The GLPGP has a strong vision for the rapid, sustainable scale-up of LPG infrastructure, distribution and demand. What are the key opportunities and challenges in achieving this in west Africa?

The key opportunities are in the fact that potential demand is estimated at 50-60% of households looking to cook with LPG, right now. This means that 40-45% of the households — the average penetration rate is about 15% — need cylinders and distribution networks to get the refills at convenience very close to their homes, with good safety. The challenge is getting sustained investment in cylinders by the gas companies/marketers, and at the same time marketers developing their exclusive distribution and retail networks. The logistical infrastructure of refilling and supply is more or less available everywhere, although some improvements are needed, but this is critical only if the investment in cylinders becomes a reality, which is not currently the case. The existing refilling capacity can be expanded rapidly to two shifts a day, and the storage capacity can rotate a little bit more.

The challenge is more in the distribution and investment in cylinders. The LPG industry, through the WLPGA when I was chair of its Global Cylinder Network, has described the Sustainable LPG Market Model that has produced successfully developed LPG markets — in all of Latin America, north Africa, Vietnam, India, Indonesia, Malaysia, Thailand, Japan and Europe — in the brochure Guidelines for the Development of Sustainable LPG Markets.

The Sustainable LPG Market Model describes the set of essential regulations, market rules and practices that create the conditions for safe and bankable LPG sector expansion. The model consists of defining precisely the marketer as the centre of cylinder investment, cylinder management and cylinder safety. The role of the marketer is as the investor in, and sole refiller of, its own branded cylinders, and the responsible party for the safety of the cylinder by consequence of being the sole refiller of its brand of cylinders and the sole party responsible for the distribution network of its brand of cylinders. Only the marketer is granted a licence and has the right and the capacity to ensure a sustainable supply of safe refilled cylinders of its brand through its branded distributors or delivery trucks. The model includes as a key element “cylinder recirculation” — the
customer exchanges their empty cylinder for a pre-filled cylinder of the same brand. At the initial stage, the cylinder is “acquired” for use only through a refundable deposit in the distribution network of the marketer. The marketer owns the cylinder and is responsible for it. The consumer makes use of it, and depends on the marketer to ensure good availability, accessibility, affordability and safety of the cylinders.

Any break or inconsistency in this model leads inevitably to a slowdown or cessation of cylinder investment, an increase of chaotic practices of supply manipulation, and a decline in the safety of cylinders (if not underfilled). The most common breaks are — the cylinder becomes generic or is treated as if it belongs to the customer; the refill is made in an LPG microstation just like a gasoline station — which is precisely what has created so many cases of fire and explosions in Ghana, Haiti and Nigeria — illegal cross-filling increases, existing licences for the import of bulk supply are given to participants that do not invest in cylinders, distributors become non-exclusive etc.

The challenge for LPG development is to explain how to fix the gap between the current model practised in a country and the Sustainable LPG Market Model. When the model is well understood and implemented by the government AND by the private sector, it makes investment in large quantities of cylinders viable, assuming industry margins are adequate. Cote d’Ivoire is a good recent example. In the past, Gabon, Cabo Verde and Mauritius did it successfully. It would be useful to talk about these countries — although small, they achieved their goals.

Ghana in October last year directed that the cylinder recirculation model of LPG distribution be implemented. What would provide the most direct route to achieving this?

After the BLEVE (boiling liquid expanding vapor explosion) of an LPG microstation open to the public — there are more that 600 such facilities in Ghana — on 5 October in Accra, injuring more than 170 persons, with more than 20 fatalities and destroying two service stations, the president took the decision to stop the country’s existing model with the micro-filling of cylinders at LPG stations, and to transition to refilling in closed industrial centralised filling plants, just like in all the well-developed markets — Morocco is probably the benchmark, with more than 60kg/capita/yr. In this case, the cylinder is not refilled at an LPG station but exchanged when empty for a refilled one in outlets close to homes. The empty cylinder is taken to the central filling plant to get checked, refilled and certified safe for use and for sale. This is the “recirculation” model that Ghana has decided to implement. The very slow development of domestic LPG use (most of the LPG consumed in Ghana is autogas: diverted cylinders placed in cars, taxis etc) requires addressing the status of the cylinder (transfer of ownership to marketers, to adequately derisk and ensure a viable return on their investment), to define the central role of the marketer as the sole investor in cylinders, the role of the refiller of cylinders, controlling the marketing of its branded cylinders, rather than having existing marketers just being “station owners or station operators”, as has been the case so far.

It implies issuing licences to marketers only, which then may apply for import, storage and refilling permits, etc. The competition must remain between marketers only, focused on acquiring and servicing customers, with no possibility for non-investors in cylinders to refill and distribute cylinders, and no role for bulk wholesalers that supply LPG to non-investors in cylinders.

The twin challenges are, first, to create the confidence among industry and consumers to justify marketers investing more than €250mn in new cylinders in Ghana, which is more than the cost of the entire logistics infrastructure for supply and distribution; and second, to plan and execute national transition to the Sustainable LPG Market Model fully, correctly and effectively.
Nigeria’s National Assembly passed the Petroleum Industry Governance Bill (PIGB) in January. The bill created a new regulator, the NPRC, which will receive the power to grant exploration and production licences and hold bidding rounds. How has the GLPGP, its members and the local market reacted to this?

We have not seen if the model that Nigeria decided to implement is in fact the Sustainable LPG Market Model, as described in the WLPGA guidelines. Nigeria has been using a model where the cylinder belongs to the customer and the refills are made at LPG stations, since the 1980s, when the good model was stopped. Since then, consumption has been very low, less than 2kg/capita, and part of the consumption is also autogas. We don’t see any intention expressed in favour of the Sustainable LPG Market Model, and many local LPG station owners see a change to the model as a threat to their existing businesses.

The change of model requires strong political will, and a good understanding of the model and its implications — precisely what Ghana realised was necessary — and business solutions with proper financing to allow the existing LPG station owners to migrate into a more sustainable business consistent with the new model — either becoming marketers investing in cylinders or becoming distributors of refilled cylinders of a licensed marketer. The GLPGP, which is primarily funded and governed by the global public sector, is in a neutral position to propose, co-ordinate and arrange effective business and financing solutions that benefit the entire private sector. Out of these business solutions, specific financing solutions for substantially reducing the cost of the cylinders for the marketers and consumers can also be evaluated and implemented.

Outside Ghana and Nigeria, what kind of potential does the GLPGP see for developing LPG use in Burkina Faso, Senegal, Cameroon, Ivory Coast and other west African countries?

Just like in Gabon, Mauritius or Cabo Verde — to reach 20kg/yr per capita, which corresponds to about 80pc of the population cooking with LPG. More than the demand potential, what is beneficial is the quality of the existing LPG legal framework and its enforcement, which can drive more rapid investment in cylinders and deliver well on safety.

I think it is worth saying that some countries have better starting conditions for LPG development than others, because the Sustainable LPG Market Model is fairly well implemented — although some enhancements are needed — and that some other countries will require more time due to the existing legal framework — or absence of — being too far from the model.

About Renzo Bee

Education:

Professional background:
36 years in the downstream of petroleum sector, of which 18 years in the LPG with knowledge of more than 70 LPG markets. Experience in the running of LPG Businesses, the merger of the LPG Business in Morocco, in the creation of Totalgas Honduras and El Salvador and in creation of a JV in the PRC: Republic of China (Henan province) in 1996.
Present job position: since January 2016.


Preparation of the structuring of the investment for Cameroon Assistance and guidance of the NPA (Regulatory body) of Ghana in the change toward the LPG cylinders re-circulating Model. Representing GLPGP at the Energy Access Platform of the OFID.