

**Renewable Energy Ecology**

NTRES 6940 (3032): Special Topics in Natural Resources and the Environment

2 credits

Wednesdays, 2:45-4:15 PM

Room: TBA

*Instructor:*

Dr. Steve Grodsky

Assistant Unit Leader | Assistant Professor

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Office hours: By appointment

*Renewable energy ecology is the study of interactions among energy development, ecosystems, and people.*

*Course overview:* This seminar defines and explores the emerging field of renewable energy ecology - the study of interactions among energy development, ecosystems, and people. We will cover interdisciplinary topics in renewable energy ecology, including the intersection of solar, wind, bioenergy, and fossil fuel development with ecosystems and their services, environmental justice, land-use and land-cover change, and climate adaptation, through the lenses of sustainability science and natural resource management. The course is open to graduate students and juniors and seniors.

*Learning outcomes:* Students will: 1) familiarize themselves with concepts in renewable energy ecology by reading and discussing foundational literature; 2) lead conversations about topics in renewable energy ecology; 3) interact with researchers and guest speakers at the forefront of the renewable energy ecology movement; 4) co-develop new ideas, connections, and philosophies that advance understanding and applications of renewable energy ecology; and 5) actively engage in a semester-long, group research project on a novel topic in renewable energy ecology.

*Course materials:* The instructor will provide PDFs of all reading assignments on the course website. Optional text: Moorman, C. E., S. M. Grodsky, and S. P. Rupp. (Eds.). (2019).

*Renewable Energy and Wildlife Conservation*. Baltimore, Johns Hopkins University Press.

*Course schedule:* The course schedule is subject to change. Please see Table 1 below for details on meetings, readings, lectures, and research activities.

*Academic Integrity Policy:* All students are expected to adhere to the University's Code of Academic Integrity (<http://cuinfo.cornell.edu/Academic/AIC.html>).

*Diversity and Inclusion Statement:* As a human being and instructor of this course, I am committed to full inclusion in education for all persons. [Services and reasonable accommodations](#) are available to persons with temporary and permanent disabilities, students with DACA and undocumented status, students facing mental health and other personal challenges, and students with other kinds of learning challenges.

*Course topics by date:*

August 24 <sup>th</sup>	<i>Intro to renewable energy ecology</i>
August 31 <sup>st</sup>	<i>Fossil fuels, climate change, and environmental injustice</i>
September 7 <sup>th</sup>	<i>Matching renewable energy and conservation targets</i>
September 14 <sup>th</sup>	<i>Renewable energy and biodiversity conservation</i>
September 21 <sup>st</sup>	<i>Case studies in wind energy</i>
September 28 <sup>th</sup>	<i>Case studies in forest bioenergy</i>
October 5 <sup>th</sup>	<i>Case studies in hydropower</i>
October 12 <sup>th</sup>	<i>Techno-ecological synergies of solar energy</i>
October 19 <sup>th</sup>	<i>Case studies in co-location: Agrivoltaics and pollinator-friendly solar</i>
October 26 <sup>th</sup>	<i>Socioecology of solar energy in deserts</i>
November 2 <sup>nd</sup>	<i>Sociology of solar in New York</i>
November 9 <sup>th</sup>	<i>Multi-stakeholder group discussion (industry, NGOs, and agencies)</i>
November 16 <sup>th</sup>	<i>The future of renewable energy ecology</i>
November 30 <sup>th</sup>	<i>Group presentations on renewable energy ecology topics</i>