

Concepts and conversions

RESOURCES

Petroleum resources are a collective term which embraces technically recoverable volumes of oil, gas and natural gas liquids (NGL). They are broken down into discovered and undiscovered resources, with the former further subdivided into fields and discoveries. By definition, a discovery is made when an exploration well identifies recoverable petroleum. A discovery will be re-defined as a field when its plan for development and operation (PDO) has been approved by the authorities. Undiscovered resources are subdivided into mapped resources (prospects) and unmapped resources (exploration models).

Volumes are given in standard cubic metres (scm) for oil, condensate and gas, and in tonnes for NGL. Total resources, which combine the various types of petroleum, are given in scm of oil equivalent (scm oe).

Total resources and reserves were given earlier in tonnes of oil equivalents (toe).

1 scm oil	=	1.0 scm oe
1 scm condensate	=	1.0 scm oe
1 000 scm gas	=	1.0 scm oe
1 tonne NGL	=	1.9 scm oe

RESERVES

Reserves are defined in accordance with the NPD's classification system, and include remaining recoverable volumes of petroleum as specified in approved plans for fields in production, fields approved for development and fields which the licensees have decided to develop. Reserves may be regarded as the economically recoverable part of the petroleum in a field. Estimated resources and reserves change from year to year as a result of new discoveries, production, and adjustments to estimates for fields and discoveries based on new studies or drilling targets or on innovations in production technology.

Gas	1 cubic foot	1 000.00 btu
	1 cubic metre	9 000.00 kcal
	1 cubic metre	35.30 cubic feet

Crude oil	1 scm	6.29 barrels
	1 scm	0.84 toe
	1 tonne	7.49 barrels
	1 barrel	159.00 litres
	1 barrel/day	48.80 tonnes/year
	1 barrel/day	58.00 scm/year

	MJ	kWh	TKE	TOE	Scm of natural gas	Barrels of oil
1 MJ, megajoule	1	0.278	0.0000341	0.0000236	0.0281	0.000176
1 kWh, kilowatt hour	3.60	1	0.000123	0.000085	0.0927	0.000635
1 TCE, tonne coal equivalent	29 300	8 140	1	0.69	825	5.18
1 TOE, tonne oil equivalent	42 300	11 788	1.44	1	1 190	7.49
1 scm natural gas	35.54	9.87	0.00121	0.00084	1	0.00629
1 barrel of crude oil (159 litres)	5 650	1 569	0.193	0.134	159	1