Energy Markets Lab

**Lecturers/Instructors**: Michael LaBelle

**Credits**: 1

**Duration**:   Click here to enter a date. To Click here to enter a date.

**Pre-requisites**:  Energy Markets and Innovation Policies or Energy Policies and Strategic Management

**Course e-learning site:**

### Aims, Objectives and Learning Outcomes

This course provides the opportunity for students to engage first-hand in the operations of energy markets and the impact of regulation on the energy sector. Students will work on specific projects to enhance their practical skills in the world of economics, business and governance by working with companies and organizations. The topics chosen provide students with the chance to contribute to the policy making arenas through analysis, research and interviews with key stakeholders. The energy lab is an extension of two courses focused on EU policy and business environments: Energy Markets and Innovation Policies and Energy Policies and Strategic Management. One of these courses is a perquisite that runs in parallel to the energy lab. The purpose of the lab is to expose students to real-world issues, strategies and policy environments that businesses and organizations operate within. The two labs hold different orientation depending on the projects. Students working on projects focused on energy markets and regulations will attend these sessions.

*The overall final grade for the lab will account for 50% of the final grade for EPSM or EMIP. In exchanges, students enrolled in the lab, will not need to do the research paper assignment in either EPSM or EMIP. Therefore, the workload per credit hour is equivalent to a 2 or 3 credit course.*

The aims are:

* Learn how to assess policy making process at both the national and EU level
* Gain a firm foundation of assessing a specific energy sector and the market structure
* Evaluate the role and impact of regulation on the energy sector, business or society.
* Cross-disciplinary approach to education and how multiple perspectives join in the policy and business realm
* Work with an external organization, company or on a real-world project within CEU

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| **Learning Outcome** | **Assessment** | **Activities** | **Estimated Workload** |
| Research and analysis skills. Greater ability to conduct research, organize data and analyze potential business or policy approaches. | Final project:  50% individual project  20% group project  5% final presentation | Interviews; data analysis; policy and business analysis | 50 hours |
| Communicate within project teams and with external audience research and analysis, including the process. | In-class mini-assignments  (5 x 5%= 25% of final grade | Directed and self-study learning during lab times |  |
| *Students are also required to take either Energy Policies and Strategic Management (EPSM) or Energy Markets and Innovation Policies. The overall final grade for the lab will account for 50% of the final grade for EPSM or EMIP.* | | | |
| Lab time | attendance | lectures | 10 hours |
| Total hours |  |  | 60 hours |

## 2017/2018 Possible Academic Partners

Preliminary list:

* Ethanol Europe
* Siemens
* Inno-Energy
* Gas company
* Central European University
* Start-ups
* Financial institutions

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| **Session** | **Topic** | **Description** |
| 1: | Description of Projects; Terms of Reference; tasks; teams | Provide overview of projects and select roles and teams. |
| 2: | Project design; team positions; research questions; Terms of Reference | Project and research management strategies |
| 3: | Interview lists; Policy assessments; market assessments;  Methods: Developing interview and study questions; using secondary sources | Developing and writing policy and business analysis; Review of EU institutions related to the energy sector (ACER, ETS, Energy Union) |
| 4: | Markets and regulatory incentives and disincentives for energy technologies. | Market incentives in the EU; Sustaining technology innovation; innovation in Carbon and Renewable Energy Technologies (CET) (RET); Valley of Death |
| 5: | EU and national energy policy strategies | Policy overviews and regulatory acceptenc/rejection |
| 6: | Presentations | Student presentations |

## Timeline and Assignments:

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| **Task** | **Description** | **Deadline** | **Percent of grade** |
| **Mini-lab assignments** | *Terms of Reference; question design; innovation models; job descriptions; group outlines;* |  | 25% |
| **Individual Project Analysis** | 4-5 page analysis matching to outlines (individual) (max 2,000 words)  See instructions below |  | 50% |
| **Final Group Case Study** | **3 page case study (max 1500 words)**  See instructions below |  | 20% |
| **Final Presentation** | **15 minute presentation of the case study** |  | 5% |

Description

## The projects

This course provides the opportunity for students to experience the intersection of the policy and business worlds. The topics chosen provide students with the chance to contribute to the policy making arenas through analysis and interviews with key stakeholders. The lab provides an opportunity for students to work with businesses, organizations or on real-world projects within CEU. The energy lab is an extension of two courses focused on EU policy and business environments: Energy Markets and Innovation Policies and Energy Policies and Strategic Management. One of these courses is a perquisite that runs in parallel to the energy lab. The purpose of the lab is to expose students to real-world issues, strategies and policy environments that businesses and organizations operate within.

**Expectations:** It is expected that students will conduct interviews with leaders and important stakeholders in each area. This real-world experience will be matched by a theoretical understanding provided through class readings. This course is student driven. This translates into students defining their reading materials, who they speak to and how they write up their assignments. The instructor and the assistants on the course can only provide a general framework that directs research and analysis. It is fully expected that students read and reference all course material. The reading material for the course is limited but essential for any analysis done in the assignments.

The key intent of the course is to foster cooperation and coordination between students and students pursuing different degrees. It is acknowledged that everyone comes with different experiences and backgrounds. It will be essential to leverage this existing student knowledge to complete the projects. It is expected that students will seek out and go further than their current knowledge paradigm. Integrated into the course are different people (senior consultants, external experts, teaching assistant and professor) who will be questioning and pushing students.

**Important:** The projects and the final papers and/or presentations may become public. This may entail an organization using the material or referencing the material. The primary objective in this course (as any) is the learning aspect. It is important to consider whether you want your work to be publicly available and with your name on it. The secondary aspect of the course is to produce a useful perspective or information for the external world. But this cannot and does not override the necessity to experiment and learn. *Before any material is released publicly students will need to sign a form stating they accept that the information will be publicly accessible.* It is important to consider your perspective on this issue and how it shapes or influences your work or the role that you take on the team. A final assessment of each project will be done at the end of the course to determine if it will be publicly available.

**Energy Lab Time:** Students will spend lab time working on specific aspects of their projects. This time will be used to shape specific aspects of each project. Mini-assignments will be given for each lab time and account for 5% of the final grade. These mini-assignments will be focused on getting each team working together and sharing information.

## Project team members

Each ‘project team’ will be composed of 2-4 students. The project team will consist of two to three consultants in each ‘topic group’ and one ‘Project leader’ who will oversee and actively participate in the work flow. The topic groups reflect how the overall project is split into two halves, it is the responsibility of the project leader to work between each team and ensure information flow and discussions are constantly occurring between the teams.

The topic groups will need to be developed by the consulting team. The chosen topic needs to be split into two sub themes. The group itself will decide on this division. As the Terms of Reference (see below) are developed the common theoretical framework and objects should be shared while individual tasks and the two sub-themes must be clearly defined and specific tasks established.

Figure 1 Project Team Organization

## Responsibilities:

**Project leader:** are the managers in charge of each project team. They lead each project and submit each group assignment. The *draft output* of each team must be assessed and correspond with the other members output. As the work flow progresses it is the responsibility of the project leader to bring together the material and ensure the project and scope remains on schedule. They are expected to do the following:

* Individual 4- 5 page case study – with a story line
* Submit group and individual project outline
* Coordinate and submit Final Group project
* Ensure the validity of the project and overall quality
* Coordinate 15 minute project presentation.
* Final 3 page group case study

**Consultants:** This position engages actively in the research and analysis. There is expected to be a high level of collaboration within each topic group. This includes sharing of research and assistance in reviewing written work. While the grading is individual this is a team exercise and cooperation and coordination is essential for a successful project. The responsibilities include:

* Contribution and active participation in developing the Project outline
* Individual 5 page analysis of topic and share this with group members
* Submit individual project outlines
* Active participation in group work
* Contribution and assistance in assembling final project case study and presentation
* Final 3 page group case study

## Project Positions and descriptions

General description of positions:

1. **Field Researcher (Interviewer and data collector):**

**Description:** The field researcher is essential to collect information from the ‘real world’. They need to interview, do questionnaires and collect key data from the case study. They are in charge of arranging interviews. A **minimum of three people need to be interviewed** for each case. Some cases will require more interviews. It is expected that these will be done. The field researcher should also involve other team members and invite them to interviews. They should also share their interview notes with other team members. Most cases involve collected a range of data either from the interviewees or from the project, it is expected that the field researcher will collect this information early on in the project and share it with other team members.

**Responsibility:**

Arrange and conduct all interviews and assess information from project site.

**Output:**

2,000 word, 4-5 page description of interview process, interview data and additional information from project site.

Co-writer final 1,500 word, 3 page case study

1. **Policy analyst**

**Description:** The policy analyst is in charge of placing the project in a broader policy context. They need to identify government policies and how companies and people are influenced by these policies. How do policies impact the technology that is under examination? Important to consider are national legislation and regulation, also any EU Directives or international agreements will be important to consider. Early analysis of this area should be shared with team members.

**Responsibility:**

Assess policy discourse and studies in this topic area

**Output:**

2,000 word, 4-5 page summary of policy issues and discussions

Co-writer final 1,500 word, 3 page case study

1. **Business analyst:**

Description: The business analyst places the business or the technology into a business context. They take the perspective of a business owner and describe how a particular technology and its connected business model may work. Examining other relevant businesses and how they make money from a related business model may be useful. Expenses and pay back periods are also important for the business analyst to cover. The business analyst will need to asses a technology and see if and how it can be commercially viable over the short or long term.

**Responsibility:** Identify and assess businesses connected to this technology

Output: 2,000 word, 4-5 page of businesses and key issues business need to be aware of

Co-writer final 1,500 word, 3 page case study

**General assignments [to be revised!]**

# Assignment #2 & #3: Job Descriptions and Group Project Outline

A 150 word job description and revised project description will need to be done. Key components include:

### #2: Job Description:

* What will you write about (e.g. energy policy, business opportunities, regulation)?
* What is the specific data that you will collect (e.g. statistics, articles, etc.)?
* What methods will you use?
* Any additional responsibilities?
* What things you will *not* do?

*Each student must submit their job description in moodle*

Grade: Pass/Fail

### #3: Group Project Outline

Project Outlines are an essential part of any project, whether contracted or in laying out the objectives for a group project. The outline will be used in this course to design and guide the research project. Consider it as an outline of the project with each bit necessary to check off, assign responsibility and complete. If a point cannot be completed then this needs to be documented.

Having a clear direction of where you need to go involves mapping out your path. The Terms of Reference are typical project touchstones that provide a guide to the research and analysis that needs to be done. These can be expressed in different forms, but having a clear guide of what outputs are expected will make sticking to the projects path easier.

***Please submit one overall group project outline***

* Group outline: **1 page** in length describing the following points:

### Objective and scope:

* **Aims and objectives (project teams):**

1. Scope of study: What are you doing and not doing?
2. Draft outline of story: What are important components for your subject that you will research and write about?
   1. Guiding questions:
      * What is/was the problem?
      * Why were stakeholders motivated to solve this problem?
      * How did they solve the problem (or not)?
      * What are the technologies involved?
      * What are the policies involved?
      * What were 3 key challenges to solving problem?
      * How can the problems and solutions be represented visually?
      * Who will be interested in the results of the project?
      * What course material is relevant for this project?
      * Who are the stakeholders and what do they do?
      * Which stakeholders should be contacted?
      * What will you produce at the end?

Grade: Pass/Fail

# Assignment #4 & #5: Final Individual Case Study

**A rough draft**, displaying an outline of the final draft is expected. Some information will be inserted. Approximately 25%- 50% of the final material is expected to be seen in this draft. The reader should get a sense of how much work has been done and gain a general understanding of the research area. In addition areas where work is currently being done should be described.

*The draft will be shared with group members for peer-review.*

**Grade: pass/fail**

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**The Final Individual Case Study** is a distillation of weeks of work. A vast amount of information will need to be inserted into only five pages. It cannot be longer than five pages, although additional information can go into the Annex (but this will only be marginally considered in grading). It is important to understand there are different ways to represent information and analysis. **Please refer to your job description to understand what is expected in your individual paper. Also please see the grading rubric below.**

**The final Individual Project is a maximum of 2,000 words and five pages.**

There is an individual grade given for this exercise but it important that the final work closely aligns with the rest of the group. It is not a standalone piece it must be tightly integrated with the other reports.

The analysis should closely align with the individual and group outline. However, it is recognized that through the research and consulting process, the output needs to be adjusted. Key elements of the Project Analysis include the main points established in the course grading rubric (see below). ***Thus the final analysis will be graded on:***

* Fulfilling individual and group Outline (unless explicitly references explanation in research journal)
* Adherence to grading rubric elements (see below)
* Overall demonstration of integration of course material, including theoretical concepts, with chosen research topic.
* Presentation in a professional manner, according to audience standards, the research/policy analysis

**Grade:**

***Grading: See Grading Rubric***

# Assignment #6: Final Group Case Study

**The Group Case Study Document:** The final document reflects a unified team effort. It is a holistic document that tells a story, with a problem and a solution. It will be the responsibility for each group leader to bring this together. In assembling this document it should fit seamlessly together due to the high amount of coordination beforehand. (A 15 minute presentation will be given about the findings and the process in assembling the document.)

**The final case study will be (maximum) a total of 1500 words. It should be done in a case study format. This clearly describes the problem/issue and walks through a decision making process. It concludes with a decision.**

The final project paper does not have to adhere to what each consultant wrote. It can be altered to reflect a holistic perspective. Thus sections can be deleted or moved about. It is the role of the group leader to alter the document, whether in collaboration or individually, the work of the consultants.

**Grade:**

# Assignment #7: Final Project presentation

**Presentation:** Each group will give a 15 minute presentation. The presentation can be given as a group effort or by the project leader. The presentation grade will be part of the overall group grade.

Each presentation must give an overview of the research project, development of the project outline and follow through in connecting the case study story with individual analysis of the issues. It needs to be concise and effective at answering the overall research questions/dilemmas.

**Grade:**

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| --- | --- | --- | --- |
| Elements & Categories | Average (C+, B) | Above Average (B+) | Very Good (A-, A) |
| Use of course material: theoretical frameworks and concepts | Loosely references course material | Demonstrates knowledge of course material | Uses and expands on course material. Significantly integrates into analysis and reflections |
| Use of academic sources: own research; Use of international studies/reports and ‘other’ material; use of original research | Barely uses academic sources; moderate reliance on other sources; no or limited amount of original research/reflection | Moderate reliance on academic sources; other sources used effectively and some or no demonstration of original research/reflection | Demonstration of original research/reflection; Strong reliance on academic sources; Strong ability to integrate and draw from studies/reports |
| Interpretation and analysis of data: framing data into a critical analysis of topic | Restatement of facts and processes; Limited to no interpretation of facts; Limited ability to present a coherent analysis of topic and themes | Presents data in an organized and coherent manner; Critical reflection is provided; Analysis of facts and data is sufficient | Critical analysis is done to a high professional standard; Facts and data are processes and neatly organized; Balanced analysis is provided |
| Documentation of research and collaboration process, referencing and overall structure of assignments. | Description is limited and incomplete; references are not compliant; disorganization rules over organization | References are sufficiently done; research process is adequately addressed; Coherent structure is seen throughout assignments | All references are correctly done; Collaboration is viewed as central to the research process; Documentation and description of research is done in a precise manner. |