North Sea
Transition
Authority

Guidance on satisfactory expected commercial return (SECR)

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Contents

Scope and purpose of this guidance

1. This document provides general guidance as to the approach the Oil and Gas Authority (‘**OGA**’) will usually take in assessing whether a project achieves a Satisfactory Expected Commercial Return (‘**SECR**’). The OGA is not bound by this guidance, and where it departs from this guidance it will explain why.

2. This guidance is not a substitute for any regulation or law and is not legal advice.

3. This guidance does not seek to: extend or redefine any part of the MER UK Strategy[1] (‘**the Strategy**’), its obligations or safeguards; set any new tests as to what should be considered economically recoverable petroleum; or, set the rate of return for projects or investments.

4. In addition to the safeguards included in the Strategy, there are likely to be earlier opportunities for companies to resolve any potential Strategy differences through licence stewardship discussions or field development plans.

5. SECR is an objective and pragmatic safeguard, with a targeted number of metrics. The OGA is aware companies use a wide range of metrics and inputs in assessing their returns, not all of which are included in the proposed SECR assessment. Indeed, separate from the Strategy, the OGA expects companies to continue to use their own project evaluation metrics for their commercial purposes.

6. Where the SECR safeguard is applied, the OGA aims to take a pragmatic approach, including having discussions with the companies involved, to understand the project. When evaluating whether SECR applies, the OGA would consider the project inputs such as the geological, engineering, project timing, cost expectations, production profiles, prices, exchange rates and the risks associated with these.

7. This guidance will be kept under review and may be revised as appropriate in the light of further experience and developing law and practice, and any change to the OGA’s powers and responsibilities.

[1] https://www.ogauthority.co.uk/media/3229/mer-uk-strategy.pdf

Introduction

8. The Strategy introduced a number of obligations on relevant persons (including licensees and infrastructure owners). Many of these obligations require a significant investment or funding of activities in pursuit of maximising the value of economically recoverable petroleum from the UK Continental Shelf (‘**UKCS**’). In cases where the relevant person decides not to ensure the recovery of the maximum value of economically recoverable petroleum[2], the consequence could be the requirement for the divestment or relinquishment of the licence or the imposition of various sanctions including the loss of operatorship, the revocation of the licence, a fine or an enforcement notice.

9. The legislative context[3] of the Strategy requires the OGA, when exercising its functions, to have regard to the need to maintain a stable and predictable system of regulation which encourages investment in activity on the UKCS. In line with this, the Strategy sets out a safeguard that the OGA will need to balance the benefits of any conduct with the damage to the confidence of investors in the UKCS.

10. Indeed, five safeguards are set out in the Strategy, which may be summarised as follows:

i. Paragraph 2 – no obligation permits or requires conduct which would otherwise be prohibited by or under the law, including the OGA’s duty to act reasonably

ii. Paragraph 3 – no obligation to make an investment or fund activity[4] where there will not be a satisfactory expected commercial return (SECR)

iii. Paragraph 4 – prior to taking enforcement action regarding a MER UK activity, the OGA must first discuss the situation with the relevant person

iv. Paragraph 5 – where a relevant person is required to invest in infrastructure or fund an activity for the benefit of another person, they may require a contribution to the associated costs that is fair and reasonable in all the circumstances, and

v. Paragraph 6 – no obligation requires any conduct where the benefits of the conduct are outweighed by the damage to the confidence of investors in exploration and production projects in the UKCS.

11. The term SECR in the context of the Strategy is not intended, nor will it be used, as a mechanism to set limits on levels of return on investment. Neither is it intended to introduce an industry standard for commerciality and companies will continue to use their measures separate from the Strategy to make their own commercial decisions on whether or not they will invest in projects.

12. The definition of SECR, as provided in the Strategy, is: “*an expected post-tax return that is reasonable having regard to all the circumstances including the risk and the nature of the investment (or other funding as the case may be) and the particular circumstances affecting the relevant person*”.

[2] Economically recoverable – “*those resources which could be recovered at an expected (pre-tax) market value greater than the expected (pre-tax) resource cost of their extraction where costs include both capital and operating costs but exclude sunk costs and costs (such as interest charges) which do not reflect current use of resources. In bringing costs and revenues to a common point for comparative purposes a 10% real discount rate will be used*”.

[3] http://www.legislation.gov.uk/ukpga/2016/20/section/8/enacted

[4] Herein collectively referred to as a “project.”

The OGA's approach

13. The OGA will have discussions with a company during a project's stewardship process, such companies being under an obligation to maximise economic recovery in line with the Strategy ('**MER UK**'). However, if the project in the OGA's view is not MER UK, the OGA will not continue to advocate for it. This is an iterative process, with the company and the OGA working to assess the project and ongoing discussions on all the relevant project-specific factors. This should be a constructive engagement with the OGA applying appropriate judgement. Indeed, the OGA and the company could rapidly agree that the investment or activity should go ahead, be dropped, or be postponed for a period of time. Should the process proceed to the use of the OGA's general enforcement powers, and the company raises SECR or other safeguards, the OGA will consider the evidence raised. Should the OGA agree that the Strategy safeguards (including SECR) apply, the process will stop. In addition to the safeguards included in the Strategy, there are likely to be earlier opportunities to reach resolution.

14. The OGA's review of a project where the SECR safeguard has been raised by a company will include an assessment of whether that company's views on inputs such as technical analysis, timeframes and assumptions are reasonable, and lifecycle costs have been reduced as far as possible (in accordance with paragraph 29 of the Strategy). This review may include assessing and verifying a company's cost and technical inputs. Again, this is an iterative process, where the OGA will be open to evidence on the specifics of the project as provided by the company.

15. It may be that the company considers that, objectively, the investment does not provide SECR and so should not be undertaken. If this is the case, the company has an opportunity to prepare material supporting such a safeguard which the OGA would then consider. For SECR, much of the data required for the numerical calculations, including that on uncertainty and risk, would be largely the same as that used to calculate the expected value of the project in relation to the definition of '*economically recoverable*' in the Strategy.

16. In addition to project data, the SECR assessment will likely require the provision of additional information from the company including that relating to the circumstances of the project that cannot be incorporated in the numerical tests and the "*particular circumstances affecting the relevant person*" that it wants the OGA to consider.

17. It is anticipated that, for the majority of potential investments, it would soon become clear at a high level whether or not an investment would meet the Strategy's "*maximum value*" Central Obligation,[5] and the SECR safeguard. However, in certain cases, whether those are met or not may not be clear and further analysis will be needed and as part of this process there will be ongoing discussions between the OGA and the company.

[5] *"Relevant persons must, in the exercise of their relevant functions, take the steps necessary to secure that the maximum value of economically recoverable petroleum is recovered from the strata beneath relevant UK waters."*

18. If there is still an outstanding difference of opinion, the OGA may choose to commence a formal investigation in line with its sanctions process as set out in the relevant guidance[6]. In so doing, the OGA will keep an open mind, including in terms of which regulatory powers are appropriate. For some cases, particularly related to exploration, the best approach might be to use applicable licence powers, including extensions and work programmes. For other situations, the solutions offered by the infrastructure powers or sanctions may be more appropriate.

19. The aim of the investigation process includes considering the application of SECR and other safeguards provided in the Strategy, and the appropriate sanctions. Again, further information may be requested of the company under the OGA's information gathering powers or the company may separately wish to submit more information on value and their view of the applicability of safeguards including SECR. The information considered is likely to include: the project cash flows, including risk analysis, assumptions and sensitivities; the circumstances affecting the company; and, the way in which the safeguards apply to the project.

20. Further, public companies listed on stock exchanges are required to '*book*' reserves to benefit transparency for the investment community, and strict rules apply to this process. The OGA does not consider that reserve '*bookability*' is a substitute for either the maximising value consideration or the SECR safeguard, nor are all companies active in the UKCS listed. However, if it became apparent during the analysis of an investment that would otherwise meet the SECR safeguard that any listed company would reasonably be influenced by the bookability of the resulting reserve, the reasons for this would be taken into consideration by the OGA.

21. Should the process continue to the sanctions stage, an important part of that stage will be the identification of the appropriate type of sanction (Notice, Fine, Operatorship or Licence Revocation). For some failures, the revocation of the licence or change of operator might be disproportionate, for example where there was a failure to make a *de minimis* investment, unless there was a pattern of such behaviours, in which case a change of operator or licence revocation might be more appropriate.

[6] https://www.ogauthority.co.uk/media/2985/oga_sanction_procedure_r.pdf

The SECR framework

Discounted Cash Flow Analysis

22. While companies use a range of investment decision-making methods and techniques, the OGA considers that, due to its economic validity and almost ubiquitous application by companies operating in the UKCS, the Discounted Cash Flow (‘**DCF**’) framework should normally be used to assess expected returns with respect to a numerical assessment of the SECR safeguard.

23. The DCF method is fundamentally an analysis of a project’s expected future cash flows, which are derived from input assumptions on a series of costs and revenues over the lifetime of the project. The discounted cash flows can then be used to generate a range of economic metrics such as Net Present Value (‘**NPV**’), Expected Monetary Value (‘**EMV**’) and Discounted Profitability Index (‘**DPI**’), which illustrate the attractiveness of a project in terms of its expected level of return and capital efficiency. For the purposes of a formal numerical assessment, the OGA would request a DCF based SECR assessment to be submitted by the company for the OGA to assess.

24. It is expected that companies will present a robust and objective assessment of all project cash flows (including capital, operating and decommissioning costs) on a point-forward basis (i.e. excluding sunk costs), including all technical and economic assumptions (including uncertainty and risk) and the resulting economic metrics. It is anticipated that the analysis would largely be the same as that used to calculate the expected value of the project in relation to the definition of “*economically recoverable*” in the Strategy, with appropriate adjustments made to the cash flows to reflect the post-tax, nominal terms nature of the SECR safeguard.

25. The OGA considers that project cash flows should include a company’s own assessment of its tax position. The OGA will assess the reasonableness of that assessment and only if there is then a significant difference of view will the OGA call in the company’s full internal tax calculations. The breakdown of costs and revenues should be at a sufficiently disaggregated level of detail to ensure that all relevant upstream UK taxes and allowances have been adequately accounted for. While the DCF analysis will be on a point-forward basis, the OGA acknowledges that any past cash flows may have an effect on the expected tax treatment of the asset being assessed.

26. The OGA would then consider the project cash flows and the underpinning technical and economic assumptions presented by companies in terms of their objectivity and reasonableness and whether lifecycle costs have been reduced as far as possible in accordance with the Strategy. In assessing technical assumptions, the OGA is likely to use internal or third-party expert advice. In relation to economic assumptions used by companies, the OGA is likely to compare them and the robustness of the resulting economic metrics using a range of external assumptions including those set out in Table one below.

Table one: Sources of OGA economic assumptions

Assumptions	Source
Oil and gas prices	Wood Mackenzie Quarterly Valuation Assumptions, Brent and NBP, nominal prices
Inflation rates	Office for Budget Responsibility (OBR), Economic and Fiscal Outlook, Consumer Price Inflation (CPI) forecasts
Exchange rates	Office for Budget Responsibility (OBR), Economic and Fiscal Outlook, exchange rate forecasts

Discount rates

27. The discount rate to apply to the cash flow analysis should be objectively determined based on the characteristics of the project and the current macroeconomic conditions and not based on a corporate discount rate which the company may apply in its own analysis based on its own approach to determining discount rates.

28. The OGA considers it appropriate for the non-diversifiable (systematic)[7] risks of a project to be reflected within the discount rate set with reference to the Weighted Average Cost of Capital ('**WACC**'), with diversifiable project specific risk captured by the company within the cash flow analysis.

29. The OGA considers that the discount rate for projects in the UKCS should be within the range of 5% to 12.75%, in nominal terms at the time of publication[8]. This range reflects a combination of current market evidence on the WACC of companies representative of those undertaking projects in the UKCS, and the nominal terms equivalent of the 10% real discount rate as defined in the Strategy. However, throughout the SECR process the OGA will consider the evidence provided by the companies, and recognises that there may be facts specific to each project to indicate an appropriate discount rate outside such a range.

30. As in all respects of the guidance, the OGA will engage with the company and consider evidence relevant to the particular project.

Expected post-tax return

31. In the context of the SECR safeguard, expected means a calculated objective expectation of post-tax value. Companies should aim to de-bias inputs, ensure logic in the analysis and strive to unlock the best option in terms of the impact on the Central Obligation.

32. In undertaking DCF analysis, it is recognised that companies can value projects of all types on either a deterministic or probabilistic basis. The analysis should be undertaken using an appropriate discount rate from the range presented in paragraph 29 above.

Deterministic Valuation – Net Present Value (NPV) and Discounted Profitability Index (DPI)

33. This is applicable when a company has only generated a deterministic case(s) but where the probability of each outcome has not been considered. A typical approach is to evaluate a range of cases for a project (e.g. low, mid and high production scenarios) and report the NPV and DPI for each case.

34. When the calculated NPV of an investment is positive, the expected return of the project is value adding and would support MER UK. However, it is recognised that industry may not wish to invest in every NPV positive project. To accommodate this, a project will generally be considered to have achieved SECR if it has a DPI of 0.3 unless it can be demonstrated there are facts specific to the project to indicate that a different DPI is appropriate.

[7] Systematic risk is the variation in outputs that is correlated with movements in the wider economy and which cannot therefore be reduced by diversification or other means of risk management. HM Treasury, The Green Book, Central Government Guidance on Appraisal and Evaluation, 2018.

[8] The top of the range will be determined by inflation at the date of the assessment. A real discount rate can be converted to nominal terms using the formula: $r = (1 + i)(1 + p) - 1$, where r is the nominal discount rate, i is the real discount rate, and p is the inflation rate. Applying this formula, 10% in real terms is equivalent to 12.75% in nominal terms, using outturn CPI inflation of 2.5% in March 2018, (Bank of England, Inflation Report, May 2018).

35. For projects evaluated on a deterministic basis the DPI would be calculated as NPV divided by the discounted capital and decommissioning costs (‘**Inv**’) as set out in the mathematical expression below[9].

$$DPI = \frac{NPV}{Inv}$$

Probabilistic Valuation – Expected Monetary Value (EMV) and Expected Value Discounted Profitability Index (EV DPI)

36. This is applicable when a company generates a probabilistic distribution of possible NPV outcomes which are generated from a decision tree or Monte-Carlo analysis[10]. It is expected that companies will present a range of possible outcomes (e.g. P10, P50, P90 cases) and an expected probability weighted mean estimate of the project’s NPV i.e. EMV.

37. Exploration prospects are often valued on a probabilistic basis. The resultant EMV considers the probability of the range of possible resource volume outcomes and success of finding hydrocarbons.

38. When the calculated EMV of an investment is positive, the expected return of the project is value adding and would support MER UK. However, it is recognised that industry may not wish to invest in every NPV positive project. To accommodate this, a project will generally be considered to have achieved SECR if it has a DPI of 0.3 unless it can be demonstrated there are facts specific to the project to indicate that a different DPI is appropriate.

39. For projects evaluated on a probabilistic basis, the Expected Value (‘EV’) DPI would be calculated as EMV divided by the EV of the discounted capital and decommissioning costs (EV Inv) as set out in the mathematical expression below[11].

$$EV\ DPI = \frac{EMV}{(EV\ Inv)}$$

Regard to all the circumstances

40. As required by the Strategy, when considering whether or not a project achieves a SECR, the OGA will consider what is reasonable – having regard to all the circumstances, which includes the risk and nature of the investment and, where appropriate in this context, particular circumstances affecting the company.

41. The risk and nature of the investment will include all the features that are inherent to the specific project. These could include:

- for projects involving exploration or production, the geology of a field and its anticipated productive performance over time and the uncertainty related to these;
- for projects involving the use of facilities, including drilling, production and transportation facilities, the lifecycle cost and performance and the uncertainties related to these;
- the complexity, novelty or interdependency with another activity or project where the impact of these on profitability and investment appetite cannot wholly or appropriately be captured by the assignment of uncertainties;
- the risks and uncertainties relating to market fluctuations for both costs and revenues in the light of reasonable industry practice to moderate these.

[9] The discounted capital and decommissioning costs (Inv) will be the same as that included in the calculation of NPV, where both have been discounted at the same rate and to the same discount date.

[10] Monte Carlo Analysis is a simulation-based risk modelling technique that produces expected values and confidence intervals as a result of many simulation that model the collective impact of a number of uncertainties. HM Treasury, The Green Book, Central Government Guidance on Appraisal and Evaluation, 2018.

[11] The expected value of the discounted capital and decommissioning costs (EV Inv) will be the same as that included in the calculation of EMV, where both have been discounted at the same rate and to the same discount date.

42. When considering "*the particular circumstances affecting the*" company, weight may be given to those circumstances that are reasonable in light of the Central Obligation, which is a requirement on every company. Depending on the facts, these may include:

- where a company has recently been part of a change of control or a licence has recently been assigned and, as part of its consideration of such a transaction, the OGA has accepted a period of reconsideration of plans for activity; or,
- where a company contends that there are financial circumstances that would make an immediate commitment to a project inefficient.

43. Where there are circumstances relating to timing or sequencing, such as the examples above, consideration may be given to the delay involved, the impact on other companies, and the confidence of those companies that the project would proceed in due course. In circumstances where there had been a long-standing expectation of project sanction or that the project formed part of a MER UK Plan as provided for by the Strategy, the weight given to the circumstances is likely to be low.

44. Other circumstances relating to the company are likely to be less reasonable in the light of the Central Obligation and consequently likely to be given little or no weight. These will generally include:

- corporate policies that tend to preclude investment in certain types or sizes of project such as a disinclination to invest in exploration beyond a core area;
- that the project does not provide a return commensurate with the overall return on their portfolio of investment; and
- enduring capital rationing set at levels effectively above those of the SECR assessments.

45. Where the company considers that the reasonableness of the return is not fully reflected in NPV, EMV or DPI metrics from the SECR assessment, it may put forward additional evidence. This evidence should be objective and focus on the particular circumstances of the project and may include evidence from tests widely applied by the industry.

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