

DUTCH OFFSHORE GAS

A SUCCESS STORY



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DUTCH OFFSHORE GAS

A SUCCESS STORY

- Introduction
- GDF SUEZ
- Exploration and Production (E&P)
- Netherlands Gas Country
- Dutch Small Fields
- Success Factors
- Importance of Gas
- Future of Dutch Offshore

NOG EPA



GDF SUEZ



TOTAL



TAQA

Cuadrilla

centrica



ORANJE-NASSAU
ENERGIE



VERMILION
ENERGY

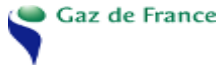
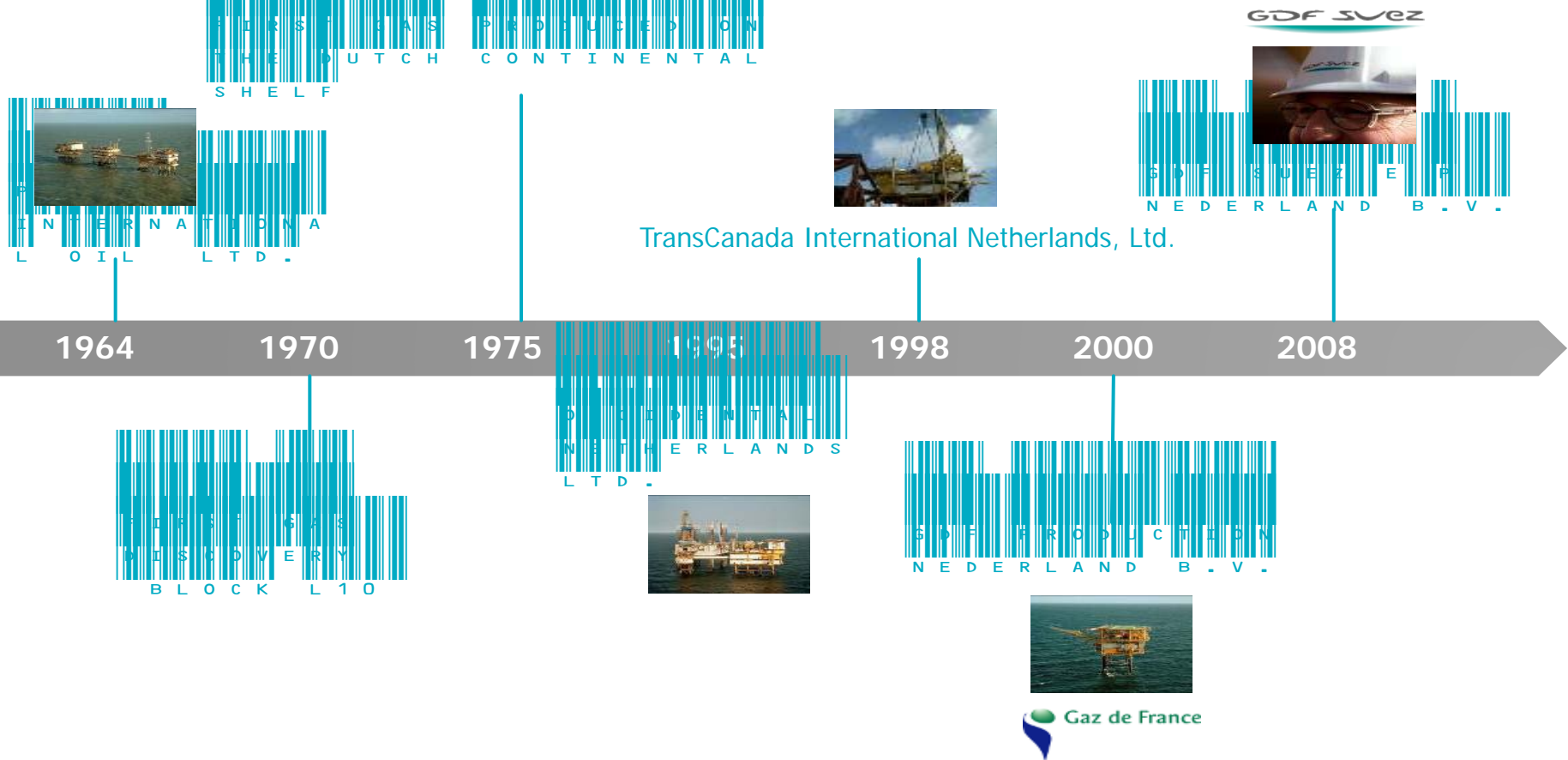


hansa

HYDROCARBONS



GDF SUEZ E&P NEDERLAND - HISTORY



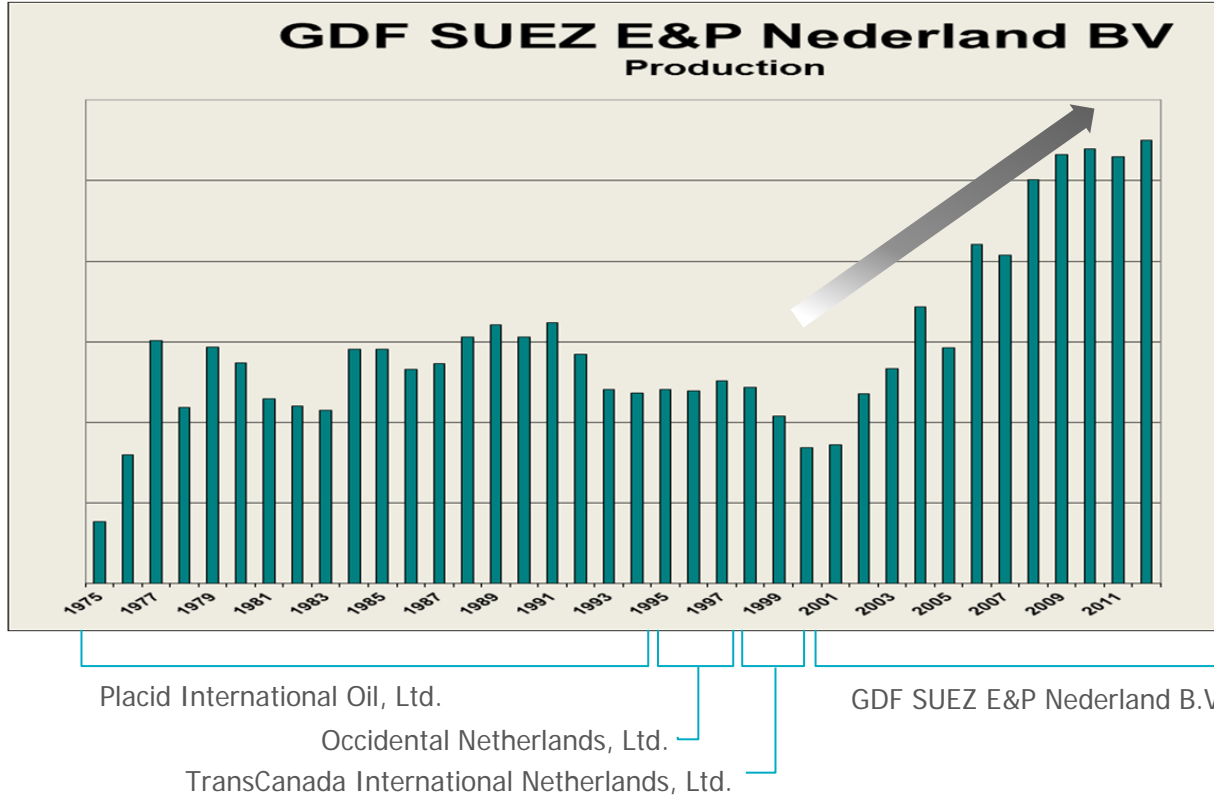
GDF SUEZ E&P NEDERLAND



GDF SUEZ E&P Nederland B.V.



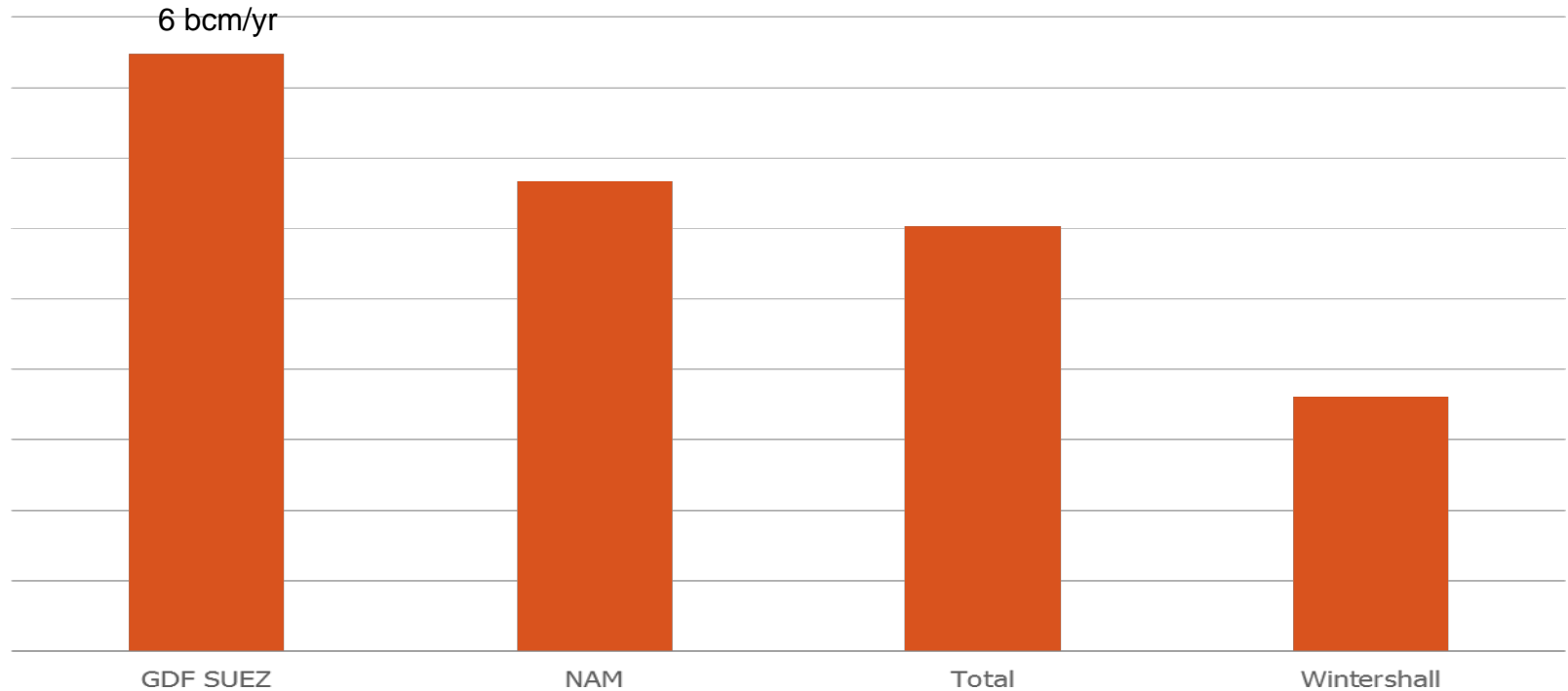
PRODUCTION HISTORY



■ Operate 33% of Dutch offshore production

GDF SUEZ - LARGEST GAS PRODUCER ON DUTCH CS

Offshore gas production



Offshore
Location and drill rig



500

Den Helder
Operational Office

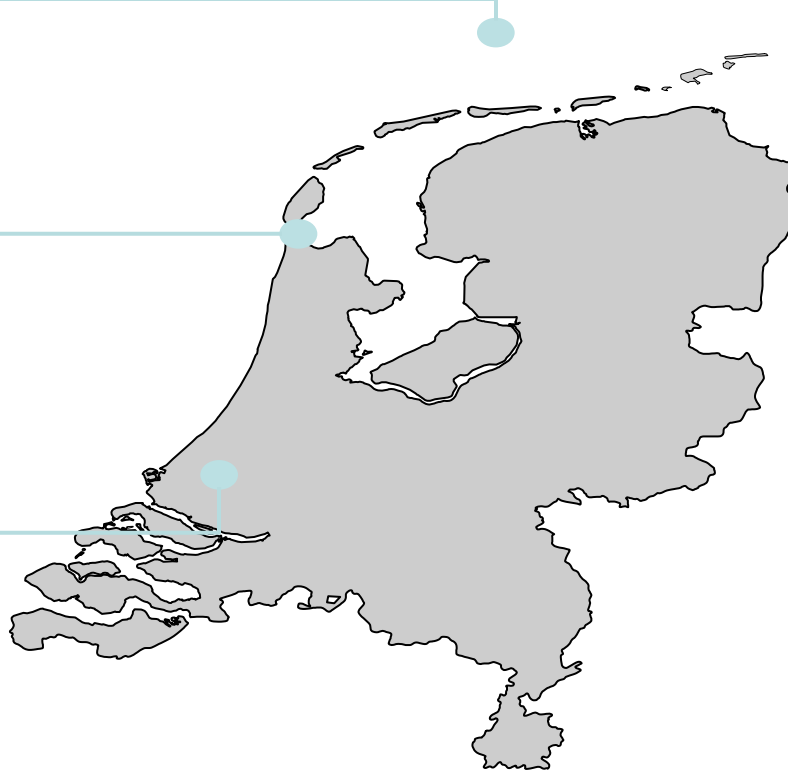


100

Zoetermeer
Head Office



200



800

total personnel

Platform D18a-A Orca

HSM





Jacket



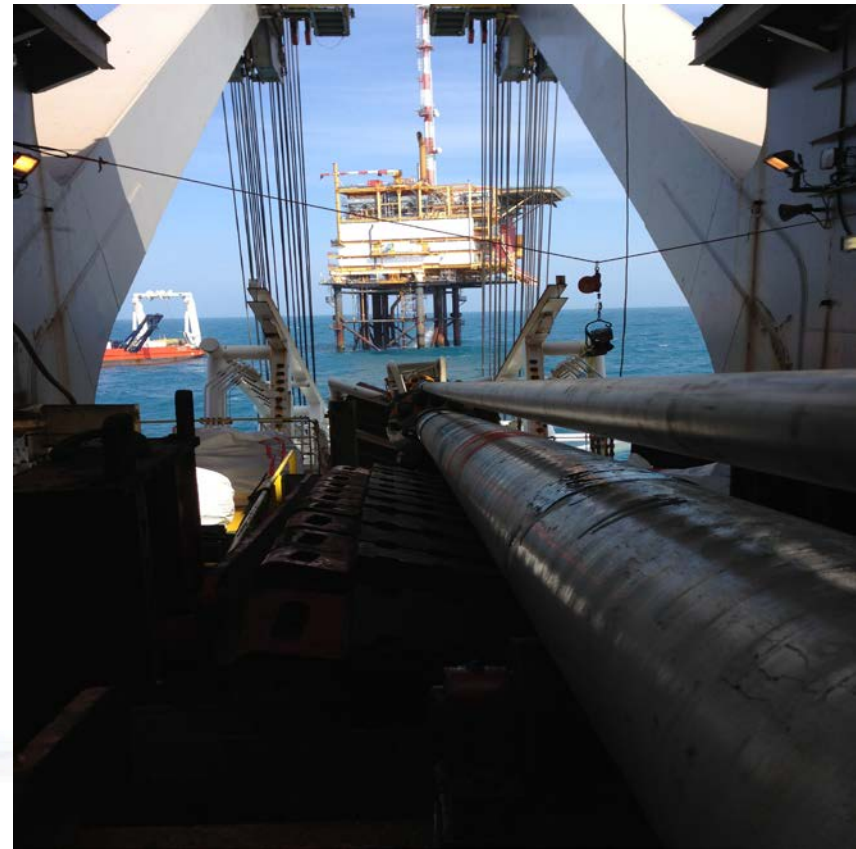


Juli 2013



E&P

Offshore Pipelaying

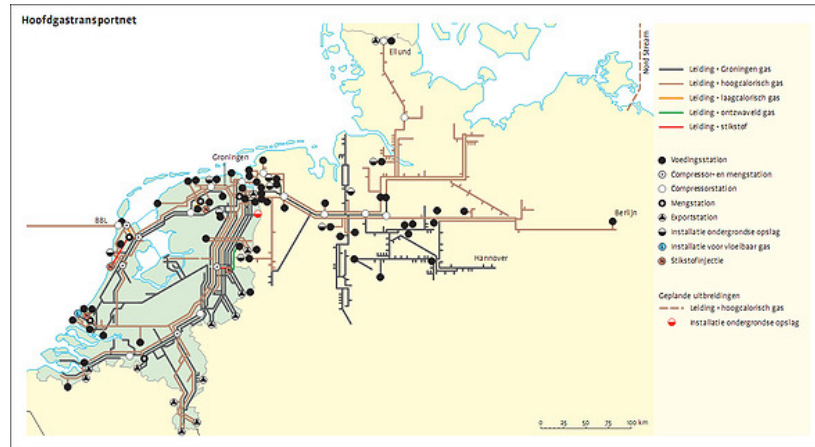


DUTCH OFFSHORE GAS

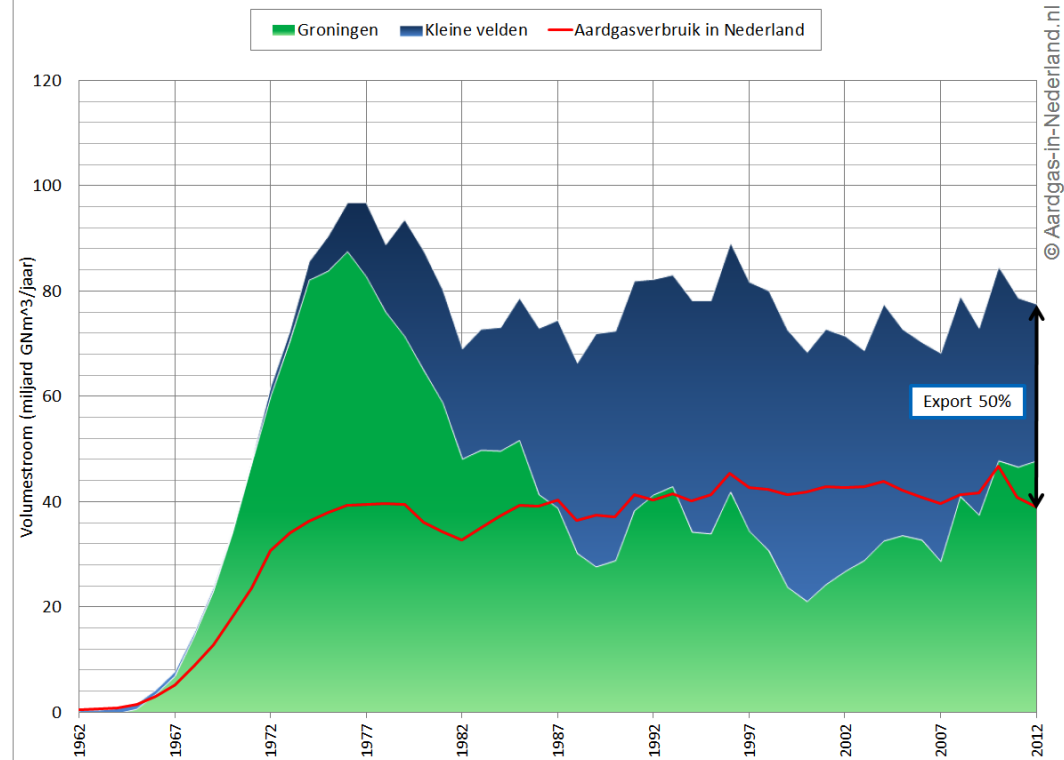
A SUCCESS STORY

- Introduction
- GDF SUEZ
- Exploration and Production (E&P)
- **Netherlands Gas Country**
- Dutch Small Fields
- Success Factors
- Future of Dutch Offshore

NETHERLANDS IS GAS COUNTRY



Aardgasproductie en -verbruik in Nederland



(Productievolumes: EBN, 2013. Verbruik: CBS 2013)

© Aardgas-in-Nederland.nl 2013

Groningen

- Ultimate Reserves 2,800 bcm
- 2/3 produced (900 bcm left)

Small Fields

- Ultimate Reserves 1,700 bcm
- 3/4 produced (400 bcm left)

Excludes Exploration potential
Excludes Unconventional Potential

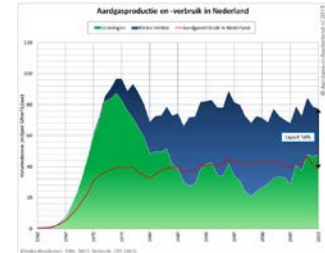
2012 Production:

- Groningen 50 bcm
- Small fields 30 bcm
- of which 20 bcm from offshore

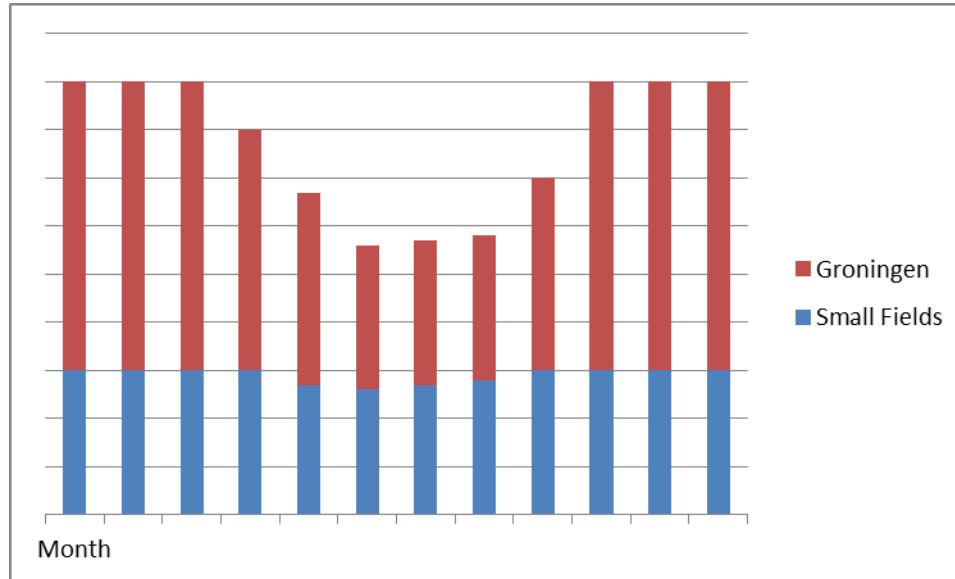
98% households connected to gas (heating, cooking)
60% of electricity from gas fired power stations
(under pressure from US coal and German wind)

DUTCH SMALL FIELDS POLICY

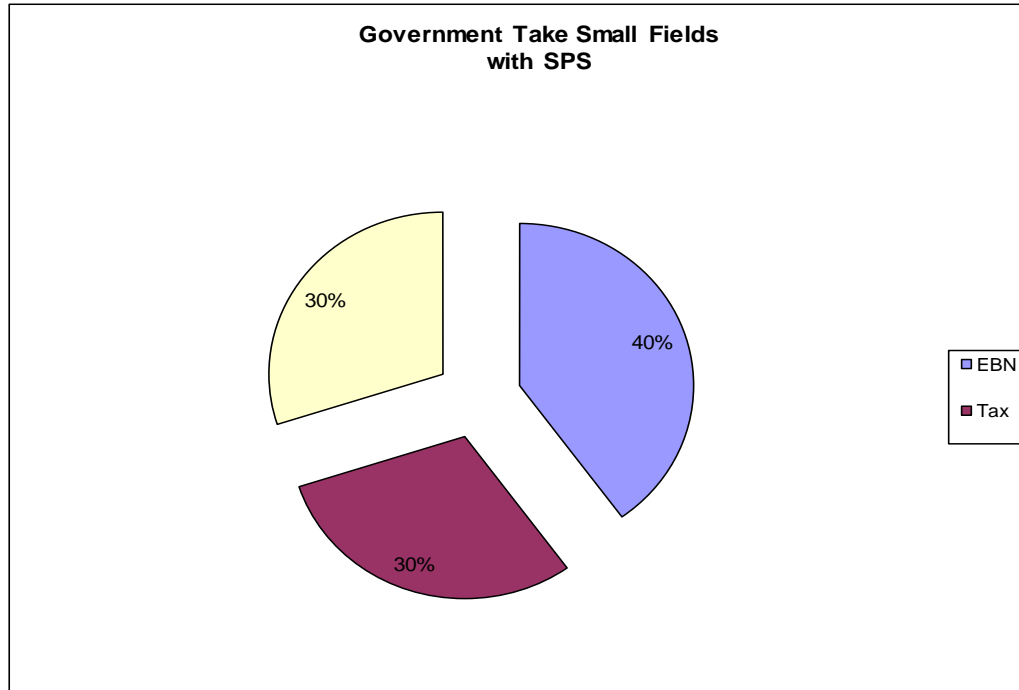
- Extend strategic Groningen Reserves
- 1973 Oil Crisis underlined importance of domestic reserves
- From 1974 Dutch government actively encourages exploration and production of small fields
- Small fields preferentially produced
- Groningen swing capacity
- GasTerra (50% Dutch State) buyer provides guaranteed market
- Gasunie GTS (100% Dutch State) provides guaranteed transportation
- State participation E&P EBN 40%
- Stable fiscal policy



GRONINGEN ANNUAL SWING



GOVERNMENT TAKE SMALL FIELDS



EBN 40%
CIT 25%
SPS 50%



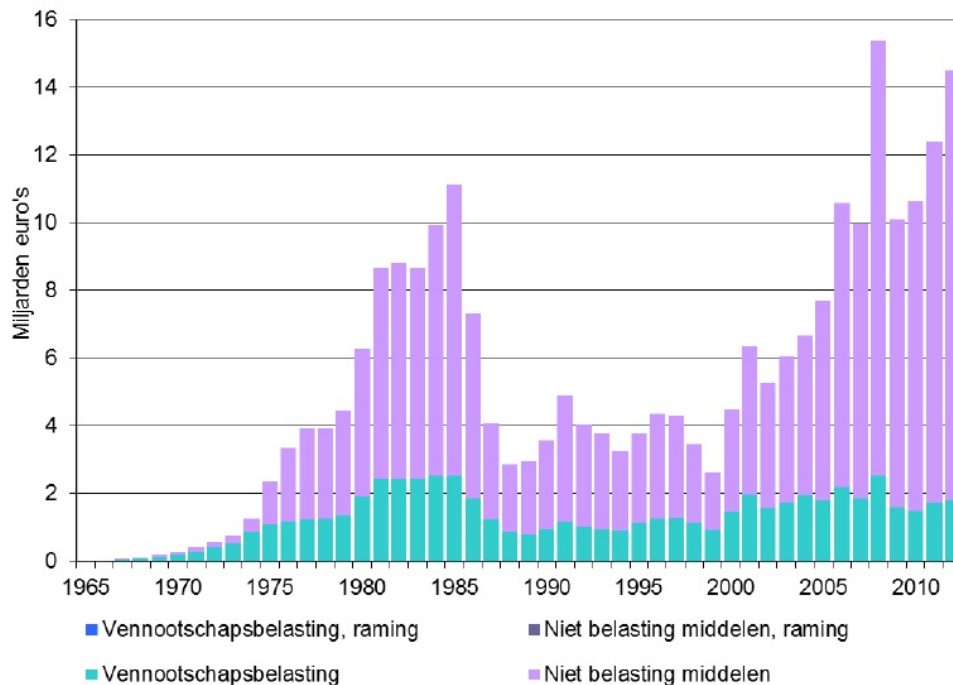
Tax 50% of 60% = 30%



Gov't take 40 + 30 = 70%

AARDGASBATEN

Aardgasbaten,



State Gas Revenues (“Aardgasbaten”)

> €250 billion

Straight to treasury (“Rijksbegroting”)

Build Dutch welfare state

>25% social security

60% health care, education, defense

15% infrastructure

GAS AND RENEWABLES – A PERFECT FIT



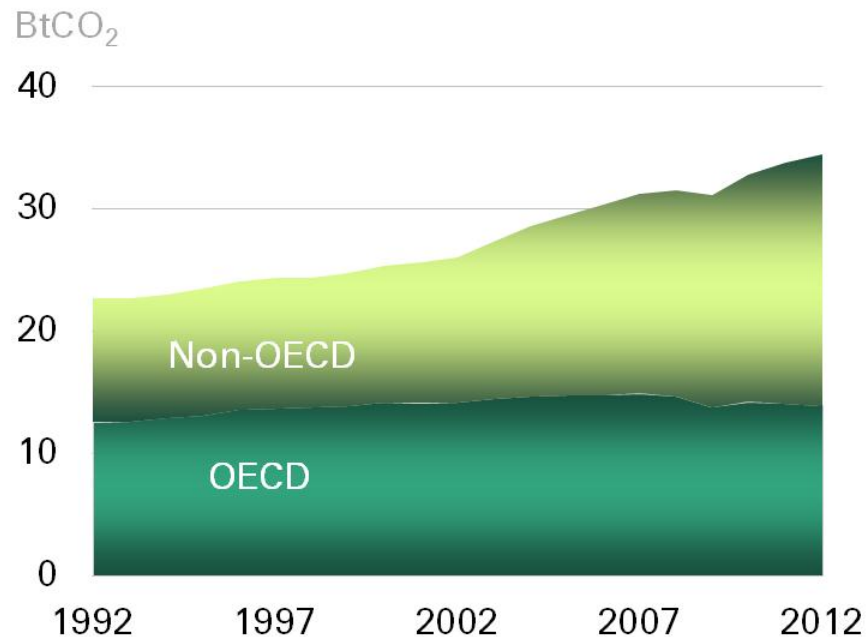
- Gas is available, affordable and flexible
- Gas cleanest fossil fuel
- Gas storage when demand is low
- High capacity when demand is high
- Complement renewables (no wind, no sun)



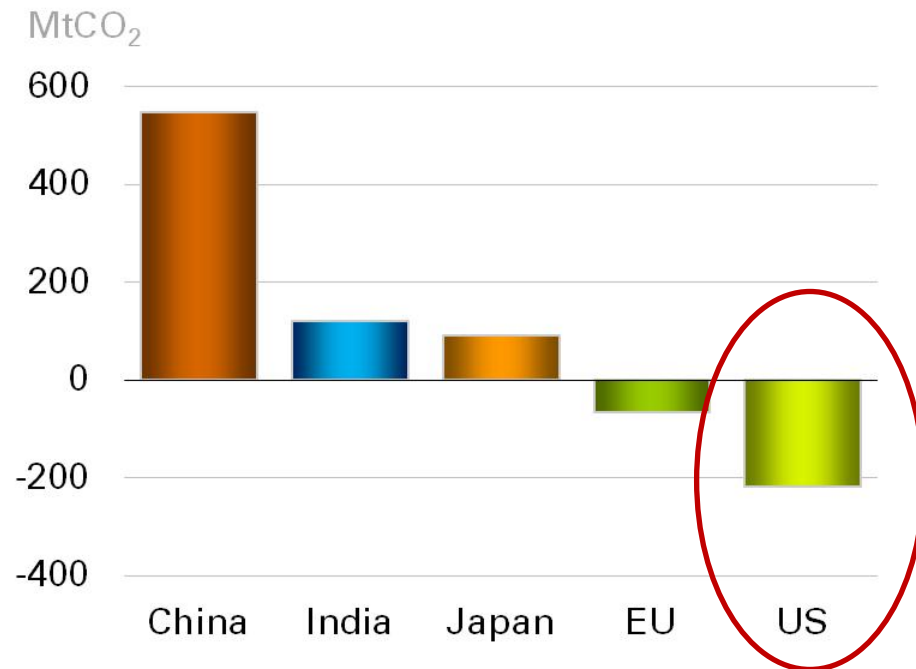


Carbon emissions

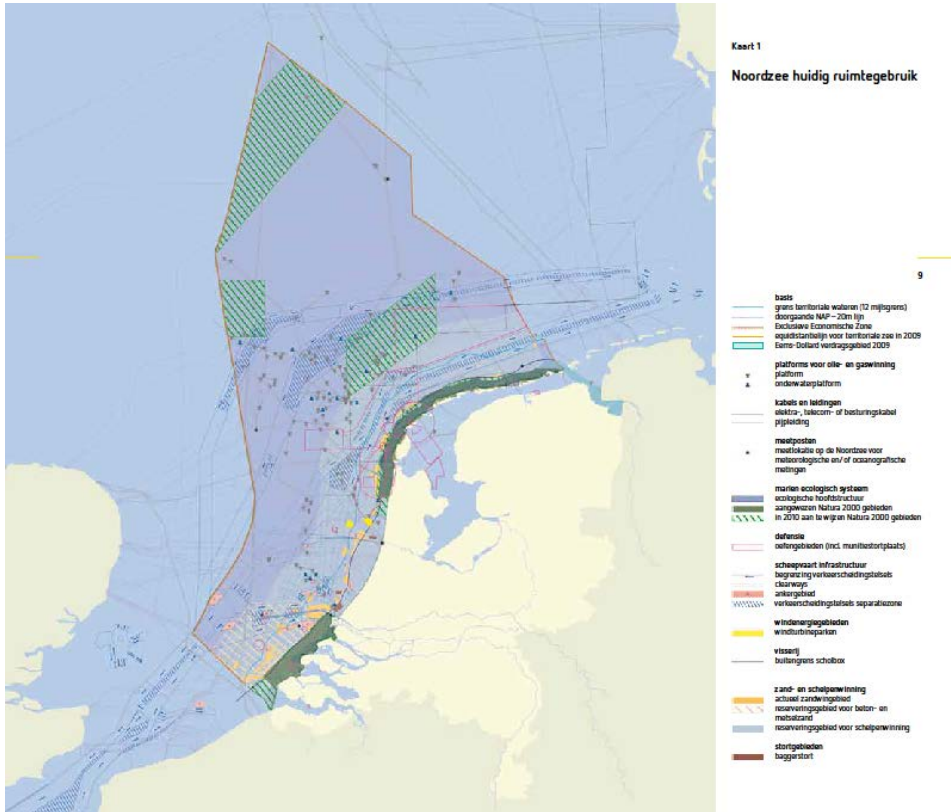
Global emissions from energy use



Largest emission changes in 2012



DUTCH OFFSHORE SPATIAL PLANNING



Multiple Users:

- E&P (platforms, rigs, pipelines)
- Wind farms
- Shipping lanes
- Anchor areas
- Fishing
- Defense (practice areas)
 - Navy, Airforce
- Environmental Areas (Natura 2000)



FUTURE FOR DUTCH OFFSHORE

- Realise multiple users; need to co-exist
- Communication is key
- Safety first
- Environmental protection
- Balancing objectives
 - State revenues from gas
 - Wind to meet sustainability targets
 - Employment



In 2010 zadelrob (seal) werd in een reiskist naar het meest noordelijke productieplatform F3 van GDF SUEZ gebracht.



Questions?

