

The Energy Transition - FINA 7397 – Fall 2020

Class Information

- Thursdays 6:00pm-9:00pm : August 27- December 3, 2020
- Location: Melcher Hall 140/Virtual
- 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. 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 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 identify 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 quizzes, an individual student paper, and a team project.

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Class Detail

Date	Topic
August 27	Course Introduction and The Current Global Energy System
September 3	Historical Energy Transitions
September 10	Drivers and Challenges of the Current Energy Transition
September 17	Evolution of Traditional Energy Sources
September 24	Evolution of Energy Use (1)
October 1	Evolution of Energy Use (2) and Introduction to Team Projects
October 8	No Class – Project Team Meeting to Work on Presentations
October 15	The Future of Electricity (1)
October 22	The Future of Electricity (2)
October 29	New Fuels and Energy Carriers
November 5	Energy Transition Scenarios
November 12	Impacts on Industries and Society
November 19	Corporate Social Responsibility and ESG Investing Impacts
December 3	Presentation of Team Projects
Final Exam	No Final Exam

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