

Techno Commercial Aspects of Using LPG as an Alternative Energy Solution for Transport and Industrial Sector in Bangladesh: Case Studies in Industrial Sector

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Abstract : Transport system and industries which are the main basis of industrial and socio-economic development of any country. It is mainly dependent on fossil fuels. Bangladesh has fossil fuel reserves of 9.51 TCF as of July 2023, and if no new gas fields are discovered in the next 7-9 years and if the existing gas consumption rate continues, the fossil fuel reserves will be exhausted. The demand for petroleum products in Bangladesh is increasing steadily, with 63% imported by BPC and 37% imported by private companies. 61.61% of BPC imported products are used in the transport sector and 5.49% in the industrial sector, which is expensive and harmful to the environment. Liquefied Petroleum Gas (LPG) should be considered as an alternative energy for Bangladesh based on Sustainable Development Goals (SDGs) criteria for sustainable, clean and affordable energy. This will not only lead to the much desired mitigation of energy famine in the country but also contribute favorably to the macroeconomic indicators. Considering the environmental and economic issues, the government has referred to CNG (compressed natural gas) as the fuel carrier since 2000, but currently due to the decline mode of gas reserves, the government of Bangladesh is thinking of new energy sources for transport and industrial sectors which will be sustainable, environmentally friendly and economically viable. Liquefied Petroleum Gas (LPG) is the best choice for fueling transport and industrial sectors in Bangladesh. At present, a total of 1.54 million metric tons of liquefied petroleum gas (LPG) is marketed in Bangladesh by the public and private sectors. 83% of it is used by households, 12% by industry and commerce and 5% by transportation. Industrial and transport sector consumption is negligible compared to household consumption. So the purpose of the research is to find out the challenges of LPG market development in transport and industrial sectors in Bangladesh and make recommendations to reduce the challenges. Secure supply chain, inadequate infrastructure, insufficient investment, lack of government monitoring and consumer awareness in the transport sector and industrial sector are major challenges for LPG market development in Bangladesh. Bangladesh government as well as private owners should come forward in the development of liquefied petroleum gas (LPG) industry to reduce the challenges of secure energy sector for sustainable development. Furthermore, ensuring adequate Liquefied Petroleum Gas (LPG) supply in Bangladesh requires government regulations, infrastructure improvements in port areas, awareness raising and most importantly proper pricing of Liquefied Petroleum Gas (LPG) to address the energy crisis in Bangladesh.

Keywords : transport and industries fuel, LPG consumption, challenges, economical sustainability

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