

**Available Immediately:**  
**Post-Doctoral Fellow: Low Carbon Urban Energy Systems Analysis**  
Principal Investigator: Dr. Noel Keough, Faculty of Environmental Design  
University of Calgary, Alberta, Canada

This two-year post-doc position will work within the Manchester District Project Research Team at the University of Calgary, Faculty of Environmental Design and Institute for Sustainable Energy, Environment and Economy. Annual Stipend: \$50,000.00 + \$5000.00 conference travel support.

There is a global imperative to transition to low-carbon sustainable cities. An emerging research focus for this transition is the opportunity afforded by abandoned or under-utilized inner city industrial sites – brownfield and greyfield.

**The Manchester Project** envisions that over a 50-year time horizon the 500 hectare Manchester industrial district, Calgary, Alberta, Canada will become a mixed use (residential, commercial/retail, industrial/manufacturing) district with a population of 80-100,000 and 40-50,000 jobs. The district will require an integrated energy system that facilitates the move toward a post-carbon, sustainable, liveable city district.

The energy system for the district will emphasize energy transitions to a low carbon energy powered district including transportation, heat and light, and electrical energy systems.

Key theoretical concepts that drive this Manchester transition are complex systems theory, industrial ecology, sustainable cities, place-making, and sustainability transitions.

Sustainable Urban Energy Systems design and analysis will be the core competency required of this position. The core task for the position is to investigate energy system alternatives to achieve a Net-Zero Carbon energy system. The ideal candidate will also have a capacity to work with energy system design, life cycle analysis, industrial ecology and urban design. The candidate will work with the Research Team to elaborate a 50-year build-out conceptual design for The Manchester District.

The candidate will be expected to

1. identify and evaluate alternative technologies for energy capture and delivery
2. investigate scalar issues – i.e. delivery and capture options from the building scale, district scale and through to regional scale and national network scale.

The key parameters driving the research will be carbon reduction, energy efficiency and livable/sustainable cities.

The candidate will also work in collaboration with a larger group of energy researchers at the Institute for Sustainable Energy, Environment and Economy working in fields as diverse as energy modeling, technology development, lifecycle analysis and building science.

Inquiries can be directed to:

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University of Calgary  
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Applications are being accepted immediately. The position will remain open until a suitable candidate is found. The position will be begin as soon as a suitable candidate is found. Candidates should first contact Dr. Keough and expect to follow-up with a statement of interest, resume and three references.