Pumped-Storage Hydropower Plants

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Message from the Guest Editor

Looking at future grids with increasing shares of intermittent renewable energy solutions, pumped hydro energy storage (PHES) plants are widely recognized as an ideal solution because of their ability to provide large storage capacity with excellent grid connection properties, high cycle efficiency range, and competitive costs. However, in order to provide primary and secondary regulation services, there is a primary need to increase the PHES operational flexibility by developing new machine designs and/or new technologies, as well as by providing hybridization with different types of energy and energy storage systems. To stimulate research areas in these fields, it is important to gather the most relevant ongoing research works on new solutions for PHES (innovative design, innovative control systems, etc.) and on their hybridization with other energy and energy storage systems (sizing algorithm, forecast model, management strategies, virtual power plant, etc.). Therefore, you are kindly invited to share your recent findings in this Special Issue.

Special Issue

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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