Building business opportunities in Kenya’s oil and gas sector

Consultation on project design and approach

April 4th, 2016
Agenda

- Introductions
- Background to the oil & gas sector
- Where to start on local content
- Project background & activities
- How local content works in practice
- Group discussion

Objectives of this afternoon

Introduce you to new work that will run over the next 5 years

Get your input on what we should do and how

Lay the foundations for working together
Background to the oil & gas sector
Multiple opportunities for local content

- In March 2012 Tullow Oil (UK) and Africa Oil (Canada) announced an oil discovery in block 10BB (northwestern Kenya) and a subsequent discovery in block 13T
- Similar exploration prospects in the Tertiary Rift basin, the Anza basin and the Mandera basin are promising.

<table>
<thead>
<tr>
<th>Basin</th>
<th>Type of Hydrocarbons</th>
<th>Estimated Resource in Place</th>
<th>Assumed Recovery Factor</th>
<th>Recoverable Resources (bbl/boe)</th>
<th>First Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>East African Rift</td>
<td>Oil</td>
<td>2 billion bbl</td>
<td>40%</td>
<td>800,000,000 bbl</td>
<td>2018</td>
</tr>
<tr>
<td>Anza Graben (oil)</td>
<td>Oil</td>
<td>1.5 billion bbl</td>
<td>40%</td>
<td>600,000,000 bbl</td>
<td>2019</td>
</tr>
<tr>
<td>Anza Graben (gas)</td>
<td>Gas</td>
<td>333 million boe (2.0 Tcf)</td>
<td>80%</td>
<td>266,400,000 bbl</td>
<td>2020</td>
</tr>
<tr>
<td>Coastal Lamu</td>
<td>Gas</td>
<td>1.5 billion boe (10 Tcf)</td>
<td>80%</td>
<td>1,200,000,000 bbl</td>
<td>2020</td>
</tr>
<tr>
<td>Offshore</td>
<td>Gas</td>
<td>250 million boe (1.5 Tcf)</td>
<td>80%</td>
<td>200,000,000 bbl</td>
<td>2020</td>
</tr>
</tbody>
</table>

Note: Information is from a preliminary draft of ‘Towards an Oil and Gas, Master Plan Presentation.’ The data and conclusions are not final, therefore the above information should be read as being only indicative of potential trends. The data and conclusions should not be treated as final.
Options to get oil to the coast

- Three different route options for the crude oil pipeline are being considered
- The heated pipeline may also have branches taking crude from Uganda and South Sudan, and will surpass India as the longest of its kind in the world.

Refinery scale

- History: Outdated Mombasa refinery with limited capacity.
- Abundant capacity in the Gulf, and refineries need scale of at least 200,000 bpd to run efficiently; Kenyan demand is not expected to reach this level until 2025.

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Background to the oil & gas sector
New pipelines and gas generated power

New pipelines to serve a wider market
• Demand for products dominated by Nairobi area (around 65-70%)
• Kenya demand estimated to triple from 2014 to 2030.
• Transit demand will grow despite Uganda refinery plans, therefore products pipeline can be both national and cross-border
• Storage: Considering a strategic stock of 30 days of product to provide energy security in the event of supply chain disruptions.

Gas to capture a significant share
• Gas will only be developed if upstream players have an economic offtake option
• The rapid development of the Kenyan gas market in areas like power generation is one such option
• Gas-fired power plants can add significant capacity to Kenya’s power generation mix, to meet Vision 2030 goals.

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Where to start on local content
Indicative projects across the oil and gas value chain

<table>
<thead>
<tr>
<th>Category</th>
<th>Project</th>
<th>Capex ($ m)</th>
<th>Operational date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude pipeline</td>
<td>LAPSSET crude pipeline: Phase I</td>
<td>7,600</td>
<td>2019</td>
</tr>
<tr>
<td></td>
<td>LAPSSET crude pipeline: Phase II</td>
<td>5,200</td>
<td>2024</td>
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<tr>
<td></td>
<td>East Rift connector crude pipeline</td>
<td>220</td>
<td>2018</td>
</tr>
<tr>
<td></td>
<td>Lake Albert connector crude pipeline</td>
<td>5,900</td>
<td>2019</td>
</tr>
<tr>
<td></td>
<td>Mombasa-Nairobi product pipeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nairobi-Nakuru product pipeline</td>
<td>50</td>
<td>2019, 2025</td>
</tr>
<tr>
<td>Product pipeline and storage</td>
<td>Sinendet-Kisumu product pipeline</td>
<td>148</td>
<td>2018</td>
</tr>
<tr>
<td></td>
<td>Eldoret-Kampala-Kigali product pipeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Storage conversion / upgrade</td>
<td>347</td>
<td>2018</td>
</tr>
<tr>
<td>Gas-fired power sector</td>
<td>New storage facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LNG-fired power plants (total 1,400 MW)</td>
<td>1,570</td>
<td>2019-2020</td>
</tr>
<tr>
<td></td>
<td>Five gas-fired power plants (total 3,400 MW)</td>
<td>3,750</td>
<td>2020-2040</td>
</tr>
<tr>
<td>LNG sector</td>
<td>Ammonia plant (3,000 tonnes per day)</td>
<td>1,200</td>
<td>2020+</td>
</tr>
<tr>
<td></td>
<td>Methanol plant (3,000 tonnes per day)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>LNG train facility (15 bcm per year)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Lamu-Mombasa offshore gas pipeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mombasa-Nairobi gas pipeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lamu-Isiolo/Meru gas pipeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refinery</td>
<td>Mombasa refinery</td>
<td>8,700</td>
<td>2026</td>
</tr>
<tr>
<td></td>
<td>Lamu refinery</td>
<td>11,000</td>
<td>2026</td>
</tr>
</tbody>
</table>

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Managing expectations
Example from Tanzania liquefied natural gas sector (projection)

Based on estimated market demand and measurement of competitiveness of local firms, likely local capture could range around 8-16% of total project cost.

**Total project cost vs. total likely local market capture**

- Total aggregate demand
- Estimated likely local capture (Year 1)
- Estimated likely local capture (Year 3)
Managing expectations
A few facts from international experience

Most developing countries struggle to achieve a national content level of 25%-30%
• e.g. Nigeria, Angola, Trinidad and Tobago, Saudi Arabia, Libya

Why local firms struggle to enter the supply chain?
• O&G industry demands are often for very high tech & sophisticated goods & services – only catered to by a few firms globally
• Limited relevant experience & technical capabilities
• Not sufficiently large to take on big contracts
• Challenges with standards of production quality, health and safety, and reliability
• Limited access to finance
• Ability to deliver on time.

The biggest opportunities for local suppliers in the construction phase (many other activities are very high tech/specialized)
• Construction = 5 years of peak employment generation and suppliers demand
• Most work will be completed by international Engineering, Procurement and Construction (EPC) firms who spend around 80% of the money of the project.

The EPC contractor is responsible for all design, engineering, procurement, construction, commissioning and testing
• Basic priorities in an EPC contract are time, cost and quality
• Damages to be payable if the fixed contract date is not met or if the contractor fails to meet the performance guarantees.
# Project background

## KEPTAP
**Kenya Petroleum Technical Assistance Project**

Objective: “Strengthen the capacity of the Government of Kenya to manage its petroleum sector and wealth for sustainable development impacts”

- Petroleum Sector Governance
- Revenue and Investment Management
- Sustainable Impact of the O&G Industry

## K-EXPRO
**Kenya Extractives Programme**

Objective: “A growing extractives sector leading to equitable, inclusive and sustainable benefits to Kenyan citizens, reducing negative impacts and risks.”

- Institutional Strengthening of GoK Institutions
- Private Sector Development (“Local Content”)
- County Engagement
- Transparency and Social Accountability

### Local content focus

<table>
<thead>
<tr>
<th>Policy focus</th>
<th>SME focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBG financed, GoK implemented ($1m + 1.7m)</td>
<td>DFID financed, WBG implemented ($4.15m)</td>
</tr>
</tbody>
</table>

- Develop Local Content policy
- Undertake reforms to address O&G business environment constraints
- Build data collection and analysis unit

- Launch communications and outreach
- Implement sector-specific training
- Implement SME support platform
  - Information portal
  - Firm-level assistance

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Project activities I
Continuous over project life

Project management
• Mechanism for managing the project, a key element of which will be the establishment of a public-private steering committee to:
  • provide direction to the project team (an inward facing role)
  • serve as an advocate for the project (an outward facing role).
• Task-teams focusing on specific business sectors and/or areas of intervention will be developed to review work undertaken in each of these specific areas.

Communications
• Local content can be a controversial and an often times politicized topic, with high expectations that are then disappointed.
• Play an active role in engaging the private sector and establishing realistic income and employment expectations.

Quality and knowledge
• Particular focus on feedback loops that extract lessons and feed these into project implementation for the next year.
• Lessons will be packaged for sharing with a wider community of practitioners, contributing to the global pool of knowledge.
Project activities II
Supply-demand analysis: Narrowing in on key clusters (example)

HOW
Inventory of **400 main goods and services** needed for O&G facility investment
Grouped into **150 associated “service lines”**
Aggregated and translated into **60 industry clusters** (matched to Industrial Standard Industrial Classification [ISIC] codes)

EXAMPLE
- Timber trusses
- Ceilings and partitions
- Hardware
- Windows
- Wall, roof cladding and flashing
- Manufactured joinery
- Roofing and window installation
- Carpentry
- Camp construction

1. Develop **Competitiveness Assessment Matrix** (CAM)
2. Assign scores to 60 industry clusters. Translate CAM summary scores into likely percentage captured in the local market
3. Gauge sustainability for each industry cluster and select top **15-20 priority industry clusters** for deeper analysis

Note: Indicative example.
Project activities II
Supply-demand analysis: Assessing readiness to compete

**Projecting demand**
- Service 1
- Service 2
- Good 1

**Procurement**
Market segments identified by industry (categorized using ISIC codes)

**Assessing readiness to compete (supply-side)**
- Market segment 1
- Market segment 2
- Market segment n
- Kenyan industry clusters with capability to compete for contracts (categorized using ISIC codes)

- Supplier 1
- Supplier 2
- Supplier 3
- Supplier 4
Project activities II
Supply-demand analysis: Progress to date

- “Core technical services represent a greater challenge for local supplier integration. Buyers in the extractives sector are more reluctant to integrate local suppliers for this category
- Indirect services provide an immediate area of expansion and optimization for local supplier development.
- Among the sectors with high budget allocations are construction, provision of electricity and fuel, supply chain services, vehicle and fleet management, and general site support services.
- Interventions could also target strategies of buyers, such as ring-fencing, which allows only local suppliers to bid for contracts for certain indirect services, or price preference scoring which affords local suppliers more leeway in pricing.”

*Source: K-EXPRO. October 2015. “Extractives industry local content early gap analysis”.*
Project activities II
Supply-demand analysis: Progress to date

Lead contractors’ ranking for indirect services with competitive supplier market in-country

- Manpower
- Site support (supplies)
- Energy
- Electricals
- ICT
- Legal
- Lifting
- Personnel
- Site support (management/services)
- Fleet management

Source: K-EXPRO. October 2015. “Extractives industry local content early gap analysis”.
Project activities II
Supply-demand analysis: Progress to date

Source: K-EXPRO. October 2015. “Extractives industry local content early gap analysis”.
Note: Table is low and high case scenarios.
Project activities III
Firm-level support: Increased targeting

- High-level training on business opportunities O&G presents for Kenyan private sector.
- This will give all businesses an opportunity to contextualize their future engagement with the oil and gas sector.
- With these foundations laid, roll-out training in specific sectors in which the supply-demand analysis has been undertaken, running in 3 batches.
- Envisaged that training undertaken 2x/year, with the second training focusing on specific topics that emerge as gaps from first.
- Training will also cover key cross-sectoral themes, e.g. access to finance or responding to procurement notices.
Project activities IV
Firm-level support: Embedding expertise

The most tangible element of the project’s support in local content will be the establishment of an support platform focused on providing firm-level support to specific high-potential enterprises.

Process
• Target firms will have been identified during the training and will be required to undergo a pre-established screening process.
• The process will be open and transparent, with firm qualification being based on demonstrated capability and a proven commitment to embark on business change.
• The SME support platform will be hosted by a local institution with established roots with the Kenyan private sector. It may be a public institution, such as a business membership organization, or a private contractor, such as a Kenya-based management consulting/advisory firm.
• Potentially more than one institution may be selected to create healthy completion in delivery.

Source: Adapted from OTF Group’s ‘5 pre-conditions for change.’
Support delivery

- Extent and duration of expert, embedded support will depend on the needs of individual target firms.
- Delivery will be conditional on target businesses demonstrating clear commitment to implementing the firm-level change recommendations that the experts put forward.
- The platform will establish a ‘desk’ with an expert to provide specific support to a number of firms on cross-cutting topics, such as business planning and access to finance or completing procurement bid applications.
- The platform will also host an information portal where O&G firms and their suppliers can post and respond to procurement opportunities, which will include databases of screened suppliers.
- The project will conclude with designing and rolling out a hand-over strategy, ensuring that the SME support platform is able to continue to serve the needs of Kenya’s private sector once the project closes.

How this works in practice
Rio Tinto Simandou (Guinea)

In response to government requirements and community expectations, Rio Tinto requested support in creation of a local procurement policy and strategy to develop businesses capable of competing for contracts.

**IFC’s Main Activities**
- Strategic and technical assistance to Simandou project and mining sector
- Skills development and capacity building for SMEs
- Donor coordination
- Access to finance (leasing)
- Women entrepreneurship and development
- Improve investment climate/legislation w WBG
- Advise on Rio’s Guinea Foundation design.

**Results**
- Inclusion of local content annex in the investment framework
- Development of a local content policy for the Simandou project
- Creation of a training platform for local SMEs
- 450+ local SMEs trained and coached
- 3,000 participants trained in business management, HR, quality, marketing, health & safety, leasing, etc.
- $12 m+ in new supplier contracts
- Over 1300 new jobs in local mining supply chain businesses
- Enterprise Center created
- Database of over 1000 local businesses developed
- “Guichet Unique,” a business registration one-stop-shop, created.

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How this works in practice
Peru LNG (Peru)

IFC worked with Peru LNG over three years to strengthen the environmental and social management of its $4 billion liquefied natural gas project that includes a liquefaction plant and a 408-kilometer pipeline connecting to an existing pipeline network east of the Andes.

IFC’s Main Activities
Supported development and implementation of:
• Local supplier development program
• Management, planning and allocation of $5.2 million in royalties for 3 municipalities
• Community Participatory Monitoring Program.

Results to Date
• $4 m in contracts to local companies
• 116 local businesses trained on management topics (quality, marketing, negotiations, financing, costs, safety and environment)
• 167 new permanent jobs created
• 31 women owned firms received SME business management training
• Peru LNG exceeded regulatory requirement of revenues to be reinvested in the local community
• 82 community monitors trained to focus on social and environmental project impacts.
How this works in practice
BP’s ACG/BTC (Azerbaijan)

Design the SME Linkages Program to help local companies and entrepreneurs benefit from economic activities related to BP’s oil field and pipeline project in Azerbaijan where there is a lack of economic opportunity, a shortage of financing, and gaps in the skills of local businesses.

**IFC’s Main Activities**

- **Supply Chain Development**: increased procurement opportunities for local businesses
- **Access to Business Services**: developed and delivered courses for small businesses
- **Supplier Finance**: launched a $15 m facility providing medium-term financing to small and medium oil services suppliers.

**Results**

- 41 new small business management training courses developed in local languages
- 560 SMEs received training (contract tendering, quality control, health, safety and environment standards)
- 1600 new business contracts worth $250 million over 4 years awarded to local SMEs.
How this works in practice
Where we’ve implemented programs

Mexico
- Mexico Wind Farms

Nicaragua
- Simplemente Madera Group
- Ecom

Colombia
- Pacific Rubiales Energy
- EcoOro
- El Royalty Mgmt

Peru
- Peru LNG
- SN Power
- Newmont
- BPZ
- MIM Peru (municipal capacity building)
- MRI Peru (municipal royalty income)

Guatemala
- Rio Tinto
- GAC

Liberia
- Aureus Mining

Bosnia
- INTSOK – Fabrication Sector

Brazil
- Constellation

Brazil
- Conakry

Nigeria
- Cemex

Ghana
- Newmont

Cameroon
- Exxon Foundation FEDEC

Chad
- ExxonMobil

Albania
- Banker’s Petroleum

Azerbaijan
- BP

India
- Cairn
- JK Paper

Laos
- Stora Enso

Papua New Guinea
- Sector-wide

Indonesia
- Musim Mas
- SCI Plantations

Zambian
- Copperbelt

South Africa
- Lonmin

Nepal
- Nepal Hydro

How this works in practice
Where we’ve implemented programs

IFC Advisory Staff
Annex

Questions for discussion from the presentation

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>What will be the impact of oil price changes on the Kenyan O&amp;G sector?</td>
<td>What does this mean for local suppliers?</td>
</tr>
<tr>
<td>Where do you envisage the greatest local supply opportunities?</td>
<td>How have Kenyan firms fared to date in supplying large infra investments?</td>
</tr>
<tr>
<td>What do we call this project….</td>
<td><strong>Private sector opportunities in oil and gas</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Business opportunities in oil and gas</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Building business opportunities in petroleum</strong></td>
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<tr>
<td></td>
<td><strong>Petroleum business opportunities</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Kenya petroleum local content?</strong></td>
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<tr>
<td>What are some of the key barriers to firm-level change and growth in Kenya?</td>
<td></td>
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<tr>
<td>What is an example of one of the most effective firm-level support platforms that you have seen?</td>
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</tbody>
</table>
# Annex

## Project background

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<tr>
<th><strong>KEPTAP</strong></th>
<th><strong>K-EXPRO</strong></th>
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<tr>
<td><strong>Kenya Petroleum Technical Assistance Project</strong></td>
<td><strong>Kenya Extractives Programme</strong></td>
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<tr>
<td><strong>Objective:</strong> “Strengthen the capacity of the Government of Kenya to manage its petroleum sector and wealth for sustainable development impacts”</td>
<td><strong>Objective:</strong> “A growing extractives sector leading to equitable, inclusive and sustainable benefits to Kenyan citizens, reducing negative impacts and risks.”</td>
</tr>
<tr>
<td><strong>Petroleum Sector Governance</strong></td>
<td><strong>Institutional Strengthening of GoK Institutions</strong></td>
</tr>
<tr>
<td>• Strengthening the capacity of the GoK’s major institutions engaged in the development and governance of the petroleum sector while ensuring that safeguards and safety standards are met in accordance with international standards</td>
<td>• Improved governance of O&amp;G/mining industries</td>
</tr>
<tr>
<td><strong>Revenue and Investment Management</strong></td>
<td>• Investor-friendly O&amp;G/mining policy</td>
</tr>
<tr>
<td>• Strengthening GoK’s capacity to manage revenue streams from the petroleum sector for sustainable development impacts</td>
<td>• Improved transparency of O&amp;G/mining industries</td>
</tr>
<tr>
<td><strong>Sustainable Impact of the O&amp;G Industry</strong></td>
<td><strong>Private Sector Development (&quot;Local Content&quot;)</strong></td>
</tr>
<tr>
<td>• Strengthening GoK’s capacity to integrate the petroleum sector into its broader economy</td>
<td>• Increased competitiveness of local suppliers to O&amp;G/mining industries</td>
</tr>
<tr>
<td></td>
<td>• Better employability of local workers</td>
</tr>
<tr>
<td></td>
<td><strong>County Engagement</strong></td>
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<tr>
<td></td>
<td>• Communities benefit from O&amp;G/mining and are supportive of the industries, initially through public-private dialogue with potential follow-on programs</td>
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<tr>
<td></td>
<td><strong>Transparency and Social Accountability</strong></td>
</tr>
<tr>
<td></td>
<td>• Improved transparency of O&amp;G/mining industries by a challenge fund to provide demand-driven support to petroleum and mining civil society organisations and industry bodies</td>
</tr>
</tbody>
</table>
Annex
Advisory knowledge to help practitioners

- Local Procurement Guide
- Strategic Community Investment Handbook
- Establishing Foundations to Deliver Community Investment
- Projects and People: A Handbook for Addressing Project-Induced In-Migration
- A Strategic Approach to Early Stakeholder Engagement
- The Value of Water: A Framework for Understanding Water Valuation, Risk and Stewardship
- Sustain Magazine: Extractive Industries
- Water, Mining, and Communities: Creating Shared Value Through Sustainable Water Management
- The Art and Science of Benefit Sharing in the Natural Resource Sector
- Wharton Case Study: FV Tool in Ghana
- Challenges of Managing Project Impacts on Small-Scale and Artisanal Fisheries
- Addressing Project Impacts on Fishing-Based Livelihoods: A Good Practice Handbook
- Women in Mining: A Guide to Integrating Women into the Workforce
- Working Together: How Large-Scale Miners Can Engage with Artisanal and Small-Scale Miners
- Community Relations in Palm Oil

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