

## **The Energy Transition - FINA 7397 – Fall 2021**

### *Class Information*

- Thursdays 6:00pm-9:00pm : August 26 – December 2, 2021
- Location: MH 113
- 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 26	Course Introduction and The Current Global Energy System
2	September 2	Historical Energy Transitions
3	September 9	Drivers and Challenges of the Current Energy Transition
4	September 16	Evolution of Traditional Energy Sources
5	September 23	Evolution of Energy Use
6	September 30	The Future of Electricity (1) and Introduction to Team Projects
7	October 7	The Future of Electricity (2)
8	October 14	No Class – Project Team Meeting to Work on Presentations
9	October 21	New Environmental Products and Markets for the Energy Transition
10	October 28	The Energy Transition Challenge in Developing Countries/New Fuels and Energy Carriers
11	November 4	International Energy Companies and the Energy Transition / Impact of Transition on Industries
12	November 11	Private Equity Investing in the Energy Transition
13	November 18	New Business Models for the Energy Transition/Corporate Social Responsibility and ESG Investing Impacts
14	December 2	Presentation of Team Projects
15	Final Exam	No Final Exam

### Guest Speakers

Topic (Class)	Speaker	Company
New Environmental Products and Markets for the Energy Transition (9)	Randy Lack - President	Element Markets
The Energy Transition Challenge in Developing Countries (10)	Dr. Zwazi Ngubevana - Director, African Energy Leadership Center	University of Witwatersburg Business School, Johannesburg
International Energy Companies and the Energy Transition (11)	Dr. Akshay Sahni – General Manager Strategy and Technology	Chevron Technology Ventures
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*

<b>Projects</b>	<b>Topic</b>	<b>Description</b>	<b>Deliverable</b>
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