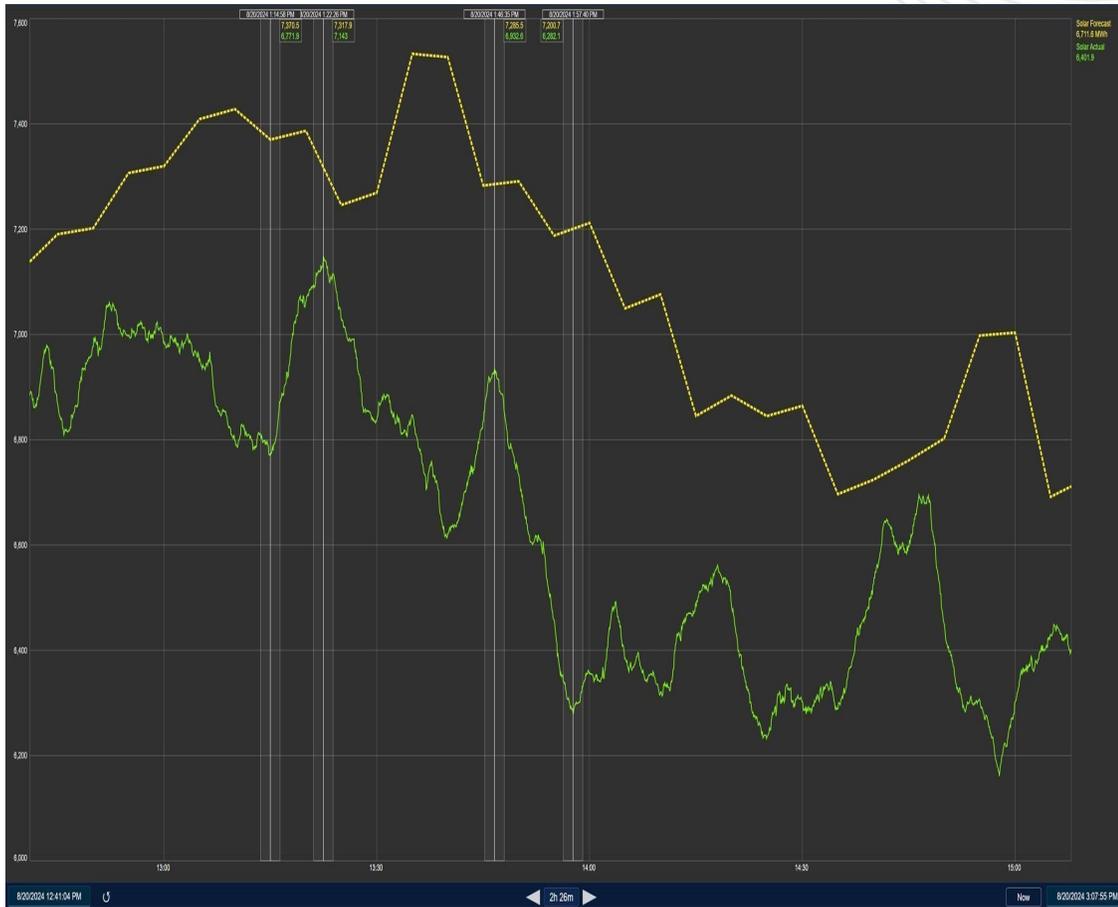


Operational Challenges with Solar Resources

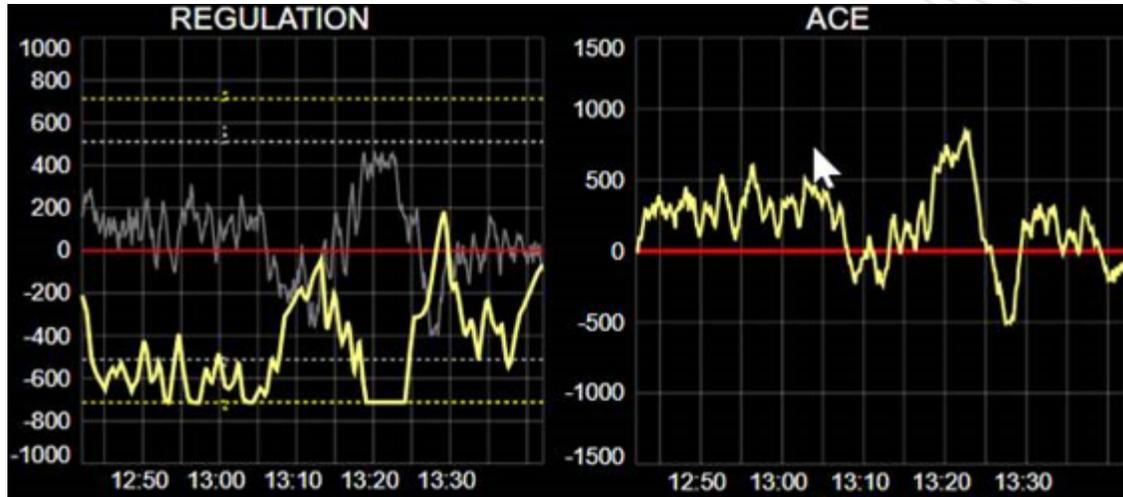
Kevin Hatch,
Sr. Manager, Dispatch
DISRS
September 9, 2024

- Provide an Operational perspective on the challenges of dispatching Wind and Solar resources in Real-Time
- Examples of typical problems and extreme weather conditions
- Concern with growth of Solar and Wind and potential impact on ACE and volatility

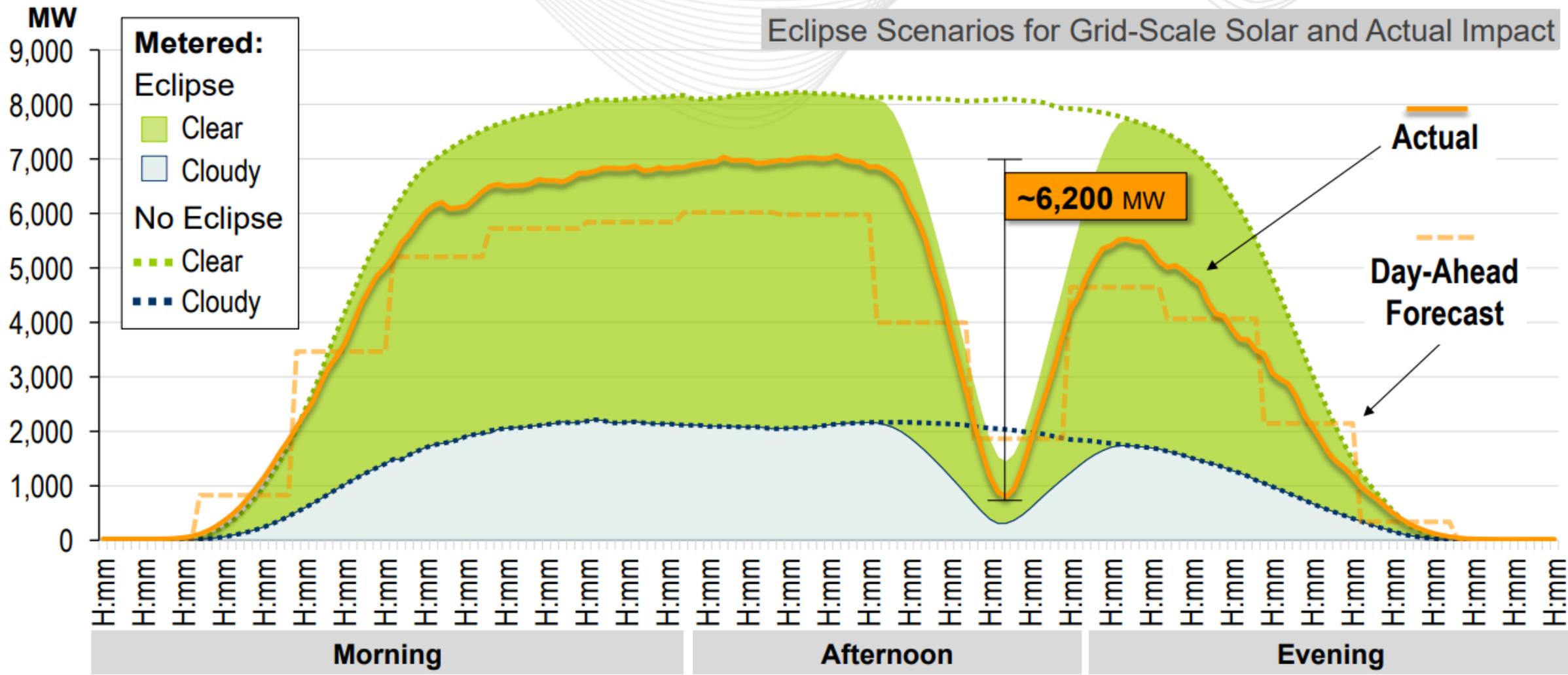


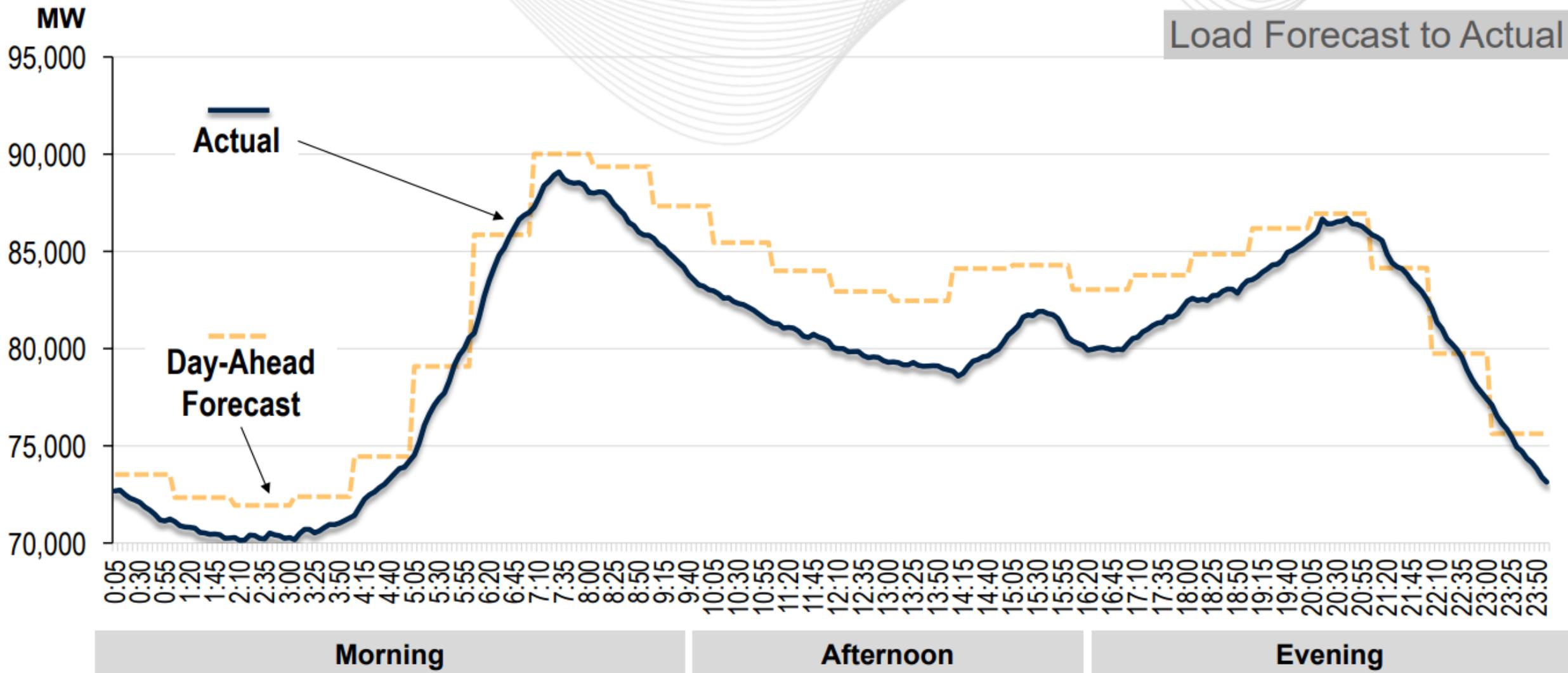
- 400-700 MW swings in solar from intermittent cloud coverage in 10 minutes or less
- Inverse effect on BTM solar driving increase in load at same time

Impact on ACE & Regulation



- Regulation has been sufficient to dampen volatility
- Concern is with future solar growth and larger swings





- Large swings of MWs and constraint volatility make it difficult to operate the system reliably
 - Can leads to out of market actions
- Solar growth is going to lead to more importance and need for ramping resources
- Solar volatility could impact the reserve and regulation requirements
- Data accuracy is going to be critical

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Operational Challenges with Solar Resources



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