environmental science and policy program



student research presentations • roundtable discussions • distinguished lectures

"The Pyrolysis-Biochar Platform: On the Road to Carbon Negative Energy"

A Distinguished Lecture by **Dr. David Laird,** Professor of Agronomy, Iowa State University

ABSTRACT: The United Nations has declared the twenty first century "the urban century," effectively, the century of the city. At the dawn of the twenty first century, we've just surpassed the mark of having more than half the global population living in cities. UN Habitat projections indicate the world's urban population's will exceed 60% by 2030, and 70% by mid-century. Simultaneously, the World Energy Outlook forecasts that cities will account for three-fourths of total energy use by 2030. In this urban century, energy policy is effectively urban policy, and vice versa: urban policy is energy policy. Energy is at the heart of cities, and cities are the heart driving energy use. This rapid urbanization of the planet and resulting increase in energy use is, coupled with existing energy use patterns in the Global North, unsustainable. To avoid

catastrophe, we need to help the 2 billion poorest who live on very little to find ways to rise out of poverty in a sustainable way, which means changing energy use patterns for everyone. Can we do this? Technology, politics, and policy are explored in the search of the pathway toward energy efficient urbanization.

> 9:30 a.m. Thursday October 15 Red Cedar A, Kellogg Center



IOWA STATE UNIVERSITY Department of Agronomy