



PEREGRINE  
TURBINE TECHNOLOGIES

# CLOSING THE 24/7 CLEAN ENERGY GAP

Storing energy and efficiently  
converting it into power



## sCO<sub>2</sub> Enabled • Miscibility Gap Alloy Long Duration Thermal Energy Storage System

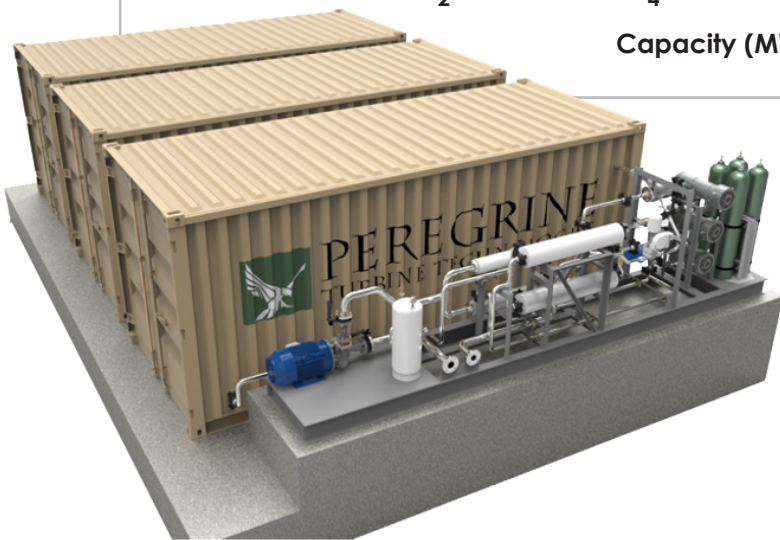
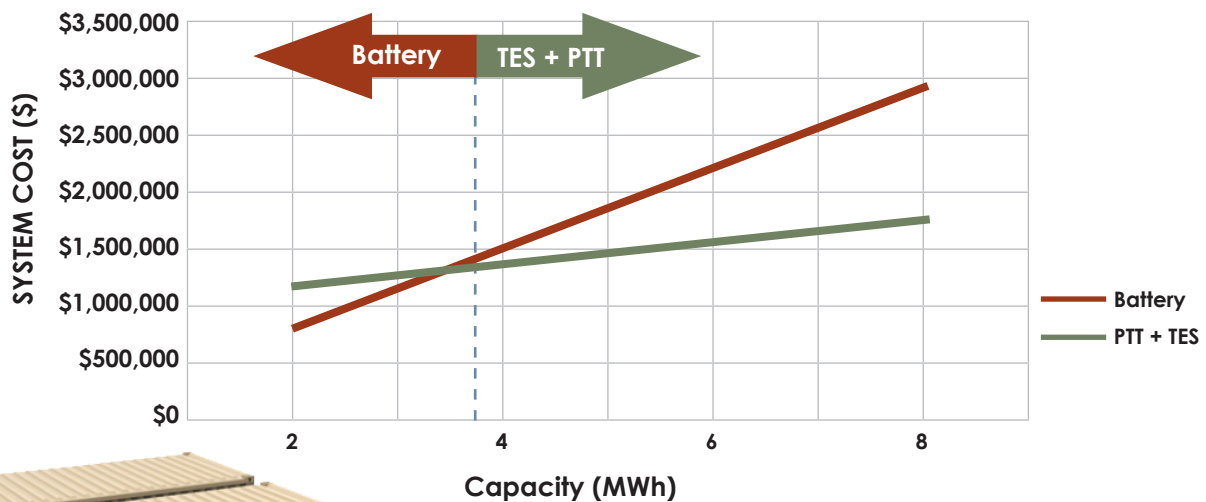
**Peregrine's sCO<sub>2</sub> Energy Conversion and Thermal Storage  
Technologies will enable a 100% Renewable Grid**

- Advanced technology TES systems have potential to outperform battery storage and other conventional forms of storage
- Thermal energy storage (TES) is projected to be the primary generation storage for renewable electricity generation
- Emerging advanced technology TES systems are strongly positioned to fill short-term reserve, ramp-up capacity and load shifting needs in the PV and Wind served markets

# 1/3 THE COST AND MORE THEN 2X THE LIFE

without Expensive End-of-Life Reprocessing of Current Technology Li-Ion BESS

SYSTEM STORAGE COST



## DECARBONIZING WITH ENERGY STORAGE

- Project lower normalized cost/MW-year than current Li-Ion Battery solutions
- Shown with 1MWe/16.5 MWh
  - Life:20 years
  - Normalized Cost: \$10k/MW-year(USD)
- 1 MWe power blocks 5 ½ MWh modules
- Product can be packaged for 1 MWe – 30 MWe applications
- Modular, containerized design minimizes onsite Assembly and commissioning
- Can be deployed to existing renewable energy installations
  - Cost reductions via shared component and systems possible at design stage
- Modular design with field replaceable cartridge components maximize uptime
- Rate of charge can be selected to suit application requirements
- Improves asset utilization for both renewable and conventional power generation

# TWO BREAKTHROUGH ENERGY TECHNOLOGIES

enable wind and solar power 24/7 by efficiently and economically storing and converting heat to electricity:

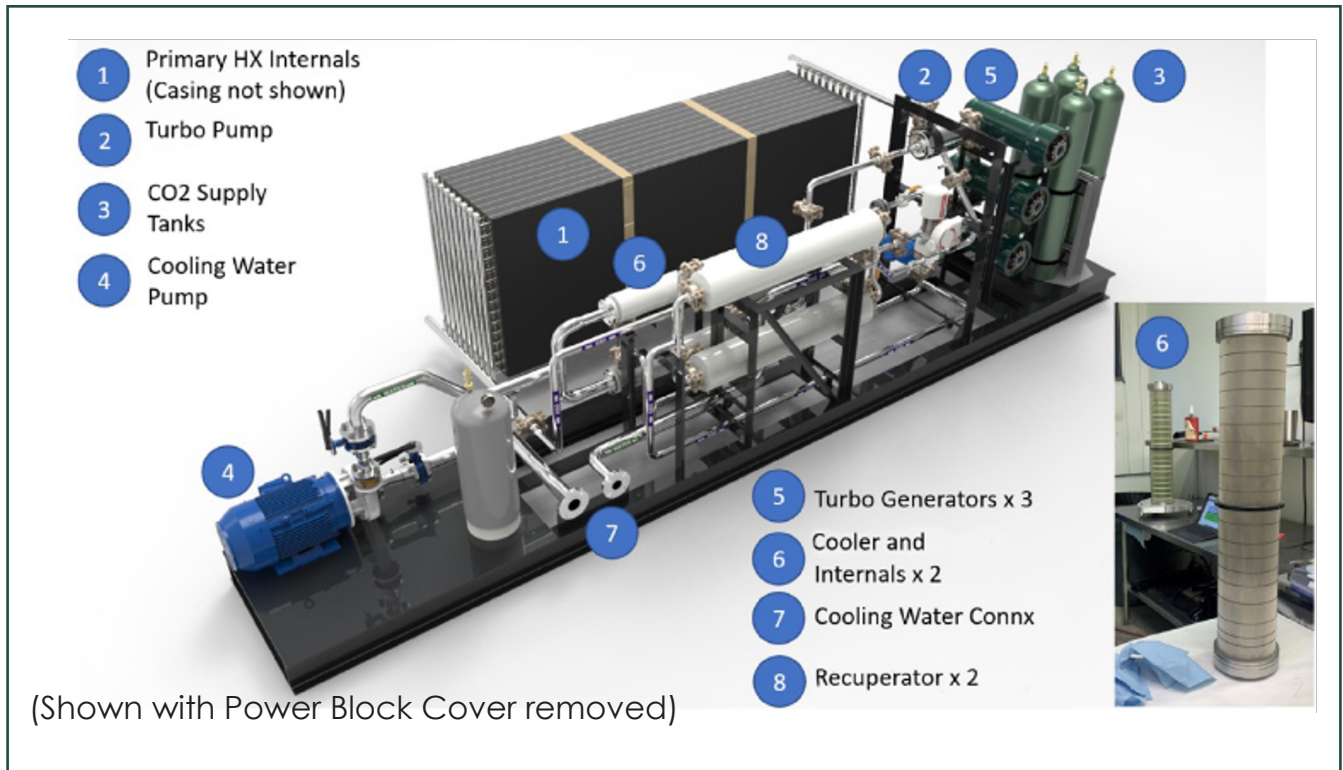
Extraordinary Energy Conversion Efficiency



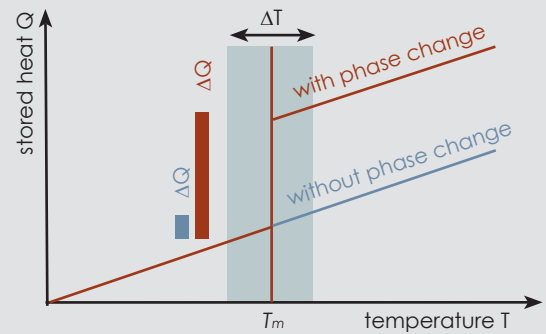
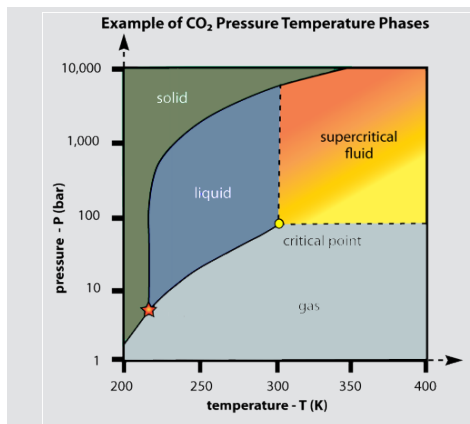
Breakthrough Heat Storage Density and Improved Thermal Conductivity



24/7 Clean Energy Availability at Lower LCOE



PTT's sCO<sub>2</sub> and Latent TES has significant advantage over Sensible Heat



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[peregrineturbine.com](http://peregrineturbine.com)

Contact Robert Brooks for information:  
[rbrooks@peregrineturbine.com](mailto:rbrooks@peregrineturbine.com)