

Exceptional service in the national interest



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with even amount of white space
between photos and header

Nuclear Technology Users Facility

NTUF Manager: Gary Rochau

Principal Investigator: James Pasch

Engineers: Darryn Fleming, Tom Conboy

Technologists: Rob Sharpe, Glen Cannon, Tom Gallegos, Wes Chilton.



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Nuclear Technology Users Facility (NTUF)

At Sandia National Laboratories, Albuquerque, NM.



Sandia National Labs has opened a first-of-its-kind nuclear power conversion test facility that provides world class testing infrastructure and support for private interests seeking to develop new thermal-to-electric power conversion technology. A primary focus of the facility is closed Brayton cycle power generation technology development.

Our services include:

- Project development and test definition support
- Test architecture design and development
- Test execution support including experienced engineers and technologists
- Data acquisition, analysis, and delivery
- Purchasing
- Contracts development

NTUF capabilities include

- 1 MW of heating.
- 0.8 MW of heat rejection.
- Maximum Allowable Working Pressure with existing hardware up to 15.2 MPa.
- Maximum operating temperature with existing hardware up to 811 K.

Current NTUF hardware include

- 2 Turbo-Alternator-Compressors (TACs) rated for operation at 75,000 rpm and 125 kW_e net power generation.
- 6 shell-in-tube heaters rated at 130 kW each (780 kW total)
- 1 Printed Circuit Heat Exchanger (PCHE) rated at nominally 2.2 MW
- 2 PCHE's rated at nominally 0.6 MW
- All components have connection fittings, making the testing architecture highly versatile.
- 0.6 MW_e load bank
- Capability to deliver generated electricity (> 0.6 MW_e) to the local grid.

NTUF site



SCO₂ Closed Brayton Cycle Test Assembly

