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RENEWABLES | SMART GRID | STORAGE | SUSTAINABLE MOBILITY | SUSTAINABILITY ANALYSES

PRESENTED BY THE WATERLOO INSTITUTE
FOR SUSTAINABLE ENERGY

Monday June 19, 2017

4:30 pm – 5:50 pm

EV3-4408

SUSTAINABLE COMMUNITY ENERGY PLANNING

Paul Parker, Professor & Associate Dean, Strategic Initiatives, Geography & Environmental Management, University of Waterloo

Canadians have a high carbon lifestyle, yet witness increasing climate change impacts. The need to transform our energy system is agreed. Communities are key players in the distributed energy system of the future. Community energy planning examines both the demand and supply side of energy systems as we plan a transition to achieve low carbon goals. Energy systems are reviewed to set the context for planning decisions and tools such as the Partners for Climate Protection framework, Passive Haus design, RetScreen project evaluation, LEED and EnerGuide for Houses ratings are introduced. At the provincial scale, Ontario reduced emissions by closing its coal-fired power plants. Electricity conservation was promoted with smart grid technology and various interventions. Remote communities have carbon-intensive, high cost diesel systems, so renewables are proposed as alternatives under challenging conditions. Vancouver focused on improving the building envelope in its planning approach. Overall, carbon intensity can be reduced, but changes require attention to social as well as technical considerations.

Biography



Paul Parker is a Professor and Associate Dean, Strategic Initiatives in the Faculty of Environment, University of Waterloo. He has over two decades of experience in teaching and research projects focused on the green economy. Paul's commitment to the development of win-win strategies where both environmental and economic objectives are achieved has led to several projects focused on renewable energy, energy efficiency, moving toward net zero energy homes and smart grid implementation. He specializes on the policy, behavioural and community dimensions of energy transformation and often works with engineering colleagues on major projects.