

**I. IDENTIFICATION DATA**

<b>Thesis title:</b>	Power supply system for an isolated consumer in the North
<b>Author's name:</b>	Dmitrii Peremitin
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Electrical Engineering (FEE)
<b>Department:</b>	Department of Economics, Management and Humanities
<b>Thesis reviewer:</b>	Ing. Adéla Linhartová
<b>Reviewer's department:</b>	External – Sécheron Hasler CZ, spol. s r.o.

**II. EVALUATION OF INDIVIDUAL CRITERIA**

<b>Assignment</b> <i>How demanding was the assigned project?</i>	<b>ordinarily challenging</b>
Since big part of the project was simulated, it was challenging.	
<b>Fulfilment of assignment</b> <i>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.</i>	<b>fulfilled</b>
The assignment of the thesis was fulfilled perfectly.	
<b>Methodology</b> <i>Comment on the correctness of the approach and/or the solution methods.</i>	<b>correct</b>
The methodology used in the thesis was correct.	
<b>Technical level</b> <i>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?</i>	<b>B - very good.</b>
Technical level of the thesis was satisfactory. Student correctly used the theoretical knowledge and applied the findings into practical part.	
<b>Formal and language level, scope of thesis</b> <i>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?</i>	<b>B - very good.</b>
English in this thesis is satisfactory. Some values should had been rounded (for example Table 5).	
<b>Selection of sources, citation correctness</b> <i>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?</i>	<b>B - very good.</b>
The level of work with sources was good. There were some absent sources, but the selection was alright.	

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

The thesis is divided into 7 main chapters. In first chapter is described the area conditions. In the description of climatic conditions, I miss the source.

Second chapter is a summary of options of electric power sources, along with advantages and disadvantages related to the project which I would put the practical part of thesis.

Third chapter describes company that was simulated for this thesis. In figure 10, there is description of x axis  $P[\text{kW}]$ , but the description of the graph says "Apparent power" which is  $S[\text{kVA}]$ .

Fourth chapter very quickly describes the use of motor soft starter. Fifth chapter is dealing with economic evaluation of variants, counts costs of the variants and very nicely describes all the costs of options.

Sixth chapter is the main chapter of the thesis and there are used more methods to compare the options by NPV and EAA of projects. I appreciate doing the sensitivity analyses for variables.

The conclusion correctly sums up the results of economy analyses done in previous chapter. I also appreciate the recommendations for the option chosen by author.

I have several questions for the author:

- 1) In chapter 2.5 you wrote that the prices for fuel are high. Can you compare the prices for fuel with prices here in Czech Republic? Can you also analyse the price of fuel in Russia in last 5 years?
- 2) Figure 10 is a power load graph – can you please explain why there is a power drop between 8-9a.m and 1-2p.m.?
- 3) What is the reason that power consumption is the highest in July and October?

The grade that I award for the thesis is **B - very good**.

Date: **10.6.2020**

Signature: