

# Seminar Series 2017 - 2018

Southern Ontario Centre for Atmospheric Aerosol Research  
University of Toronto

## Air quality and energy efficiency: Quantitative connections and provincial programs

**Dr. Andrew Knox**  
*Program Manager*

**CLEAResult**



Andrew Knox is a former SOCAAR PhD student now working with CLEAResult to implement Ontario's industrial Save on Energy programs. His thesis modeled the cost of energy conservation and the value conservation provides in the form of reduced air-quality externalities. Andrew will talk about his SOCAAR research, his transition from academia to industry, and the link between his research and existing conservation programs.

Air-quality health externalities are the health impacts of air pollution quantified in economic terms. They can be compared to cost of efficiency measures such as increased insulation. Externality values in  $\text{¢/kWh}$  for power plants in Ontario were calculated using dispersion models, pollutant release data, and published life-year values. EnergyPlus models were then used to determine energy savings afforded by different construction standards. Health savings were compared to the cost to build better and were shown to be substantial relative to the cost of conserving energy.

By conserving energy, Ontario's industrial energy conservation programs reduce absolute health externalities from Ontario's generation fleet, but some of their impacts are not as benign. New policies and ongoing changes to programs are addressing unexpected air-quality impacts.

As part of the bridging between past research and current professional work, the talk will contain a brief interlude touching on tips for graduate students seeking jobs outside academia.

**Wednesday, February 7, 2018 3:00 - 4:00PM**

**Wallberg Building, 200 College Street, Room 407**

