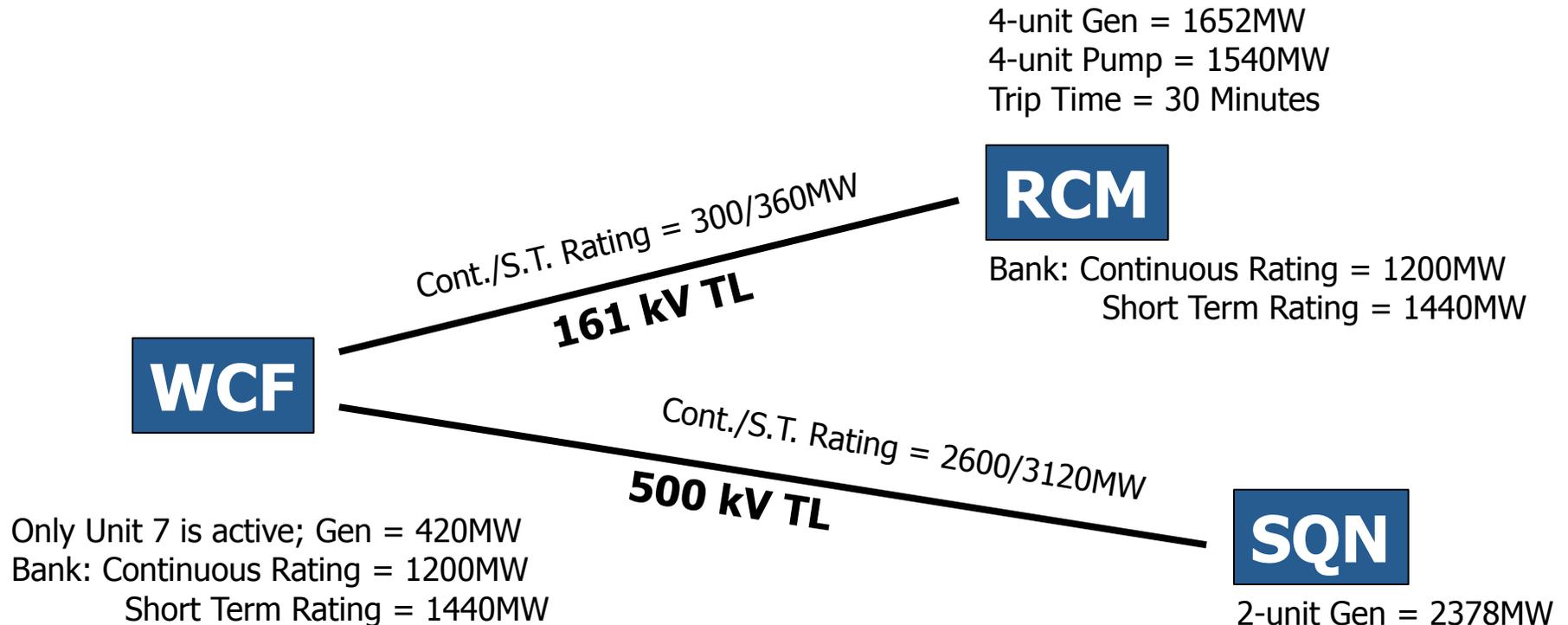




# Bridge to Post-contingency Mitigation Using Short Term Ratings



Short Term Ratings Must be Good for at Least 30 Minutes



## The Illustrative Case

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ATC: at 20,000MW system load, only 3 RCM units can pump

N-1: 20,000MW only 2 units can pump

Contingencies:

Loss of: WCF 500 kV Bank  
RCM 500 kV Bank  
WCF-SQN 500 kV TL  
WCF-RCM 161 kV TL

Consequences: for any one of these contingencies, either the WCF or RCM Bank overloads to 115%.

Without short term ratings, mitigation is pre-contingency RCM pumping derate with long duration economic loss

With short term ratings, system capability is increased until a low probability contingency occurs. Reliability is maintained, while economic loss is much reduced if it even occurs.



## Barriers to use of short term ratings

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How many utilities are like TVA in this respect?

Grid ratings are assigned by long term transmission planners

Information to support the confident assignment of short term ratings usually resides within the operations and maintenance world e.g., DGA analysis (for CO, CO<sub>2</sub>) likely confirms no xfmr loss-of-life

Opportunity to enhance communications between these worlds can yield appropriate use of short term ratings to realize significantly higher use of the grid