TITLE: Mechanical/Chemical/Aerospace Engineer –Supercritical CO_2 Power Cycles
DEPARTMENT: U.S. Department of Energy
AGENCY: National Energy Technology Laboratory (NETL)
LEVEL: Graduate or Post-Doctoral Researcher
POSITION INFORMATION: Temporary Appointment: 1 year between approximately September 1, 2015 and August 31 2016; Full-time (40 hours per week)
DUTY LOCATION: Morgantown, West Virginia
WHO MAY BE CONSIDERED: United States Citizens, LPRs, & Foreign Nationals with appropriate approval

SUMMARY:
A graduate student or post-doctoral researcher is sought for a position in Morgantown, West Virginia at the National Energy Technology Laboratory - the U.S. Department of Energy's primary lab supporting fossil fuel-based energy research. A an ideal candidate will have demonstrated completion of coursework pursuant to a PhD in science or engineering, and wishes to engage in a funded research project formulating the publication of a Dissertation in that field. Post-doctoral candidates are also being sought. The candidate will research for a period of 1 year, with the possibility of extending that appointment. The candidate will research collaboratively with NETL Federal Researcher Scientists in the following area:

> Supercritical CO_2 Power Cycles. The candidate will use thermodynamic system modeling tools to assess and optimize various aspects of CO2 power cycles for fossil energy applications including operating conditions, system efficiency, cooling strategies and combustor configurations. Computational Fluid Dynamics (CFD) may also be utilized to model certain system components to assess performance and optimize design. Also, the candidate will be required to perform design calculations for the development of an experimental turbine blade cooling facility as well as an oxy-fuel combustor facility. The candidate would also be expected to assist in experimental data collection and analysis along with the preparation and presentation of technical papers and reports.

QUALIFICATIONS:
An ideal candidate will have a working understanding of system level thermodynamics modeling approaches using commercial software such as Aspen Plus and ThermoFlex. Some experience in modeling turbulent reacting flows using CFD would be beneficial. Also, the candidate would have a background in the design and operation of laboratory scale experiments as well as data collection and analysis techniques. Expertise in analytical modeling, thermodynamics, heat transfer, fluid mechanics and experimental methods is necessary. A background in power cycle fundamentals would be beneficial. Interested candidates may contact Dr. Pete Strakey (peter.strakey@netl.doe.gov) directly with a current CV at the earliest opportunity**.**

HOW TO APPLY:
Applicants should apply through the Oak Ridge Institute for Science and Education (ORISE) program. The ORISE Program provides opportunities for undergraduate students, recent graduates, graduate students, post-doctoral researchers, and faculty researchers. NETL utilizes

the ORISE program to support research and work within NETL's Office of Research & Development.

- Interested applicants should complete the online application at http://www.orau.gov/netl/
- If you have additional questions please contact Nancy Andres, Nancy.Andres@netl.doe.gov, who is the NETL ORISE program contact.