

## ABSTRACT

The cost involve in fulfilling the energy needs for domestic and other sectors is annually increasing over the years and the cost for importing petroleum products was 3368 million US\$ in year 2008. Increase in prices for the generation of electricity and cost incurred in acquiring petroleum products for energy needs has become a serious issue for the general community as the consumer and to the Sri Lankan government as the main service provider. Sri Lankan government had to annually expend greater percentage of financial resrves from the budget to supply the domestic energy demands and the amount expended is around 32 % of the annual import cost in year 2008. The heavy expenditure of financial reserves to meet the domestic sector energy needs is not bearble to a country's economy running with a budget deficit of 8 – 9%. The scarcity of hydro resources and ever increasing hike in prices of imported petroleum based energy together with the rate of depletion of fossil fuel energy resources all over the world, demand to search and adopt alternative methods to generate energy to fulfil the domestic needs. Use of biofuel as an alternative to fulfill domestic energy needs could be one viable measure that can be adopted to overcome the present problem in obtainig petroleum based enrgy sources and to reduce the burden imposed on the national economy.

Advantages of using bio-fuel instead of petroleum based fuel for the economy has been demonstrated by Bangladesh as a developing country. Leaving aside other raw materials cow dung alone in Bangladesh is capable to provide biogas more than sufficient to meet the rural energy requirements for cooking and parboiling. Thailand uses biogas technology in the country for rural cooking and electrification. Such economic advantage of using an alternative energy is of great importance to a developing third world nation like our country as well. Apart from economic advantage social, health and environmental benefits can be obtained by using bio-fuel. Several studies have been undertaken to find out alternative energy sources for country's energy requirements.

Possibility of using bio-fuel to fulfill the domestic energy needs in the country with special emphasis on biogas generation and its advantages are discussed in detail in this study. The viability of using bio-fuel in the urban and rural areas in the country was also investigated and the results obtained were quite promising. Possibility of implementing a national scale programme for the promotion of biogas as an alternative

energy is considered to be a long lasting solution in meeting the ever increasing energy demands of the domestic sector.