

# Proposal A

## **Constructing a (provincial or municipal) marginal abatement cost curve**

### **Research questions:**

Quantify the comparative climate benefit of adopting new electrification technologies in a specific Province or Municipality in Canada.

### **Scope of work:**

Canadian cities are heading down a decarbonisation and electrification path. Municipal and Provincial policy makers need to make informed decisions on which technologies can be most effective and affordable. Marginal abatement cost curves can be effective tools to inform policy makers on which technologies and/or policies and programs are needed.

Municipal decisions on infrastructure investments, including buildings, transportation, waste treatment and energy, lock in patterns of energy consumption and GHG emissions for fifty years or more; once these investments are made they are very expensive to modify. With careful consideration of their investments and requirements, municipalities can stimulate the economy, substantially reduce GHG emissions and save energy.

### **Policy analysis**

The student will gain an understanding of how the provinces and local governments will play a critical role in decarbonizing the economy.

### **Economic analysis**

The student will gain a better understanding of how to analyze and communicate relative economic benefits of existing and new technologies to decarbonize Canada's economy. They will also improve their general knowledge of existing and new electrification technologies' potential for local deployment and grow their appreciation for the contribution cities can make to provincial decarbonisation efforts.

### **Supervisors**

Brad Little  
Renewable and Electrical Energy Division  
Natural Resources Canada  
[bradley.little@canada.ca](mailto:bradley.little@canada.ca)  
613-851-0966

Benjamin Poirier  
Renewable and Electrical Energy Division  
Natural Resources Canada  
[ben.poirier@canada.ca](mailto:ben.poirier@canada.ca)  
343-292-7399