TANZANIA PETROLEUM DEVELOPMENT CORPORATION (TPDC)

OIL & GAS INVESTMENT OPPORTUNITIES IN TANZANIA

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OUTLINE

- About Tanzania
- Management Structure of Petroleum Industry in Tanzania
- Exploration History and Gas Development
- Natural Gas Reserves in Tanzania
- Investment Opportunities

ABOUT TANZANIA

ECONOMIC PERSPECTIVE

- Population : Estimated 50.14 Million
- Population density : 64
- GDP : 45.63 Billion USD at 6.20/yr
- One of 20 fastest growing economies in the world.
- The largest contributor is agriculture > 30%.
- Industrial sector's is contributing <10%
- Easy of Doing Business: 135/190

Source: Tanzania Bureau of statistic and Word Bank Report 2017

MINERALS AND GAS RESOURCES

Gold
2,222 Tons

Coal
911.0 million Tons

Uranium
35.9 million pounds

Iron Ore
103 million Tons

Tanzanite
12.6 million Tons

Nickel
209 million Tons

Diamonds
51 Million Carats

Natural Gas
57.25 TCF

ENERGY DEMAND PROJECTIONS

- 90% of Tanzania's energy requirement is supplied from traditional fuels, mostly biomass involving firewood and charcoal.

- **8.8 TCF** be required for power generation (30,755 MW) over a period of 30 years.
- The Household demand of 0.5 TCF for 30 years.
- **1.1 TCF** of natural gas will be required for production of methanol for two trains a period of 23 years.
- Three trains GTL will require **1.8 TCF** by 2045.

NATURAL GAS DEMAND PROJECTIONS BY 2045

	DOMESTIC DEMAND											EXPORT DEMAND		TOTAL
						Petrochemicals								
USER	Electricity	Households	Institutions	CNGV	Industries	*Fertilizer/ Ammonia*	*Methanol*	*GTL*	*DME*	*MTG*	Iron & Steel	LNG	Pipeline	
Demand (TCF)	8.0	0.5	0.1	0.6	3.6	0.7	1.1	1.8	0.3	0.4	1.1	11.1	3.1	32.5
TOTAL (TCF)											***18.3***		***14.2***	**32.5**

Source: Tanzania Natural Gas Utilization Master Plan (NGUMP)

MANAGEMENT STRUCTURE

MANAGEMENT STRUCTURE

ROLES OF THE SUB-SECTOR INSTITUTIONS

MEM is responsible for policy making and approving key decision gates in the upstream petroleum value chain

PURA is responsible for technical regulation of the petroleum upstream activities and Liquefied Natural Gas (LNG) facilities

EWURA is responsible for technical and economic regulation of the electricity, petroleum, natural gas and water sectors in Tanzania pursuant to Cap 414 and sector legislation

TPDC is responsible for carrying out commercial undertakings in the petroleum industry

To coordinate the importation of Petroleum products in Tanzania

LEGAL FRAMEWORK & KEY POLICIES

- National Energy Policy, 2015
- Petroleum Act, 2015
- Oil and Gas Revenue Management Act, 2015
- Tanzania Extractive Initiative Transparency Act, 2015;
- Natural Gas Utilization Master Plan

EXPLORATION HISTORY AND GAS DEVELOPMENT

TANZANIA EXPLORATION BASINS

Inland Basins and Modern Rift System 114,000km^2

Coastal and Continental Shelf Basin 280,000km^2

Deep Sea Basins 140,000km^2

Total is 534,000km^2
56% of country size

EXPLORATION HISTORY

- Exploration began:
  - ❑In 1950's- however intermittently
  - ❑Mainly coastal basins (onshore to transitional)
  - ❑SS gas discovery was in 1974
  - ❑Then Mnazi Bay in1982

- Production began:
  - ❑In 2004 – Songo Songo
  - ❑Only gas and condensate

- 95 wells at Success rate of 50%

1950-1964	Phase I
1969-1979	Phase II
1980-1991	Phase III
1992-1999	Phase IV
2000- to-date	Phase V

GAS DISCOVERY AS OF MAY 2017

Onshore: ~10.00 TCF
Offshore: ~47.25 TCF
Total : ~57.25 TCF

GAS DISTRIBUTION INFRASTRUCTURES

INVESTMENT OPPORTUNITIES

UPSTREAM OPPORTUNITIES

TPDC as NOC strategically considers the following Blocks for Exploration:

1. Blocks 4/1B & 4/1C (Awarded to NOC)
2. West Songo Songo
3. Eyasi Wembere
4. Mnazi Bay North
5. Block 3

Under Application

BLOCK 4/1B & 4/1C

Surface Area:

- Block 4/1B ~3591 sqkm &
- 4/1C ~4283 sqkm.

Plan:

- Acquire & Process 3D seismic
- Interpretations

WEST SONGO SONGO

Available Data:

- 2D seismic
- Offset wells
- 2 prospects identified

Plan:

- Secure a partner
- Drill

EYASI WEMBERE

- Area ~22671 sqkm
- Potential EAR basin

Available Data:

- AGG
- Magnetic

Plan:

- Acquire & process 2D seismic
- Interpretations

MNAZI BAY NORTH

Surface Area: ~252 sqkm

Available Data:

- 2D & 3D seismic
- 1 Prospect identified potential for > 1 TCF

Plan:

- Secure a Partner
- Drill 1 well

BLOCK 3

- Area ~5323 sqkm

Available Data:

- 2D & 3D seismic
- Papa-1 discovery ~ 2 TCF

Plan:

- Secure a Partner
- Drill 1 well
- Possibly develop together with Mnazi Bay North

DRILLING COST AS OF MARCH 2017

ONSHORE:

- Wells in ranges of 1500-2500 m cost about 15 - 28 Million USD

OFFSHORE:

- Wells in ranges of 1500-2500 m cost about 21- 45 Million USD

DOWNSTREAM OPPORTUNITIES

- Natural gas Distribution projects
  - Dar Ring Main Project
  - Mtwara and Lindi
  - Coastal Regions
  - Upcountry (CNG&Min LNG)
- Strategic Petroleum Reserve
- Oil trading business
- Gas Utilization Master Plan Projects

i.e. Methanol, GTL, DME, MTG

FINANCING STRATEGY

- Strategic Partnerships – PPP and PSA
- Loans from Banks or other Financial Institutions
- Equity Financing
- Government budgetary allocation

Ahsanteni Sana