

“Capacity Building and Strengthening Institutional Arrangement”

Workshop: Quantitative risk assessment of oil and gas plants

**EU and Italian standards for
oil and gas industries evaluation impacts**

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1. EU standards for oil and gas industries

The European Union has ruled a series of directive in which are indicate what kind of activities and plants should be subject to an environmental impact assesment (EIA) to evaluate their impacts on the environment and human health

- **Directive** **85/337/ CE**
- **Directive** **96/61/ CE**
- **Directive** **97/11/CE**

In all these directives are also defined the standards of the activities and plants which need an environmental impact assesment

1. EU standards for oil and gas industries

Regarding to the oil and gas industries activities the environmental impact assessment has to be performed for the following plants and productive processes :

- Crude-oil refineries (excluding undertakings manufacturing only lubricants from crude oil) and installations for the gasification and liquefaction of 500 tonnes or more of coal or bituminous shale per day.
- Deep drillings with the exception of drillings for investigating the stability of the soil and in particular:
 - a) geothermal drilling,
 - b) drilling for the storage of nuclear waste material,
 - c) drilling for water supplie
 with the exception of drillings for investigating the stability of the soil

1. EU standards for oil and gas industries

- Extraction of petroleum and natural gas for commercial purposes where the amount extracted exceeds 500 tonnes/day in the case of petroleum and 500 000 m³/day in the case of gas
- Mineral oil an Pipelines for the transport of gas, oil or chemicals with a diameter of more than 800 mm and a length of more than 40 km d gas refineries
- Installations for storage of petroleum, petrochemical, or chemical products with a capacity of 200 000 tonnes or more
- Surface industrial installations for the extraction of coal, petroleum, natural gas and ores, as well as bituminous shale

2. Italian standards for oil and gas industries

As a part member of Union European Italy has receipted the previously directives in the national law for the environmental impact assessment

With concern of environmental impacts of oil and gas industries, in Italy there is a shared responsibility between regional and national authorities

Regional authorities are responsible for setting operating permits for significant polluting sources and these permits contain standards set on a plant-by-plant basis to ensure compliance with relevant air quality standards fixed by law

2. Italian standards for oil and gas industries

Italian legislation oil and gas Industry Emissions

In accordance with law DPR n. 203 of 24/5/1988 and European directives, emissions limits have been established for existing refineries throughout the country.

In the case of combustion plants, the standards are related to a percentage of oxygen in the flue gases:

3% for gaseous and liquid fuels

6% for coal

11% for other solid fuels

15% for turbogas

The limits are calculated as ratio between the sum of weights pollution gases and the sum of volumes of total gas emitted within the refinery

2. Italian standards for oil and gas industries

SO₂ emission limits

Limits on sulphur dioxide emissions from combustion plants are :
1700 mg/Nm³

NO_x emission limits

Limits on sulphur dioxide emissions from combustion plants are :
500 mg/Nm³

CO emission limits

Limits on carbon oxide from combustion plants are :

250 mg/Nm³

Particulate Emission limits

Limits on carbon oxide from combustion plants are :

80 mg/Nm³

2. Italian standards for oil and gas industries

Another important law is the DPR 18/04/1994 n° 526 , that rules the environmental impacts assessment regarding prospecting, survey and cultivation of liquid and gas hydrocarbon

According the national law, the prospecting is free while the permitting for survey and cultivation has to be released by the Regional Administration after the approval by Ministry of the Environment