



UNIVERSITÄT
ZU KÖLN

University of Cologne

Department of Economics – Chair of Energy Economics – Prof. Dr. Marc Oliver Bettzüge

Business Administration

Corporate Development – Master of Science

Winter Term 2023/2024

Digital strategy as a facilitator of the energy transition

Credits	6
Language	English
Examiner	Dr. Marcus Eul
Allocated Modules	Modulkennung: 1253MSSIC2 Modulname: SM Elective Corporate Development II

1. Topic - Digital strategy as a facilitator of the energy transition

Naturally, companies that are ahead in terms of digitisation are those that are already active (with their products) in the digital space - this applies, for example, to banks, media and telecommunications groups or retail. Often they are driven by new, hitherto non-industry players who use disruptive technologies to position themselves between supposedly established players and their customers - and in the process sometimes upset the existing business, if not completely break it down. Amazon, Airbnb, Uber, Netflix, Tesla - they all force the established players to further digital development. And that across all stages of the value chain.

Traditional utilities, and the energy industry, are still in the early stages of development. This may be due to the traditionally non-digital products, possibly also to the long lack of competition and the previously high barriers to market entry. But the energy transition and liberalisation are increasingly ensuring that digitisation also has an impact in the energy sector. Old business models are suddenly being questioned, new competitors are appearing, customers are changing their expectations, the regulatory framework is being developed further - the pattern, in other words, that is familiar from other industries. The industry is being swept up by the digitalization wave.

The seminar is intended to give a broad overview over the energy industry, changes and challenges driven by the energy transition. Digitization will be introduced with its major technologies and their application across the energy value chain and – specifically – as the basis for a successful energy transition. Beside a theoretical background practical cases will be used for illustration and an impulse speech will be given by an innovative start-up for digital solutions.

Students are expected to build and deliver in-depth knowledge for one specific seminar topic of the value chain, and to develop and answer a defined research question. Agile methods with focus on design thinking will be applied to shape and work out the seminar topics in a structured, sequential way to develop “spot on” seminar results.

2. Schedule

The seminar contains 8-9 onsite sessions until February 20th

Date	Time	Room	Course
Tuesday, October 17 th	14:30 – 16:30	KFR1	Course Introduction I: Seminar organization & agile basics
Wednesday, October 18 th	09:00 – 10:30	KFR1	Course Introduction II: Energy industry and digitization needs
Friday, October 20 th	17:59		Students apply for research topics by email to meul2@uni-koeln.de
Sunday, October 22 nd	18:00		Research topic allocation via ILIAS
Friday, December 1 st	17:00-18:30	KFR1	Slide drawing and presentation skills
Monday, December 4 th	14:00-18:00	KFR2/virt	Q&A (optional, meeting to be requested individually)
Friday, December 8 th	17:00-18:30	KFR1	Impulse speech NEXUM AG
Friday, December 15 th	23:59		Deadline for pitch submission via ILIAS
Monday, December 18 th	17:00-19:00	KFR1	Proposal/ pitch presentations by students
Tuesday, December 19 th	17:00-19:00	KFR1	Proposal/ pitch presentations by students
Friday, February 9 th			Deadline for seminar paper submission via ILIAS
Friday, February 16 th			Deadline for seminar presentation submission via ILIAS
Monday, February 19 th	17:00-19:00	KFR1	Seminar thesis presentations by students
Tuesday, February 20 th	10:00-12:00	KFR1	Project result presentations by students

Staatswissenschaftliches Seminar | Lehrstuhl für Energiewirtschaft | Dr. Marcus Eul | 24.08.2023



KFR1 is at the Institute of Energy Economics (ewi), Vogelsanger Str. 321a, 50827 Cologne

3. Requirements and Expectations

The seminar is designed for students who have an interest in the energy transition and digitalization. Prior experience in the sector and knowledge of energy economics is helpful yet no prerequisite. Students will work on an energy related topic independently. They will receive information about how to write an academic paper and how to give a scientific presentation. Based on the input, students are expected to choose a topic provided by the chair, narrow down a research question and compose a literature review.

4. Application

The registration for examination should be done using KLIPS. The registration is binding and students who do not hand in a pitch document, seminar paper or who do not present their paper will receive a failing grade.

5. Mode of Examination

Combinations of examination components:

- 10% Pitch ppt (max 10 slides) and presentation (10 mins)
- 60% Seminar Paper (3,000 words)
- 30% Seminar paper ppt (max 15 slides) and presentation (15 mins)

All examinations must be graded at least 4,0 (ausreichend) to pass the course!

6. Organisation

Dr. Marcus Eul, meul2@uni-koeln.de

Please do not hesitate to contact me in case of further questions.