

# BSEE Permits, Approvals, and Process Alternatives Norway

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## 1. Overview of Offshore Oil and Gas Regulation in Norway

Norway regulates offshore oil and gas based on risk and performance based standards. The Petroleum Safety Authority (PSA), an independent government regulatory agency formed in 2004, is responsible for health, safety, environment (HSE), and emergency preparedness in the Norwegian petroleum industry. PSA administers and enforces the petroleum exploration and development regulations, which cover:

- assignment of responsibility
- risk reduction
- application of maritime regulations as an alternative to certain technical requirements in the petroleum regulations for mobile facilities
- principles for health, safety, and environment (HSE), including requirements for a good HSE culture.

PSA has cooperative agreements with the Norwegian Environment Directorate, the Norwegian Board of Health, the Norwegian Radiation Protection Authority, the Norwegian Coastal Authority, the Norwegian Industrial Safety and Security Organisation, the Norwegian Petroleum Directorate (NPD), and the Norwegian Labour Inspection Authority. (Note that PSA's duties related to HSE were administered by NPD prior to 2004.) In addition, key provisions of the Working Environment Act which apply to offshore activities are incorporated in the regulations. These relate to such matters as working hours, time off and offshore tours and promote employee rights to involvement.

Norway has established a system of performance-based standards that are supplemented by prescriptive requirements. Norwegian performance-based standards are based on application of risk-management standards and specify the appropriate level of risk to be maintained. There are five separate sets of offshore HSE regulations with different purposes:

- Framework Regulations
- Management Regulations
- Information Duty Regulations
- Facilities Regulations
- Activities Regulations

The Framework regulations include "risk reduction" requirements. The Management regulations are management standards, and Information Duty regulations are operator reporting requirements. The Facilities regulations are installation design and construction standards, and the Activities regulations are facility operations standards (somewhat similar to BSEE's current standards-based approach.)

## 1.1. Alternatives to BSEE Permits, Approvals, and Processes

Four potential alternatives were identified relative in the Norway regulatory program that could be applied as alternatives to the current process used by BSEE to regulate offshore oil and gas exploration and development.

### 1.1.1 Risk-based Approach/Adoption of Risk-based HSE Requirements

Norway has implemented requirements for applicants to submit risk-based health, safety, and environment (HSE) for licensing of offshore activities. A risk-based approach could be applied as an alternative to BSEE's standards-based permitting program.

### 1.1.2 Performance-based Standards/Adoption of Petroleum Related Activity Requirements

Norway has developed performance-based standards for conduct of offshore petroleum-related activities. Performance-based standards could be applied as an alternative to BSEE's standards-based permitting program.

### 1.1.3 Performance-based Standards/Requirements Related to Facility Design and Outfitting

Norway has developed performance-based standards for facility design and outfitting for offshore installations. Performance-based standards could be applied as an alternative to BSEE's standards-based permitting program.

### 1.1.4 Multiple Agency Jurisdiction/Common Regulatory Framework

Norway has instituted a multi-agency jurisdiction system for regulating offshore activities, but unlike the U.S. and other international programs, all agencies in Norway share a common set of regulations.

In Norway, there are multiple regulatory agencies with jurisdiction over aspects of offshore activities, however all Norwegian agencies with jurisdiction have a common set of regulations. The Norwegian regulations for offshore petroleum activities are common to the Norwegian Ministry of Labour, the Ministry of the Environment and the Ministry of Health and Care. The Norway Petroleum Safety Authority (PSA) has the coordinating role in development and supervision of health, safety, and environmental regulations for offshore activities.

The legislative framework is established under:

- *Regulations relating to health, safety and the environment in the petroleum activities and at certain onshore facilities.* The regulations provide a framework for comprehensive and prudent activities.
- *Regulations relating to management and the duty to provide information in the petroleum activities and at certain onshore facilities.* Regulations bringing together all overall management requirements relating to HSE, including:
  - risk reduction
  - barrier requirements
  - management elements

- resources and processes
  - analyses and measurements
  - handling of nonconformities and improvements.
- *Regulations relating to conducting petroleum activities* - Regulations govern the way various activities are conducted, and specify requirements for such aspects as:
  - planning and monitoring
  - operational preconditions for start-up and use
  - working environment factors
  - facilitating work
  - health-related factors
  - the natural environment
  - emergency preparedness
  - drilling and well activities
  - maritime operations
  - maintenance
  - manned underwater operations.
- *Regulations relating to design and outfitting of facilities, etc., in the petroleum activities* - Regulations govern the design and outfitting of facilities, and specify requirements for such aspects as:
  - robust solutions
  - safety functions and loads
  - materials
  - work and recreational areas
  - physical barriers
  - emergency preparedness
  - drilling and well systems
  - Maritime facilities.

PSA has also issued Guidelines to these regulations. The guidelines are not legally binding but are intended to be used by applicants for the level of performance and means of achieving it that PSA desires. Norway's Working Environment Act replaced 47 prior regulations by just six new regulations on 1 January 2013, to provide a simpler overview of rights and duties under the Act by consolidating regulations which deal with the same conditions.

A comparison of the Norwegian programs analogous to those in the BSEE Scope for this project is presented in Table 1.

ICF will conduct a more detailed assessment of the Norway regulatory approach to permits and approvals under the PSA, under Task 2.

## 1.2. Points for Further Research

### 1.2.1. Risk-based Approach/Adoption of Risk-based HSE Requirements

If a comprehensive management HSE requirement is pursued as an alternative approach, further research would be conducted to determine how best to apply the principles of risk reduction, along with handling of nonconformities and improvements, as well as how to implement management elements, analyses, measurements, and processes.

### 1.2.2. Performance-based Standards/Adoption of Petroleum Related Activity Requirements

If implementation of regulations that specify requirements for aspects of petroleum related activities is pursued as an alternative approach, further investigation of the PSA approach would be conducted to assess the viability of BSEE applying this approach. The focus of this research would include detailed investigation of aspects of the Norwegian regulations such as planning and monitoring, operational pre-conditions for start-up and use, health related factors, emergency preparedness, drilling and well activities, along with maritime and other operations.

### 1.2.3. Performance-based Standards/Requirements Related to Facility Design and Outfitting

If implementation of regulations that specify requirements for regulations governing the design and outfitting of facilities is pursued as an alternative approach, further investigation of the PSA approach would be conducted to assess the viability of BSEE applying this approach.

### 1.2.4 Multi-agency Jurisdiction/Common Regulatory Framework

If implementation of a common set of regulations among U.S. agencies with jurisdiction over offshore activities is pursued as an alternative approach, further investigation of the common regulatory framework approach would be conducted to assess the viability of BSEE applying this approach.

## 1.3. Implications for BSEE

### 1.3.1. Risk-based Approach/Adoption of Risk-based HSE Requirements

#### *Efficiency*

Adoption of a program that requires risk-based HSE requirements could potentially result in improved efficiency for BSEE over time, once the regulatory structure is put into place. In particular, if BSEE decided to adopt risk-based HSE requirements similar to the Norway regulatory framework, it could result in more systematic and standardized approach to the treatment of exploration and drilling activities, along with management plan practices and a risk based approach. In effect, BSEE would be determining appropriate practices for many similar types of operations upfront. However, review of risk-based applicant submittals could require more BSEE staff time, and higher-level, BSEE staff time, than reviewing standards-based applicant submittals. Therefore BSEE may initially experience decreased efficiency in implementing a risk-based regulatory approach. Application of a risk-based

approach could decrease efficiency on the part of the applicants; preparation of risk-based submittals would require more, and higher-level, applicant staff time than preparing standards-based submittals.

### ***Effectiveness***

Application of risk-based requirements could potentially improve effectiveness on the part of both BSEE and applicants. BSEE would be able to conduct a risk-based evaluation of the subset of activities that represent the highest potential risk, and the applicant would be able to focus on providing detailed risk-based documentation concerning the subset of activities that represent the highest potential risk, rather than the applicant having to document each and every activity desired to be conducted at a similar level of detail. BSEE would be able to conduct a more focused and higher quality review; the applicant would [likely] be able to provide a higher quality level of documentation for a risk-based analysis than the applicant would provide in a standards-based permit application process.

### ***Suitability for Purpose***

This approach has the potential to improve environmental and safety performance; the applicant, and BSEE, would identify the subset of activities that represent the highest potential risk and apply risk-based standards to those activities. BSEE would then be able to focus their efforts on applying risk-reducing controls preferentially to those activities that represent the highest potential risk, and evaluate performance based on risk-based standards. The applicant, having identified the activities representing the highest potential risk, could focus their efforts on applying appropriate controls and mitigation to manage that risk.

### ***Implementation***

BSEE staff training in the application of risk based and management systems principles as well as the development of guidance documents with and for stakeholders would likely be necessary if the Agency decided to adopt a HSE approach.

BSEE would need to obtain / train staff experienced in/capable of reviewing risk-based applicant submittals and applying risk-based standards, meaning that BSEE staff likely would need to develop a new set of skills from the current skill set that is focused on comparison of specific activities with specific standards. BSEE would not be able to depend upon the ability to apply pre-developed standards (e.g., API standards) that do not have a risk component, but rather would need to develop the ability to evaluate risk assessments and apply risk-based standards. Initially, applying a risk-based approach may not result in an improvement in efficiency, as there would be time and effort needed for BSEE to develop the risk-based standards and for BSEE to develop the skill set needed to review and base decisions on risk-based standards.

### **1.3.2. Performance-based Standards/Adoption of Petroleum Related Activity Requirements and Performance-based Requirements Related to Facility Design and Outfitting**

#### ***Efficiency***

Adoption of a program that requires performance-based requirements for offshore petroleum related activities related to planning and monitoring, operational pre-conditions for start-up and use, health related factors, emergency preparedness, drilling and well activities, along with maritime and other operations, could potentially result in improved efficiency for BSEE over time, once the regulatory structure is put into place. As in the case of the risk-based HSE Requirements alternative, adopting petroleum related regulations to the level of the PSA could result in a more prescriptive treatment of exploration and drilling activities. This would potentially increase BSEE's efficiency as a consistent approach to each activity would exist; however, the upfront administrative burden could potentially reduce efficiency in short term.

#### ***Effectiveness***

Application of performance-based standards could potentially improve BSEE and applicant effectiveness. BSEE could be able to evaluate the applicant's performance of activities based on performance-based standards by applying performance-based metrics to the activities. Applicants could be better able to understand and comply with performance-based requirements by applying performance metrics to their internal assessments of activities.

#### ***Suitability for Purpose***

Application of performance-based standards could potentially improve environmental and safety performance. BSEE and applicants could be better able to ensure compliance with performance-based standards through application of performance-based metrics to measure compliance of the activities against the standards.

#### ***Implementation***

BSEE would need to apply staff resources to develop performance-based standards through potentially multiple rulemakings. Application of performance-based standards could require consultations with technical experts knowledgeable in performance-related aspects of offshore activities throughout the rule making process.

### **1.3.3. Multiple Agency Jurisdiction/Common Regulatory Framework**

#### ***Efficiency***

Adoption of a common regulatory framework could potentially improve efficiency for BSEE and applicants. Applicants would not be subject to multiple and potentially overlapping regulatory requirements. BSEE could be able more efficiently coordinate regulation with other agencies having jurisdiction over offshore activities.

### ***Effectiveness***

Adoption of a common regulatory framework could potentially improve effectiveness for BSEE and applicants. BSEE could be able to more effectively coordinate regulation with other agencies and address potential regulatory gaps. Applicants would not be subject to multiple and potentially overlapping regulatory requirements and potentially could more effectively implement compliance programs.

### ***Suitability for Purpose***

Adoption of a common regulatory framework could potentially improve safety and environmental performance. BSEE could be able to better coordinate compliance-assessment activities with other agencies under a common regulatory framework, and applicants could potentially better understand requirements common to agencies than separate requirements of multiple agencies. .

### ***Implementation***

Adoption of a common regulatory format could potentially overlap with existing OSHA, Environmental Protection Agency, Coast Guard, and other Maritime regulatory requirements. BSEE would potentially need to conduct coordinated rulemakings with multiple agencies to establish a common regulatory format.

**Table 1. Comparison of the Norway Offshore Oil and Gas Program to BSEE Permits and Plan Requirements Covered in the Scope of this Analysis**

Type	BSEE Permit/Plan Requirement	What is it? Who is required to have it?	When is it required?	How does Norwegian Regulation Compare to BSEE Scope?
Admin	Royalty Relief application	Operators may apply for royalty relief for leases or projects that meet criteria specified in 30 CFR 203	Optional	Have not found comparable provisions to BSEE Scope in Norway regulations.
Admin	Compensation Royalty Determination Request	Operators may either: (1) Drill and produce the wells that the Regional Supervisor determines are necessary to protect the Federal government from loss due to production on other leases or units or from adjacent lands under the jurisdiction of other entities (e.g., State and foreign governments); or (2) Pay a sum that the Regional Supervisor determines as adequate to compensate the Federal government for your failure to drill and produce any well.	Optional	Have not found comparable provisions to BSEE Scope in Norway regulations.
Explor	Application for Permit to Drill (APD)	Lessees, operating rights owners, operators, and their contractors and subcontractors	Before drilling any well or before sidetracking, bypassing, or deepening a well	Different. Norway permits petroleum activities as a whole based on performance-based criteria, rather than permitting individual components.
Explor	Application for Permit to Modify (APM)	Lessees, operating rights owners, operators, and their contractors and subcontractors	An APM is required for operators that: <ul style="list-style-type: none"> <li>• intend to revise a drilling plan, change major drilling equipment, or plugback;</li> <li>• determine a well's final surface location, water depth, and the rotary kelly bushing elevation; or</li> <li>• move a drilling unit from a wellbore before completing a well.</li> </ul>	Different. Norway permits petroleum activities as a whole based on performance-based criteria, rather than permitting individual components.



Type	BSEE Permit/Plan Requirement	What is it? Who is required to have it?	When is it required?	How does Norwegian Regulation Compare to BSEE Scope?
Devel	Deep Water Operations Plan (DWOP)	Required for operators with: <ul style="list-style-type: none"> <li>• deepwater development projects; or</li> <li>• any development projects which will use non-conventional production or completion technology, regardless of water depth.</li> </ul>	The DWOP consists of two parts: a Conceptual Plan and the DWOP: <ul style="list-style-type: none"> <li>• The Conceptual Plan is required before completing any production well or installing the subsea wellhead and well safety control system.</li> <li>• The DWOP is required before production.</li> </ul>	Similar. Norway Program appears to have more safety and management plan requirements.
Leasing	Lease Suspension Request	Operators may request a suspension, which will either take the form of Suspensions of Operations (SOO) or Suspensions of Production (SOP).	Before the end of the lease term (i.e., end of primary term, end of the 180-day period following the last leaseholding operation, and end of a current suspension)	Have not found comparable provisions to BSEE Scope in Norway regulations.
Leasing	Competitive Reservoir Determination Request	Optional request for preliminary determination by the Regional Supervisor as to whether a reservoir is competitive		Similar. Norway Program appears to have more safety and management plan requirements.
Leasing	Voluntary Unitization Proposal or Unit Expansion	Optional request for voluntary unitization or expansion of a previously approved voluntary unit to include additional acres		Have not found comparable provisions to BSEE Scope in Norway regulations.
Prod	Temporary Storage Request	Operators must obtain approval of the method of disposal of drill cuttings, sand, and other well solids		Different. Norway permits petroleum activities as a whole based on performance-based criteria, rather than permitting individual components.
Prod	Surface Commingling Application		Before commencing the commingling of production or making any changes to previously approved commingling procedures	Different. Norway permits petroleum activities as a whole based on performance-based criteria, rather than permitting individual components.

Type	BSEE Permit/Plan Requirement	What is it? Who is required to have it?	When is it required?	How does Norwegian Regulation Compare to BSEE Scope?
Prod	Production Approvals (Special Cases)		The following production activities require approval: <ul style="list-style-type: none"> <li>• production within 500 feet of a unit or lease line;</li> <li>• production of gas-cap gas from an oil reservoir with an associated gas cap;</li> <li>• downhole commingling hydrocarbons;</li> <li>• flaring and venting gas; and</li> <li>• enhanced oil and gas recovery operations.</li> </ul>	Different. Norway permits petroleum activities as a whole based on performance-based criteria, rather than permitting individual components.
Prod	Facility Safety System Application (i.e. Production Safety System Application)	Required for surface production-safety systems	Prior to installation	Similar. Norway requires Safety Planning.
Platform	Platform Approval Program Application		Before the following circumstances: <ul style="list-style-type: none"> <li>• installation of a platform;</li> <li>• major modification to any platform;</li> <li>• major repair of damage to any platform;</li> <li>• converting an existing platform at the current location for a new purpose; and</li> <li>• converting an existing mobile offshore drilling unit (MODU) for a new purpose.</li> </ul>	Similar. Norway Program appears to have more safety and management plan requirements.
Platform	Platform Verification Program Plans/Documentation	The following kinds of platforms are subject to the Platform Verification Program: • floating platforms; • platforms of a new or unique design; • platforms in seismic areas; and • platforms located in deepwater or frontier areas.	For any platform subject to the Platform Verification Program, the following are also subject to the program: the conversion of that platform at that same site for a new purpose, or making a major modification of, or major repair to, that platform.	Similar. Norway requires Safety Planning.

Type	BSEE Permit/Plan Requirement	What is it? Who is required to have it?	When is it required?	How does Norwegian Regulation Compare to BSEE Scope?
Pipeline	Pipeline Application		Before: <ul style="list-style-type: none"> <li>• Installation, modification, or abandonment of a lease term pipeline;</li> <li>• Installation or modification of a right-of-way (other than lease term) pipeline; or</li> <li>• Modification or relinquishment of a pipeline right-of way. (250.1000)</li> </ul>	Different. Norway permits petroleum activities as a whole based on performance-based criteria, rather than permitting individual components.
Pipeline	Right-of-way (ROW) Assignment	Application for approval of an assignment of a ROW or of a lineal segment thereof		Have not found comparable provisions to BSEE Scope in Norway regulations.
Pipeline	Pipeline Repair Application/Plan	Lessees or ROW holders must notify BSEE about repairs of pipelines or pipeline components and submit a detailed report after the completion of repairs	Before the repair of any pipeline or as soon as practicable. Report must be submitted within 30 days after completion of the repairs.	Different. Norway permits petroleum activities as a whole based on performance-based criteria, rather than permitting individual components.
Pipeline	Pipeline Right-Of-Way Grant Application		Before installation of a right-of-way pipeline (250.1000, 250.1009)	Different. Norway permits petroleum activities as a whole based on performance-based criteria, rather than permitting individual components.

Type	BSEE Permit/Plan Requirement	What is it? Who is required to have it?	When is it required?	How does Norwegian Regulation Compare to BSEE Scope?
Spill	Oil Spill Response Plan (OSRP)	<ul style="list-style-type: none"> <li>• Describes plans for responding to an oil spill, as well as training, equipment testing, and periodic drills</li> <li>• Required for owners or operators of: <ul style="list-style-type: none"> <li>o oil handling, storage, or transportation facilities located seaward of the coast line;</li> <li>o abandoned facilities until they are physically removed or dismantled, or the Regional Supervisor provides notification that the plan is no longer required; or</li> <li>o offshore pipelines carrying oil, condensate that has been injected into the pipeline, or gas and naturally occurring condensate (not required for operators with essentially dry gas).</li> </ul> </li> </ul>	Before operating a facility (or while BSEE reviews the plan, if there are appropriate certifications)	Similar. Norway requires Safety Planning.
Decommissioning	Site Clearance Waiver	For well sites, platforms, and other facility sites, operators must submit an APM to BSEE with specified information about site clearance	30 days after the completion of verification activities	Similar. Norway Program appears to have more safety and management plan requirements.
Decommissioning	Structure Removal Application	For leases and pipeline ROWs in the Pacific OCS Region and Alaska OCS Region, operators must submit an initial platform removal application		Different. Norway permits petroleum activities as a whole based on performance-based criteria, rather than permitting individual components.

References:

<http://www.psa.no/about-the-working-environment-regulations/category931.html>