The NCEC Social Science Research Fellowship program is designed to foster interdisciplinary research that addresses the challenges of the new carbon economy, from the development to the deployment of carbon removal approaches. The fellowship will support a cohort of early career social scientists who (1) will conduct both independent and collaborative research deeply informed by and intertwined with CDR scholarship; and (2) whose presence in NCEC will catalyze interdisciplinary collaboration among engineers, natural scientists, and social scientists to advance a new carbon economy. We envision the social scientists investigating CDR research questions in three specific areas:

What are the conditions for creating a new carbon economy, from political agendas and policy instruments to the mobilization of financial and human resources, to the creation or emergence of new actors, alliances, movements, rights, and markets? What types of incentives will trigger investment in carbon removal, sequestration, and use? Who is and who should be involved in creating the rules and distributing costs and benefits of the new carbon economy? What should be the core principles of governing new carbon technologies? How might marginalized communities be affected by the transition to a new carbon economy, particularly an economy that involves revaluing long-established carbon employment and externalities? What will be key sources of opportunity or opposition to establishing policies that facilitate a new carbon economy?

Are there ways of designing carbon management research, experiments, pilots, and demonstrations that facilitate rather than hinder innovation? What are effective ways to co-produce and communicate knowledge regarding the risks and benefits of carbon management between scientists, the public and policy makers? How does the nature of negative emission technologies, especially their long-term impacts, affect research, decision-making and public opinion? What is the ongoing role of expertise from different disciplinary areas in informing decision making in a new carbon economy?

What are the social dynamics that enable or constrain the initiation of and transformation to a new carbon economy? What is the role of ideas, language, story-telling and meaning-making processes more generally in the transition away from a fossil-fuel-based economy? What are the social benefits and risks of carbon management, and how are they distributed demographically and spatially in a new carbon economy? Which human and social variables affect the ability to scale up carbon management technologies? What are key sources (individuals, institutions, groups, organizations) of leadership in social-economic transformations? What are the professional, educational, and labor-market implications of developing a new carbon economy? How will carbon management change human understanding of important activities and experiences, e.g., work, identity, travel, or nature?
The New Carbon Economy Consortium (NCEC) is requesting applications for Postdoctoral Fellows in the social sciences to work with Consortium institutions on topics related to the transition to an economy that sequesters more carbon than it emits. The Consortium is building a knowledge enterprise that includes the scholarship needed to understand and facilitate the development of approaches that remove, store and use atmospheric carbon and explore the critical intersection between such advancements and the social sciences like economics, political science, sociology, human geography, with special attention to justice, equity, diversity, and inclusion. NCEC seeks applications from scholars across a broad spectrum of social science disciplines and perspectives, including perspectives on how CDR technologies can be scaled equitably and safely.

The NCEC Social Science Research (SSR) Fellowship program is funded by the Alfred P. Sloan foundation to bring social science research to bear on carbon management. Arizona State University’s Julie Ann Wrigley Global Futures Laboratory serves as the Secretariat for NCEC and the Principal Investigator for this grant.

$70,000, with host University benefits and grant-related travel funding. The fellowship will provide support for two years from June 1, 2021- May 31, 2023, dependent on evaluation of year one performance.

The cohort of four NCEC SSR Fellows will be expected to perform independent and collaborative research as well as participate in quarterly workshops, NCEC annual meetings and co-lead NCEC working groups. NCEC SSR Fellows will be responsible for producing articles for submission to relevant journals, presenting their research at NCEC meetings and academic conferences and contributing to including policy briefs. In addition to having mentors at their host university, Fellows will have access to the breadth of expertise represented in the Consortium and will be expected to collaborate with NCEC investigators and other fellows.

Completion of PhD more recently than 2017, with a preference for candidates for whom this would constitute their initial postdoctoral position.

Application deadline is February 15, 2021 with anticipated start date June 1, 2021.

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In addition to a cover letter, CV and contact information for 3 persons who can provide letters of reference, candidates are expected to provide a research project proposal (up to three pages) that addresses the following questions:

1. What is the problem statement and/or hypothesis that will be addressed during the fellowship?
2. How does this research relate to other topics in CDR?
3. How will the proposed research integrate social science with natural science or engineering to ensure CDR development and deployment are informed by on-the-ground realities and the human and social dimensions of the work?
4. If the aims of the proposed research are achieved, how will scientific knowledge, technological capability, and/or practice or societal outcomes be improved?

Although not required, candidates are encouraged to identify researchers, centers and/or institutions within the Consortium as potential hosts and mentors. A list of potential sponsors and their research interests can be found here.

ASU and NCEC institutions are EO/AA employers and intend to support and foster a culture of inclusiveness. Diversity within the NCEC is strong with public, private, minority serving institutions and HBCU members. Each institution has a profound commitment to the inclusion of minorities and gender diversity in research. The intent of the fellowship is to integrate diverse disciplines and foster an inclusive intellectual and professional cohort of scholars. This goal will be facilitated by social science mentors and scholars who have been trained in team science and awareness of cultural differences.

The New Carbon Economy Consortium currently includes Arizona State University, Carbon 180, Colorado State University, Columbia University, Cornell University, Howard University, Lawrence Livermore National Lab, National Renewable Energy Lab, Purdue University, University of British Columbia, University of California Berkeley, Global CO2 Initiative, University of Wyoming, Worcester Polytechnic Institute. Please review NCEC Innovation Plan for more information on the work of the Consortium.

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Criteria for Ranking Candidates:

Candidates must have received a Ph.D. in the social sciences, after June 1, 2017 but prior to commencement of the Fellowship period, in the fields of economics, political science, behavioral science, law, geospatial planning, science communication, or other relevant social sciences.

Are the applicant’s academic record and research experience relevant to the topic of proposed research? Does the applicant have the potential and commitment to develop as an independent and productive researcher?

Is the research proposal well-conceived, with a clear problem statement and/or hypothesis to be tested; a data-gathering, management, and analysis strategy; and a clear understanding of how the research relates to other CDR research and broader new carbon economy development? Is there evidence of a potential match between the research interests of the applicant and a Consortium institution and mentor? Does the applicant demonstrate any experience with or understanding of the opportunities and challenges of conducting social science research in collaboration with natural scientists and engineers?

Does the proposed research project address an important problem or crucial barrier in one of the three thematic areas? If the aims of the proposed research are achieved, how will scientific knowledge, technological capability, and/or practice be improved?

Dr. Peter Schlosser                  PI, Vice President and Vice Provost  
                                      ASU Julie Ann Wrigley Global Futures Laboratory
Dr. David Guston                    Co-PI, Associate Vice Provost for Discovery, Engagement and Outcomes  
                                      ASU Julie Ann Wrigley Global Futures Laboratory
Noah Deich                         Executive Director  
                                      Carbon180
Dr. Jennifer Wilcox                 Presidential Distinguished Professor of Chemical Engineering and Energy Policy  
                                      Department of Chemical and Biomolecular Engineering, School of Engineering and Applied Science, Kleinman Center for Energy Policy, and Weitzman School of Design, University of Pennsylvania
Dr. Manjana Milkoreit               Assistant Professor  
                                      Department of Political Science at Purdue University
Dr. Michael B. Gerrard              Andrew Sabin Professor of Professional Practice  
                                      Columbia Law School
The NCEC SSR Fellowship Steering Committee, identified above, will conduct the initial review, ranking the candidates and forwarding the top-ranked ones to NCEC institutional representatives for consideration by host faculty. Host institutions will then send their ranking of desirable candidates back to the Secretariat for consolidation. The Steering Committee will finalize the placement and assignment of candidates. Throughout this process, every effort will be made to ensure the diversity of candidates, diversity of research topics, and methods.

**Fellowship Program Milestones**

- NCEC Meeting – working session on Integrating Social Sciences: Oct. 2020
- Commencement of Grant and Announcement of Fellows Program: Nov. 2020
- NCEC Annual Meeting and Social Science Working Session: Dec. 2020
- Opportunity publicized and posted: Dec. 2020
- Recruiting begins: Dec. 2020
- Selection process completed: Feb. 2021
- NCEC member virtual meeting Fellows announced and introduced: Mar. 2021
- Fellows onboarded at respective institutions: June 2021
- Cohort working session 1 with mentors and advisors: July 2021
- Fellows research plans due to scientific review committee for input: Aug. 2021
- Cohort working session 2: Oct. 2021
- ASU Winter School on the Social Studies of Emerging Technologies: Jan. 2021
- NCEC Innovation Plan updated based on work of Fellows: Feb. 2022
- Presentations at Annual NCEC meeting: Feb. 2022
- Cohort working session 3: May 2022
- Cohort research plan progress reports due: July 2022
- NCEC Annual Meeting – Fellows Presentations: Oct. 2022
- Cohort working session 4: Oct. 2022
- NCEC member meeting for NCEC Fellowship presentations: April 2023
- Summative publication and final report published: May 2023
- End of Grant Period: May 31, 2023

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Social Science Research Fellowship
Researchers and Liaisons

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<tr>
<th>Institution/Center</th>
<th>Social Scientist and NCEC Contacts</th>
<th>Area of Research</th>
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<tbody>
<tr>
<td>Arizona State University</td>
<td>David Guston (<a href="mailto:David.Guston@asu.edu">David.Guston@asu.edu</a>) Associate Vice Provost for Discovery, Engagement and Outcomes Julie Ann Wrigley Global Futures Laboratory</td>
<td>Co-PI; governance of emerging technologies</td>
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<tr>
<td>Carbon180</td>
<td>Noah Deich, Executive Director (<a href="mailto:noah@carbon180.org">noah@carbon180.org</a>)</td>
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<td>Colorado State University</td>
<td>Diana Wall, Inaugural Director, School of Global Environmental Sustainability</td>
<td>NCEC Liaison</td>
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<tr>
<td>Columbia University</td>
<td>Steven A. Cohen (<a href="mailto:sc32@columbia.edu">sc32@columbia.edu</a>) Professor in the Practice of Public Affairs School of International and Public Affairs</td>
<td>sustainability management, environmental management</td>
</tr>
<tr>
<td>Cornell University</td>
<td>Rebecca Slayton (<a href="mailto:Rs849@cornell.edu">Rs849@cornell.edu</a>) Associate Professor, Department of Science &amp; Technology Studies and Director, Judith Reppy Institute for Peace and Conflict Studies</td>
<td>Governance and societal transformation. How can marginalized and vulnerable communities best participate in a transition to a low or negative carbon economy?</td>
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What governance arrangements will empower and incentivize marginalized groups to participate and chart their own future in a new carbon economy?

Global CO2 Initiative
University of Michigan | Prof. Kailin Raimi Ford School of Public Policy | (1) how people compare their own beliefs and behaviors to others, (2) how adopting one pro-environmental behavior affects later action, and (3) how climate change communication affects people’s understanding, behaviors, and support for climate policies and technologies. In particular, she studies how members of the public perceive the processes and products of carbon dioxide removal (CDR) and carbon capture and utilization (CCU), and whether learning about these technologies affects support for policies to reduce greenhouse-gas emissions. |
<p>| Howard University | Rubin Paterson, Dean College of Arts and Sciences | NCEC liaison |</p>
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<tr>
<td>Lawrence Livermore</td>
<td>Roger Aines&lt;br&gt;Senior Scientist</td>
<td>NCEC liaison</td>
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<td>National Lab</td>
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<td>National Renewable</td>
<td>William Tumas, Associate Lab Director&lt;br&gt;Randy Courtright</td>
<td>NCEC liaison</td>
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<td>Energy Lab</td>
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<td>Purdue University</td>
<td>Tim Filley, Director&lt;br&gt;Erin Hennes (<a href="mailto:ehennes@purdue.edu">ehennes@purdue.edu</a>)&lt;br&gt;Leigh Raymond (<a href="mailto:lraymond@purdue.edu">lraymond@purdue.edu</a>)&lt;br&gt;Stacey Connaughton (<a href="mailto:sconnaug@purdue.edu">sconnaug@purdue.edu</a>)</td>
<td>NCEC liaison</td>
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<td>University of British</td>
<td>Gregory Dipple, Professor&lt;br&gt;Walter Merida, Associate Dean Research and Industrial Partnerships</td>
<td>NCEC liaison</td>
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<td>Columbia</td>
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<td>University of California</td>
<td>Daniel Sanchez, Assistant Specialist</td>
<td>NCEC liaison</td>
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<td>Berkeley</td>
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<td>University of Pennsylvania</td>
<td>Jennifer Wilcox&lt;br&gt;Presidential Distinguished Professor of Chemical Engineering and Energy Policy, Department of Chemical and Biomolecular Engineering, School of Engineering and Applied Science, and Kleinman Center for Energy Policy, Weitzman School of Design</td>
<td>NCEC liaison and Grant Steering Committee</td>
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<tr>
<td>University of Wyoming</td>
<td>Matthew S. Henry (<a href="mailto:mhenry12@uwyo.edu">mhenry12@uwyo.edu</a>)&lt;br&gt;Scholar in Residence Haub School of Environment and Natural Resources&lt;br&gt;School of Energy Resources/Center for Energy Regulation and Policy Analysis&lt;br&gt;Jane Zelikova</td>
<td>Environmental humanities/social sciences, environmental justice, just transition policies/practices (western U.S.)</td>
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