International Journal of Commerce and Management Research
ISSN: 2455-1627, Impact Factor: RJIF 5.22
www.managejournal.com
Volume 2; Issue 12; December 2016; Page No. 59-61

Impact of pricing of liquefied petroleum gas on customer satisfaction level

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Abstract
Human life faces a unique and far reaching challenge. The energy needs are growing as a result of continuous increase in population increase, economic growth, and individual fuels/energy consumption. At the same time, emissions from fuel wood and fossils fuels, the main energy source for heating in homes and powering our economies, are contributing to climatic changes and affecting the local air quality. According to the Census of India, 2001, about 91% of rural and 31% of urban homes depend mainly on traditional fuels -- fuel-wood, animal and crop waste and charcoal -- for cooking. Dependence on traditional forms of biomass adversely affects human productivity particularly when time is increasingly spent farther and farther afield for diminishing fuel-wood sources and if the health of those exposed is endangered by high concentration of particulate matter from inefficiently burnt domestic fuels. While individuals (mainly women and girls) are exposed to the\injurious effects (of smoke inhalation, the emission of unburned hydrocarbons\through traditional stoves, and soot deposits when washed off vessels, etc.) and also have to spend time on fuel gathering, the community as a whole is adversely affected both by the ambient pollution created by simultaneous cook-fires and through land degradation in cases where fuel-wood is gathered in an unsustainable manner. This has meant that the need for cleaner and more efficient cooking fuels has not been adequately addressed. The fuel-stove combinations become cleaner and more efficient, but also increase in capital costs as the ladder is ascended. Therefore, as household income increases, people are able to move up to the energy ladder, affording seemingly more expensive but more efficient sources of energy, if they are accessible.

Keywords: liquefied petroleum gas (LPG), customer satisfaction

Introduction
Liquefied Petroleum Gas is used as fuel for thousands of applications. In developing countries the main benefits of LPG is in helping people to switch from unsustainable biomass use to a clean and safe cooking fuel. LPG domestic uses can never be ignored. It has played a revolutionary role when it comes to changing the face of domestic fuels used for heating and cooking. HPCL commenced marketing of LPG under the brand name "HP GAS".LPG for household consumption is nearly 89% of total LPG off-take in India. Total LPG consumption in the country for the year 2011-12 is projected to be more than 16.5 MMT (Million Metric Tons) and is expected to grow at 8-9% as envisaged in vision 2015 document of Ministry of Petroleum and Natural gas. There are still many rural areas where they have no awareness on use of LPG for domestic purpose. In developing countries main benefits of LPG is in helping people to switch from unsustainable biomass use to a clean and safe cooking fuel. This provides enormous health benefits to avoid the 1.6 million deaths per year from respiratory problems caused by smoke and other pollutants released by inefficient biomass burning in enclosed spaces. It also releases women and children from the drudgery of collecting firewood and health problems associated with carrying heavy bundles long distances. The main domestic uses of LPG are with respect of Lighting, Refrigeration, Cooking and most of all heating. It is as good for powering standalone stoves and huge cooking stoves. It has been found to be cost effective and hence is used in large scale cooking also. The main reason behind this is easy accessibility, low cost per unit and the environment friendly properties of LPG.
LPG has a massive range of uses, mainly used for cylinder across many different markets as an efficient fuel container in the agriculture, recreation, hospitality, calefaction, construction, sailing and fishing sectors. It can serve as fuel for cooking, central heating and to water heating and is a particularly cost-effective and efficient way to head off- grid homes. In the safety font LPG cylinder must be updated to new standards in safety and user experience, giving a huge contribution for domestic usage.
With a subsidy provided for domestic users of LPG even after the dismantling of the Administered Pricing Mechanism (APM), any decisions regarding domestic LPG provision would have to begin with pricing. Subsidy-options would also have to be decided upon – either on the initial costs of connections/stoves, or on the fuel, through funds from cross-subsidies or budgeted from the exchequer, and so on. Subsidising initial costs helps to overcome the first-cost sensitive, and seems preferable to fuel (or refill) subsidies because the latter could be diverted to other uses/users. However, first-cost subsidies leave possibilities for dropouts from those who cannot afford the fuel costs, resulting in "dead" investments.

Pricing of competing fuel
When evaluating the pricing of LPG, one has to consider the relative prices of these fuels, and whether or not inter-fuel shifts are desirable.

- Reducing/removing the subsidy on kerosene could make LPG relatively cheaper, without a burden on the exchequer. (However, in the near term, or as long as homes are not electrified, subsidies to kerosene have to merit consideration because it is the source of lighting for about 43% of the population).
- If the relative costs of LPG other fuels were reckoned after

accounting for their calorific values and the efficiencies of the related stoves it can therefore be argued that LPG subsidies are not required.

Direct cash benefits instead of subsidised fuel

There could be schemes through which LPG is priced at its full cost, but targeted households get some pre-determined compensation (as in the case of electricity for irrigation, in the state of Tamil Nadu). This would avoid careless use of the fuel, while assisting the economically disadvantaged. Such programmes would require funding from the government - with transfer payments directly to the poor, but the better the targeting, the higher the administrative costs. Also, earlier experiences with such below-BPL schemes have not been very successful.

Public awareness

Awareness of the adverse impacts on health of indoor pollution and the benefits of "cleaner" fuels would increase their popularity and thereby, the willingness to pay.

Supply security

Dependable supply of LPG requires-

- adequate and well dispersed import facilities,
- indigenous processing plants (refineries and natural gas fractionating plants),
- availability of storage capacities throughout the country, and
- Multi-mode transport facilities for moving LPG from alternative destinations.

Dependable distribution network:

- The problems of distributors -- who face unfavourable economies of scale when demand is low or dispersed, and those of consumers -- whose location precludes them from LPG use, can be addressed through extension of the distribution network beyond urban and semi-urban areas.
- Complementary infrastructure – roads, equipment suppliers, repair services, etc. – should be built up in tandem, to facilitate the smooth operation of the system (analogous to the rationale for improving rural infrastructure along with electrification).

Regulation - the government's role

The government/regulator would have to set standards to maintain safety and avoid corruption, impose measures for ensuring that the cylinders are checked for their user-worthiness and are properly filled, and provide consumer protection. (With a large numbers of operators and poor enforcement of standards, accidents and commercial malpractice can occur).

While the government has to be involved, at least through its policies, in helping to provide energy services to the economically disadvantaged, there has also to be a suitable environment for the private sector to cater to those who can pay for their needs. Subsidies will continue to be necessary for a while, but have to be applied with care. Development assistance/grants – from aid agencies, etc. could help only small fractions of the population which means that the government and market forces have to handle the rest and their extent and effectiveness have to be expanded to meet current and growing needs.

Objectives of the Study

- To evaluate the pricing policy of the company with the customer satisfaction level.
- To examine the Strategies and Government Policy Concerning Pricing of the liquefied petroleum gas.
- To Evaluate the Price Control Mechanism adopted by the Government.
- To Examine the Composition of the Subsidies in Pricing of LPG.
- To Evaluate Impact of Change in Prices, So as to have Good Relations with Government and Public at Large.
- To Examine the Long term Impact of the LPG Pricing Policy and the Indian Economy.
- To Evaluate the Social Impact of Change in LPG Pricing by Public and Private Companies.

Advantages of LPG

- LPG can be economically stored and transported as liquid in cylinders and used as a gas in any place.
- LPG is easily controllable and flexible to use according to requirement.
- LPG has a complete construction and produces a large amount of heat.
- LPG give you an instant cooking flame and is easy to control the blue flame is visible and its size is easily controlled over a wide range so that the required rate of heating can be obtained.
- LPG is non-poisonous and safe to use. Burns cleanly and does not produce any soot, smoke or smell during combustion, therefore leaving your kitchen clean.
- LPG is pure and very consistent in quality and is compatible with many different appliances and easy to maintain. It is used in many different sector i.e. domestic, commercial, and industrial and agriculture.
- Health-related- The use of LPG reduces the interior air pollution by 90% in comparison to traditional ways of burning biomasses. As LPG burns almost completely, the proportion of pollutants is reduced.
- Environmental impacts- related- CO2 emissions are relatively low. Greenhouse gases are reduced by 5-16 times per prepared meal compared to coal. If LPG was used, the wood consumption can be substantially reduced 45 kg of LPG is sufficient to produce the thermal energy of about half a ton of wood. In regions with low biomass availability, or in regions where more than the sustainably available amount of biomass is burnt, LPG could lead to a significant relief of biomass recourses.
- Further advantages- LPG stoves quickly supply heat and work more efficient than stoves which burn biomass. The simple and precise regulation simplifies the cooking process and can save time. Due to its high energy density, LPG is easily transportable.
- Because LPG vaporizes when released from the tank and is not water soluble, LPG does not pollute underground water sources.
- Its high octane rating enables it to mix better with air and to burn more completely than does gasoline, generating less carbon. With less carbon build up spark plugs often last longer and oil changes are needed less frequently.
- Because it burns in the engine in the gaseous phase, propane results on less corrosion and engine wear than gasoline.

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