



Nuclear Energy in Sustainable Development

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Abstract

With the increasing international consensus concerning the harmful health and environmental impacts due to fossil fuel use, and together with limitation, depletion, and fluctuation in price of the fossil fuel, it is necessary to seek the alternative energies to cope up with the demand of energy consumption for development. Nuclear energy is a viable energy source for power generation. Nuclear energy and its technology in nuclear power plant (NPP) has achieved to the reliable level of safety and being in commercial competitiveness. Also with the proven of reactor technology, uranium source can last up to at least 3,000 years. In this paper, the principles of sustainable development (SD) together with its dimensions have been pointed out. Economics, environment and social dimensions of SD have been elaborated in relation to the characteristics of nuclear energy. Social aspect, especially, social concern and social acceptance of nuclear energy are vital issues for nuclear energy in order to be completely accepted as an energy for SD. Recommendations for better social acceptance of nuclear energy in SD are also offered.

Keywords: Sustainable development, Nuclear energy, Economics, Environment, Social consideration.