Cogeneration and energy storage

Cogeneration: Another way to increase energy efficiency of hybrid renewable energy hydrogen chain - A review of systems operating in cogeneration and of the energy ...

Cogeneration and trigeneration systems may operate more efficiently if the production of electricity and heat are uncoupled by using thermal energy storage, where heat ...

Over the last few years, thermal energy storage (TES) technologies have received a great deal of attention because of their potential application in smart thermal grids ...

Factories in China are faced with peak-valley electricity prices and carbon reduction policies nowadays. As the adiabatic compressed air energy storage has a potential to store electricity ...

Cogeneration system combining reversible PEM fuel cell, and metal hydride hydrogen storage enabling renewable energy storage: Thermodynamic performance assessment

What is CHP? Combined heat and power (CHP), also known as cogeneration, is the simultaneous production of electricity and heat from a single fuel source, such as: natural gas, biomass, ...

Environmental performance of a multi-energy liquid air energy storage (LAES) system in cogeneration asset - A life cycle assessment-based comparison with lithium ion (Li ...

Abstract This study proposes and evaluates a solar compound parabolic concentrator-photovoltaic/thermal driven cogeneration system, based on thermochemical ...

In this work, a hybrid cogeneration energy system that integrates CAES with high-temperature thermal energy storage and a supercritical CO 2 Brayton cycle is proposed ...

As clean new energy generation accounts for an increasing proportion of power grid, cogeneration units are required to further improve their operational flexibility. In this paper, a coupled system ...

Compressed CO2 energy storage (CCES) system has received widespread attention due to its superior performance. This paper proposes a novel CCES concept based on gas-liquid phase change and cold-electricity ...

In this study, a power and cooling cogeneration system is introduced, consisting of a chemisorption cycle, a latent heat thermal energy storage (TES) system employing phase ...

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This work proposes a non-islanded cogeneration energy management center (EMC) that can be used to displace grid-level natural gas turbine systems and ...

Within the framework of the project TESIN funded by the German Ministry of Economic Affairs and Energy, a high temperature latent heat thermal energy storage unit is ...

This paper focuses on the difference between the application of a micro-cogeneration (uCHP) device (the reference case), and an integrated system consisting of a ...

Combined heat and power --sometimes called cogeneration--is an integrated set of technologies for the simultaneous, on-site production of electricity and heat. A district energy system is an efficient way to heat and/or cool many buildings ...

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