

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

Final Report

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Aim and content of the Winter and Summer School

The Czech-Austrian Energy Expert Group (CZ-AT EEG) was established in 2002 by the Austrian and Czech Governments to jointly study the issues of energy systems in both countries. The members of this group, appointed by their governments, are affiliated with Czech and Austrian universities and institutions. The Czech-Austrian Energy Expert Group is based on bilateral cooperation on sensitive issues in the field of energy contributing to shaping future energy policies in both countries.

The helpful and successful cooperation between Czech and Austrian energy experts led to the idea to organize the Winter and Summer School on Energy Systems in Austria and Czech Republic. All of those previous Winter and Summer Schools led to the intention to organize it again for the thirteenth time in 2018.

Since 2013 the Winter and Summer School has been formally organized by Jan Evangelista Purkyně University in Ústí nad Labem and Vienna University of Technology. The whole concept of the event remained the same as well the network of collaborating experts. This year special emphasis was placed on the discussion parts among the students and lecturers which (according to the student's feedbacks) was really appreciated and we will try to carry on with this style during next year hopefully.

The Winter and Summer School on Energy Systems in Austria and Czech Republic is designed for 20 students who want to acquire and deepen their knowledge about energy issues through interesting presentations and excursions. This year, unfortunately, there were less students because of school exams in same dates. The participating Czech and Austrian students should find a partner from the other country during the Winter School in Prague to start working on their bilateral seminar papers. Seminar papers were presented during the summer part of the course in Vienna (June 2018) and evaluated by supervisors.

Students

The participating students came from different specializations and universities (in CZ – University of Economics, Czech Technical University, Jan Evangelista Purkyně University and Ambis University – for the first time), which provides the heterogeneous mixture of approaches to the energy issues.

This year the course was filled by 8 students from Czech Republic and 6 students from Austria. Those students were chosen through the application form with the personal information and experiences in the energy and economics field (application form can be seen in Annex 1 of this document). The list of participants (meaning all students, lecturers and organization team) can be seen in Annex 2.

Organization and program of the Winter and Summer School 2018

The whole project was proposed and carried out by:

Amela Ajanovic from Vienna University of Technology, Austria

Jiřina Jílková from Jan Evangelista Purkyně University in Ústí nad Labem, Czech republic

Together in the cooperation with their project partners:

Wolfgang Streicher from Innsbruck University, Austria, Reinhard Haas from Vienna University of Technology, Austria and Jaroslav Knápek from Czech Technical University in Prague, Czech Republic.

The program and all the activities were organized by the teams of the home universities. Lenka Zemková, Jiří Louda (in behalf of Jiřina Jílková - UJEP) and Jaroslav Knápek, Michaela Lachmanová (CTU) were the coordinators of the Winter School in Prague, Amela Ajanovic in cooperation with Reinhard Haas were the coordinators of the Summer School in Vienna. The program of the Winter and Summer School 2018 can be found in Annex 3. Students from both countries had the possibility to compare the energy situation in their country with the other one which is supposed to be very helpful in finding and understanding the differences and similarities of both areas. As mentioned above, this year there was a special emphasis on open and very active discussion between the students and lecturers organized and moderated by Alois Tost. Students had the possibility to prepare the questions and think about the topic before the lecture started through the “round table” discussion and because of that presentation and lecture was closer and more interesting for them because lecturer should focus more on those topics students are interested most in.

During the Winter School in Prague students had the possibility to visit Small Hydro Power plant in Mířejovice as well as visit the Coal Power Plant in Mělník (for the first time). There was also a little excursion through new smart building of Czech Technical University. Two very interesting simulation games were part of the program this year. Students always very appreciate the game led by Alois Tost. For the first time this year we started the cooperation with Silvester Van Koten and we visited his laboratory at University of Economics and tried another simulation game as well. We hope that this cooperation will continue next time.

There was a theoretical part lectured in Vienna University of Technology, this part was enriched by excursions where students may gain the practical view. During the Summer School in Vienna, participants had the possibility to visit: the waste incinerator in Spittelau, Austrian Power Grid and a solar building - passive apartment house with the architect’s commentary.

During the Winter School in Prague students created teams of two (or three in special case) people to start working on the topics which they could choose upon the agreement with supervisors (Amela Ajanovic, Jirina Jilkova, Reinhard Haas, Jaroslav Knapek) and six bilateral teams were created. During the time between the Winter and Summer School students were working in Czech-Austrian teams on their seminar papers. The aim of all of the topics was to analyse the current situation in both countries, find up-to-date data and compare it (also on the EU level). Students presented their seminar papers and results of the comparison during Summer School in Vienna (see in program). The list of all seminar papers presented in Vienna can be found in Annex 4.

Before the Winter School, the contribution from Austrian students (6 x 150 EUR/student) and contribution from Czech students (8 x 1000 CZK/student) was collected. During the winter week in Czech Republic, the Czech amount was totally spent for daily meals (for the Austrian and Czech participants) and refreshment during the lectures which was not covered by the AKTION budget. In Austria, the contribution was taken to finance the expenditures for lunch and the joint dinner. Each student received a confirmation of his/her contribution delivery. The overview of expenses (with comments) during the Winter School in Prague is in the Financial Report.

We guarantee that there was no overlapping of the financing from AKTION and this extra support was absolutely necessary to realize this successful project. We thank to Austrian Embassy for arranging the accommodation for Czech students also for this year which brought an absolutely significant help and savings to the budget.

A handwritten signature in blue ink, appearing to read 'Jilková', is written over a horizontal dotted line. The signature is fluid and cursive.

Prof. Ing. Jiřina Jílková, CSc.

Annex 3 Programme of the Winter and Summer School 2018

Interdisciplinary Winterschool 2018 on "The Future of Energy Systems in Austria and the Czech Republic"

Sunday, January 28th, 2018

Important addresses:
Hotel Krystal
J. Menšího 2, tram #20, 26, line A - Nádraží Veleslavín and night tram 51 - station Nad Džbánem
ČVUT - lecture room
Jug. Partyzánů 1580/3
J:B5-576, J:B5-534
Restaurace Pod Loubim
Evropská 26, tram station Dejvická
Menza Studentský dům
Blá 2571/6
Academic restaurant
Tháškurova 1

19:00 Arrival of Austrian students

19:00 Dinner for Austrian participants

Monday, January 29th, 2018

ROOM: J:B5-576

9:00 Registration

9:10 Welcome address and get together

Prof. J. Knápek, Doz. Dr. A. Ajanović

Prof. R. Haas, Dipl.-Ing. Alois Tost

10:00 World Energy System - An Introduction

R. Haas, J. Knápek, A. Ajanović

10:30 Coffee break

10:45 World Energy System - An Introduction

Continuation

12:15 Lunch break at Menza

13:15 Heating: An Introduction

Prof. J. Knápek

14:45 Coffee break

15:00 Biomass as a major RE carrier

J. Knápek

17:00 End of the day

Tuesday, January 30th, 2018

ROOM: J:B5-534

9:00 Introduction to Electricity markets

and the role of renewables

Reinhard Haas

10:45 Coffee break

11:00 Introduction to Energy Economics in transport

Amela Ajanović

12:45 Lunch break at Menza

14:00 Workshop: How to write a seminar paper

Introduction, presentation of topics

A. Ajanović, R. Haas, J. Knápek

16:30 End of the day

Thursday, February 1st, 2018

9:00 Excursion: New Czech Technical University building

Smart building

11:15 Lunch break at Menza (meeting in front of the Menza)

Transfer to University of Economics

13:00 Simulation game Part I

S. van Koten - University of Economics

14:30 Coffee break

14:45 Simulation game Part II

17:00 End of the day

Wednesday, January 31st, 2018

ROOM: J:B5-534

8:00 Excursion: Small hydropower plant

in Mířejovice + Coal Power plant Mělník

Departure by bus, meeting point : Bus stop

at Evropská st.

Lunch

14:00 Workshop Part I: Simulation game

Dipl.-Ing. Alois Tost

15:30 Coffee break

Workshop Part II + III: Simulation game results

and discussion

17:30 End of the day

Friday, February 2nd, 2018

ROOM: J:B5-534

9:00 National and international Energy Policy

T. Smejkal - Ministry of Industry and Trade CZ

10:15 Coffee break

10:30 Regulation in Energy Sector: Introduction

Prof. Jiřina Jilková, J.E.P. University

12:00 Lunch break at menza

13:30 Time for individual discussion of seminar

papers in bilateral teams

16:00 End of the day



Interdisciplinary Summer School 2018 on "The Future of Energy Systems in Austria and the Czech Republic"

Sunday, June 17th 2018

Accommodation for Czech students:
Accommodation at Czech Embassy Penzingstr. 114, 1140 Wien

18:00 Arrival of Czech Students
19:30 Dinner for Czech students

Lectures:

Dekanatzimmer CF Z217, Gusshausstrasse 25, 2-3. Stock, Stiege 7

Tuesday, June 19th 2018

EI 10

9:30 **New challenges in Electricity markets**
Prof. Reinhard Haas (TU WIEN)

Dekanatzimmer CF Z217

10:30 **Coffee break**

11:00 **Energy Security as a Political Topic: The Fewer Facts the Better**
V. Bartuska

13:00 **Lunch break at Mensa**

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

16:30 **End of day**

19:00 **Social event for all students and lecturers**

Thursday, June 21st 2018

Dekanatzimmer CF Z217

9:00 **Work on seminar papers by students**

10:30 **Coffee break**

11:00 **Biomass in Europe**

13:00 **Lunch break at Mensa**
Prof. Dr. J. Knappek (Technical University of Prague)

14:30 **Spittelau**

15:15 **Technical Tour**

Waste incineration plant Spittelau

17:15 **End of day**

Friday, June 22nd 2018

Dekanatzimmer CF Z217

9:00 **Sustainable Buildings**

Dipl. Ing. Roman Grummer (BOKU Vienna)

11:15 **Lunch break at Mensa**

12:30 **Technical Tour**

Solar buildings

15:00 **End of day**

Wednesday, May 31st 2017

Dekanatzimmer CF Z217

9:00 **Transport**

Amela Ajanovic

10:15 **Coffee break**

10:30 **Presentations of seminar papers by students and discussion**

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

12:00 **Lunch break at Mensa**

13:30 **Technical Tour**

Austrian Power Grid

17:00 **End of day**

Monday, June 18th 2018

Dekanatzimmer CF Z216

9:00 **Registration**

9:15 **Introduction**

Prof. R. Haas, TU WIEN

9:30 **Recent developments on EU electricity markets**
Prof. Dr. J. Knappek (Technical University of Prague)

11:00 **Coffee break**

11:30 **Work on seminar papers by students**

(with J. Knappek, Mischa)

12:30 **Lunch break at Mensa**

13:45 **The tragedy of the commons**

Alois Tost

15:00 **Coffee break**

15:30 **The tragedy of the commons (continuation)**

Alois Tost

17:00 **End of day**



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

Austrian student	Czech student	TOPIC OF SEMINAR PAPER	Supervisor
Ilker Icyuz	Šimon Přecechtěl Jakub Gregor	International electricity exchange in central and western Europe	Jaroslav Knápek
Natalia Kowalska	Michal Vodňanský	A comparison of the development of PV systems over time	Reinhard Haas
Niko Themeßl Kateřina Vrbková	Martin Horák	Promoting renewable energy	Reinhard Haas
	Dmitry Muravyev Lukáš Dvořáček	Sharing energy storage and decentralized PV systems	Reinhard Haas
Maria-Luisa Brüser	Kateřina Dundrová	Impacts of PV regulation in CZ and AT	Jiřina Jílková
Mojtaba Pouyan	Yulia Marishkina	Intergation of energy systems	Jaroslav Knápek