

## **What are the technical requirements for operators in the Netherlands?**

### **Definition of an operator**

Under Article 22, 5<sup>th</sup> paragraph, of the Dutch Mining Act (DMA), an operator is defined as:

*A person (natural person or legal entity) appointed by the holder of the permit to perform the actual operations or to commission their execution.*

Numerous persons can be named in a permit. Taken together as a unit, they constitute a single 'permit holder'. But only the appointed person is permitted to perform the actual operations or contract them out. Initially, the appointment of a given person occurs 'in the permit' (DMA, Art. 22, 6<sup>th</sup> par.). A different person can be appointed afterwards, however, if the permit holder receives written permission from the Dutch Minister of Economic Affairs.

### **Types of operators**

A distinction is made between operators involved in the exploration, production and storage of *petroleum and natural gas* and those involved in the exploration and production of *other mineral resources*, such as salt and geothermal resources. Operators in the first category work with mineral resources that are flammable and under high pressure, and potentially disastrous under uncontrolled conditions. Operators in the second category deal with nonflammable mineral resources. That does not necessarily mean, however, that they can be extracted without danger. Salt production, for example, has been known to cause sinkholes in the surface.

There is also a distinction made between operators that perform offshore activities and those that work onshore. Offshore activities are conducted under difficult circumstances (rough water, storms, space limitations on a platform). By comparison, operating onshore is relatively straightforward. Sites tend to be easily accessible, though onshore operators do have to contend with a variety of government agencies and, more importantly, are required to take ground movements (subsidence, tremors, etc.) and external safety into account.

Finally, there is a distinction made between operators involved in *exploration* and those involved in *production* and *storage*. The former activity is short-term, while the latter is long-term.

The distinctions discussed above are summarised in table form below.

**Table 1: Specific characteristics per mineral resource and mining activity**

(characteristics in boxes shaded grey are given extra attention when operators are evaluated)

Mineral Resource	Type of activity		
	Exploration	Production	Storage
Oil and gas	<div style="border: 1px solid black; background-color: #e0e0e0; display: inline-block; padding: 2px;">Offshore</div> Onshore Short-term <div style="border: 1px solid black; background-color: #e0e0e0; display: inline-block; padding: 2px;">Hazardous</div>	<div style="border: 1px solid black; background-color: #e0e0e0; display: inline-block; padding: 2px;">Offshore</div> Onshore Long-term <div style="border: 1px solid black; background-color: #e0e0e0; display: inline-block; padding: 2px;">Hazardous</div> Ground movements	<div style="border: 1px solid black; background-color: #e0e0e0; display: inline-block; padding: 2px;">Offshore (future)</div> Onshore Long-term <div style="border: 1px solid black; background-color: #e0e0e0; display: inline-block; padding: 2px;">Hazardous</div> Ground movements
Salt	Only onshore Limited risk Short-term	Only onshore Limited risk Long-term <div style="border: 1px solid black; background-color: #e0e0e0; display: inline-block; padding: 2px;">Ground movements</div>	Only onshore <div style="border: 1px solid black; background-color: #e0e0e0; display: inline-block; padding: 2px;">Hazardous</div> Long-term <div style="border: 1px solid black; background-color: #e0e0e0; display: inline-block; padding: 2px;">Ground movements</div>
Geothermal resources	Only onshore Limited risk Short-term	Only onshore Limited risk Long-term	n.a. (to date, storage of geothermal resources only up to 500 m deep)

### Technical criteria for operators

As with all citizens and enterprises, operators must comply with Dutch legislation and regulations. The essential question is whether a certain operator *is in a position* to comply with that legislation and those regulations.

As part of the process for determining whether it *is in a position* to comply, the operator must prove that it possesses:

1. Management specialised in this field;
2. Suitably skilled and experienced staff capable of controlling the mining engineering processes;
3. A staff that is sufficiently knowledgeable about Dutch legislation and regulations;
4. An organisation capable of dealing with any disasters that might occur;
5. A Strategic Plan for performing the aforementioned activities;
6. Sufficient financial reserves to carry out the aforementioned activities (for the record only).

*Notes to the above items:*

Regarding Item 1

An operator must have managerial personnel with experience in the kinds of mining activities it plans to pursue. If an operator wants to explore for and produce natural gas and/or petroleum, then the company management must have expertise and experience in the E&P business. In the case of a salt producer, the management must have expertise and experience in the field of salt mining.

Regarding Item 2

An operator will almost always rely on contractors to conduct the operations. It must be adequately staffed with personnel who can comprehensively manage the contracts (financially and intrinsically) and supervise the *contractors*. That personnel must possess professional expertise, which is to say they've had the appropriate education. They must also possess sufficient experience in the field. The know-how and experience required depends on the mining activities the operator plans to pursue. A different kind of expertise is needed to extract salt than is needed in petroleum production.

Regarding Item 3

In keeping with Dutch legislation and regulations, the operator must have personnel who are familiar with Dutch regulations – not only mining regulations, but also occupational health and safety and environmental regulations. Each individual mining activity listed in Table 1 is subject to its own specific regulations.

Regarding Item 4

Table 1 expressly lists the mining activities considered hazardous. While attention to safety and the environment is of the utmost priority in the mining industry, it is impossible to rule out the possibility of a disaster occurring. It is therefore critical that an operator be able to react decisively should one occur. It must be well-versed in crisis management.

Regarding Item 5

An operator must have a Strategic Plan that outlines *what* it plans to do and *how* it plans to do it. This plan is used to determine whether the methods the operator plans to use to conduct its operations in the Netherlands are realistic.

Regarding Item 6

An operator must have sufficient financial resources to perform the aforementioned activities. The item is 'for the record only' since it is not actually a topic of this discussion.

The criteria outlined above are substantiated by means of the documentation and information requested in the attached form (see below). The National Mines Inspectorate uses the answers provided on the form to evaluate the technical capacities of the operator.

This evaluation invariably includes an interview with the enterprise in question, which may or may not be followed by a visit to the company.

### Form for operators

(Not all topics are relevant for every type of operator. Only those marked with an X need to be filled in/provided.)

Information / document	Oil & Gas	Salt	Geothermal resources
<b>Administrative information</b>			
-Name (business name), address -Telephone number, Fax, E-mail -Office(s) in the Netherlands: address(es)	X	X	X
Company history: information about the company's experience as an operator	X	X	X
Management summary from the annual reports of the last three years	X	X	X
List of memberships in trade organisations (e.g., NOGEPa)	X	X	
<b>Staff information</b>			
-Organisational chart	X	X	X
- Resumes for managers and key personnel	X	X	X
Strategic Plan for planned activities	X	X	X
Expertise: A list of the expertise available in-house and that which must be sought externally	X	X	X
A list of prospective contractors	X	X	X
<b>Safety policies</b>			
HSE management system	X	X	X
Quality assurance system for construction engineering and/or drilling engineering	X	X	X
Business management (operations) and maintenance policies	X <sub>1</sub>	X <sub>1</sub>	X <sub>1</sub>
Disaster plan	X	X	X
<b>Targeted production</b>			
Reservoir management policy	X <sub>2</sub>		

X<sub>1</sub> : only for production and storage activities

X<sub>2</sub> : only for production activities