#### Moving Forward with Natural Gas



#### THE GULF INTELLIGENCE 2ND LEVANT ENERGY FORUM



# 26 JUNE 2012 UNIVERSITY OF CYPRUS, NICOSIA

# The Need to Develop the Internal Gas Market



Cyprus has an **isolated energy system**, dependent entirely
on imported petroleum
products→ needs to **diversify**its energy sources

Cyprus' accession to the

European Union → comprised new obligations and constraints concerning emissions and the environment



Cyprus needs to Contribute to the EU 20-20-20 Target by Reducing emissions and increasing efficiency

Market conditions → economic growth is coupled to an increase in the **demand for energy** 



#### What do We Need?

#### CYPRUS NEEDS

an environmentally friendly energy system which will ensure <u>Security of</u> <u>Supply</u> and will provide consumers with a qualitative service at the <u>Lower Possible Cost</u>

## **Energy Policy**



The Cypriot long term strategic plan is aligned with the European Union Directives and energy strategy and is based on the following 3 Pylons:

Security of energy supply

Increasing the competitiveness of Cypriot economy

Adherence to environmental commitments.

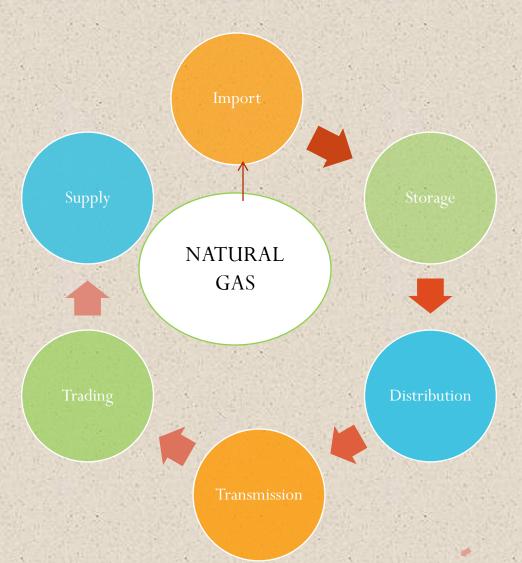
#### The Natural Gas Market



- According to EU Directives Cyprus qualifies and is classified as an Emergent Market for Natural Gas and also as an Isolated Market.
- O Unlike the electricity sector, which has been liberalized since 2004, the gas sector, will be fully monopolistic for a period of at least 10 years
- The Natural Gas Public Company (DEFA), set up and controlled by the state, is the **Sole Distributor**, of any form of Natural Gas, in Cyprus i.e. DEFA is totally responsible for the Cyprus Internal Gas Market.
- O In view of recent Gas Discoveries by Noble Energy (USA) in Block No 12 in the Cyprus Exclusive Economic Zone, DEFA is currently in discussions with the Government to widen its role and activities

# DEFA's Role in Developing the Internal Natural Gas Market





## **DEFA Scope of Work**



- I. To secure sufficient Natural Gas supplies, at the lowest possible prices, to cover the needs for Electricity Power Generation (Phase "A") and subsequently to also supply Industries, Hotels and Households.
- II. Furthermore DEFA is responsible for developing the necessary GAS NETWORK infrastructure

The Gas Network will initially consist of 3 pipelines connecting the Gas Import Hub with the three existing downstream Power Stations. The estimated cost for "Phase A" of this project is around €60m. Towards this cost DEFA has managed to Secure a €10m grant from EU under the European Economic Programme for Recovery.

Vasilikos Power Station

• ≈0.6 km pipeline

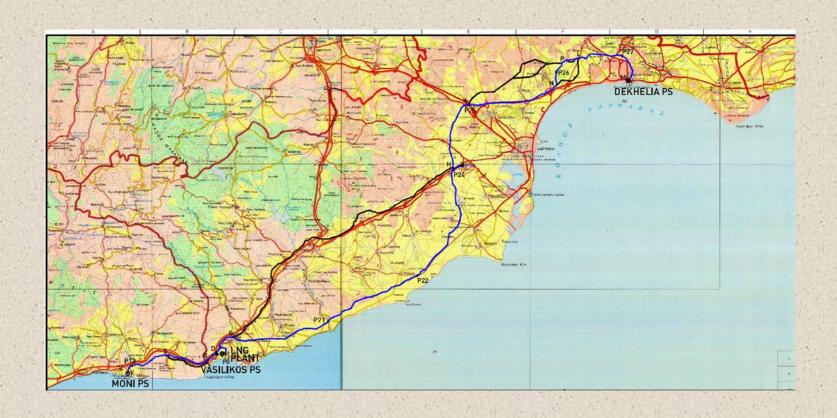
Moni Power Station

• ≈12 km pipeline Dhekelia Power Station

• ≈65 km pipeline

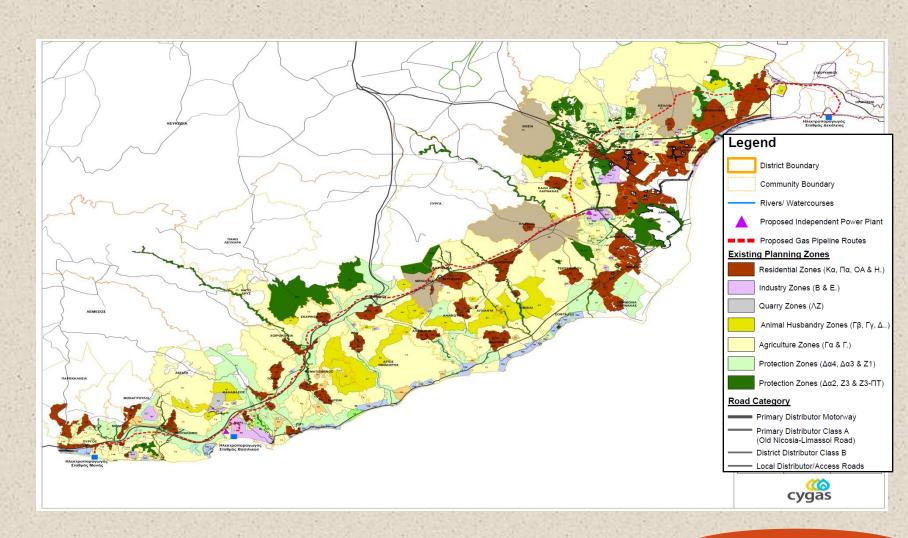


#### The Selected Route (For Phase "A")



# The Selected Route (Showing Town Planning Zones)







### The way forward

#### Pipeline Network Project.

- Regardless of the Supply Source of Natural Gas, technical work on the Pipeline Network Project is continuing uninterrupted.
- The strategic planning regarding the Gas Infrastructure Network remains unaffected and a Public Consultation with all affected communities took place on 06/06/2012.
- The gasification of the Island (Phases "B" and "C" connecting the Receiving Terminal to Industries, Hotels and Households) will be an on-going process and it is expected to cost over €500 million.

#### **Financing the Project.**

• Apart from Technical work ,DEFA is in close contact with European Investment Bank (EIB) and other Commercial Banks regarding the funding of the Pipeline Network Project.

#### **INVESTMENT OPPORTUNITIES**



The recent Natural Gas Discoveries in Cyprus Plot 12 open up a range of possible Investment Opportunities in the Cyprus Energy Sector:

- Exploration (2<sup>nd</sup> Licensing Round, 11<sup>th</sup> February 2012 Closing Date 11<sup>th</sup> May 2012- 15 Proposals were submitted)
- 2. Submarine Pipeline(s)
- 3. Liquefaction Plant(s)
- 4. Cyprus Internal Natural Gas Distribution Network
- 5. Electricity Power Generation
- 6. Use of Natural Gas in Transport (buses, cars, etc.)

#### 1. Exploration



- Block No 12 was awarded to Noble Energy during the 1<sup>st</sup>
  Licensing Round. Another 12 Blocks are the subject of the
  Second Licensing Round, offering big investment
  possibilities.
- 15 Proposals have been received, which were submitted by big companies around the world.



### 2. Submarine Gas Pipelines

- In order to bring the Natural Gas to Cyprus, from the Gas Fields, a 200km + submarine gas pipeline will be necessary. Estimated cost up to US\$2Billion.
- There is an opportunity for the Production, Laying,
   Operation and Maintenance of this pipeline, which is bound to have "third party access".



### 3.Liquefaction Plant(s)

- The setting up of 1-3 Liquefaction trains 5MT/y each, (in modular form), in Cyprus, in order to liquefy gas reserves and export them to Europe, Asia, etc as LNG (Liquefied Natural Gas), is a necessity.
- The estimated cost of establishment of such an LNG plant is in the region of US\$10Billion.

# 4. Cyprus Internal Natural Gas Distribution Network



- The Government of Cyprus has created the Natural Gas Public Company of Cyprus (DEFA) which will be the sole importer and distributor of Natural Gas in Cyprus.
- DEFA is currently designing the inland gas distribution network and very soon it will announce tenders for this Project. The gasification of the Island will be an on-going process and it is expected to cost over €500 million.



## 5. Electricity Power Generation

- The Electricity Market of Cyprus has been liberalized (following EU Directives) so it is open and free to competition.
- The Electricity Power Generation needs of Cyprus are quite high and are increasing, while the Sector is still a monopoly!
- It is anticipated that the first Independent Power Producers will soon appear.



### 6.Use of Natural Gas in Transport

• The use of Natural Gas in Transport i.e. Buses, other Vehicles running on Natural Gas and Gas Stations, opens up a big new opportunity which needs to be addressed. This subject is one of the priorities that DEFA itself has set.

Thank you

Costas Ioannou

**Executive Chairman** 

Email: info@defa.com.cy

Tel: 00 357 22 761761