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Habilitation Thesis Reviewer's Report

Masaryk University **Faculty of Social Studies**	
Field of habilitation	Politology…
Aplicant	Mgr. Filip Černoch, Ph.D.
Candidate's workplace, institution	Department of International Relations and European Studies, Faculty of Social Studies, Masaryk University
Habilitation thesis	Energy Transition: the Case Study of Germany and the Czech Republic
Reviewer	Prof. Ing. Pavel Kolat, DrSc
Workplace of reviewer :	VŠB-Technical University Ostrava, Faculty of Mechanical Engineering, Department of Energy

Reviewer's report:

The reviewer's report was written at the request of Vít Hloušek Professor of European Politics, Department of International Relations and European Studies and the Director of International Institute of Political Science received on the 26th February 2018.
Formally the work is very well designed, written in a clear, easy-to-understand language. It comprises 119 pages, tables and figures that are adequate and informative. References used in the work are interpretative.

1. The Habilitation Work

The habilitation thesis being discussed describes issues of the Czech - Germany energy transitions affected by cross-border factors. The work is supported by the research and experimental activities. It reflects long-term research conducted at the Faculty of Social Studies of Masaryk University over the last four years. Mgr. Filip Černoch, Ph.D. also utilized experiences and knowledge gained during his work placement at the Deutsche Gesellschaft für Auswärtige Politik in Berlin in 2014 -2015.

The results from habilitation thesis enable practical application in energy sector. New energy transition is coming to the scene. It is driven by climate change concerns, and the primary goal of this transition is to decarbonize the world economy. Renewables are surging around the globe, with decreasing investment costs, increasing efficiency and predictability, and generally with high public support.
Very important is the research occupied by the theoretical concepts associated with the Multi-Level Perspective (MLP), which also constitutes the theoretical foundation of habilitation

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thesis. Experimental investigations is based on the MLP approach, which perceives the system of electricity provision as a dynamic network of infrastructure, institutions, and stakeholders.

Realization of the chosen topic is highly significant and relevant since the importance of the change of energy transition.

2. Meeting of objectives

The habilitation thesis summarised research activity of Mgr. Filip Černoch, Ph.D. in the field of electricity transition . The solution of this problems was initiated by the Czech electricity sector and State Energy Policy of the Czech Republic in 2014.

The habilitation thesis aims :

- to evaluate how the former country's energy transition affects the latter's system of electricity provision, which has its own transitional dynamics,
- to identify the vector of transitional cross-border pressure, where disruptive signals are expected to originate from Germany and affect the Czech Republic,
- to demonstrate how the Germany affects the Czech system of electricity provision via changes in the wholesale price of electricity,
- to demonstrate how the regional electricity market affects the behaviour of energy stakeholders in the country,
- to show the effect of the imbalance between rapid renewable energy and less rapid grid investment compromising the stability of the Czech grid system,
- to analyse the affect on the transitional dynamics of the Czech system of electricity provision,

3. Methodology of investigation

Methodology is based on an analysis of the dynamics of the cross-border diffusion of energy transition and how it spreads from one country to the other and what impact it has. It is used in the Germany – Czech Republic case study, evaluating how the former country's energy transition continues to affect – the latter's system of electricity provision, which has its own transitional dynamics. The methodology of investigation clearly describes how each specific objective will be achieved, with enough detail to enable an independent and informed assessment of the proposal.
The habilitation thesis includes:

- Restatement of research problems: hypothesis or research questions; formulating the research problem, justifying its practical and theoretical relevance.
- Description of study areas, the procedures for their selection; mainly for "energy transition," to switch from fossil-fuel technologies to low-carbon ones.
- Data collection: description of the tools and methods used to collect information, and identification of variables by means of the Multi-Level Perspective, providing the research tools to approach the empirical case.
- Data analysis: description of data processing and analyzing procedures; focused on examination of the transition of the Czech electricity system, dynamics of the system and trying to identify transitional pathways according to MLP and how the Czech electricity sector interacts with the German one.

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The methodology is consistent with the objectives of the habilitation thesis. The problem under investigation is formulated in an appropriate and clear form.

4. Evaluation of the research results

Mgr. Filip Černoch, Ph.D. developed a research approach of the system of electricity provision, with constitutive elements of institutions, actors, and infrastructure, based on the Multi-Level Perspective approach. This approach is very precise, which perceives any socio-technical system as a dynamic network of infrastructure, institutions, and stakeholders. The interaction of these constitutive elements ensures the functioning, reproduction, and gradual evolution of the system. This is main benefit of the evaluation of research results.

The subject of habilitation thesis is in the correspondence with the research topics and energy policy of European Union.

5. Comments.

- *What are potential applications of your current research results, in particular in the field of Energy Transition. How do you envisage the further development of your methods?*
- *Explain role of energy storage technologies as an important component of a future low-carbon energy systems.*
- *Explain the role of decentralization of production and influence to stability, of energy systems.*
- *Explain in more details three presented possible visions /pp. 95-96/ for future electricity provisions which is beyond the scope of thesis.*

6. Conclusion.

The habilitation thesis is in compliance with energy research program of the European Union. It has very high scientific quality and the obtained findings significantly contribute to the development of new energy technologies. **Habilitation thesis meets the requirements standard for habilitation in the field of politology.** It fulfills the criteria laid down by the decree of the Czech Ministry of Education for habilitation theses.

I recommend this work for defense subsequently leading the defendant to be awarded the academic title of "Associate Professor", once all the necessary formal requirements have been fulfilled.

Ostrava 16th March 2018

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Prof. Ing.Pavel Kolat , DrSc
VŠB-Technical University Ostrava