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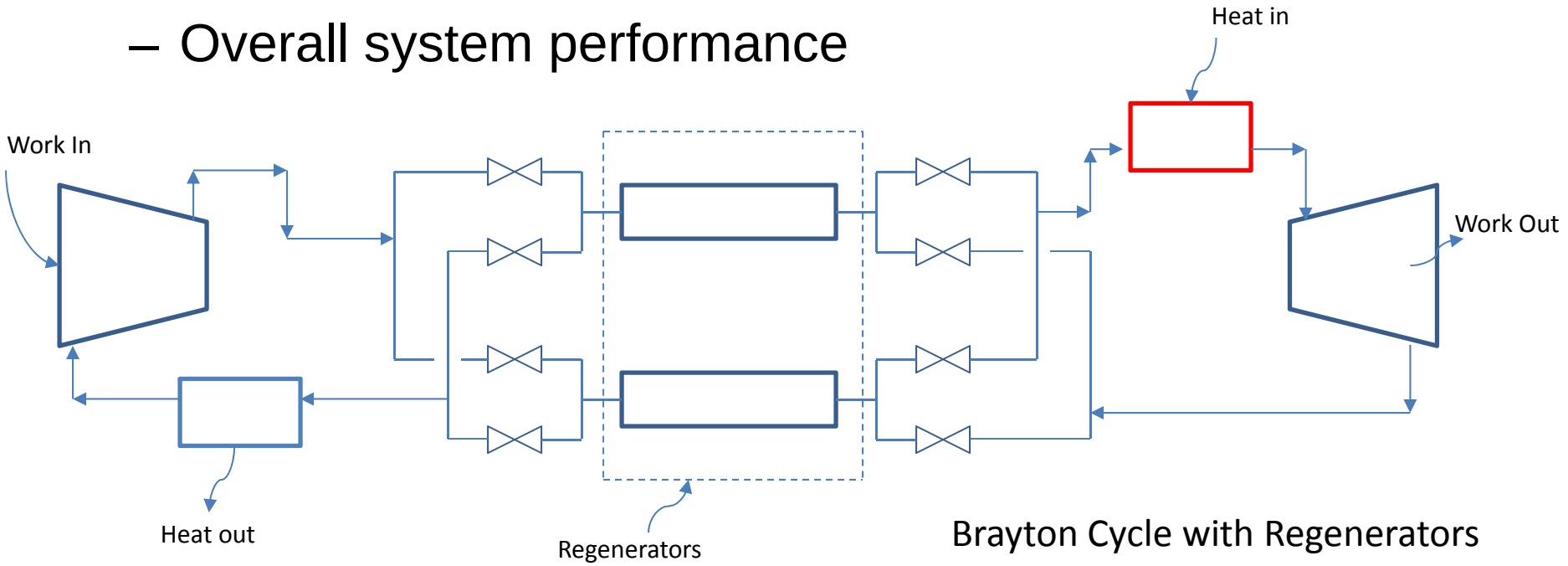
Project: Supercritical CO2 Brayton cycle with regenerators

Motivation

- Part of Department of Energy SunShot Initiative
  - Goal of making solar energy fully cost competitive with traditional energy sources by 2020
  - Supercritical CO2 (sCO2) Brayton cycle would utilize heat provided from concentrated solar power
  - To reduce cost of implementing sCO2 Brayton cycle, regenerator type heat exchangers are being evaluated to replace more expensive types of heat exchangers

- To validate the performance of sCO2 cycle with regenerators, a 10kW scale experimental facility is being built at UW-Madison to evaluate:
  - Regenerator effectiveness
  - Valve control, timing, and system response
  - Overall system performance



Brayton Cycle with Regenerators