ANALYZING THE ENERGY SYSTEM

Changing how we power our society can have countless economic, social, and environmental effects. Costs may increase, unexpected emissions may occur, and jobs may be created or lost. It is essential for decision makers to understand the potential system-wide impacts of the renewable energy transition in the near future and further, identifying and analyzing the tradeoffs associated with different futures, so they can be accounted for in planning and policy. State-of-the-art modeling and simulation tools, along with cutting edge political science and economic policy analysis, can help identify both benefits and unintended consequences.

CURRENT RESEARCH PROJECTS

Assessing Political Pathways for Energy Transition
Principal Investigator: Lori Thorlakson

Assessments of Technologies Developed under Future Energy Systems
Principal Investigator: Amit Kumar

Development and Application of GCAM-Canada Model for Future Energy Scenario Analysis
Principal Investigator: Evan Davies

Development of a Distributed Energy Management Initiative
Principal Investigator: Amit Kumar

Integrated Assessment of Environmental Footprints for Energy Scenarios
Principal Investigator: Amit Kumar

Life Cycle Assessment of Energy System Transitions
Principal Investigator: Amit Kumar

NSERC/Cenovus/Alberta Innovates Associate Industrial Chair Program in Energy and Environmental Systems Engineering
Principal Investigator: Amit Kumar

The Future of Energy and What It Means for Labor Markets
Principal Investigator: Joseph Marchand

RECENT PUBLICATIONS

Local Labor Markets and Natural Resources: A Synthesis of the Literature
Lead Author: Joseph Marchand

Assessment of energy demand-based greenhouse gas mitigation options for Canada’s oil sands
Lead Author: Anil Kumar Katta

Insights for Canadian electricity generation planning from an integrated assessment model: Should we be more cautious about hydropower cost overruns?
Lead Author: Evan Arbuckle

RECENT NEWS STORIES

• Applying the scientific method to labour markets
• Hitting emissions targets will take more than energy efficiency, says researcher

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