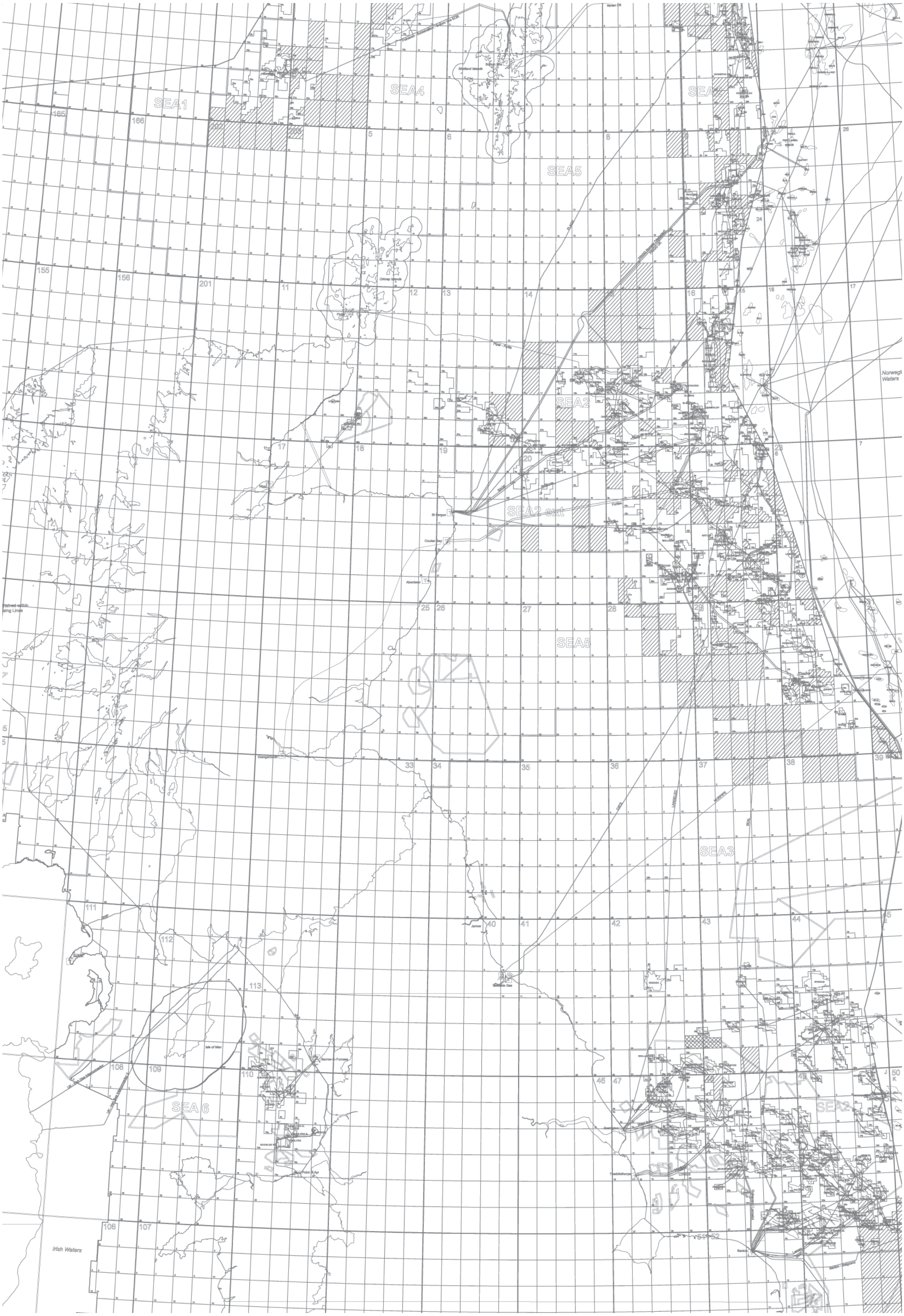
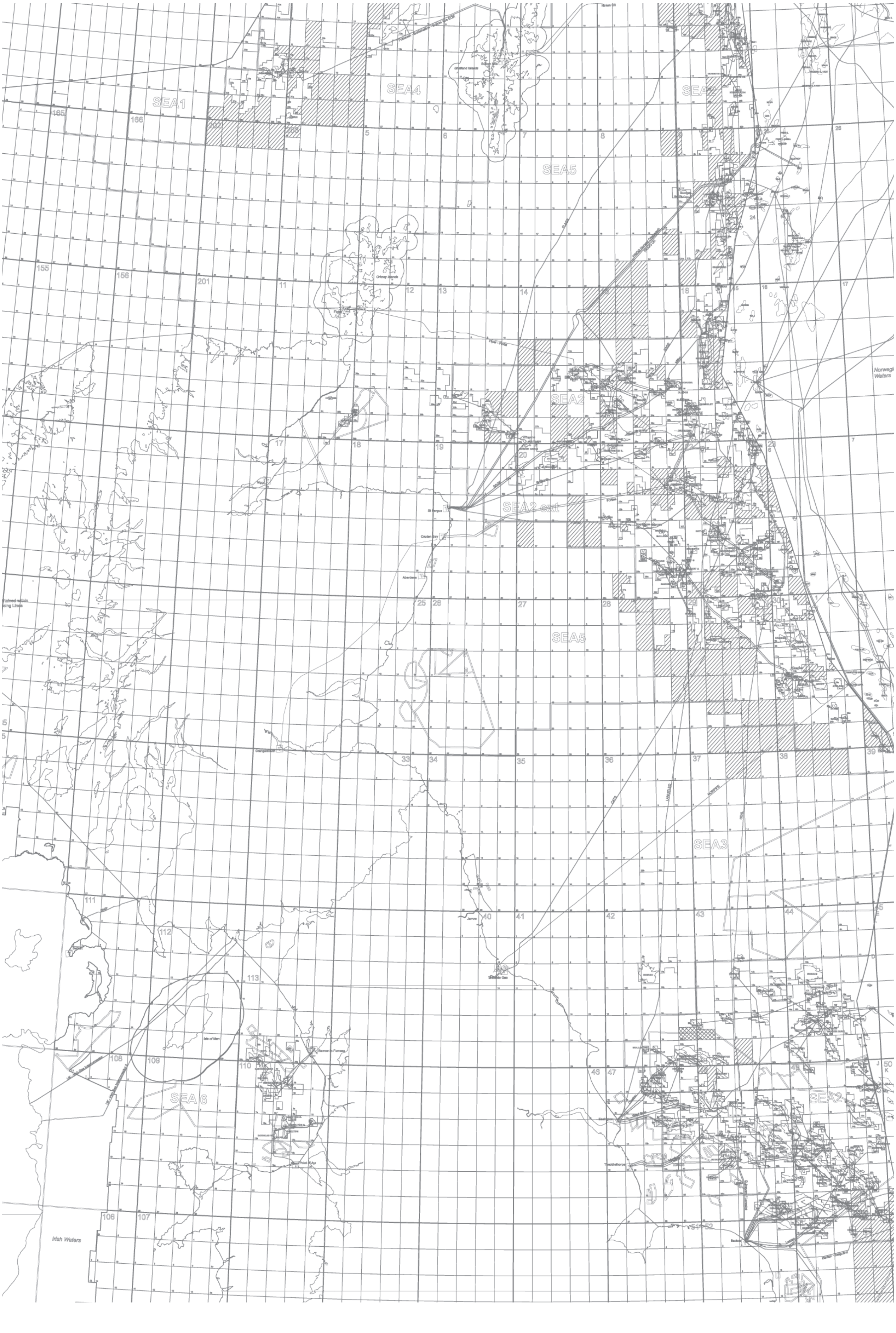
UKCS MAXIMISING RECOVERY REVIEW: INTERIM REPORT

11 November 2013

Sir Ian Wood


SEA1
SEA4
SEA5
SEA2
SEA2 ext
SEA3
SEA6
Shetland Islands
Orkney Islands
Isle of Man
Irish Waters
Barrow-in-Furness
St Fergus
Aberdeen
Cruden Bay
Grangemouth
Teesside Gas
Theddlethorpe
Bacton
Point of Ayr
165
166
155
156
201
202
5
6
7
8
11
12
13
14
16
17
18
19
20
25
26
27
28
29
30
33
34
35
36
37
38
39
40
41
42
43
44
46
47
52
106
107
108
109
110
111
112
113

Contents


SEA1
SEA4
SEA5
SEA2
SEA2 ext
SEA3
SEA6
Shetland Islands
Orkney Islands
Isle of Man
Irish Waters
St Fergus
Cruden Bay
Aberdeen
Grangemouth
Barrow-in-Furness
Teesside Gas
Theddlethorpe
Bacton

1.

Introduction

The UK's oil and gas industry makes a substantial contribution to the UK's energy security, economy and employment. It supports the employment of 450,000 people, directly and indirectly, across the UK, and underpins the international export of related UK goods and services worth £7 billion. In 2012-13 the industry paid £6.5 billion in corporate taxes on production, over 15 per cent of all corporate taxes in the UK, and made a contribution of £39 billion to the UK balance of payments.

Some 41 billion barrels of oil equivalent (boe) have already been produced from the United Kingdom Continental Shelf (UKCS) and it is estimated that a further 12 to 24 billion boe could be produced. Ultimate recovery is in a large part dependent on how well the UK manages the development of remaining reserves. In addition to the economic importance, maximising recovery of the UK's indigenous supplies of oil and gas will help maintain security of supply as the UK transitions to a low-carbon future, with DECC's latest projections showing that in 2030 oil and gas will continue to provide 70 per cent of the UK's primary energy mix. Currently the UKCS still provides 66 per cent of the UK's oil demand and 50 per cent of gas demand.

Whilst the UKCS is one of the most mature offshore basins in the world, it is not uniform: it comprises a diverse mix of mature areas, frontier areas, new exploration plays (such as the Carboniferous and Sub-basalt) and huge opportunities in maximising brownfield recovery. Thus, the area West of Shetland is essentially a frontier region which provides the opportunity to use the lessons learnt from the more mature UKCS areas to achieve the optimal development.

However investors also face unprecedented challenges:

- The number of fields has grown rapidly from 90 in the early 1990's to over 300 today. These fields are operated by an increasingly diverse mix of companies, ranging from super majors and national oil companies through to small independents. They are also far more interdependent than in the past. Gone are the days when a handful of major companies operated large fields in isolation.
- Discoveries are generally smaller and more expensive to exploit: the average UKCS discovery size over the past ten years has been 25 million boe and 90 per cent of current fields in production on the UKCS are producing less than 15,000 boe per day. The resulting development costs per barrel have risen five fold over the last decade. Many developments will only be viable through collaboration and cooperation to form hubs/clusters to achieve the most efficient development. This is particularly true for infrastructure utilisation.
- Some operating assets are more than 30 years old – at or beyond the end of their originally intended design life, increasingly expensive to maintain and facing increasing pressures on standards and safety. Thus, maintaining ageing infrastructure and encouraging new infrastructure investment is vital for maximising further production.
- Technology advances allow exploitation of ever more complex discoveries, such as tight gas and oil and high pressure high temperature fields. These however come with high costs that could render many such opportunities too marginal to pursue.
- There are severe constraints on availability of finance for small and some medium operators.

continued

It is essential for the future growth and prosperity of the UK that the recovery from both existing fields and new discoveries is maximised. To achieve this goal, there now needs to be a radical step up in how Government exercises stewardship of the UKCS, working closely with Industry. There is also a need for urgent intervention in some areas to avoid significant value erosion to both Industry and Government. DECC are to be commended for commissioning this timely Review. This interim report identifies the key challenges the Government now faces in managing and supervising the UKCS and makes recommendations on the actions that should be taken to address them.

Over the last four months, the Review team has conducted more than 80 interviews. 40 were with companies that have a licence interest in the UKCS; together these companies account for more than 95 per cent of UKCS production and investment, and provide a representative insight into the challenges facing the industry. The Review has taken evidence from key government figures and has also met with regulators from the USA, Canada, Norway, the Netherlands and Australia. The Review has also received more than 25 submissions via the review website.

This report contains the interim findings of the Review. The final report, to be published early in 2014, will consider sector strategies and implementation plans to maximise the economic recovery from the UKCS, take account of feedback on the interim findings, and provide more details of the evidence base.

2.

Challenges

UKCS investment is currently at a record high of over £13.5 billion in 2013, with new fields being brought into production. However, this masks some serious underlying problems.

- Over the last three years production has fallen by 38 per cent with the UKCS producing around 500 million boe less over the period. 360 million boe of the decline is due to the rapid fall in production efficiency (from 70 per cent to 60 per cent).
- The fall in production has cost HM Treasury (HMT) up to £6 billion in lower tax receipts.
- The decline in exploration led to less than 50 million boe being discovered in 2012. If such a trend continues, the UK will fail to recover even a small portion of the exploration potential that still remains across the UKCS, which DECC estimate to range from 6 – 16 billion boe.

The reasons behind these problems are complex, but the Review has identified the following key issues:

i) **Lack of focus on maximising economic recovery for the UK** – under the current approach, operators have pursued individual commercial objectives in insolation, with limited shared commitment or obligation to maximise economic recovery across fields or within regions of the UKCS. New infrastructure is typically designed only for specific developments and without taking account of wider potential demand. Over the last three years, ten Floating Production Storage and Offloading vessels (FPSOs) have been selected for new fields. These have enabled the development of fields that would otherwise have been uneconomic, but have higher operating costs and poorer field recovery. Greater efforts must be made to use existing infrastructure where available.

ii) **Fiscal policy** – clear views were expressed that fiscal instability has been a significant factor in basin under-performance. However, recent changes (for example fiscal allowances for some new fields, for brown field developments, and certainty over decommissioning tax relief) have been well received, and will help maximise long term economic recovery.

iii) **Government stewardship** – Government's present stewardship model, which was designed when the UKCS was a relatively young basin and is towards the "light touch" end of intervention, will not be adequate to manage the challenges the UKCS faces in the future. The Regulator (situated within the Department of Energy and Climate Change, DECC) is now significantly under resourced and far too thinly spread to respond effectively to many of the demands of managing an increasingly complex business and operating environment.

iv) **Industry stewardship** – the rapid fall in production efficiency is an indication of poor asset stewardship which the Regulator has not been able to adequately confront due to the significant increase in their workload in recent years. The consequences of a past lack of investment are also becoming increasingly apparent. While ageing assets are a factor, there are strong signs that under-investment in assets and insufficient uptake of Improved Oil Recovery (IOR) and Enhanced Oil Recovery (EOR) techniques will have a significantly adverse effect on maximising economic recovery for the UK. It is acknowledged that some Enhanced Oil Recovery (EOR) schemes are costly and complex to operate, but industry must be encouraged to invest more in these schemes to avoid leaving significant value behind.

continued

v) **Lack of collaboration and overzealous legal and commercial behaviour between operators** – a lack of cooperation and collaboration across industry has increased costs, caused delays, and led to poorer recovery. For example, the Review has found more than 20 instances in the last three years where the inability of operators to agree terms for access to processing and transport infrastructure has led to sub-optimal (more expensive / lower recovery) developments, significant delays or in some cases stranded assets.

vi) **High quality strategic thinking by PILOT[1], but poor implementation** – on issues such as exploration, infrastructure and decommissioning, the UKCS now requires integrated planning and collaboration to ensure the most efficient approach is adopted across the UKCS. The Regulator and Industry must continue to work together through PILOT to implement the strategies already developed in a number of key areas.

[1] PILOT (formerly the Oil and Gas Taskforce) facilitates the partnership between the UK oil and gas industry and Government.

3.

New strategy for Maximising Economic Recovery from the UKCS (MER UK)

Recommendation 1: Government and industry to develop and commit to a new strategy for maximising economic recovery from the UKCS (MER UK)

The UKCS should be an attractive destination for investment, with significant opportunities still to be developed. However, to address the challenges of the evolving basin, changes need to be made urgently to meet the Government's objective of maximising economic recovery from the UKCS, ensure the long term health of the UKCS, and reverse recent declines in performance.

Until now, successive Governments' policy has largely focused on maximising economic recovery from individual oil and gas fields. With the increasing number of clusters and the importance of hubs, Government (both HMT and the Regulator) and Industry must now adopt a cohesive tripartite approach to develop and commit to a new, shared strategy of MER for the UK (MER UK) in order to maximise the huge economic and energy security opportunity that still lies off the UK's shores. This will involve more collaboration to achieve mutual benefits which will enhance individual gain by significantly increasing the reserves recovered. This Review makes a series of recommendations to each party on the role they must play in establishing and delivering that strategy.

Changes to the current regime must, of course, balance the desire to drive better performance and recovery with the risk of discouraging investment. The Review believes that, if implemented fully and quickly, the recommendations will bring a significant increase in the recoverable oil and gas reserves to the benefit of both Government and industry alike.

At the low end, the Review believes the recommendations in this report have the potential to deliver at least 3-4 billion boe[2] more than would otherwise be recovered, worth approximately £200 billion to the UK's economy at today's prices, through an increase in industry collaboration on cluster developments, reversing the fall in production efficiency, promoting exploration, delaying decommissioning, and preventing the stranding of assets through loss of key infrastructure. At the high end, HMT, the Regulator and Industry fully committing to the new strategy will put the UK in a much stronger position to reach the 24 billion boe potential.

[2] The benefits derive from the following opportunities, all of which contribute to a positive outlook for the UKCS and are unlikely to be achieved unless the recommendations within this report are implemented. Many of the elements overlap and a conservative estimate of 3-4 billion boe has been used. Key components:

- Effective implementation of EOR – 0.5 - 1 billion boe - ranging up to 6 billion boe in a best case scenario,
- Increased rate of exploration estimated to deliver an additional 1 – 1.5 billion boe,
- Improved use of infrastructure allowing an additional 0.5 – 2 billion boe to be recovered,
- Postponing of decommissioning (by five years on average) adding an additional 1 billion boe.

The Review sees the key contributions from HM Treasury, the Regulator and industry to deliver the new strategy for Maximising Economic Recovery from the UKCS (MER UK) to be as follows:

3.1. HM Treasury

As stated earlier, Fiscal policy is key to company behaviour and decision making. Since 2011, HM Treasury (HMT) has demonstrated its desire to maximise economic recovery with Government introducing: a brown field allowance for incremental projects in existing fields; a £3 billion allowance to support investment West of Shetland; a £500 million allowance for large shallow water gas fields; and extending the small field allowance. These measures have all been strongly welcomed by industry, significantly contributing to the current record wave of investment. The recent decommissioning tax relief also gives the industry much greater certainty on decommissioning liability and should facilitate a number of licence changes and release substantial funding held under guarantee. This should drive at least £13 billion of increased investment with additional 1.7 billion boe extracted.

The Review has the following observations for HMT:

- The UKCS is not a uniform mature basin. There are frontier areas, new plays, new technically challenging areas, mature dry gas regions and mature oil regions. The MER UK strategy will require sufficient flexibility and capacity to encourage investment and maximise recovery in each of these plays. HMT will be able to work very closely with a greatly strengthened Regulator to better use their fiscal levers to incentivise MER.
- It is noted that HMT have chosen to use Field Allowances to successfully promote investment in more marginal fields. Interviewees warmly welcomed the allowances and believe they will make a significant contribution to maximising economic recovery. A significant number of Interviewees also suggested that Government should consider further extension of field allowances to incentivise EOR as the business case emerges. This would promote new technologies, increase recovery and encourage major refurbishments of existing fields, thereby prolonging field life and postponing decommissioning. Interviewees also suggested looking at end-of-life fiscal plans to encourage business models which retain essential infrastructure, and combine late-life operations and decommissioning.
- Against the backdrop of a more complex fiscal regime, many Interviewees expressed the view that bespoke allowances should be at a minimum within a simpler and stable fiscal regime within each area/play of the UKCS. This would enable better industry planning and significantly reduce the present level of work on bespoke applications.
- The Review found strong views on the need to stimulate exploration, particularly in less prospective areas. The recent discovery of the large 1.8 billion boe Johan Sverdrup field on the Norwegian Continental Shelf, close to the border with the UKCS, highlights the potential rewards of encouraging exploration. Interviewees suggested the need to incentivise seismic and exploration wells for operators who currently lack production and also for less prospective areas. The rate of Exploration drilling has halved over the last ten years and the UKCS must see a significant step up in exploration over the next 5-10 years to achieve MER UK.

3.2. Regulator (Licensing and Stewarding of Exploration, Development and Production)

A strong, informed and engaged Regulator is essential to ensure industry maximises economic recovery of UKCS oil and gas for the UK. The Regulator is responsible for working with industry to deliver the full productive potential of the UKCS through:

- Requiring sound stewardship of existing assets and infrastructure to achieve the maximum economic recovery of resources;
- Encouraging timely development of discoveries, taking account of the broader need to maximise adjacent likely developments in the region;
- Promoting active exploration for new oil and gas resources around the UKCS;
- Overseeing the deployment and retention of key infrastructure to support the on-going development of the UKCS, ensuring appropriate access to third parties and facilitating the development of new strategic infrastructure;
- Overseeing the decommissioning of the UKCS, ensuring it proceeds in a logical, environmentally sound and cost effective manner. Government has a significant financial interest in this.

To achieve these goals the Regulator must have the appropriate structure, resources and legal powers to operate effectively. The current structure, with the regulatory body situated within DECC, is, in the view of DECC, Industry and the Review, no longer adequate to meet the challenges of managing an increasingly complex basin.

Recommendation 2: Create a new arm's length regulatory body

The number of both administrative and specialist skilled posts in the Regulator has decreased over the last 20 years. In the early 1990s, the UKCS economic and operational Regulator had around 90 personnel at a time when there approximately 90 fields in production. The UK now has over 300 fields in production but the Regulator is down to less than 50 personnel, working on more complex licensing and stewardship issues. In contrast, the Norwegian Petroleum Directorate (NPD has 220 personnel and Energie Beheer Nederland BV (EBN) in the Netherlands has around 100. The Review has heard consistent praise for the performance of the present DECC staff, but it was the unanimous view from the evidence received that the Regulator is now significantly under-resourced and under-powered to effectively manage the increasingly complex UKCS. The Regulator is effectively limited to tackling the most immediate and pressing issues.

With the increasing interdependence between operators, and the number of disputes and disagreements over new field developments and access to infrastructure, Industry is clearly saying they want a stronger Regulator, able to become proactively involved, minimise disruption and delays, and facilitate and accelerate progress.

The new Regulator should be set up and operate on the following principles:

i) The Regulator should be responsible for the economic and operational regulation of the UKCS (Licensing and Stewarding – Exploration, Development and Production activity), focusing on supervising the licensing process and maximising economic recovery of the UK's oil and gas reserves. It should not cover the regulation of Health and Safety nor Environmental matters.

ii) It should be an arm's length body with the ability to attract top quality personnel, with appropriate industry experience, able to work closely with all parties to deliver the MER UK strategy.

iii) It must be able to build up the necessary skills and experience to a much stronger capability than at present. This should include additional leadership, commercial, legal, petroleum engineering, engineering, economic, geological and geophysical posts.

iv) It should be responsible for ensuring that Government and Industry have a coherent strategy for delivering MER UK over the next 30 years. The key elements of this strategy are set out in Recommendation 4, and will be outlined in the final Report.

v) It would require sufficient operational freedom, within an appropriate framework set by Ministers. As an arms-length body, it would need to be led by an individual with significant industry experience, who would work closely with the Energy Minister and policy officials in the relevant department (currently DECC).

vi) It should identify areas in which Competition Law may prevent companies from working effectively to promote MER UK (for example, sharing of seismic data), and act as an independent external party to facilitate coordination and interpretation of data.

vii) The Review notes that many regulatory bodies, including OfGem, Ofcom and the Financial Conduct Authority, are fully funded by their respective industries. This would appear to be an appropriate funding model for the proposed new Regulator, which must have the resources and delegated freedom to recruit high quality personnel in a competitive market.

Recommendation 3: Additional powers

In other jurisdictions the Review has examined, a significant amount of a regulators' influence comes from their knowledge, capability and experience. These regulators are informed and involved, and, on occasion, prepared to press operators with an implicit, if not explicit, requirement to collaborate and alter plans in order to maximise recovery for the country concerned. A much better resourced UK Regulator should achieve this, but to ensure delivery of the new MER UK strategy, Government should take the necessary steps to secure the following additional powers:

i) **Maximising economic recovery for the UK –** a clause should be included in current and future licences to build on existing language, making clear that in all areas of development and operation, the licence holder must act in such a way that is consistent with the principle of MER UK. This would set the expectation in areas such as maximising production efficiency, demonstrating effective utilisation of infrastructure, and collaborative behaviour for development of regional clusters. This could be supported as necessary by the development of protocols and procedures as guidelines for achieving such collaboration.

ii) **Dispute resolution and complexity of the legal and commercial process –** the Review has found a very significant number of disputes and disagreements on commercial and technical issues between and within licences, mainly on access to processing and transport infrastructure and new field cluster development, both of which have a significant impact on MER UK. The new Regulator should work with industry to develop protocols and processes, based on past learning, for dispute resolution including the use of expert assessors where appropriate. Power should be given to the Regulator to resolve such disputes and disagreements within an agreed timeline and structure, ending in the Regulator making a recommendation to the parties concerned. The parties will not be bound by the recommendation, but failure to accept the outcome may fall within the new MER UK clause, other clauses in the licence, or within the sanctions and incentives outlined in the next paragraph.

The Review is unwilling, and does not have the expertise, to be prescriptive to simplify the complexity of UKCS legal and commercial negotiations. Standard agreements do exist in a number of areas but are often not used. There is also a lot of learning from past disagreements in areas like transport, stabilisation, storage or handling of petroleum products in the infrastructure. The Review recommends that the operators should be given one year to come up with their solution to simply the complexity and significantly reduce the time required in UKCS commercial and legal negotiations. If they can't produce a satisfactory framework, the new Regulator should make its own recommendations which should then be included in the licence terms.

iii) **Sanctions and incentives –** a number of sanctions already exist within the licence terms and regulations, ultimately including removal of operatorship. Leading up to this, the Regulator can issue informal and formal warnings. A clear system of (private) informal and (public) formal warnings should be developed which could lead to the loss of operatorship and then licence. The new Regulator, with its greater involvement with operators, should be able to ensure many of the issues are resolved before or as they arise. With the urgent need to improve production efficiency, brownfield investment will be very important and the Regulator must be able to take steps to ensure assets are in the right hands to maximise brownfield recovery. Consideration of past performance regarding MER UK and broader regulatory compliance should be used as a formal element of future company licence applications, and inform HMT thinking on whether further field allowances would be justified.

iv) **Right to attend consortia meetings –** to effectively manage the UKCS, the Regulator must understand to the fullest extent possible the challenges faced by industry. As such, licences should include a provision allowing the Regulator to attend Operating and Technical Management Committee meetings. This is common practice in Norway and the Netherlands, where the Regulator frequently attends such meetings to ensure they are fully informed.

v) **Transparency and access to data –** the ready access to timely data is a prerequisite for a competitive market and this is even more important in an industry which relies on good data to create value and support its safe operation. The new Regulator should give consideration as to how this should be achieved and include this in the licence terms accordingly. For example, to promote greater openness on asset performance, the Regulator should require production data to be provided within timings to be determined, typically within three weeks of the end of the month in question. The Regulator should also consider publishing key data on asset stewardship, which in time should include asset production efficiency and recovery efficiency (actual and projected) both to be reported annually, within six months of year end. Further powers to promote the reporting and coordination of seismic and well data should also be given to the new Regulator.

Recommendation 4: Development and implementation of important industry strategies

The new Regulator, with its expanded resources, should, as a priority, work with industry to develop and implement strategies in the areas below, building on the excellent work already conducted within PILOT. These strategies and implementation plans should set out how Government and industry will maximise economic recovery in practice, and will be developed in the final Report.

- Exploration
- Asset Stewardship (Production Efficiency and Improved Oil Recovery)
- Infrastructure
- Technology (including Enhanced Oil Recovery and Carbon Capture and Storage)
- Decommissioning
- Regional Development Plans (starting with the Southern North Sea where a plan is urgently required)
- Data management
- Access to finance (particularly for Small and Medium Operators)

Each of these strategies should maximise opportunities for data sharing/knowledge management and for collaboration in exploration, development and operations.

It is noted that DECC has already undertaken work with The Crown Estate, the oil and gas industry, and the offshore renewables industry to ensure that potential conflicts of interest are identified and resolved at an early stage. This work should be developed further to ensure that the contribution of both sectors to the UK economy is maximised. With decades of experience of overcoming offshore challenges, the UK's oil and gas Industry has a wealth of transferable knowledge, skills and technology that the Review believes will benefit offshore renewables projects. Areas such as the subsea sector and safety will provide models for offshore renewables projects, as will Industry's experience of building a globally competitive supply chain. In addition to sharing knowledge and expertise, Industry should look for areas to work in collaboration with offshore renewables where mutually beneficial cost savings can be found: for example, the potential for offshore wind farms to provide power to oil and gas platforms.

The Review believes that PILOT serves a very important and useful communication and relationship function between Industry and Government, and this should be continued. A fully resourced and more visible Regulator, playing a more active leadership role in PILOT, will significantly increase the likelihood of the subsequent policies and strategies being implemented.

Additional considerations for the new Regulator:

i) The new Regulator should provide technical support for policy formation within Government, including HMT, which is consistent with the need to encourage MER UK.

ii) Whilst the Review's remit is primarily offshore oil and gas, it is clear that there are many synergies with aspects of the regulation of onshore oil and gas activities (including shale gas) and the Review believes that consideration should be given to the new Regulator taking on this function in due course to avoid duplication and ensure consistency (with appropriate resource adjustments).

iii) The Review believes the need for a new Regulator is urgent due to the significant changes that are taking place in the UKCS. If legislative requirements delay formation, a transitional arrangement under an enhanced team should be established as soon as possible.

3.3. Industry

The number of exploration and production companies operating across the UKCS has increased by more than 50 per cent over the last decade. The basin now has a number of small and medium sized companies, some National Oil Companies, and major companies who have also retained a strong presence. The Review believes that to maximise economic recovery from the UKCS, including the frontier areas, the UK needs all of these participants and should also actively market the UKCS to attract new entrants.

Industry clearly needs a business environment which is predictable and encourages long-term investment. A significant amount of future production will come from exploiting a large number of small, marginal fields, so the fiscal and regulatory environment must encourage such investment. However, this will also require industry collaboration, use of economies of scale and a Regulator that will minimise bureaucracy, facilitate and support developments and help remove obstacles.

The Review has considered industry performance and the challenges raised by the rapid production decline over recent years. Whilst there are some obvious exceptions, in many cases it appears that companies have constrained asset investment and expenditure in a drive to deliver short-term returns. Also, evidence given to the Review clearly indicates the frustration and concern expressed by companies of all sizes on the negative impact of commercial behaviours. Whilst it is acknowledged that there are genuine technical difficulties that can impact negotiations, the frequency of failure to agree between and within consortia on key issues, including access to infrastructure and development of field clusters, is very damaging.

The Review received evidence of a number of companies having a predisposition not to collaborate: Operators have brought many of the problems on themselves. Indeed disputes and disagreements are seen as a clear negative to further investment in the UKCS. As an example, West of Shetland is an extremely important frontier area where, despite a lot of discussion on co-ordinating the development of a number of fields, little collaboration has yet been achieved in terms of field and infrastructure development. Infrastructure, both managing ageing assets, and securing the necessary investment in new assets, is perhaps the UKCS's most significant Achilles heel and the new Regulator must be empowered to achieve significantly better collaboration here.

The Review recommends the new Regulator should seek the following commitments from industry:

i) **Commit to the principles of Maximising Economic Recovery from the UKCS (MER UK)**

For MER UK to be achieved, Industry must play its full role in the cohesive tripartite solution. The prize here is improved production efficiency, better use of infrastructure, more active and, ideally, collaborative exploration programmes, many more small and medium fields developed economically and efficiently, and more cost effective development of regional clusters and infrastructure to achieve significantly increased reserves.

A large number of operators and other key stakeholders indicated significant frustration in working with a "light touch" Regulator. There is clear recognition that many of the current delays and failures to agree could be resolved with a considerably better resourced and so more involved and proactive Regulator. The introduction of the MER UK obligation will see significant mutual benefits to Industry with increased overall production from which everyone will benefit.

Industry must also undertake to provide some of its best and most experienced people to work with the new Regulator on developing and implementing MER UK strategies in areas such as exploration, production, increased and enhanced oil recovery and decommissioning.

ii) **Commit to work with the Regulator and adjacent licensees to develop efficient and effective cluster plans making the most economic use of production facilities and infrastructure**

This will be a critical success factor for MER UK. The introduction of the MER UK obligation will mean that operators must be prepared to discuss cluster field development plans with each other and take account of the opportunities of co-ordinating production facilities and infrastructure support with the aim to maximising regional recovery including building in potential for further future regional developments.

iii) **Commit to more efficient sharing of infrastructure (promoting third party access)**

Both exploration and field development are being badly affected by a lack of anticipated infrastructure availability. Under MER UK, Industry will be expected to resolve such commercial disputes on infrastructure access issues in a timely manner. Industry must fully abide by the Infrastructure Code of Practice which already exists and provides guidelines on third party access to infrastructure. In addition, the Regulator has sufficient legal powers to resolve issues which are contested and must actively use them under the new regime.

iv) **Commit to work with the Regulator to develop new infrastructure business models**

The new Regulator should have early discussions with the present infrastructure owners and possible new investors on how best to provide medium term infrastructure support in the UKCS. Unlike other comparable countries, infrastructure is largely owned by the present operators but there are signs that some modest infrastructure additions are appearing, financed by a number of the principal users. Measures should be taken to encourage a new infrastructure model focused on joint funding of infrastructure, and also the independent transporting and processing of third party production including onshore terminals. The ability to unbundle infrastructure from the existing production centric hubs should be evaluated and the revenue and decommissioning fiscal implications of such a development need to be considered.

v) **Commit to deliver on its obligations regarding asset stewardship**

Whilst there are some notable exceptions, the current situation where production efficiency has fallen to an average of 60 per cent in 2012 is unacceptable and illustrates the shortcomings of existing asset stewardship. It is first and foremost the responsibility of each company to demonstrate that it is an effective steward of the assets it is licenced to operate. The Review recommends that changes are made to the asset stewardship regime, with the new Regulator setting out clear expectations for asset performance and a timetable for their implementation. A fully resourced Regulator will be better able to assess performance and have more focused discussions with underperforming operators to agree and monitor a programme of continuous improvement. Where companies fall short of these expectations, the Regulator should issue a private and then a public warning, and then, if appropriate, encourage the sale and transfer of assets to a company more committed to maximising economic recovery.

In extremis, the Regulator's ultimate sanctions are to remove the operatorship and then the licence.

Poor project management, planning and execution efficiency, leading to high cost offshore operations has been raised on a number of occasions in the Review. Additionally the shortage and very high cost of offshore exploration rigs clearly impacts on MER UK. Skills shortages, particularly at high end technical levels are a problem and unit production costs have increased significantly as have the time taken to carry out major refurbishments and shutdowns. The Review observes that this is not helped by the very large number of self-employed contractors working within both the operators and the supply chain contractor organisations. These are challenges the industry must work through and solve.

vi) **Commit to improve collaboration**

Effective collaboration will be fundamental to the successful future of the UKCS. The word collaboration is much used and abused in PILOT discussion. All the good work done by the PILOT sub committees will come to nothing unless meaningful implementation is achieved, and this will not happen without genuine Industry collaboration. It is the Review's belief that such collaboration should be robustly facilitated and co-ordinated by the Regulator, who must be able to call companies to account, within the licence terms, when they adopt an unreasonable position. The new Regulator, by acting as an independent third party receiving and coordinating data, will also help prevent Competition Law inadvertently hindering companies from working effectively together.

Industry has achieved very successful collaboration on health and safety issues and there is no reason why this cannot work just as well for areas such as production efficiency, rig sharing, more effective deployment of new technology, improved shutdown co-ordination, sharing access to key spares and a collaborative approach to decommissioning.

vii) **Commit to reduce the legal and commercial burden of working in the UKCS**

Evidence clearly indicates the UKCS is perceived as being one of the most difficult and adversarial legal and commercial basins in the world, disproportionately driven by risk aversion to the detriment of value creation, particularly when the transaction is not material to one party. Industry must challenge this culture and senior management must play a leading role in delivering change and, in particular, accept the challenge under Recommendation 3 ii to come up with their proposals.

In the interim, industry should commit to at least using agreed standardised agreements, processes and procedures, such as the: Joint Operating Agreement; Confidentiality Agreement; Proximity Agreement; Pipeline Crossing Agreement; and Decommissioning Security Agreement. Interestingly, a number of interviewees observed that operators took a much more constructive approach to risk in discussion with the supply chain than in discussion with each other.

Significant disagreements also emerge within Joint Ventures. The proposed new Regulator's right to attend Joint Venture meetings should improve the situation, as should the prospect of the Regulator exercising the dispute resolution process which, the Review believes, will result in many of the problems being resolved without recourse to the Regulator.

Partners within individual Joint Ventures must collaborate to ensure the operator can effectively fulfil their MER UK obligations, where necessary drawing on support resources from the other partners.

continued

viii) **Commit to working with Government to implement the UK Oil and Gas Industry Strategy**

In March 2013, the Government launched the UK Oil and Gas Industry Strategy as one of several sector strategies that go together to make up the government's wider industrial strategy. The strategy recognises the significant value of the supply chain which serves both the UKCS and the global oil and gas industry. Industry should ensure it prioritises its commitments and obligations within the UK Oil and Gas Industry Strategy to ensure the continued health and growth of this valuable sector, both in the UK and internationally, to the benefit of the UK economy.

Appendix A:

Terms of Reference

The Government believes the time is right to take a fresh look at the current arrangements for maximising economic recovery of the UK's offshore oil and gas resources. The Secretary of State for Energy and Climate Change, Rt Hon Edward Davey MP has therefore invited Sir Ian Wood, recently-retired chairman of Wood Group to lead a Review.

Sir Ian's Review will examine key factors which affect UKCS performance and will develop recommendations designed to enhance economic recovery of oil and gas reserves in the future. The Review will recognise the unique partnership that is required between operators and Government to exploit the vital resource remaining in the mature UKCS and, taking account of the strategic challenges and opportunities that lie ahead, will examine:

- Whether the incentives on operators to invest or divest are sufficiently strong to drive optimum investment and maximise economic recovery of current and future developments. This will include looking at the role and effectiveness of Petroleum Exploration and Development Licensing and associated regulatory and stewardship activity by Government as well as the investment hurdles, decision-making structures and resources available within and between licence holders.
- How the valuable work in the PILOT sub groups looking at production efficiency/Improved Oil Recovery, Enhanced Oil Recovery, exploration, access to infrastructure and technology, can best be driven through to early implementation. This will include looking at how to maximise investment in improving reservoir recovery rates across the basin.
- How to build on the partnership between operators and Government as well as significantly enhance inter operator collaboration across the basin to maximise economic recovery.
- The resources available to Government to carry out its oil and gas resource and Industry stewardship role effectively. In particular, the extent to which Government has the technical and commercial resources and capabilities, and how best these should be organised, to play a proactive and strategic role in partnership with Industry to maximise economic recovery of oil and gas.

While the Review will not make recommendations on taxation, its conclusions may nevertheless be drawn upon in future tax policy considerations by HM Treasury.

The Review will take account of the work of PILOT and the Oil and Gas Council and will draw upon expertise across Government, the oil and gas industry and elsewhere.

The aim of the Review will be to set the course for a prosperous and successful UKCS for the next decade and beyond, delivering growth, jobs and revenue to the UK economy and profitable opportunities for good operators.

Interim conclusions will be published in the autumn and the final report and recommendations will be presented to the Secretary of State and published around the end of the year.

Appendix B:

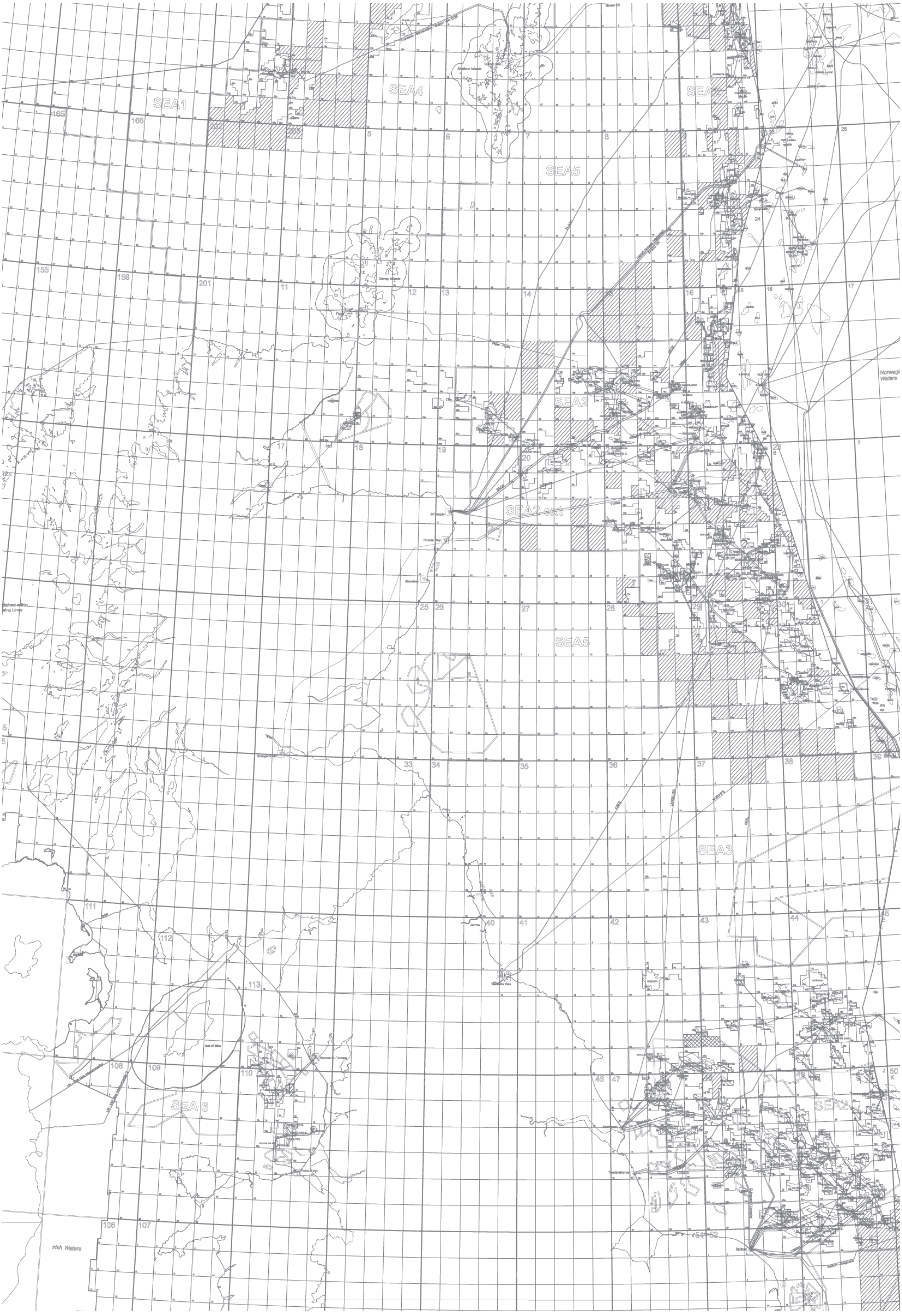
Areas Not Considered by the Review

The Review focusses on the primary issues impacting MER UK.

One of the most significant issues, UK fiscal policy, is not directly within our Terms of Reference and thus has not been given full consideration, although it featured heavily in interviewees comments.

Among the other important issues which will impact MER UK, but are not directly considered in this Review, are the following:

- Role of supply chain contractors
- Availability of skilled workforce
- Safety
- Environment


SEA1
SEA4
SEA5
SEA2
SEA2 ext
SEA3
SEA6
Shetland Islands
Orkney Islands
Norwegian Waters
Irish Waters
Isle of Man
Barrow-in-Furness
Point of Ayr
St Fergus
Cruden Bay
Aberdeen
Grangemouth
Jarrow
Teesside Gas
Easington
Theddlethorpe
Bacton

UKCS
MAXIMISING RECOVERY
REVIEW