

Estimation of the Wind Power Plants Capacity to be Integrated in Actual Power System of Moldova

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Abstract— Extension of share of renewable energy sources in energy mix is a big challenge for our community. First of all we should fight against global warming by cutting emissions of GHG. Secondly we should increase energy security and reduce energy poverty. The Republic of Moldova is highly dependent on energy import (about of 90%). One of ways to reduce its energy dependence is to increase share of renewable energy. The paper addresses only electricity issue. Currently Moldova imports over 80% of its electricity consumption. On the over hand electricity produced from renewable energy sources is lower than 1% target being 10% to 2020. The paper present results on estimation of wind turbines capacity that can be integrated in actual electrical system without doing any reconfiguration of electrical system. The study is based on analysis of power transformer stations working on 110kV, 35kV, 10kV and 6kV. Over 350 consumption nodes through all country territory were analyzed per total. The potential of wind turbines was estimated for two heights – 50m and 100m. Results can serve as useful information for both investors and TSO/DSO.

Keywords – wind turbines; RES, power system, transformer stations, electricity.

VI. REFERENCES

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