



THE GLOBAL LPG PARTNERSHIP

Energy Access in Africa

National and Regional Targets for Clean Cooking by 2030

Clean Cooking and Sustainable Development Goal 7

Massive scale-up in the deployment and sustained adoption of safe, healthy and affordable clean cooking solutions is required in order to reach the United Nations Sustainable Development Goal 7 (SDG7), focused on ensuring universal access to modern energy by 2030.

Achieving SDG7 requires a target annual growth rate of 1.7 percent.¹ However, data from the 2015 World Bank's Global Tracking Framework shows that between 2010-2012 "annual growth in access to non-solid fuels was negative 0.1 percent." The report also noted that while 125 million people gained access to non-solid fuels in the same period, predominantly in urban areas, the global population increased by 138 million, therefore negating gains achieved.¹

In order to help drive more rapid solution availability and adoption for the nearly three billion people still cooking using solid fuels, there is now renewed focus on fuels that provide the health benefits that form part of the motivation for SDG7, as well as SDG3, which is focused on ensuring health and wellbeing. The "BLEN" fuels - biofuels, liquefied petroleum gas (LPG), electricity and natural gas – are clean at point of use, and have shown promising laboratory results supported by field data, both in terms of effectiveness, and also in improved health outcomes.

The role of Liquefied Petroleum Gas

LPG is a clean, modern cooking fuel supporting a range of improvements in health, and addressing deforestation caused by the use of woody biomass and charcoal for cooking.

Governments across the developing world are increasingly focused on the role that LPG can play as a clean cooking fuel. Many are adopting ambitious targets to increase the share of LPG in their energy mix, particularly for cooking purposes.

This document provides a summary of known national targets set by countries for increasing LPG penetration. The following data also highlights the importance of the Global LPG Partnership (GLPGP)'s efforts to help support governments and other stakeholders in undertaking large-scale

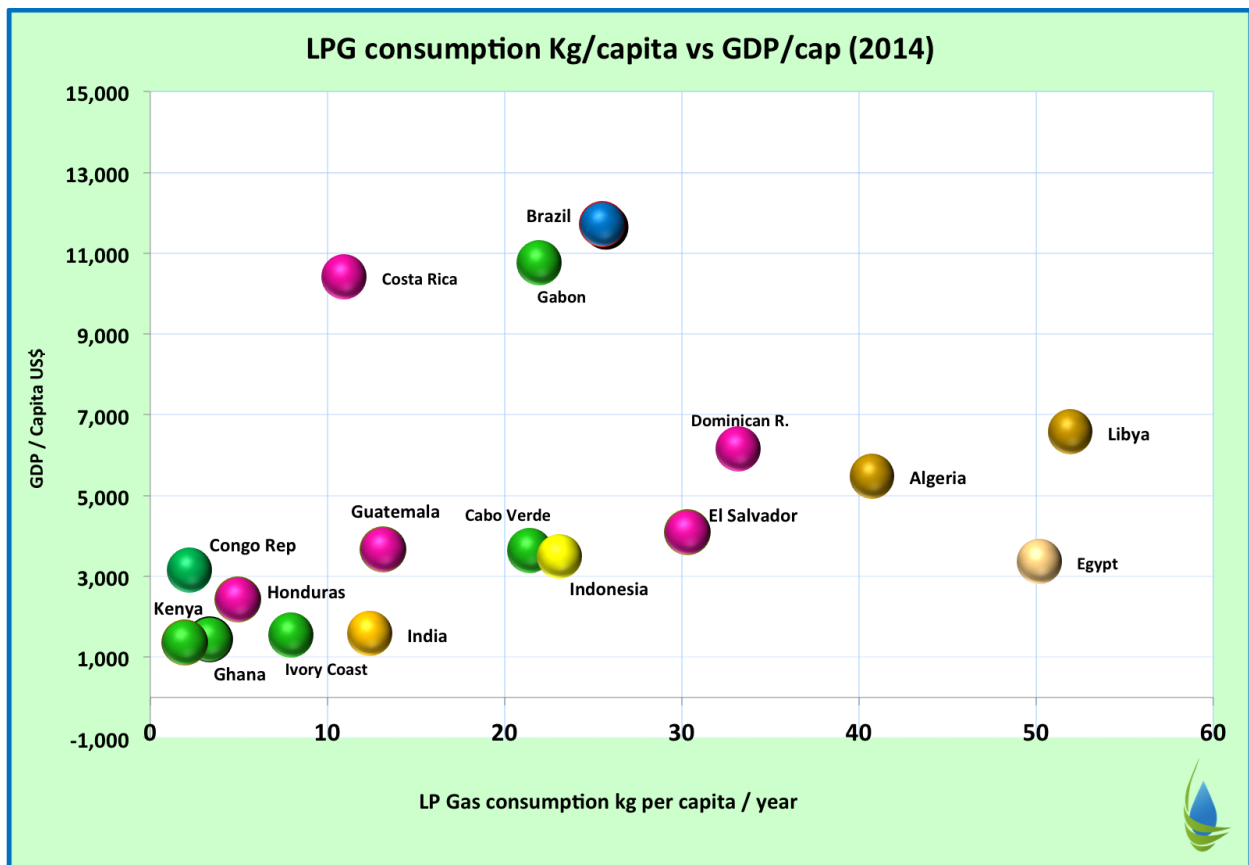
¹ World Bank, 2015. Progress Toward Sustainable Energy. Global Tracking Framework 2015, summary report.

transitions from traditional fuels to LPG for clean cooking. These objectives are also consistent with international energy access goals.

Available data collected by GLPGP shows that in 2014, household demand for LPG in Sub-Saharan Africa averaged 2.5 Kg per person per year, with overall LPG penetration rates at approximately 13-16% population.² In northern Africa, the LPG penetration was significantly higher, with countries consuming 40-50 Kg of LPG per person per year.

Broad correlation exists between LPG consumption and GDP per capita. As illustrated in **Figure 1**, of the nine countries with LPG consumption exceeding 20 Kg per capita, Algeria, Brazil, Dominican Republic, Gabon and Libya are upper-middle income, while Cabo Verde (Cape Verde), Egypt, El Salvador, Indonesia, are lower-middle income economies³. This shows that even in lower-middle income countries, LPG can be made accessible and affordable, if the right policies and enabling conditions are in place.

Figure 1- Correlation between LPG Kg/capita consumption and GDP in selected countries



Source: Adapted from the LPG Master Plan of Cameroon²

² The Global LPG Partnership, 2016. The LPG Master Plan of Cameroon. Available upon request.

³ According to the World Bank's income level classification system.

LPG for Clean Cooking in Africa - Country Targets

Globally, many countries have begun to identify concrete targets and action steps in order to reach SDG7. Available country data, drawn from both published and draft reporting/national action plans, reflects that the majority of developing countries have recognized the urgent need to make the transition to modern cooking fuels.

For instance, as part of their work in cooperation with the UN Sustainable Energy for All initiative (SEforAll)⁴, over 70 developing countries have completed gap analyses to identify country-specific challenges and opportunities. Based on these assessments, many of these countries have published or begun drafting "Action Agendas" (AA). These are meant to focus action and strategic reforms in priority areas for energy access, including electrification, heating and cooking, alongside targets focused on renewable energy and energy efficiency.

In addition to the severe negative health consequences of Household Air Pollution (HAP) from cooking with solid fuels, addressing both forest loss and degradation is a priority in some developing countries in Africa, energizing the move to the adoption of clean cooking fuels and stoves. In particular, some Sub-Saharan African (SSA) countries and regions have articulated ambitious national goals for the scale-up of LPG deployment in both urban and rural areas, as part of their overall national engagement on energy access.

A summary of regional and national targets is presented below:

- The *Economic Community of West African States* (ECOWAS) countries have coordinated their LPG targets for clean cooking via the Regional Centre for Renewable Energy and Energy Efficiency (ECREEE). **Table 1** shows LPG penetration targets by country, as well as relevant demographic data from the World Bank. Countries like Cape Verde, which start from a higher base in their LPG penetration rates, have established goals for almost exclusive LPG usage, and eradication of three-stone fires and traditional biomass stoves. Other countries like Burkina Faso and Niger have very high LPG targets for urban areas. Nigeria and Togo include LPG as a key fuel in the mix of fuels and energy sources to reach 80% and 75% clean cooking by 2030, respectively.

⁴ Established by the UN Secretary-General, and now an independent non-profit, www.SEforAll.org

Table 1 - ECOWAS countries LPG penetration targets by 2030⁵

Country	Population (million), 2015 [#]	GDP per capita (US\$), 2015 [#]	Population using solid fuels, 2013 [§]	LPG penetration target, 2030	Source (SEforAll AA)
Benin	10.8	762	94%	Not reported but LPG expansion to urban areas cited	AA under development*
Burkina Faso	18.1	589	95%	68% in urban areas	AA under development*
Cabo Verde	0.5	3,080	31%	90% or more	AA released ⁱ
Cote D'Ivoire	22.7	1,399	81%	1,200 kT of LPG for household cooking by 2030	AA under development*
Gambia	2	472	95%	Not reported but LPG expansion to urban and peri-urban areas cited	AA released ⁱⁱ
Ghana	27.4	1,370	83%	50% by 2020	AA released ⁱⁱⁱ
Guinea	12.6	531	>95%	50% access to clean cooking by 2025	AA under development*
Guinea Bissau	1.8	573	>95%	20%	AA under development*
Liberia	4.5	456	>95%	43% ('cooking plan' scenario)	AA released ^{iv}
Mali	17.6	724	>95%	62.5%	AA under development*
Niger	19.9	359	>95%	85% urban, 60% rural	AA under development*
Nigeria	182.2	2,640	75%	80%, together with other clean fuels	AA released ^v
Senegal	15.1	900	61%	Not reported	AA under development*
Sierra Leone	6.5	653	>95%	25%, together with other clean fuels	AA under development*
Togo	7.3	560	95%	75%, together with other clean fuels	AA under development*

- *Central African Economic and Monetary Community (CEMAC)⁶ and the Economic Community of Central African States (CEEAC/ECCAS)⁷ have set the target of quadrupling LPG penetration*

⁵ Sources: [#] World Bank, 2015, [§] World Health Organization, 2013 (survey based data). *<http://www.ecreee.org/node/85076>

ⁱ http://www.se4all.org/sites/default/files/Cape_Verde_AA_EN_Released.pdf

ⁱⁱ http://www.se4all.org/sites/default/files/Gambia_AA_EN_Released.pdf

ⁱⁱⁱ http://www.ecreee.org/sites/default/files/events/sustainable_energy_action_plan_ghana.pdf

^{iv} http://www.se4all.org/sites/default/files/LIBERIA_AA_EN_Released_0.pdf

^v http://www.se4all.org/sites/default/files/NIGERIA_SE4ALL_ACTION_AGENDA_FINAL.pdf

⁶ CEMAC countries include, Cameroon, the Central African Republic, the Republic of the Congo, Gabon, Equatorial Guinea, and Chad.

⁷ CEEAC includes CEMAC countries plus Angola, Burundi, the Democratic Republic of the Congo, Sao Tome and Principe, and Rwanda.

from 16.5% in 2010 to 66% in 2030 in urban areas, and from 6% to 25% in rural areas.⁸ Gabon and Angola, which have relatively high levels of LPG usage (62% and 54% respectively), have both established the target to achieve universal LPG access (100%) by 2025 (see **Table 2**).⁵

- Countries in East Africa have also included LPG expansion within their targets. For example, Kenya has set up a goal of 36% penetration from an initial 5%, and Uganda has established a target for ensuring increased LPG access in urban areas (see **Table 2**).

Table 2 – Central and East African countries: Known LPG penetration targets by 2030⁹

Country	Population (million) [#]	GDP per capita (US\$) [#]	Population using solid fuels, 2013 [*]	LPG penetration target, 2030	Source
Angola	25	4,101	54%	100% by 2025	CEMAC/CEEAC Livre Blanc de l'Énergie ⁸
Cameroon	23.3	1217	78%	58%	National LPG Master Plan ²
Gabon	1.7	8,266	20%	100% by 2025	CEMAC/CEEAC Livre Blanc de l'Énergie ⁸
Kenya	46.1	1,377	84%	36%	AA released ^{vi}
Rwanda	11.6	697	>95%	25% LPG penetration in urban areas	AA released ^{vii}
Tanzania	53.5	879	>95%	>75% access to modern cooking solutions	AA released ^{viii}
Uganda	39	705	>95%	1 million urban households	AA released ^{ix}

⁸ Livre Blanc de la CEEAC et de la CEMAC, 2014. *Politiques régionale pour un accès universel aux services énergétiques modernes et le développement économique et social 2014-2030*. Available at: https://www.se4all-africa.org/fileadmin/uploads/se4all/Documents/News___Partners_Docs/ECCAS_CEMAC_livre_blanc_energie_2014.pdf

⁹ Sources: [#] World Bank, 2015, ^{*} World Health Organization, 2013 (survey based data).

http://www.se4all.org/sites/default/files/Kenya_AA_EN_Released.pdf

https://www.se4all-africa.org/fileadmin/uploads/se4all/Documents/Country_AAs/RWANDA_Action_Agenda.pdf

http://www.se4all.org/sites/default/files/TANZANIA_AA-Final.pdf

http://www.se4all.org/sites/default/files/Uganda_AA_EN_Released.pdf