## **Energy & Mineral Resources**

Users in energy and mineral resources deal with the harvesting of energy from **renewable resources** and **extractive industries** including **oil and gas and raw materials**. EO information helps them in exploring potential locations to build new mines or power plants, in identifying risks from infrastructure and in managing the environmental impact of their operations. Uses that apply to the extractive industries: a study of landforms, structures, and the subsurface, to understand physical processes creating and modifying the Earth's crust.

Market Sector	Composition	EO Services
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Oil and Gas	Offshore & onshore exploration and production,	Assess environmental impact of human activities
	drilling and support services, oil and gas commodities trading,	Asset infrastructure monitoring
	energy planners.	Map water depth / charting
		Monitor construction and buildings
		Monitor ocean quality and productivity
		Monitor the coast line
		Monitor atmosphere composition
		Monitor land ecosystems and biodiversity
		Forecast and monitor current movement and drift
		Baseline mapping
		Monitor vegetation encroachment
		Map geological features
		Measure detect land surface change
		Map and assess flooding
		Monitor forest resources
		Detect and monitor wildfires
		Detect and monitor hurricanes and typhoons
		Identify hydrocarbon seeps in soil
		Assess ground water and run-off
		Detect and monitor ice risk at sea
		Monitor land cover and detect change
		Forecast and monitor ocean winds and waves
		Detect and monitor oil slicks
		Monitor coastal ecosystem
		Monitor air quality & emissions
		Monitor marine habitats
		Forecast and map large waves
		Monitor ice on rivers and lakes
		Monitor oil rigs and flares
		Forecasting sunlight exposure
		Forecast weather
		Monitor pollution at sea
		Monitor urban areas
		Monitor sensitive risk areas
		Assess and monitor water bodies
		Detect and monitor ground movement
		Assess dredging operation impacts
		Map seismic survey operations
		Map and monitor transport networks

Renewable Energy	Solar energy providers, wind energy providers, tidal energy providers, energy and carbon traders, local and regional planners, national policy makers.	Assess changes in the carbon balance Map and monitor solar energy (solar farms) Forecast and monitor current movement and drift Map and monitor wind energy (wind farms) Forecast and monitor ocean winds and waves Map hydroelectric sources
Raw Materials	Mining and quarrying companies, exploration and survey specialists, commodities traders, exploration and extraction equipment suppliers, drilling, excavation and support services, regional planners / policy makers.	Assess environmental impact of human activities Map geological features Detect and monitor ground movement Measure land use statistics Monitor land pollution Monitor mineral extraction