

# An Enhancement of the Thermal Efficiency of House Hold Domestic Cook Stove

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**Abstract:** *Now a days gas stoves are very common in all houses counting urban and remote areas. The main power source for gas stoves is LPG. Liquefied petroleum gas (LPG) is usually used as a cooking fuel because it has higher energy content and produces lower emissions compared to other traditional fuels. Due to immense demand for LPG, aside from its limited reserve, performance improvement of the LPG cook-stoves is important. LPG plays a significant role in the transition towards a more safe, sustainable, and competitive energy model. The major source of the LPG is fossil fuels, so its huge consumption will definitely lead to its shortage in the future. Considering the limited fuel resources, energy conservation, environmental issues, increase within the demand of LPG in near future, it's necessary to explore the ways to further improve the thermal efficiency and therefore the emission characteristics of the domestic LPG cooking stoves. In the present work, performance parameters of the LPG stove such as parameters affecting thermal efficiency and CO emissions are studied. Various parameters affecting thermal efficiency of a burner such as distance between burner and pot, material of the burner, size of injector, swirl effect, pan support modification are determined. The paper is aimed to spotlight the latest add in this field and also, the areas needed to be addressed are discussed.*

**Keywords:** Domestic Cook Stove, Emission, Liquefied Petroleum Gas, Thermal Efficiency, etc.

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