there exists a gap in the spectrum of renewable energy technologies for wind energy converters (WECs) that supplement energy supply at locations with low solar radiation at reasonable costs and in line with demand in terms of time and space.In addition to retarders, mechanical heat pumps can be used for direct energy conversion , Indirect heat generation concepts still rely on electricity generation with a conventional generator and the subsequent conversion into heat.In particular, we define WTES as an innovative composition of state-of-the-art technologies, i.e. wind energy converters, thermal storage and, depending on the application, a thermal engine Due to their capability to work with high temperature heat, WTES can be potentially used for both heat and power supply.For example, WTES provide the opportunity for retrofit measures or the development of renewable alternatives to fossil-fired combined heat and power (CHP) plants.WTES describes all combinations of wind turbines with thermal storage facilities for the demand-oriented supply of electricity or heat.In this setup, WTES combine the systemic advantages of steam power plants (i.e. rotating mass) with the use of the renewable resource wind.At this temperature power reconversion with efficiencies of up to 25% can be achieved by organic rankine cycle (ORC) processes .Compared to existing power-to-heat solutions , the novelty of these concepts relies on the inclusion of on-site conversion of wind energy into heat.For example, to keep losses for electricity reconversion with thermal engines low (Carnot efficiency), the thermal energy storage needs .(to work with high-temperature heat (>350?C