

The Energy Transition - FINA 4397/7397 – Fall 2022

Class Information

- Thursdays 6:00pm-9:00pm : August 25 – December 1, 2022
- Location: MH 120
- Office Hours: By appointment (832-256-2229)

Instructor

Greg Bean is the Executive Director of the Gutierrez Energy Management Institute in the Bauer College of Business at the University of Houston. In this position, he is responsible for energy education, research, events and industry outreach at Bauer. He is also the Faculty Director of the MS in Global Energy Management Program and an adjunct faculty member. Greg has forty years of experience in the oil and gas industry, management consulting, and higher education. Prior to joining Bauer, Greg was most recently Managing Director – Oil and Gas Strategy and Organization Consulting at Deloitte Consulting. He started his career at ExxonMobil. Greg has a degree in chemical engineering from Texas A&M University.

Summary

The course is designed to introduce students to the significant changes to the global energy and related industries resulting from the transition to a low carbon energy world. The course will emphasize the drivers of the transition, uncertainty of the nature and pace of the transition and different points of view and potential scenarios. Students will assess the business opportunities and threats created by the transition.

Course Learning Objectives

- Understand the current global energy system
- Identify the drivers and challenges for the global energy transition
- Assess the potential impacts of the energy transition on different segments of the energy industry, related-industries, and society more broadly
- Understand the uncertainties on the nature and pace of the transition and build potential scenarios for the transition
- Identify key business opportunities and threats resulting from the transition
- Assess potential changes in energy industry structure and players

Course Approach

The course will include a variety of learning activities including lectures, classroom discussion, reading assignments, guest lecturers, and individual and team projects.

Grading

Grades will be based on a mix of biweekly quizzes, an individual student paper, and a team project.

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Class Detail

Class	Date	Topic
1	August 25	Course Introduction and The Current Global Energy System
2	September 1	Historical Energy Transitions
3	September 8	Drivers and Challenges of the Current Energy Transition
4	September 15	Evolution of Traditional Energy Sources
5	September 22	Evolution of Energy Use
6	September 29	The Future of Electricity (1) and Introduction to Team Projects
7	October 6	The Future of Electricity (2) and Introduction to Individual Papers
8	October 13	International Energy Companies and the Energy Transition / Impact of Transition on Industries
9	October 20	New Environmental Products and Markets for the Energy Transition/Product LCA
10	October 27	No Class – Project Team Meeting to Work on Presentations
11	November 3	New Fuels, Energy Carriers and Other Enablers
12	November 10	Private Equity Investing in the Energy Transition
13	November 17	New Business Models for the Energy Transition/Corporate Social Responsibility and ESG Investing Impacts/Policies
14	December 1	Presentation of Team Projects
15	Final Exam	No Final Exam

Guest Speakers

Topic (Class)	Speaker	Company
International Energy Companies and the Energy Transition (8)	Dr. Akshay Sahni – General Manager Strategy and Technology	Chevron Technology Ventures
New Environmental Products and Markets for the Energy Transition (9)	Randy Lack - President	Element Markets
Private Equity Investment in the Energy Transition (12)	Chris Smith - Founder	SER Capital
New Business Models for the Energy Transition (13)	Dr. Zin Smati – Retired CEO	Engie North America

Project Assignments

Projects	Topic	Description	Deliverable
Individual	Most Interesting Scenario for the Energy Transition	Students will define their most interesting scenario for how the energy transition will evolve in the next thirty years	10-15 page white paper
Team	Best Business Opportunity from the Energy Transition	Student teams will identify and build a case for the best business opportunity they see as a result of the energy transition	15 minute presentation