Special Issue

Challenges and Future Trends of Co-generation Systems

Message from the Guest Editor

Cogeneration is a system that produces heat and electricity simultaneously in a single plant powered by one primary energy source, thereby guaranteeing a better energy yield than would be possible to achieve from two separate production sources. In this way, nearly all the thermal energy produced by combustion processes is not dissipated into the environment, as happens with traditional plants; rather, this thermal energy is recovered and reused. The most widely used cogeneration technologies involve the combustion of fuels such as natural gas, GPL, diesel, biogas, bio-methane, vegetable oil or biomass. A cogeneration system (also called a Combined Heat and Power system, or CHP), can deliver significant benefits for commercial and industrial (C&I) customers because it produces heat and electricity at the same time. Using the same fuel to generate both heat and electricity therefore improves energy efficiency, delivers environmental benefits, and ensures savings. Cogeneration power plants generally operate at between 50 to 70% higher efficiency rates than traditional power plants.

Guest Editor

Dr. Ehsanolah Assareh
School of Chemical Engineering, Yeungnam University, Gyeongsan 38541, Republic of Korea

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Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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