

Looking for an effective alternative to LPG

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Even after more than Rs 12,000 crore was spent on near universal access to LPG connections, it is estimated that about six lakh people die every year due to air pollution in Indian kitchens. Over half of rural India continues to primarily rely on burning solid fuels for cooking, increasing the likelihood of illnesses, including ischemic heart disease, cataract and lung cancer. Recent evidence also shows that it increases the risk to Covid-19 infections. Clearly, connections are not enough to address this challenge and sustained use would need investments towards increasing affordability, behaviour change, and quality of supply and service. Rising domestic LPG prices, removal of subsidies, growing retail inflation and an unending distress owing to the pandemic have squeezed the pockets of low and middle-income households, making it difficult to shift to LPG. In this situation, it is pertinent to ask—is there an effective alternative to LPG on a large scale?

Can electricity be an alternative? Since induction stoves are flameless, switching to them would have to address some cultural and behavioural barriers. But electricity may not be an immediately viable alternative because of two major concerns. First, households that got electricity connections under the rural electrification schemes have a maximum connected load of 500W. However, induction stoves are rated at typically more than 1500W. If a sizeable number of homes move to electric cooking, there will be significant issues in reliability of supply due to distribution transformer failures. Since most households would cook at roughly the same time of the day, it could lead to further stress on the electricity distribution system. Large investments in distribution network augmentation, along with efforts at better peak load management will be needed before electricity can become a technically viable option in rural areas.

Even if the above issues are addressed, affordability will remain a concern. The requirements of a rural household are usually met within 100 units/month. This gets covered by concessional tariffs or subsidised power schemes in most states. However, beyond 100 units, consumers have to pay about Rs 7-8 per unit used. Except in states where subsidies are extended beyond 100 units, induction-based cooking alone would drive up the monthly electric bill by at least Rs 500-600 which would be unaffordable for many poor households. This expenditure is comparable to the cost of using LPG for all cooking needs. Given that an average Ujjwala consumer has only been able to afford around half that quantity even at subsidised rates, electricity seems to be unaffordable as an alternative.

Despite over 30 years of various programmes, biogas usage has not picked up, and is unlikely to do so. The central government expenditure on biogas programmes has been on a steady decline, from Rs 137 crore in 2009-10 to Rs 36 crore in 2019-20. Although biogas may remain active in pockets, it is hard to imagine it as the dominant alternative to LPG.

Piped natural gas (PNG) could be an alternative to LPG in densely populated urban areas in the coming years. But it is not designed to supplement the cooking needs of rural India as network expansion costs could be prohibitive. Even if this is addressed, India has limited reserves of natural gas. Therefore, large-scale usage of PNG would require imports which would make PNG unaffordable.

Since the launch of Ujjwala Yojana in 2016, there have been significant efforts to augment the domestic LPG distribution network, adding 12 new bottling plants (with an added capacity of 6,200 thousand metric tons per annum) and about 9,000 new distributors. Thus, having already made the investment into domestic LPG, and given the difficulties in scaling up alternatives in the near to long term, the only immediately available option to address the household air pollution challenge is LPG.

However, budgetary allocations to LPG have been rapidly shrinking in the recent past. The outlay for LPG direct benefit transfers has come down from about Rs 31,400 crore in 2018-19 to only Rs 4,000 crore in the budget for 2022-23. At the same time, pre-election promises in some states to supply free LPG cylinders seem to acknowledge LPG affordability as an issue. Therefore, a coherent, targeted approach backed by requisite financial and institutional support is desirable in order to address this endemic problem.

One way to achieve this is to resume LPG subsidies and rationalise them. For example, a tapering subsidy could be provided only to consumers with historically low consumption. In addition, revising LPG prices could be limited to twice in a year to provide price certainty in the context of volatile oil markets. While efforts to enhance alternatives can happen in parallel, only with adequate, immediate and sustained support to rural and poor domestic LPG consumers, can the government make an impact on the manifold developmental issues associated with household air pollution.

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