Risk versus reward of nuclear power

Literature, Russian Literature

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The technological breakthroughs and developments have led the human race to an era of progress and globalization. There have been new inventions and machineries have become an essential part of the everyday life of the individuals. This has led to an increase in the requirement of energy and owing to this demand; the search for energy resources has increased. Furthermore, the depleting resources of fossil fuels have given a trigger for this search. Nuclear power is an alternative energy source which has provided hopes that energy production would improve and it would serve to assist in the conservation of fossil fuels. But there are many drawbacks and negativities associated with nuclear power as well (In Foreman et al 1970; Miller et al 2011).

The advent of nuclear power brought with it many advantages. Nuclear power can be used for the production of different forms of energy and electricity production is one of its major uses. Nuclear energy production provides for economic benefits as it serves as a competitor for other energy producing resources. This results in an overall lower cost of energy for consumers. It has environmental benefits as it does not release gases which result from the burning of fossil fuels and hence it protects the environment. Furthermore, the usage of nuclear power can assist in the conservation of fossil fuels whose reserves are depleting at a very fast pace (In Foreman et al 1970; Miller et al 2011).

Nuclear power has proved to be very helpful but this source of energy has its own disadvantages. The energy that is produced from nuclear power plants is less and the cost of the building of the nuclear power plants is very high.

Another major drawback is the waste products that are released from these nuclear power plants. These wastes are toxic and radioactive and the dumping of these wastes is a very complicated issue. This is owing to the fact that leakage from dumping sites can result in land and water pollution which can have serious consequences. Nuclear power has also been responsible for the production of nuclear weapons which can prove to be very dangerous for the human race. The last risk associated with nuclear power plants is the accidents that may occur in these plants and result in the production of toxic substances into the environment (Miller et al 2011).

The severity of the nuclear power plant accidents can be accessed with the impact of the Chernobyl disaster that took place in the year 1986 in Ukraine. A nuclear power plant disrupted and there was radioactive leakage into the environment. This exposure was not restricted to Ukraine but spread to Europe as well as Russia. 56 people lost their lives immediately following the disaster and the death toll owing to later exposure has been analyzed to reach as high as 1 million. A recent nuclear disaster occurred in Japan in the year of 2011 when the Fukushima nuclear power plant disrupted following the tsunami and earthquake that struck Japan. It created a state of emergency as many people were exposed to the radioactive radiations. Furthermore, 180. 000 people had to be relocated owing to the danger of radioactive exposure (Miller et al 2011; Talmadge et al 2011).

Nuclear power has many advantages but the risks truly outweigh the rewards of nuclear power. Nuclear disasters can prove to be very harmful for the human race. Thus, research should be done to find alternative fuel sources which can replace the usage of nuclear power.

References

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