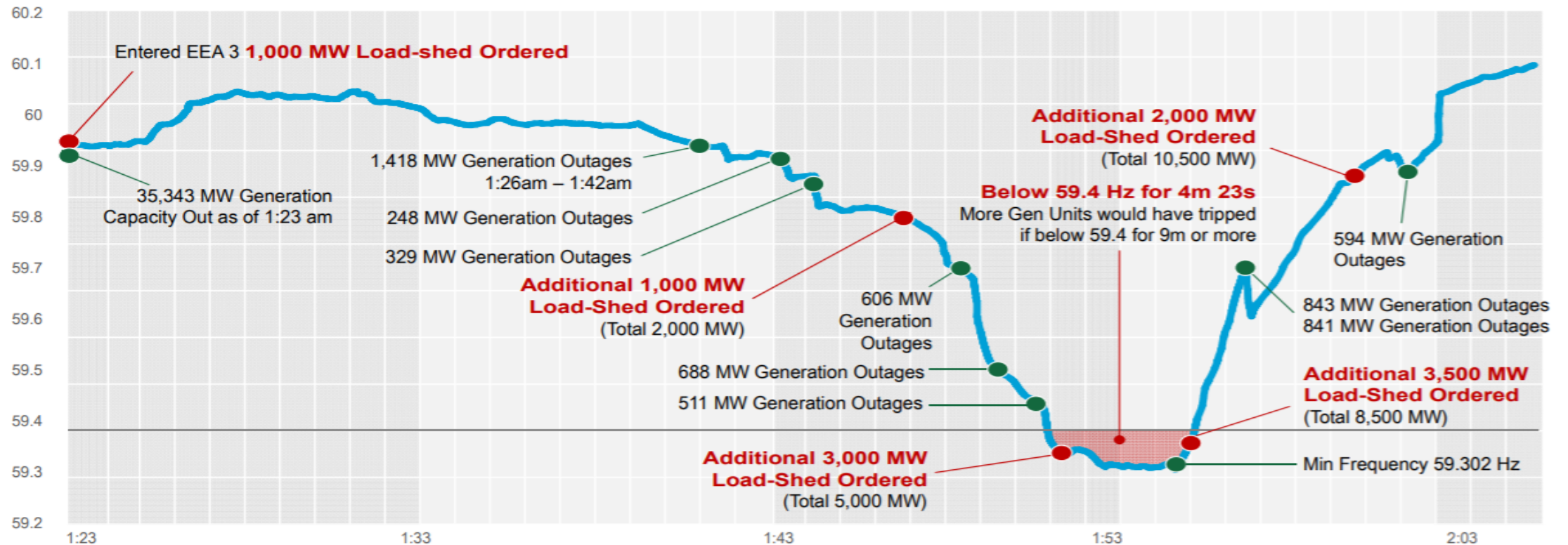




# NERC Lessons Learned

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## Rapid Decrease in Generation Causes Frequency Drop

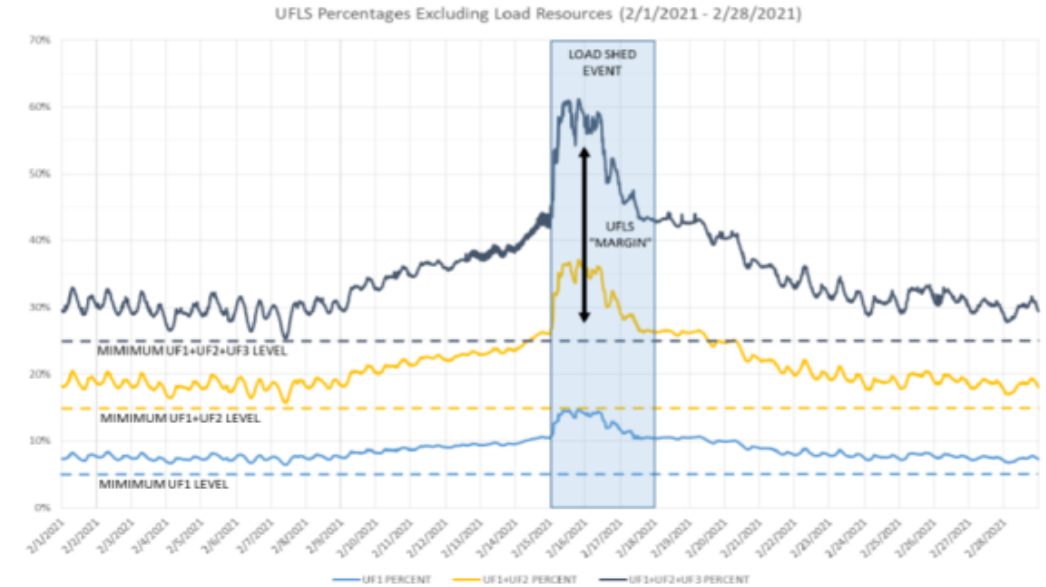




## Managing Under Frequency Load Shed Obligations

- February 2021 cold weather event required load shed for system reliability
- Entities found it difficult to rotate customer outages while maintaining service to critical loads & UFLS feeders
- Percentage of system load connected to UFLS feeders exceeded the required percentage levels
- Some system operators ultimately ran out of non-UFLS and non-critical load circuits and were forced to use a portion of their UFLS circuits to meet manual load shed directives

- Several TOPs noted that their UFLS-connected load represented up to 60% of its remaining load during the period of February 15–16



**Figure 1: February cold event UFLS connected load percentages (Feb 15-16 in blue shade area)**

- TOP may have the option to use some of the UFLS “margin” to include in load shed and rotating outages while still meeting its UFLS obligations
- Critical loads should not all receive the same level of priority, and the characteristics of a load shed event (depth/duration/season) will impact the treatment of certain critical loads
- It is critical to have the flexibility to include or exclude certain facilities based on the load shed scenario

## LL20220301 Managing UFLS Obligations Service Critical Loads during Energy Emergency

[https://www.nerc.com/pa/rrm/ea/Lessons%20Learned%20Document%20Library/LL20220301\\_Managing\\_UFLS\\_Obligations\\_Service\\_Critical\\_Loads\\_during\\_Energy\\_Emergency.pdf](https://www.nerc.com/pa/rrm/ea/Lessons%20Learned%20Document%20Library/LL20220301_Managing_UFLS_Obligations_Service_Critical_Loads_during_Energy_Emergency.pdf)

[https://www.puc.texas.gov/agency/resources/reports/UTAustin\\_\(2021\)\\_EventsFebruary2021TexasBlackout\\_\(002\)FINAL\\_07\\_12\\_21.pdf](https://www.puc.texas.gov/agency/resources/reports/UTAustin_(2021)_EventsFebruary2021TexasBlackout_(002)FINAL_07_12_21.pdf)

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## NERC Lessons Learned



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