PETROLEUM AND MINING SECTOR IN EGYPT

“Unlocking Egypt’s Energy Potential”
I. SECTOR STRENGTHS & CHALLENGES
II. STRATEGY FOR THE SECTOR
III. INVESTMENT OPPORTUNITIES
IV. KEY MESSAGES
Egyptian Aspirations

Enhance living standards and alleviate poverty

Improve public services

Increase job opportunities

Restore Egypt’s Regional and International Leading role

Realize Significant Growth Rate
A Clear Vision to Achieve Egyptian Aspirations

The Vision

- Secure local energy demand within reasonable prices to fuel sustainable economic development & realize Egyptians’ aspirations for better life

Strategic Objectives

- Ensure energy Security and satisfy domestic demand
- Maximize Added Value of Egypt’s natural resources
- Build National Capacities with high efficiency
Energy Security

Rising Consumption driven by Population growth, high energy intensity and subsidies

- **Supply demand deficit and financing**
  - **Current supply deficit** of 700 MMSCF/day for gas
- **IOC Arears**

![Graph showing energy consumption and production trends from 1994 to 2013. The graph illustrates a significant increase in energy consumption, particularly in petroleum products, with almost double the previous period by 2013. The data points for 2005 and 2006 show a notable increase, indicating rising consumption driven by population growth, high energy intensity, and subsidies.](image-url)
Energy Security

- Infrastructure Development
- Market Structure

Unbalanced Energy Mix

Average Refinery Complexity

- USA: 9.5
- Canada: 8.2
- Europe: 6.5
- Levant: 5.28
- Egypt: 3.85

Primary Energy Mix

Egypt

- Oil and gas: 96%
- Coal: 1%
- Hydro: 3%

And Increasing
Financial Sustainability And Governance

- Energy Subsidy
- Sector Governance

Overview of energy subsidies

- **51 times** Social Security
- **5 times** Food Subsidy
- **5 times** Health Budget
- **2 times** Education Budget

Comparison of energy (including electricity) subsidies with social spending

- Health
- Education
- Fuel subsidies

<table>
<thead>
<tr>
<th>Sector</th>
<th>Social Security</th>
<th>Food Subsidy</th>
<th>Petroleum Subsidy</th>
<th>Health Budget</th>
<th>Education Budget</th>
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<tr>
<td>% of GDP</td>
<td>3</td>
<td>27</td>
<td>128</td>
<td>27</td>
<td>64</td>
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<tr>
<td>% of Budget</td>
<td>1.4</td>
<td>7</td>
<td>3.6</td>
<td>4.8</td>
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The Egyptian Oil & Gas sector: A Unique Position

- Significant development potential with a robust, multi-decade track-record of success
- Substantial Exploration Potential – Increase focus on Upstream Activities
- Continuous Upgrade and Expansion of Infrastructure
- Leverage Egypt’s Location to potentially become a regional Energy Hub and a vibrant ecosystem for Petroleum investments
I. SECTOR STRENGTHS & CHALLENGES

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IV. KEY MESSAGES
The strategy for the sector comprises 3 strategic pillars and 8 action areas, supported by 23 separate policy measures.

**Petroleum Sector Strategic Pillars and Action Areas**

- **Energy Security**
  - Boost energy supply
  - Diversify energy supply
  - Manage energy demand

- **Financial Sustainability**
  - Address historic debts (arrears)
  - Reform energy subsidies
  - Address internal debts

- **Sector Governance**
  - Modernize sector governance
  - Boost private sector investment

**23 policy measures**
5 action areas and supporting policy measures have particular relevance for investors

**Petroleum Sector Strategic Pillars and Action Areas**

- **Energy Security**
  1. Boost energy supply
  2. Diversify energy supply
  3. Manage energy demand

- **Financial Sustainability**
  3. Address historic debts (arrears)
  4. Reform energy subsidies
  5. Address circular internal debts

- **Sector Governance**
  5. Modernize sector governance
  6. Boost private sector investment

23 policy measures
### Boost Energy Supply

#### Policy measures
- Encourage new gas expl. & development
- Accelerate existing gas field developments
- Secure new LNG import contracts
- Expand & upgrade infrastructure

#### Progress to date
- 56 upstream agreements signed, $12 billion minimum expenditure
- $13 billion of ongoing and planned gas developments
- Port
- Shipments
- FSRU
- Pipeline
- Ports
- Refineries
- Pipelines & Storage
- Marketing
Boost Energy Supply

Concession Agreements Map Before November 2013

Concession Agreements Map After November 2013
Boost Energy Supply

Policy measures

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Progress to date

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- Marketing
Diversify Energy

Policy measures
- Diversify Energy Mix
- Strengthen Regional Energy Trade

Progress to date
- Launched Discussion to Introduce New Sources of Energy
- Develop Cyprus Gas Utilizing Egypt LNG Facilities

Primary Energy Mix

Egypt
- Oil and gas 96%
- Coal 1%
- Hydro 3%

Global Energy
- Oil and gas 61%
- Coal 20%
- Nuclear 10%
- Other 9%

And Increasing
3 Address Historical Debts

Policy measures

- Restore EGPC Financial Balance

Progress to date

- $7.9 billion in arrears paid from July – December 2014

IOC Receipts & Payments

($) billion

- Receipts
- Payments

Arrears to IOCs

($) billion

- Jul. 13 - Jun. 14
- Jul. 14 - Dec. 14

11.2 10.7
5.0 7.9

- 0.6 0.5 0.5 1.6 1.1 1.3 3.2 6.3 5.4 4.8 5.9 3.1

- -47%
Reform Subsidies: A 5-Year Plan

Policy measures

- Adjust energy prices to cost recovery levels by 2019
- Improve subsidy Administration

Progress to date

- July 2014 announcement on comprehensive subsidy reform
- 3.0 million smart cards issues

Billion LE

00/01 01/02 02/03 03/04 04/05 05/06 06/07 07/08 08/09 09/10 10/11 11/12 12/13 13/14 14/15

Initial budget 140.00
Revised budget 100bn
Expected Value 70bn
Modernize Sector Governance

Policy measures
- Modernize Gas Sector

Progress to date
- Shadow Regulator Established

Policy
Regulation
Market

Past
EGPC, EGAS

Current
Shadow Regulator
EGPC, EGAS

Future
Regulator
EGPC, EGAS, Other Suppliers

Moving Towards Free Market
Mining Sector Plan

Increase Mineral Resources contribution to Egypt GDP to more than 5% in 10 years

- New Mining Law
- Restructuring of Mineral Resources Sector and capacity building
- Reduce Exports of Raw Materials to maximize added value
- Regularly issue new bid rounds
- Develop A Master Plan to include integrated industrial complexes to maximize added value – Example The Golden Triangle Project

The Golden Triangle project in Upper Egypt aims at establishing a World Class Economic Zone including Mineral Extraction, Industrial Facilities, Commercial Hub, and Touristic Zones.
New Mining Law Highlights

- Generating decent revenues to the state
- Maximizing added value
- A special law to govern the exploration and concession agreements for areas exceeding 16 km² through international tenders
- Allocation of 1% of the output for social development within the relevant governorate for the area being developed
- Allows different models of exploration agreements
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The Strategy requires investment of $70 billion through 2022, including $25bn of new investment.
Major Downstream Projects Recently Awarded/Ongoing

- **ERC**
  Hydrocracker Complex
  $3.7 billion
  - 4.2 MMT/Year
  - LPG / Jet Fuel / Gasoline / Gas Oil / Coke / Sulphur

- **MIDOR**
  Refinery Expansion
  $1.4 billion
  - 0.5 MMT/Year
  - Gasoline / Diesel

- **ANRPC**
  Catalytic Reforming
  $250 million
  - Gasoline / LPG / Hydrogen-rich gas

- **ETHYDCO**
  Ethylene & Poly Ethylene
  $1.9 billion
  - 0.5 MMT/Y Ethylene
  - 0.4 MMT/Y Poly-Ethylene

- **PPC**
  Sokhna-Tebeen Pipeline
  $174 million
  - 170km
  - Fuel Oil / Gas Oil

- **ASORC**
  CCR
  $250 billion
  - 0.8 MMT/Y Gasoline

- **PPC**
  Beni Sweif-Menia Pipeline
  $60 million
  - 145km
  - Fuel Oil / Gas Oil
Upstream Investment Opportunities

A total of 18 new blocks are offered for exploration in two recent bid rounds

- **EGAS 2015 Bidding Round**
  - 8 shallow-water blocks
  - 10 onshore blocks (W. Nile, E. Nile, S of Gulf of Suez)
  - Data available from EGAS and GANOPE
  - Closing date 31st May, 2015

- **GANOPE 2015 Bidding Round**
## Downstream Investment Opportunities: $18 billion

### $ billion

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<td>2.5</td>
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<td>Minia-Assiut Product Pipeline</td>
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<td>Glass Sand</td>
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<td>El Hamra Petro-Refinery Hub Project</td>
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<td>Petr. Basin, Bunkering and Solar</td>
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**Ready Now**

**Short-Term**

**Medium-Term**
Unlocking Egypt’s Energy Potential

Strong Investment Landscape

Medium-Term
- El Hamra Petro-Refinery Hub Project
- 2017 Bid Rounds
- Petroleum, Basin, Trade and Solar Energy
- Glass Sand

Short-Term
- Aromatics & Fertilizers Complex
- Propylene and Derivatives
- New Atmospheric Distillation Unit
- Gold Mining Round
- Formaldehyde and Derivatives
- Minia-Assiut Product Pipeline

Ready Now
- Full Conversion Hydrocracker Complex
- EGAS 2015 Bid Round
- EGPC 2015 Bid Round
- New Lubrication Oil Complex
- 2015 Bid Round
- El Hamra Petro-Refinery Hub Project
- Glass Sand

Readiness for Implementation

- Refining
- Upstream
- Trans./Rec.
- Mineral
- Petchem
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Strategic Objectives: Major Progress

### Energy Security
- 56 upstream - $12bn concessions awarded
- 2 current bid rounds
- New gas terms, prices & investments
- LNG imports finalized

### Financial Sustainability
- IOC arrears reduced ($6.3bn to $3.1bn)
- Energy subsidy reform ongoing (1st Phase Completed – July 2014)

### Sector Governance
- New mining law ratified
- Shadow gas regulator established

- $45 billion in oil, gas and mining investment currently ongoing
- $25 billion new investment opportunities available for private sector participation