

# Facility energy management in semiconductor manufacturing

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UT Austin main campus has CHP generation using natural gas; satisfying all electric, heating and cooling demands.

Campus cooling load optimization includes

- Forecasting of total cooling and electric load
- Modeling of chillers, cooling towers, pumps, turbines, boilers, TES tanks
- Shifting cooling loads across various chillers and across different times of a day; and estimation of energy savings

UT Austin and TI Dallas north campus have similar

- Electricity loads
- Cooling loads
- Thermal storage (TES) tanks

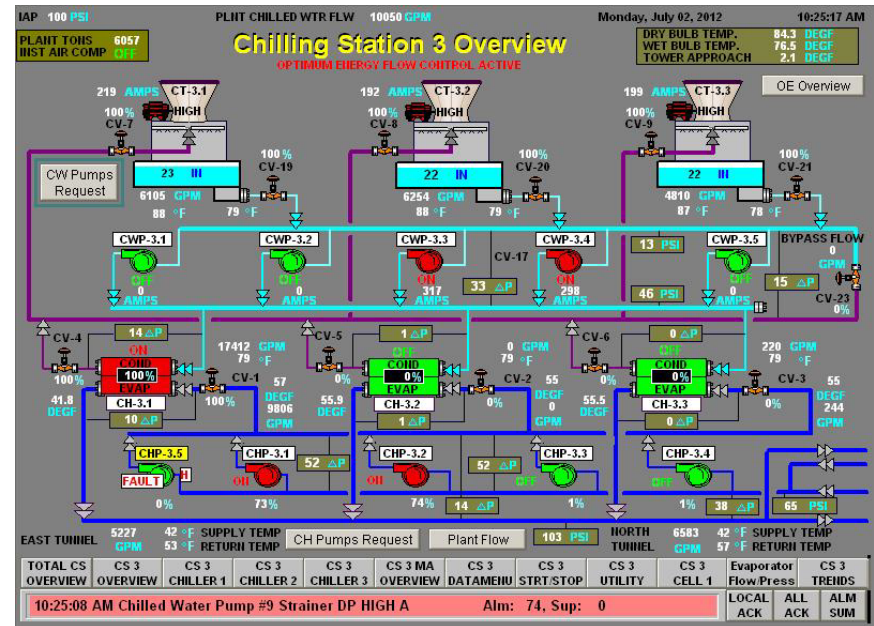


Figure: Layout of Chilling Station 3 at UT Austin

## Future work

- Apply UT findings to TI CHP opportunity
- Use adaptive modeling strategies to track changes in operating conditions