Brazil success story.

The experience over the past 77 years

Nairobi – Kenya
Africa LP Gas Summit 2015.

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Sindigás

AmazonGas

FOGÁS
CONFORTO, SEGURANÇA E QUALIDADE

LIQUIGÁS
BR PETROBRAS

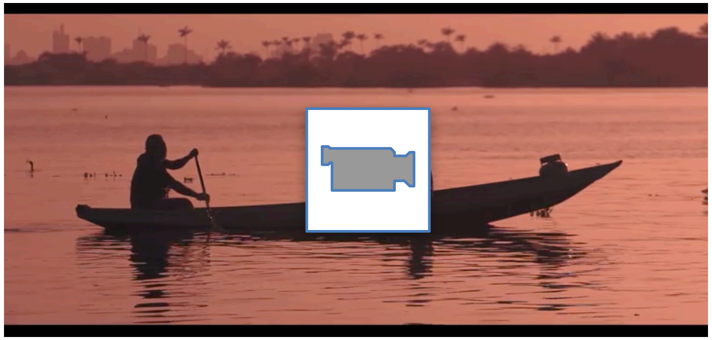
NACIONALGÁS

SUPERGASBRAS

ULTRAGAZ
especialista no que faz

Together those companies:

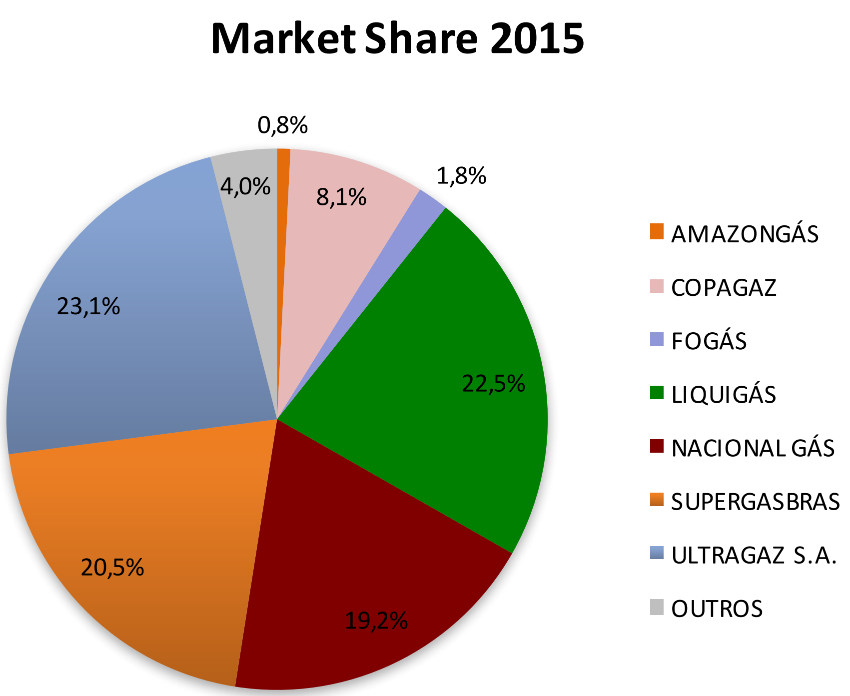
- **Supply over 90% of national demand.**
- **Cover 100% of national territory.**



Brazil - Big Numbers

LP GAS INDUSTRY - BIG NUMBERS

33 million Cylinders delivered per month (12 cylinders delivered per second)	**22 Distributors**	**7,3 million tons** Commercialized in 2013
100% Cities served by LP Gas	**55 Thousand** LP Gas Retailers	**108 million** Estimated 13 Kg cylinders universe
30 Kg Per capta consuption	**60 Million Households**	**27% wood** Residential Energy Matrix
96% Population use LP Gas as Cooking fuel	**350,000** Direct / Indirect employment	**USD 2,5 Billion** Taxes collected per year



Source: Agencia Nacional do Petróleo, Gás Natural e Biocombustíveis

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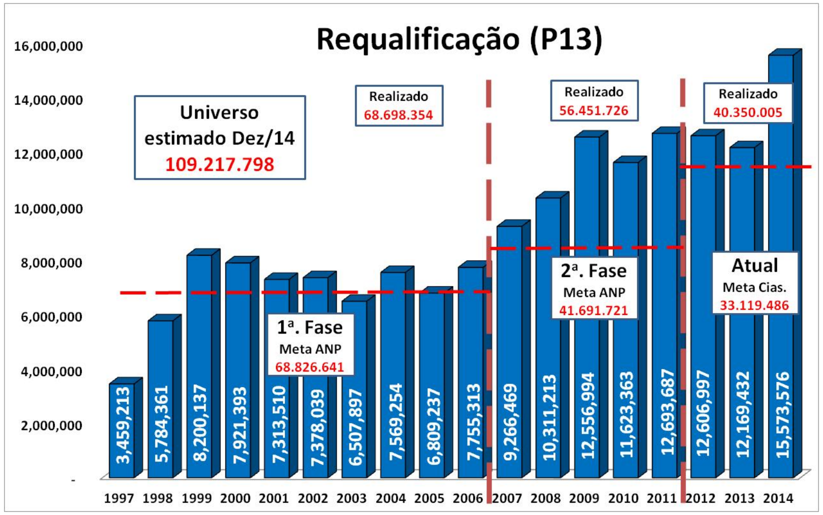
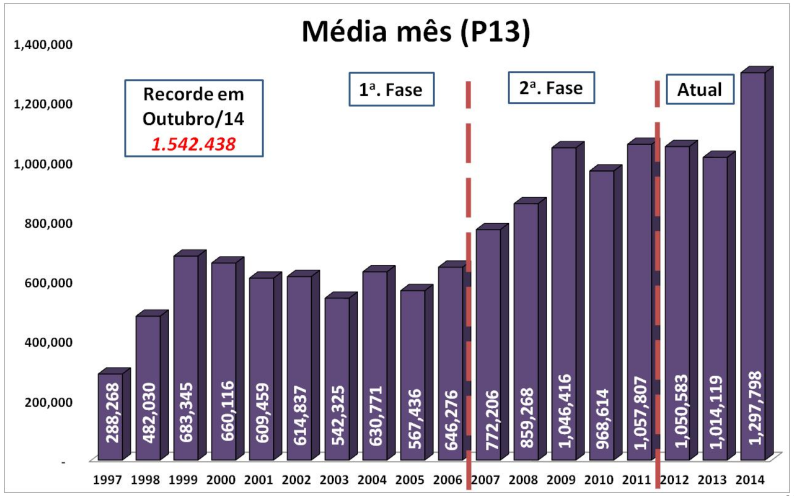
Brazilian cylinder rehabilitation program

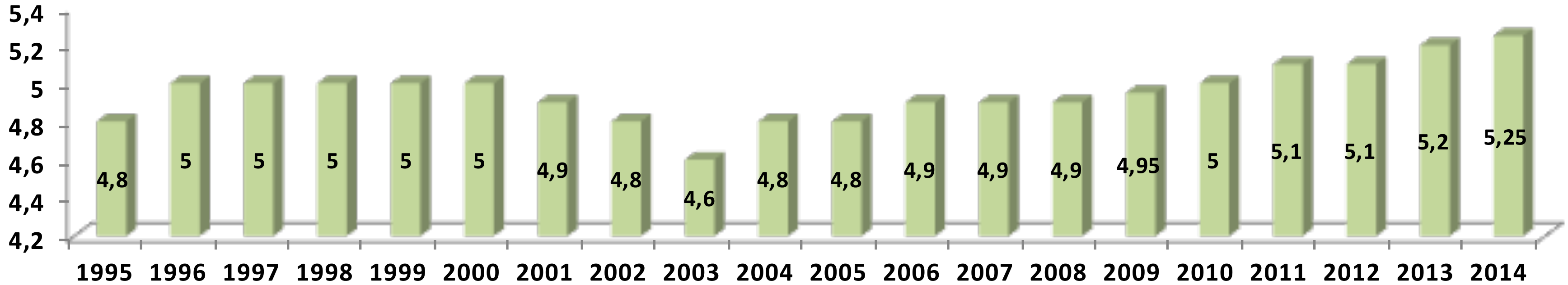
- Estimated numbers of the cylinder rehabilitation program(P13) (1996 to 2015):
  - Scraped cylinders – 26 million
  - Introduction of new cylinders – 49 million
  - Rehabilitated cylinders – 145 million
- USD 1 billion in rehabilitation;
- From 1996, USD 2 billion invested in cylinder reposition.



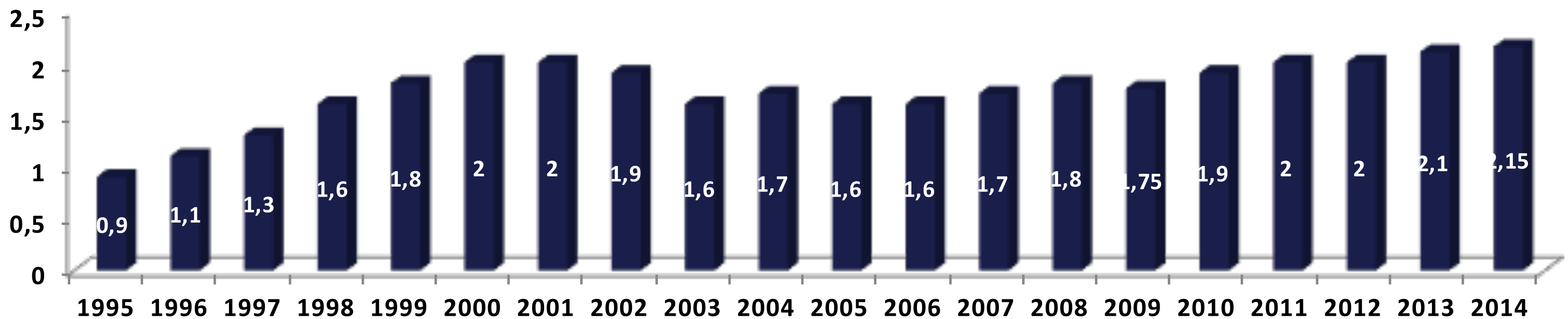


Brazilian demand

Cilynder Demand (000)t



Bulk Demand (000)t



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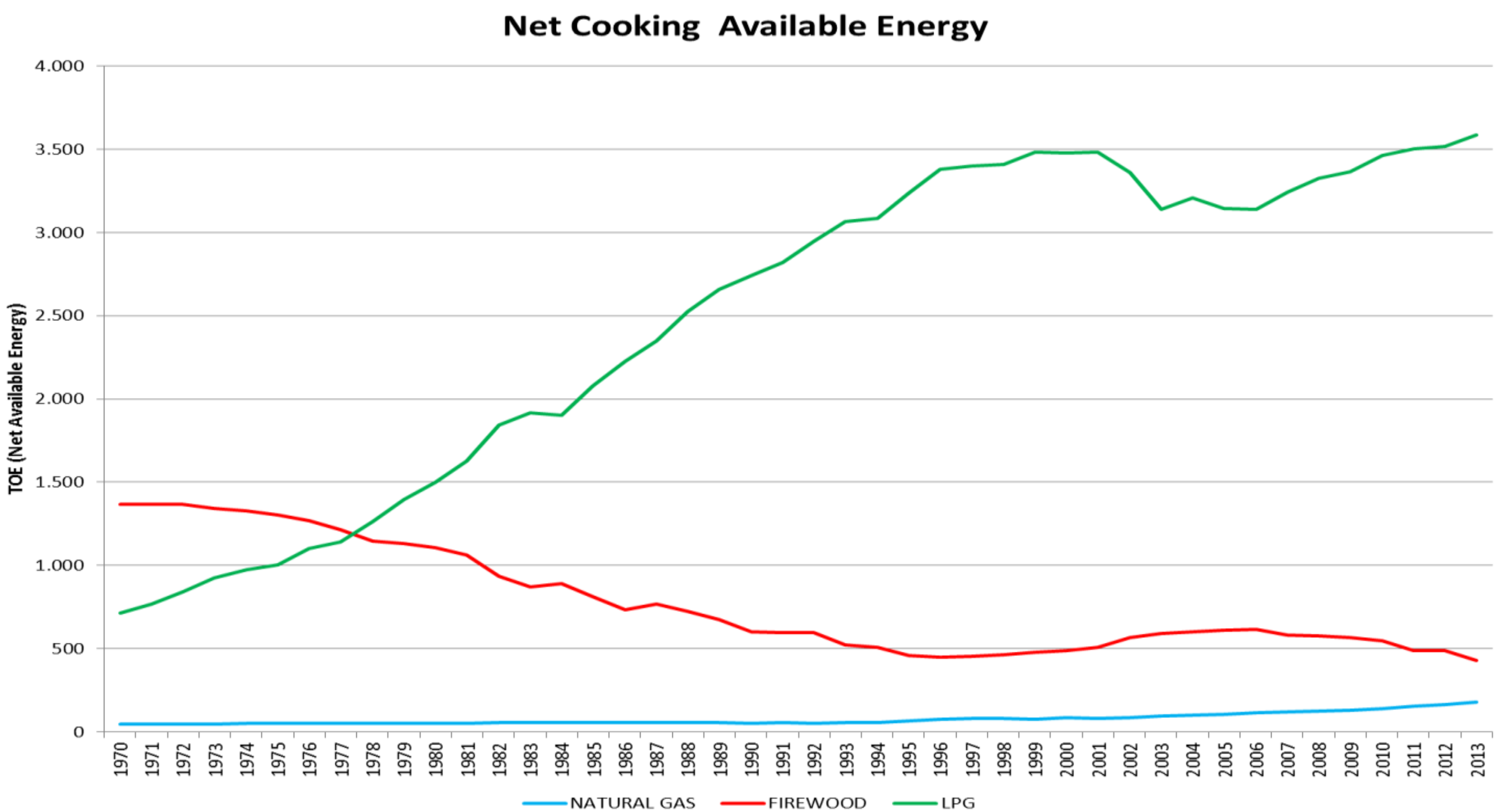
Source: ANP

LP Gas Competitors

The use of firewood as a domestic fuel, after a dramatic fall over the last decades, is stable at a low level .



Source: EPE(2010)

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Brazil…the land of flex kitchen

The use of firewood as a domestic fuel is still present in the countryside, but losing ground quickly to LP Gas due to LP Gas advantages.

Fuel	Urban Areas	Rural Areas
LPG ONLY	**92,0 %**	**38,6 %**
LPG + Firewood	5,1 %	36,6 %
LPG + Charcoal	1,6 %	6,2 %
LPG + Firewood + Charcoal	0,2 %	3,0 %
FLEX FUEL KITCHEN	**6,9 %**	**45,8 %**
Charcoal Only	0,4 %	3,4 %
Firewood only	0,6 %	11,1 %
Firewood + Charcoal	0,2 %	1,1 %
BIOMASS ONLY	**1,1 %**	**15,6 %**
Total	**100 %**	**100 %**

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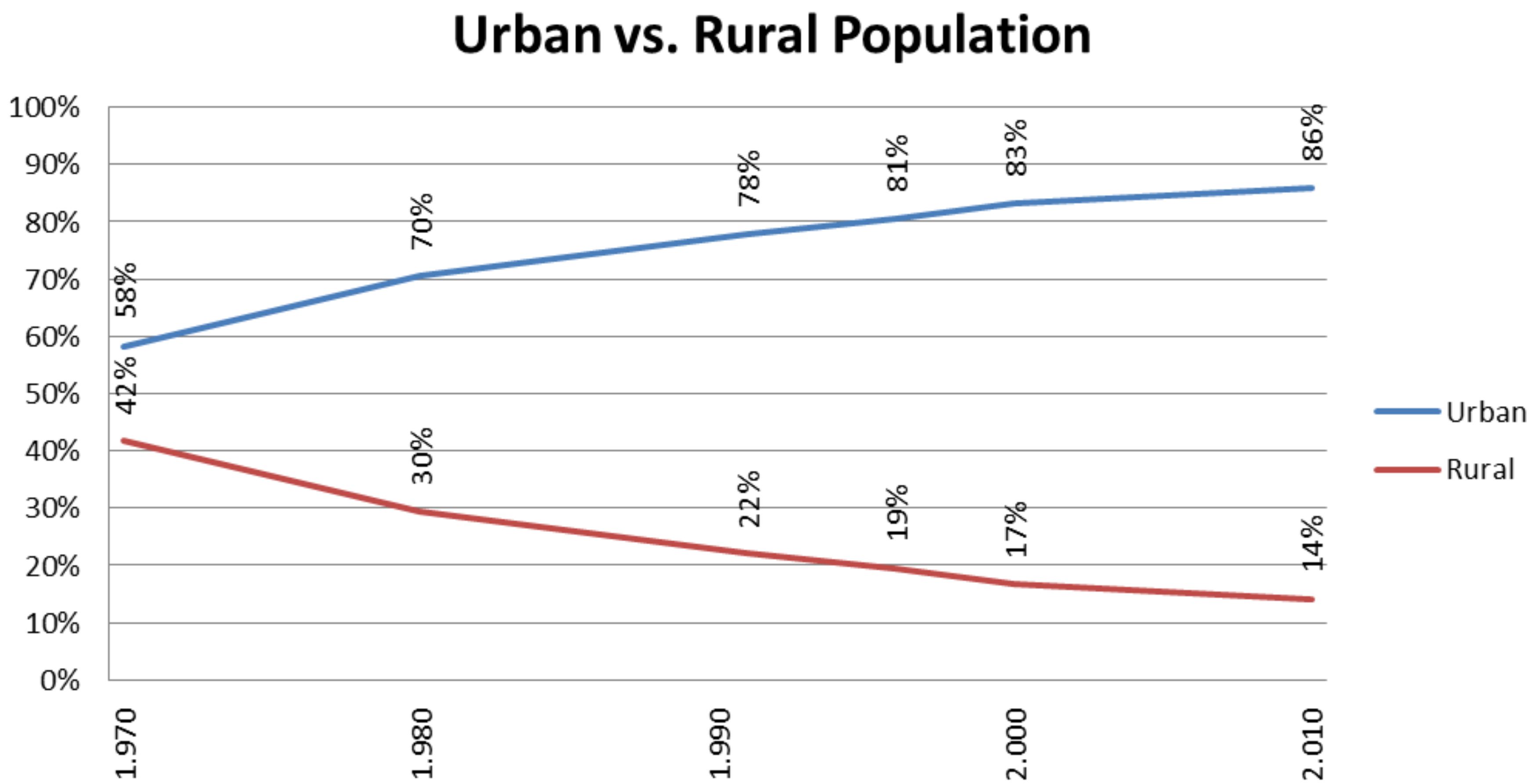
Source: IBGE(2010)

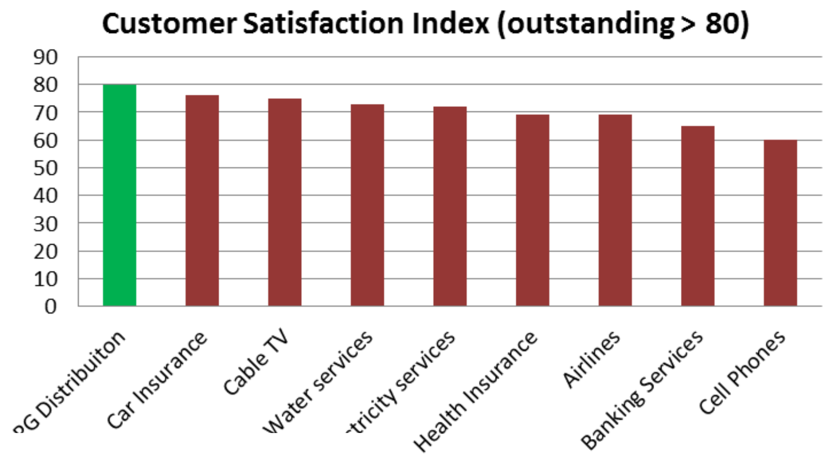
Demographics

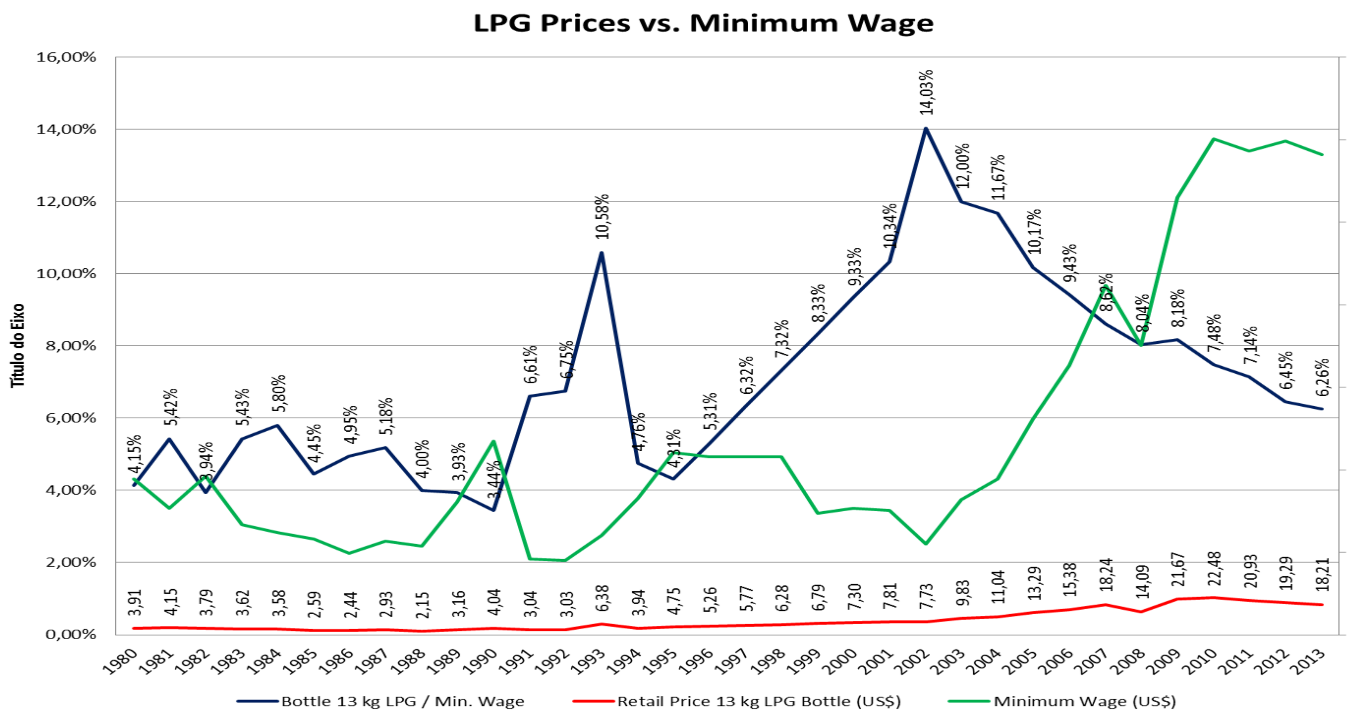


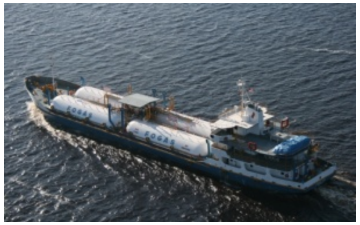
Source: IBGE(2010)

Excellent service

Even the low cost to the consumer we identify with extensive research that the domestic LP Gas market received the best score compared to different high-demand services (banking, cell phones, water and sewerage, etc.)







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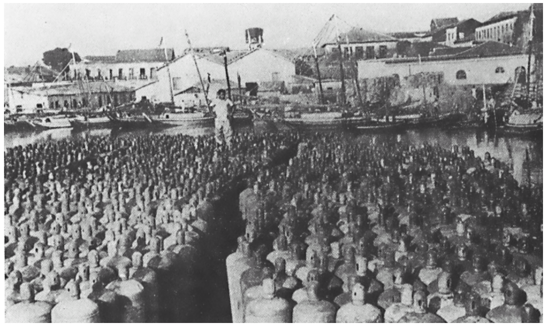
The Beginning

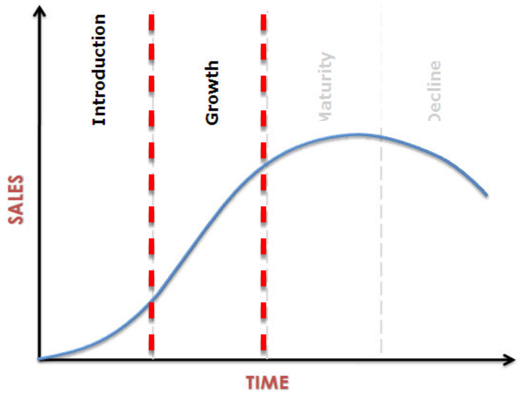
- 1937, the airship operation cancelled flights to Brazil. Mr. Enerto Igel saw the leftover LP Gas cylinders of the airship operation in Brazil as an opportunity to start the LP Gas industry in Brazil. Mr Igel purchased the 6,000 cylinders from the airship operator and started Ultragaz.

Image of the Airship Hindenburg.



LP Gas introduction Stage

1938 UNTIL 1960 - INTRODUCTION + GROWTH STAGE



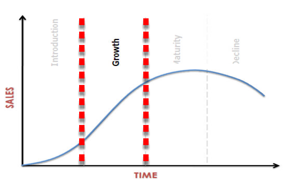
- Free market pricing;
- No local supply of LP Gas – LP Gas imported directly by the LP Gas distributors;
- LP distributors created the necessary infrastructure to develop the market;
- Market with limited regulation;
- Cylinders from the very early stages were branded.
- Petrobras – 1953 (Construction of the first refinery started in 1954);
- LP Gas companies subsidized appliances and cylinders;

How LP Gas was introduced in the Brazilian Market

Growth Stage

1960 UNTIL 1980 - GROWTH STAGE

- LP Gas sold to the consumer at very low prices (approximately 2% of the minimum wage);
- Government as the supply agent thru Petrobras; (logistics and import agent);
- Subsidy applied directly on the purchase of LP Gas by the SOE – Petrobras (Cross subsidy);
- Prices sold on the internal market below import parity;
- Price control - Same price throughout the country thru freight subsides (therefore two subsidies on the product - Gas and freight);
- Government introduces regulations ;
- LP Gas perceived as a cooking fuel;
- **LP GAS HOUSEHOLD penetration of approximate 95% (by late 1970's)**



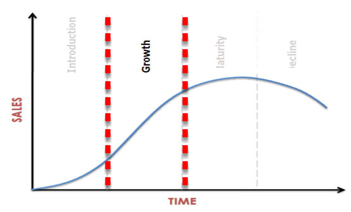



Government vision in making LP Gas fuel of choice for the household sector was fulfilled.

Maturity Stage

1980 until 1996 – MATURITY STAGE

- Business practices – below expectation of customers;
- Government price control (at every stage of the distribution channel);
- Cylinder cross filling was common practice by industry agents;
- LP Gas related accidents – Increased;
- LP Gas use restricted (considered and perceived by the population and government as a cooking Gas);
- Increasing number of regulations on the industry. (limited enforcement).



The Brazilian LP Gas Industry at a turning point.

Industry Renewal

1996 until 2014 – INDUSTRY RENEWAL - MATURITY STAGE

- Self regulation, government agreements, and long run planning by all agents;
- End of cross filling of cylinders by the industry players;
- Cylinder rehabilitation started with a ten year plan(target per year);
- Cylinder replacement and cylinder scraping;
- End of price control thru a free market scenario (1998 – 2001);
- Introduction of cylinder exchange centers;

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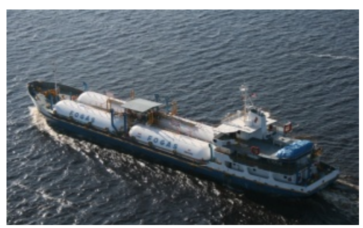
Industry Renewal

1996 until 2014 – INDUSTRY RENEWAL - MATURITY STAGE

- Strong competition from other fuels mostly NG;
- LP Gas use still faces legal restriction (still perceived as cooking gas by government agents);
- Accidents fall sharply;
- Government thru Petrobras remains as the supply agent – (current purchasing prices remain under international import parity value) – Prices at Petrobras still set by the government;
- Enforcement of the law;
- Industry and government understand the importance of the brand.



The LP Gas industry agreed with the government thru a self regulation code to eliminate bad business practices in the LP Gas industry in Brazil.

SUBSIDY STAGES

Initial stage:

• LP gas product subsidy implemented by the government to turn LP gas the household fuel of choice

- Low prices to consumers (heavy burden to government and society);

• Distributing companies subsidized appliances, cylinders, etc.

Intermediate stage (Current stage):

• There remains artificial pricing at the SOE (heavy burden to Petrobras – approximately US$ 4,5 billion in the past 11 years) ;

• Free competition in the wholesale and retail portion of the industry;

• LP Gas taxation does not reflect social relevance to society;

• Low income households receive a subsidy thru government cash transfers.

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SUBSIDY STAGES

Maturity stage:

- Free competition between fuels and market players;
- Appropriate taxation – Lower negative externalities should have lower taxes.
- Prices at the refinery should be linked to import parity or export parity values (society must make choices)
- Cash transfers to low income consumers. (targeted subsidy)

Subsidy evaluation:

- A subsidy should represent a choice made by society (society thru political decision makes choices on where to allocate scarce resources).
- If a subsidy on a product is created it should have three pillars to be successful:

- TRANSPARENT (where the money comes from and where is going and the total cost to society of the subsidy);

- TARGET (what are the objectives of the subsidy) – Temporary by nature;

- ACCOUNTABILITY (agents should be made responsible for the correct allocation of resources).

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CONCLUSIONS

CONCLUSIONS

- Government price control and margin control will lead to industry problems on the long run (value judgment of what is a fair price or correct operating margin);
- Free market pricing has a tendency to lead to superior solution and a better market allocation of scarce resources. Government should create the necessary conditions for a competitive market;
- Regulation is a key to success but regulation should be dynamic and enforcement is necessary;
- Brand is the single most important attribute of the LP Gas industry because it benefits consumers and government.

LP GAS INDUSTRY IS JUST ON THE BEGINNING

Thank you very much

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