

Open to Students From All Departments!

Sustainable Energy

Two Sections for Undergrads and Grads: EEL 4935-003 / EEL 6935-003

by Dr. Rudy Schlaf, Electrical Engineering



Offshore wind turbines.
Pretty? or not?

This course will enable you to:

- **Understand** the scientific background of conventional and renewable energy, its storage and consumption.
- **Quantify** the impact of the various energy and storage technologies, as well as paths of energy use/consumption.
- **Assess** the feasibility of the most prominent sustainable energy conversion methods.
- **Identify** challenges to implement a world-wide sustainable energy economy.



Energy consuming air vortex behind a plane. Can we make better planes?

- **Participate** in the current debate about sustainable energy.

More info: <http://rsl.eng.usf.edu/Pages/Teaching.html>
Syllabus and a sample lecture are posted.

Course Materials: This course is based on scientific papers and internet resources, which will be made available through Blackboard to all enrolled students.



Nissan Leaf EPA sticker. It states “99 miles/gallon”. Pretty good-or not? This course will discuss how to properly compare between “electrical mileage” and conv. gas mileage.



Solar energy conversion: What is better, photovoltaics or solar thermal electricity generation? This course will discuss the pros and cons.



Mountaintop removal coal mining: Fossil fuel use not only increases CO₂ in the atmosphere, but also causes extensive direct harm to the environment during the mining process.