Local Content in the Petroleum Sector in the Republic of the Sudan

By

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Minister of Petroleum and Gas
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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.
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An Overview

Dr. Mohamed Zayed Awad
Minister of Petroleum and Gas
Petroleum Infrastructure in Sudan

Export Pipelines and Marine Terminals
1. Block 1, 2 & 4 Pipeline is 1,510 km, 28 inch, with 6 pump stations, a daily capacity of 500 thousand barrels, and 1 Marine Terminal capable of storing 1.8 million barrels.
2. Block 3 & 7 Pipeline is 1,472 km, 32 inch with 6 pump stations, a daily capacity of maximum 750 thousand barrels and 1 Marine Terminal capable of storing 3 million barrels.
3. Block 6 Pipeline is 716 km, 24 inch with 6 pump stations, a daily capacity of maximum 250 thousand barrels to Khartoum Refinery.
4. Total pipeline 3,700 km with a capacity of 1.5 million barrels of oil per day and Marine Terminal storage capacity of 4.8 million barrels.

Central Processing Facilities (CPF)
1. Heglig CPF: 350 thousand barrels per day
2. Jabalyn CPF: 300 thousand barrels per day
3. Fula CPF: 200 thousand barrels per day
4. Total processing capacity: 850 thousand barrels per day

Refineries
1. Khartoum Refinery: 95,000 BOPD (plans to upgrade)
2. Obeid Refinery: 15,000 BOPD
3. Port Sudan Refinery: To be Refurbished
4. Total domestic refining capacity: 110,000 BOPD

Sudan has a Robust petroleum infrastructure
E&P Business

Regulatory Body (OEPA, DGD, GDES)

Operators
GNPOC
Petro-Energy
Staroil
Rawat
Petrodar

Sudapet as Full-Fledged Operator

Investment Vehicles: Sudapet (Upstream) and PETCO (Midstream)

Petroleum Services

EPCC Asawer Petrolines

PMC/O&M Centroid

Training PTC

Enhanced Oil Recovery

Downstream Business

Gas to Liquid

Gas for Power Generation

Crude Oil Sales and Marketing

Distribution Business Nile Petroleum

Refining Khartoum Obeid Port Sudan

Alternate Energy

Petroleum Value Chain

Geophysical Acquisition BGC

Seismic Processing BPC

Drilling NUS ADF

Bring back value from the Value Chain

Private Businesses
Methods for Injecting Local Content

Joint Venturing
- Establish JVs with renowned technology providers
- Phase out foreign companies equity in JVs

Acreage Operators
- Sudanization

Regulatory Framework
- Preferential treatment accorded to local contractors
- JV requirement for certain industries

Knowhow and Technology Acquisition

Bringing back value
Exploration

- Comprehensively explore Sudan’s sedimentary basins according to ranked exploration prospects
- Aim for an exploration success rate of 40% and a reserve target of 2.5 billion BBLs
- Appraise all existing gas discoveries to achieve economic break-even
- Appraise un-appraised oil discoveries

Sudapet: Investment
BGC: Seismic Acquisition
BPC: Seismic Processing
NUS Drilling Services
Development

- Fast track development of existing discoveries
- Fast track development of Gas trends
- Fast track appraisal and development of Red Sea offshore gas and condensate

- Sudapet: Investment
- PLRS: EOR Lab Services Studies
- Asawer: Field Facilities
- NUS Drilling Services
• Production
  – Implementation of IOR/EOR
  – Facilities construction, management and maintenance

Sudapet: Investment
PLRS: IOR studies
Asawer: Field Facilities
NUS Drilling Services
Centroid PMC and O&M
Transportation

– Optimize existing pipelines
– Construct necessary tie-ins
– Facilities construction, management and maintenance

PETCO: Investment
PLRS: Studies
Petrolines: Pipeline Construction and Operation
Centroid PMC and O&M
Downstream

- Iron ore reserve development in South Kordofan, Khartoum, River Nile and Red Sea states
- Optimize refining to “local market requirement” as priority A and “export requirement” as priority B
- Fertilizer plants may be constructed to provide fertilizer for local agricultural industry
- Gas-To-Liquid plant is already under process to utilize flared gas to produce liquid fuel types
- LNG businesses will be established upon discovery of large enough quantities
Petroleum Services

• Sudanese Companies to focus on high value Projects to bring back value from the value chain
• Strategic services such as EOR services, drilling etc… to be domesticated
• Service providers to act as “training vehicle”
• Provide legislative framework to cater for local content in petroleum services
# Human Resources

## Sudan's Upstream Business: an example of successful local content policy in human resources

<table>
<thead>
<tr>
<th>Course</th>
<th>Students</th>
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</thead>
<tbody>
<tr>
<td>Electrical Engineering</td>
<td>723</td>
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<tr>
<td>Mechanical Engineering</td>
<td>712</td>
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<tr>
<td>Petroleum Engineering</td>
<td>513</td>
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<td>High Secondary School</td>
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<tr>
<td>Geology</td>
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<td>Chemical Engineering</td>
<td>231</td>
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<tr>
<td>Finance Accounting</td>
<td>203</td>
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<tr>
<td>Others (Interior Design, Tourism, Secretary, Press &amp; Media)</td>
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<tr>
<td>Business Administration</td>
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<td>Technical School</td>
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<td>Commercial</td>
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<td>Law</td>
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<td>Arts-English Language</td>
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<tr>
<td>Political Science</td>
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<tr>
<td>Organization Management</td>
<td>32</td>
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<tr>
<td>Architecture</td>
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<tr>
<td>Lab Science</td>
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<td>Information Technology</td>
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<td>Surveying Engineering</td>
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<tr>
<td>Aviation</td>
<td>22</td>
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<tr>
<td>Agricultural Economy</td>
<td>21</td>
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<tr>
<td>Military College</td>
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<tr>
<td><strong>Total</strong></td>
<td>4185</td>
</tr>
</tbody>
</table>

SUDANIZATION BY QUALITY

Over 95% of positions Sudanized
Regulatory Framework

- Preference given to local contractors in certain services
- Quoted price margins for local contractors in tenders
- Sudanization of positions held by expatriates in petroleum operating companies
- Development of manpower in Sudapet and service providers
Challenges

Brain Drain

• Gulf represents attractive market
• Sudanese are now a target of IOCs to work in gulf states
• New emerging markets e.g. Iraq

Overcome by:
Better remuneration
Better education

Sanctions

• Smaller number of technology providers
• Importation of equipment and payment for services are grave challenges

Overcome by:
R&D
Domestication of services
Thank You