



In Partial Fulfillment of the Requirements for the Degree of

Master of Science
Darragh O’Keeffe

Will present his scientific paper

**Los Angeles Sustainability Plan: Drivers of Residential CO₂
Emissions and Equitable Energy Retrofits**

Abstract

The Sustainability Plan for Los Angeles was released in 2015. Among its aims are to reduce carbon emissions and increase the energy efficiency of buildings through retrofitting. Using the Hestia high-resolution approach to carbon emissions quantification in the residential sector and by incorporating socioeconomic data from the American Community Survey 5 year estimates for 2014 the utility of modeling carbon emissions at the block group spatial scale is demonstrated. Results from spatial Analysis and regression modeling show that population, affluence and housing density have a positive relationship with carbon emissions, whereas household compactness is negatively correlated with emissions. Using energy use intensities, building age and median household income, a priority ranking system for retrofitting candidate block groups is presented.

Wednesday, April 12, 2017
2:30 p.m.
West Hall, Room 220

Faculty, students, and the general public are invited.

Supervisory Committee:
Dr. Kevin Gurney, chair
Dr. Sonja Klinsky, member
Dr. Michael Schoon, member