

MARKET DEVELOPMENT – HOW TO INCENTIVISE INVESTMENTS?



Access to **Sustainable Energy for All With Gas**
Gas Training Seminar – Abidjan, Côte d'Ivoire
November 2013



Akmal M Zaghloul, MBA
Business Development GM

- **World class Gas Networks** suits Africa & Middle East standard and life style;
- Gas Distribution Networks is a **reachable goal** in Africa & Middle East;
- It offers **Better quality of life:**
safe – reliable – environmentally friendly.

But, first let's have a closer look on ...

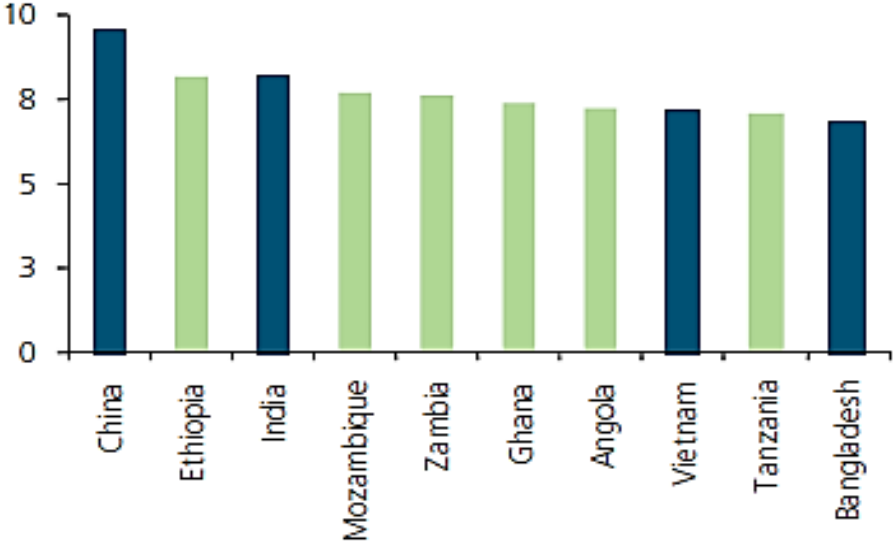
AFRICA ENERGY MARKET



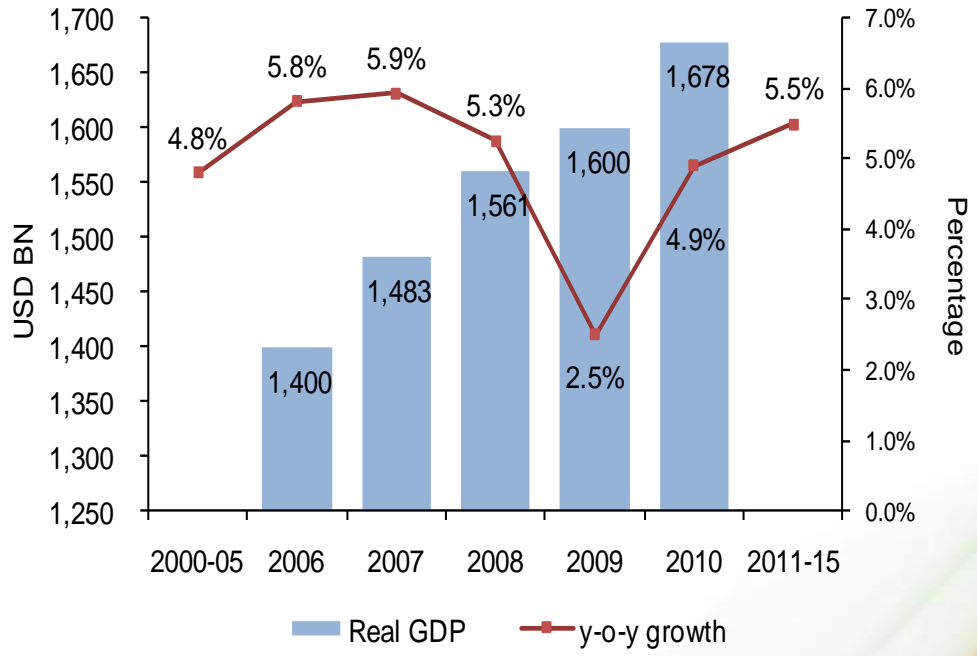
TAQA

- 54 countries (including the island nations)
- Circa 1 billion people
- Young, growing population
- Rapid urbanisation (50% of population will live in cities by 2035)
- 60% of the world's uncultivated arable land

6 of 10 Fastest Growing Economies



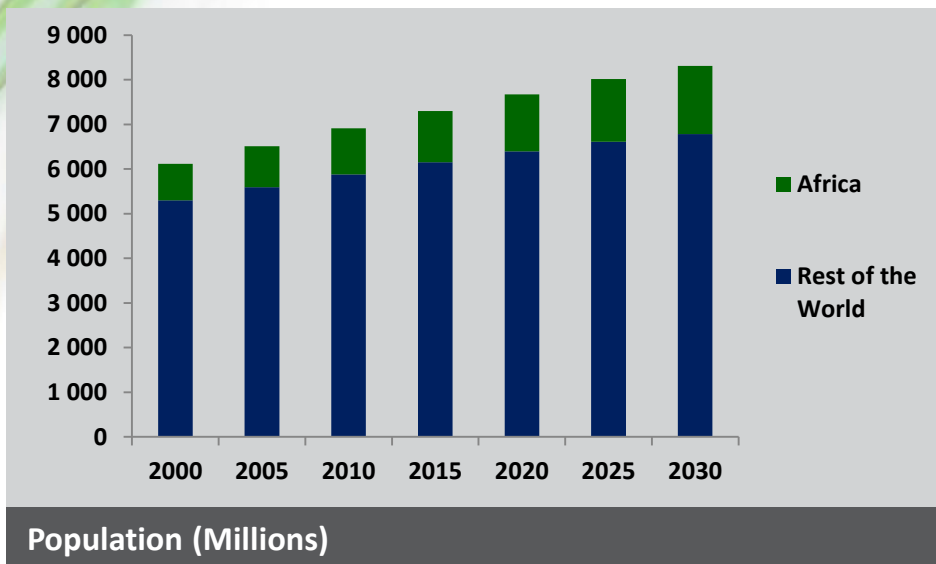
GDP GROWTH



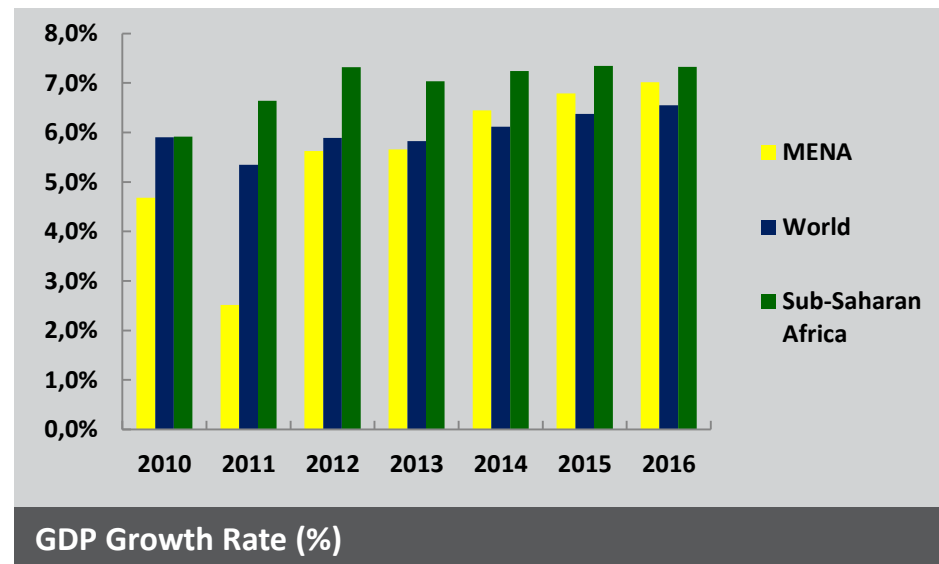
- USD 1.1 trillion economy at market prices
- USD 1.9 trillion purchasing power
- Average of USD 1,340 GDP/capita

- Engine for Economic Growth (High Correlation: Energy Consumption & GNP)
- Facilitator of Social Progress
- Key to Poverty Reduction
- Employment Generation
- Promotes Gender Equality
- Vital Input in Production (All Sectors of Economy)
- Increasingly Becoming a Need Rather than a Luxury
- Key Element for Attracting Foreign Investment
- Foreign Exchange Earner

Energy Demand Drivers



Source: United Nations

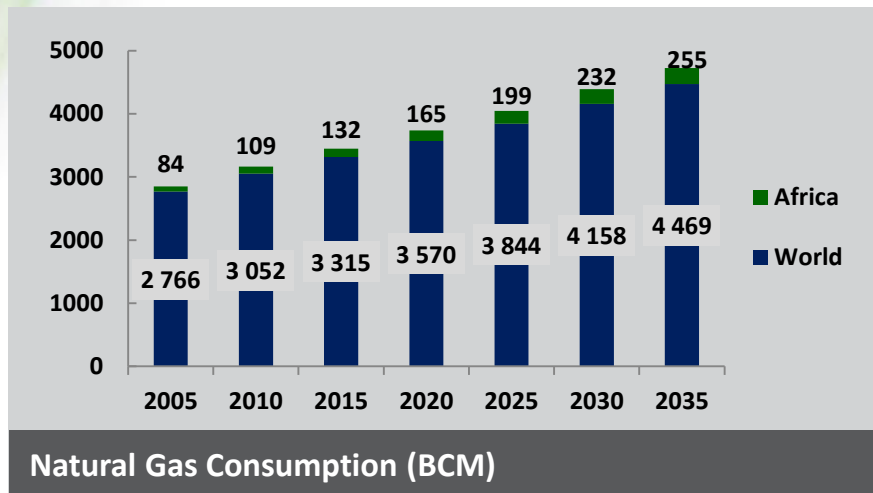


Source: International Monetary Fund (IMF)

- Africa's population is expected to grow from 1 billion in 2010 to 1.5 billion by 2030, at **CAGR of 2%**, being the highest growth rate if compared to any other continent, and almost 3 times World's CAGR for the same period, being **0.7%**.
- The region median age is 20, compared with 30 in Asia and 40 in Europe.
- Africa now has the fastest-growing middle class.
- Over the past decade, six of the world's ten fastest-growing economies were African.
- In the last ten years, while foreign Aid only grew from **USD 20 bn** p.a. to **USD 28 bn** per year, FDI ballooned from **USD 20 bn** per annum to **USD 75 bn** per annum.
- According to the IMF, Sub-Sahara GDP is forecasted to grow from **USD 1.8 tn** in 2011 to **USD 2.7 tn** in 2016 at a **CAGR of 7.3%** well above the World's and MENA's CAGR that are forecasted at **6.1%** and **6.3%** respectively.

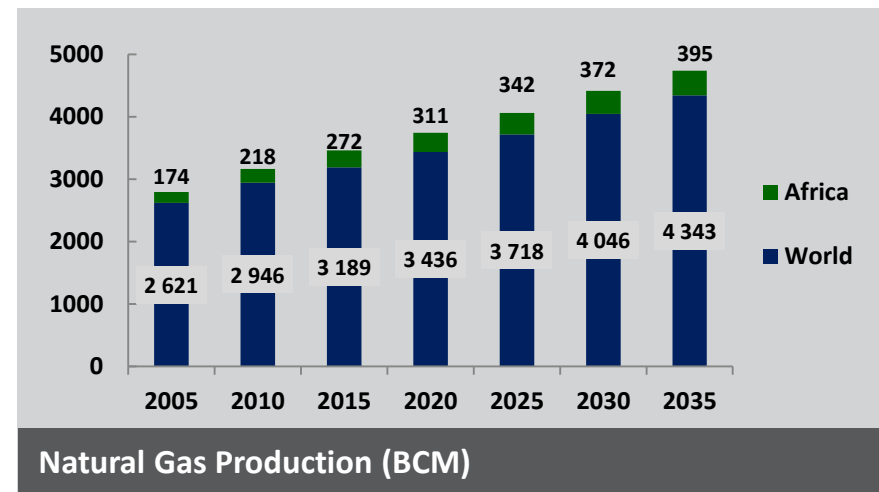
Africa is moving towards being a large energy consuming society

Africa Gas Outlook



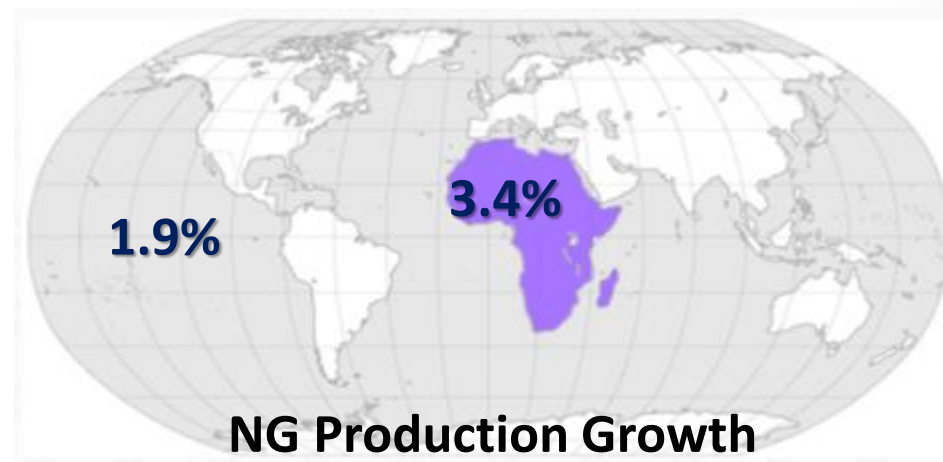
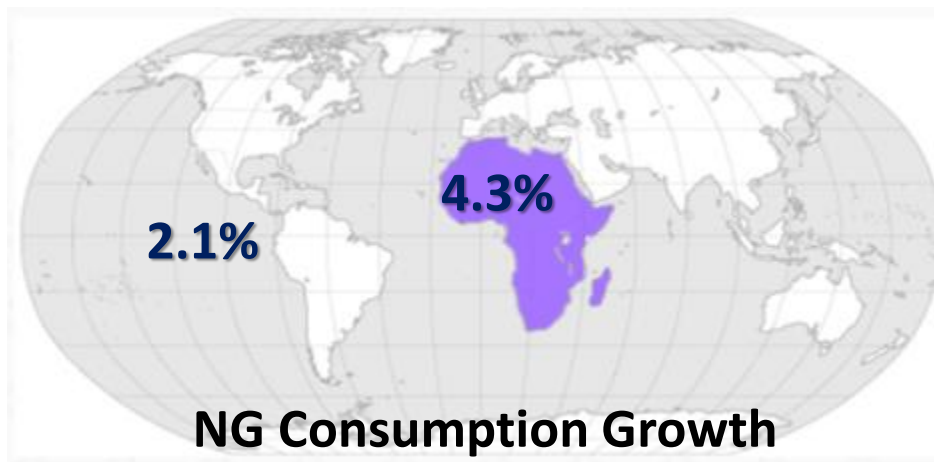
Natural Gas Consumption (BCM)

Source: US Energy Information Administration (EIA)

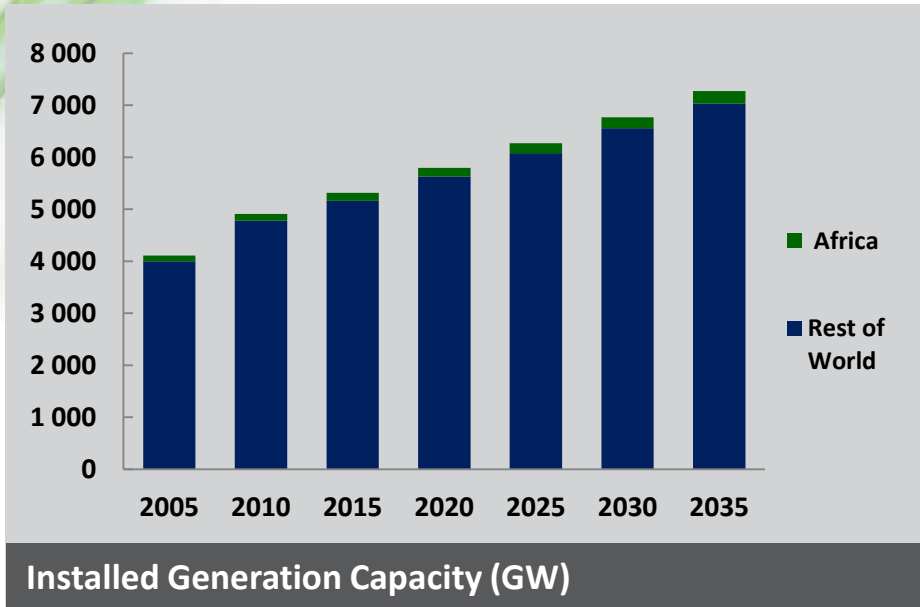


Natural Gas Production (BCM)

Source: EIA



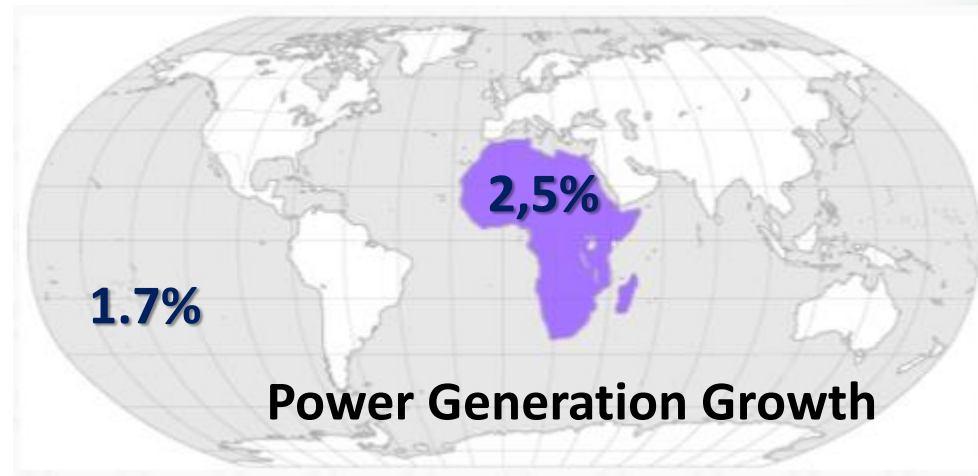
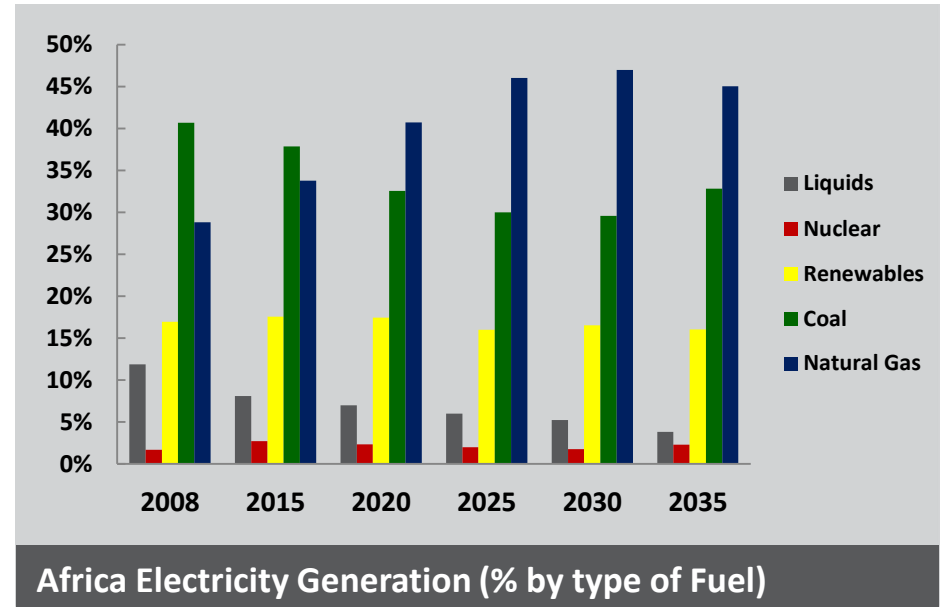
Africa Power Outlook



Source: EIA

- Africa's installed generation capacity is forecasted to rise from **134 GW** to **214 GW** between 2011-2030.

- Although coal is currently the primary source of power generation in Africa, comprising nearly **40%** of total power generation in 2008, natural gas fired generation is the fastest growing, at CAGR of **4.7% p.a.**, and will account for **47%** of total power generation capacity by 2030.



Then, let's understand more about business models ...

EGYPT CASE STUDY



TAQA

Gas Midstream & Downstream Cycle



Gas Delivery



Gas Grid



Local Distribution

Gas Usages



Power



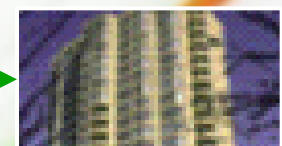
Fertilizers



Industry



CNG



Domestic

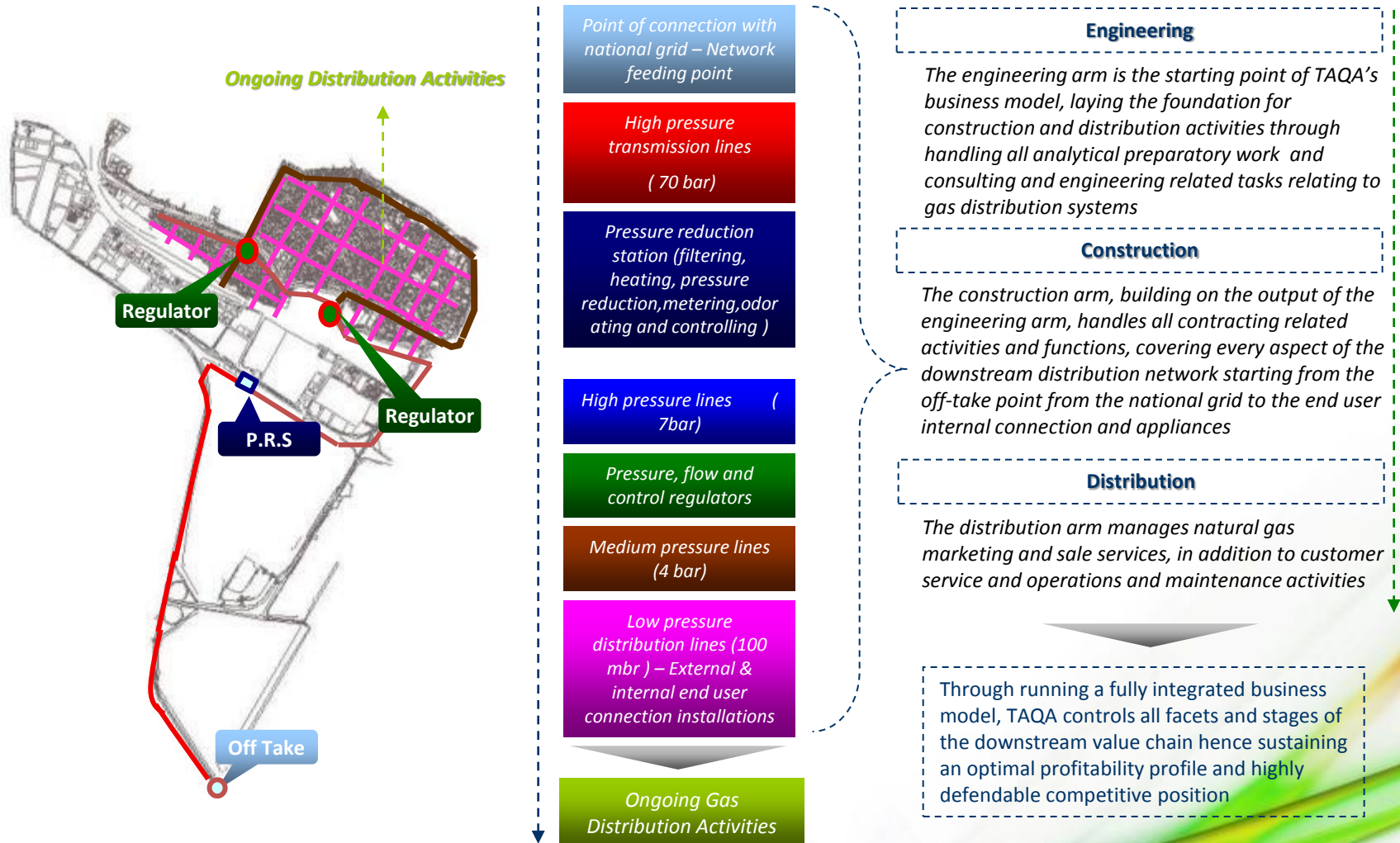
Natural Gas Distribution Network

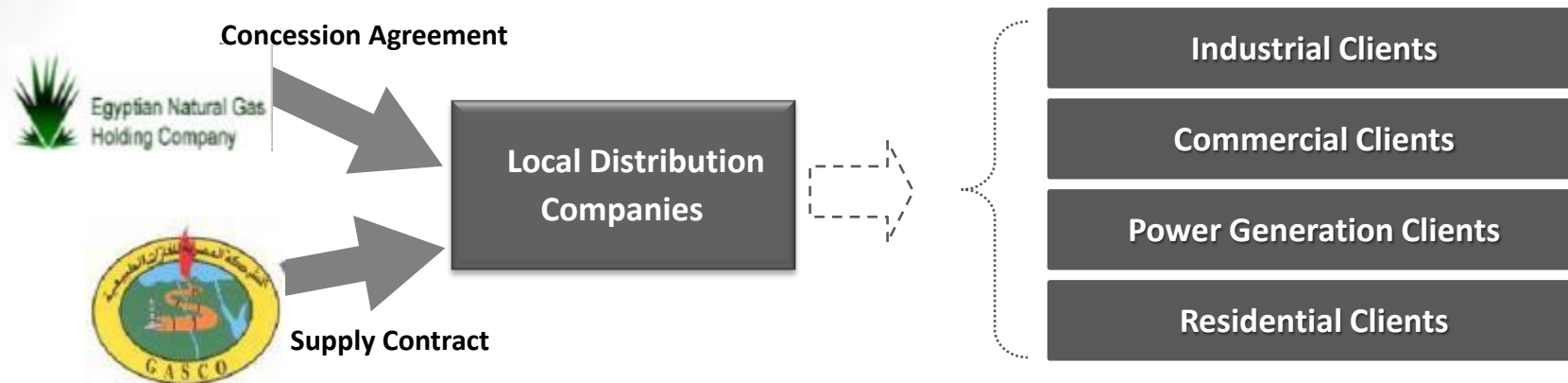


A Vertically Integrated Operation Across the Downstream Value Chain ...

Structure of a Typical Downstream Gas Network ...

... Fully Covered by TAQA's Unique Business Model





EGAS/LDCs Agreement

- Concession duration is 20-25 years
- Local Distribution Company (LDC) submits to EGAS project technical and financial study including time table specifying the number of customers to be completed in each commitment phase
- LDC Finance, design, supply, operate, maintain, and collect gas consumption bills from customers.
- LDC distribute gas to all new residential, commercial and industrial customers within the designated area.
- GASCO (EGAS affiliate) contract with LDC to provide natural gas quantity through the national gas grid.

Commercial Terms

First Phase Agreement

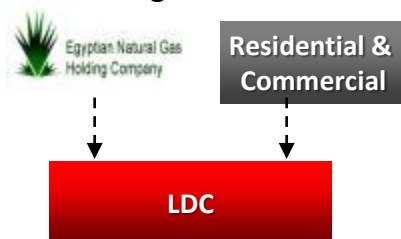
- EGAS repays the capital expenditure (mobilization, installation of network, extraordinary maintenance and gas distribution) of each commitment phase over 20 quarterly installments.
- Installation and conversion costs per customer is set at LE 2,670
- LDC collects gas bills from customers and will retain a commission fee of LE 0.1 for residential and LE 0.02 for industrial for each cubic meter of natural gas consumed
- EGPC guarantees **18% IRR** for LDC (takes into account operation & maintenance costs as well as 5 year tax exemption)

Second Phase Agreement

- Cost of connecting each residential unit was reduced to 2,500 LE. The LDCs would be compensated for 1,000 LE from the MOP and the remaining 1,500 LE to be paid cash by the customer or over a 10-year installment period with banks, moreover the 1,000 LE share of the MOP would be made to the LDCs over a 3-year period (quarterly payments).
- LDCs would receive from the MOP a distribution and maintenance fee per customer (0.25 LE per cubic meter of consumption) capped at 100 LE per customer per year for the first 10 years, and at 125 LE for the following 10 years.

Conversion Revenue

- Realized on penetrating new areas to connect new residential and commercial customers as per concession agreement with EGAS



- Conversion cost is split (unequally) between EGAS and the customer
- The amount paid by the customer is received prior to the conversion while the amount paid by EGAS is split between down payments that cover 40% of the total contract value, with the remaining 60% to be received over a 3 year period (However is recorded as revenue upon conversion)

Industrial

- An amount is fully charged to the customer (that includes a margin) and is a function of geographical and demographic factors

Commissions

- Commissions on collection on behalf of EGAS, to industrial, residential, and commercial customers



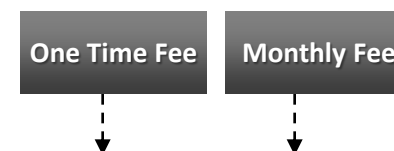
- Same commission on sales, as per agreement with EGAS, applies to both
- Commissions cover both collection, operation and maintenance services
- Commission is subject to an annual increase that is pre-determined in the concession agreement
- Commission varies from one contact to another (explained later)

Industrial

- Commissions per m³ are much lower than for residential and commercial customers, however, due to the larger volumes consumed by industrial customers, the total revenue generated from industrials is much higher

Customer Service Fees

- Related to administrative and customer services, in addition to billing systems and other customer services offered



- One time fee (EGP10 or EGP14.5) is charged to the new customer upon conversion to natural gas
- A recurring fee is charged monthly to the customer that lies within the LDC's distribution concession for the ongoing services provided

- Well developed gas grid;
- The end consumer price and margin are regulated;
- Conversion is undertaken only by the CNG companies;
- Local codes in place governing all technical and HSE aspects;
- Conversion loans were offered through CNG companies till mid. 2003, now through commercial banks;
- The Government is the sole supplier of the gas, and the sole owner of the supply grid nationwide



Mechanism

Financing 100% of cost of conversion through commercial lending on a debit card to be presented at fueling stations by converted vehicles' drivers



Increase

No. of Vehicles Converted



Conversion Revenue

One Time Fee



- Converting fee for converting vehicles

Commissions

Monthly Fee



- Commission from Gas Sales.

Customer Service Fees

- After sale service for converted vehicles.
- Vehicles different services Lube oil,...etc

GAS DOWNSTREAM BUSINESS

TAQA



The gas distribution project will provide a wide range of benefits directly to end-consumers and to the country as a whole

Benefits to Government

- New Private foreign investment in Key infrastructure
- New industrial Growth opportunities
- Employment opportunities, (Long Term)
- People development, training and skills (short/long term)
- Environmental Improvements, Reduced pollution (CDM opportunities)

Benefits to End-Consumer

- 24 hour non interruptible, On demand supply
- Energy Efficient and clean source of fuel (product improvement)
- Improved safety of usage
- Reduced Fuel costs (greater value)

*African Governments
are keen for the private sector
to be involved in these projects*

- New capital
- Sources of funding
- Expertise
- Efficiency
- Accelerated development
- Reduced financial burden on Government budget

The local gas distribution concession is an attractive investment opportunity for the private sector

Why Invest?

- Attractive long-term returns
- Existing secured gas demand, serving millions of people and businesses
- A pilot licence for selected zones
- Availability of a realistic commercial structure for the gas distribution business
- Opportunity to be a long-term player in a growing energy market
- Potential of future business opportunities in other cities/regions
- Planned liberalisation of gas market in African countries
- A track-record of successful privately-financed infrastructure projects in Africa

“A co-operative venture between the public and private sectors, built on the expertise of each partner, that best meets, clearly defined public needs through the appropriate allocation of resources, risks and rewards.”

Therefore the concept of PPPs should be seen within these perspectives:

1. Mobilising private sector's money, expertise and capacities for national infrastructure development
2. Long- term relationship between the government and private sector (usually>10years)
3. Sharing of Risks and Rewards
4. Private sector performs to agreed KPIs
5. Life cycle focus (*operations & maintenance*)

Source: Eric Jan Kleingeld: International Federation of Surveyors, 2010.

- PPPs were developed to:



- Overwhelming evidence of the use of PPP structures in the last 50 years (including in emerging markets such as India and South Africa) indicate that these arrangements result in:
 - **Prompter delivery** on essential needs
 - Greater **regulatory convenience**;
 - Enhanced **development capacity of the state by leveraging public money**
 - Mechanism for **tapping into private money and efficiency**;
 - Greater **transparency requirements** as usually includes a competitive bidding process;
 - **Lower financing costs**;
 - Better **risk containment and sharing**;
 - **Directed benefits** through subsidies;

Source EmeraldInsight: Benefits & Limitations of PPP, 2012.

PPPs let Public Sector and Business do what they do Best !!!

☐ Private

- Innovation, use of technology
- Professional management
- Good project and lifecycle management
- Efficiency
- Technology
- Maintenance practices
- Financing

☐ Public

- Policy setting
- National planning
- Regulation
- Looking after public interest

PPPs : Spectrum of Options



- **O&M:** Operations and Maintenance
- **OMM:** Operations, Maintenance and Management
- **DB:** Design-Build
- **DBM:** Design-Build-Maintain
- **DBO:** Design-Build-Operate
- **DBOM:** Design-Build-Operate-Maintain
- **DBFOM:** Design-Build-Finance-Operate-Maintain
- **DBFMOT:** Design-Build-Finance-Operate-Maintain-Transfer
- **BOT:** Build-Operate-Transfer
- **BOO:** Build-Own-Operate
- **BBO:** Buy-Build-Operate
- **Developer Finance**
- **EUL:** Enhanced Use Leasing or Underutilised Asset
- **LDO** or **BDO:** Lease-Develop-Operate or Build-Develop-Operate
- **Lease/Purchase**
- **Sale/Leaseback**
- **Tax-Exempt Lease**
- **Turnkey**

Source: PPP Terms GAO, 1999

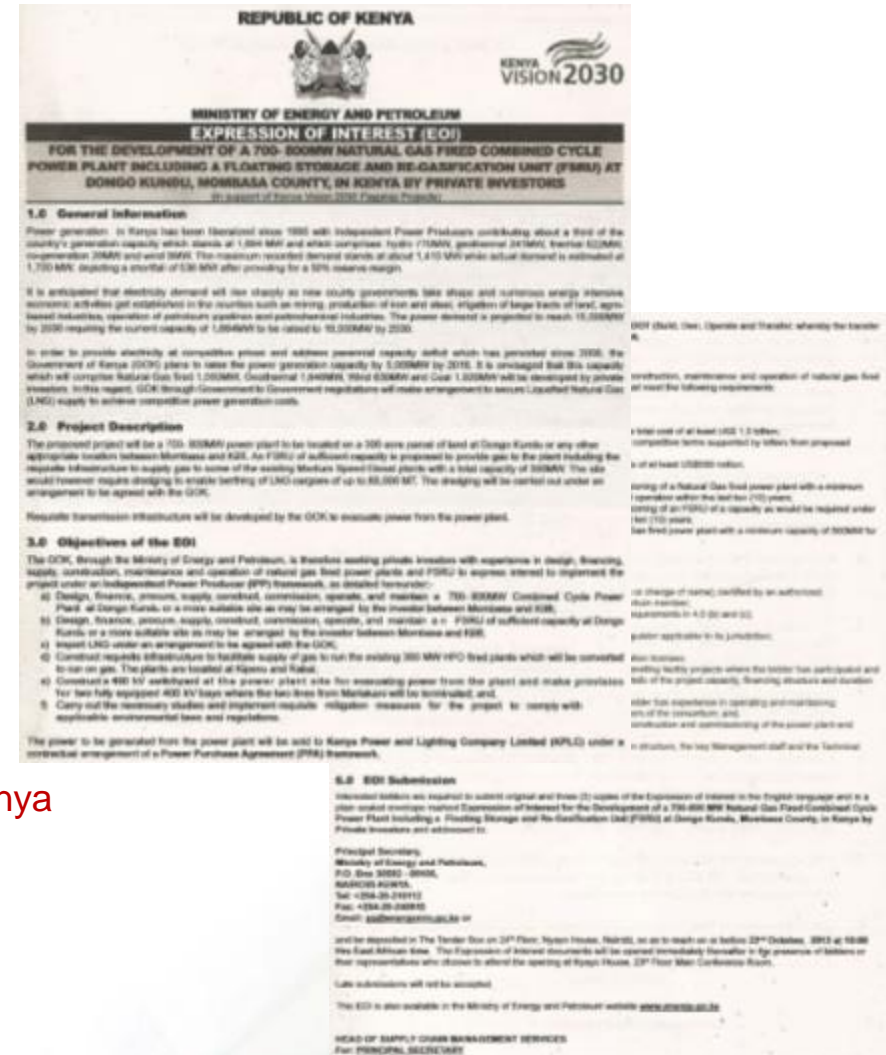
PPP Project Sample – Kenya: Liquefied Natural Gas (LNG) Power Plant

Project Description

Name:	LNG Power Plant
Capacity:	495 MW
Estimated Cost:	US\$ 686 million
Economic Life:	20 years
Mode:	Natural Gas (imported)
Expected PPP:	BOT
Location:	Dongo Kundu, Mombasa, Kenya
Status:	Feasibility Study Completed

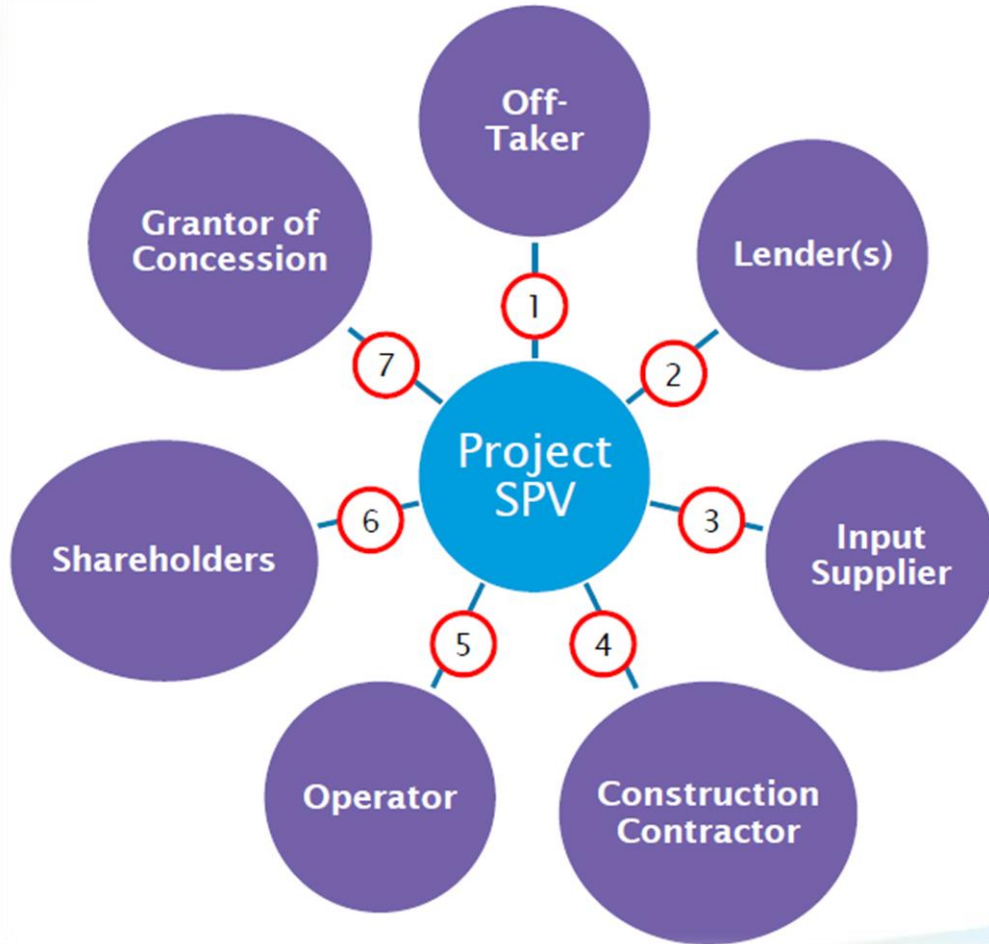
**BOT
PPA**

- Build Operate Transfer
- Power Purchase Agreement



Source: KenGen; TMO

Whose involved?



What is involved?

1. Off -take Purchase Agreement (Take or Pay)
2. Project Loan Agreements
3. Input Supply Agreement
4. Construction/EPC Agreements
5. Operations & Maintenance Agreements
6. Shareholder's Agreements
7. Concession Agreements
8. Detailed feasibility Studies

Investments Incentives Listing

TAQA



Tax Holiday

Ranging from 5-10 years, subject to determination of satisfactory performance by the regulator.

Tax Deductible Interest on loans

Interest payable on any loan obtained for a gas project, with the prior approval of the regulator, is tax deductible.

Tax-free dividends

During the tax holiday, provided that the downstream investment was made in foreign currency or provided that plant and machinery imported during the tax-free period, for purposes of the project, account for not less than 30% of the company's equity.

VAT Exemption on Plant and Machinery

As a further incentive, VAT exemption is granted in respect of plant and equipment purchased in connection with the utilisation of gas in downstream petroleum operations, from the imposition of VAT. Machinery, equipment or spare parts imported into the country in connection with the processing of gas, or the conversion of such gas into electric power, is also exempted from customs duties.

Custom duties exemptions

For imported materials in connection with the utilisation of gas in downstream petroleum operations.

Other attractive tax concessions, such as:

Accelerated depreciation for plants and buildings, five-year loss carry-over and R&D expenditure deductibility

Free market – easy entry & exit procedures

Free transferability of profits and dividends

Let's Do It ...



TAQA

○ Supply and infrastructure

➔ Role of private sector

Full involvement of investors & distribution companies

- Capital intensive industry
- Slow but steady returns
- Involvement in the whole supply chain
- Consumer education

➔ Support from international institutions

Commitment from international institutions

- Financing collective infrastructures
- Support for micro-credits
- Exchange of good practices

○ Regulations

- ➔ developing adequate framework using experience from well established and structured market
- ➔ opting for a cylinder deposit system
- ➔ banning cross-filling
- ➔ establishing a licensing system

○ Access for poorer classes and implication of taxes

- developing an efficient network
- financing solutions such as micro-credit
- eliminate taxation of LPG and cylinders (import duties and VAT)
- harmonizing the tax system (in case partial taxation is maintained)

→ Support from governments

- Stability of the political and legal systems
- Rules governing trade and investment
- Regulations concerning industry operating and safety standards
- Involvement in fair tax / duty treatment

○ Awareness & Consumer's Adherence

→ Openness to change

- education campaigns
(schools, associations, role of village heads)
 - safety
 - applications
- advertising campaigns by marketers



Our market is real

Our challenges are critical

And our Energy is just here



Lets Plan, Reform & Work **NOW**

