DECOM North Sea

NDA Scottish SME Steering Team

Dounreay, Thursday 13 February 2014

Brian Nixon, Chief Executive

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DECOM North Sea

oil & gas decommissioning - agenda

- **market**
- challenges
- opportunities
- the role for Decom North Sea

courtesy Peterson SBS / Veolia

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general situation in UK Continental Shelf

- £11.4 billion CAPEX in 2012 with forecast of £13.5 billion in 2013
- £44 billion of capital investment approved and under development
- 45 new projects approved in 2011 & 2012

however:-

- production in UKCS has fallen for 11 straight years (10.7% in 2012 alone)
- concerns over unplanned shutdowns, reliability of equipment etc.
- operating costs rising – produced water, energy consumption, asset integrity, etc.
- production efficiency falling
- only 13 new exploration wells started in 2013

resulting in several assets nearing CoP and decommissioning

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regulations for offshore decommissioning

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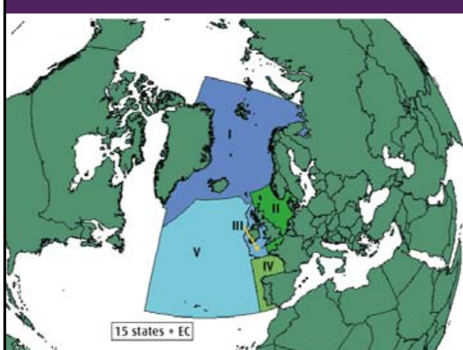

The Convention for the Protection of the marine Environment of the north east Atlantic - *'OSPAR Convention'.*

Signed and ratified by all Contracting Parties to the original Oslo or Paris Conventions (Belgium, Denmark, the European Union, France, Germany, Iceland, Ireland, the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom and Northern Ireland) and by Luxembourg and Switzerland.

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some market observations

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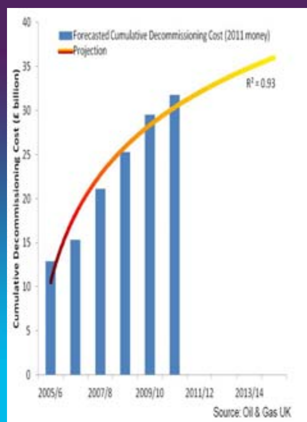

- little thought of decommissioning at design and build stage, or through life of asset
- most operators preparing for first project
- forecast costs rising
- multiple drivers to defer
- limited experience – operators or contractors
- decommissioning projects unique and stand alone

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forecast decommissioning expenditure

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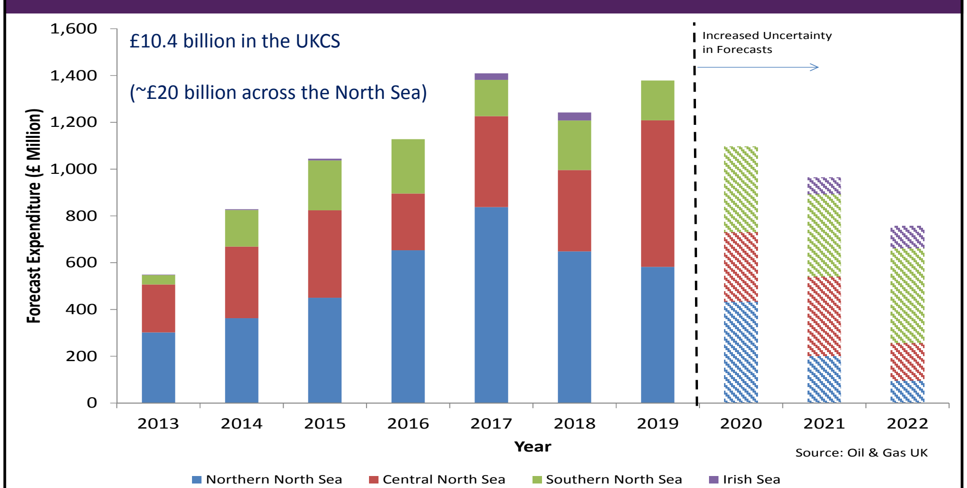

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decommissioning expenditure - UKCS

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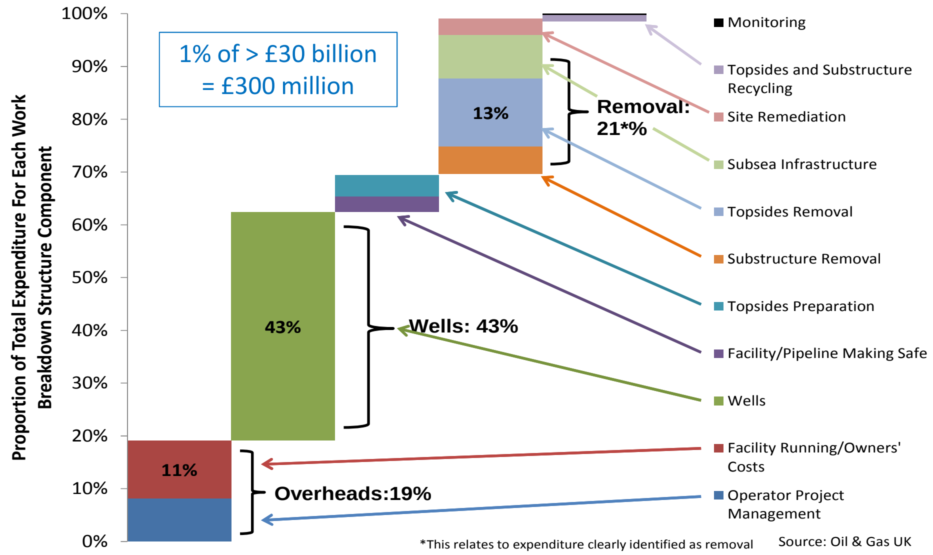

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challenge - the oil & gas life cycle

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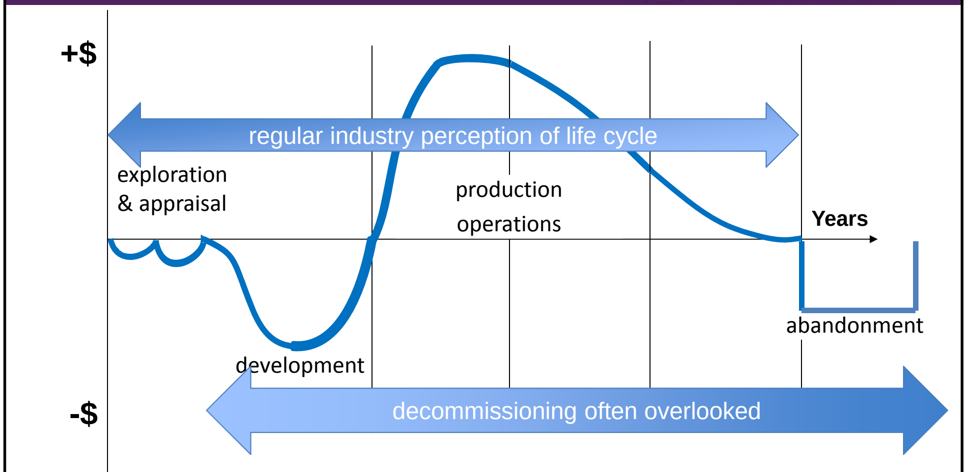

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Steel Piled Jacket (SPJ) structures
CNR International – Murchison Platform

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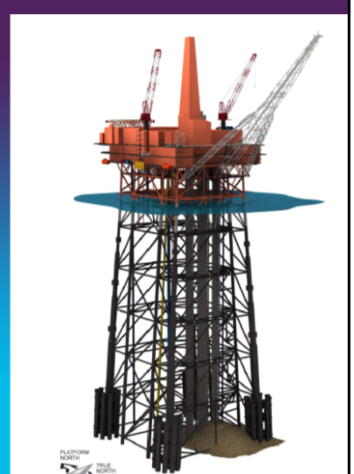
- programme to DECC June 2013 – CoP in 2014
- topsides - 24,548 tonnes – 26 modules
- steel jacket - 24,640 tonnes (excl piles)
- water depth 156m – 150 km NE of Shetland
- 33 platform & subsea wells
- drill cuttings pile – degrade naturally in time
- export pipeline – remedial rock placement
- infield pipelines & branches - removed



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Gravity Base Structures (GBS)
Shell Brent Field

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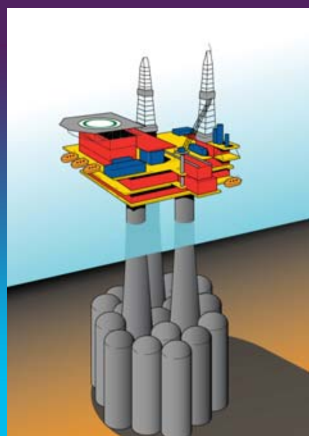

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work

- >300 studies - programme not yet submitted
- first project for Pieter Schelte

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SNS steel piled jackets / platforms
- ~400 installations

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- typically less than 1,500 tonnes jacket weight
- up to ~ 1,400 tonnes topsides weight
- many unmanned
  (i.e. no accommodation)
- mainly gas producers
- total removal expected

courtesy Veolia / Petersen SBS – Shell Inde

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subsea infrastructure

- wells P&A
- manifolds
- flowlines
- umbilicals
- mid height arches
- protection covers
- mooring systems

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some removal options

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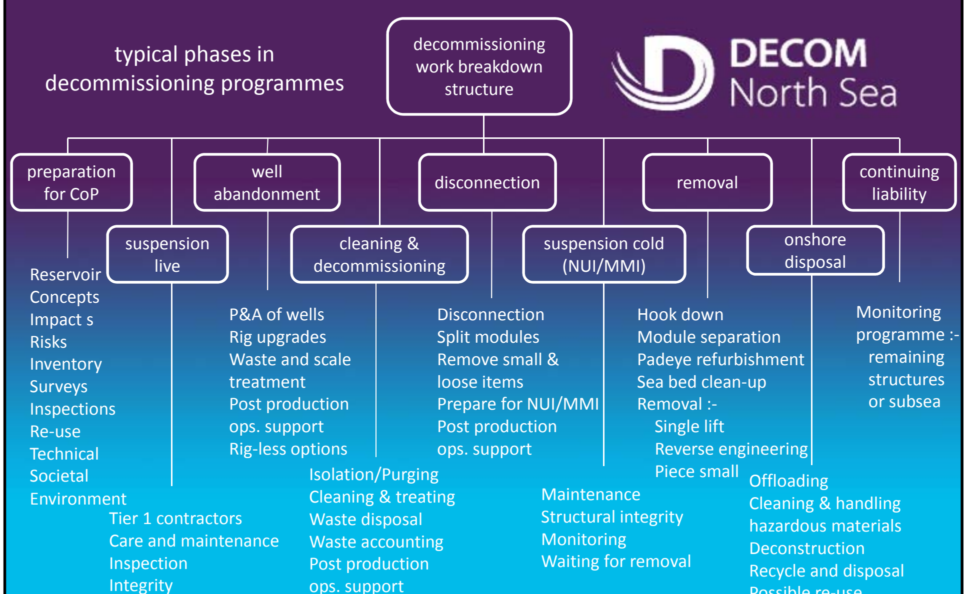

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since 2010 -
the industry forum for decommissioning

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- not-for-profit organisation, privately funded
- 230 member companies from Denmark, Germany, Norway, The Netherlands, the UK and USA
- membership across the whole sector:- operators (large & small), contractors, marine, subsea, onshore disposal, wells P&A, legal, environmental, specialist services, consultants etc

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Decom North Sea's role in the industry

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- stimulating a vibrant, efficient and cost effective industry
- promoting collaboration and the sharing of knowledge and learning
- developing models, templates and guidelines for the decommissioning sector
- responding to economic and technical challenges facing the sector
- researching other sectors for synergies and experience (GoM, nuclear, salvage)

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joint industry initiatives

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- standard template for decommissioning programmes
- research greater re-use of plant and equipment
- model template for EIAs
- Southern North Sea special interest group
- multi-party approach - start with wells P&A
- compensation models in different phases and types of decommissioning
- North Sea map of onshore disposal facilities
- more reliable activity forecasts to support industry investment
- work together earlier & better
- raise awareness & profile of decommissioning

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benefits of membership

- operator programme update events
- training courses
- industry lunch 'n learns
- learning journeys around the North Sea
- 2 annual conferences (one with Oil & Gas UK)
- work groups and steering groups on JIPs
- website with industry capability matrix
- regular newsletters
- market intelligence reports
- business advice

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