

Interdisciplinary Winter and Summer School on Energy Systems in Austria and the Czech Republic 2024

Final Report

Amela Ajanovic
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Aim and content of the Winter and Summer School

In 2024, we organised the 19th Winter and Summer School on Energy Systems in Austria and the Czech Republic. The Winter and Summer School is aimed at 20 highly motivated students from Austrian and Czech universities who wish to deepen their knowledge of energy issues. The event is designed to be broadly interdisciplinary, so that students from different universities studying a wide range of disciplines can participate. In addition, the speakers (from different universities, but also from practice) address energy issues from the perspective of different disciplines (technology, economics, social sciences, etc.). The Winter and Summer Schools consist of theoretical lectures, practical excursions and interactive workshops. Each year, during the Winter School in Prague, the participating Czech and Austrian students should find a partner from the other country to start working on their bilateral seminar papers. These papers are written by the teams during the whole semester (under the supervision of lecturers) and the results of their collaboration are presented during the Summer School in Vienna. During the presentation, students receive feedback that they can incorporate into the final version of the paper. The papers are then assessed by the lecturers and, if the students achieve a certain number of points, they receive ECTS credits for completing the course.

The first year of the Winter and Summer School took place in 2006 as one of the activities of the Czech-Austrian Energy Expert Group (CZ-AT EEG). This group of academics from both countries was established in 2002 by the Austrian and Czech Governments to jointly study the issues of energy systems in both countries. The members of the group, appointed by their respective governments, are affiliated with Czech and Austrian universities and research institutions.

We are very grateful that the AKTION programme supports this event and helps students from both countries not only to learn about the interdisciplinary context of energy production and consumption, but also to deepen mutual understanding of the different approaches to energy policy in the Czech Republic and Austria.

The winter and summer schools are organised by Amela Ajanovic from the Vienna University of Technology and Jiří Louda from the Jan Evangelista Purkyně University in Ústí nad Labem. However, we work closely with the Czech Technical University in Prague, which provides facilities for the Winter School.

Students

The winter and summer school is organised for 10 students from each country. 10 students from each country were also selected to participate in the course. Unfortunately, one student from Jan Evangelista Purkyně University in Ústí nad Labem cancelled his participation after the Winter School, so he did not participate in Summer School and did not get the ECTS credits. On the other hand, it is very positive that the course was attended by students from a total of 5 universities (with students from one university often studying very different disciplines), which ensured the interdisciplinary nature of the course. The list of students (as well as the Czech and Austrian organising team) can be found in Annex 2. All students sent to the organisers an application form with personal information and experience in the field of energy and economics (see Annex 1). The list of participants (all students and the organising team) can be found in Annex 2. All students successfully completed the Winter and Summer School and received a certificate of 6 ECTS credits.

Organization and program of the Winter and Summer School

The Winter school took place in Prague between 28th January and 2nd February. The Austrian students arrived on Sunday 28th January afternoon by train to Prague. The Austrian students arrived in Prague by train in the afternoon of Sunday 28 January. They were taken to the hotel and then to a joint dinner where they were able to meet some of the Czech lecturers and students. The lectures themselves started on Monday morning, 29 January. Thanks to the kindness of the Czech Technical University in Prague, we were able to use their premises for the lectures. The main organiser of the Winter School was Jiří Louda (from the Jan Evangelista Purkyně University in Ústí nad Labem) with strong support from colleagues from the Czech Technical University (Jiří Bím - PhD student and expert in solar energy and Jaroslav Knápek - professor and head of the Department of Economics, Management and Humanities).

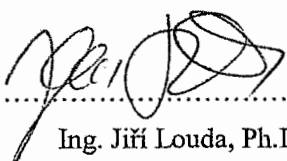
The Winter School programme consisted of theoretical lectures and practical interactive workshops given by academics (Jaroslav Knápek, Jiří Bím, Jan Mikeš, all from CTU; Amela Ajanovic, Reinhard Haas, both from TU Vienna; Jiří Louda and Silvester van Koten, both from J.E.P. University) and practitioners (Marek Adamec and Jiří Zapletal from Nuclear Power Plant Dukovany; Robin Fingerhurt from ČEZ). University) and practical experts (Marek Adamec and Jakub Zapletal from Dukovany Nuclear Power Plant; Robin Fingerhurt from ČEZ; Patrik Šimůnek from ČSOB; Alois Tost - independent energy consultant) and excursions (to Mělník Thermal Power Plant, Mířejovice Small Hydropower Plant and CTU Lightning Generator Laboratory). At the same time, the students formed bilateral teams and started discussing topics for their term papers.

The Summer School, which took place in Vienna from 12 to 17 May, was mainly organised by Amela Ajanovic, with assistance from Helen Fisher. There were also theoretical lectures (by Jaroslav Knápek and Jiří Bím from CTU; Silvester van Koten from J.E.P. University; Reinhard Haas, Amela Ajanovic, Helen Fisher, Nadine Gürer, Frank Radosit and Michael Harssek all from TU Vienna) and excursions (e.g. to the agrivoltaics site in Donaustadt). The complete programme of the Winter and Summer School 2024 is attached in Annex 3. In addition, the student teams presented their seminar papers (list of bilateral groups and seminar paper topics in Annex 4), which were prepared by the students between the Winter and Summer School. All papers focused on current issues related to energy policy and energy economics in the Central European context, within which the students analysed the current energy situation in both countries.


The seminar papers, the students' presentations of the papers and the lecturers' presentations will be available online on the website of the Czech-Austrian Energy Expert Group (<http://www.energy-europe.org/>).

Financial report

The costs of organising the Winter and Summer Schools are shown in the table below. All students of the Winter and Summer School paid a participation fee: Czech students 1000 CZK/student from public university and 2000 CZK/student from private university (according to an earlier recommendation by AKTION representatives, participants from private universities should contribute more to the funding), Austrian students 150 EUR/student. This financial contribution was used to cover part of the cost of daily meals. Each student received a confirmation of payment. An overview of the expenses (with comments) incurred during the Winter School in Prague can be found in the Financial Report. We did not use all the money sent by the Ministry of Education, Youth and Sports (MŠMT)/AKTION because we managed to save some money on accommodation and travel costs. The unused part of the grant will be returned to the Ministry's account. We guarantee that there was no overlap with the funding from AKTION and that this additional support was absolutely necessary to realise this successful project. We are grateful to the Czech Embassy in Vienna for arranging accommodation for Czech students during the Summer School in Vienna again this year, which was an absolutely essential help and saving for the budget.



.....
Ing. Jiří Louda, Ph.D.



.....
doc. Ing. Jan Slavík, Ph.D.
(Vice-Rector for Science and Research)

Austrian part of financial report

Kostenart / typ nákladů	2024 (EUR)
Aufenthaltskosten tschech. Projektteilnehmer in Österr. (gemäß den Sätzen des BMBWK, s. Merkblatt) / úhrady za pobyt českých účastníků projektu v Rakousku (dle sazeb rak. min. vědy, viz Pokyny)	3256,72
Reisespesen: Reisen österr. Projektteilnehmer in die ČR, sowie Reisen von Projektteilnehmern auf österr. Gebiet (s. Merkblatt) / jízdné rak. účastníků do ČR, jízdné účastníků projektu po Rakousku (viz Pokyny)	625,30
Honorar f. Lehrtätigkeit f. österr. Projektteilnehmer (gemäß d. Sätzen d. BMBWK, s. Merkblatt), honorář za výuku rak. účastníkům projektu (dle sazeb, viz Pokyny)	1600
Publikations- und Editions-kosten (Rezensenten-honorar, Druckkosten) / publikační a ediční náklady (lektorský posudek, tisk)	0
Students contribution	-1500
Gesamtkosten in EUR / celkové náklady v EUR	3982,02

Czech part of financial report

typ nákladů / Kostenart	2024 (CZK)
Úhrada ubytování účastníků projektu v ČR (viz Pokyny) / Unterkunftskosten für Projektteilnehmer in d. ČR (s. Merkblatt)	80.678
Stravné a kapesné účastníků projektu v ČR (s. Merkblatt) / Verpflegung für Projektteilnehmer in der ČR (viz Pokyny)	48.600
Jízdné česk. účastníků do Rak. a účastníků projektu po ČR (viz Pokyny) / Reisespesen: Reisen tsch. Projektteilnehmer nach Ö., Reisen von Projektteilnehmern auf tschech. Gebiet (s. Merkblatt)	39.718
Odměna za výuku českým účastníkům projektu (viz Pokyny) / Honorar für Lehrtätigkeit tsch. Projektteilnehmer (s. Merkblatt)	11.000
Publikační a ediční náklady (lektorský posudek, tisk)/ Publikations- und Editions-kosten (Rezensenten-honorar, Druckkosten)	0
Ostatní náklady včetně režijních nákladů / sonstige Kosten inkl. Regiekosten	7.000
Gebühren der Studenten (poplatky studentů)	-11.000
Celkové náklady v Kč / Gesamtkosten in CZK	175.996

Annex 1

Application for the Interdisciplinary Bilateral Winter and Summer School and Energy System in Austria and the Czech Republic 2024

Winter School: January 29 – February 2, 2024 in Prague
Summer School: May 12 – 16, 2024 in Vienna

Application deadline: January 17, 2024. E-mail address for sending this
application is: louda@ieep.cz

Contact details

Name: [REDACTED]

Address: [REDACTED]

E-mail: [REDACTED]

Tel: [REDACTED]

Education

Field of study: [REDACTED]

University: [REDACTED]

Number of semesters at the University: [REDACTED]

Achieved academic title:

- Bakk /when (year): [REDACTED]
- Master/Magister/ when (year): [REDACTED]
- Doktor/PhD/ when (year): [REDACTED]

Successful attended university classes/courses on: (which)

- Energy policy: [REDACTED]

- Energy economics: [REDACTED]

- Energy technologies: [REDACTED]
(renewables, efficiency)

- Other energy relevant topic: [REDACTED]

when (year)

Other experiences in the energy field

- work experience: [REDACTED]

- internship/workshop: [REDACTED]

- seminar papers: [REDACTED]

- other: [REDACTED]

Experience with/in the Austria

- language courses: [REDACTED]

- seminar papers: [REDACTED]

- work experience: [REDACTED]

- university exchange programme in the Austria: [REDACTED]

Please summarize your motivation to participate in this Winter and Summer School
(2-3 sentences)

[REDACTED]

Annex 2 List of participants

List of participants for the Winter/Summer School, February/May 2024, Prague/Vienna		
Surname	Name	University
Austrian Students		
Adlberger	Lisa	TU Vienna
Dikovits	Clemens	TU Vienna
Rebernig	Florian	TU Vienna
Torlutter	Lena	TU Vienna
Kosir	Sebastian	TU Vienna
Forster	Franz	TU Vienna
Ivanovic	Milan	TU Vienna
Rachle	Philipp	TU Vienna
Eybl	Julian	TU Vienna
Haslinger	Leonhard	TU Vienna
Austrian organization team		
Fischer	Helen	main organizational support - TU Vienna
Ajanovic	Amela	priv. doc. at TU Vienna
Reinhard	Haas	professor at TU Vienna
Czech Students		
Beček	Michal	Jan Evangelista Purkyně University in Ústí n/L he cancelled his participation after Winter School
Kaplan	Lukáš	Charles University
Fridrich	Natálie	Charles University
Stránský	Štěpán	Czech Technical University
Procházka	Petr	Czech Technical University
Truhlářová	Štěpánka	Jan Evangelista Purkyně University in Ústí n/L
Dobrovolný	Ondřej	Jan Evangelista Purkyně University in Ústí n/L
Horváth	Miroslav	Jan Evangelista Purkyně University in Ústí n/L
Bartášek	Lukáš	Škoda Auto University
Galarza	Laura	Jan Evangelista Purkyně University in Ústí n/L
Czech organization team		
Louda	Jiří	UJEP
Bím	Jiří	main organizational support - CTU
Knápek	Jaroslav	professor at CTU FEE - EEM

Annex 3 Programme of the Winter and Summer School 2024

Interdisciplinary Winterschool 2024 on "The Future of Energy Systems in Austria and the Czech Republic"

Sunday, January 28th, 2024

Important addresses:

Hotel Krystal
J. Martího 2, tram #20, 26, line A - Nádraží Veveřslavín
and night tram 51 - station **Nad Džbánem**
CVUT - lecture rooms
Jug. Partyzánů 1580/3
ROOM: J5:B5-576

19:00 Arrival of Austrian students
20:00 Dinner for Austrian participants

Tuesday, January 30th, 2024

ROOM: J5:B5-576

9:00 **Biomass as a major RE carrier**
Jaroslav Knápek
10:15 **Electricity economics and the role of renewables and nuclear**
Reinhard Haas (TU Vienna)
11:15 **Coffee break**
11:30 **Introduction to Energy Economics in transport**
Amela Ajanovic (TU Vienna)
13:00 **Lunch break at menza**
14:15 **Workshop How to write a seminar paper II incl. bilateral discussions**
Reinhard Haas, Amela Ajanovic, Jiří Louda, Jiří Bím
16:00 **End of the day**

Thursday, February 1st, 2024

8:00 **Excursion: Thermal Power Plant Mělník**
Departure by bus. Meeting point: in front of the University
Jaroslav Knápek (CTU)
12:30 **Lunch break**
13:30 **Excursion: Small hydropower plant in Mířejovice**
Jaroslav Knápek (CTU)
17:00 **End of the day**

Monday, January 29th, 2024

ROOM: J5:B5-576

8:50 Registration
9:00 **Welcome address**
J. Knápek, A. Ajanovic, J. Louda
9:20 **Get together**
Alois Tost (Energy Expert)
10:50 **Coffee break**
11:05 **World Energy System - An Introduction**
Reinhard Haas, Amela Ajanovic, Helen Fisher (TU Vienna)
11:45 **Workshop: How to write a seminar paper I Introduction, presentation of topics**
Amela Ajanovic, Reinhard Haas (TU Vienna)
12:30 **Lunch break at menza**
13:30 **Workshop Part I: Simulation game**
Alois Tost (Energy Expert)
14:45 **Coffee break**
15:00 **Workshop Part II + III: Simulation game results and discussion**
17:15 **End of the day**
18:30 **Dinner for all participants**



Wednesday, January 31st, 2024

ROOM: J5:B5-576

9:00 **Nuclear Energy's Role in the Clean Energy Transition**
Marek Adamec (Nuclear Power Plan Dukovany)
Jakub Zapletal (Nuclear Power Plan Dukovany)
10:15 **Financing and acquisitions in the energy sector**
Robin Fingerhut (ČEZ, a.s.)
Patrik Šimůnek (ČSOB - CS Commercial Bank)
11:15 **Coffee break**
11:30 **Current situation in photovoltaics and new trends trends for future**
Vojtěch Češík (Energy Expert)
12:30 **Lunch break at menza**
13:30 **Excursion: Lightning generator laboratory**
Jan Mikeš (CTU)
15:30 **End of the day**

Friday, February 2nd, 2024

ROOM: J5:B5-576

9:00 **Power plant economics: an interactive introduction: Part I**
Silvester van Koten (J.E.P. University)
please take your laptops with you to this lecture
10:15 **Coffee break**
10:30 **Power plant economics: an interactive introduction: Part II**
Silvester van Koten (J.E.P. University)
12:30 **Lunch break at menza**
13:30 **Time for individual discussion of seminar papers in bilateral teams**
moderated by Jiří Louda (J.E.P. University) and Jiří Bím (CTU)
15:30 **End of the day**



Interdisciplinary Summerschool 2024 on "The Future of Energy Systems in Austria and the Czech Republic"

Sunday, May 12 2024

Important addresses:

Accommodation at Czech Embassy

Penzinger Str. 114, 1140 Wien

Lectures

room CFSO29

18:24 Arrival of Czech students in Wien

19:30 Dinner for Czech students

Tuesday, May 14 2023

9:30 **Presentations of seminar papers by students**

with R. Haas, J.Knappek, A.Ajanovic

11:00 *Coffee break*

11:15 **Presentations of seminar papers by students**

with R. Haas, J.Knappek, A.Ajanovic

12:30 *Lunch break at Mensa*

13:45 **Excursion to the agrivoltaics site at Donaustadt**

Jiri Bim

17:00 *End of day*

18:00 *Social event for all students*

Thursday, May 16 2024

9:00 **New challenges in Electricity markets**

Reinhard Haas

10:30 *Coffee break*

10:45 **Energy and mobility (Part II)**

Amela Ajanovic

12:15 *Lunch break at Mensa*

14:00 **Technical Tour**

Frank Radosits (TU Vienna)

17:00 *End of day*

Monday, May 13 2024

, Registration

9:15 **Introduction and welcome speech**

A. Ajanovic /R. Haas (TU Vienna)

9:30 **Biomass in Europe**

J. Knappek (Technical University of Prague)

11:00 *Coffee break*

11:15 **Agrivoltaic systems as part of the modern energy sector?**

Jiri Bim (Technical University of Prague)

12:30 *Lunch break at Mensa*

14:00 **Work on seminar papers/presentations by students**

14:30 **Presentations of seminar papers by students**

with R. Haas, A.Ajanovic

17:00 *End of day*

Wednesday, May 15 2024

9:30 **Recent developments of biomass technologies**

Michael Harasek (TU Vienna)

11:00 **Externalities, Pigovian taxes & ETS**

Silvester van Koten (J.E.P. University in Ústí nad Labem)

13:00 *Lunch break at Mensa*

14:30 **Work on seminar papers/presentations by students**

17:00 *End of day*

Friday, May 17 2024

9:15 **Energy Communities**

Helen Fisher (TU Vienna)

10:00 **Economics of biomass**

Nadine Gürrer (TU Vienna)

10:30 *Coffee break*

10:45 **Carbon capture, storage and utilisation**

Frank Radosits (TU Vienna)

12:00 *Lunch break at Mensa*

13:30 *End of day*

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Annex 4 List of the seminar paper groups with topic and supervisors

Seminar papers: CZ-AT pairs and topics					
CZ student		AT student		Title of the paper	Supervisor
Bartášek	Lukáš	Ivanovic	Milan	Assessing the Relevance and Costs of Storage: A Comparative Analysis of Czech Republic and Austria	Reinhard Haas
Kaplan	Lukáš	Forster	Franz	Promoting Renewable Electricity: Targets, Strategies, by Technology	Reinhard Haas
Stránský	Štěpán	Eybl	Julian	Electric vs Gasoline Vehicles: Total Costs of Ownership and Emissions	Amela Ajanovic
Fridrich	Natálie	Dikovits	Clemens	National Energy and Climate Plans: Comparing Czechia and Austria New Challenges Resulting from the Green Deal	Jaroslav Knápek
Dobrovolný	Ondra	Rebernig	Florian	International Electricity Exchange in Europe: Problems and Challenges	Jaroslav Knápek
Horváth	Miroslav	Adlberger	Lisa	City Buses	Amela Ajanovic
Galarza	Laura	Kosir	Sebastian	E-Mobility in Urban Areas: A Comparative Analysis of Stock and Policies in Austria and the Czech Republic	Amela Ajanovic
Procházka	Petr	Rachle	Phillip	Energy Savings	Jaroslav Knápek
Boček	Michal	Haslinger	Leonhard	Biomass Potentials and Biomass Competitiveness	Jaroslav Knápek
Truhlářová	Štěpánka	Torlutter	Lena	Wholesale Electricity Markets: Differences in Price, Developments, Structure	Reinhard Haas