

Postdoctoral Scholar Position in Representing Political Economy Insights in Integrated Assessment Models

Overview:

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 *Representing Political Economy Insights in Integrated Assessment Models*.

We are looking for an enthusiastic, self-motivated postdoctoral scholar to join a new project funded by the Alfred P. Sloan Foundation to incorporate political economy insights into the quantitative modeling of decarbonization policies. Women and members of historically underrepresented groups are especially encouraged to apply.

With a focus on the U.S. climate policy, this project aims to:

- 1) Organize insights from political economy fields to enable quantitative representations in models;
- 2) Upgrade IAMs to better represent and assess politically-realistic policy and investment decisions.

The successful candidate will have the opportunity to advance their own research while also collaborating with several teams of scholars—in IAMs, and in the social sciences—who are developing new ways to collaborate across disciplines.

The ideal candidate will have experience with integrated assessment modeling or energy system modeling, some familiarity with the social science literature of climate policy and energy transition, and be passionate about interdisciplinary research to understand and inform real-world climate action.

This position is offered for 1 year and can be renewed for 1-2 more years depending on job performance and funding availability. The start date is negotiable (earliest: October 2022).

The postdoc will be jointly hosted by SIA and CEE at Penn State, supervised by Dr. Wei Peng, with close collaboration from Dr. Gokul Iyer (Joint Global Change Research Institute, PNNL/University of Maryland) and Dr. David Victor (UC San Diego).

To apply, please send a CV, a cover letter, and the contact information of 3 references to Dr. Wei Peng (weipeng@psu.edu). Please indicate “Postdoc application” in the subject line. We will start reviewing applications from **September 30, 2022** and will accept applications until the position is filled.

Some relevant publications for this position include:

- (1) *Climate Policy Models need to Get Real about People – Here’s how*. Peng, W.; Iyer, G.; Bosetti, V.; Chaturvedi, V.; Edmonds, J.; Fawcett, A.; Hallegatte, S.; Victor, D.; van Vuuren, D.; Weyant, J.. *Nature* (2021), 594, 174-176.
- (2) *The Surprisingly Inexpensive Cost of State-Driven Emissions Control Strategy*. Peng, W.; Iyer, G.; Binsted, A.; Marlon, J.; Clarke, L.; Edmonds, J.; Victor, D. *Nature Climate Change* (2021), 11, 738-745.

- (3) *Improved representation of investment decisions in assessments of CO₂ mitigation*. Iyer, G., Clarke, L., Edmonds, J., Flannery, B., Hultman, N., McJeon, H., Victor, D. *Nature Climate Change* (2015), 5, 436-440.

Duties and Responsibilities:

The primary responsibility of the position is to work closely with modelers and political scientists to improve the representation of political economy insights in IAMs (e.g., GCAM-USA: <https://jgcri.github.io/gcam-doc/gcam-usa.html>).

Additional responsibilities will include:

- 1) participating in regular meetings with the project team;
- 2) help organizing annual workshops to engage modelers and social scientists;
- 3) writing and publishing results in scientific journals;
- 4) presenting research findings at academic conferences and meetings with potential stakeholders;
- 5) participating in professional development activities including proposal writing.

Qualifications

Basic Requirements:

- PhD degree in engineering, energy systems, climate sciences, or related field.
- Familiarity with integrated assessment modeling or energy system modeling.
- Proficiency in programming language such as R or Python.

Desired Qualifications:

- Familiarity with relevant social science literature on climate policy and energy transition.
- Ability to work well in a collaborative, highly interdisciplinary environment.
- Excellent verbal, written, and interpersonal communication skills.
- Well-honed organizational skills and ability to manage multiple priorities and timelines.

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 relevant professional experiences (e.g., prior research experiences and skills).
 - 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.