

Abstract**APPARATUS FOR ENERGY CONVERSION**

690 An apparatus and a method of for energy conversion to dual-functionality are disclosed. The apparatus includes a storage container configured to store a working medium fluid and a pressure release valve configured to release the working medium fluid. A vane motor receives the working medium fluid at a high pressure. An embedded heat exchanger is encased within the vane motor that creates an interface
695 between the working medium fluid within the vane motor and an energy carrier fluid, for heat exchange to occur therebetween. Upon the heat exchange, the temperature and pressure of the working medium increases and the temperature of the energy carrier fluid decreases. The vane motor within an electric generator acts as rotor, is rotated under combined effect of the working medium fluid entering the vane motor at
700 high pressure and the pressure of the working medium increasing upon heat exchange.

(Fig. 1)