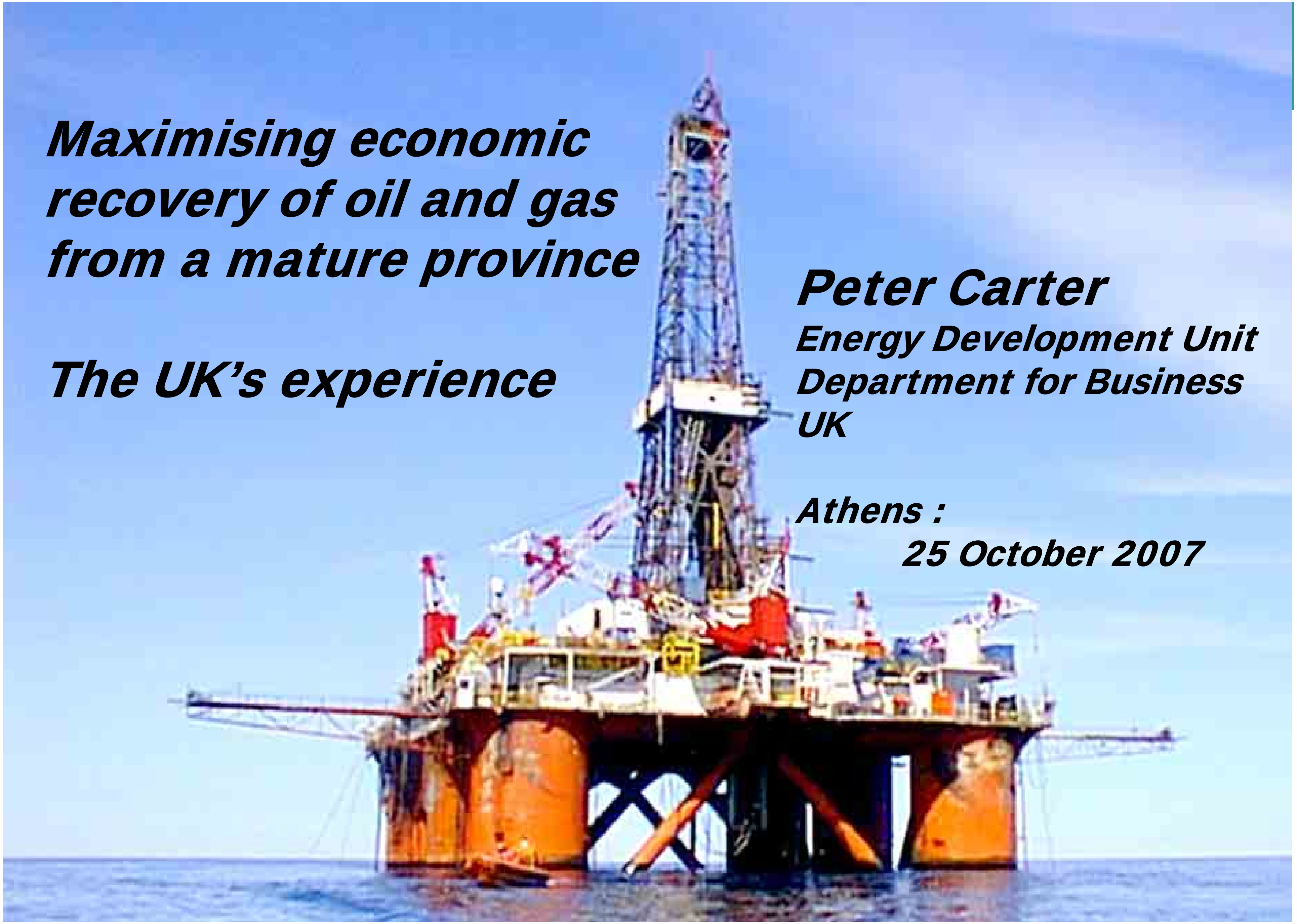

Maximising economic recovery of oil and gas from a mature province

The UK’s experience

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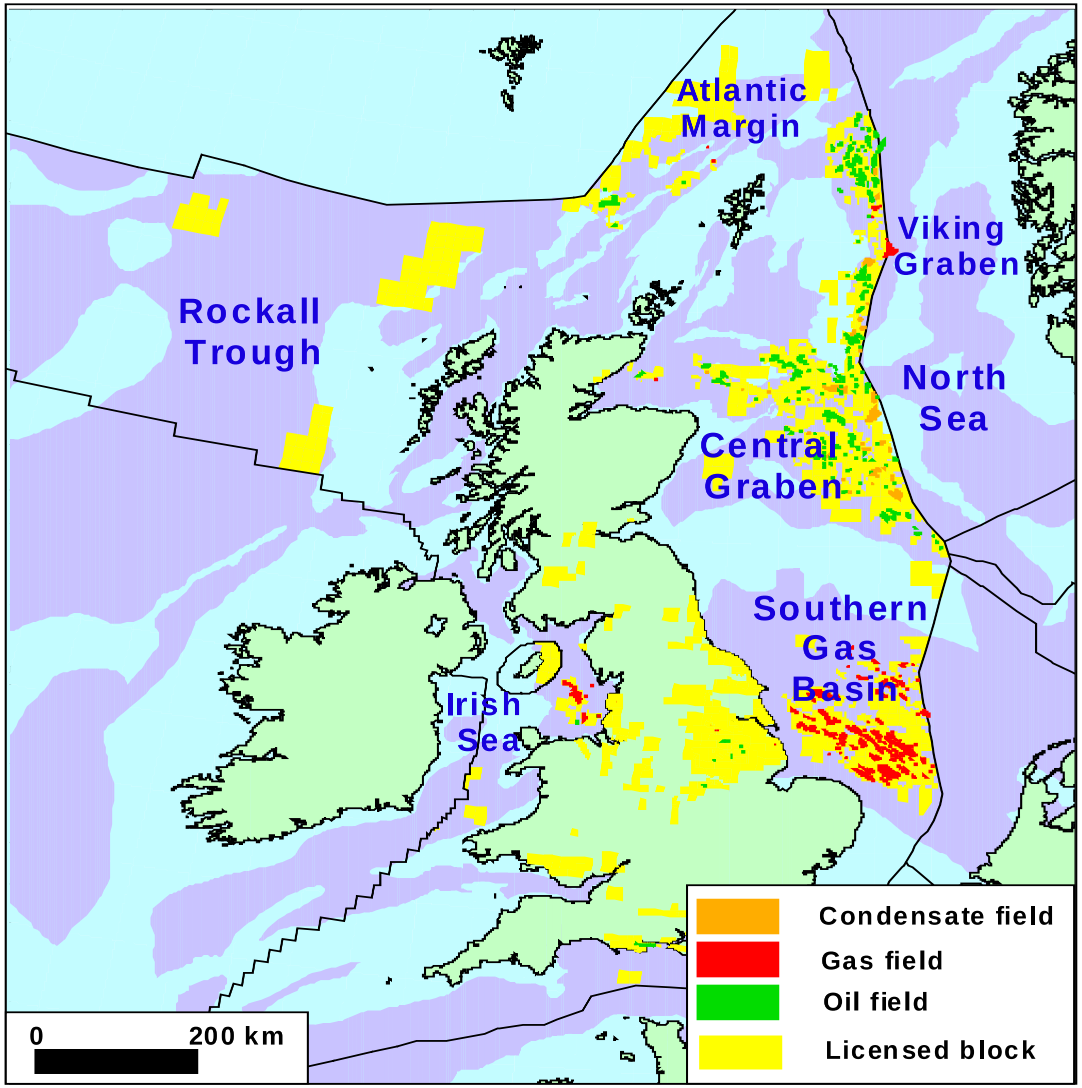
UK

Athens :
25 October 2007

Outline of talk

- The UK's oil and gas resources – some background
- The UK regulator – who are we?
- The oil and gas licensing process
- History of oil and gas recovery in the UK
- Current challenges and how we are addressing them

What do we regulate? Key Features of the UKCS



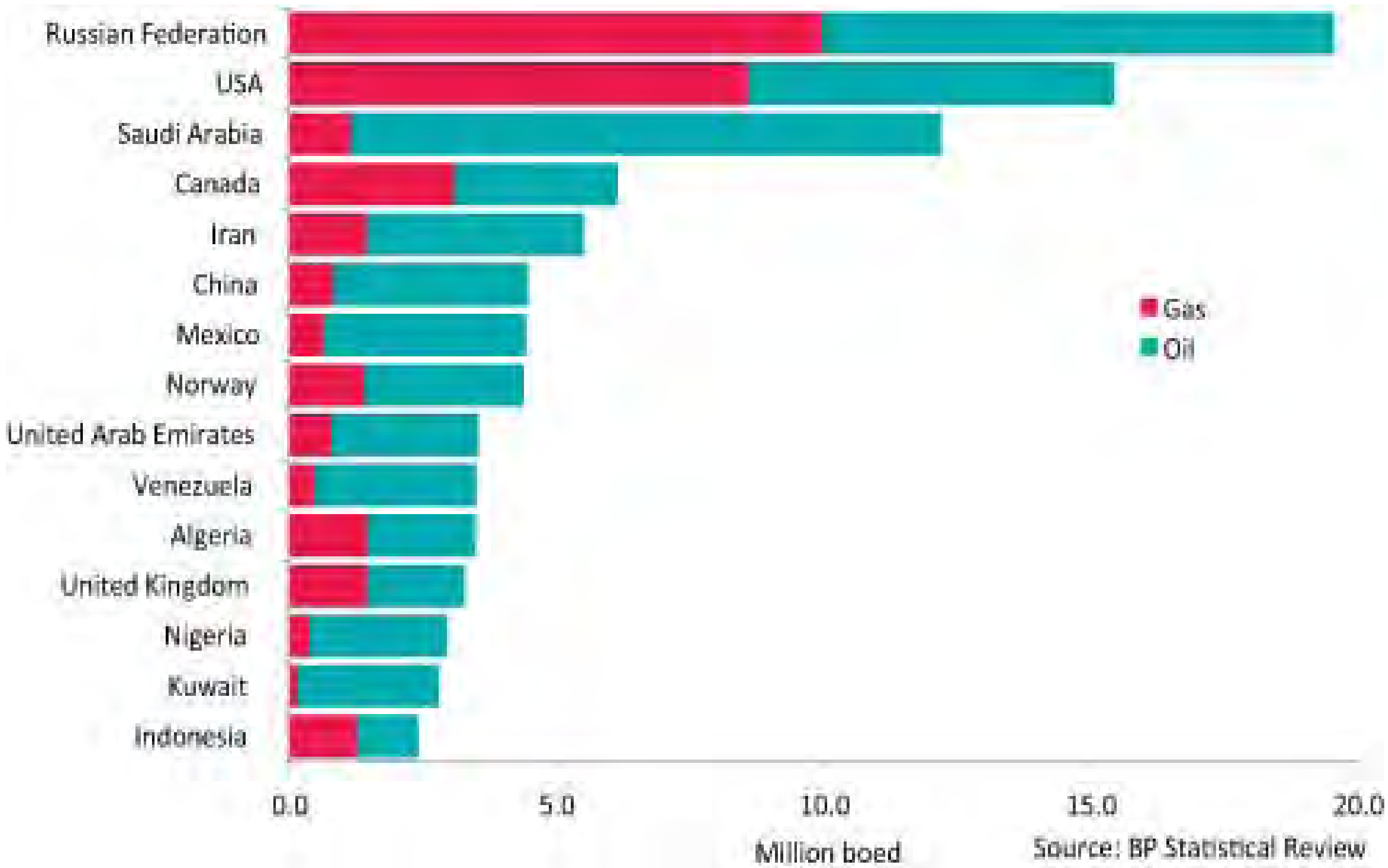
The UK Continental Shelf (UKCS)
Some basic facts & figures

- In 2006 the UKCS
  - Produced 2.9 million boe* per day
  - Spent £11.5 billion (new investment and ongoing operations)
  - Contributed £9.1 billion in direct taxation
  - With oil price averaging at $65 and gas price 42 p/th†
  - Provided 70% of the nations total energy needs

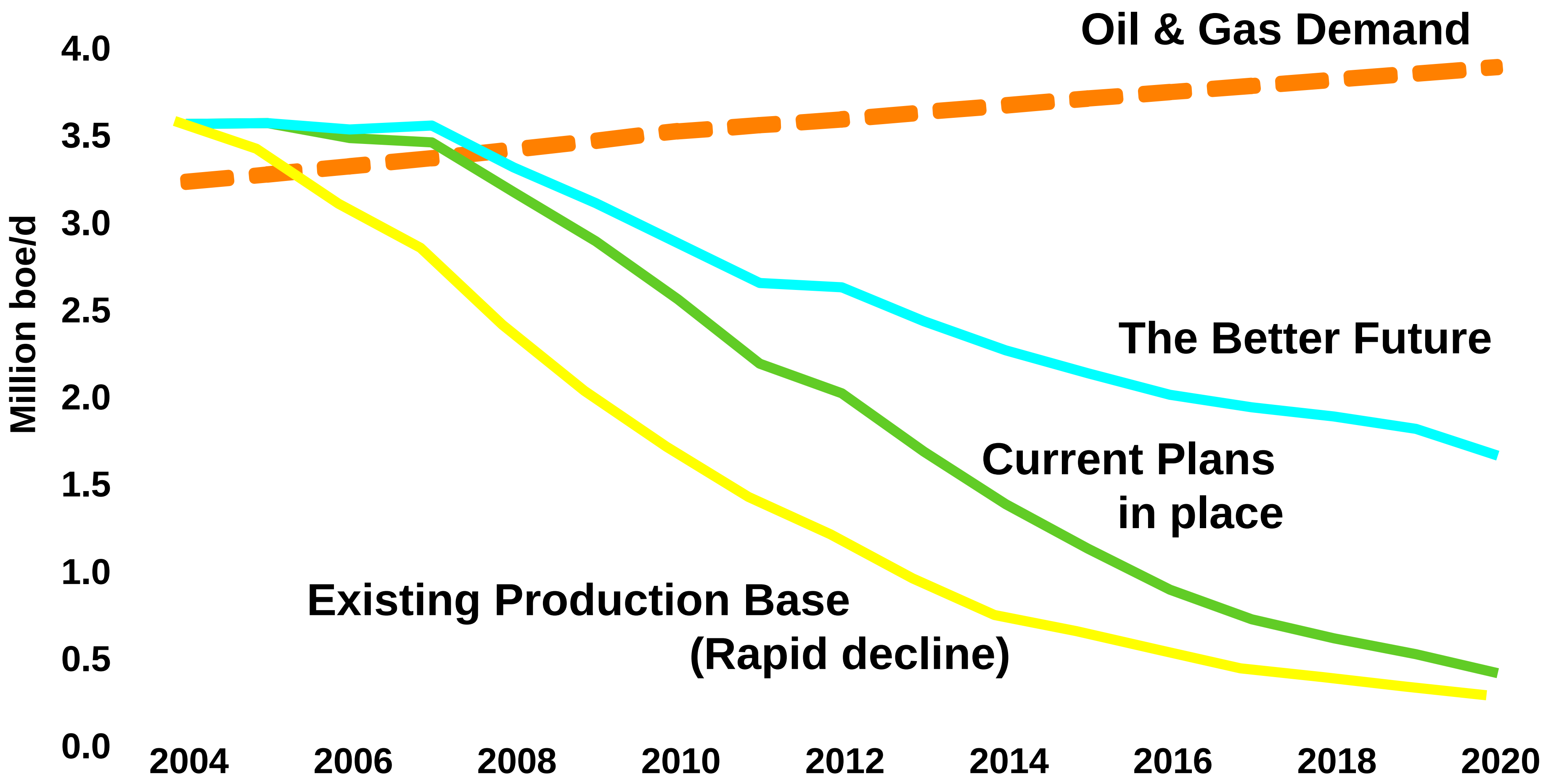
- In 2007 the UKCS will
  - Produce ~ 2.7 million boe per day
  - Spend ~ £10 -10.5 billion reflecting a potential drop in investment
  - Provide ~ £ 8 billion in tax revenues
  - With year-to-date oil price averaging at $63 and gas price 21 p/th†

* boe – barrels of oil & gas, † day ahead gas price

Major Oil and Gas Producing Countries 2005



But…..Future production from the UKCS is in decline



What is the role of the UK’s oil and gas regulator?

Who are we?

- The Energy Development Unit (EDU) - *the UK regulator* - is part of the UK Department for Business, Enterprise, and Regulatory Reform (BERR) – formerly Dept of Trade and Industry (DTI)
- EDU is responsible for the *licensing* of exploration and regulating development and production of the UK's oil and gas resources. We are not responsible for oil and gas taxation (Treasury) or Health and Safety (HSE)
- The UK has no state involvement in oil and gas exploration or production

Oil and Gas Licensing: the process

Basis of Licensing Regime

- All rights to petroleum resources of Great Britain and the UK territorial seas are vested in the Crown. Also, the UK has sovereign rights to exploit petroleum in designated areas on the continental shelf
- Most invitations to apply for production licences are made in competitive Licensing Rounds (nominally annual - 25th offshore round opening end January 2008)
- Licence allows licensee…*"To search, bore for, and get, petroleum…."*

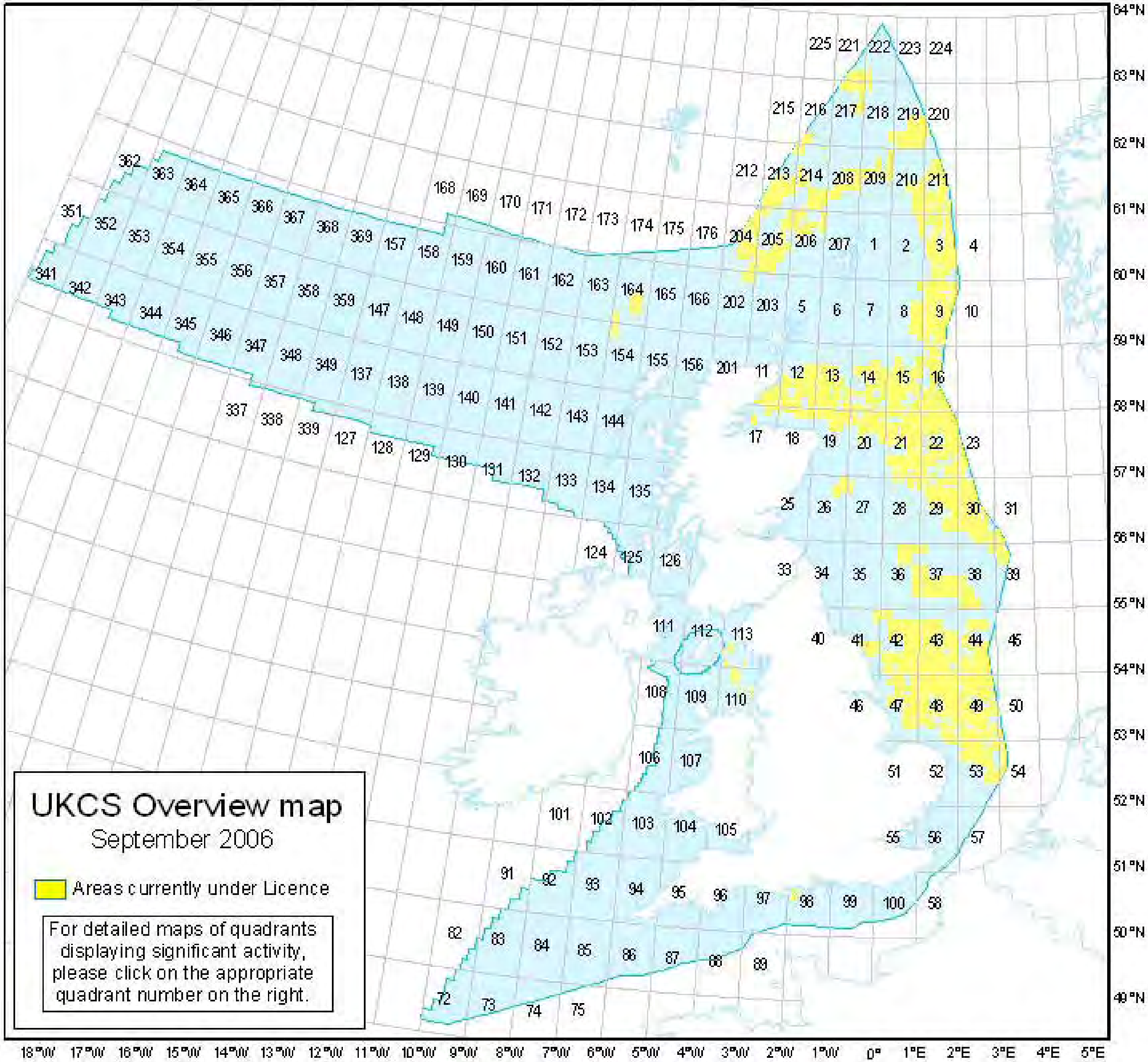
Offshore licensing

Exploration Licences

- **Rights:** Non-exclusive
- **Purpose:** To enable surveys of unlicensed (open) acreage
- **Entitlement:** Surveys and shallow drilling anywhere on the UKCS not covered by a production licence
- **Duration:** 3 years, extendable for 3 years

Production Licences

- **Rights:** Exclusive
- **Purpose:** To enable exploitation of a specified area
- **Entitlement:** Exploration, appraisal and development
- **Duration:** 26yrs (Traditional and Promote), 30 yrs (Frontier)



Units of area ('acreage')

Quadrant = 1° long and 1° lat.

30 blocks per quadrant (5 x 6)

~250 sq km per block

'Traditional' Licence Terms and Conditions

Offshore latest = 25th round – to be launched 01/08

Initial	2nd term	3rd term
Start agreed Work Programme. Need to relinquish 50% after initial term.	Appraisal. Secure FDP	Develop fields: produce
4 yrs	**4 years**	**18 years** ***Total = 26***

Licensing Round: launching/applying

Information on Round published in Official Journal (EU) and BERR websites

Applications close 90 days after announcement (2006, 24th round closed 16 June: awards announced 1 February 2007) Forms on BERR website http://www.og.berr.gov.uk/upstream/licensing/licawards.htm

Applications to include:

- Background company/technical data
- Geological case
  - programme of geological evaluation work
  - existing geological database
  - use of data held.
- Financial information
- Environmental competence

Oil and Gas

UKoilportal

UK Promote

July 2007 - New PON14A Application and Close Out Forms Available DETAILS

Decommissioning Offshore Energy Installations Consultation DETAILS

2006 Oil Production DETAILS

2006 Gas Production DETAILS

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PILOT Data Initiative

Licensing

Guide to the licensing system

- Overview
- Legislative background
- Types of licence
- Applying for a Licence
- Licence Assignments (Transfers)
- Licence Relinquishments
- Change of control of Licensee
- Licence extensions
- Suitability of licensees
- Joint operating agreements
- Charges on licences
- Progressing Partnership - Streamlined Transfer and Pre-emption Arangements "Master Deed"
- Appendices
- Other potential restrictions on activity

Current Opportunities

- Timing of the 13th Onshore Oil and Gas Licensing Round
- 23rd Seaward Licensing Round
- 22nd Seaward & 12th Landward Licensing Rounds
- Out of Round Licensing offer on Seaward block 15/25e
- Fallow acreage

Webmaster: Danny Stocke

History of North Sea development

History: North Sea - First Phase

Does an oil / gas province exist there?

If so, where?

Do we have technology to exploit it economically?

First Phase: In the Beginning, a long, long time ago

1964 – 1972

First 4 Offshore Licensing Rounds

- **To encourage rapid exploration and exploitation of petroleum resources**
- **First licences – aimed to induce oil companies to explore a difficult, unproven area through generous terms**
- **No special taxation other than 12% royalty**
- **Progressive move from shallow Southern North Sea to more challenging Northern areas**

First Phase Optimism and Intervention in the 1970s

- **1972 – Offshore Supplies Office set up**
- **Response to First Oil Crisis –1975 – BNOC set up**
- **Big finds – infrastructure established**

And Oil Taxation Act 1975 – PRT introduced

North Sea

Second Phase

Large scale success and investment

Second Phase Liberalisation in the 1980s

UKCS established as a world class hydrocarbon province

- **Strong interest in licensing rounds**
- **Strong oil price (until 1986)**
- **Reversal of state participation (cut back in UK Govt activities, privatisation of BNOC, British Gas)**

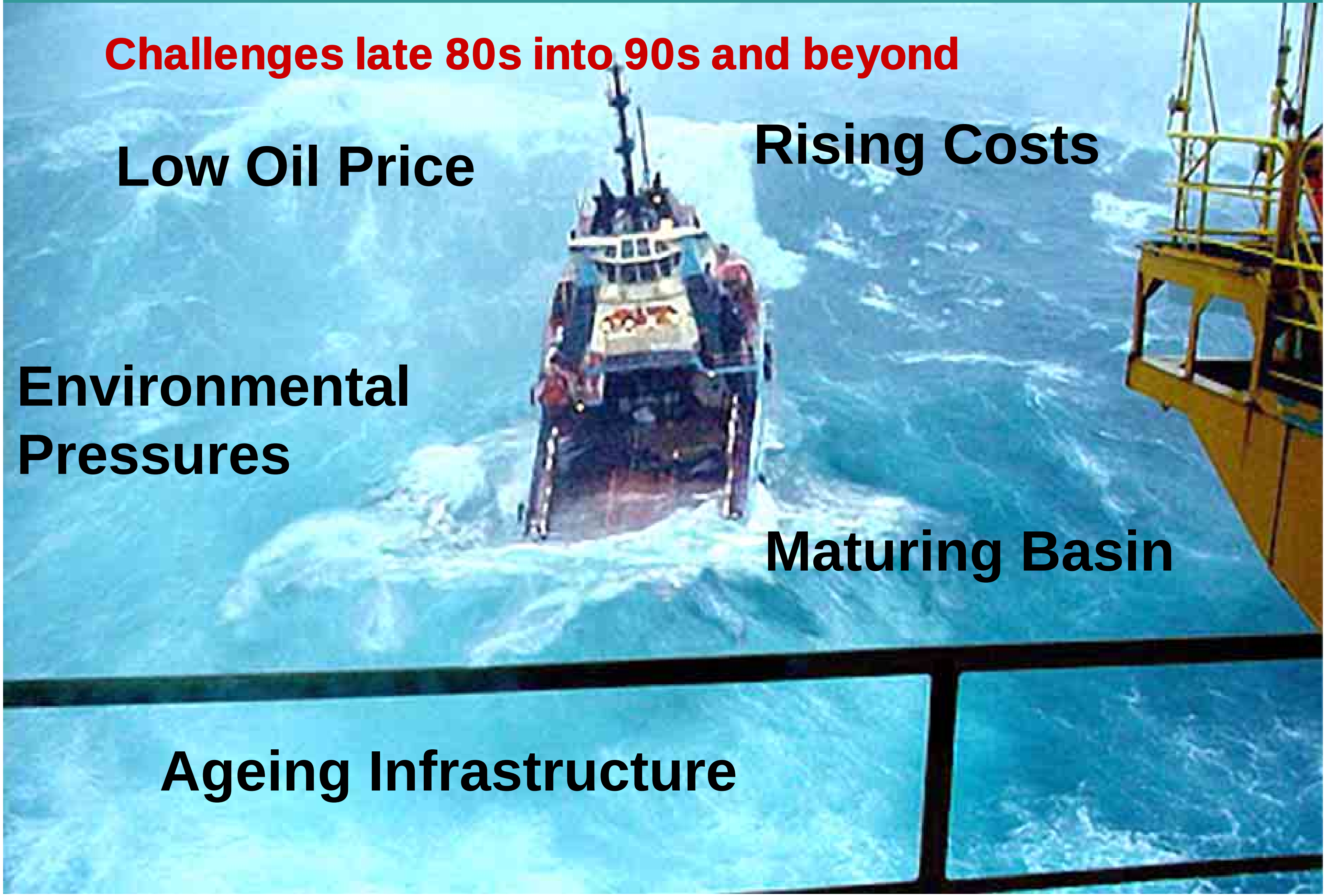
Licensing System did not change much – possibly remained too generous

North Sea

Third Phase

Overcoming Hurdles

Challenges late 80s into 90s and beyond



Low Oil Price

Rising Costs

Environmental Pressures

Maturing Basin

Ageing Infrastructure

Hence the reality is…

- UKCS is mature, finds are getting smaller: need to make best use of existing pipelines etc
- Legislative/commercial frameworks were drawn up at a time when a handful of oil majors were developing fields rapidly (cf risks etc…)
- Need to get more activity from existing licensees, speed up the turnover of fallow fields and discoveries, streamline commercial processes, attract a wider range of players

Addressing the challenges – ensuring continued investment/interest

Initiatives since 1999 have included:

- PILOT – high level Govt/industry Forum
- Changes to Licensing to encourage new entrants – the 'Promote' Licence
- Not allowing inactivity for long periods (the 'Fallow' Exercise)
- Improving Access to Infrastructure (pipelines etc)
- Better management of mature producing fields (Stewardship exercise)

1. Innovation in licensing
Promote licence (i)

- Introduced in 21st round (2003)
- Much lower rental in first two years (90% reduction)
- First 2 years to work up and market prospects
- Continuation after two years if licensee commits to substantive work programme and passes financial, technical, environmental tests
- 'Promote' round concurrent with traditional licensing round

'Non traditional' licence
Promote licence (ii)

Similar to traditional Petroleum licence except Work Programme for first 2 years; as offered for first time in 21st (2003) offshore Round.

Pre-initial	Initial	2nd term	3rd term
Work up prospect on basis of known geology: maybe undertake some seismic. Relinquish or submit WP (with nec. resources in place) by end of 2 years	Need to relinquish 50% by end of initial term	Appraisal Secure FDP	Develop fields: produce
2 yrs	**2 years**	**4 years**	**18 years** ***Total = 26***

2. Helping firms gain access to acreage - Fallow Block/ Discovery Initiative

'A'

Long Inactivity

'B'

Doing all that can be expected

Retain

Inaction due to eg partner misalignment; uneconomic; other commercial barriers

Market Testing (12 – 24 months)

Relinquish

Divest/Reassign

Fallow Impacts since the process started in 2002

On fallow blocks

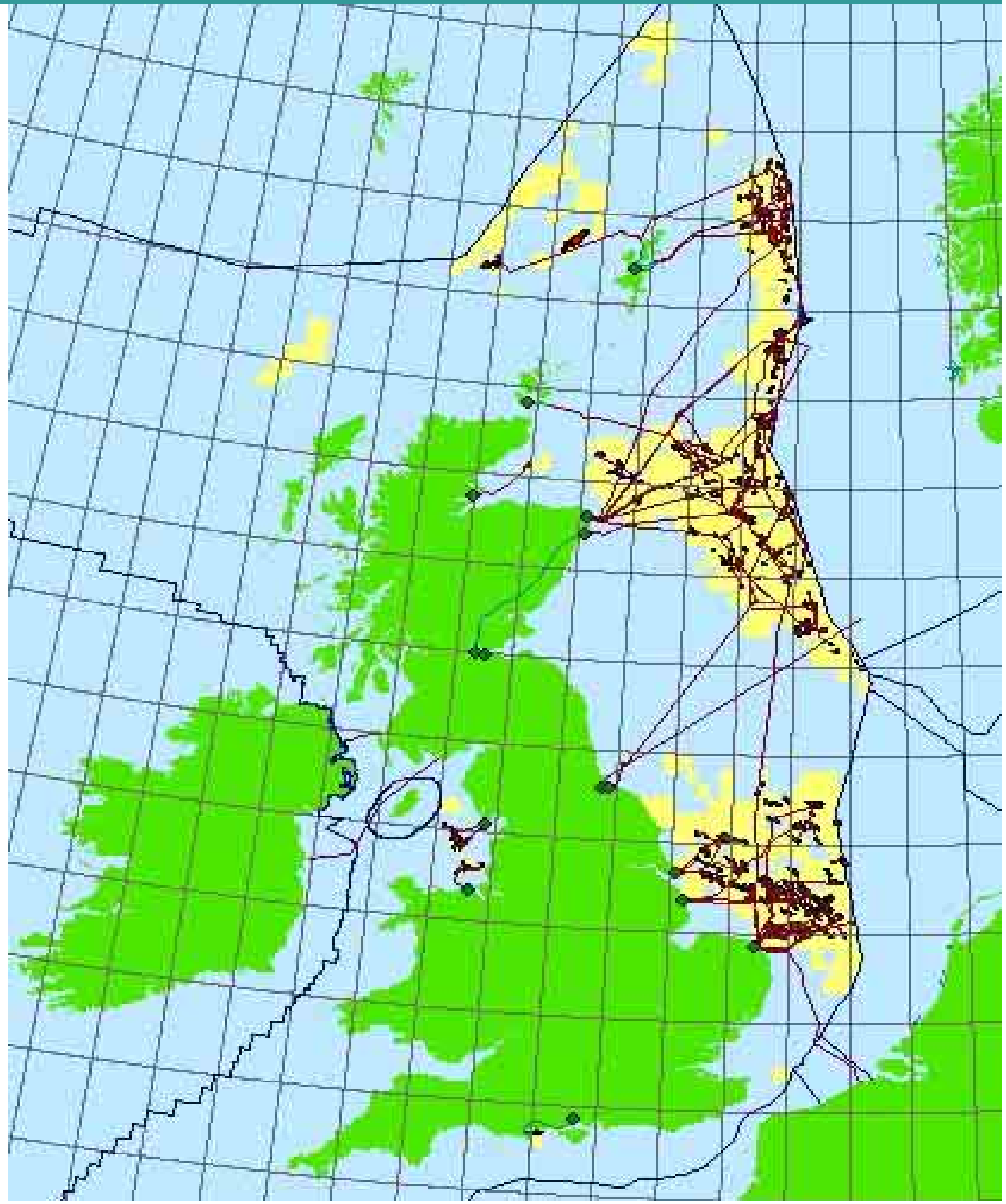
- 78 wells have been drilled on fallow sub-areas
- new seismic has been shot on 17 sub-areas
- new Production or Development plans have been approved
- 138 previously fallow blocks have been re-licensed
- 150 sub-areas were partially relinquished
- 62 once fallow sub-areas will be offered in future Rounds

On fallow discoveries

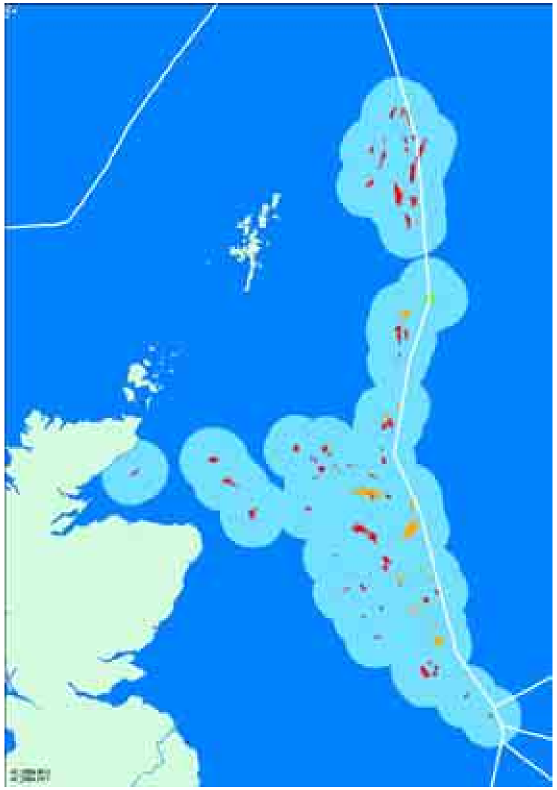
- activity was completed on 34, including 19 wells and 15 development plans
- 18 have activity plans agreed or pending commercial agreements
- 17 have been re-licensed out of 24 that have been relinquished
- 42 are currently advertised as fallow and 7 newly fallow are under review have insufficient

3. Getting Fair Access to Infrastructure

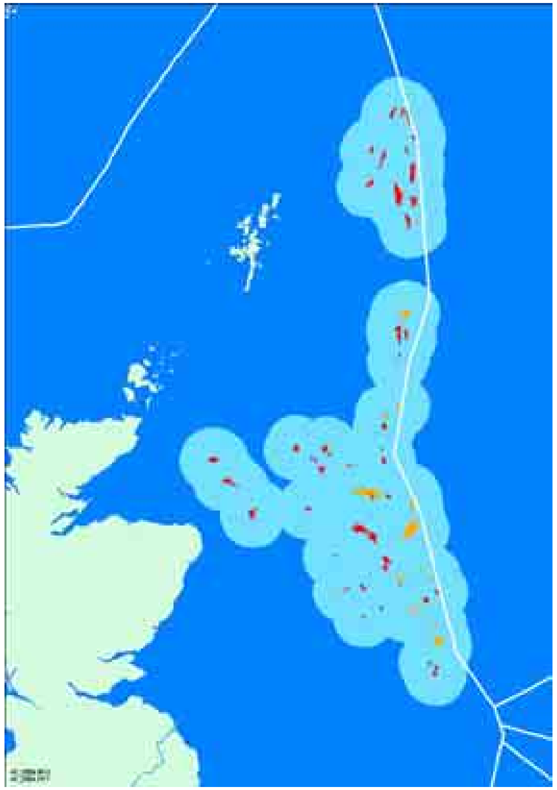
- Pipelines, Platforms
- Access by 3rd parties key to exploration and development
- Widespread concern that access terms were not fair



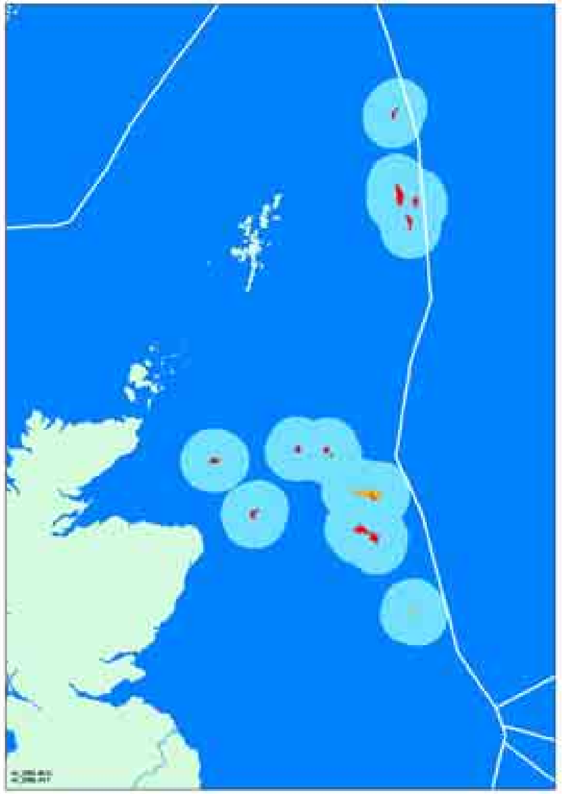
UKCS "Window of Opportunity"



2004



2010



2020

Fair access to Infrastructure

- Re-launched 'Code of Practice' – Sept 2004
- Clarified how BERR would set a tariff if asked – cost/risk/return balance: target as if competition exists
- Greater transparency on tariffs & terms (firms must publish agreed tariffs etc on websites)
- Accepted that BERR will facilitate and may set tariff & terms if there is no agreement between pipeline owner/possible new user within 6 months

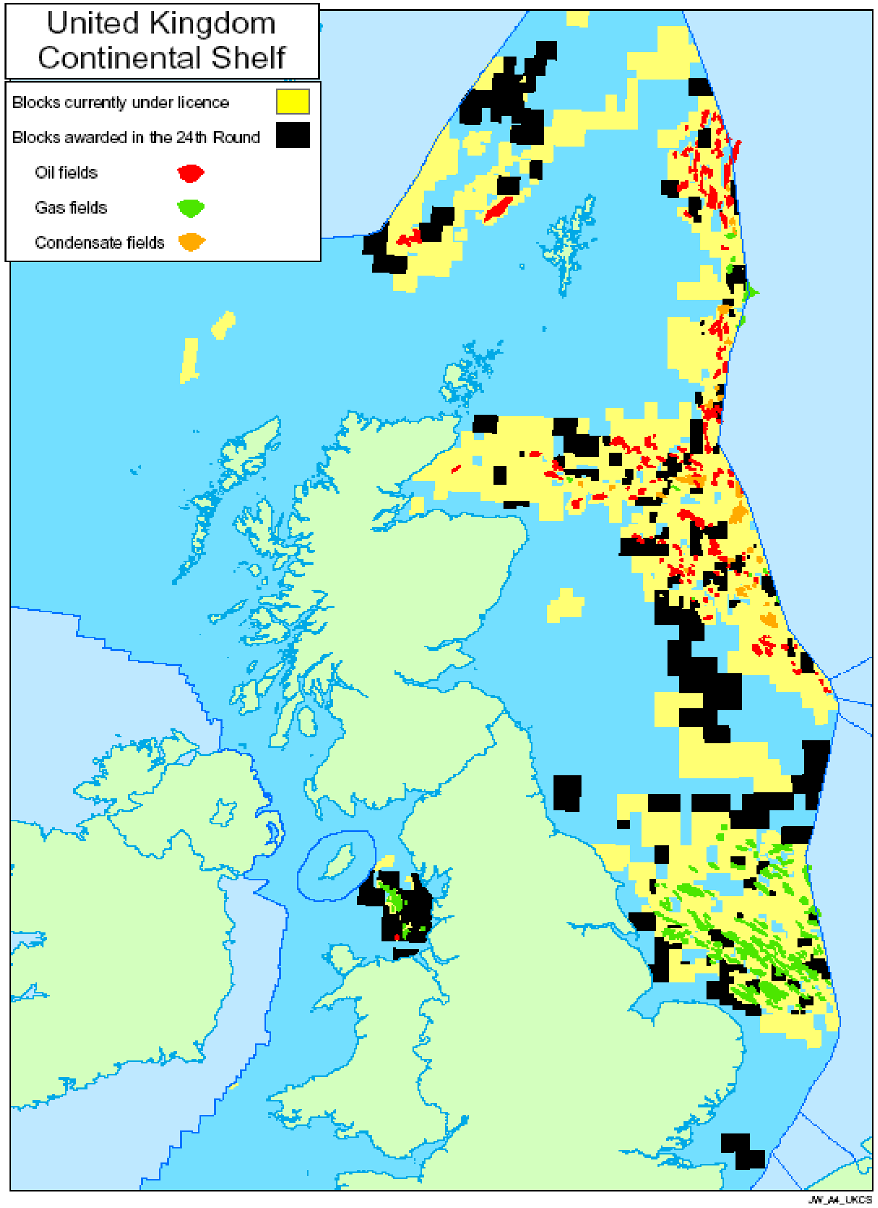
Conclusions

Measuring Success: are we seeing…

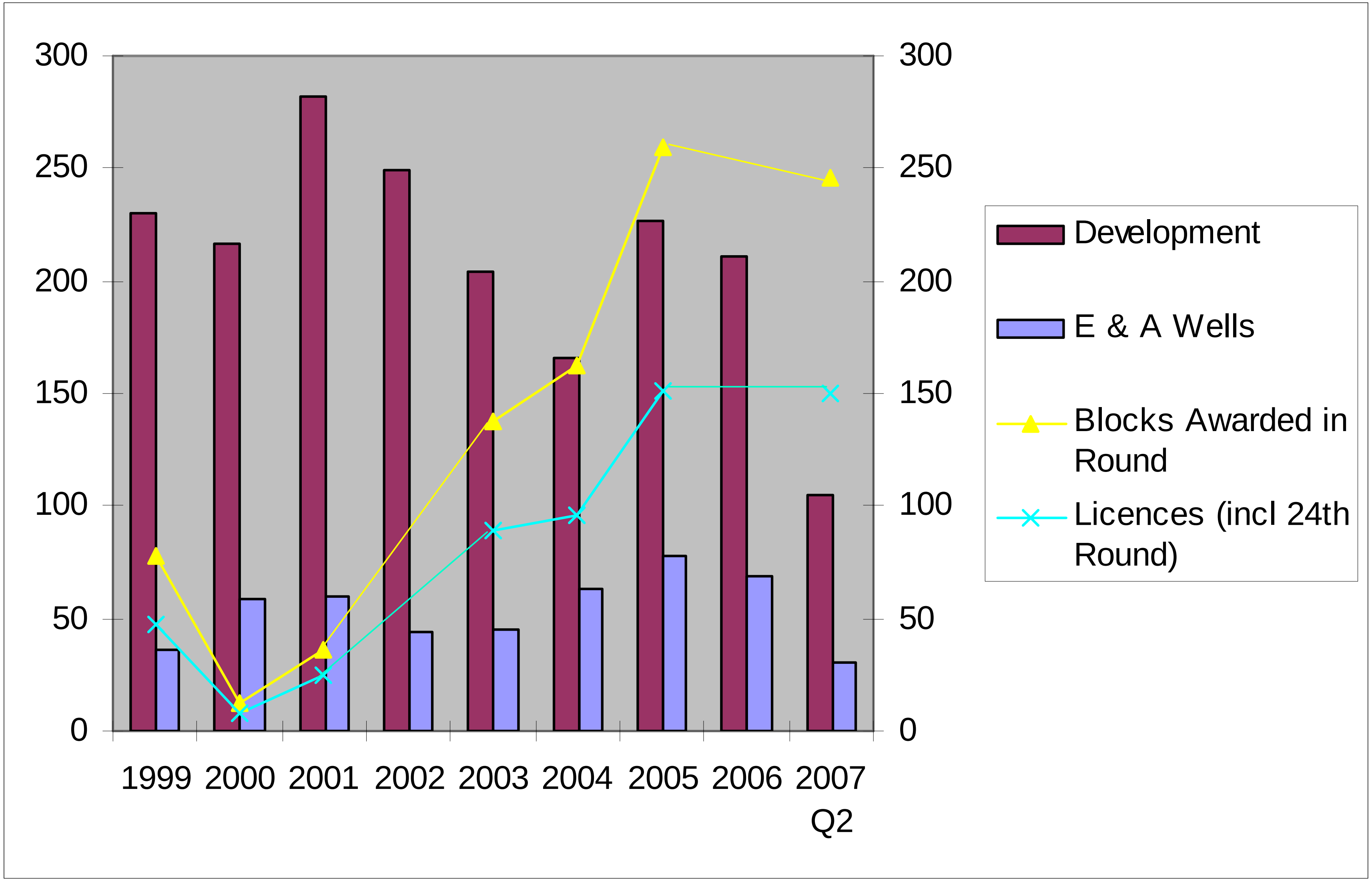
- Wider range of UKCS oil and gas licensees?
- Continued investment and activity?
- Maximisation of exploration potential?
- New approaches / Innovative thinking?

24th Round (2/07)

- 17 New Players
- 246 Blocks licensed
- 16 Wells committed to
- 79 Traditional licences
- 65 Promote licences



UKCS Activity Levels



Finally…

www.og.berr.gov.uk