



Assessing the option of wind power based heat supply of buildings for various regions in Europe

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For regions with a high wind potential the use of wind power to run electrical heating can be considered as option for renewable heat supply, or – in reverse – the heating of buildings in colder climates may offer a well matched load in grids with high wind penetration. This paper will give a more detailed assessment of this option for various regions in Europe, based on information on wind resources and the temperature conditions expressed by the heating degree days a governing number for the determination of the heating requirements. From this, information the seasonal balance of supply and demand can be characterised. From hourly resolved data together with information on the thermal inertia of the buildings, requirements for the inclusion of storage facilities can be derived. Based on both, long term and short term characteristics regions that show favourable conditions for wind power based heat supply can be identified.