



OPPORTUNITIES FOR SHIPPERS AND LOGISTICS PLAYERS IN UGANDA'S OIL SECTOR

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PETROLEUM EXPLORATION AND PRODUCTION



2006

- Hardman Petroleum Pty (now Tullow) makes the first commercial discovery well in Kayiso Tonya area.
- Hardman Petroleum Pty (now Tullow) signs an MOU with Government for an Early Production Scheme (EPS) for oil production, and Thermal Power generation ~ 50-85MW.

2007

- Dominion Petroleum is licensed to Exploration Area 4B.

2008

- Cabinet approves the National Oil and Gas Policy;

2010 – 2012

- Farm-out of Heritage oil and Gas to Tullow and Farm-in of Total E & P Uganda and CNOOC Uganda Limited
- Production License over Kingfisher issued

2013:

- Petroleum (Exploration, Development and Production) Act 2013 enacted
- In addition to Kingfisher, Total and Tullow submit applications for possible award of Production Licenses over sixteen (16) discoveries



PETROLEUM EXPLORATION AND PRODUCTION



2014

- A Memorandum of Understanding on Commercialisation was signed between Government and Licensed oil companies which under pinned the three principles options of crude for export, refinery and crude for power.

2015

- First competitive licensing round for 6 blocks in the Albertine Graben, that culminated into the licensing of Armour Energy Limited (Australia) and Oronto Petroleum Limited (Nigeria)

2016

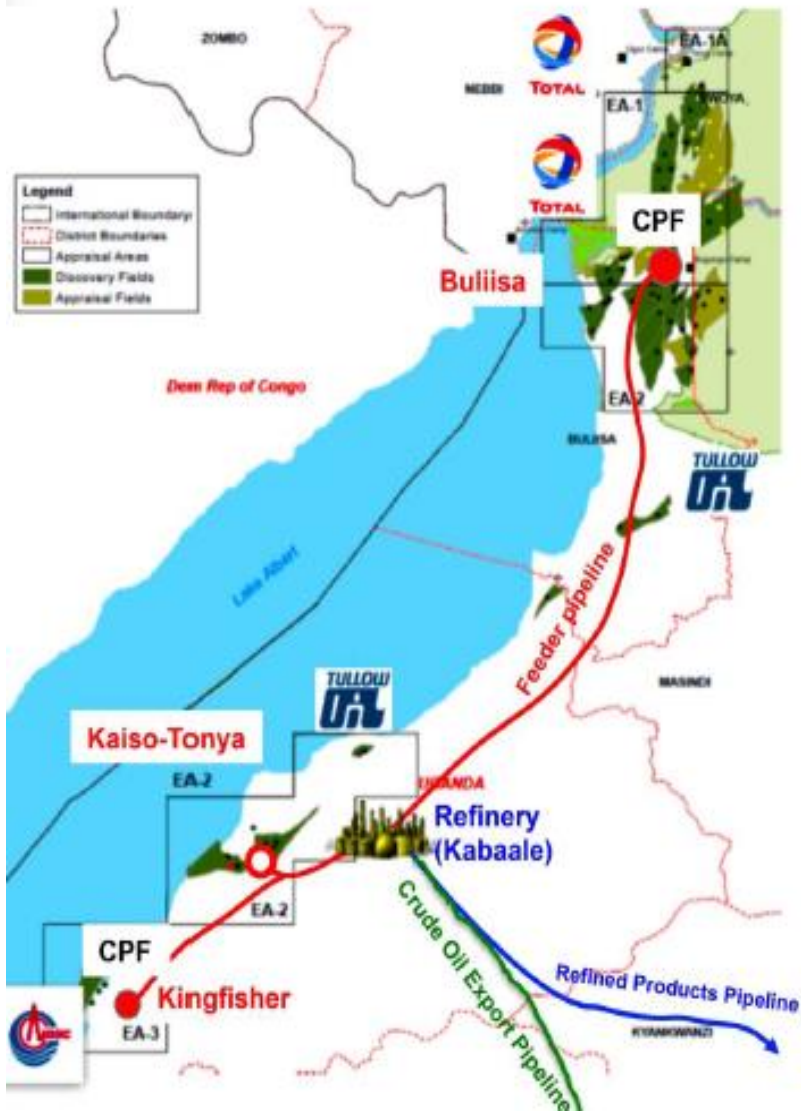
- Six (6) Production Licenses issued to Tullow Uganda Operations Pty and three (3) Production licences issued to Total E & P Uganda
- The Hoima to Tanga Crude oil pipeline routing agreed

2017

- Appointment of Directors for the Petroleum Authority of Uganda
- FEED for Upstream Facilities and also for EACOP were launched
- IGA for EACOP was signed between Uganda and Tanzania and foundation stone laid
- New exploration Licenses issued to Armour Energy Limited (Australia) and Oronto Petroleum Limited (Nigeria).



LAKE ALBERT OILFIELD OVERVIEW



UPSTREAM

- Discovered oil in blocks EA-1, EA-2 & EA-3
- Operated by CNOOC, Total & Tullow
- Production licences granted - production plateau ~ 230,000 bpd

Refinery at Kabaale

- Phase 1 – 30 kbd,
- Phase 2 – 60 kbd

EACOP project :

- 1,450 km Export Pipeline to Tanga (TZ)
- Design capacity 200 kbd
- Pumping stations
- Marine Terminal



TILENGA UPSTREAM PROJECT





TILENGA SURFACE FACILITIES

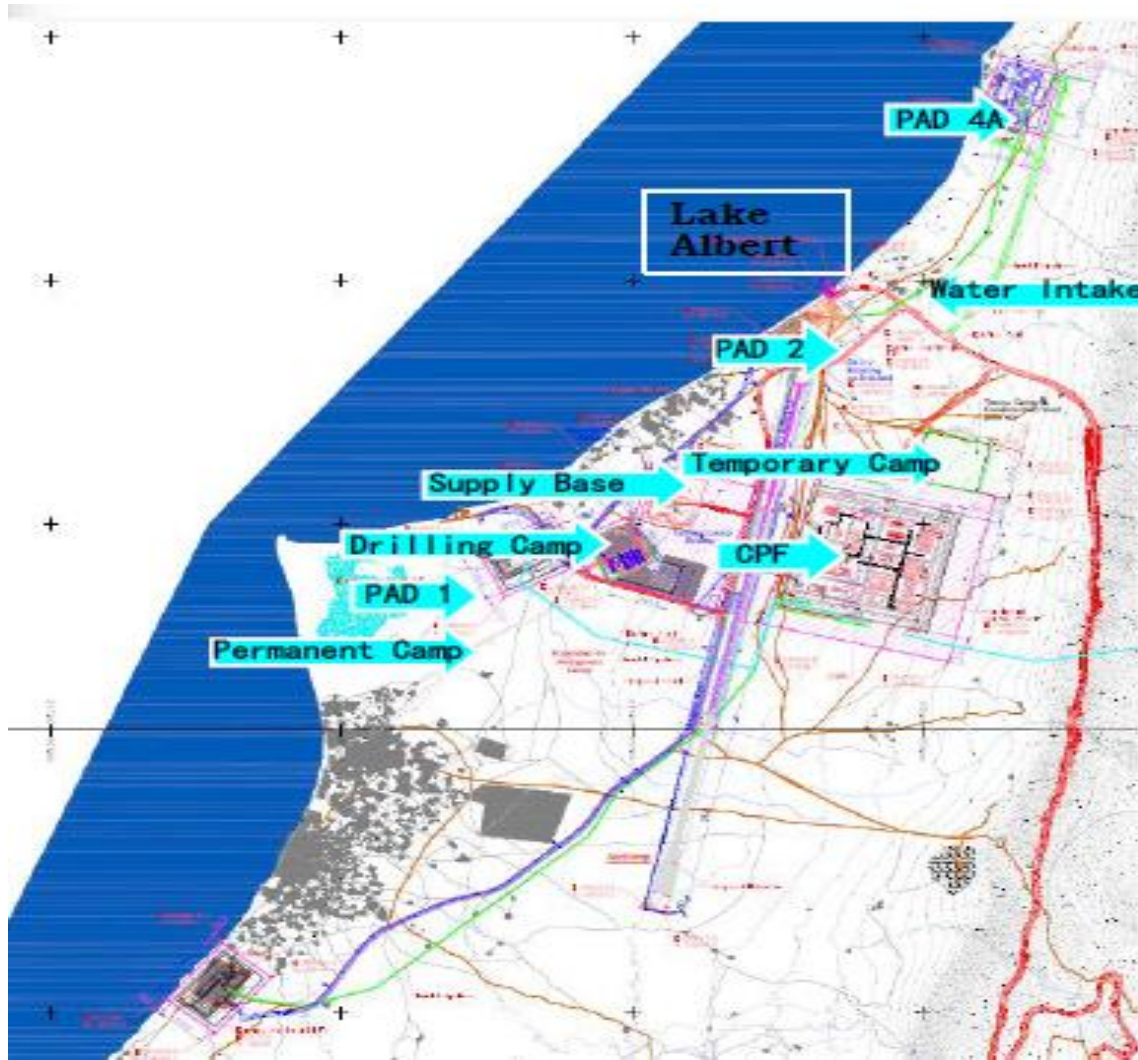


Tilenga Oil field Development Project consists of the following facilities:

- ❑ **Wellpads (36)** – includes drilling **401** Oil production wells and water injection wells from thirty six (36) well pads
- ❑ **~230km Infield Flowlines** – These link well sites to the CPF by production flow lines, water injection lines, electrical cables and fibre optic cables
- ❑ **Central Processing Facilities** - Construction of 190 kbopd & 700 kbbl/d total liquid treatment capacity
 - Power generation
 - Water treatment and lake water re-injection
- ❑ **Feeder line** – Construction of 100Km heat traced feeder line Kingfisher to Kabaale
- ❑ **Other Infrastructure** – Permanent and temporary Camps, Construction Yards, Supply Base etc.



KINGFISHER OILFIELD DEVELOPMENT





KINGFISHER SURFACE FACILITIES

The Kingfisher Oil field Development Project shall comprise these facilities:

- ☐ **Wellpads (4)** – includes drilling the Oil production wells and the water injection wells from four locations adjacent to the banks of Lake Albert
- ☐ **1.6~3km Infield Flowlines** - These link well sites to the CPF by production flow lines, water injection lines, electrical cables and fibre optic cables
- ☐ **Crude Processing Facility (CPF)**- Construction of 40,000 bopd Oil treatment Capacity
- ☐ **Lake Water Intake pump Station** – Construction of a lake water intake pump station on the shore of lake Albert and water transfer pipelines to CPF
- ☐ **Feeder line** – Construction of 50Km crude oil pipeline with related power and fiber optic cables
- ☐ **Other Infrastructure** - Permanent and Temporary Camp, Construction Yard, Supply Base etc.



KINGFISHER EPC PACKAGES



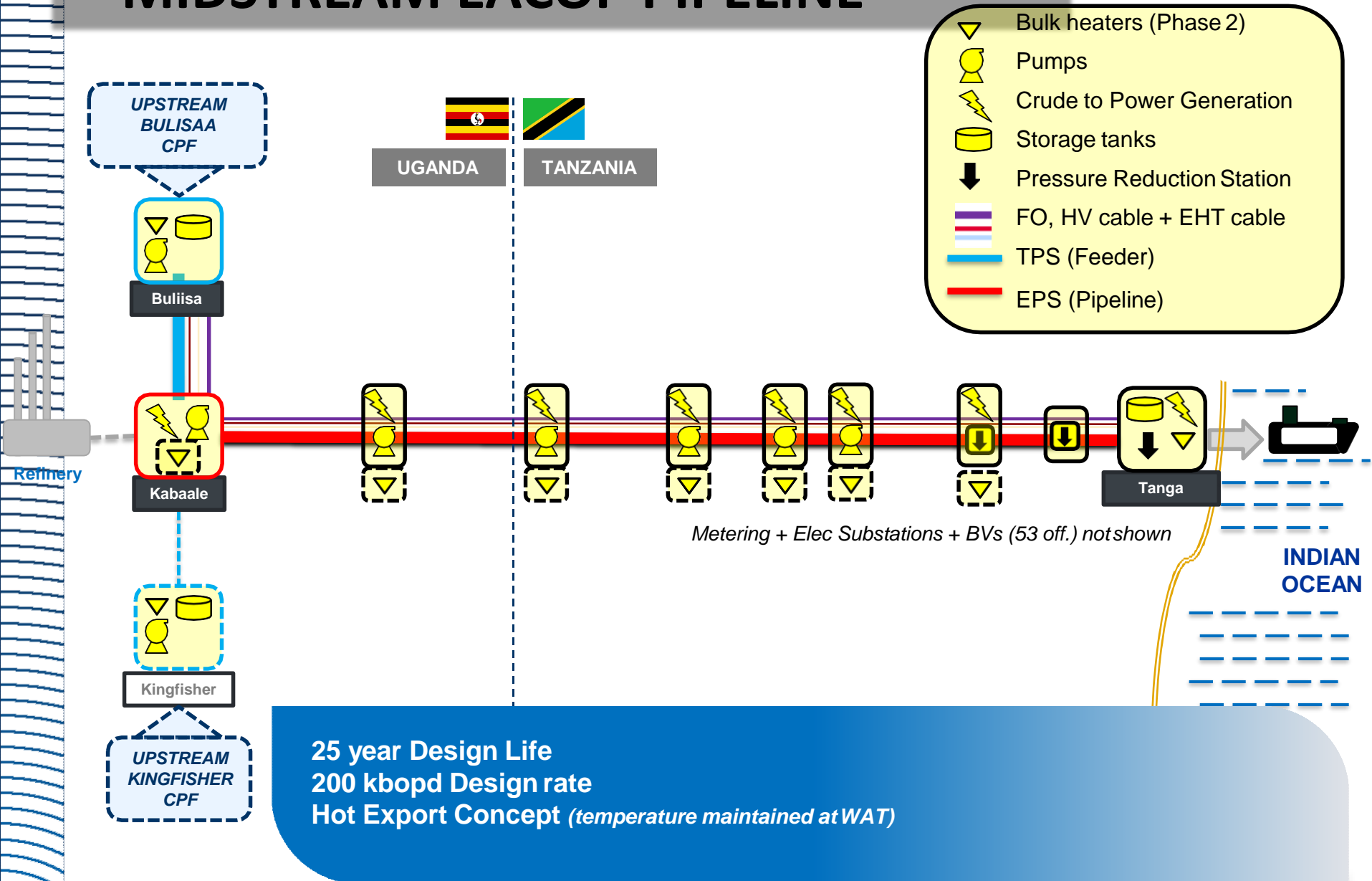
There are four (4) EPC packages planned for the field development as follows:

- ❑ **EPC-1:** Pad1/2/3 Pre-drilling works and Inter-pads Roads (**Duration: 9 months**)
- ❑ **EPC-2:** Permanent Camp & Supply Base & Safety Check Station & Well Pads (Civil Works) (**Duration: 33 months**)
- ❑ **EPC-3:** CPF, Well Pads (Production Facilities), Infield Flowlines & Water Intake Station (**Duration: 33 months**)
- ❑ **EPC-4:** Feeder Line
 - 50km, 10 inches, 40,000 bbl/day
 - buried underground with heat trace and fibre optics (**Duration: 24 months**)

The above services will require the following:

- Detailed engineering design; Procurement and transportation of materials for the works
- Construction works as per the approved drawings and specifications
- Pre-commissioning and mechanical completion where necessary

MIDSTREAM EACOP PIPELINE



25 year Design Life
200 kbopd Design rate
Hot Export Concept (*temperature maintained at WAT*)





TILENGA UP STREAM MATERIAL



Enabling Work and CPF Estimated starting date: Q1 2019

➤ Duration of the construction campaign : about 2- 3 years

<i>Sites</i>	<i>Works</i>	<i>Imports</i>	<i>Estimate Tonnage</i>	<i>Entry points to Uganda</i>	<i>Destination</i>
Buliisa North Field	Enabling Works	Equipment (Steel, Machineries etc)	12,200 T	Busia / Tororo	Tangi
Buliisa South Field	Enabling works	Equipment	13,300 T	Busia / Tororo	Bugungu
Buliisa South CPF	CPF	Equipment	20,000 T	Busia / Tororo	Buliisa
		<i>Total</i>	43,500 T		
		<i>Material</i>			
Buliisa North-South and CPF Field	Construction	Materials (Cement, Gravel, Sands)	1,000,000 T		
	Consumables	Fuel, food, generals supplies	220,000 T		
			1,200,000 T		



Drilling Equipment / Material

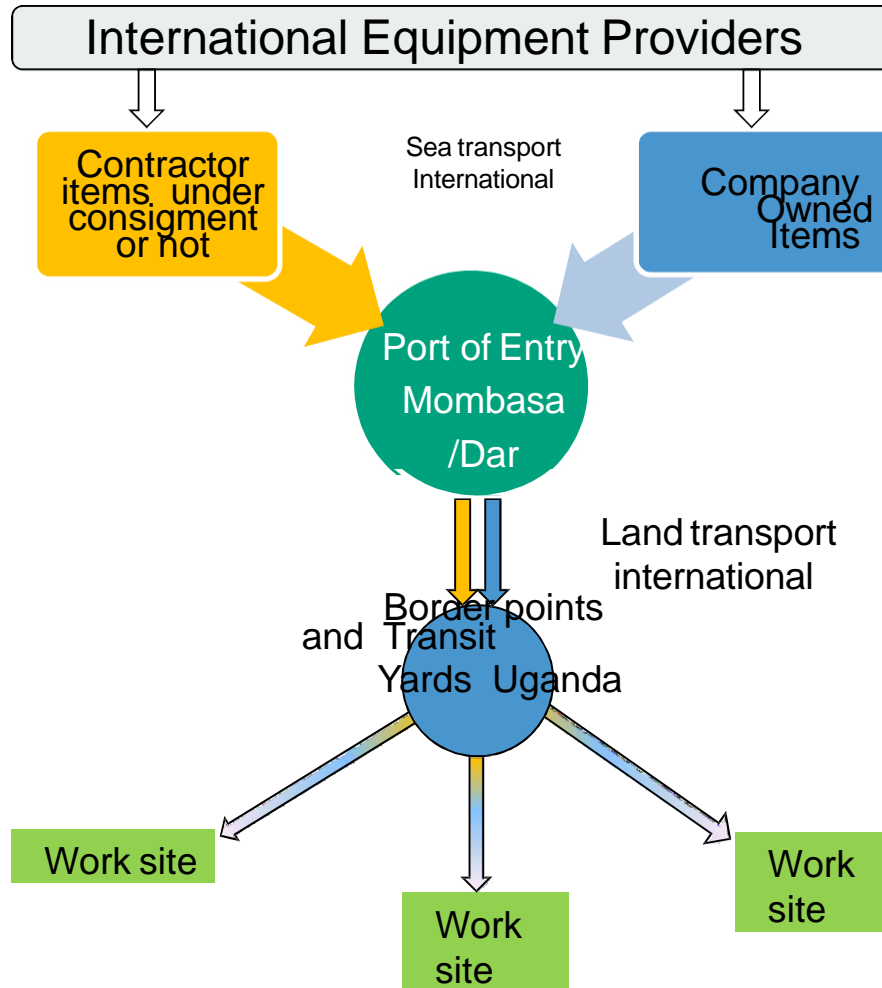


- Estimated starting date: Late 2019
- Duration of the drilling campaign
- Number of wells to be drilled: North Field 100 wells / South Field 300 wells

<i>Sites</i>	<i>Description</i>	<i>Est.Tonnage</i>	<i>Entry point</i>	<i>Destination</i>
Buliisa N. Field	Equipment (Casing, wellhead+ cement + fluids)	49,000T	Busia / Tororo	Tangi
Buliisa S. Field	Equipment (Casing, Wellhead + cement fluids,)	147,000T	Busia /Tororo	Bugungu or other
	<i>Total</i>	196,000T		



EQUIPMENT TRANSPORT FLOW CHART





NATIONAL CONTENT



The primary Uganda Regulations involved with the National Content aspects for Upstream and Midstream Pipeline Projects are:

- - The Companies Act 2012 – 18th September 2012
- - Statutory Instruments Supplement No. 14 – 2nd June 2016:
- *-The Petroleum (Refining, Conversion, Transmission and Midstream Storage) (National Content) Regulations, 2016*
- - Statutory Instruments Supplier No. 18 – 24th June 2016: *The Petroleum (Exploration, Development and Production) (National Content) Regulations 2016*

“Ugandan company” for purposes of section 53 (4) of the Act and regulations, means;

- a company incorporated under the Companies Act, 2012 and which;

(a) provides value addition to Uganda;

(b) uses available local raw materials;

(c) employs at least 70% Ugandans; and

(d) is approved by the Authority under regulation 10(3).



NATIONAL CONTENT



Goods and Services to be provided by Ugandan Companies and Citizens
Registered Entities (per Supplement No. 14 Regulation 11 (1) and (2))

- ☐ *Transportation*
- ☐ *Security*
- ☐ *Foods and Beverages*
- ☐ *Human Resource Management*
- ☐ *Office Supplies*
- ☐ *Fuel Supply*
- ☐ *Land Surveying*
- ☐ *Clearing and Forwarding*
- ☐ *Crane Hire*
- ☐ *Locally available construction materials*
- ☐ *Civil Works*
- ☐ *Environmental studies and impact assessments*
- ☐ *Communications and information technology services*
- ☐ *Waste management, where possible*



NATIONAL CONTENT



Total E&P / Tullow / CNOOC and their EPC companies will as per local content regulations require foreign companies and JVs bidding for works to submit a National Content Plan with details of the Bidder's strategy, key activities, organisation, procedures and plans together with National Content Reporting Matrix.

The National Content Plan must specify:

- ☐ Goods and services to be provided
- ☐ Ugandan Labour component
- ☐ Ugandan Preference in Bid Evaluations
- ☐ Succession Plans
- ☐ QHSE Standards
- ☐ Technology & Knowledge Transfer
- ☐ Research & Development
- ☐ Procurement Opportunities
- ☐ Local Supplier Development
- ☐ Partnerships
- ☐ Local Education Institutions
- ☐ Training Plans / Skilling



OPPORTUNITIES FROM OILFIELD INFRASTRUCTURE

❑ Oilfield Development 2019 – 2025 **\$ 20 Billion**

Includes:

- E.African Crude Oil Pipeline EACOP **\$ 4 Billion**
- Refinery Development at Kabaale **\$ 4 Billion**
- Kabaale International Airport **\$ 200 Million**

Upstream infrastructure for The Tilenga and Kingfisher Fields Development and EACOP project forms the bulk of project capital expenditure in the short term to 2021.



OILFIELD INFRASTRUCTURE



