

Subsurface-to-Surface Advisory Solutions

Power your transition with insight and impact

At every stage of your energy project, GaffneyCline™ energy advisory (GCea) and io Consulting help you move faster, reduce risk, and make smarter decisions. Whether you're tackling emissions, unlocking storage, managing water, or developing complex fields, we turn complexity into clarity—so you can act with confidence, optimize performance, and accelerate results.

GaffneyCline™ energy advisory (GCea) delivers actionable insight and strategic guidance across the energy asset lifecycle—helping you make smarter investment decisions, optimize performance, and reduce risk. Backed by 60+ years of global experience and deep local knowledge, GCea translates complex technical data into clear, value-maximizing execution strategies tailored to your specific reservoirs and business goals.

io consulting, a joint venture between Baker Hughes and McDermott, accelerates your project outcomes through strategic front-end consulting. Whether you're developing a new facility or repurposing existing assets, io delivers integrated, fit-for-purpose solutions that improve economics, reduce emissions, and de-risk decision-making. With 500+ projects completed—spanning oil & gas, CCUS, hydrogen, ammonia, SAF, and methanol—io empowers you to lead in industrial decarbonization and energy innovation.

EMISSIONS ABATEMENT

Take control of your emissions profile and unlock actionable pathways to net-zero

Argentina | Scope 1 & 2 Emissions reduction roadmap

GCea conducted an independent, data-driven emissions baseline to identify reduction opportunities for a major operator. By assessing direct (Scope 1) and indirect (Scope 2) GHG emissions and benchmarking against industry norms, we provided a clear set of targeted actions to reduce emissions intensity—enabling regulatory alignment and corporate sustainability progress.

Southeast Asia | Emissions projects investment review

During an acquisition process, GCea assessed the cost, schedule, and technical scope of two carbon abatement initiatives—a membrane upgrade for methane recovery and a gas-assisted flare project. Our insights enabled the buyer to make informed investment decisions with full visibility into feasibility, risks, and ROI potential.

Middle East | Offshore platform decarbonization

io consulting helped a leading NOC reduce emissions from a major offshore platform by evaluating energy optimization strategies, technology upgrades, and operational improvements. The study delivered practical, prioritized recommendations aligned with both emissions' reduction goals and business performance targets. [Case Study](#).

CARBON CAPTURE, TRANSPORT & STORAGE (CCUS)

De-risk your CCUS journey with full-chain-insights—from storage potential to commercial feasibility

Middle East | Dual reservoir CO₂ storage feasibility

GCea supported a Middle Eastern NOC in evaluating CO₂ injection for enhanced oil recovery (EOR) and long-term storage. By modeling a mature waterflooded reservoir and an undeveloped saline formation, we provided reservoir simulations, lab analyses, and project configurations to inform pilot planning and future field-scale deployment.

Middle East | Country-level CCUS strategy

GCea created a national CCUS cost outlook, from capture through storage, and identified an optimized phased development approach—equipping the client with a strategic roadmap for deployment at scale.

Australia & Far East | CCS infrastructure & export hubs

io consulting developed cost-effective, scalable CCS and CO₂ export strategies by combining technical, economic, and regulatory insight—giving clients a clear path to meet decarbonization targets. [Case Study](#).

OIL & GAS – GREENFIELD & BROWNFIELD

Unlock new reserves, extend asset life, and improve recovery through integrated planning from reservoir modeling to facility design

Middle East | Field development optimization

GCea provided a comprehensive development plan, from static modeling to dynamic simulation, that helped a major NOC understand production potential and facility needs in a greenfield project—accelerating planning and value realization.

Latin America | Pres-salt field economic assessment

By assessing production scenarios and evaluating new technologies for a greenfield project, GCea helped identify the most viable approach to unlock complex pre-salt reserves—maximizing economic return from a technically challenging asset.

Egypt | Cost review for offshore gas development

GCea supported the Egyptian government with an independent review of CapEx and OpEx for a brownfield project—helping strengthen negotiations and ensure more favorable gas pricing.

USA | Carbon Dioxide EOR Simulation Study

To support a major U.S. independent operator, GCea developed detailed geological and simulation models to evaluate the viability of CO₂ injection at the Reeves Unit in Texas. Our modeling provided clarity on recovery potential, helped rank development options, and revealed inefficiencies in the current waterflood program—enabling smarter planning and improved resource recovery.

Algeria | Brownfield redevelopment

io consulting redefined the redevelopment strategy of a stalled brownfield project, improving returns and reducing execution risk. With over 1,000 deliverables in

11 months, the project positioned the operator for a confident Final Investment Decision (FID). [Case Study](#).

WATER MANAGEMENT

Manage water more efficiently, reduce disposal risk and support sustainable development

Qatar | Produced water disposal options & PreFEED

io consulting screened multiple permanent and temporary solutions for redirecting high volumes of produced water. Our phased approach eliminated infeasible options early and matured selected concepts into PreFEED, accelerating execution planning and reducing environmental exposure. [Case Study](#).

France | CBM appraisal well planning

GCea supported drilling design, produced water handling, and contractor evaluation for a coalbed methane project. Our practical advisory reduced technical risk and improved readiness for appraisal activities.

U.S. Shale | Water and commercial risk review for farm-in-opportunities

GCea helped an acquirer evaluate two shale gas plays by analyzing technical risks, CapEx/OPEX, environmental factors, and water handling requirements—delivering a risk-weighted commercial analysis to guide negotiations and investment prioritization.

POWER-TO-X & SUSTAINABLE FUELS

Accelerate low-carbon fuels deployment with scalable, bankable concepts

UK | Sustainable aviation fuel via power-to-liquid & DAC

io consulting led the FEL1 phase of a government-backed study to assess SAF production using DAC and PTL. Our team facilitated stakeholder workshops, delivered cost modeling, and outlined next steps to optimize modularity and manufacturability—paving the way for commercial-scale production. [Case Study](#).

U.S. | e-methanol feasibility & concept select

io consulting helped a client explore e-Methanol production using green hydrogen and captured CO₂. By evaluating system designs, carbon conversion efficiencies, and technology maturity, we recommended the most technically and economically viable pathway for sustainable fuel development. [Case Study](#).