



BOTTLED GAS FOR BETTER LIFE COOKING WITH LPG FOR BETTER HEALTH



3 GOOD HEALTH AND WELL-BEING



7 AFFORDABLE AND CLEAN ENERGY



Hundreds of lower income families in Cameroon and Kenya **now breathe cleaner air and have better health**, thanks to a microfinance programme launched in 2017 by The Global LPG Partnership (GLPGP) **together with local microfinance and banking institutions**, LPG marketers and academics partners.

Contributors



THE GLOBAL LPG PARTNERSHIP



UNIVERSITY OF LIVERPOOL



Global Health Research Group

The Project

The **Bottled Gas For Better Life** initiative addresses the challenge of upfront costs preventing many families from switching to LPG for cooking. Short-term microfinance loans of US\$80-\$100 are provided to families to **purchase an LPG “start-up kit”** including a double burner LPG stove, a filled LPG cylinder, and accessories.

Most programme participants had been using firewood as their main cooking fuel. **Switching to LPG for everyday cooking eliminates smoke exposure in the kitchen**, supporting better well-being and health, particularly for women and children.



WORLD LPG ASSOCIATION

182 avenue Charles de Gaulle
92200 Neuilly-sur-Seine - France
www.wlpga.org



“When you cook with firewood, smoke enters your eyes. My children cough because of the smoke. **When you cook with gas, you feel nothing.**”

Woman who adopted LPG for cooking through Bottled Gas for Better Life, Cameroon



The results: Cameroon

The University of Liverpool, UK conducted an independent study of the programme's pilot phase in Cameroon, evaluating the extent to which overcoming the upfront cost barrier for the LPG equipment encourages households to adopt LPG, and how this affects their access to energy and thus use of time, well-being and health. The study included household air pollution (HAP) measurements in households before and after LPG adoption, measuring particulate matter (PM2.5) in kitchens inhaled by primary cooks. PM2.5 is responsible for most of the disease related to HAP².

- LPG consumption by participants over six months was **nearly five times Cameroon's national average**, showing sustained LPG use after initial adoption.
- PM2.5 exposure levels **decreased significantly**. Exposure in primary cooks reached levels below the WHO's indoor air pollution Interim Target-1 (35µg/m³), **confirming LPG's health protective role**.
- Significant **reductions in headaches** (46% to 9%), **eye problems** (66% to 8%), **cook burns** (25% to 3%) and **child burns** (9% to 0%) were observed.



The results: Kenya

Programme beneficiaries in rural Kenya also received a loan that covered all equipment costs for repayment in six monthly instalments. **94% of beneficiaries repaid their loan in full and on time**. Adoption of LPG as the primary cooking fuel expanded by 23% as a result of the programme. The findings suggest that promoting LPG usage through microloans for equipment is likely to be both **commercially viable and beneficial to health through decreased use of polluting biomass fuel**³.

- Participants increased their household LPG use by **5.9 hrs per week** and **decreased their biomass fuel** use by 4.8 hrs per week.
- **76.8% of participants indicated they were more likely to use LPG** as their primary cooking fuel compared to only 38.8% of non-participants.

Over time, scaling up LPG use for clean cooking is expected to lower the mortality and disease rates attributed to household air pollution while also promoting gender benefits and environmental protection.

No more smoke and bending over: cooking with LPG compared to cooking with biomass



Switching from biomass to LPG for domestic cooking fuel use in line with Cameroon's National LPG Master Plan target for 2030 is **projected to save 28,000 lives** with climate co-benefits¹.

¹ Kyridemos et al. 2020. Health and Climate Impacts of Scaling Adoption of Liquefied Petroleum Gas (LPG) for Clean Household Cooking in Cameroon: A Modeling Study. *Env Health Prospect* . 128(4).

² Pope et al. 2018. The Bottled Gas for Better Life Pilot: An Evaluation of the First Microfinance Initiative in Cameroon to Support Households Switch from Solid Fuel to LPG for Cooking. *Env Health Prospect*

³ Hsu et al. 2021. Microfinance for clean cooking: What lessons can be learned for scaling up LPG adoption in Kenya through managed loans? *Energy Policy*. 154:112263