

Master thesis supervisor's review

Title: **Feasibility Study to Implement a High Voltage Direct Current Transmission Link**

Name of student: **Karol Patricia Cruz**

The main task of the diploma thesis was to design HVDC transmission line from German's substation Röhsdorf to Austrian's substation Ernsthofen or Dührohr across land of Czech Republic.

The second one line was selected to design for several HVDC variants with various capacity, technology of converter and pylons. The advantage of this solution is existing corridor of AC 400 kV lines. This project should help the German "Energiewende" for purpose of power transmission between German wind turbines and Austrian pumped storage power plants.

Author paid great effort to the technical aspects of the HVDC lines design and cost estimates for economic efficiency assessment of variants. Author also researched the specific transport costs and determined the optimal transmit power of the proposed line which will more than designed maximum capacity (4 ÷ 7 GW). Author designs also original shape of new pylons for HVDC line under existing AC lines.

The formal aspects of the thesis is also excellent. The work is clear without spelling mistakes and includes many tables and charts with valuable data. The author has studied a large number of literature and other sources.

Karol was hardworking and showed a great deal of initiative, the progress of her work was regularly consulted with me. I am pleased with her work on the highest level.

The final assessment of the diploma work is

S A excellent S

13. 6. 2017

Ing. Miroslav Vitek, CSc.