

# Permitting over the CCS lifecycle

This visual representation of a typical CCS project permitting model summarises the key considerations for policymakers and regulators when developing regulatory frameworks for CCS, or when evaluating the capability of national frameworks to regulate the CCS process.

The representation provides general guidance and does not include an exhaustive list of responsibilities of carbon management project developers or activities necessary to obtain the required licences and permits.

**PRE-INJECTION** 

**OPERATION** 

CLOSURE

POST-CLOSURE

**ACTIVITIES** 

ASSESSMENT & CHARACTERISATION

DEVELOPMENT & CONSTRUCTION

CAPTURE

**TRANSPORT** 

INJECTIO

END OF INJECTION AND SITE CLOSURE

LONG-TERM STEWARDSHIP

**PERMISSIONS** 

Exploration permit

Development permit

Emissions standards
/pollution controls

CO<sub>2</sub> transport/

Injection

Application for site closure

Closure

## **REQUIREMENTS**

#### PRE-INJECTION

Ensure CO<sub>2</sub> is classified as a substance approved for injection

Obtain permission to undertake exploration of storage site

Assess suitability of storage

Conduct comprehensive testing including seismicity and drilling programmes

Evaluate well construction to ensure safety and CO<sub>2</sub> containment

Undertake public notification and engagement

Obtain all approvals such as environmental impact assessments, construction and development permits

#### **OPERATION**

Operate within permit requirements

Capture CO<sub>2</sub> in accordance with all relevant guidelines and regulatory requirements

Conduct any necessary environmental evaluations along the CCS value chain

Conduct safe transportation of  $CO_2$  consistent with all protocols and guidelines

Inject CO<sub>2</sub> into the storage site in accordance with the terms of the injection authority

Monitor the injected CO<sub>2</sub> and site performance

Undertake all necessary testing, monitoring and reporting activities

Take corrective action if any issue arises including implementation of approved emergency and remedial response plan if required

Maintain financial security and insurance

### **CLOSURE**

Follow approved procedures for site closure

This may include removal of injection facilities and/or site rehabilitation

Continue to monitor any injected substances and the overall site for the specified timeframe

## POST-CLOSURE

Conduct long-term monitoring and site care activities

Undertake corrective measures (if needed)

Meet completion requirements

Transfer liability (where applicable)

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