

## ABSTRACT

The purpose of this study is to see the possibility of using nuclear energy as an alternative to fossil fuels in Sri Lanka. Cost of petroleum increased past US\$140 a barrel in June 2008. The energy consumption of Sri Lanka is on the rise. Plans are afoot presently to produce electricity by the use of coal to meet this demand and the first coal power plant is under construction in Norochcholai. Approximately 60-65% of the local electricity demand is produced by fossil fuel driven generation stations while hydro power consists of only about 35%. Petroleum is being imported in increasing quantities in order to meet the increasing energy demand. The results of global warming and environmental pollution due to fossil fuels are gradually becoming evident world over. Hence it is time to seriously think about finding an alternate source of energy that is environment friendly and capable of meeting our future energy needs.

France currently generates over 75% of her electricity needs by the use of nuclear power. The cost of nuclear energy is comparable with coal which is considered the cheapest available major source of energy. Fourth generation nuclear plants which are inherently safe will be a reality within the next decade and thus will be an attractive option for power generation. Thorium which can be developed to be used as fuel in a nuclear reactor is available in Sri Lanka thus providing us with a cheap source of fuel. Before nuclear energy in Sri Lanka becomes a reality a lot of work needs to be done in developing a disaster management organization capable of handling a nuclear event and also in educating the masses in the advantages of nuclear energy.

Considering the adverse effects of fossil fuels on the environment and human health, the non availability of another major source of energy and also the financial benefits, Sri Lanka should plan to fulfil her future energy needs by the use of nuclear energy.