

Inversiones en infraestructura primaria en países en desarrollo



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33° congreso de la AIGLP
22 De marzo 2018

1. The WLPGA at a glance
2. LPG in the world today
3. Primary infrastructure
 - Challenges and risks
 - Case studies from Sri Lanka, Mauritius, Kenya
 - Common learnings
4. Conclusions

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The team

A powerful Industry Association





WLPGA

Serving the full LPG value chain



**The unique association for LPG businesses worldwide
>260 organisations in >125 countries**

The WLPGA promotes the use of
LPG to foster a safer, cleaner,
healthier and more prosperous
world

- A. Demonstrate the benefits of LPG and inform, educate and influence all stakeholders
- B. Support the development of LPG markets
- C. Promote compliance with standards, good business and safety practices
- D. Identify innovation and facilitate knowledge transfer

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What is LPG?

LPG is a co-product of natural gas production and crude refining. It consists of propane and/or butane.

Consumption

298 million tonnes/yr in 2016;
up 6.5% on 2015



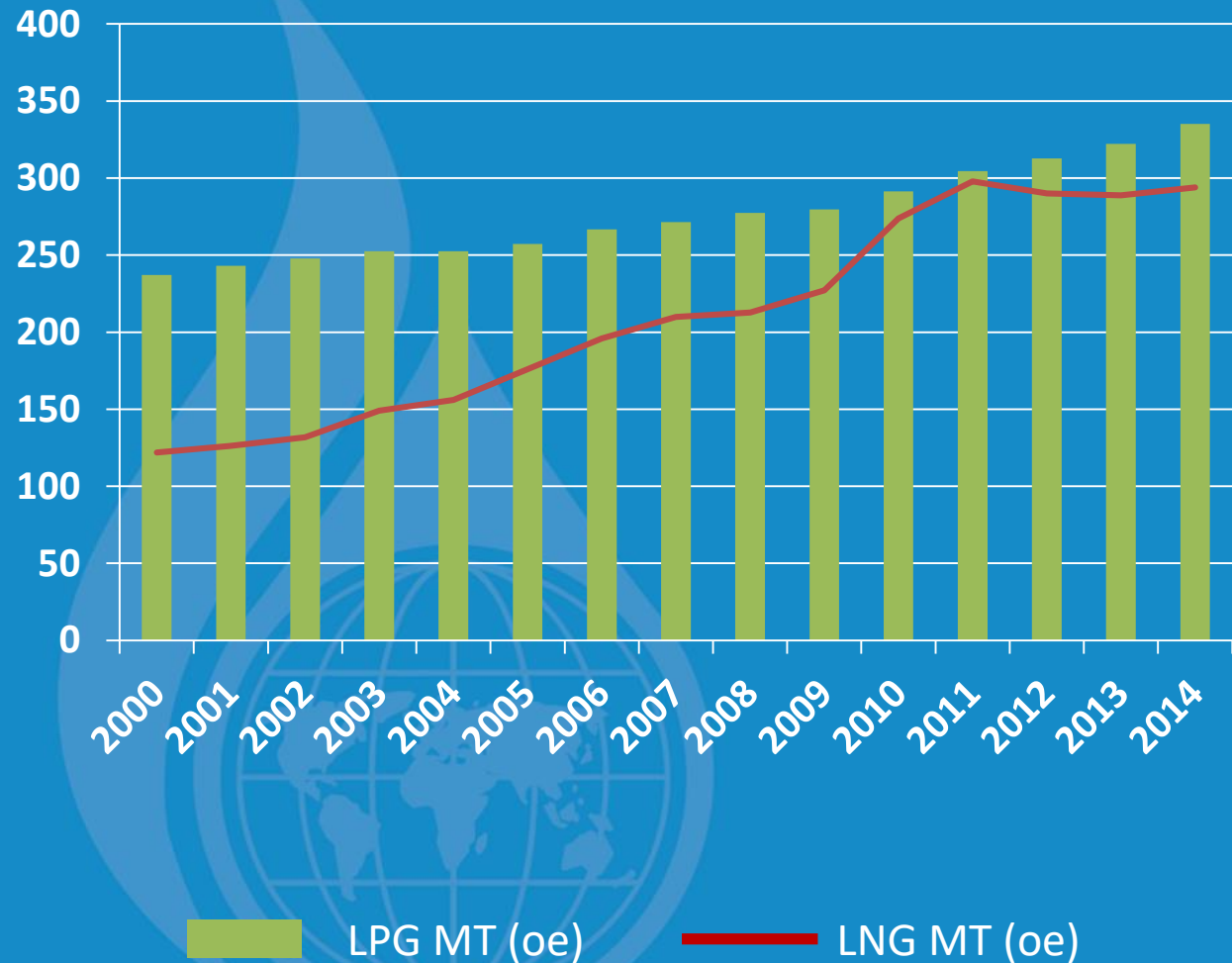
>2,000,000 employees

3 billion consumers

Global value of the business > \$300 billion/yr

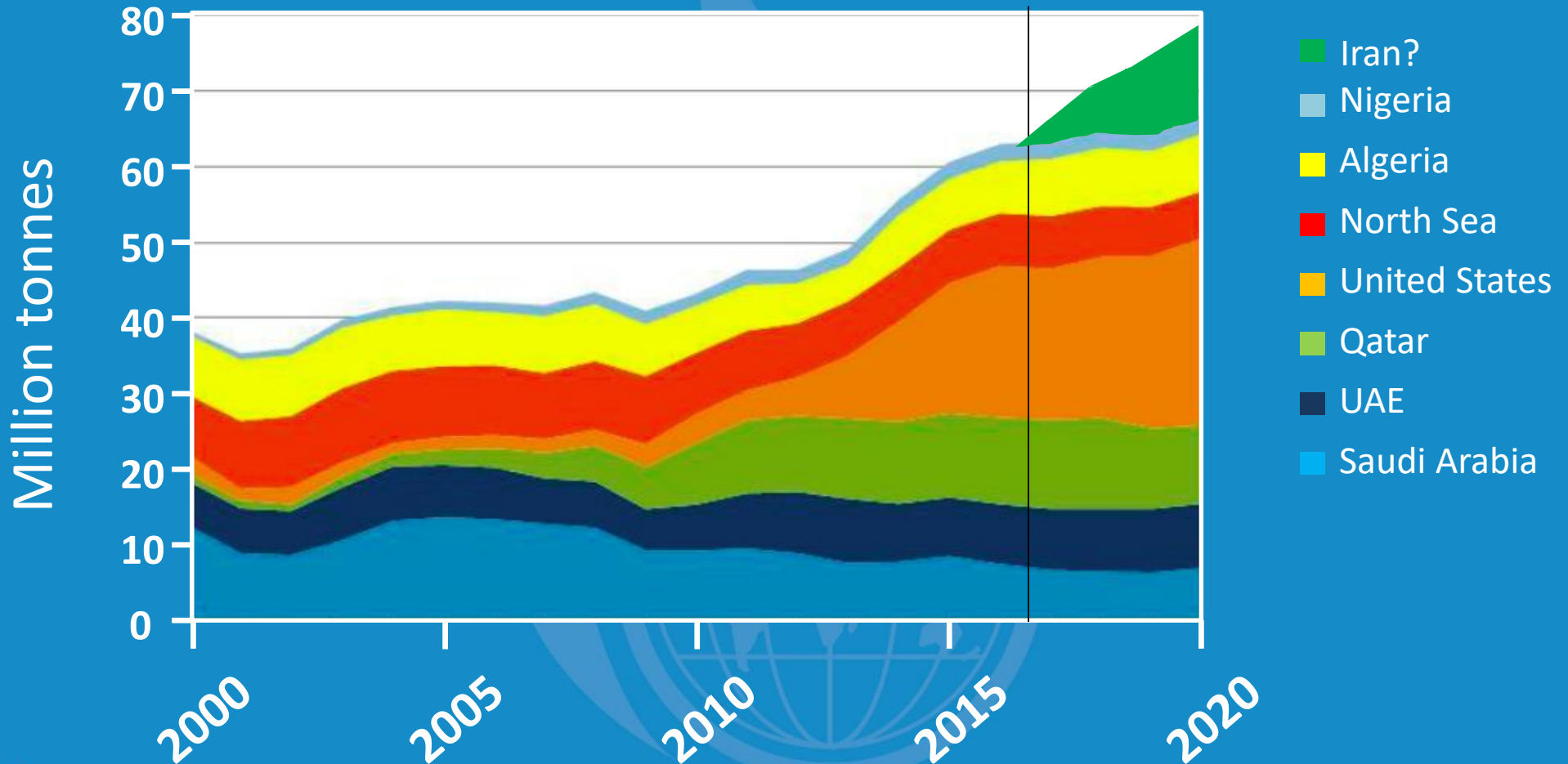
LPG volume outpacing LNG...still

LPG volume consumption globally remains higher than LNG



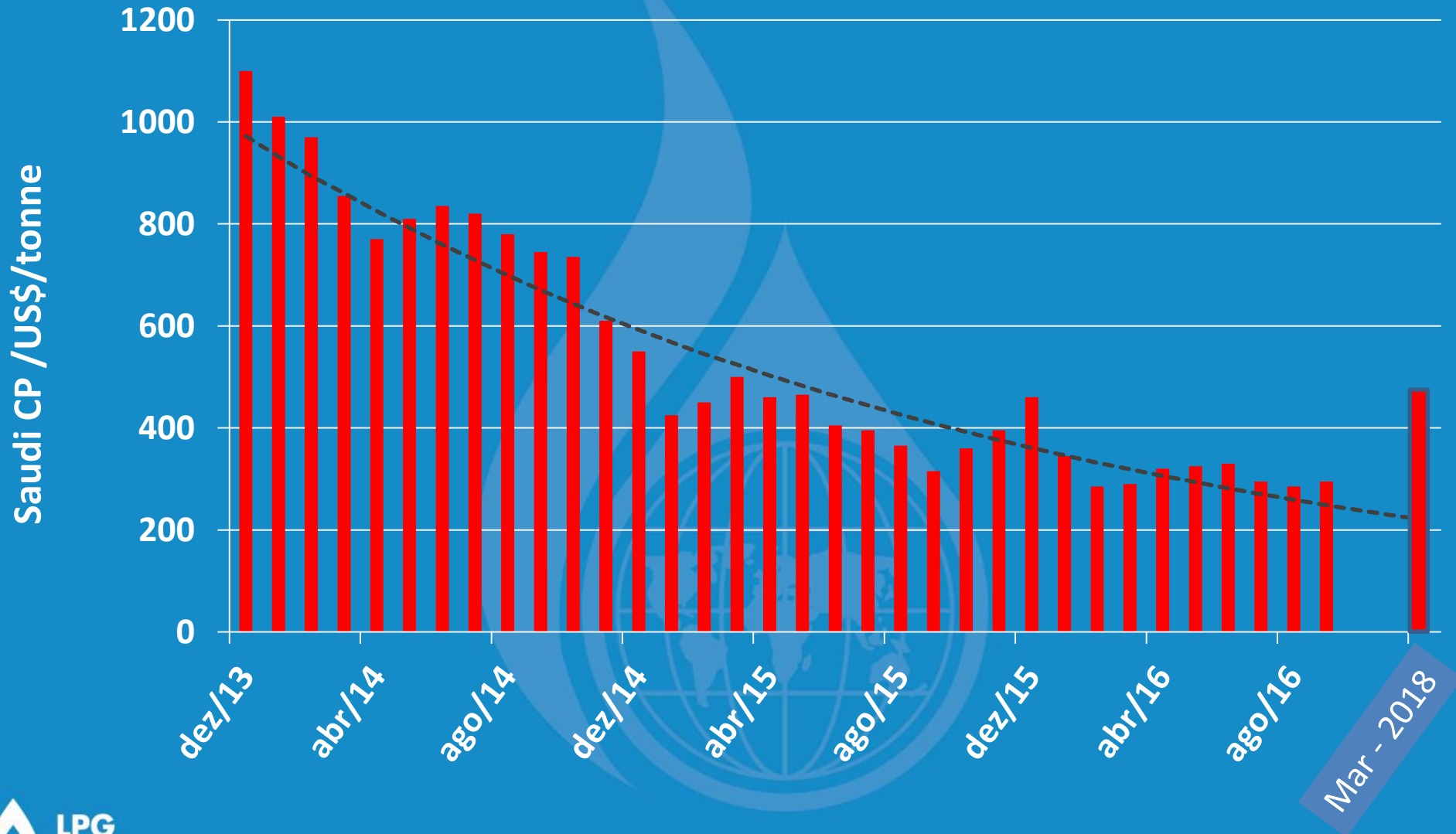
Trade flows are changing...

Total LPG exports from major regions



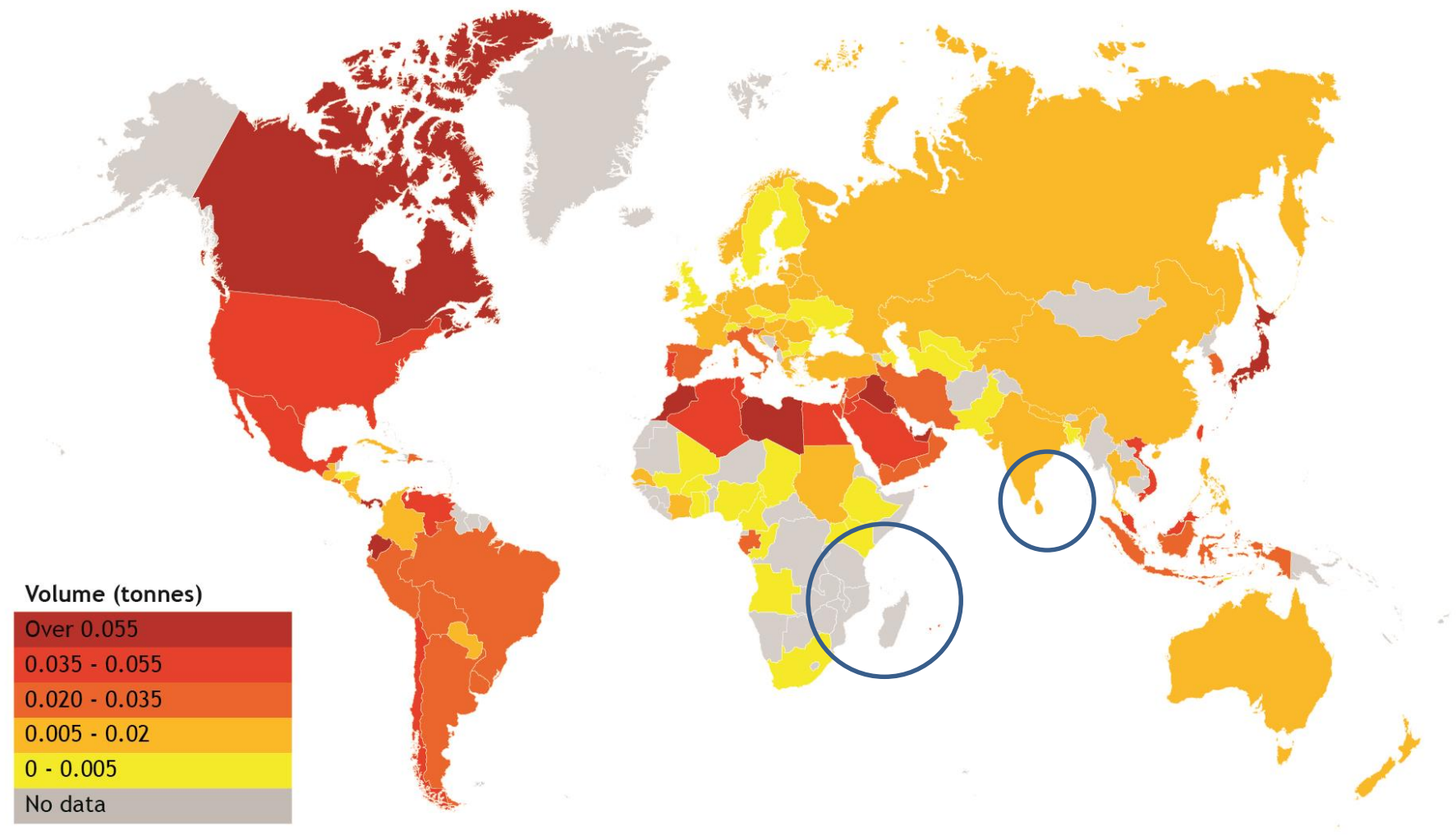
and price is decreasing

Propane Price



Where is the potential?

World LPG domestic consumption per capita



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LPG market development is beneficial



Access to clean, modern energy such as LPG can improve a country's GDP

LPG access improves health and economic opportunity

It generates tax revenue for governments

It creates direct & indirect employment

It encourages capital investment



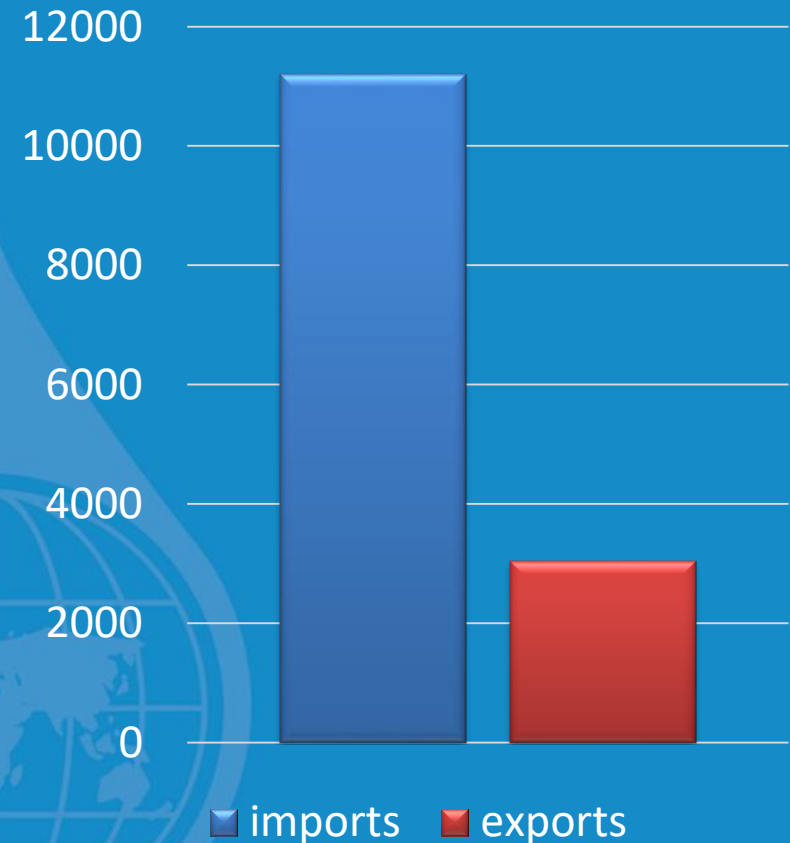
Import infrastructure essential

This region is a large net importer.

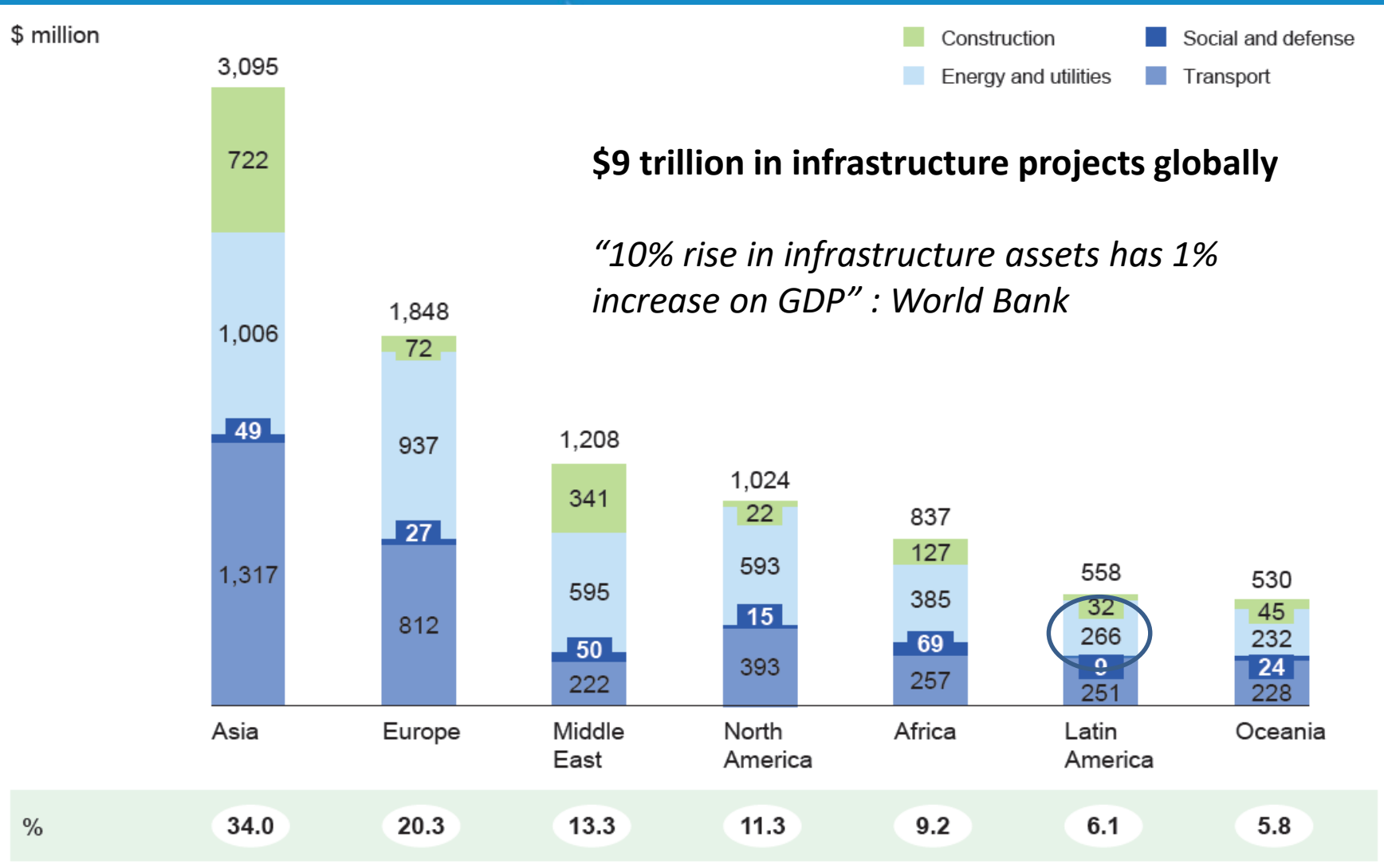
Continued LPG market growth is dependent on sufficient access to product at competitive rates – often driven by import infrastructure

Consumption growth flat in the last five years

South & Central America



The opportunity



Challenges and risks

Design / construction risk: Private sector - manageable

Forex risk: manageable with instruments

Market risk: Private sector – linked to political & regulatory risk

Legal / Regulatory risk: Public sector

Political risk: Public sector



The role of government is critical

Lack of infrastructure: Need for investment - Improve the business & regulatory environment

- Create a level playing field for all energy sources and make energy services competitive
 - Essential to tackle subsidies on competing fuels or other unequal tax advantages
- Tackle barriers to market entry
 - (e.g. product import / storage facilities, equipment import duties)*
- Encourage investment in distribution – stable, long term policy
- Regulate and enforce good business practices

Jointly create an LPG road map

- Demonstrate capacity of the LPG industry to play a meaningful role in energy mix
 - Health
 - Environment
 - Sustainable development
- Consider indigenous supply vs import + infrastructure
- Regulatory role of government to be clearly defined
- Agree fiscal incentives joint investments enhanced communication
- Reduce market and regulatory risks



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Sri Lanka LPG terminal



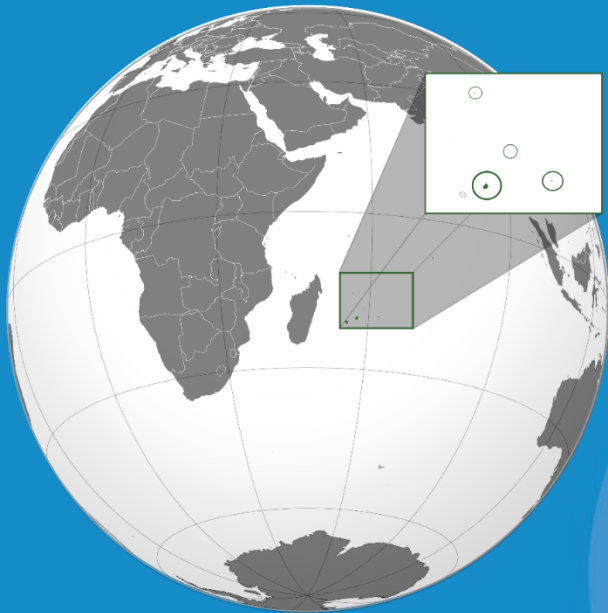
- 343kTonne/yr market in 2016
- 80% domestic
- Forecast growth rate 30%
- New segments emerging:
Agricultural & industrial
- Opportunity to create a storage hub to serve the local and regional market

Sri Lanka LPG terminal

- Phased terminal up to 45kT storage
- c. \$85m project
- Throughput 1.8 mT/yr
- Debt finance supported by Sinosure – Chinese state entity
- Strong government support for project including relations with Chinese



Mauritius LPG Terminal



- Serving East African market
- Low current volumes due to lack of import facilities
- Terminal acts as a bulk breaker for large VLGCs
- Can support downstream market development in the Indian Ocean and particularly East Africa

Mauritius Terminal

- Mounded tanks with 15kT storage in 3 5kT units. Commissioned Mar 2014
- \$42m project
- Throughput c. 1.1mT/yr for both export (1mT) and local market
- Market risks limited since traded volumes already in place
- Government support regarding permits based on technical and HSE proposal
- Project break even within 4 years



Kenya LPG Terminal



- 174kTonne/yr market in 2016
- 80% domestic
- Potential market >700k Tonne
- Barriers:
 - High product price
 - Limited primary infrastructure
 - Poor regulations and enforcement on cylinder ownership

Kenya LPG terminal

- 35kT storage (Mombasa & Nairobi)
- Import Jetty & truck unloading
- 1 million tonne / year throughput
- Shared facility – all companies can access at a tariff
- Government supports market development with \$200m



Picture is not of the Kenya LPG Terminal but a generic terminal

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Common learnings

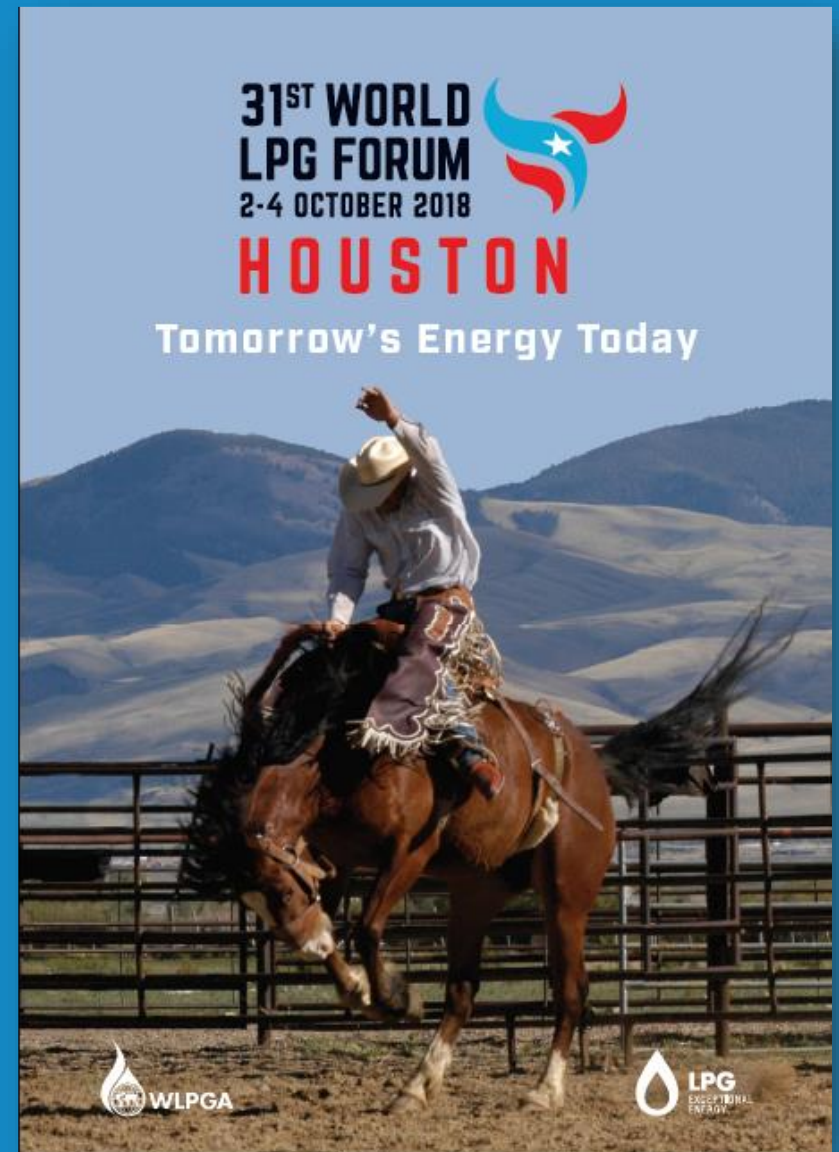
- The import terminals responded to clear commercial opportunities:
 - Supporting local market growth
 - Strategic hubs for re-export
- Cooperation between private sector and government to reduce project risks:
 - Support to financing / partnering strategy
 - Direct support to market development
 - Approval of permits
- Preparation of an LPG road map supported by government and industry

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- The LPG sector is growing thanks to supply growth and demand for clean fuels.
- LPG growth correlates to socio-economic growth
- Supply-constrained regions need import facilities
- Infrastructure investment requires risk management including:
 - Political /regulatory risk
 - Market risk
- Governments have a key role to play in creating the environment to reduce barriers to investments in infrastructure projects

Want to know more about
LPG opportunities and
infrastructure projects?

Join us, together with AIGLP
from October 2nd – 4th
in Houston, USA





Obrigado!

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