Ingersoll-Rand's-Advanced Microturbine Program

- DOE Funding: \$1.4 M over 4 years
- Partners: Kyocera, Honeywell Ceramic Components, ORNL, NASA

21st Century

 Approach: Apply today's Si₃N₄ turbine technology to PowerWorks[™] platform:

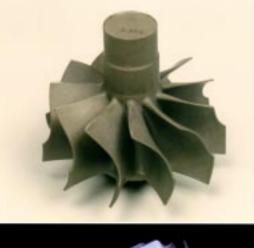


- Power Gen (100 250 kW with an electrical efficiency of 40% LHV
- High efficiency direct-drive air compressor
- Advanced high efficiency chiller and refrigeration packages





- Applying today's Si₃N₄ technology to microturbines will achieve near-term product success:
 - PowerWorks[™] air compressors use turbine rotors comparable in size (<3 in dia.) and geometry to Si3N4 turbochargers that have been produced in highvolume.





 These small turbocharger rotors are low in cost, and operate at temperatures above that of uncooled metallic candidates.