

Postdoctoral Science Fellow, Global Methane

Job Description

EDF offers internships and fellowships for students and recent graduates in a variety of programs and departments throughout the organization. The ultimate goal of our internship and fellowship program is to provide high-quality experiences (including relevant projects and opportunities for networking) that form the foundation for any individual who is serious about pursuing an environmental career.

Program Overview

The Office of Chief Scientist (OCS) is the nexus of science at Environmental Defense Fund (EDF), ensuring that the science that is the backbone for all EDF policy positions is based on the best available information. To be most effective in this role, OCS provides programmatic support for all scientists at EDF and fosters relationships with scientists outside the organization. The OCS team works on projects across all of EDF's programs, translating natural and social science basic and applied research into actionable ideas for colleagues who are designing programs and projects. The Fellow will work with OCS and report to a Lead Senior Scientist in OCS.

EDF has set an ambitious goal to achieve a 45% cut in global methane pollution from the Oil and Gas supply chain by 2025 in an effort to reduce the rate of warming we will experience over the next 20 years, equivalent to closing one third of the world's coal fired power plants. In order to map and quantify methane emissions globally, a new satellite mission - MethaneSAT is being developed by a wholly-owned subsidiary of EDF, which will provide quantitative methane emissions data covering the majority of global oil and gas production.

EDF's OCS seeks a recent Ph.D. recipient with proven research, analysis, and writing skills to work collaboratively with scientists and technologists from MethaneSAT and EDF and external partners to quantify methane emissions from the global oil and gas sector using state-of-the-art measurement and modeling approaches. The Postdoctoral Science Fellow will report to a Lead Senior Scientist in the Office of the Chief Scientist.

Overall Function

The Postdoctoral Science Fellow, Global Methane will work on quantifying methane emissions from (including but not limited to) the oil and gas sector. The Post-Doctoral Fellow will work on methane emissions inventory development, methane source attribution and data analytics related to the scientific objectives of MethaneSAT and EDF.

Key Responsibilities

Tasks will include but are not limited to:

- Lead and participate in the preparation of scientific papers and reports.
- Conduct rigorous research and analysis of quantitative oil and gas methane emissions data and emission sources, utilizing existing and planned multi-scale measurement data from satellites, airborne, and ground-based observation platforms.
- Develop and/or update comprehensive inventory of anthropogenic methane emissions with a focus on oil and gas sector.
- Contribute to the development and analytics of methane source attribution for MethaneAIR and MethaneSAT.
- Perform geospatial, statistical, and other advanced analyses in support of remote sensing and methane science questions.
- Provide scientific expertise in support of other EDF oil and gas methane emissions workstreams and stakeholders on an as-needed basis.
- Represent EDF in external meetings with a high degree of professionalism.
- Participate in advancing EDF Diversity, Equity, and Inclusion goals in which people from all backgrounds and experiences feel connected, included, and empowered to address the environmental and organizational challenges in alignment with EDF values.

Qualifications

- A recent Ph.D. in Atmospheric Science, Environmental Science and Engineering, Earth System Science, or a related field.
- Demonstrated research experience with methane emissions and emission inventory development approaches strongly preferred.
- Knowledge of oil and gas infrastructure/operations strongly desired for this position.
- Experience working with large-scale datasets including geospatial and/or satellite datasets is strongly desired.
- Strong quantitative data analysis skills and knowledge in statistics; preference for proficiency in Python or a similar language allowing analysis of large data sets.
- Proficiency in geospatial data analytics and tools (e.g., geostatistics, ArcGIS, QGIS).
- Experience in performing rigorous analysis with short deadlines in support of highly visible work.
- The ability to communicate complex ideas in writing and orally to multiple stakeholders with different levels of expertise, including the public, industry, and government policy makers.
- Intellectual agility and comfort with working on a wide variety of environmental topics.
- Ability to work independently and support a multi-disciplinary team, using independent judgment to plan, prioritize, and organize a diverse workload in a fast-paced environment.
- An interest and commitment to solving environmental problems through collaborative projects based on rigorous science and solutions-focused advocacy.

- Demonstrate self-awareness, cultural competency and inclusivity, and ability to work with colleagues and stakeholders across diverse cultures and backgrounds.

Location

This position may be located at any EDF office in the US or be based remotely in the US.

Term

This is a 24 month position.

Compensation

We offer a strong total rewards package encompassing competitive salary, robust benefits, and professional development opportunities consistent with a modern global organization.

The annual salary for this role is 68,250 USD.

Application Materials

Interested applicants should attach their cover letter and CV to the EDF application, a list of the names of 2-3 references, and a sample peer-reviewed paper or other writing sample.