

# WISE

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FOR SUSTAINABLE ENERGY



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PRESENTED BY THE WATERLOO INSTITUTE  
FOR SUSTAINABLE ENERGY

**Tuesday June 28, 2016**

**10:30 – 11:30 am**

**CPH 4333**

## FOREST BIOENERGY IN ONTARIO: EXAMINING THE LIFE CYCLE IMPACTS AND COSTS OF USING HARVEST RESIDUE AS FEEDSTOCK FOR SMALL- AND LARGE-SCALE BIOENERGY SYSTEMS

**Dr. Julian Cleary**, Expert in Environmental Life Cycle  
Assessment

Forest bioenergy has been touted as an important option for reducing GHG emissions from the energy sector. With its abundant supply of potential feedstock, Ontario has recently embraced this technology option by retrofitting coal-fired power plants to use wood pellets. However, bioenergy can also be produced using smaller scale, combined heat and power systems using local feedstock supplies. This presentation addresses the life cycle impacts and costs of large- and small-scale forest bioenergy systems via an Ontario case study.

### Biography



Dr. Julian Cleary obtained his Ph.D. from the University of Toronto and his research expertise is in environmental life cycle assessment (LCA) and greenhouse gas (GHG) mitigation from forest bioenergy, biochar, and waste management systems.

Dr. Cleary has worked as an Assistant Professor, an environmental consultant and a GHG auditor. He has taught energy, environment and waste management courses at three Canadian universities.

Dr. Cleary's research has been cited by the IPCC and presented to academic, government, and business audiences in North America, Europe and Asia.

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