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A WEBINAR PRESENTED BY THE WATERLOO INSTITUTE FOR SUSTAINABLE ENERGY

Tuesday Nov 24, 2020
2:30 pm – 3:30 pm

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NEW VISIONS TO POLYGENERATION SYSTEM IN TOTAL SITE CONTEXT ASSISTED BY SOLAR ENERGY

Dr. Majid Amidpour is a professor of Mechanical and Energy engineering at K. N. Toosi university of Technology.

Polygeneration is an efficient method of saving energy in which electricity, heating and cooling are produced simultaneously. One of the novel aspects in energy systems is the polygeneration system with assisted renewable energies. Various configurations can be developed with higher energy efficiency using the analysis. Beside polygeneration aspects, process integration has been used as a tool for energy targeting and evaluation total Site system.

The simultaneous production process can be based on the use of gas turbines (GTs), steam turbines, or combustion engines, and the primary energy source includes a wide range of fossil fuels, biomass, geothermal energy, or solar energy. Using Heat Integration concepts, a general procedure for integration of solar heat into total site processes is generated.

This procedure provides a tool for designers to find the best integration scenario and solar fraction targets.

Biography



Dr. Majid Amidpour is a professor of Mechanical and Energy engineering at K. N. Toosi university of Technology. He and his research team are working on different aspects of the Energy and Water Integration Systems through using Cogeneration approaches including systems that are utilizing renewable energies. The team is also investigating the energy systems' integration with environmental issues (carbon emission trading), agriculture productions (water, energy, and food nexus), and energy materials (clean technologies).

He has published more than 370 national and international conference and journal articles; his book "Cogeneration and Polygeneration Systems", which was published by Elsevier Science & Technology, adopts exergetic and thermoeconomic analysis and related modeling and simulation tools to inform performance and systems design in modern cogeneration plants. He is also affiliated with University of Simon Fraser in Canada and Polytechnic di Milano University in Italy as a visiting professor.

ALL ARE WELCOME!

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