PhD position in Renewable Energy Transitions Lab at the University of Victoria, Canada

The Canada Research Chair in Urban Planning for Climate Change, Dr. Christina Hoicka, is seeking to hire a PhD student for a 3 year research project on the geography of diffusion of disruptive clusters of low-carbon and renewable energy innovations. The student will work on this Social Science and Humanities Research Council (SSHRC) funded project entitled "*Do disruptive renewable energy innovations in local contexts accelerate a just and democratic energy transition?*". The position will start in September 2022 or January 2023, depending on the preference of the selected candidate and the timing of the hire.

Project Description

Addressing climate change requires a rapid transition to renewable energy sources. Depending on how a renewable energy transition occurs, it can either address or exacerbate inequalities as they occur in local contexts. This transition is not simply about technological change, it is about societal transformation and the scale-up of innovations that disrupt the established 'socio-technical' system. Social science research is required to advance our knowledge of how to address inequalities and encourage widespread participation while advancing a renewable energy transition to avoid climate disruption. One important pathway to these goals is implementing *clusters of renewable and low-carbon innovations*, also called *renewable energies industrial clusters* that can dramatically speed up the transition towards renewable energies. Renewable energy (industrial) clusters combine multiple renewable technologies (e.g., wind and solar complementarity) with flexibility for balancing, such as storage, demand response, virtual power plants, and peer to peer sharing, and build upon regional agglomeration economies. This SSHRC project will explore the emergence of renewable energy clusters globally. Three fields of study offer useful approaches to study the emergence and societal impact of these clusters: the technology innovation system (TIS), energy geography, and spatial and regional approaches. This proposed research seeks to: identify and analyze disruptive renewable energy projects that are being planned and implemented in communities applying the concepts of renewable energy clusters and renewable energy transitions; understand their potential to be societally transformative and the associated factors; translate and communicate this knowledge to the communities.

Position Description

The PhD student will support the development of an analytical framework to identify influential factors from energy geography, regional sciences, and sustainability transitions on the emergence of clusters of renewable energy and low-carbon innovations. The objective of this project is to learn from the three fields of sustainability transitions, energy geography, and regional sciences, to develop an analytical framework that will identify important concepts and influences, and the range of factors that inhibit or encourage the emergence and form of renewable energy (industrial) clusters spatially. This includes identifying relevant drivers to input into a machine

learning model to identify typologies and exemplars of renewable energy (industrial) clusters and the places where they occur to predict emergence and potentially inform questions around labour, justice and policy. The student will contribute to the development of a dataset of renewable energy (industrial) clusters and run machine learning analyses to understand the factors that influence the emergence of clusters.

The ideal candidate will have academic and potentially work experience related to regional sciences and energy/ energy geography and sustainability transitions, however, this is not necessary if there is a willingness to learn. We are looking for someone who is creative, critical and can take initiative to work independently and contribute to a team research environment. The successful applicant will be working with an interdisciplinary and diverse team of researchers and students. The position will be supervised by Dr. Christina Hoicka (UVic Geography and Civil Engineering) and Dr. Marcello Graziano (Southern Connecticut State University Management & International Business & University of Connecticut Connecticut Center for Economic Analysis). Learn more about Dr. Graziano at https://www.southernct.edu/directory/grazianom5. Learn more about Dr. Hoicka and the lab at https://socialexergy.ca/. UVic geography offers minimum funding packages, and funding will be competitive for the successful candidate. Details about the graduate program in Geography at the University of Victoria are found here:
https://www.uvic.ca/socialsciences/geography/graduate/prospective-students/index.php

Qualifications:
- Master's degree completed no later than August 2022 for a September 2022 start date, and December 2022 for a January 2023 start date.
- Applicants must have a relevant Master's degree or bachelor's degree in economic or human geography, regional studies, resource/energy economics, or a related discipline.
- Demonstrated quantitative analysis skills.
- (Preferred) Elementary knowledge of ArcGIS/Pro.
- (Preferred) Familiar with popular statistical software Stata, Python or R.
- If your first language is not English you must provide proof of language proficiency as per UVic requirements for graduate admissions.

Interested applicants should send a cover letter detailing how they are qualified for this PhD position, a CV clearly identifying qualifications, publications (please include DOI links or URL), academic achievements, conferences, and unofficial transcripts to Dr. Christina Hoicka (via Kayla Klym, Lab Coordinator, socialexergylab@uvic.ca), with the subject line "*Renewable Energy Transitions Lab PhD position application*". **Review of applications will begin May 15, 2022 until the position is filled.** Cover letters should explicitly identify how previous academic and/or work experience are related to the skills required for the advertised position. Only those candidates of interest will be contacted for an interview, so we ask that you do not send follow-up emails regarding the status of your application.

University of Victoria
The University of Victoria is a public research university in Greater Victoria, British Columbia, Canada, located in the municipalities of Oak Bay and Saanich. It is the first post-secondary institution established in the province of British Columbia in 1903. UVic is one of Canada's leading universities. It is widely recognized for leadership in research, inspired teaching, and community engagement. UVic provides innovative programs and dynamic learning experiences

in the diverse and welcoming West Coast setting. You can find more information on the university website (https://www.uvic.ca).

Victoria is on the ocean and close to hiking, and has an extensive network of bicycle paths. It offers a setting close to nature and city to conduct research.

Diversity
UVic is committed to upholding the values of equity, diversity, and inclusion in our living, learning and work environments. In pursuit of our values, we seek members who will work respectfully and constructively with differences and across levels of power. We actively encourage applications from members of groups experiencing barriers to equity.

The lab encourages applications from all underrepresented groups considering research careers without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, or age.