CERA

S&P Global
Energy

CERA Consulting

EXPERTISE THAT MOVES YOU FORWARD.

Your tailored pathway ahead with CERA Consulting.



ENERGY
IS EVERYTHING

The new era of energy welcomes new growth opportunities.

But it brings plenty of uncertainty and challenges too...

Factors influencing energy market dynamics:

- Rising energy demand from consumers, industries and datacenters
- Ensuring energy security, access, and affordability
- Economic growth priorities, fiscal policies and incentives
- Financing challenges
- Different realities and timelines by region and technology
- Geopolitics and supply chain disruptions
- Regulatory and policy changes

It's no surprise you're asking questions you've never asked before.

To take advantage of growth opportunities, businesses must navigate complex challenges. That means getting to grips with changing market economics and pricing, risk management, strategic planning, operational efficiencies, compliance and regulations.



How can CERA Consulting help?

By leveraging our best-in-class research platform, our consulting service brings you custom-built intelligence for a new era of energy. We're the ones who can answer your unique questions with unique solutions.



What we cover

Our sector coverage spans Energy and Commodities value chains with our expert consultants working across sectors, particularly in critical areas like Energy Expansion, Decarbonization and Sustainability


Low Carbon Fuels and Decarbonization


Power & Clean Technologies


Global Gas & LNG


Oil & Gas Exploration & Production


Oil Markets, Midstream and Refining


Chemicals


Agribusiness

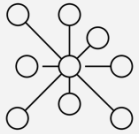


Critical Minerals

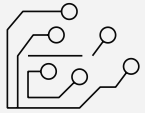
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How we help

We work with you to understand your challenges and develop tailored solutions that are right for your business. With our consulting service, you get:



An integrated view of the full energy value chain



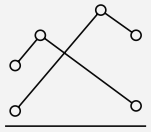
An unparalleled depth and breadth of proprietary data



Deep global and regional experience



Experts across each energy and commodity industry segment



Leading data, insights, tools and models



Transparent and independent analysis you can trust

Built on trusted foundations

Platts S&P Global Energy

IHS Markit Energy & Natural Resources

CERAWEEK

Chemical Week by S&P Global

CERA Cambridge Energy Research Associates

PIRA

Purvin & Gertz Inc.

PFC Energy

Bentek Energy

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Working together

Our Consulting solutions are based on a broad, solid foundation of market engagements and coverage.

Bespoke Consulting

Unique and efficient studies created in-house
Our experts examine your challenges and provide custom-built solutions.

Multi-client Services

Data-rich reports and workshops covering market fundamentals
Our data and expertise enables us to recognize trends and provide analysis.

Conferences & Training

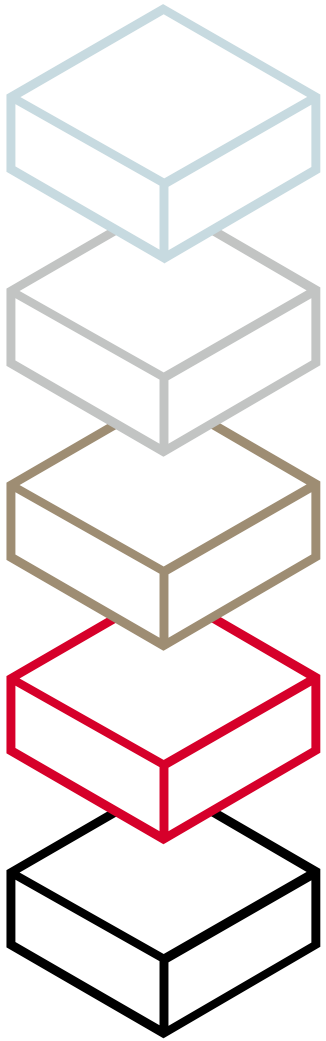
Market participants gather for discussions
We bring together people from your industry to share, educate and discuss ideas.

Benchmark Pricing

Trusted data used in contract settlements
Our trusted, impartial prices are used by companies to settle contracts.

Market Reporting

Daily coverage of market fundamentals
Our reporters collect data by talking to people daily in the energy markets.



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How we help our clients

From operational management to strategic decision makers, we support a wide range of senior stakeholders.

- ✓ Strategically plan for the long term
- ✓ Evaluate assets and investment projects
- ✓ Support M&A with target screening and due diligence
- ✓ Benchmark against the competitive landscape
- ✓ Provide Commercial and Technical third part validation

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Our Global Practice Leaders



Seba Borgarello
Global Head of CERA Consulting

"I'm passionate about helping my clients win in the new world of energy – and pushing the boundaries of what is possible."



Eleonor Kramarz
Power, Energy Transition & Critical Minerals

"I'm excited by transforming complex problems into effective solutions."



Eric Eyberg
Global Gas and LNG

"I pioneer innovative energy solutions that drive long-term sustainability for some of the world's largest companies."



Preston Cody
Upstream, Regulatory & Energy Analytics Consulting

"I love helping clients use data to characterize the trade-offs between opportunity and risk."



Anthony Wood
Oil Markets, Midstream & Refining

"I focus on really understanding a client's need – and then using our unrivalled intelligence to help answer it."



John Barsby
Chemicals

"What defines the chemicals industry isn't just molecules and processes, but the people who turn insight, discipline, and collaboration into global impact."



Juan Sacoto
Agribusiness

"I'm excited to be at the forefront of agricultural innovation – and love turning my client's challenges into valuable opportunities."

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Low Carbon Fuels and Decarbonization

Our team is at the leading edge of the convergence between energy and technologies, providing the insight you need to reshape the energy landscape of tomorrow.

From analysing low carbon fuels to exploring carbon capture, and e-fuels – we understand the challenges of balancing energy demand with the need to reduce greenhouse gas emissions. That's why we're dedicated to finding solutions that enhance energy security, economic growth, and environmental sustainability.

We can help you with:

- ✓ Decarbonization strategy and roadmaps
- ✓ Low carbon hydrogen and ammonia
- ✓ Biofuels, sustainable aviation fuel (SAF) and e-Fuels
- ✓ CCUS and carbon markets
- ✓ Emissions benchmarking & management

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Case study

Assessment of emissions, decarbonization and policy in the gas and LNG value chain

Challenge

The World Bank and the East Mediterranean Gas Forum (EMGF, a regional intergovernmental organization of gas-producing and exporting countries) commissioned S&P Global to identify and assess decarbonization opportunities along the natural gas value chain (including gas production, transmission, liquefaction and regasification) in several member countries (Egypt, Israel, Jordan, Cyprus and Palestine).

Our approach

S&P Global leveraged in-house data and expertise, supplemented with additional research, to carry out:

- Estimation of greenhouse gas (GHG) emissions along the natural gas value chain (including upstream, transmission and LNG) in selected member countries
- Analysis of key emission sources and their drivers
- Carbon-intensity benchmarking against global producers
- Assessment of decarbonization opportunities and development of a marginal abatement cost curve
- Development of a prioritized decarbonization action plan
- Formulation of options for EMGF to support member countries in decarbonizing their natural gas value chains
- Development of a carbon-intensity certification mechanism and an implementation roadmap
- Development of options for a sub-regional harmonized policy and regulatory framework and a sequenced action plan to enable and encourage decarbonization across member states

Results

Study results were presented to the EMGF Executive Board and announced at COP27, marking the launch of a major regional gas value chain decarbonization initiative.

The study helped EMGF clarify its role in the decarbonization effort, continue building its organizational capabilities, and coordinate carbon-footprint reduction initiatives across national governments.

Case study

Net-zero plan to 2050 for a vertically integrated Central European energy company

Challenge

The largest refinery and petrochemical asset for this company emits approximately 8 million tons of CO_2 per year. Under the EU ETS, several product sub-installations have emissions above the 80th percentile benchmark, creating a risk of losing free allocation and incurring multimillion-euro fines for non-compliance.

Our client required a comprehensive evaluation of abatement options and decarbonization pathways to formulate a net-zero plan.

Our approach

- Assessed decarbonization options along with relevant regulations and emission targets in the areas of hydrogen, biomethane, electrification, carbon capture and storage, and small modular nuclear reactors.
- Analyzed the market outlook for refined and petrochemical products and the asset's long-term competitiveness.
- Developed a long list of abatement solutions and shortlisted them, incorporating input from the client's commercial and technical teams.
- Built cash-flow models to assess the economics of each abatement option and developed a marginal abatement cost curve (MACC) to evaluate the relative merit and sequencing of each measure.
- Defined and compared multiple decarbonization pathways for the asset, including different technology-adoption and policy scenarios, to identify robust, least-cost routes to net zero by 2050.

Results

The client gained a clear view of the long-term implications of regulatory frameworks such as the EU ETS, ETS2, RED III and the Energy Efficiency Directive on their asset.

The project provided our client with the timing, capital and operating costs, and key risks associated with fully decarbonizing the asset by 2050, supporting investment planning and strategic decision-making.



Power & Clean Technologies

Power demand is surging to meet global energy, electrification and decarbonization needs. This shift isn't just about embracing new technologies - but transforming the power markets to sustainably and reliably meet the world's energy needs.

Our experts are at the forefront of understanding the evolving dynamics in power and renewables markets. Covering all types of power generation and storage, we help clients assess evolving commercial opportunities and the emerging system risks.

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We can help you with:

- ✓ Power system economics and transmission analysis
- ✓ Integrated power demand forecasts and the role of AI datacenters
- ✓ M&A and commercial due diligence
- ✓ Technical due diligence and market landscape of:
  - ✓ Battery and Gigafactories
  - ✓ Geothermal
  - ✓ Large Scale and Small Nuclear Reactor

Case study

Load forecast for a Texas utility assessing future power demand growth through 2045

Challenge

A transmission and distribution (T&D) utility in Texas sought support to understand potential load growth in its service territories, enabling it to effectively plan necessary infrastructure development and upgrades over the next 20 years. The client needed expert inputs to assess future power requirements, particularly from rapid growth in datacenter and electric vehicle (EV) demand segments, in the Gulf Coast and North-Central service areas in Texas.

Our approach

- Established and validated baseline year demand for all service areas by leveraging various data sources and created a census tract-level heat map to visually represent this baseline demand.
- Performed regional economic modeling to understand the underlying drivers of residential, commercial, and industrial growth projected through 2045.
- Analyzed key demand segments, including datacenters, chemicals and refining, hydrogen, and electric vehicles.
- Developed hot summer and cold winter scenarios of the forecast based on weather-adjusted scaling factors.
- Compiled and delivered a technical report summarizing the methodology, key findings, results, and implications of the forecast.

Results

S&P Global's forecast and scenario outputs enabled the client to gain a clearer understanding of its future transmission and distribution (T&D) planning needs, facilitating more effective communication of these requirements to the Electric Reliability Council of Texas (ERCOT), the Public Utility Commission of Texas, and other stakeholders.

Case study

Southern African Power Pool (SAPP) strategy assessment for infrastructure investor



Challenge

S&P Global was commissioned by an Infrastructure Investor to conduct a commercial and technical review to identify whether there are opportunities to develop new private interconnectors in the Northern part of the Southern African Power Pool (SAPP).

S&P Global was requested to provide an overview of the electricity market of the aimed countries, together with an assessment of the prevailing commercial framework within SAPP.



Our approach

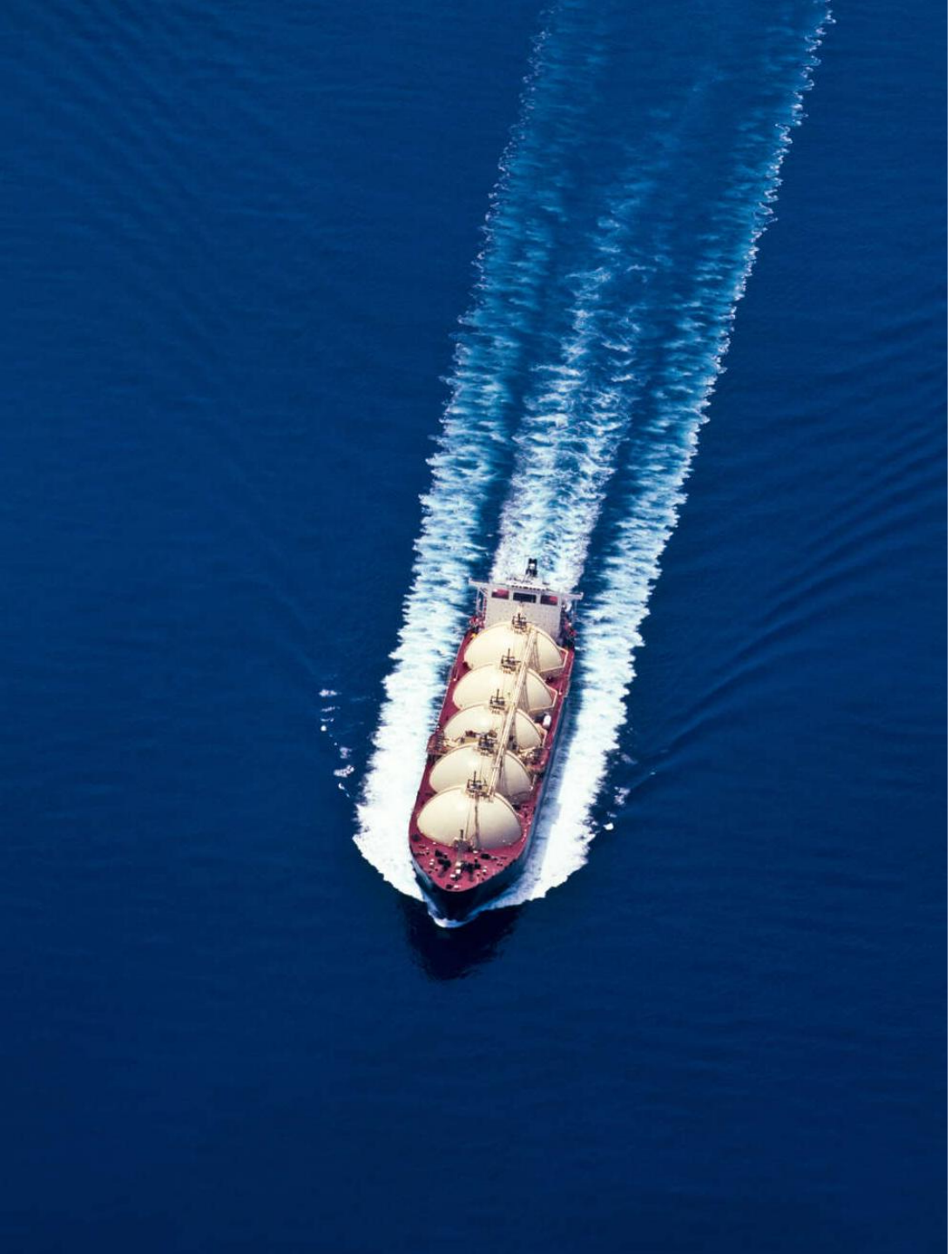
- Analyzed demand, capacity, and generation for selected Sub-Saharan Africa countries out to 2050.
- Provided supporting insights into export/import opportunities within SAPP for different scenarios.
- Evaluated commercial opportunities for SAPP trading, considering power availability, import costs, and likely import/export routes, identifying potential transmission capacity needs.
- Assessed risks associated with new interconnector development, considering SAPP's evolving trade landscape, liquidity constraints, network planning challenges, and regulatory transparency issues.



Results

A comprehensive report was delivered to the client presenting an overview of S&P Global's conclusions in terms of SAPP countries that require additional firm capacity and their ability to develop new capacity in the next decade.

We also identified economically viable routes for new interconnectors and risks associated which ultimately informed our Client's investment decision regarding the opportunity at hand.



Global Gas & LNG

As governments and organizations aim for a lower carbon future, they're turning towards clean-energy technologies. But we still need traditional fuels like natural gas and LNG, along with emerging low-carbon gases like hydrogen, synthetic methane, and renewable natural gas (RNG), to power our world and support decarbonization.

Our experts understand the pivotal role that the gas market plays in this transition. They see the potential of adapting existing infrastructure to transport cleaner alternatives. A sustainable future will require both old and new energy solutions.

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We can help you with:

- ✓ Gas markets pricing, contracts and regulatory design
- ✓ Gas masterplans
- ✓ Gas monetization and LNG shipping
- ✓ Emissions mitigation and low carbon gases
- ✓ M&A due diligence and project financing

Case study

Gas monetization strategy for potential development of an Argentina LNG export facility for a national oil company

Challenge

A national oil company engaged S&P Global to provide an independent assessment of various gas monetization options for the Vaca Muerta resource basin to support the potential development of a world-scale LNG facility and to identify other material and economic gas monetization opportunities.

Our approach

S&P Global conducted a multi-phased study that included a deep-dive market fundamentals report, including forecasts of supply, demand,
pricing, regulation, and above-ground considerations; developed and modelled various demand driven scenarios, highlighting changes in the LNG, industrial, petrochemical, and fertilizer markets, and assessed the scenarios upstream implications.

S&P Global then performed netback analyses for 7 potential gas monetization routes, including LNG exports, pipeline export expansion opportunities, urea/ammonia investment, and petrochemical opportunities. This analysis then complemented a benchmarking exercise to help our client better understand potential infrastructure investment requirements, policy considerations, and potential synergies amongst the various monetization routes.

Results

The project has since moved forward with a land deal and FID announcement from key commercial counterpart and upstream gas partner.

The client gained a much clearer understanding of the challenges and obstacles required prior to making a significant investment, allowing it to better frame its strategy and target potential upside synergies amongst monetization options.

Case study

Buy-side due diligence on an LNG regasification terminal with onsite renewable assets



Challenge

The client required a due diligence report on a UK-based LNG terminal, and a strategic assessment of associated power and renewables opportunities.

Following previous engagements that led to successful transactions for the client, CERA Consulting was once again retained as buy-side commercial advisor.



Our approach

- Provided natural gas supply-demand outlooks to 2050 to evaluate the opportunity for LNG on a market- and regional-basis in Europe considering regional dynamics, consumption by demand sector, pipeline gas flows that underpinned the long-term terminal utilization and the tariffing outlook.
- Evaluated the regasification capacity landscape in Europe taking account of regasification capacity bookings.
- Assessed commercial competitiveness of terminals and drivers of value to benchmark the asset against competing UK and European terminals that would drive demand for capacity when marketed.
- Performed an analysis of the potential tariff range, including extrinsic and intrinsic value of asset capacity.



Results

The client gained a thorough understanding of the assets' role and value in both the domestic market and regional gas balance, which enabled the client to assess the potential tariff range for the terminal.

The due diligence report was well received and supported the successful acquisition of the asset via a bidding process.



Oil Markets, Midstream & Refining

With an increased focus on climate change concerns and sustainability, shifting consumer habits are impacting the refining industry in an unprecedented manner.

Our proprietary research and data covers crude oil, refined products, natural gas liquids, lubricants, downstream company strategies, and the future of mobility.

We can help you with:

- ✓ Refinery competitiveness
- ✓ Refinery decarbonization strategies
- ✓ Energy Transition scenario planning and roadmaps
- ✓ Low Carbon Fuels: biodiesel, ethanol, renewable diesel, SAF, and e-Fuels
- ✓ Transaction and financing support
- ✓ Market and feasibility studies
- ✓ Crude oil valuation

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Case study

Study on the potential evolution of refining and liquid fuels production in Europe

Challenge

Concawe, a division of the European Fuels Manufacturers Association, required a comprehensive study to examine the possible implications of achieving the EU's net-zero emissions targets by 2050 on the European refining industry and on European security of fuel supply.

Our approach

- Developed two scenarios, which share a common basis for the energy transition but differ on the decarbonization pathway for liquid fuels particularly in the transport sector.
- The Max Electron Scenario satisfies the EU Fit-for-55 targets while surpassing the Heavy-Duty Vehicles CO2 standards - by assuming zero Internal Combustion Engines (ICE) vehicle sales after 2035 and unprecedented electrification across various modes of transportation.
- The More Molecule Scenario also satisfies the EU Fit-for-55 targets but aims for net-zero by 2050 by combining electrification with increased use of low-carbon liquid fuels, allowing some ICE vehicle sales post-2035 and deferring aviation/marine electrification to after 2050.
- Each scenario evaluated the impact on conventional refining capacity by 2030, 2040 and 2050, and the new or re-purposed capacity required for bio-fuel production. To allow for electrification across all sectors and production of Renewable Fuels of Non-Biological Origin the requirements for additional European renewable electricity production is calculated.

Results

The report provides EU and other national policymakers with a deeper understanding of the risks and opportunities of the energy transition on the European refining industry enabling them to take measures for a smooth and value-added energy transition, without disrupting fuels security of supply.

Case study

Sustainable Aviation Fuel (SAF) and Renewable Diesel (RD) Strategy Study



Challenge

A national oil company sought to evaluate opportunities for investing in SAF and RD in the Asia Pacific domestic market and required forward-looking market outlooks and a robust market entry strategy.

In addition, the client required targeted insights to understand the critical success factors for SAF and RD deployment, including regulatory frameworks and the design and implementation of book-and-claim mechanisms.



Our approach

- Conducted a technology assessment of SAF and RD, covering established and emerging production pathways such as hydroprocessed esters and fatty acids (HEFA) and Alcohol-to-Jet, and mapping production capacity by region, feedstock, and technology.
- Developed market outlooks, examining demand drivers, constraints, and biofuel policy frameworks e.g., US Renewable Fuel Standard and the EU's Renewable Energy Directive III.
- Analyzed the competitive landscape by benchmarking leading global producers, and mapping value chains from feedstock suppliers and biofuel producers to airline operators and regulatory bodies.
- Provided outlooks for key feedstocks, assessed pricing mechanisms and cost structures in US and European markets, and developed price forecasts to inform commercial strategy.



Results

We conducted an on-site workshop at the client's offices and a presentation of key findings to the Senior Management team.

Through this work, the client gained a focused business entry strategy and a detailed execution roadmap for the domestic market, providing a clear path forward for its SAF investment project.



Chemicals

Every industry, from agriculture to energy to retail, relies on chemicals at some stage in the production process. To stay ahead, you need a deeper understanding of market volatility, regulatory pressures, cost competitiveness and shifting end user demand.

Our chemicals consultants have experience advising chemical producers, governments, financial institutions and technology providers operating at any point along the value chain, from commodity to specialty chemicals.

We can help you with:

- ✓ Materials Transition
- ✓ Plastics Circularity
- ✓ Decarbonization strategies
- ✓ Market studies for commodity and specialty chemicals
- ✓ M&A due diligence and project financing
- ✓ Process technology and production cost economics
- ✓ Feasibility and techno-economic studies

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Case study

Project 2035: Chemical industry pathways

Challenge

Facing a rapidly evolving regulatory landscape, increasing sustainability demands, and global market uncertainties, the UK Chemical Industries Association (CIA) needed robust evidence and actionable insights to support its members, advise on policy, and communicate the sector’s value to stakeholders.

Our approach

- We assessed industry trends to clarify how sustainability pressures, technological innovation and regulations are shaping the sector's long-term trajectory
- We engaged a cross-section of industry stakeholders through structured interviews and interactive workshops with manufacturers and specialised operators.
- We developed and modelled four long-term scenarios to examine the implications of different policy and demand environments
- We delivered a detailed internal report for strategic decision-making and a publicly accessible summary for the CIA to support policy dialogue and communications.

Results

The CIA launched 'Project 2035’,based on this study, which outlines a vision for a resilient and sustainable UK chemical industry. The study findings enabled the CIA to clearly communicate the sector's role in economic growth and the transition to net zero, along with the major threats and opportunities facing the industry, serving to inform government consultations.

Case study

Commercial and technical due diligence for a major petrochemicals cross-border transaction

Challenge

Kuwait Petroleum Corporation's (KPC) subsidiary, Petrochemical Industries Company (PIC), set out to acquire an equity interest in Wanhua Chemical's petrochemical assets in Yantai, China, which produce propylene oxide, tert-butyl alcohol and butyl acrylate.

PIC required an advisor who could integrate both commercial and technical due diligence into a coherent view of value and risk, and help them negotiate the transaction with confidence.

Our approach

We validated the business case and value creation potential by:

- Conducting product market assessments including regional and global supply-demand balances and capacity pipelines
- Developing price and margin outlooks, testing sensitivity to feedstock costs and crude oil price scenarios
- Reviewing feedstock purchase agreements, commercial performance, product mix, sales strategies and R&D management

In parallel, we evaluated technical robustness through:

- A one-week field visit to the Yantai complex and in-depth interviews with operations teams
- Asset-specific analyses focusing on production processes, utility consumption, maintenance practices and retrofit history

Both commercial and technical teams prepared red flag reports with evaluation of mitigation measures, and a combined due diligence report for the client.

Results

The due diligence streams combined provided PIC with a single, coherent view of value drivers, risks and upside opportunities for this transaction.

PIC successfully completed the acquisition of a 25% stake in Wanhua's Yantai petrochemical assets for US$638 million, marking a major Kuwaiti investment into the Chinese petrochemical sector



Oil and Gas Exploration & Production

Converging market forces, including rising energy demand, lower oil prices and geopolitical developments, are dramatically reshaping the global oil and gas industry.

As the pace of change accelerates, corporate and government leaders must make confident, insight-led decisions.

Our consultants can help you identify exploration and production opportunities including carbon capture, utilisation and storage (CCUS) options to drive optimal growth, prioritize investments, manage risks and reduce costs.

We can help you with:

- ✓ Policy/regulatory support
- ✓ Bid-rounds support
- ✓ Upstream decarbonization strategy
- ✓ Performance benchmarking
- ✓ Supply chain market intelligence
- ✓ Transaction and financing support
- ✓ Cost assessments
- ✓ CO_2 storage screening and evaluation

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Case study

Open-door exploration licensing round support for a Middle Eastern National Oil Company



Challenge

A key priority in the country's evolving energy strategy is to attract higher levels of foreign direct investment in oil and gas exploration. To advance this objective, our client sought to launch its first-ever open-door licensing round. With limited prior experience, the client required consulting support to design and execute the licensing round and bidding process effectively.



Our approach

- Advised on the nature of opportunities that should be offered
- Advised on key strategy and supported objective setting
- Advised and built capacity on the necessary aspects of exploration contracting and other license terms
- Evaluated options for optimum fiscal terms
- Developed bid guidance documentation with procedural details and selection criteria
- Facilitated key aspects of the marketing process including website content development and roadshow advertising
- Organized and supported licensing round events, presenting on fiscal terms and guiding potential applicants through the bidding procedure and key contractual terms.



Results

The bid round opened conventional oil and gas exploration to international investors. Blocks were licensed to IOCs, with alternative tax systems proposed.

The round led to 7 discoveries from 19 wells with development investments exceeding 2.3 billion USD.

Case study

Techno-commercial due diligence for upstream asset divestment in West Africa



Challenge

An African upstream regulatory authority required an independent due diligence review of a regulatory submission from an international oil company relating to asset divestment. Our assessment scope covered both pre-transaction and potential future liabilities under the applicable regulatory framework.



Our approach

- Conducted a comprehensive financial modeling analysis, including an estimate of Decommissioning and Abandonment (D&A) liabilities, host community development obligations, and environmental obligations to quantify pre-transaction and future liabilities.
- Conducted an in-depth due diligence assessment of the divestment, examining data on technical, financial, and environmental liabilities. Access to a data room allowed for a detailed, independent analysis to identify gaps and potential risks.
- Flagged areas where the buyer may lack operational experience or infrastructure, HSE and ESG practices, which could impact financing and operational safety.
- Proposed specific regulatory and financial levers, such as performance guarantees, third-party guarantees, and letters of credit to safeguards ensure the buyer's accountability in maintaining asset integrity and funding obligations.



Results

Our support enabled the regulator to confidently evaluate the buyer's technical and financial capabilities, along with long-term environmental and operational liabilities associated with the assets, to oversee a smooth, well-governed asset transaction.

Case study

International development best practices for unconventionals in Latin America



Challenge

Commercialising unconventional resources in Latin America has proven challenging. To address this, our client needed a focused study on recent technological advances and regulatory permitting practices for unconventionals, with the objective of identifying practical measures to enhance investment in unconventional oil and gas.



Our approach

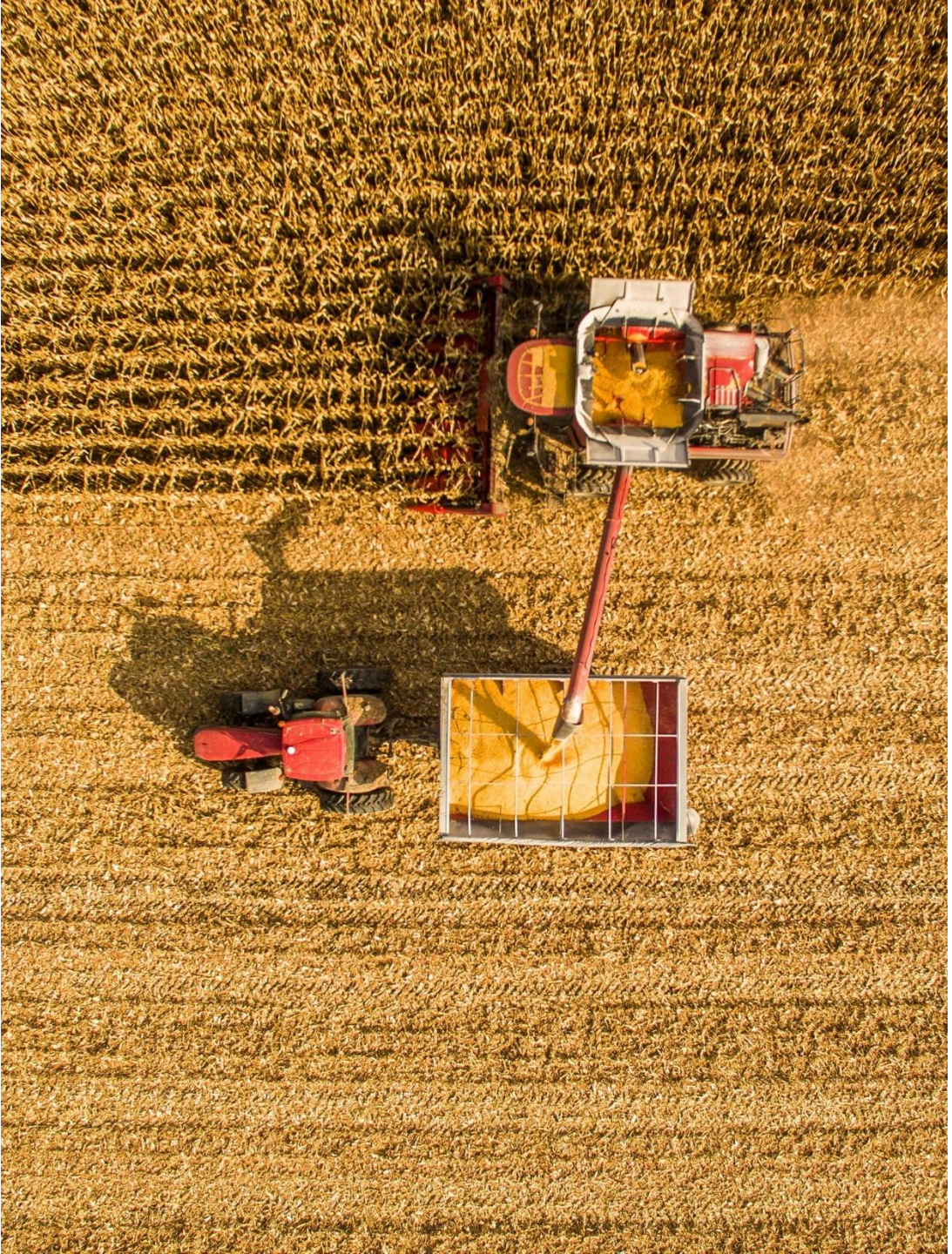
- Phase I identified key technological innovations that have underpinned the successful development of exploration and production activities from source rock formations.
- Phase II focused on legal frameworks, fiscal incentives and social-impact considerations in five benchmark jurisdictions (Texas, Pennsylvania, Argentina, Australia and the UK). This phase included a review of community-relations frameworks used in these markets and an assessment of breakeven prices for unconventional plays in both these jurisdictions and Colombia.
- Phase III translated the best practices identified in Phase II into tailored recommendations for Colombia, highlighting regulatory, fiscal and stakeholder engagement enhancements to improve competitiveness.



Results

Our findings were delivered via detailed written report and interactive client workshops, building capability and awareness around key enablers for unconventional development.

The client gained a comprehensive understanding of global best practices along with targeted regulatory adjustments and fiscal incentives to enhance Colombia's attractiveness for unconventional oil and gas investment



Agribusiness

From chemicals, machinery and fertilizers inputs, to commodities, food and by-products outputs, we are the only expert consultants which cover the whole agribusiness value chain.

This includes policy, transportation, finance and regulation which are applied at every step.

We can give you a holistic view of inputs, through producers and food manufacturers, to transport, bio-energy and biomass, policy and sustainability.

We can help you with:

- ✓ Bio-feedstocks and biofuels
- ✓ Market & feasibility studies
- ✓ Supply chain evaluation
- ✓ Policy & regulations support
- ✓ Climate change scenarios and impact on agriculture
- ✓ Fertilizers markets
- ✓ Transaction and financing support

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Case study

Assessing climate and policy risks in the EU sugar supply chain



Challenge

To comply with the EU Corporate Sustainability Reporting Directive (CSRD), a leading alcoholic beverage manufacturer in Europe, was required to disclose environmental, social, and governance (ESG) risks as part of its annual reporting cycle.

The client sought a data-driven report on potential climate change impacts on sugar, a key raw material, and on physical assets in the supply chain, including exposure to acute and chronic physical climate hazards.



Our approach

- In collaboration with S&P Global Sustainable1, we prepared two targeted assessments:
  - Physical risk posed by climate change to sugar beet yields and production, along with political risk from EU agricultural and trade policy changes.
  - Physical and financial risk posed by extreme weather events to physical assets in the client's supply chain.
- The physical risk assessment used a proprietary yield forecasting model that estimates the influence of changing temperatures across multiple geographies and climate scenarios.
- We extended the analysis for varying levels of crop disease prevalence under warming temperatures.
- Finally, we used regression-based econometric analysis to estimate the influence of crop yields under these scenarios on future sugar beet and sugar prices.



Results

The report provided our client with a clearer understanding of key climate-related and price risks to the sugar supply and enabled them to meet their CSRD requirements.

Additionally, through a series of workshops with the client, we demonstrated how the analytical findings related to other sustainability topics, such as opportunities to promote regenerative agriculture in their supply chain.

Case study

Urea capacity expansion and diversification strategy



Challenge

The client, a state-owned producer and leading global exporter, was looking to evaluate an ambitious increase in urea production capacity to monetize the country's natural gas reserves and create local employment.

The client needed to address questions on the impact the project would have on the market and competitive landscape, and whether they should consider product diversification.



Our approach

- In Phase 1, we modeled the market impact of the proposed expansion and designed two ramp-up schedules to limit urea market disruption and price risk. We presented long-term supply, demand and trade outlooks, highlighted key risks (including decarbonization policies), and analyzed fertilizer supply chain trends.
- We assessed how consolidation and vertical integration between global producers and local distributors could affect the client's operations and evaluated business models to reduce volume risk in a highly competitive market.
- In Phase 2, we screened and ranked ammonia and urea derivatives to identify the most attractive options for portfolio diversification and to mitigate pressure on the urea market.

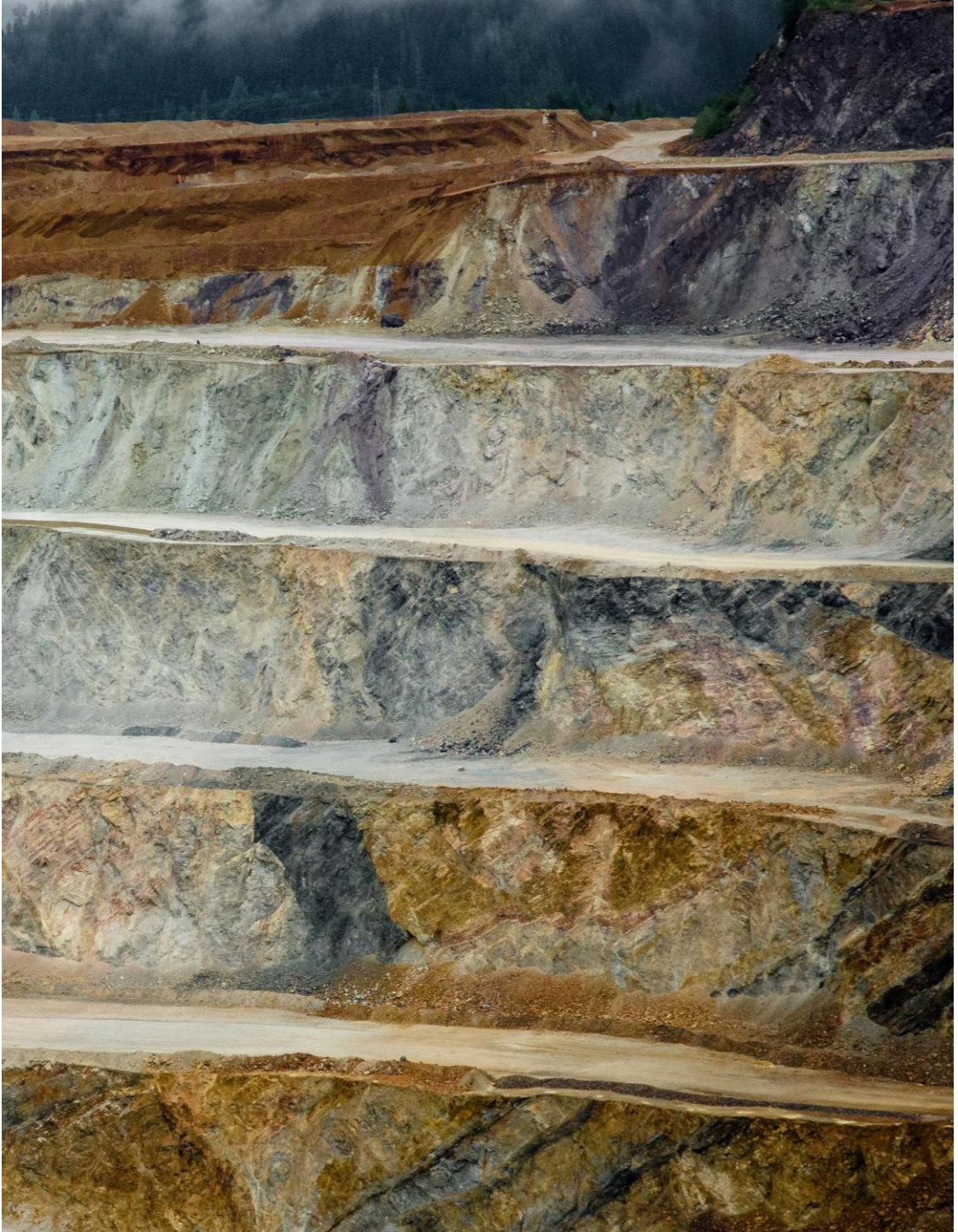


Results

The report and workshops helped the client fully understand the impact of the proposed plant on the global urea market.

The optimal timing and pace of capacity expansion, and rationale for product diversification were presented to the client's board and parent company.

Drawing on the report's findings, the client is preparing to submit a finalized expansion and diversification investment plan for board approval.



Critical Minerals

Securing access to critical minerals has quickly become a core imperative - shaping industrial strategy, national security planning, and capital allocation.

Rapid investment in artificial intelligence (AI), electric vehicles (EVs), clean power and digital infrastructure is driving demand, while concentrated supply chains intensify geopolitical risk.

Our critical minerals consultants offer specialised intelligence and deep technical insight providing clients with clarity across opaque markets and supply chains.

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We can help you with:

- ✓ Granular country/market level supply and demand forecasts
- ✓ Mine and processing economics
- ✓ Exploration budget trends
- ✓ Cost assessments and benchmarking
- ✓ Country economic and risk profiling
- ✓ Supply chain market intelligence
- ✓ Investment appraisal and transaction support

Case study

Critical Minerals market transparency initiative

Challenge

The U.S. Department of Defense, through DARPA, recognized a lack of transparency and forecasting capability in the market for critical minerals, and needed improved methods for assessing asset-level cost, supply chain risks, and future demand under evolving technological scenarios.

S&P Global was selected to develop and test prototype forecasting technology to model component-based material input costs, and supply and demand for critical commodities such as base metals, rare earth metals and other materials.

Our approach

- This project was structured in three phases, from proof-of-concept to full product.
- Our consultants built a bottom-up landscape of supply, demand, trade flows and cost competitiveness
- We developed innovative probabilistic modeling tools in a scalable framework, capable of simulating numerous scenarios and what-if analyses.
- We created structural price forecasts associated with macro and micro-outlooks under different conditions
- We delivered asset-level analysis with fully transparent inputs and stress-tested scenarios, to support investment feasibility and risk assessment

Results

The modeling system developed enables DARPA and other stakeholders to assess project viability, position opportunities on the cost curve, and translate market risks into actionable insights.

This initiative supports DARPA's national security objectives around strategic planning and investment decisions in the critical minerals sector.

Case study

Copper in the Age of AI: Challenges of Electrification

Challenge

The world is entering an era of rapid electrification and digital transformation, with copper at the centre of energy, technology and security strategies.

However, surging demand from emerging sectors is intensifying pressure on supply chains and global markets.

Meeting this growing demand is fraught with challenges, both above and below ground, and the decisions made in the coming years will determine whether copper remains an enabler of progress or becomes a bottleneck to growth and innovation.

Our approach

- We engaged with major copper producers and users to assess the role of copper in energy transition
- We developed bottom-up demand models for copper uses in core economic demand; energy transition demand, encompassing EVs, battery storage, renewable power infrastructure, transmission and distribution, and AI and data centres; and defence demand
- We developed asset-level supply forecasts up to 2040 to analyse the potential supply-demand gap
- Additional analysis focused on operational challenges for copper mining and operational themes to tackle from a miner's perspective

Results

Our study, "Copper in the Age of AI: Challenges of Electrification," analyses the global outlook for copper supply and demand through 2040, focusing on the metal's essential role in meeting the growing requirements of electrification, digitalisation, technologies such as AI, data centres and EVs, and defence.

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Ready for answers?

Get in touch with our expert consultants today.

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