



UK – NORWAY. TRANS-BOUNDARY OIL & GAS FIELDS

GUIDELINES FOR DEVELOPMENT OF TRANS-BOUNDARY OIL AND GAS FIELDS

PREFACE

These guidelines for development of trans-boundary oil and gas fields have been jointly published by the UK and Norwegian authorities. The purpose of the guidelines is to provide a simplified overview of key elements in the Framework and other delimitation line agreements as they relate to development of trans-boundary reservoirs and the practical steps in implementing various types of project. Emphasis has been placed on explaining the roles of licensees and operators and their relationship to the Regulatory Authorities in the UK and Norway. References to other relevant regulations, agreements and guidelines for development are also given. This list is not complete and further information is available on the NPD, DECC, PSA, HSE and SFT websites. The terms in the Norwegian version of this guideline have been adapted to address the Norwegian regulations. These may therefore deviate from the common terms used in the Intergovernmental Framework Agreements 1998 and 2005. The English version of the guidelines uses the terms from the Framework Agreements. This difference is not meant to have any substantive effect.

GUIDELINES FOR NORWEGIAN AND UK AUTHORITY PROCESS.

1. Joint exploitation of trans-boundary oil and gas reservoirs

1.1 Initial steps, entering into agreements, etc.

If, as a result of geological/geophysical mapping, a petroleum structure is considered to extend across the delimitation line and the licensees want to start development then the operating company, acting on behalf of their co-licensees, will inform the authorities of its home country accordingly. This will be the Norwegian Petroleum Directorate (NPD) for a discovery predominantly in Norway and the Department of Energy and Climate

Change (DECC) for a discovery predominantly in the UK. The authorities will discuss and hold meetings as necessary to review the potential extension of the petroleum structure across the delimitation line.

The operator will advise the licensees on the adjacent Continental Shelf and start technical discussions with them aimed at agreeing a possible time table for development.

The licensees of both countries will hold joint meetings to clarify technical issues on the basis of available geological and technical data with a view to agreeing a draft development plan and to prepare the draft agreements necessary for the development. The latter will include a Licensees' Agreement, as required by Article 1.2 of the 2005 Framework Agreement. The competent authorities of both countries will be invited to such meetings.

The Unit Operator will be appointed by agreement between the licensees and subject to the approval of both Governments. Any change of operator will need advance approval by the authorities of both countries. The Unit Operator will be responsible for coordinating contacts with both Governments for the purpose of the development.

If the licence area on one side of the delimitation line has not been awarded, the relevant authorities will represent that licence area in the technical and commercial meetings until such time as a licence is awarded. All reasonable efforts will be made to award the area as soon as possible.

The licensees will establish a joint schedule for the development project and agree procedures with the authorities for processing the development plan and for processing the agreements requiring joint Government approval. The specific information required, for example in the field development plan (FDP) or plan for development and operation (PDO), will be agreed with the authorities in the joint technical meetings. However, this will broadly follow the models set out in Figure 2. Preparation of these documents will usually follow the specific Guidance published by the Norwegian and United Kingdom authorities. Reference(s) to existing Guidance has been included at Appendix 1.

1.2 The Licensees' Agreement

The Licensees' Agreement will normally be the Unitisation and Unit Operating Agreement and will comprise the main terms for joint operations, together with appendices covering specific procedures, protocols and agreements. These will usually include such procedures as appointment/approval of Operator, determination of reserves, appointment of expert, etc. together with associated agreements such as the accounting agreement. The Licensees' Agreement will be subject to approval by both Governments.

An important element of the Licensees' Agreement needs to address determination of the trans-boundary oil and gas reserves. The Agreement should identify the limits of the petroleum structure and include proposals for determining the extent of the proposed field, the hydrocarbons initially in place, the method of calculation, and the distribution

of the reserves between the licensees on each side of the delimitation line. Methods for determining and if appropriate, redetermining reserves and their distribution across the delimitation line will be needed. The Licensees' Agreement should also include the process for resolving disputes related to the distribution of the petroleum deposit across the delimitation line, as well as disputes between the licensees.

Appendix 2 – Example Licensees' Agreement

1.3 Initial hydrocarbon volume in place and the allocation of reserves

The licensees will establish the initial hydrocarbon volume in place in the reservoir and the distribution of it across the delimitation line and thereby between the respective licensees. The process should be agreed between the licensees and should be as simple as possible. Figure 1 illustrates the process.

The process and outcome of it is subject to approval by both Governments and Articles 3.3 and 3.4, Appendix D of the Framework Agreement 2005 set out the process to be applied in case the Governments are unable to agree.

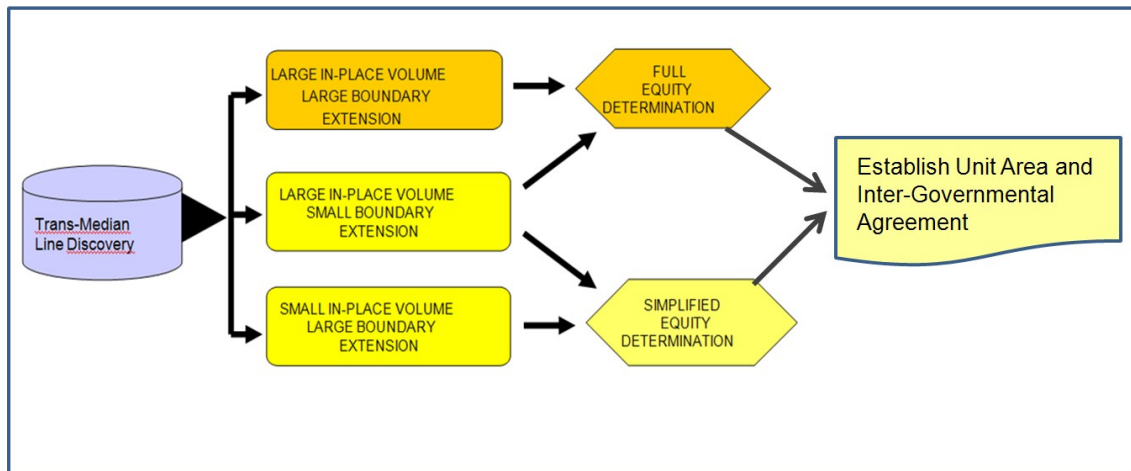


Figure 1: Cross-border Procedures for Equity Determination based on in-Place Volumes and Distribution across Median Line

1.4 Exploration drilling

Exploration drilling that is to start on the United Kingdom Continental Shelf (UKCS), but with bottom hole location on the Norwegian Continental Shelf (NCS) requires a drilling permit from the Norwegian Petroleum Directorate (NPD), consent from the Department of Energy and Climate Change (DECC) and a notification to the UK Health and Safety Executive (HSE). The Norwegian Petroleum Act will apply, and Norwegian jurisdiction will be exercised. For all practical purposes, the Petroleum Safety Authority (PSA) will need to be notified but will, through agreement with the British authorities be based on safety regulation by the HSE. An Environmental Statement (ES) or a Petroleum

Operations Notice 15 (PON 15 - seeking a Direction that an ES is not required) will be needed as part of the application to DECC. Guidance on environmental requirements can be found at:

[DECC guidance on environmental assessment required for drilling and petroleum production](#)

Exploration drilling that is to start on the NCS and with a bottom hole location on the UKCS requires the consent of the PSA together with notification to NPD, DECC and HSE,

Further Guidance is available at::

[DECC guidance for consent to drill wells](#)

[NPD guidelines for designation of wells and boreholes](#)

[NORSOK Standards](#)

Summary

Exploration drilling started from the United Kingdom Continental Shelf (UKCS) with bottom hole location on the Norwegian Continental Shelf (NCS):

Required

DECC : Consent and PON 15
HSE : Notification
NPD : Drilling permit
PSA : Notification

Exploration drilling started from the NCS and with a bottom hole location on the UKCS

Required

NPD : Notification
DECC : Notification
HSE : Notification
PSA : Consent

Exploration drilling on a trans-boundary structure, where the well is wholly on one or the other side of the delimitation line, is subject to the regulations of the national authority on whose side the exploration well is to be drilled.

1.5 Development drilling on a trans-boundary field

Development wells drilled from facilities placed on the UK side of a trans-boundary field and drilled to a bottom hole location on either the UKCS or NCS will require the relevant

consents and permits from the United Kingdom Authorities (DECC and HSE). Similarly, development wells drilled from a facility on the Norwegian side of a trans-boundary field and with a bottom hole location on the UKCS will require notification to DECC.

Development wells drilled from facilities on the Norwegian side of a trans-boundary field do not need formal consent from either the NPD or from PSA. However, both authorities have to be notified and register the development well which follow the proposed drilling program.

GUIDELINES FOR LICENSEES PROCESS

2. Development plans and authority processing

2.1 Development plan for joint exploitation of trans-boundary fields using facilities located on the field

The Unit Operator is responsible for submitting a field development plan for the joint exploitation of the trans-boundary reservoir to the competent authorities of both countries. The full range of possible development concepts is wide and the manner in which they will be handled will depend on the development concept in question. The field development plan is subject to the approval of both Governments and it is strongly recommended that processing of the plan is discussed with the authorities of both countries at an early stage. Approval of the Licensees Agreement, approval of the Operator etc. will usually be part of the overall approval process and usually will be considered at the same time as the approval of the FDP or PDO

The Norwegian and UK authorities have agreed that development plans can be adapted to whichever side of the delimitation line the facilities are located on. This means that a UK Field Development Plan (FDP) will form the basis of the submission if the installations are wholly located on the UK side and that a Norwegian Plan for Development and Operation (PDO) and Plan for Installation and Operation (PIO) will be used if the installations are wholly located on the Norwegian side. However, it should be recognised that the plan, whether based on a PDO or FDP, will need to include the information required by both Governments. A PDO consists of the Plan itself and an impact assessment, which is to be carried out by the licensees. The licensees are also responsible for submitting the impact assessment to public consultation.

If facilities are to be located on both sides of the delimitation line, then a composite plan will be needed.

The Norwegian requirements for development plans, including impact assessments are regulated through the Petroleum Act, the Petroleum Regulations, the Framework Regulations and guidelines for PDOs and PIOs. These are available at the web sites of the Norwegian Petroleum Directorate and the Petroleum Safety Authority Norway.

Guidance can be found at:

[NPD regulations and guidelines](#)

The UK requirements are regulated through the Petroleum Act 1998 and associated legislation. An Environmental Statement (ES) or a Petroleum Operations Notice 15 (PON 15 - seeking a Direction that an ES is not required) will be needed as part of the submission to DECC.

Further guidance can be found:

[DECC regulations and guidance](#)

2.2 Projects making use of a host facility for exploitation of trans-boundary fields

When the licensees of a trans-boundary field propose a development which makes use of a host facility which is outside of that field, the Unit Operator of the trans-boundary field will prepare and submit a development plan for the field in accordance with the Guidance provided in section 2.1 above. This should include a section covering details of the relevant modifications and of the impacts that the development will have on the host facility which are the result of petroleum activities relating to the trans-boundary field.

In addition, the Operator of the host facility will be required to prepare and submit an amendment to the existing development plans for the host field. The development plan for the trans-boundary field will require the approval of both Governments. The amendment to the existing development plan for the host field will usually only require the approval of the relevant Government, following consultation between the two Governments.

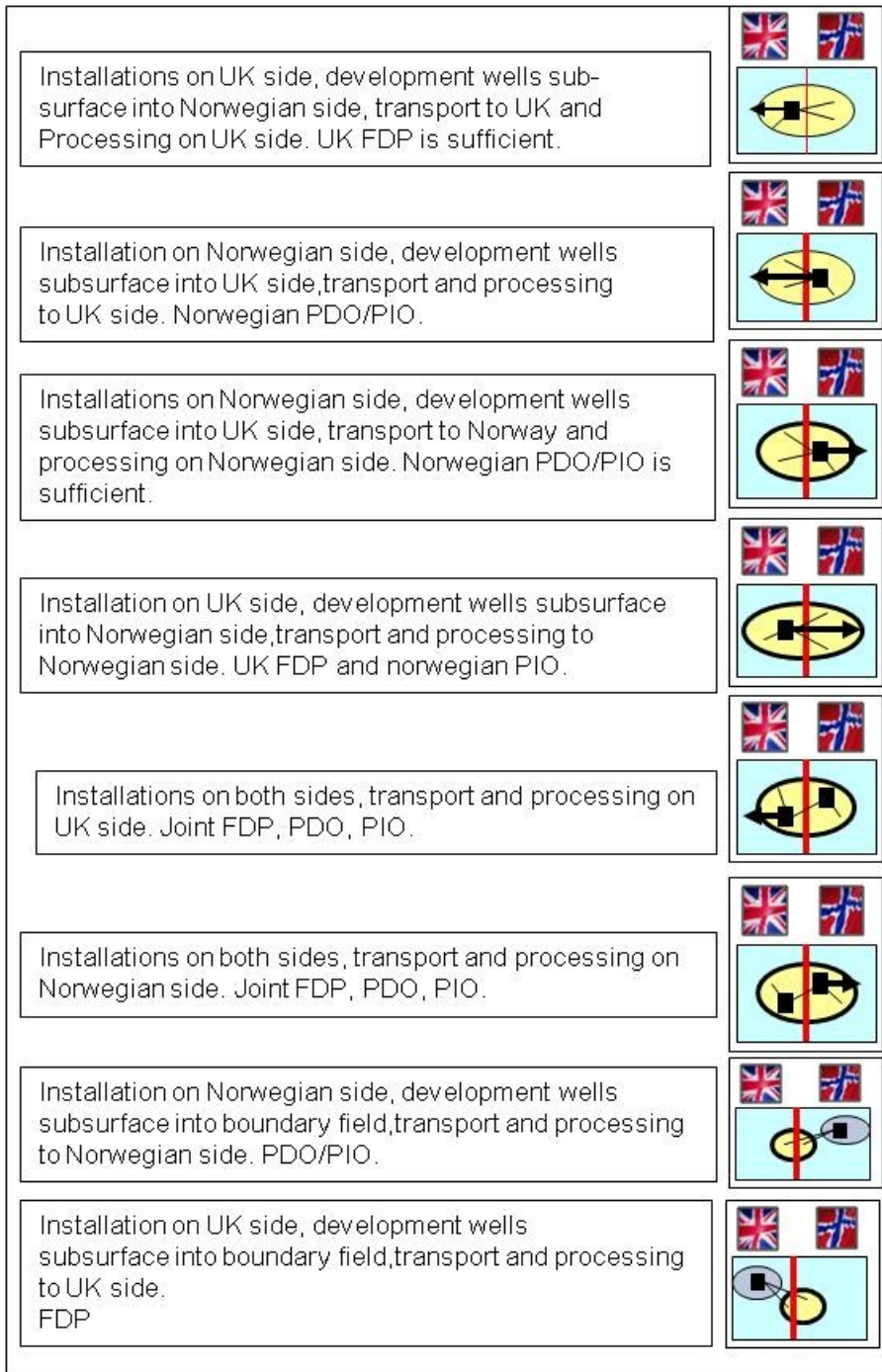


Figure 2: Development schemes showing installations and development wells, process and transport solutions together with FDP/PDO/PIO requirements

3. Trans-boundary pipeline serving a trans-boundary field

3.1 Pipeline which transports petroleum from a trans-boundary field where licensees from both countries have a participating interest in the pipeline

Normally, a project which includes a pipeline which is connected with a trans-boundary field will be part of the development plan for the field, (Paragraph 2.1). The pipeline operator, if not the same as the Unit Operator, will be appointed by the licensees and will be subject to formal approval by both Governments. Changes in pipeline operator will similarly require the approval of the Governments.

Installation and operation of parts or all of a pipeline located on the UKCS requires a Pipeline Works Authorisation (PWA) issued by DECC. An Environmental Statement (ES) or a Petroleum Operations Notice 15 (PON 15 - seeking a Direction that an ES is not required) may be needed as part of the submission for authorisation. Specific guidance is available:

[DECC guidelines on application for Pipeline Works Authorisation](#)

Installation and operation of parts or all of a pipeline located on the NCS requires a PDO/PIO. The PDO/PIO consists of the Plan itself and an impact assessment, which is to be carried out by the licensees. The licensees are also responsible for submitting the impact assessment to public consultation.

Further guidance is available at:

[NPD regulations and guidelines](#)

4. Production permits (Norway) and Production consents (UK), including flaring for trans-boundary fields

4.1 Production permit

Both a production permit (Norway) and a production consent (UK) will be required before production can commence from a trans-boundary field and these will be subject to annual renewal unless otherwise agreed. The production permit (Norway) will be given before the production from the field commences and may be conditional. The production consent (UK) will be issued to the licensees as part of the field development plan approval process and will be for the UK allocation of production only. The consent may be conditional. Guidance can be found:

[DECC guidance on production consents](#)

[NPD thematic guidelines: production permission](#)

The Licensees' Agreement, the development plan and the appointment of Unit Operator will need to be approved by both Governments before a permission to commence production is granted. Separate and specific approval is required from the NPD to start-up production. All other approvals, permits or consents necessary to comply with the regulations of the respective countries, must also be in place.

Guidance can be found:

[NPD thematic guidelines: Start of new fields](#)

4.2 Flaring and cold venting

Permission for all flaring of gas and/or cold venting of petroleum is required. A Norwegian permit, issued by Ministry of Petroleum and Energy (MPE) for the total volume of gas flared or vented will be required if such flaring or cold venting takes place from an installation located on the NCS. Separate consent from DECC is required for any flaring or cold venting of gas that originates from the UKCS whether that flaring or venting takes place from an installation located on the UKCS or the NCS. In practice, a UK consent is required for the volume of gas flared or vented in proportion to the UK equity share in the trans-boundary field. No Norwegian permit is required for gas flared or vented on the UKCS.

4.3 Discharge permit

The Norwegian Pollution Control Authority (SFT) is responsible for issuing discharge permits for emissions to air and discharges to water on the NCS. DECC are responsible for issuing consents for all emissions on the UKCS whether derived from UK or Norwegian allocated production.

4.4 Marine pollution preparedness and response

The Norwegian Coastal Administration, (NCA) in Norway and the Maritime and Coastguard Agency's Counter Pollution & Response Unit (CPR) in the United Kingdom are responsible for coordinating the response to an offshore pollution incident. Notification of an incident on a trans-boundary field would be made to the authority in the country from which the Unit Operator is licensed, regardless of which side of the delimitation line the incident occurs. That authority would then take the lead role.

Guidance on oil spill preparedness is available from:

[Norwegian Coastal Administration](#)
[Maritime and Coastguard Agency](#)

5. Consent requirements

5.1 For reservoir and resource management

Reservoir and resource management is of major importance in field development. Specific consents and permits are required at certain milestones in the field development to ensure maximum economic recovery of hydrocarbons. Guidance on the consent requirements can be found at:

[DECC guidance](#)

[NPD thematic guidelines](#)

5.2 Approval of metering

All metering systems for trans-boundary developments require approval by the competent authorities of both countries. The Unit Operator must obtain the consent from both the Norwegian Petroleum Directorate (NPD) and the Department of Energy and Climate Change (DECC) before the metering system is put to use. A consent must also be obtained for carrying out major modifications or changing the area of use for a metering system.

Reference is also made to Article 1.7 in the Framework Agreement 2005 and the “Memorandum of Understanding” (MoU) dated 23 June, 1998: “Fiscal Metering Supervision and coherent practical arrangements related to Pipelines and Installations governed by existing Agreements between the UK and Norway” updated in 2006 by the “Supplement to the Memorandum of Understanding Dated from 3.6.1998” “Fiscal metering supervision and coherent practical arrangements related to pipelines and installations governed by existing agreements between the UK and Norway between Department of Trade and Industry (DTI) and The Norwegian Petroleum Directorate (NPD)”

[DECC guidelines on petroleum measurement and the UK / Norway MoU](#)

[NPD: Measurement of petroleum](#)

5.3 The consent scheme within the Norwegian PSA area

Guidance on the requirements in the area of health, safety and environment on the Norwegian Continental Shelf may be found at:

<http://www.ptil.no/information-duty/category402.html>

6. Decommissioning

The Unit Operator is responsible for preparing a decommissioning plan for the field and field installations and facilities. The plan is subject to approval by the competent authorities in the country where the installations and facilities are located, in consultation

with the authorities of the other country. If there are installations and facilities on both sides of the delimitation line, a joint plan may be submitted subject to agreement by the competent authorities of both countries.

In Norway a consent from the Ministry of Petroleum and Energy is required before decommissioning work starts. Further information is available at:

<http://www.npd.no/en/Regulations/Regulations/Petroleum-activities/>

Further information regarding UK procedures can be obtained from the guidance notes 'Decommissioning of Offshore Oil and Gas Installations and Pipeline under the Petroleum Act 1998 at:

<https://www.og.decc.gov.uk/upstream/decommissioning/index.htm>

APPENDIX 1: REFERENCES :

InterGovernmental Agreements

Agreement between the Government of the United Kingdom and Northern Ireland and the Government of the Kingdom of Norway relating to the Delimitation of the Continental Shelf between the two Countries (10 March 1965)

Framework Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Norway (April 4th, 2005)

Framework Agreement between the Government of the United Kingdom of Great Britain and the Government of the Kingdom of Norway relating to the Laying, Operation and Jurisdiction of the Inter-connecting Submarine Pipelines (25 August 1998) together with the 2006 Supplement updating the MoU.

Memorandum of Understanding between the Health and Safety Executive and the Petroleum Safety Authority Norway concerning Health and safety related to pipelines and installations governed by Agreements between the UK and Norway. Dated September 2005

Legislation and Guidance - NORWAY

The Petroleum Act; Act of 29 November 1996 No. 72 relating to petroleum activities

The Petroleum Regulations; Regulations to the Act relating to petroleum activities. Stipulated by Royal Decree, 27 June 1997

The Petroleum Register Regulations, Regulations relating to the Petroleum register. Stipulated by Royal Decree, 19 June 1997

The Resource Management Regulations; Regulations relating to resource management in the petroleum activities (the Resource Management Regulations). Stipulated by the Norwegian Petroleum Directorate 18 June 2001

The Metering Regulations; Regulations relating to metering of petroleum for fiscal purposes and for calculation of CO2 tax. Stipulated by the Norwegian Petroleum Directorate 1 November 2001

The Information Duty Regulations; Regulations relating to materials and information in the petroleum activities. Stipulated by the Norwegian Petroleum Directorate 3 September 2001

Guidelines for PDO and PIO; Guidelines for Plan for Development and Operation of a petroleum deposit (PDO) and Plan for Installation and Operation of facilities for transportation and for exploitation of petroleum (PIO). Issued by the Norwegian Petroleum Directorate February 2010

Legislation and Guidance - UNITED KINGDOM

The Petroleum Act 1998

The Petroleum (Current Model Clauses) Order 1999

The Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) (Amendment) Regulations 2007

Offshore Petroleum Production and Pipelines (Assessment of Environmental Effects) Regulations 1999

Guidance Notes on the Offshore Petroleum Production and Pipelines(Assessment of Environmental Effects) Regulations 1999 (as amended)

Field Development Plan (FDP); Guidance Notes on Procedures for regulating Offshore Oil and Gas Field Developments

Guidance Notes for Petroleum Metering under the Petroleum (Production) Regulations, December 2003

Additional information is available at:

<https://www.og.decc.gov.uk/regulation/legislation/index.htm>

<https://www.og.decc.gov.uk/regulation/guidance/index.htm>

<https://www.og.decc.gov.uk/environment/index.htm>

https://www.og.decc.gov.uk/environment/envirion_leg_index.htm

APPENDIX 2: EXAMPLE LICENSEES AGREEMENT - CONTENTS

XXXXX FIELD
UNITISATION AND UNIT OPERATING
AGREEMENT

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4	TRACT PARTICIPATIONS AND UNIT SHARES
5	REDETERMINATION
6	ADJUSTMENTS FOLLOWING REDETERMINATION: UNIT ACCOUNT
7	ADJUSTMENTS FOLLOWING REDETERMINATION: UNIT SUBSTANCES
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12	PROGRAMMES AND BUDGETS
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	SCHEDULE 6Appointment of Expert (other than for Redetermination)
	SCHEDULE 7Associated Agreements
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