CTU
CZECH TECHNICAL UNIVERSITY IN PRAGUE

THESIS REVIEWER'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Renewable Energy Consumption and Economic Growth in European Union Countries**
Author's name:	**BSc. Mehmet Hakan TOHMA**
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Economics, Management and Humanities
Thesis reviewer:	Ing. Pavel Pavlátka, Ph.D
Reviewer's department:	Department of Economics, Management and Humanities

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment — **challenging**

How demanding was the assigned project?

The aim of the work was to research the impact of renewable energy sources on economic growth. Furthermore the thesis makes a suggestions based on the interpretation of the model

Fulfilment of assignment — **fulfilled**

How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.

Thesis are structured into 3 key parts:

1) Introduction - considering general energy concept and renewable energy sources (Solar, Wind, Hydro, Wave, Geothermal, Biomass), describes concepts of economic growth and theories (classical, Keynesian, neo-classical and endogenous)
2) Energy economics describes global energy market considering EU market and further developing topic with the role of energy in economic growth
3) Analysis of the relationship between renewable energy and economic growth describes scope and theoretical basis of the subject implementing data set and variables, resulting in panel data analysis with GMM estimator of econometric model

Assigned task is correctly fulfilled in this thesis and primary goals were successfully achieved

Methodology — **outstanding**

Comment on the correctness of the approach and/or the solution methods.

The method of the Generalized Moments Method (GMM) can be used for dynamic panel data with the existence of linear functional relationship in situation where independent variables are not strictly exogenous considering the presence of heteroscedasticity and autocorrelation. Approach of GMM is correctly applied, showing us the advantages of GMM method.

Technical level — **A - excellent.**

Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?

Student by this thesis proved relevant expertise in the field of thesis problematic

Formal and language level, scope of thesis — **A - excellent.**

Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?

Notations and formalisms were used properly and are organized in a logical way and presented in relevant structure.

Selection of sources, citation correctness — **A - excellent.**

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Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?
Selection of sources was relevant and bibliographic citations meet the required standards

Additional commentary and evaluation (optional)
Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.
Considered topic of energy sources and its influence on the economic growth is interesting and valuable for correct energy policy set up in order to fulfill specific level of the local energy production independence, ecological aspects of energy production and furthermore economical/price aspects of such a energy sources.

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

Summarize your opinion on the thesis and explain your final grading. Pose questions that should be answered during the presentation and defense of the student's work.

Thesis

The grade that I award for the thesis is **A - excellent.**

Question:

1) **Please consider RES supporting incentive scheme(green certificates) and its impact to local energy price level. Describe the impact to macroeconomic figures in short/long term period.**
2) **How the increasing/decreasing energy price could affect in the case of relatively energy intensive and small/open economy such a Czech rep. components of GDP - net exports, consumptions, savings**

Date: **17.6.2021** Signature: Ing. Pavel Pavlátka, Ph.D.