Bioenergy and energy sustainability

Sustainability is a critically important goal for human activity and development. Energy sustainability is of great importance to any plans for overall sustainability given the pervasiveness of energy use, its importance in economic development and living standards, and the significant impacts that energy processes and systems have on the environment. Many factors that need to be considered and appropriately addressed in moving towards energy sustainability are examined in this presentation. These include appropriate selection of energy resources bearing in mind sustainability criteria, facilitation of the use of sustainable energy resources, enhancement of the efficiency of energy-related processes, and a holistic adoption of environmental stewardship in energy activities. In addition, other key sustainability measures are addressed, such as economics, equity, land use, lifestyle, sociopolitical factors and population. The specific role that bioenergy has in the broader context of energy sustainability is described throughout. Conclusions are provided related both to options and pathways for energy sustainability and to the broader ultimate objective of sustainability.

Biography

Marc A Rosen is a Professor in the Faculty of Engineering and Applied Science at the University of Ontario Institute of Technology in Oshawa, Canada. He served as Founding Dean of the Faculty from 2002-08. He was President of the Engineering Institute of Canada for 2008-10. He served as President of the Canadian Society for Mechanical Engineering from 2002 to 2004, and is a registered Professional Engineer in Ontario. He is also Editor-in-Chief of several journals, including Biofuels.

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