



Nigeria Field Trip

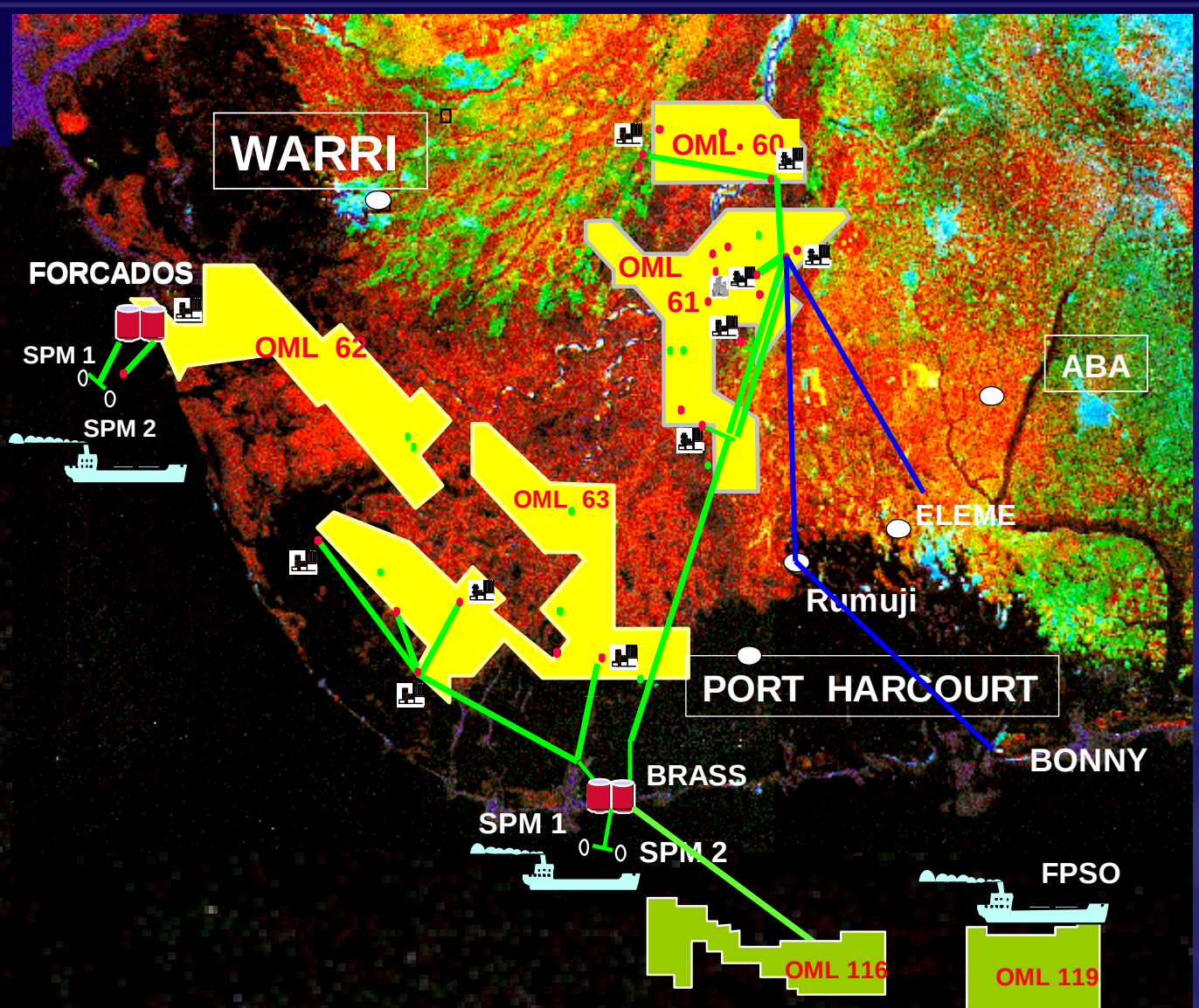
Claudio Descalzi

Senior Vice President for Operations

Italy, Africa and Middle East

E&P Division

October, 2002





Socio-Economic Situation

Year 2001

- In 1999 the Country returned to democracy, after 15 years of military rule
- The main objective is to obtain international credibility to build a stronger Country

GENERAL DATA

Population:	120 million
GDP:	36.0 Billion US\$
GDP per capita:	300 US\$
GDP growth rate:	3%
External Debt	27 Billion US\$

UPSTREAM SECTOR

Oil production:	2,1 M BOPD
Total Gas production:	0.84 M BOEPD
Oil & Cond. Reserves 2P:	30.0 B STB
Gas Reserves:	138.1 T SCF

Oil and Gas revenues represent 78% of foreign exchange earning and 38% of GDP



Eni's contribution to the Country's great challenges



- Special attention to NIGER DELTA needs
 - Health improvement
 - Economic empowerment
 - Educational programs
 - Social Infrastructures
- Utilise gas resources currently flared





ENI in Nigeria



Nigerian Agip Oil Company Ltd.

J.V. Concession Agreement



Agip Energy & Natural Resources Ltd.

Service Contract



Nigerian Agip Exploration Ltd.

Production Sharing Contract



Downstream Participations



Nigeria LNG Limited

Bonny Gas Transport Limited

Shareholder Agreement



Typology of Contracts

CONCESSION AGREEMENT

- OMLs 60/61/62/63 NAOC JV (op.) 
- OMLs SPDC JV
- SOLE RISK (OML 71/72/74/77)

PRODUCTION SHARING AGREEMENT

- OPL 211 316 (Abo field: NAE Ltd.) 
- OPL 219 – OML 118 (Bonga: Snepco op.)
- OML 244 
- OML 79 (EA field – SPDC op.)

SERVICE AGREEMENT

- OML 116 – Agbara field 
- OML 119 – Okono/Okpoho fields 



AGIP Concessions & participated blocks

DEVELOPMENT LEASES

Sq km

Operated: 6,443

Non Operated: 32,955

EXPLORATION LEASES

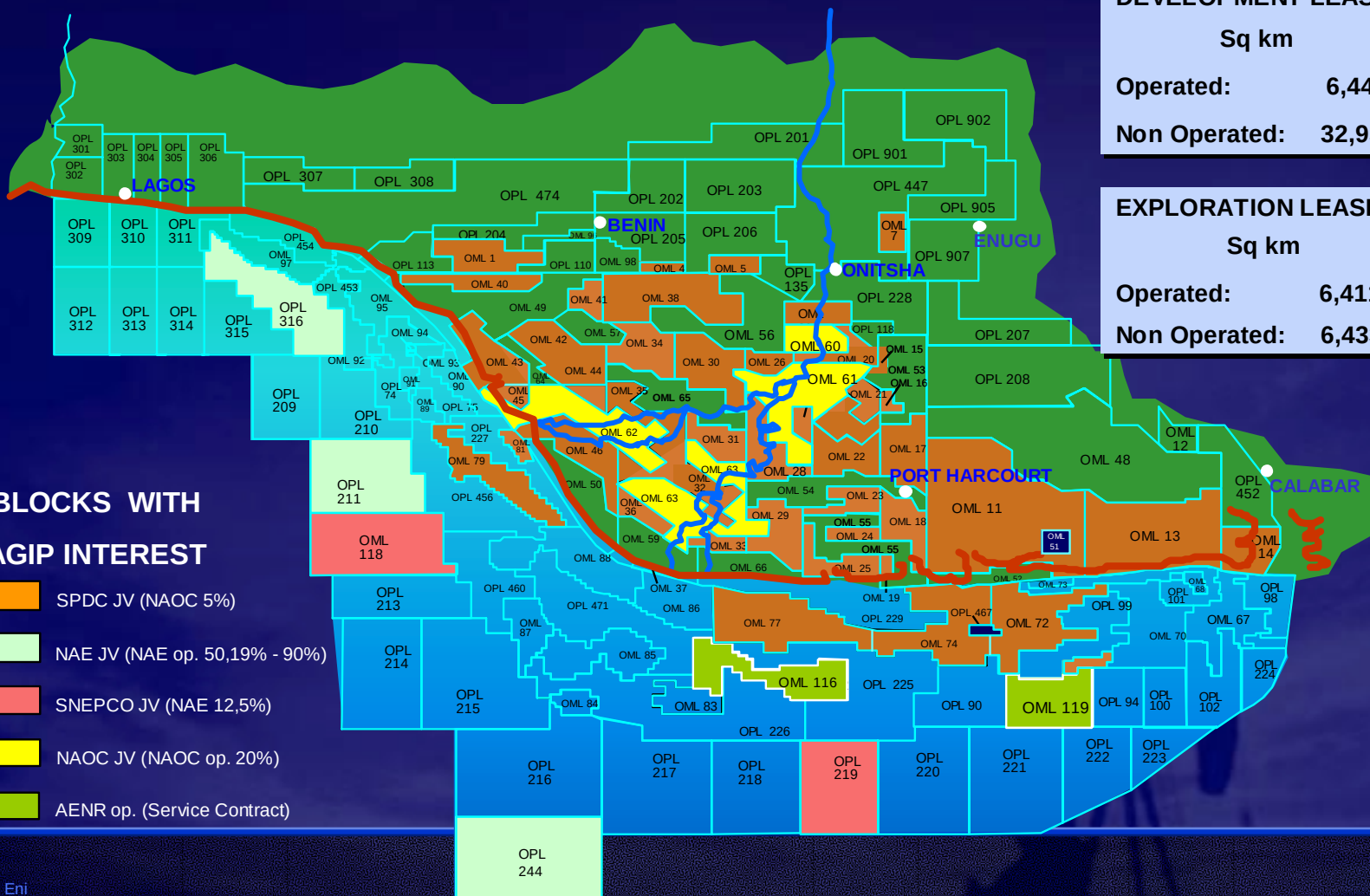
Sq km

Operated: 6,411

Non Operated: 6,433

BLOCKS WITH AGIP INTEREST

- SPDC JV (NAOC 5%)
- NAE JV (NAE op. 50,19% - 90%)
- SNEPCO JV (NAE 12,5%)
- NAOC JV (NAOC op. 20%)
- AENR op. (Service Contract)





Eni's history in Nigeria



1962: AGIP STARTS EXPLORATION ACTIVITIES IN NIGERIA

1965-1967: DISCOVERY OF EBOCHA, MBEDE, KWALE, OKPAI , AKRI, OBIAFU AND OBRIKOM FIELDS

1973: **JV WITH NIGERIAN GOVERNMENT (60% NNPC)**

1973-1975: DISCOVERY OF OBAMA FIELD AND EBEGORO FIELD

1976: FIRST TO IMPLEMENT SOCIAL PROGRAMMES (ELECTRICITY TO HOST COMMUNITIES).



1979: **INCORPORATION OF AGIP ENERGY & NATURAL RESOURCES Ltd.**

1985: NAOC IS THE FIRST OIL COMPANY TO START RE-INJECTING THE PRODUCED GAS INTO OIL RESERVOIRS.

1989: AGIP ACQUIRES 5% OF SPDC JV, (NNPC 55%, SHELL 30% , ELF 10% , AGIP 5%) PRODUCING ABOUT 1 MILLION OF OIL BARRELS PER DAY

1989: THE NIGERIA LNG Ltd IS ESTABLISHED.
PARTNERS : AGIP 10.4%, NNPC 49%, SHELL 25.6%, ELF 15%



Eni's history in Nigeria



1994: EXPANSION OF OB-OB PLANT TO RECOVER NGL THE NGL, AND FUEL GAS, ARE DELIVERED TO ELEME PETROCHEMICAL

1996: **INCORPORATION OF NIGERIAN AGIP EXPLORATION (NAE), FOR THE ACTIVITIES IN DEEP WATERS (PRODUCTION SHARING CONTRACT)**

1997: **RENEWAL OF OMLs TILL YEAR 2027**

1999: **START-UP OF LNG PLANT IN BONNY (TRAINS 1-2) AND F.I.D. FOR TRAIN 3 (FORECAST START UP NOV. 2002)**

2000: LAUNCH OF GAS MASTER PLAN PROJECTS WITH OBJECTIVE OF ZERO FLARING WITHIN 2004 TO CREATE VALUE FOR GAS RESOURCES

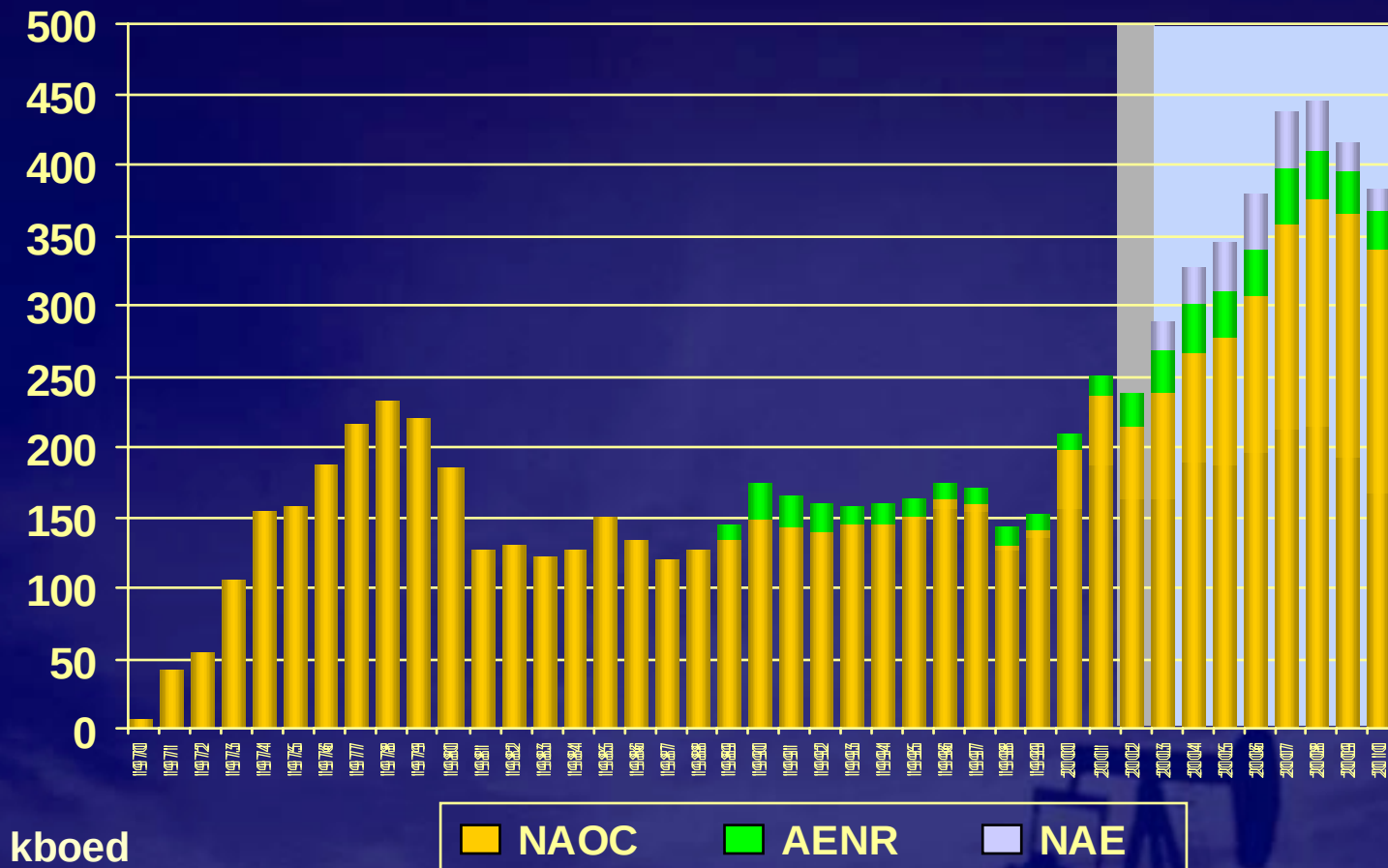
2001: FIRST OIL COMPANY TO SIGN A POWER PURCHASING AGREEMENT (PPA) WITH FEDERAL GOVERNMENT AND TO START THE PROJECT FOR IPP (INDEPENDENT POWER PLANT)

2002: N-LNG TRAINS 4-5 F.I.D. (FORECAST START UP Q2 2005)



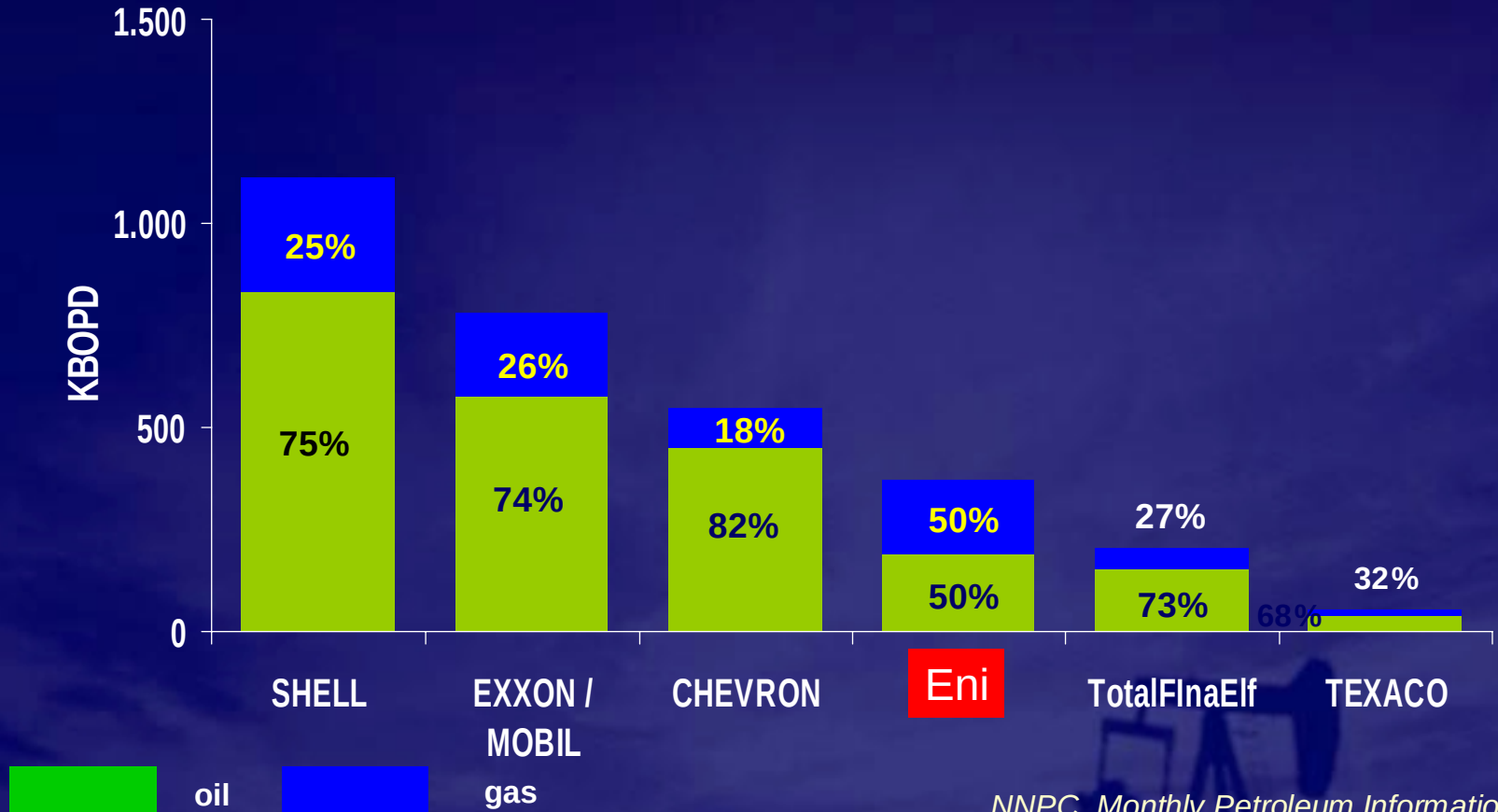


Operated production 100%





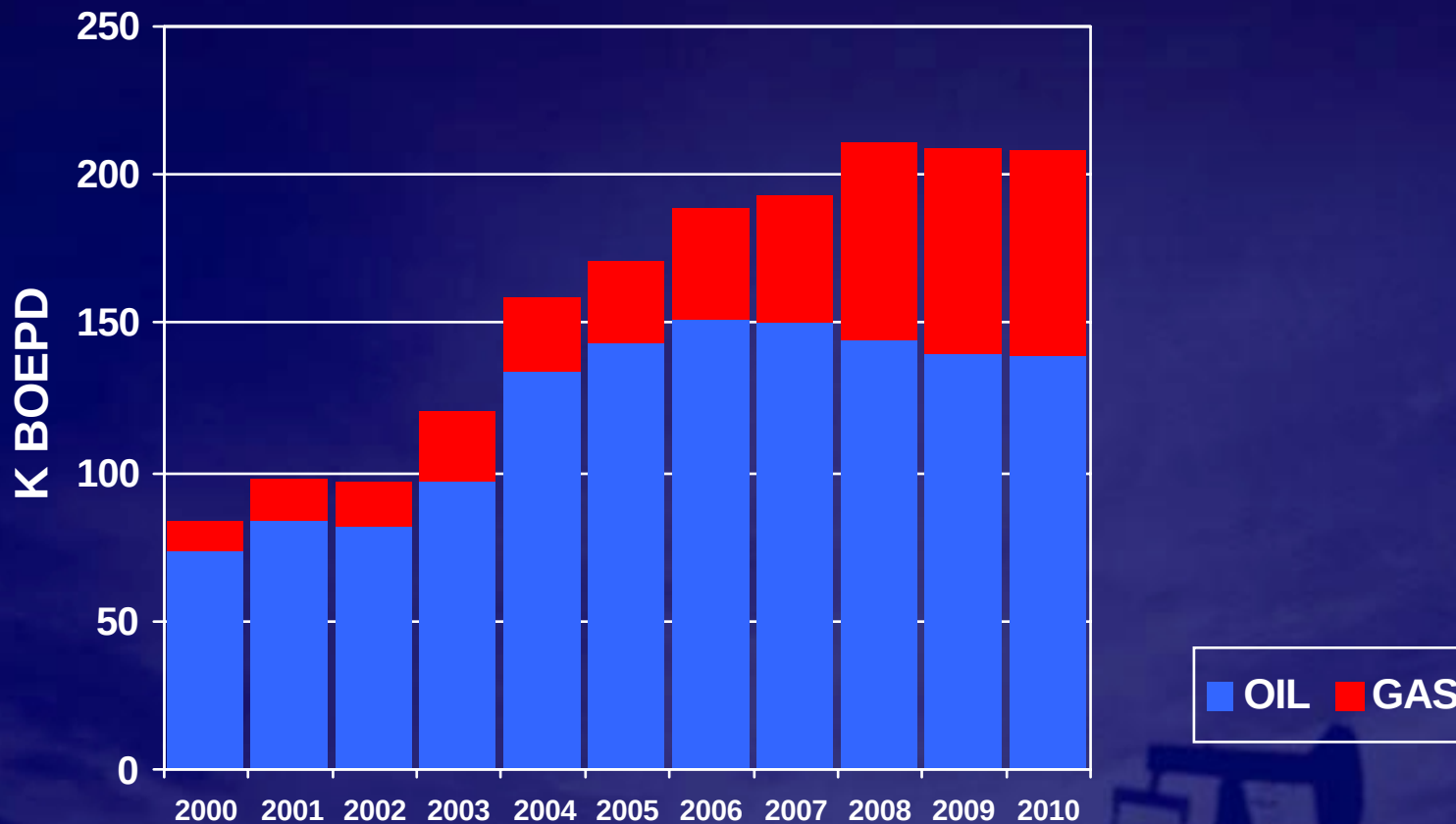
Averaged daily operated production Year 2001



NNPC, Monthly Petroleum Information



Eni Equity Production



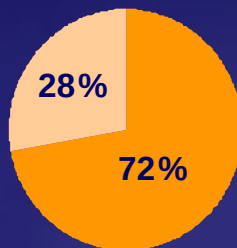
Equity Reserves (M BOE @ Dec. 2001)

TOTAL = 2,0 B BOE



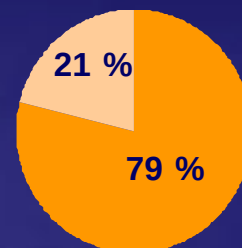
P1

700



P2 + P3

1300



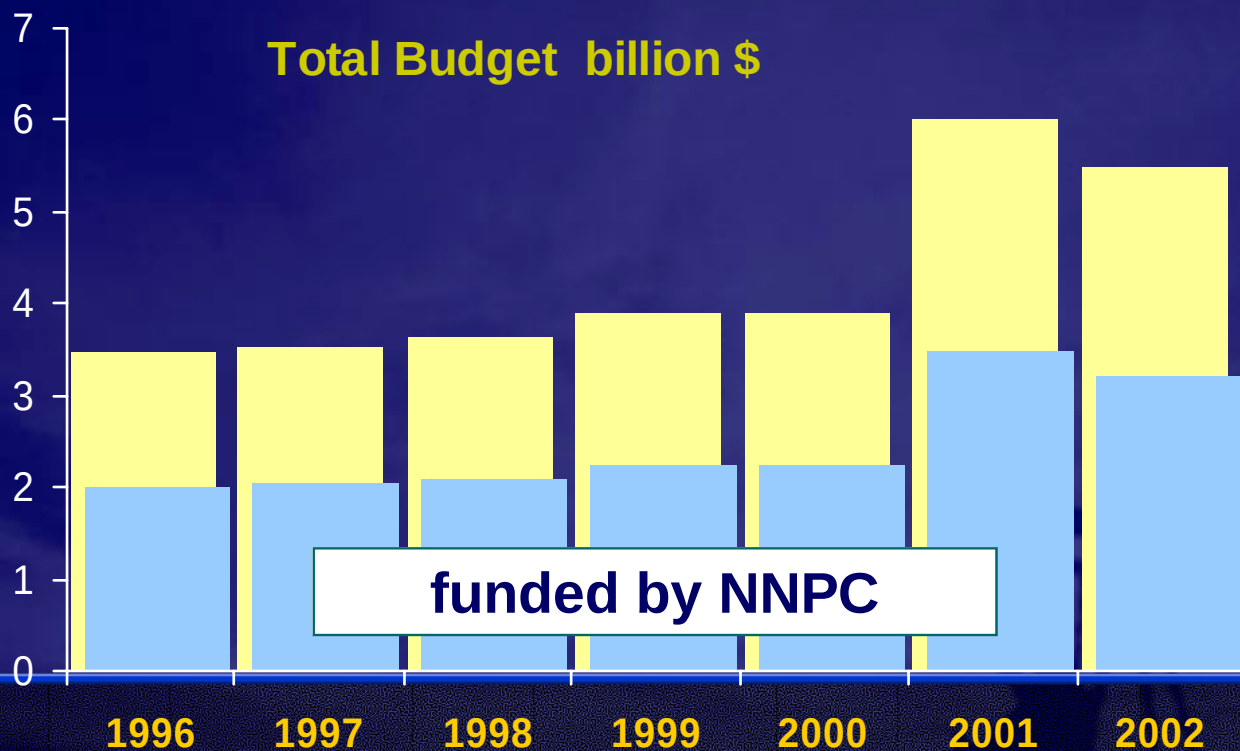
Replacement ratio

1999	4.07
2000	2.03
2001	2.55



NNPC JVs Budget contribution

- Average budget 1996 - 2002: \$ 4.2 billion/year
- Budget Year 2002: 5.5 billion \$ (50% capex for associated gas projects)





Investments & Operating Costs - Eni share 2001 & Four year plan 2002 - 2005

Million US\$

2001

2002

2003 - 2005

Capex Development

292

377

661

Capex Exploration

31

49

98

Total Capex

322

425

759

Operating Costs

72

107

434





Utilization of Associated Gas

View of Nigerian flares as seen from the satellite
An unusual brightness in the dark of the African continent

Nigeria produces 2.1 M Bopd of oil and 4,850 M Scf/day of associated gas.

About 2500 M Scf/day is presently flared.

Gas reserves of the country is estimated to be 138 Tcf

The government through fiscal incentives has opened new markets

In 1999 commenced the exportation of liquefied natural gas (N-LNG)

Zero flaring objective in 2008



Utilization Associated Gas - Flaring down

NAOC is implementing the Gas Master Plan to achieve the zero flaring by 2004; to be the first among the oil multinationals operating in Nigeria



1985



2000

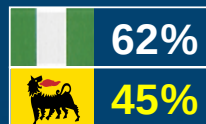
The Nigerian gas flare torches



2004



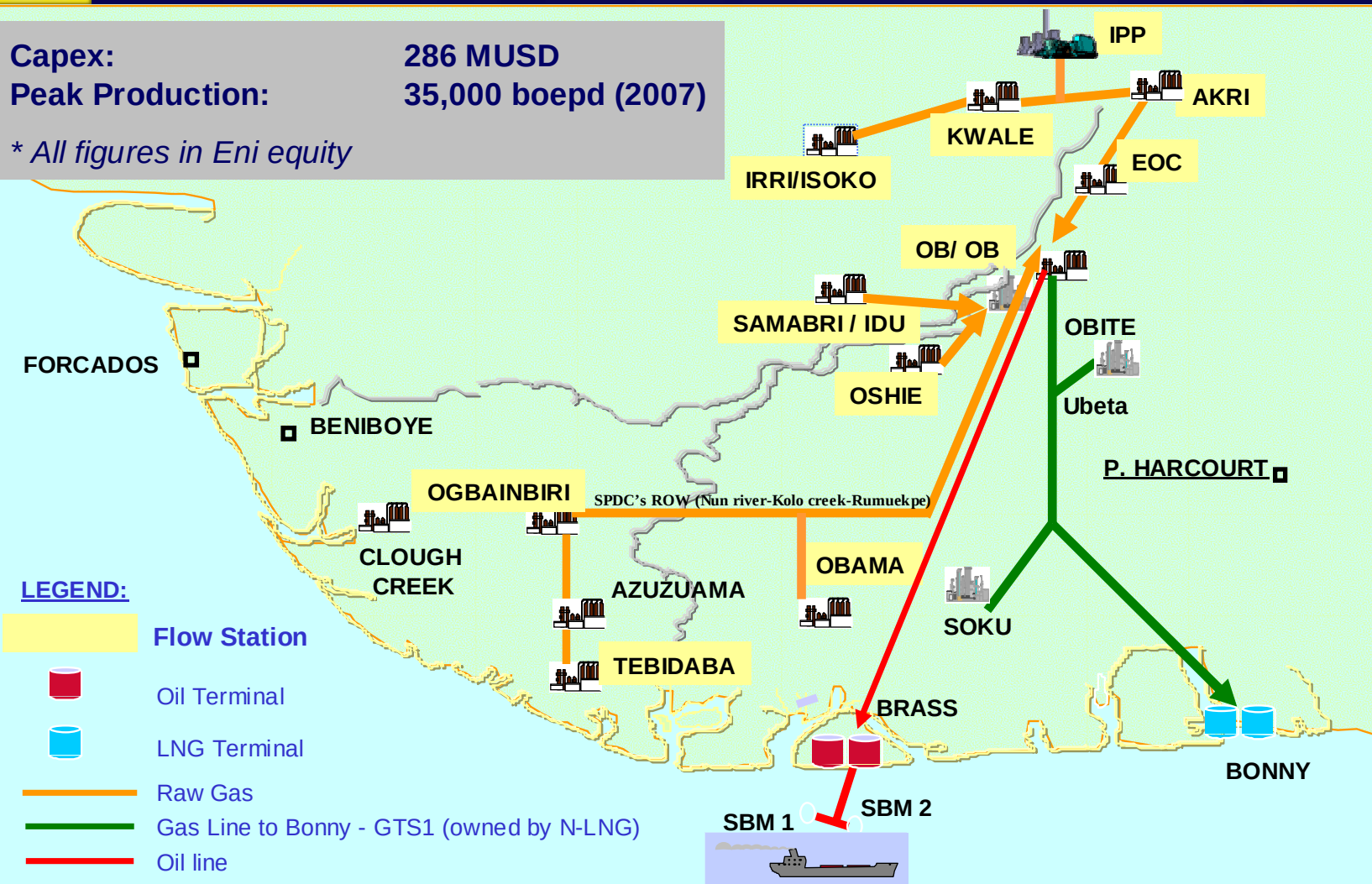
2008



NAOC Land & Swamp Area Projects

Capex: 286 MUSD
Peak Production: 35,000 boepd (2007)

** All figures in Eni equity*



Nigeria - LNG Projects



Train 6

A feasibility study for this is currently ongoing. The start up is foreseen by 2006



Nigeria LNG - Marketing

Trains 1, 2 & 3

Production: **10.85 Bcm/y**

BASE PROJECT

Trains 1 & 2

BUYERS - QUANTITY (Bm³/y) - DESTINATION

ENEL	3.50	Montoir-France
ENAGAS	1.6	Huelva -Spain
GAZ DE FRANCE	0.5	Montoir-France
BOTAS	1.2	Marmara-Turkey
TRANSGAS	0.35	Huelva -Spain
Total	7.15	

EXPANSION PROJECT

Train 3

BUYERS - QUANTITY (Bm³/y) - DESTINATION

ENAGAS	2.7	Huelva -Spain
TRANSGAS	1.0	Huelva -Spain
Total	3.7	



Train 4 & 5

Production: **10.3 Bcm/y**

Quantity already sold



LNG PLUS

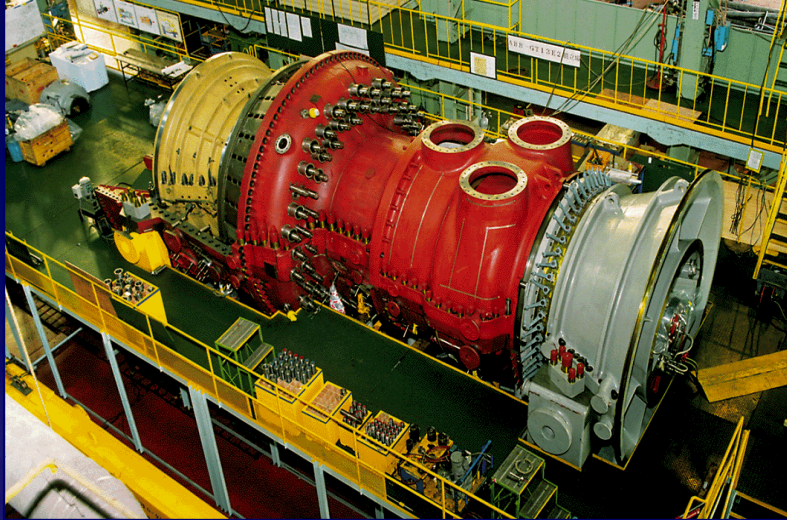
BUYERS - QUANTITY (Bm³/y) - DESTINATION

Eni	1.5	Portugal
IBERDROLA	1.5	Spain
SHELL	1.5	USA
TRANSGAS	2.0	Portugal
Total	6,5	

3.8 Bcm/y of LNG

balance already committed
(MOU)

IPP project, Okpai 450 MWe Power Plant



Open Cycle Operations:
End 2003: Gas Turbine
Generators operation

Commercial Operations:
Mid 2004: Full Plant Start up

Scope of the Project:
Improve Nigeria Power Generation Capacity
Reduce Gas Flaring

Social Commitment





Eni's social commitment in Nigeria

More than 500 social projects for the host communities

**SOCIAL
INFRASTRUCTURES**

344

**ENVIRONMENTAL
PROTECTION**

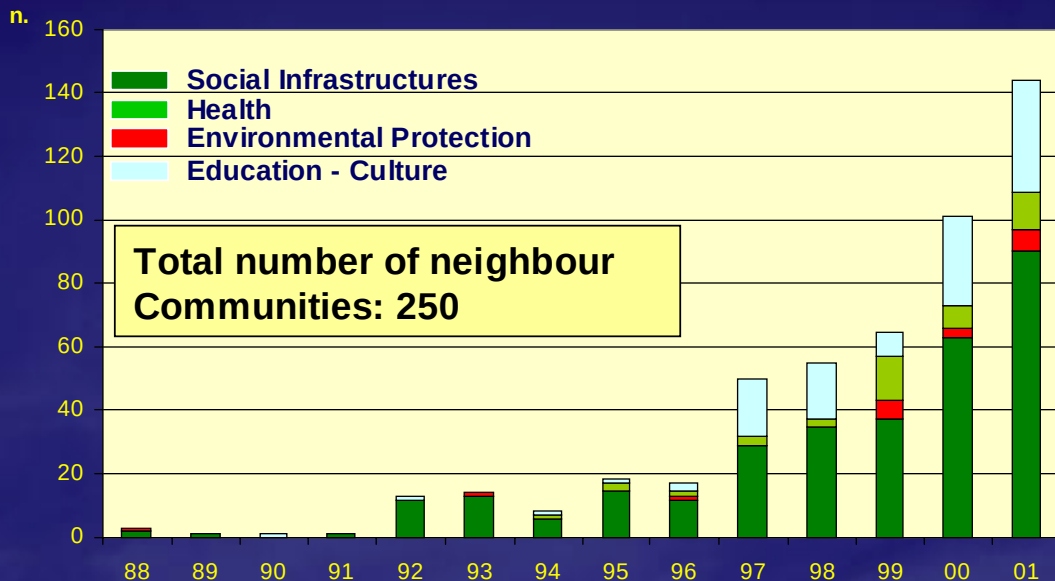
21

**EDUCATION -
CULTURE**

113

HEALTH

43





Eni's main objectives in Nigeria

- ➔ **Increase of Hydrocarbons production (CAGR >10 %)**
- ➔ **Development of gas resources throughout integrated projects upstream / downstream**
- ➔ **Continuos improvement in Health, Safety and Environmental aspects**
- ➔ **Enhancement of development programmes for Social Communities**