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(54) **ENERGY TRANSMISSION SYSTEM AND WIND FARM**

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(57) **ABSTRACT**

An energy transmission system is provided for a power generation plant including. plural distributed power generation devices and a flow battery system that includes plural charging stacks including electrochemical flow, wherein each charging stack is associated with one or a group of the power generation devices of the power generation plant and wherein each charging stack is configured to receive electrical energy produced by the associated power generation device or group of power generation devices and to energi/e an electrolyte of the flow battery system by the received electrical energy; a central storage unit configured to store the electrolyte of the flow battery system; a discharging stack including electrochemical flow cells, wherein the discharging stack is configured to extract electrical energy from the electrolyte and to provide the electrical energy to a power gri A wind farm including wind turbines and including such energy transmission system is further provided.