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| **TITLE:** | Developing Efficiency Factors for CO2 Storage in Geologic Formations Based on DOE-NETL Methodologies Using Reservoir Modeling and Simulation |
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| **DEPARTMENT:** | U.S. Department of Energy/National Energy Technology Laboratory (DOE/NETL) |
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| **NETL CONTACT:** | Angela Goodman; angela.goodman@netl.doe.gov |
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| **DUTY LOCATION:** | Pittsburgh, PA |
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| **LEVEL:** | Post-Graduate |
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| **POSITION**  **INFORMATION:** | 1-year appointment; full time (40 hours per week) with the possibility of extension |
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| **CLOSING DATE:** | 6/28/2019 |
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| **WHO MAY BE**  **CONSIDERED:** | United States Citizens, LPRs, & Foreign Nationals with appropriate approval which includes F-1 OPT with EAD (STEM extension not valid), J-1 Exchange Visitor, and LPR with EAD |

**SUMMARY:**

This posting seeks motivated post-graduates (M.S. or PhD) interested in performing research as part of a team at the National Energy Technology Laboratory (NETL). NETL is a multi-disciplinary, scientific and technical-oriented national laboratory.

In this research position, the candidate will collaborate with NETL’s Geological and Environmental Systems Division, Geochemistry Team to: (1) develop CO2 storage efficiency factors for geologic formations (i.e. ROZs, Shale, Saline) and (2) convert the existing CO2-SCREEN tool to python and add capabilities for estimating CO2 storage during enhanced oil recovery. Development and refinement of CO2 storage efficiency factors is vital to quantifying uncertainty associated with resource assessment. There is currently a need for robust efficiency factors on multiple scales from national to regional and even site specific. The current CO2-SCREEN tool uses DOE methodologies and equations to estimate CO2 storage resource for saline and shale formations. Expanding the tool to include enhanced oil recovery and conversion to python based will enable new capabilities and increase user accessibility.

The candidate will develop new CO2 storage efficiency factor values based on DOE methodologies. This research will include reservoir simulation and numerical modeling to calculate P10 and P90 probability estimates for CO2 storage efficiency. The candidate will use previous DOE methodologies and equations, as well as new data derived from the literature for simulation efforts.

The candidate should be able to collaborate as part of an interdisciplinary team, including colleagues at NETL, site support contract staff, and university collaborators.

Applications will be considered from a wide variety of disciplines; however, the ideal candidate will:

* hold a M.S. or Ph.D. degree in geology, petroleum engineering, computer science, or related field from an accredited institution.
* have experience in reservoir modeling, numerical simulations, python coding, statistics, carbon storage, and other related topics.
* must have a demonstrated ability to perform modeling, data analysis, literature reviews, and present/write results.
* must possess strong scientific reading and writing skills and demonstrate the ability to collate and present information in a timely, professional manner.

**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, postdoctoral researchers, and faculty researchers to apply classroom knowledge in a real-world setting to learn about NETL Research and Innovation Center’s (R&IC) core mission areas.

* Interested applicants should complete the online application at <http://www.orau.gov/netl/>.
* In the online application **list Angela Goodman as your requested mentor.** This will associate your application with this research opportunity. Please send a CV to [angela.goodman@netl.doe.gov](mailto:angela.goodman@netl.doe.gov).
* If you have additional questions please contact Patricia Adkins-Coliane, [Patricia.adkins-coliane@netl.doe.gov](mailto:Patricia.adkins-coliane@netl.doe.gov), who is the NETL Graduate Education Program Manager.