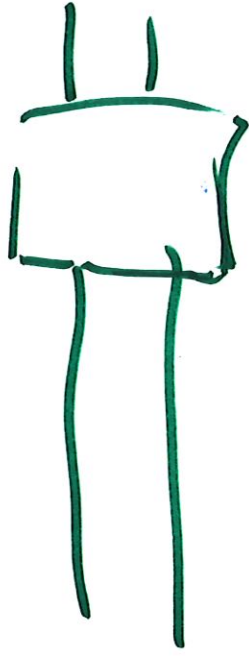


ECE 444 / ECE 544 /
CS 444 / CS 544

Supervisory Control and Critical Infrastructure Systems

Session 9



19 2/4

Now
- scheduled generation
- day/days ahead
- hours ahead
- reserve

GENERATOR DISPATCH:
CLASSICAL APPROACH

CS&ECE 444/544
Lecture 8

- Base load
- operate 24/7
- Intermediate (mid) load
- smaller, more responsive
- Peaking units
- gas, hydroelectric
↳ only operate for short times

7

Spring 2024

7

MEASURES OF PERFORMANCE
PLANNING VERSUS OPERATIONS

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Reliability

1. interruptions
frequency (how often)
how many customers
how long
2. Power quality
voltage

operational statistics

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Spring 2024

planning - probabilities
- n-2, n-1 contingencies

LS 3/4

BALANCING AUTHORITY RESPONSIBILITIES

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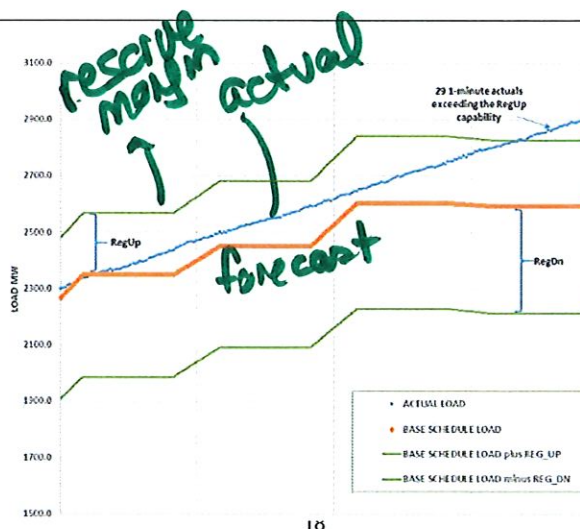
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MAINTAINING REGULATING RESERVES

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western energy imbalance market

h/n 67

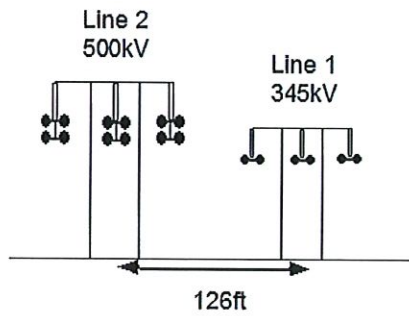
POWER LINES

Voltages approx. 132kV and up

- EHV 345 kV and above
- This is RMS phase to phase voltage

Land use—transmission right of way

Source at both ends of line



TRANSMISSION

