



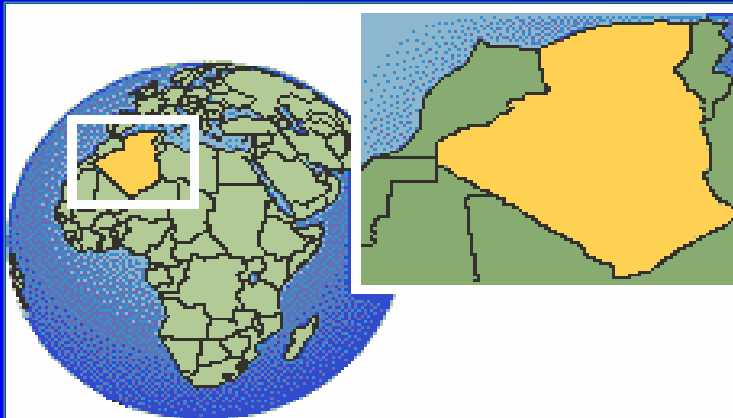
SONATRACH

A Key Player In The Gas Industry

3rd Latin American & Caribbean
Gas and Electricity Congress

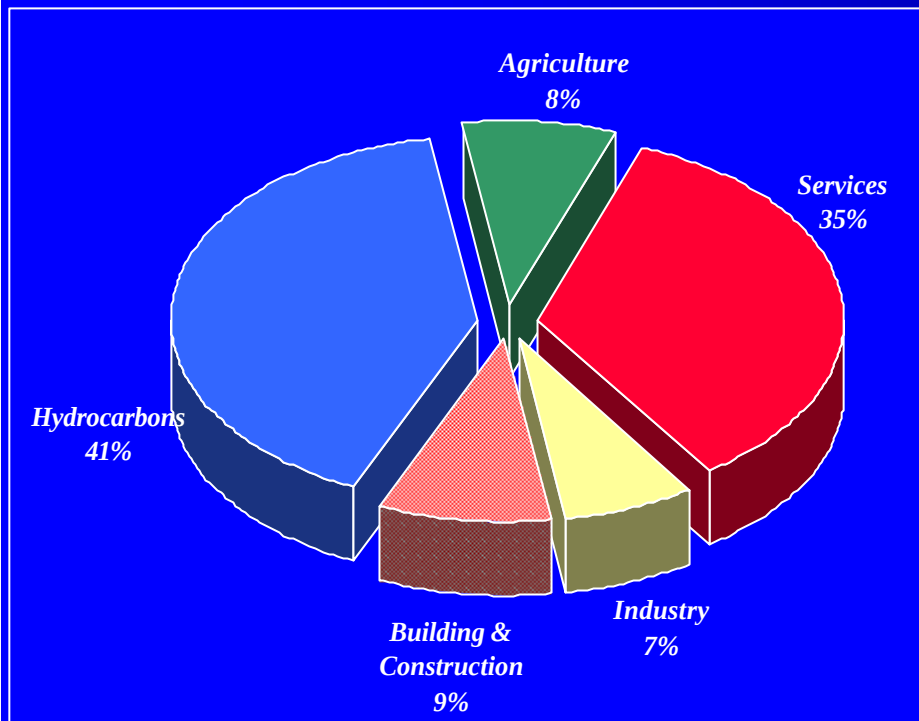
22-24 April 2002
Santa Cruz - Bolivia

Some figures about Algeria



- ✓ **Second African country in size, with an area of 2.4 Million Sq.Km.**
- ✓ **Strategic geographic location, at the crossroads of African, Arabic, and Mediterranean worlds**
- ✓ **30 Million inhabitants, mostly young and educated**

The Weight of the Hydrocarbon Industry in the Algerian Economy (year 2000)



- ✓ The hydrocarbon industry accounts for around 41% of GDP
- ✓ Proceeds from hydrocarbon exports cover 95 % of hard currency resources of the country
- ✓ More than half of the state budget is funded by oil and gas tax revenues
- ✓ 150 000 employees work for the oil and gas industry

GDP : 53,4 Billion US \$

An Important Base of Reserves

Hydrocarbons in place
= 140 Billion bbl Oil Equivalent



Total Hydrocarbons reserves
= 40 Billion bbl Oil Equivalent

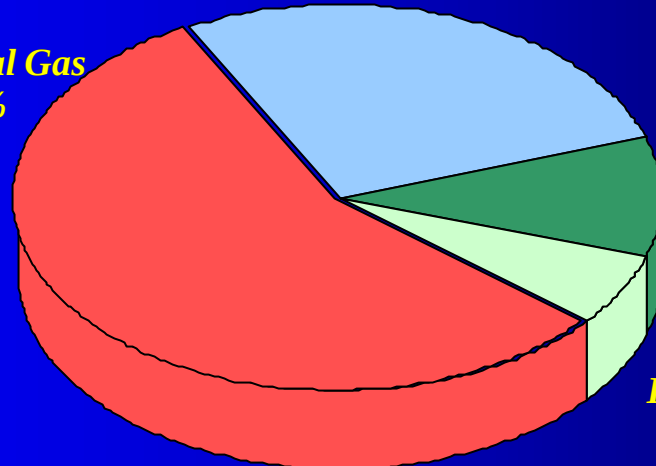


Crude Oil
28 %

Natural Gas
56 %

Condensate
10 %

L.P.G
6 %





Sonatrach : The Algerian National Oil and Gas Company

Sonatrach was created in december 1963

The mission of Sonatrach is threefold:

- ➡ to meet Algeria's present and future hydrocarbon needs
- ➡ to maximize the long-term value of Algeria's hydrocarbon resources
- ➡ to contribute to the national development, mainly by providing the required hard currencies



A Competitive Law on Hydrocarbons

↪ 54 contracts have been concluded between Sonatrach and foreign partners since the promulgation, in 1986, of the Law on Hydrocarbons.

↪ At the present time, 23 Oil companies are operating in Algeria.



Sonatrach : A Fully Integrated Company

Core activities

- *Exploration and Production*
- *Transportation by pipelines*
- *Natural Gas Liquefaction & LPG Separation*
- *Marketing*

Affiliated activities (100%)

- *Refining (NAFTEC)*
- *Petrochemicals (ENIP)*
- *Domestic Distribution of petroleum products (NAFTAL)*
- *Hydrocarbons shipping (SNTM - HYPROC)*
- *International oil trading*
- *International gas trading*
- *Training (Algerian Petroleum Institute)*

Affiliated activities (51%)

- *Drilling (ENTP and ENAFOR)*
- *Well Services (ENSP)*
- *Geophysics (ENAGEO)*
- *Construction (ENGTP)*



Key Factors of Success

- *Important base of reserves*
- *Sedimentary basins of high potential and under explored*
- *Competitive Hydrocarbon Law*
- *More than 30 years of experience in integrated oil and gas activities, from upstream to downstream*
- *Leading experience in the gas chain, mainly in gas liquefaction*
- *Products of high quality and proximity to important markets*
- *Successful record of partnership*



SOME KEY FIGURES ABOUT SONATRACH (2000)

**12 TH Largest Oil and Gas
Company in the World (PIW)**

Total gas exports :

62 Bcm, of which : 43 % LNG
57 % Natural Gas

Total hydrocarbons exports: 122 Mtoe

Total Export Sales : 20.8 Bn US \$

Exploration :

Mining territory : 1.6 million Km²

Production :

82 Fields

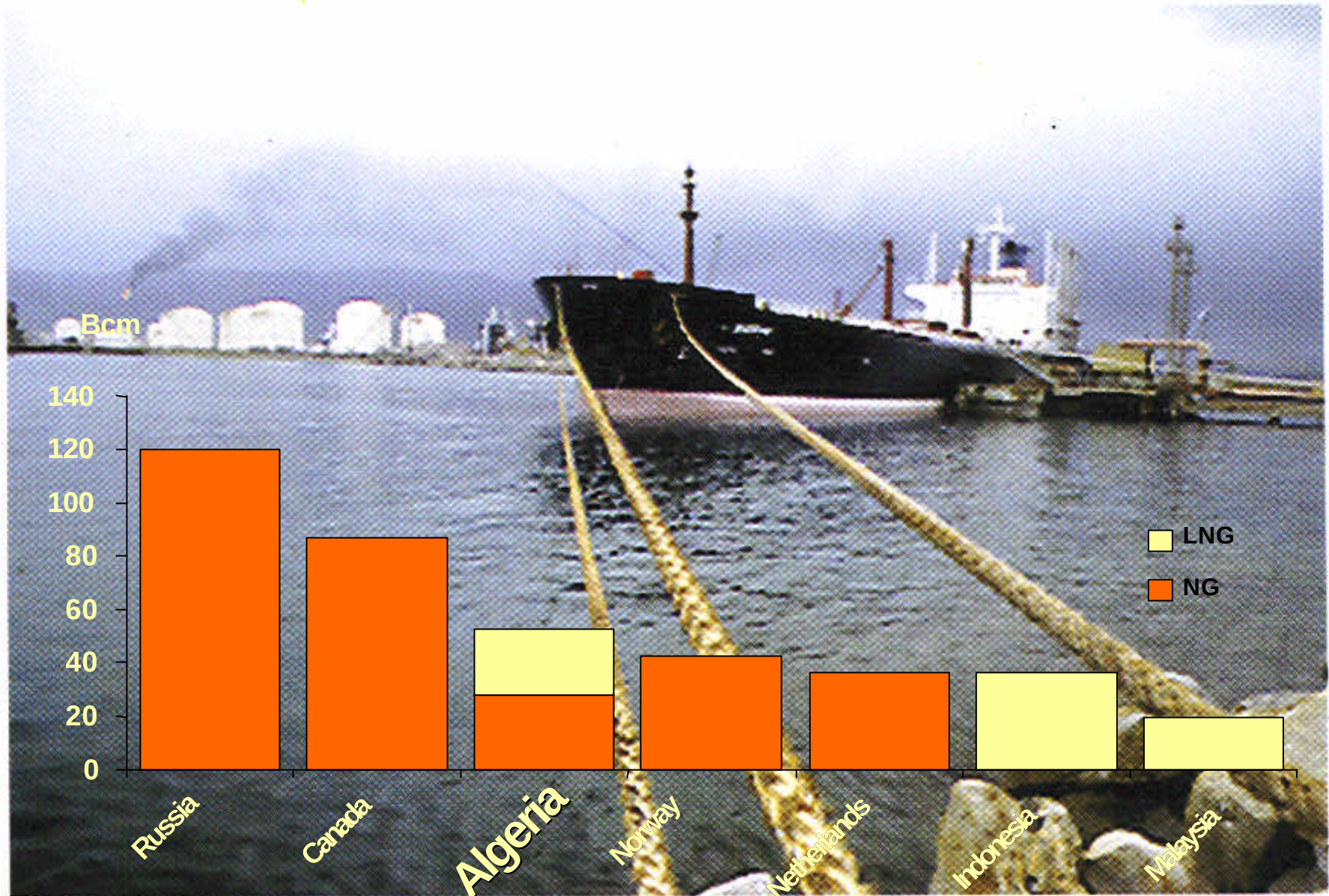
202 millions t.o.e produced (of which
65 % of Natural Gas) equivalent to
around 4.4 Mboe/day.

Separation of LPG : 8.4 M.T

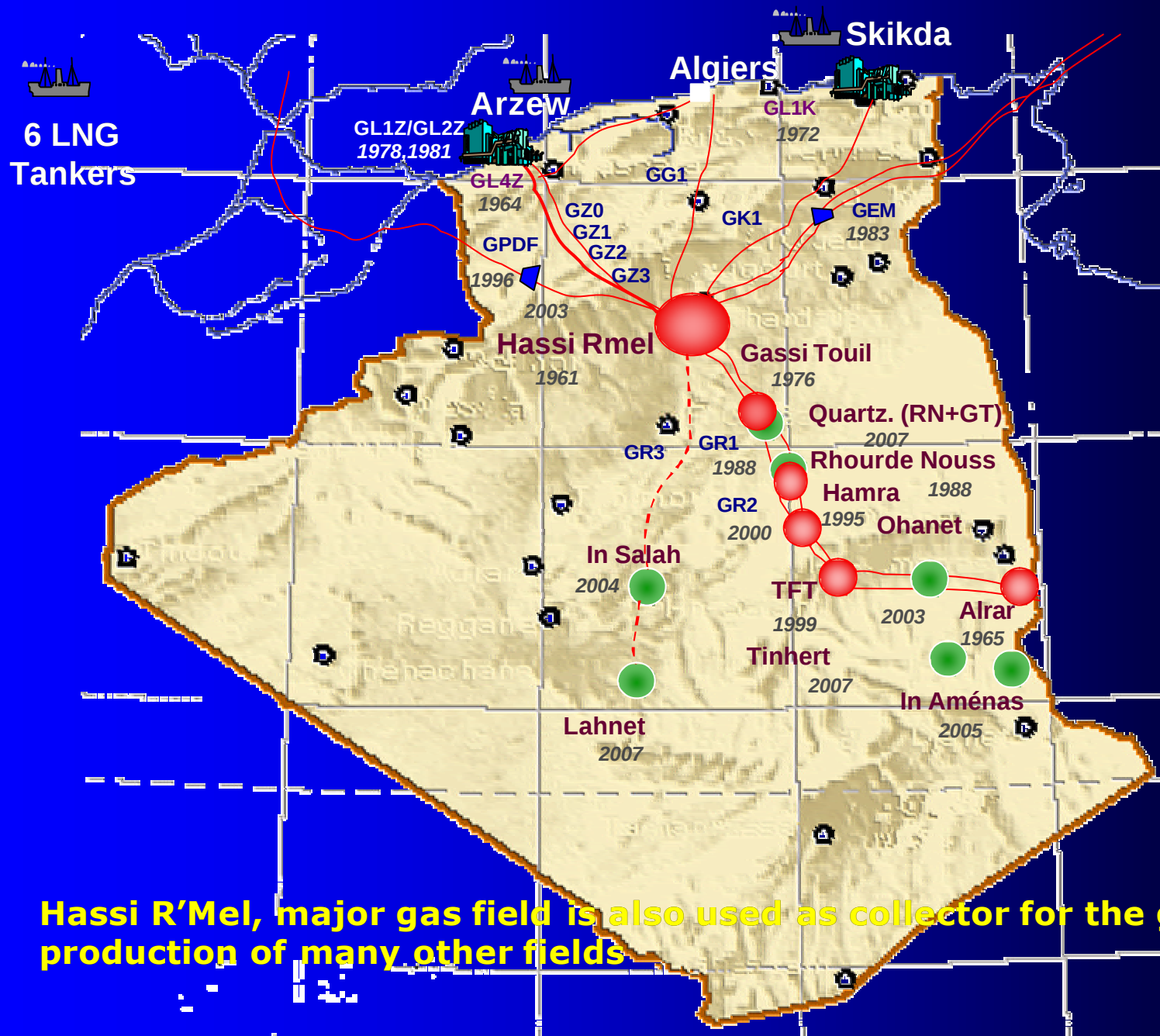
Transportation :

14000 Km of pipeline in operation
(27 pipelines of which 12 gaslines)

Algeria, the Third World Gas Exporter



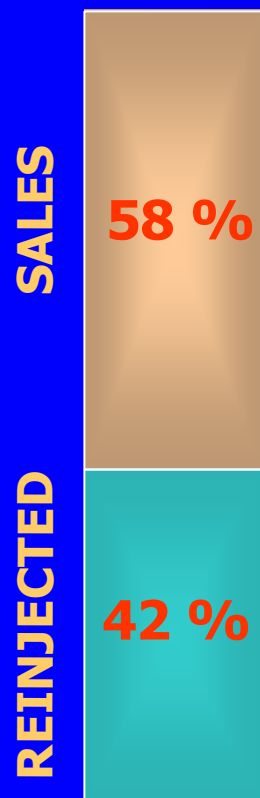
OVERVIEW OF GAS INFRASTRUCTURE



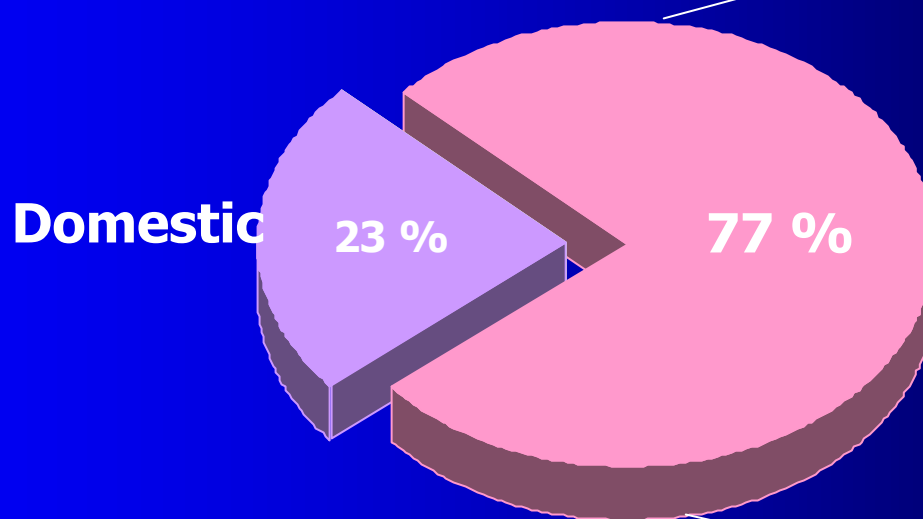
Hassi R'Mel, major gas field is also used as collector for the gas production of many other fields

ALGERIAN GAS BALANCE 2000

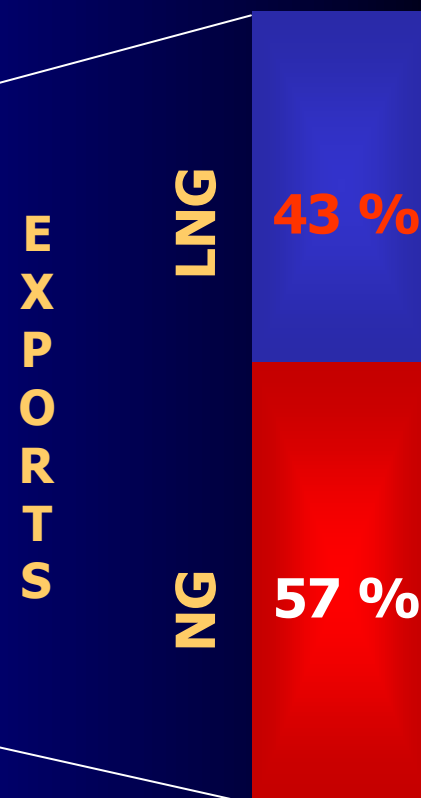
Gross Production
140 Gm3



Marketed Production
81 Gm3



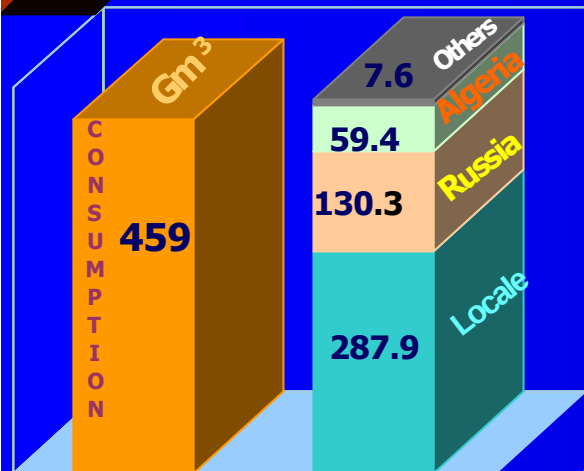
Exports
62 Gm3



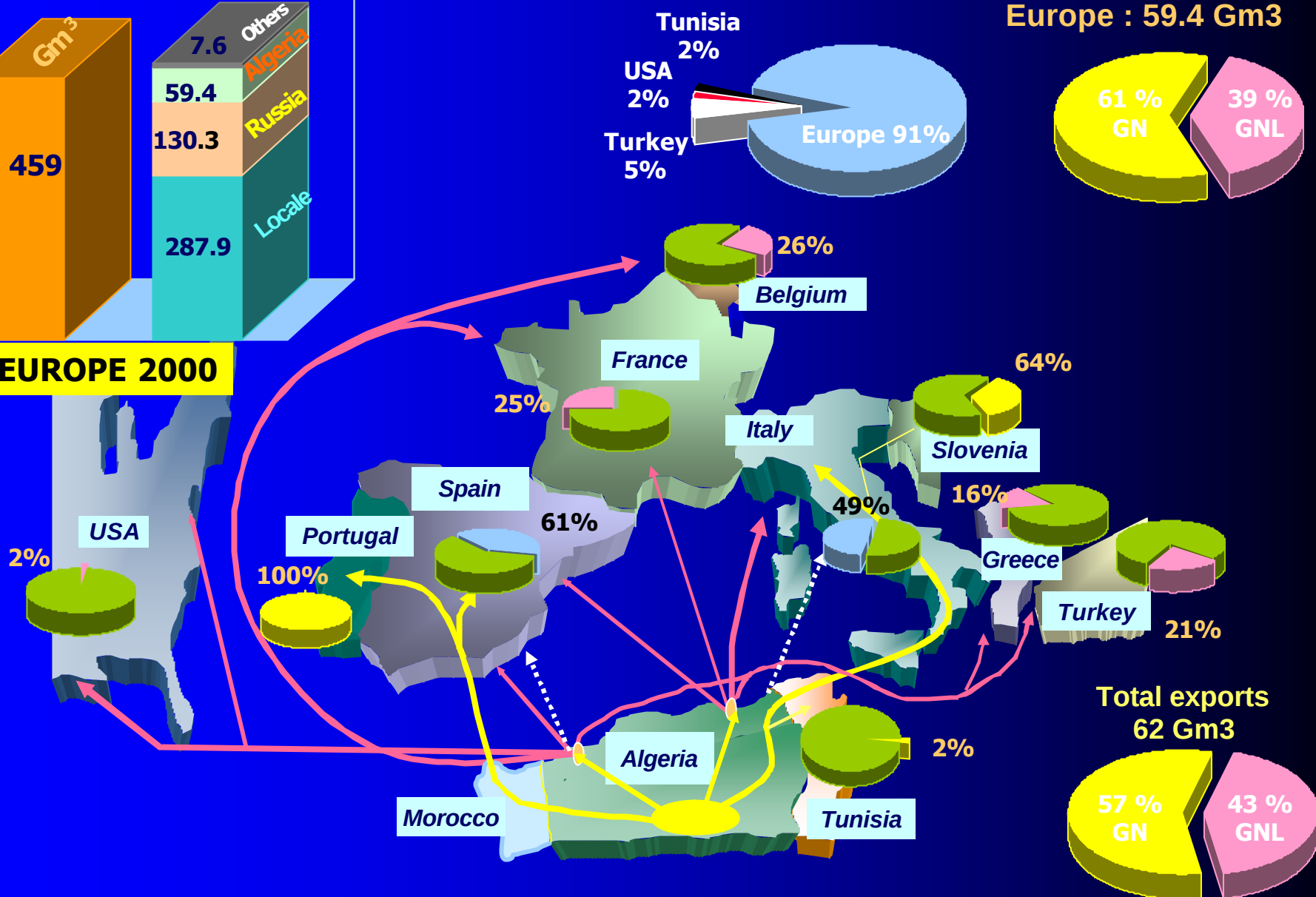
- Exports account for 77% of the marketed volumes
- Nearly 42% of the total gas production is reinjected



NATURAL GAS EXPORTS in 2000



EUROPE 2000



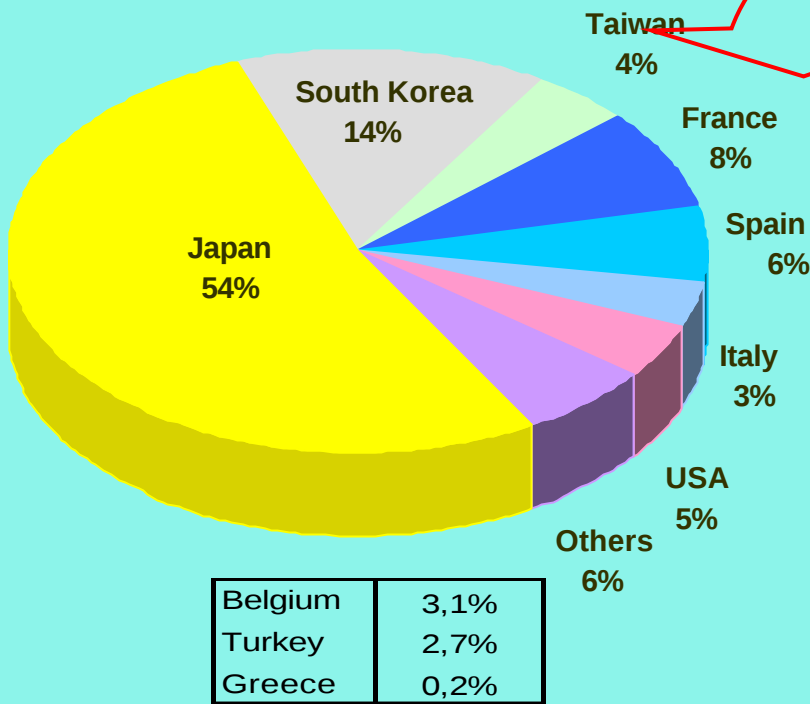
Europe is the main destination for the Algerian gas exports

Source : BP STATISTICAL REVIEW OF WORLD ENERGY 2001

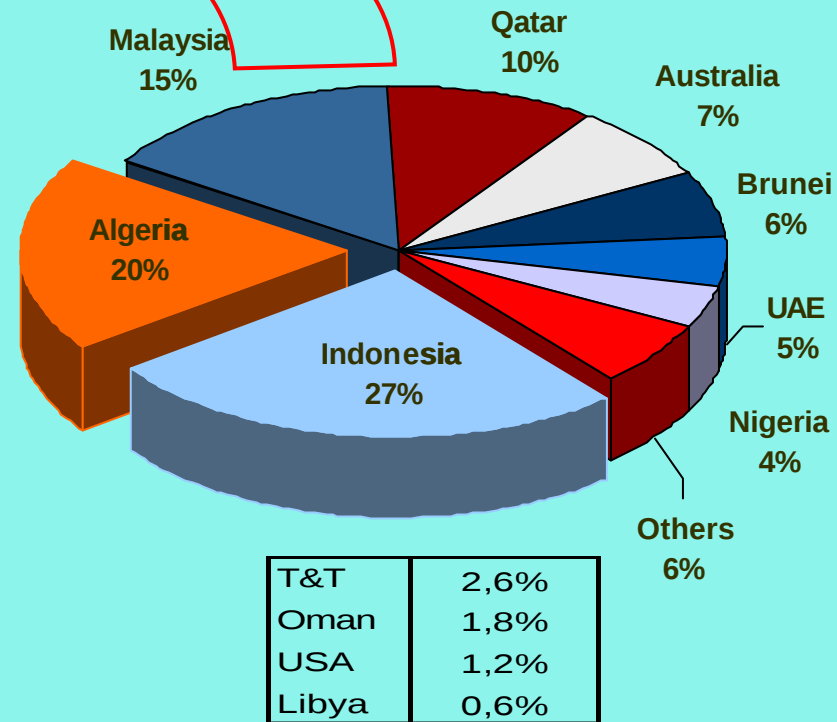
ALGERIA, THE WORLD'S SECOND LARGEST EXPORTER of LNG in 2000



LNG Importing Countries



LNG Exporting Countries



In 2000, worldwide LNG trade amounted to 137 Gm³
An increase of 10% compared to 1999

Algeria's Gas Export Projects

LNG Terminal
1.8-3.6 MT/an



MEDGAZ
8-10 bcm

ESPAGNE



Arzew



Liquefaction Plant
4 MT/an
LNG Carriers

Hassi R'Mel

ALGERIE

TMPC

The new export routes for Algerian gas to Europe

Sonatrach - Worldwide



Pipeline ALGERIA - SPAIN



• Debit : 8 Milliards Cm^3/y

• De Hassi R'mel à Beni Saf (onshore pipeline/Algérie):

Diametre : 48"

Long : 547km

• De Beni Saf à Almería (offshore pipeline) :

Diametre : 24"

Long : 200km

Deep : 2200 m

1 station

**MEDGAZ for Studies and
promotion of the Project**

Pipeline ALGERIA - ITALY



• Debit : 7,6 Billions Cm^3/y

• Hassi R'mel - El Kala Ouest (onshore pipeline/Algérie):

Diametre : 42" Long : 640km

1 Station

Capex : 595 Millions US\$

• El Kala - Cagliari (offshore pipeline) :

Diametre : 24" Long : 310 km

Deep : 2150 m

Pression : 200 bars

1 Station

Capex : 764 Millions US\$

• Cagliari - Olbia (Sardaigne) :

Diametre : 42" Long : 300km

Capex : 222 Millions US\$

• Olbia - C.d.Pescaia (Offshore pipeline) :

Diametre : 22" Long : 220km

Deep : 900 metres

Pression : 190 bars

1 station

Capex : 451 Millions US\$

Estimated Project Costs : 2 Billions US\$

Trans-Africain Pipeline Project



• Abuja (Nigeria) – Niger – Beni Saf (Algeria)

Diametre : 56" Long : 3773km

Pression max : 71 bars

Estimated Capex : 7 Billions US\$

Camisea Project



- **BOOT – 33 years**
- **Camisea – Lima : Gas Pipeline :**
Diametre : 26'' 24'' 18''
Long : 697km
2 Stations
- **Condensat Pipeline :**
Capacity : 50 000 bbl/d
Long : 575km
4 Pumping Stations

SONATRACH



Thank You