Potential for LPG Market Expansion in Developing Countries via Public-Private Partnerships to Solve Major Global Mortality, Health, Environmental and Labor-time Problems Caused by Use of Solid Cooking Fuels
Use of Solid Fuels for Cooking
Deforestation in Sub-Saharan Africa

Ghana
Cameroon
Uganda
Kenya
Tanzania
LPG Market Potential in Sub-Saharan Africa: 5 Target Countries

Household Economics of LPG Fuel

Comparative Costs of Cooking Fuels
Annual Cost per Household - Cameroon

Source: Kosan Crisplant Cameroon, GTZ (Feb. 2012; electricity as of Mar. 2009)
LPG Market Development: Developing Country Accelerators and Barriers

- Growing incomes, middle classes
- Aspirational purchasing
- Urbanization
- Increasing cost / scarcity of substitute fuels
- Growing awareness of problems associated with “less modern” fuels
  - Illness / mortality
  - Deforestation
  - Others
- Mobilization of international capital, know-how
- Consumer first costs
- For BOP, high fuel cost as % of household income (increasingly applies to all fuels bought with cash)
- Lack of supply / infrastructure
- Theft of cylinders and other cheating
- Inconsistent safety practices
- Weak regulations and/or enforcement
- Corruption

Supply and demand: Which unlocks which?
LPG Transition Success Factors

Supply Chain
- Sufficient, rationalized infrastructure for reliable supply and low-cost distribution
- Realization of economies of scale
- Distribution / retail SME capability-building
- Access to capital

Consumer
- Financing of (or financial support for) consumer first costs
- Right range of cylinder sizes
- LPG stoves that fit the culture’s pots
- Multidimensional consumer education

Government
- Adequate governmental policies and regulation: taxes/duties, safety, practices
- Adequate enforcement
- Market structure that
  - Incentivizes legitimate companies to invest in, and remain in, the market
  - Balances private sector profit requirements with goal of public/social benefit
Large-scale Transition Successes to Date

LPG Penetration of Households

Indonesia
India
Senegal (urban)
China

Stated Goal
To Date