

CAPABILITY OVERVIEW

CCUS & CO₂ Management

Genesis is helping clients transition to a sustainable future.

Our leading advisory team with its solid global track record in CCUS & CO₂ management offers innovative and cost-effective solutions, providing confidence in their CCUS investments.

Leading CCUS & CO₂ solutions

HOW WE CAN HELP

Our expert consultants provide independent and agnostic services helping our client from master planning & early phase design through engineering stages they can rely on.

At Genesis, we understand the economic and technical challenges facing a host of CCUS projects. We ensure clients are provided with phase appropriate engineering and economics for assured decision making in their investment.

Genesis has worked on many key carbon dioxide management projects globally and has cemented a significant track record across the CCUS value chain, including CO₂ pipeline design from concept select to FEED.

HOW WE ADD VALUE

- With more than 35 years of experience in holistic technology and integrated design and execution of more than 50 CCUS projects since 2020, we have developed a deep understanding of the changing landscape in technology maturity and uncertainties in CCUS markets.
- Our extensive global experience has shown us that many CCUS projects have various technical obstacles, regulatory hurdles and integration costs. Our extensive engineering expertise and experience of building up a holistic technical cost from a basic concept is applied across all CCUS projects, providing robust levelized costs of CO₂ (LCCA).
- We help our clients make informed decisions, considering the carbon footprint of different development options during the early stages of development, and support identification of carbon reduction and minimization strategies.
- We provide specialized expertise in CO₂ modeling, CO₂ transport, CCS hub models, offshore and subsea pipelines and risk and safety management and permitting.
- Leveraging a host of our digital tools and benchmarks, we can rapidly assess multiple CCUS concepts and optimize the levelized costs of carbon abatement to direct your investment. We work with our clients to take their development to the final investment decision (FID).

ADVANCED TOOLS

- Ultra Front End™ Suite (UFE™)
- Genesis Carbon Assessment Tools™ (Gen-CAT™)
- Asset Development Evaluation and Planning Tool (ADEPT)
- Brownfield cost estimating tool
- PHAST modeling tool
- CFD CO₂ dispersion modelling tools
- Environmental CO₂ emission modelling tools

OUR SERVICES



KEY INVESTMENT DECISIONS

- Technology selection & system integration
- Decarbonization roadmaps, master planning
- Regulatory driven advisory & ESG finance services
- Energy intermittency management
- CO₂ disposal routes and export spec assessment
- Asset planning



SUSTAINABILITY

- Life time carbon footprint assessments and optimizations
- Re-use of transportation infrastructures
- Environmental impact assessments
- Decarbonisation strategy



ENGINEERING DESIGN

- Site layout studies & brownfield integration
- Pipeline & material engineering
- Flow assurance & dynamic modeling
- Technical safety studies



COST ESTIMATION & FINANCIAL SERVICES

- Real cost estimation & LCCA estimation
- Funding application support
- Economics & market analysis

Capture.Now™

Transforming carbon into opportunities

Genesis is collaborating with Capture.Now™, the strategic CCUS platform of Technip Energies to support clients in their decarbonization journey as the agnostic advisors in early phase.

A strong partner in CCUS & CO₂ Management

OUR TRACK RECORD IN CCUS

>75 recent early phase projects in CO₂

Multidiscipline Teams

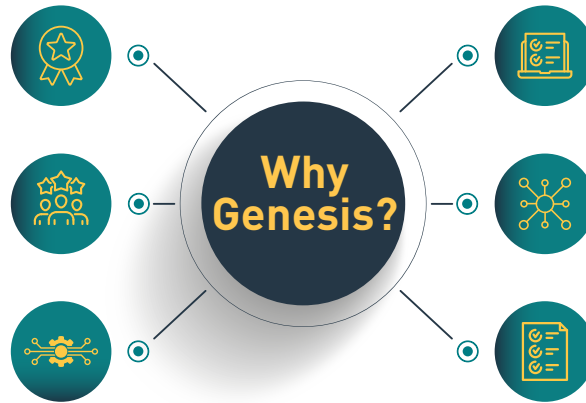
Capitalizing on in-house engineering resources to minimize subcontracting and interfaces

Leveraging Wider Organization

Wholly owned by Technip Energies with more than 60 years in EPC.

Processes & Tools in Development

30 years of experience in project management, onshore and offshore developments and optioneering.



Transparent Cost Estimating

Bottoms up estimating and leveled costs with transparency to support your investment decisions.

Holistic Systems Design

Understanding the challenges with infrastructure, pipelines, CO₂ specifications & behavior, capture & treatment, etc...

Agnostic Reviews

Agnostic technology assessment, screening & selection of technology. Working with OEM, vendors and licensors.

INNOVATIVE & COLLABORATIVE

Fully integrated working with our clients to find value and solve industry challenges

OUR KEY PROJECTS

CCUS cluster

Client: Energy company
Scope: Industrial cluster concept + pre-FEED

CCS license

Client: E&P company
Scope: Environmental support to CCS license application

CCS integration

Client: Asset mgmt. co.
Scope: FEED - CCS Utility integration

CO₂ management

Client: Energy company
Scope: Flare and vent mapping and reduction

CO₂ management

Client: Gas company
Scope: CCS pre-FEED

Electrification + CCS

Client: Energy company
Scope: Offshore power hub with integrated CCS

CCS master planning

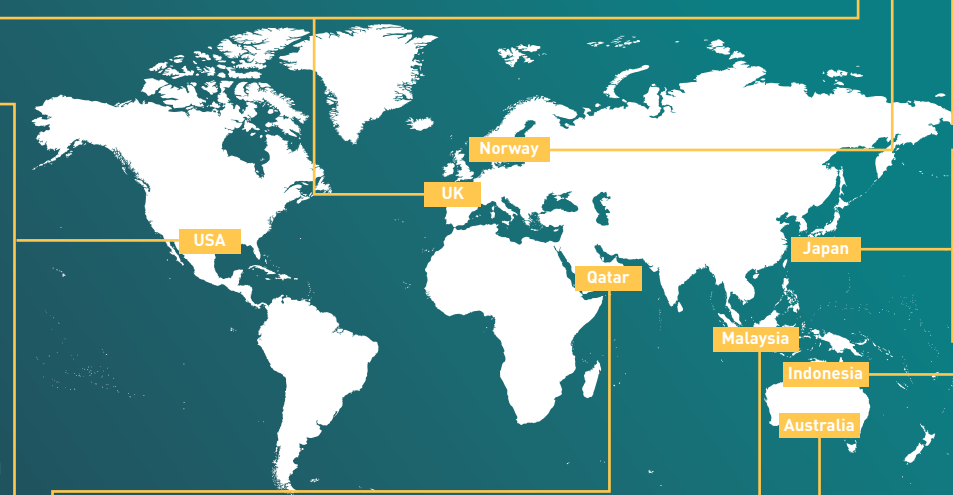
Client: O&G company
Scope: Pre-FEED to evaluate process and economic feasibility to implement CO₂ capture, injection and NGL recovery

CCS master planning

Client: O&G company
Scope: Master planning for gathering and storing of CO₂ from diverse operations

CO₂ - EOR

Client: Engineering company
Scope: Screening study: Offshore CO₂ injection riser and mooring assessment



CO₂ - EOR

Client: E&P company
Scope: CO₂ expert for EOR through CO₂ WAG injection

CO₂ management

Client: E&P company
Scope: EPIC for CO₂ water alternating gas

CO₂ injection

Client: E&P company
Scope: CO₂ injection pipeline and platform

CO₂ management

Client: E&P company
Scope: Concept identification workshop for coal to hydrogen / ammonia development with CCUS

CCS master planning

Client: Independent
Scope: Concept and pre-FEED: Capture and compression of CO₂ for storage and cost estimate

CO₂ EOR

Client: Energy company
Scope: Enhanced gas recovery, CO₂ injection pipeline and platform



Your trusted **advisor** on the journey
to a **sustainable future**

