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Thermal Storage Power Plants (TSPP)

Guest Editor:

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Message from the Guest Editor

Thermal Storage Power Plants (TSPP) are similar to conventional steam and gas turbine thermal power plants, but save considerable fuel compared to their conventional equivalents. This is achieved by integrating high temperature heat storage and electric heaters, or heat pumps that absorb renewable power from variable sources, such as photovoltaics, wind power or grid surplus, store it temporarily in the form of heat, and deliver it later in order to produce electricity on demand, a concept called a Carnot battery. TSPP transform variable renewable power into dispatchable power, keeping firm power capacity fully in place by adding fuel if required. TSPP are highly flexible and highly efficient, through combining heat storage, steam turbines and gas turbines in an optimal way. TSPP can replace 100% of fossil fuels with renewable primary energy sources, namely sunshine, to feed the heat storage and biomass as primary fuel, and they can also be highly cost effective. They can be built on green fields or by repurposing existing power[...] For further reading, please follow the link to the Special Issue Website at: https://www.mdpi.com/journal/cleantechnol/special_issues/YB9RVD9AG1

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Message from the Editor-in-Chief

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