

## Postdoctoral Scholar Position in Air Quality Modeling for Climate Policy and Social Equity

### Description:

The School of International Affairs (SIA) and the Department of Civil and Environmental Engineering (CEE) at the Pennsylvania State University offer an outstanding opportunity for a postdoc position in Air Quality Modeling for Climate Policy and Social Equity.

We are looking for an enthusiastic, self-motivated postdoctoral scholar to work on air quality model simulations for assessing the implications of climate policy on environmental justice and health disparities. Women and members of historically underrepresented groups are especially encouraged to apply.

This project aims to utilize global and regional air quality models (e.g., WRF-CMAQ, WRF-Chem, GEOS-Chem, AM4, etc.) to understand the impacts of climate policies on the distribution of pollution exposure and health outcomes.

The ideal candidate will have experience with air quality modeling, some familiarity with climate policy models (e.g., integrated assessment models), and be passionate about research to understand and address climate-related equity issues.

This position is offered for 1 year and can be renewed for 1-2 more years depending on job performance and funding availability. The postdoc will be jointly hosted by SIA and CEE at Penn State, supervised by Dr. Wei Peng, with close collaboration from Dr. Mark Budolfson at Rutgers University and Dr. Noah Scovronick at Emory University. The start date is negotiable (earliest: September 2021).

To apply, please send a CV, a cover letter, and the contact information of 3 references to Dr. Wei Peng ([weipeng@psu.edu](mailto:weipeng@psu.edu)). Please indicate "Postdoc application" in the subject line. We will start reviewing applications from **August 16, 2021** and will accept applications until the position is filled.

### *Recent relevant publications include:*

**Peng, W.;** Dai, H.; Guo, H.; Purohit, P.; Urpelainen, J.; Wagner, F.; Wu, Y.; Zhang, H. The Critical Role of Policy Enforcement in Achieving Health, Air Quality, and Climate Benefits from India's Clean Electricity Transition. *Environ. Sci. Technol.* 2020.  
<https://doi.org/10.1021/acs.est.0c01622>.

**Peng, W.;** Yang, J.; Lu, X.; Mauzerall, D. L. Potential Co-Benefits of Electrification for Air Quality, Health, and CO2 Mitigation in 2030 China. *Applied Energy* 2018, 218, 511–519. <https://doi.org/10.1016/j.apenergy.2018.02.048>.

Scovronick, N.; Budolfson, M.; Dennig, F.; Errickson, F.; Fleurbaey, M.; **Peng, W.;** Socolow, R. H.; Spears, D.; Wagner, F. The Impact of Human Health Co-Benefits on Evaluations of Global Climate Policy. *Nature Communications* 2019, 10 (1), 2095. <https://doi.org/10.1038/s41467-019-09499-x>.

### **Duties and Responsibilities:**

The primary responsibility of the position is to model air quality and health impacts of a wide range of climate policy scenarios at the city, national, and global scales.

Additional responsibilities will include:

- 1) participating in regular meetings with supervisors and a collaborative team;
- 2) writing and publishing results in scientific journals;
- 3) presenting research findings at academic conferences and meetings with potential stakeholders;
- 4) participating in professional development activities including proposal writing.

### **Qualifications**

#### **Basic Requirements:**

- PhD degree in engineering, atmospheric sciences, climate sciences, or related field.
- Familiarity with running atmospheric chemistry and transport models.
- Proficiency in programming language such as R or Python.
- Excellent verbal, written, and interpersonal communication skills.
- Self-motivated and able to work effectively.
- Well-honed organizational skills and ability to manage multiple priorities and timelines.
- Ability to work well in a collaborative academic environment.

#### **Desired Requirements:**

- Familiarity with relevant methods and scholarship in health impact assessment.
- Familiarity with integrated assessment modeling.
- Experience with web development to visualize research findings.

**Application Instructions:**

To apply, applicants should send the following application materials to Dr. Wei Peng (weipeng@psu.edu):

1. CV
2. Cover letter briefly describing your qualifications, professional goals, and specific interest in this position. In your letter:
  - a. Please describe why you are interested in working on this project, and describe relevant professional experiences (e.g., working in collaborative partnerships, in science communication, etc.).
  - b. Please also include a short description of your contributions to and vision for promoting justice, equity, diversity, and inclusion.
3. Contact information for 3 references, with a brief description of why that person is listed and/or what that person's interactions with you have been.