

Exceptional service in the national interest



Research-to-Power: The sCO₂ Future

Coordination and contributions to component research and system demonstrations by Sandia National Laboratories

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Sandia National Laboratories

6th International Supercritical CO₂ Power Cycle Symposium
2018-03-29 in Pittsburgh, Pennsylvania, USA

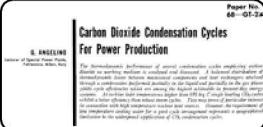
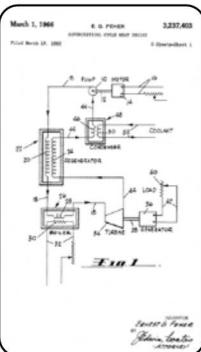


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Research Progress to the sCO₂ Future



Theory



Exploration



Development

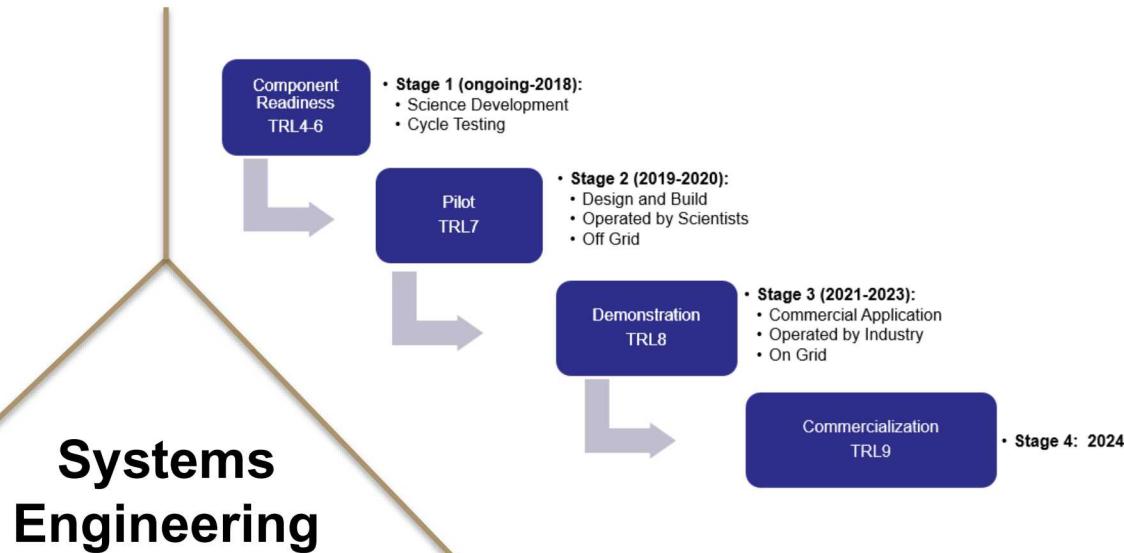
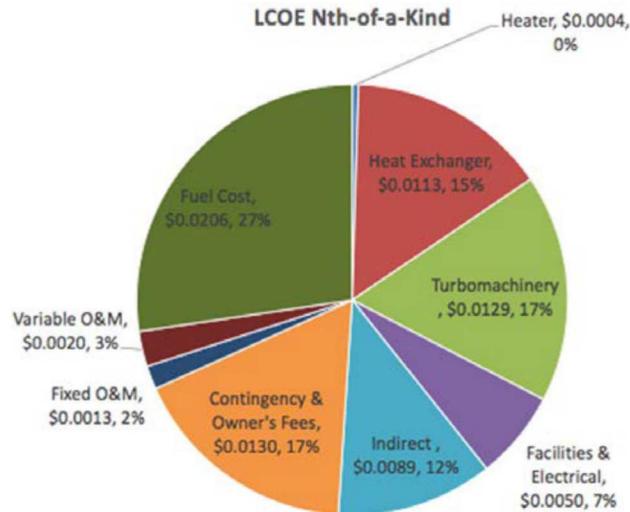


Demonstration



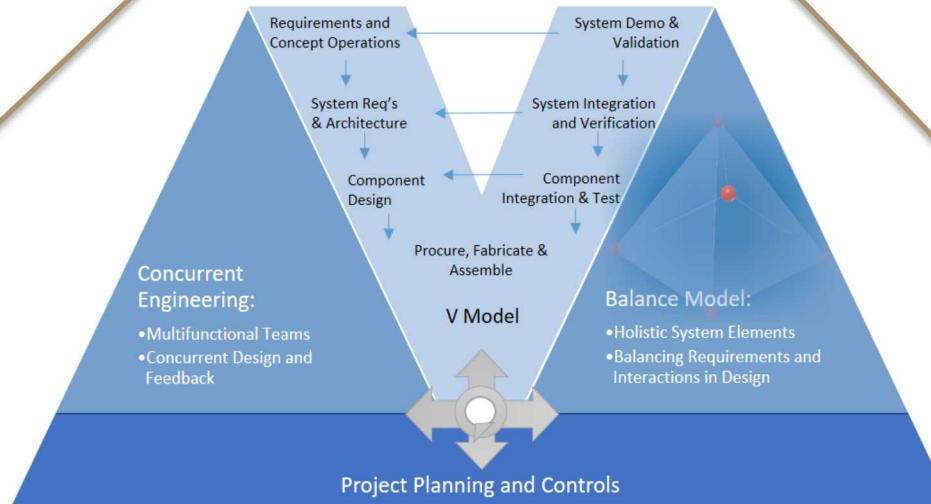
NET POWER

Coordination of Research Activities

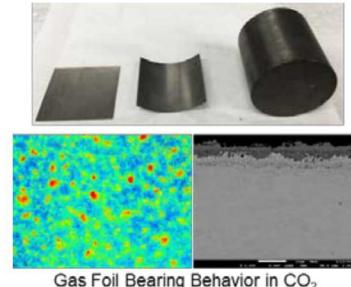
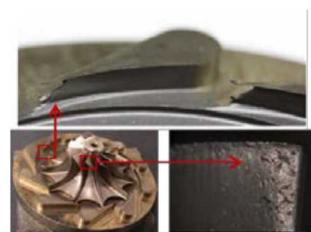
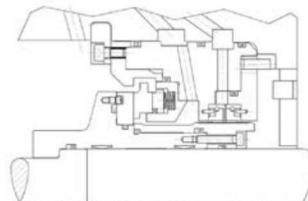
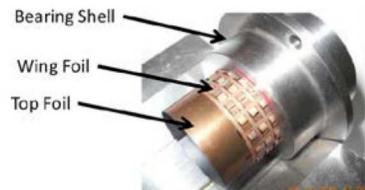


Economics

Roadmapping

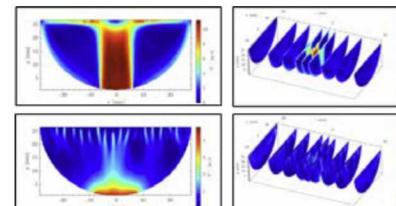
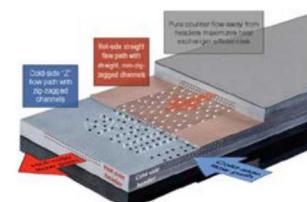


Support of Component Development



Turbine Degradation RCA

Turbomachinery

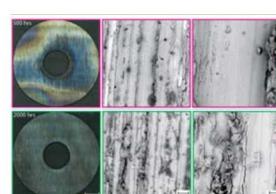


Heat Exchangers

Materials



In Situ Corrosion/Erosion Monitoring



Alloy Corrosion Experiments



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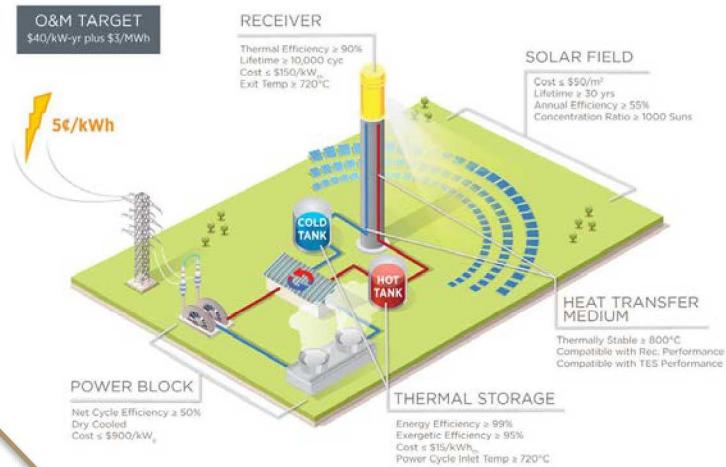
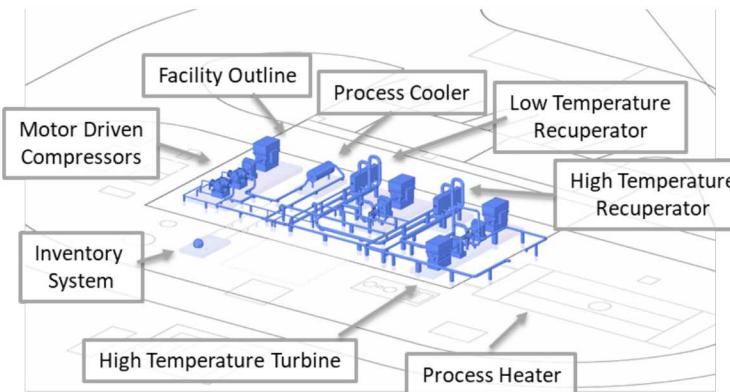
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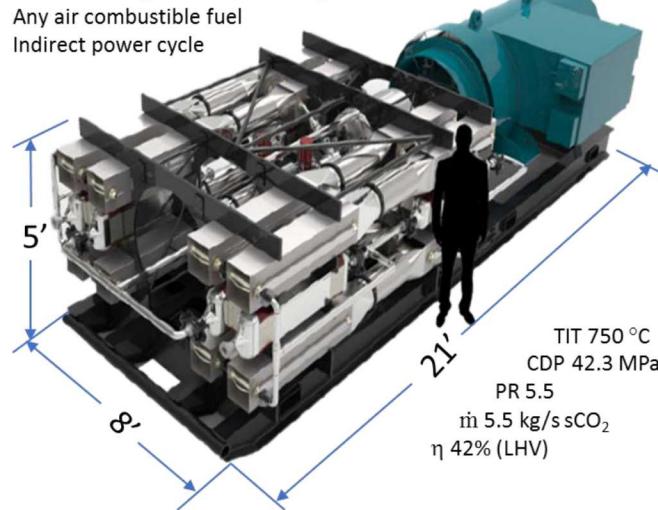
OAK
RIDGE
National Laboratory

EC Structural Materials Consortium

Support of Demonstration Efforts



1 MWe Merlin Power cycle, by Peregrine Turbine Technologies
Variable configurations, including CHP
Any air combustible fuel
Indirect power cycle



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TECHNOLOGIES OFFICE
U.S. Department Of Energy