

Opponent review of the master thesis

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The topic of the thesis is focused on the hybrid system wind power and diesel generator.

Difficulty of the assignment is more demanding.

Final thesis meets the points of the assignment. The division of individual chapters is in accordance with the assignment points.

The working procedure is correct. The author first assesses the use of solar and wind energy in a given locality.

The author suggests the configuration of a hybrid power supply from a wind turbine in combination with a diesel generating plant including the accumulation of energy in the batteries. In chapter 6 is described the model of the wind power plant in MATLAB Simulink and the economic analysis is performed.

The text of the master thesis is elaborated to the required depth and the knowledge gained during studying at university and in the study of professional literature is applied in it.

The master thesis is written in English. The technical terms are correct and the text of the thesis is very good.

The list of literature used by the graduate is extensive and includes both domestic and foreign materials.

With the construction and operation of a wind power plant, fossil fuel consumption can be significantly reduced and the electricity cost compared to the price of electric energy from diesel generators. CO₂ production will also decrease. However, the price for customers is distorted by subsidies provided by the state energy company.

Question to the defence:

1. Which electricity quality parameters generated by wind turbines with DC/AC inverters are important for connecting and operating plants in the distribution network.
2. What type of batteries does the author recommend for use in the studied hybrid system?

Final mark evaluation:

B – very good

Recommendation to the defense:

I recommend

Date: 6. 6. 2019

Signature: