



International
Association
of Oil & Gas
Producers

European Oil&Gas Production & Microplastics

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ECHA, Helzinki, 31 May 2018



Agenda

- 1. About IOGP**
- 2. Oil&Gas Production in Europe**
- 3. Results from our recent analysis**
- 4. Conclusions**

About IOGP

Business segment

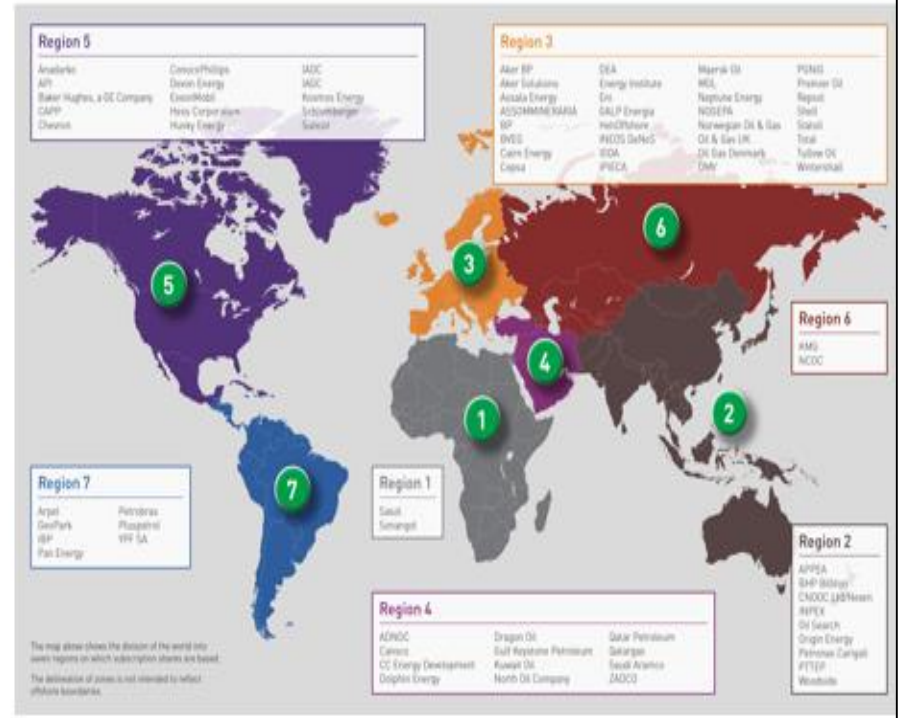


Upstream



4

80 Members around the world



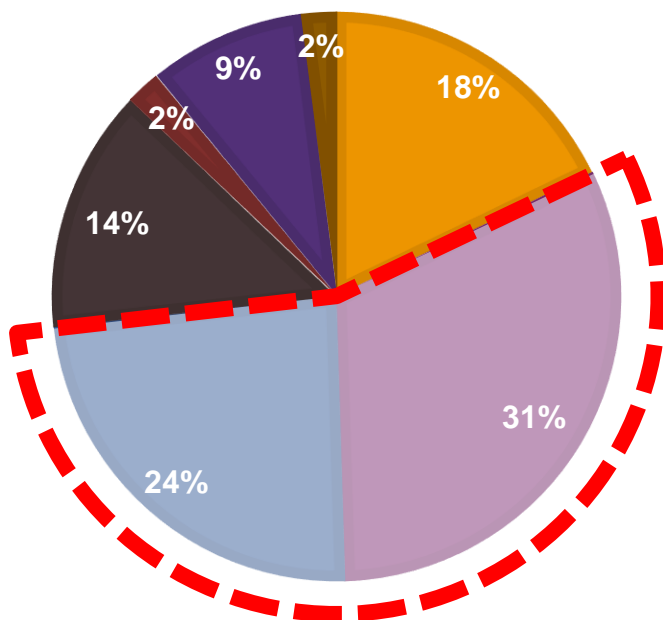
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European Energy Needs

Post COP21

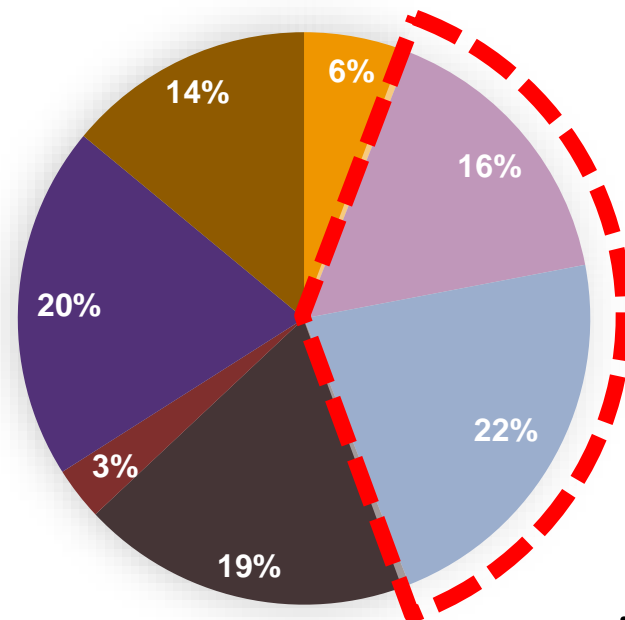
EU energy mix 2013



55%

- Coal
- Oil
- Gas
- Nuclear
- Hydro
- Bioenergy
- Other renewables

2040 – Two degrees



38%

Source: International Energy Agency, World Energy Outlook 2016

O&G will still meet > 35%

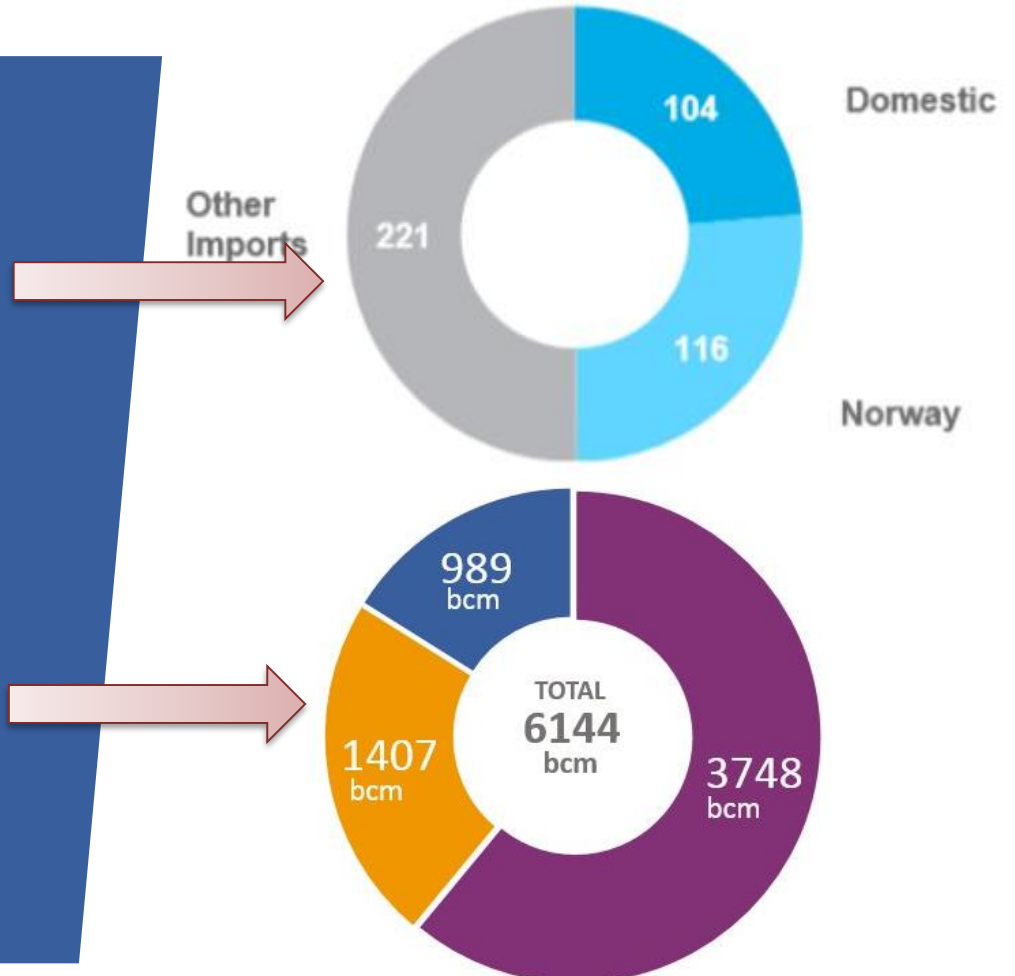
European O&G Resources

(WoodMac study for IOGP)

2017 EU28+Norway Gas Supply Mix | bcm

Today: 50% of European gas demand is currently supplied by EU28 + Norway production

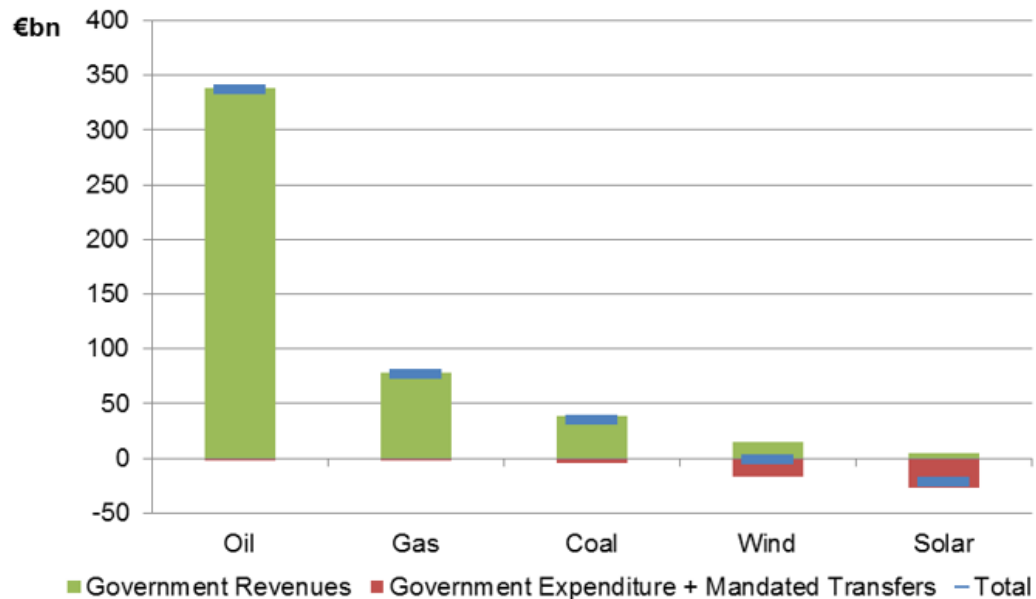
Future: 6100bcm known resources = Enough to cover 50% of demand for over 25 years



Your domestic energy security

Public Revenues

EU28 + Norway Net Government Revenues and Mandated Transfers (2015)

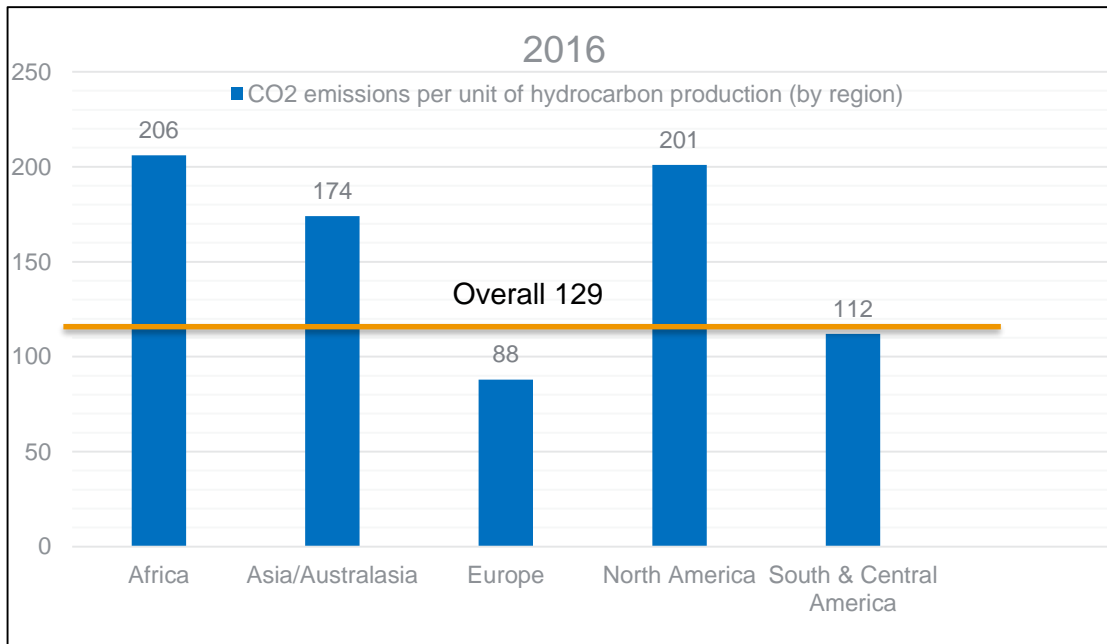


NERA Report

- Overall, EU28+NO collected €475bn from the 5 energy sources.
- **Oil & gas dominate : €420 bn** (€340bn (oil) + €80bn (gas))
 - Duties on petroleum products: €257bn
 - VAT from various energy sources: €155bn
 - Upstream oil & gas production: €37bn

O&G generated ~3% of EU GDP in 2015

Climate Change



IOGP, Environment Performance Indicators, 2016

Emissions of CO₂ while producing O&G

- The global overall emissions per 1 t of hydrocarbons produced is 0.12 t CO₂
- The European overall emissions per 1 t of hydrocarbons produced is 0.08 t

European extraction is 30% less carbon intensive

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Microplastics in O&G Production:

Facts

1) Chemicals are used in drilling and production activities (E&P)

- Lubricants, friction reducing agent, antifoam, demulsifier, ...

2) All use require permitting and site-specific risk assessment

- See HMCS in OSPAR

3) Any discharge is highly regulated in O&G

- Most of the products discharged are « PLONOR » listed under OSPAR
- MPs discharged correspond to 0.05% of the chemicals used

Microplastics in O&G Production: *Recommendations*

- 1) A common and proper definition is important
 - See Now. or OSPAR experiences

- 2) Common approaches to calculating discharges is important
 - See the biggest contributor, i.e. demulsifiers (> 80% of MPs discharged)

- 3) Chemical substitution processes already exist
 - E.g. OSPAR HMCS

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Conclusions

- IOGP is willing to be role player in better understanding the risks and in a possible review programme
- The cost environment is challenging
- Domestic production is key for Energy Security but also for Climate Change mitigation



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