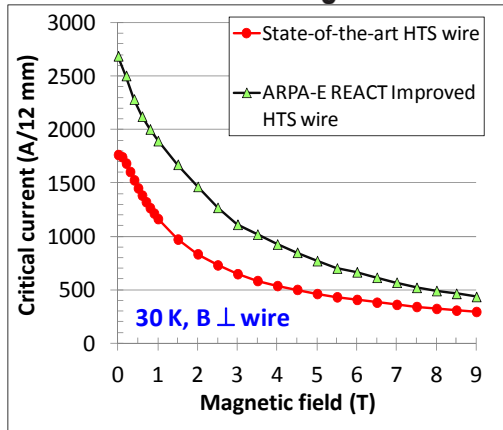


REACT: High Performance Low Cost Superconducting Wires and Coils for High Power Wind Generators

UNIVERSITY of HOUSTON **T_CSUH**



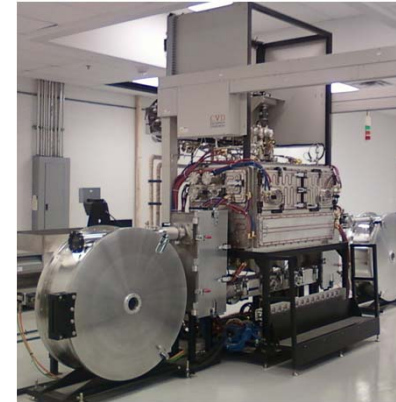
arpa • e

Advanced Research Projects Agency • ENERGY

SuperPower Inc.

A Furukawa Company

UNIVERSITY of HOUSTON **T_CSUH**



Pilot MOCVD system to scale up improved wire to manufacturing

68% improvement in wire performance at wind generator operating condition of 30 K, 2.5 T

NREL **TECO** **Westinghouse**

UNIVERSITY of HOUSTON **T_CSUH**

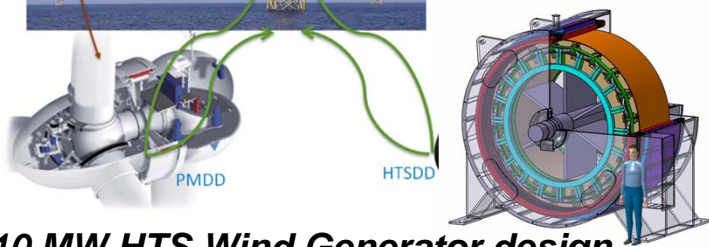
Tai-Yang Research

UNIVERSITY of HOUSTON **T_CSUH**



Innovative Drive Systems expected to affect:

- Operating cost through reduced failure rates and lower cost component replacement
- Annual energy capture through improved drive system efficiency
- Capital investment through lower cost and/or weight for tower/substructure, drive system and installation



10 MW HTS Wind Generator design & economic analysis



Superconducting Rotor Pole Design for fabrication & testing of coils with improved wire