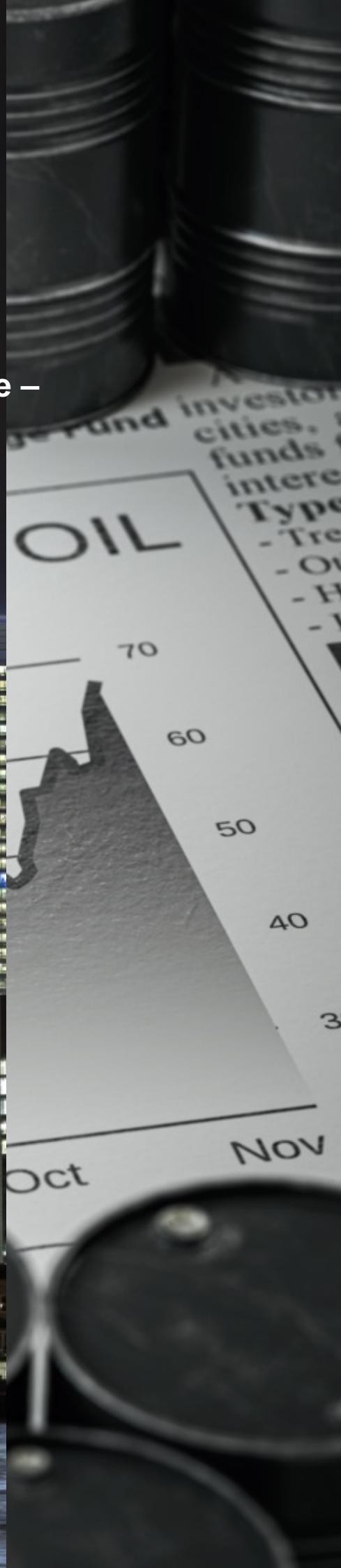




*Empowering the next generation of energy leaders*

## Executive Programmes

### Future Energy Leaders Executive Programme – *OPEC+, Markets and Geopolitics Track*



# Message from the President

## Dear Future Energy Leaders

Welcome to the London College of Energy Economics (LCEE), a pioneering learning affiliate of the Energy Institute founded in 2024, to address one of the most pressing challenges of our time: the transition to a sustainable energy future. Our mission is clear – to empower engineers in the energy industry to lead this transformation while equipping them with the economic tools to tackle the complexities of emerging technologies. As the world shifts toward a carbon-constrained economy, LCEE stands at the forefront, bridging technical expertise with economic insight to drive meaningful change. The term “Energy Economics” was coined following the oil crisis in 1973, and since then, it has been influencing global politics. For the past decades, the oil and gas sector has remained a cornerstone of global energy systems, but its future hinges on adaptation.

Engineers are uniquely positioned to innovate, whether through integrating renewables, scaling carbon capture and storage (CCS), or advancing hydrogen technologies. However, these innovations bring economic challenges – volatile markets, high capital costs, and evolving regulations. LCEE was established to support engineers in navigating these hurdles. Our cutting-edge programs blend energy economics, financial analysis, and policy evaluation, enabling professionals to assess the viability of new technologies and design

strategies that align profitability with sustainability.

Through practical training, real-life business case studies, and cost-benefit analyses, we ensure our graduates are not just technical experts but also strategic decision-makers shaping a resilient energy landscape.

Beyond education, the college is a hub for applied, policy-oriented research that empowers decision-makers to seize opportunities in a carbon-constrained world. Our world-class lecturers and industry partners produce actionable insights on critical issues, from the economics of decarbonising oil fields to the role of green subsidies in energy markets. Our research aims to inform policymakers, corporate leaders, and investors, helping them navigate regulatory shifts and capitalise on sustainable investments.

At LCEE, we believe the energy transition is not just a challenge but an opportunity to redefine the industry's future. We invite engineers, researchers, and visionaries to join us in this mission. Together, we can build an energy ecosystem that is innovative, equitable, and sustainable. Explore our programs and research initiatives, and let's shape the future of energy together.

Sincerely,

Dr. Yousef Alshammari, FEI CSci  
President, London College of Energy Economics



# Program Overview

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## The Future Energy Leaders Executive

**Programme (FELEP)** is an intensive eight-day executive development initiative designed for highly talented young professionals in energy, economics, sustainability, or related fields. Offered by the London College of Energy Economics (LCEE), a Learning Affiliate of the Energy Institute (EI), course participants will engage in immersive modules on energy transition economics, policy innovation, sustainable finance, and leadership in decarbonization. Through four different special tracks, the FELEP curriculum includes advanced lecturing, executive workshops, case studies from real-world energy challenges, networking with C-suite leaders, and a capstone project addressing a pressing energy issue, including energy markets, net-zero strategies, AI and renewable supply chains.

## The OPEC+, Markets and Geopolitics Track

dives into the complex dynamics of the OPEC+ alliance, global energy markets, and geopolitical factors shaping the future of energy, enabling participants to better understand key factors influencing energy markets and OPEC+ policies. Through a blend of expert-led lectures, interactive group case coursework, dynamic presentations, and rigorous exams, participants will gain actionable insights to lead in an evolving energy landscape and be able to advise on global energy policies. The programme will provide trainees with 60 CPD credits through lectures, workshops, and exams on special topics in energy economics, aiming to prepare the next generation of energy leaders.

## Programme Leaders



### John MacArthur, FREng FEI

Chair of the Council, London College of Energy Economics

Former Vice President of Carbon Policy at Shell International, and a Visiting Professor at Imperial College London

Mr. MacArthur is a distinguished British engineer and energy executive renowned for his pivotal role in advancing sustainable practices within the global oil and gas industry. He undertook multiple roles within the oil and gas technology innovation, including VP of Integrated Gas Technology, where he spearheaded advancements in gas separation, gas-to-liquids processes, liquefied natural gas (LNG), and CO<sub>2</sub> abatement technologies. As Vice President of Shell's Carbon Policy, he pioneered the concept of the Circular Carbon Economy, and he oversaw Shell's climate ambition, including net-zero emissions targets by 2050. He chaired the Oil and Gas Climate Initiative (OGCI) Climate Investments, a \$1 billion+ fund deploying capital in methane reduction, carbon capture, and hydrogen technologies. MacArthur has addressed forums like TEDGlobal and Imperial College events, advocating for hydrocarbons' integration into a low-carbon future. He was elected a Fellow of the Royal Academy of Engineering in 2018, for his contributions to bridging fossil fuels with renewable innovation.



### Dr. Yousef Alshammary, CSci FEI

President of the London College of Energy Economics and Honorary Senior Lecturer at Imperial College London

Dr. Alshammary is a distinguished energy expert and one of the world's top global energy analysts. He is the winner of the OPEC Best Young Energy Professional Award, 2023, in recognition of his commitment to objective research and balanced analysis of the global energy sector while improving understanding of energy market stability. He is a TV speaker on multiple channels, including Bloomberg, Euronews, Reuters, and AlArabiya Business. As a member of the Group of Experts on Sustainable Energy at the United Nations, in Geneva, he has been advising countries on better strategies for decarbonisation of fossil fuels while maintaining energy security and affordability. He was elected a fellow of the Energy Institute in 2022, and he was awarded a Chartered Scientist membership by the Science Council in the UK in 2024. He spoke at multiple prestigious international energy events, including the International Energy Week and the MIT Energy Conference.

# Speakers include



**Neil Atkinson**

**Former Head of Oil Industry and Markets Division, IEA**

Mr. Atkinson is a former Head of Oil Industry and Markets Division at the International Energy Agency (IEA). He advises leading financial institutions, and he participates in consulting projects, including those for the Organisation of the Petroleum Exporting Countries and the World Petroleum Council. He is also a columnist for the Petroleum Economist magazine and a contributor to Bloomberg, CNBC and many other media outlets. While at the IEA, Mr. Atkinson was in charge of the IEA oil market monthly report, one of the most influential reports for oil traders.



**Dr. Cornelia Meyer**

**Former Special Advisor for Europe, IEF**

Dr. Meyer is a member of the World Economic Forum Global Agenda Council and a CNN Top 20 Global Thought Leader. She is a global speaker on energy and the Middle East, a business consultant, macro-economist and energy expert, as well as a media commentator for BBC and CNN. She was educated at the St. Gallen University, the London School of Economics and Tokyo University. She served as an advisor to BP and to the Swiss Central Bank. For more than 20 years, she has been a key analyst for OPEC meetings, providing essential, balanced analysis, and she served as the Special Advisor for Europe at the International Energy Forum (IEF).



**Dr. Jorge León**

**SVP & Head of Geopolitical Analysis, Rystad Energy**

Dr. Jorge held prestigious positions as an economist at BP and OPEC. He was one of the main authors of OPEC's flagship publication, the World Oil Outlook. He also coordinated OPEC's internal medium-term oil market report, managed several research projects, and led OPEC's international dialogue initiatives with the European Union, the International Energy Forum and the International Energy Agency. He was also the chairman of OPEC's Academic Committee. He was part of BP's Economic and Energy Insights team in London. He speaks on multiple news outlets, including BBC and CNBC.



**Francesco Martoccia**

**Energy Strategist and Director at Citigroup**

Francesco Martoccia is an Energy Strategist at Citigroup. In this role, he primarily focuses on the oil and emissions markets in analysing the macroeconomic trends of energy. Mr. Martoccia also generates research on supply and demand fundamentals, geopolitical risks and OPEC strategies, and new mining technologies to provide hedging and investment analysis and recommendations for the company's industrial clients and hedge funds. In addition, Mr. Martoccia has contributed to some publications of the Italian Energy Magazine and he provides insight on OPEC decisions to leading international media channels



**Paul Hickin**

**Editor in Chief and Chief Economist at Petroleum Economist**

Mr. Hickin is editor-in-chief and chief economist, overseeing all content produced by Petroleum Economist, Hydrogen Economist and Carbon Economist. He has over two decades of experience across financial and commodity news and analysis. Paul has held senior editorial and management roles at S&P Global Platts, now Commodity Insights, Dow Jones Newswires and the Wall Street Journal.



**Asma Muttawa**

**Counsel, White & Case LLP**

Asma is a Counsel with the White & Case LLP in London. Her practice is primarily in the energy sector, focusing on sovereign, NOC and renewable energy clients. She has over 20 years' experience delivering legal expertise on global issues related to the energy sector. She is also an Honorary Lecturer at CEPMLP, University of Dundee. Asma served as the General Legal Counsel for OPEC from 2011 to 2018 and later as Special Advisor to the Secretary-General, reporting to the Ministerial Conference on OPEC+ cooperation. Asma is an international energy lawyer with an LLM in International Business and Comparative Law, specialised in International Arbitration and Banking Law, as well as being a Member of the Chartered Institute of Arbitration.

# Speakers' affiliations include



**Imperial College London**



**RystadEnergy**

**Petroleum Economist**



**Royal Academy of Engineering**

# Who should attend?

This program is designed for **engineers, economists, policy analysts, strategists, and executives** seeking to enhance their expertise in energy markets, economics, and geopolitics while gaining business analysis skills through real-life group case studies.

By the end, participants will be prepared to navigate complex scenarios, from OPEC+ decisions, oil price volatility, to sustainable energy transitions, while earning accredited 60 CPD points linking course insights to career progression.

## Programme Benefits

The programme learning outcomes ensure the programme contributes meaningfully to your CPD, emphasising skills to support your professional progression towards full professional membership (MEI) as well as professional registration (e.g., Chartered Energy Manager).

The Energy Institute's output-based CPD framework and aligned with UK CPD standards. This ensures supporting membership progression with leading institutions and enhancing their professional credentials for leadership roles in the energy sector. The programme benefits from a diverse international cohort will include participants from a range of countries, job functions and industries, while hosting international experts and energy leaders necessary to enhance young professional experience.



## Programme Learning Outcomes

Aligned with the Energy Institute output-based CPD framework for clear, measurable objectives linking course insights to career progression, participants will be able to:

1. Evaluate the key components of the oil and gas value chain – upstream exploration, midstream transportation, and downstream refining and distribution – to understand their roles in shaping global energy markets.
2. Apply core energy economics principles, including supply-demand dynamics, pricing mechanisms, and market structures, to analyse energy market trends.
3. Understand the role of OPEC+ in shaping global oil supply, pricing, and market stability, analysing its structure, decision-making processes, and geopolitical influences, including supply

chain disruptions, sanctions, and international alliances.

4. Assess the structure, trends, and geopolitical implications of global natural gas and LNG markets, analysing trade flows and pricing models to understand their dynamics.
5. Analyse the interplay of energy security, geopolitics, and the global energy trilemma (security, affordability, sustainability) to develop risk mitigation strategies while assessing the sustainability of energy policies using the World Energy Council Index.
6. Tackling real-world energy challenges in teams, applying critical thinking to propose solutions, delivering evidence-based presentations, synthesising data for actionable stakeholder recommendations, and fostering leadership skills.

# Programme Details

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## Day 1: Introduction to Crude Oil Value Chain

**Morning:** Participants will explore the crude oil value chain, covering both upstream and downstream sectors. The upstream segment introduces the fundamentals of crude oil and gas production, processing, and shipping, alongside key concepts like international pricing benchmarks, API classification, OPEC crudes, and the price basket. It also examines global oil resources, production costs, and carbon intensity.

**Afternoon:** Exploring the downstream segment, providing an overview of refinery products, refining processes, and major global refineries, including the Nielson Index (NCI) for sizing refineries. Participants will delve into crude oil feedstock selection, refinery configurations, major petrochemical processes, and alternative energy systems, concluding with practical case study exercises to reinforce learning.

## Day 2: Fundamental Concepts in Energy Economics

**Morning:** The day delves into fundamental concepts of energy economics, tracing the history and unique characteristics of energy markets. Participants will explore price mechanisms, market coordination, and the dynamics of the current energy system, focusing on the law of supply and demand, market equilibrium, and elasticity.

**Afternoon:** The session covers various market types, crude oil and natural gas price dynamics, and the role of risk and cost of capital, including the Weighted Average Cost of Capital (WACC) across regions and technologies. Additional topics include global energy investment trends, components of the Levelised Cost of Energy (LCOE) and Full Cost of Energy (FCOE), technology cost curves, and financial metrics like NPV and IRR. The day concludes with case study exercises to apply these concepts practically.

## Day 3: OPEC+, and Oil Markets Dynamics

**Morning:** The day examines the dynamics of OPEC+ and global oil markets, starting with the pre-OPEC era dominated by the Seven Sisters and tracing the history of OPEC and the nationalisation of oil companies. Participants will explore the formation and global influence of the International Energy Agency (IEA), key stages in the evolution of global oil markets, and the emergence of the OPEC+ alliance.

**Afternoon:** The session covers the OPEC economic model, key factors driving oil markets, and critical elements to monitor in the oil trade. It also compares key messages from the OPEC Oil Market Report and World Oil Outlook with those from the IEA's equivalent reports, alongside discussions on oil trade and refining margins. The day concludes with case study exercises to deepen understanding of these concepts.

## Day 4: Natural Gas and Global LNG Markets

**Morning:** The day covers natural gas and global LNG markets, exploring production, delivery, and extraction methods (conventional vs. unconventional). It examines the global methane budget, onshore vs. offshore facilities, and LNG liquefaction versus pipelines. The session analyses LNG trade flows, major reserves, top producers, and growth drivers, alongside the global gas supply chain, pricing, and trading, including oil-linked contracts and the Henry Hub.

**Afternoon:** The session will address the pre-2022 trade systems, the 2020 COVID-19 impact, key gas hubs, geopolitical influences, modern trends, the role of gas in the energy transition, alternatives, and future outlook.

## Day 5: Energy Security, Geopolitics and Global Energy Trilemma

**Morning:** The day focuses on energy security, geopolitics, and the global energy trilemma. It introduces energy security concepts, using the Russian-Ukrainian War as a case study to examine impacts on the oil and gas sectors. The session covers the IEA's Strategic Petroleum Reserves, the EU's price cap and embargo on Russian oil and gas, redirected Russian oil flows, and changes in Asian oil and gas imports post-invasion.

**Afternoon:** Exploring the Indian-Middle East Green Corridor and the Middle East's future role in global energy security. The World Energy Trilemma Index is analysed, alongside sustainable energy policies and regional case studies. The global energy agenda, its key influencing factors, and regional variations are reviewed, concluding with practical exercises and case studies.

## Day 6-7: Business Case Grand Challenge

Each student group will be presented with a business case to analyse and propose a strategy. The college will provide support and mentoring for students to prepare their presentation on Day 8. Students will also have the opportunity to attend a keynote speech of an energy leader, which will support them in obtaining real-life exposure to develop business strategies and policy design.

## Day 8: Group Presentations, Best Strategy Prize, and Certificates

On Day 8, students will need to complete a presentation highlighting their approach to solving an energy business challenge. Each group will be given a 30-minute presentation assessed by an expert panel. Presentations will be followed by announcing the best business strategy and awarding the programme certificates.



## Accreditation



# Programme Highlights

	Lectures blended with real-life group case studies (60: 40)		Accredited CPD credits for professional growth
	In-Person Capstone Modules		Career-long mentoring opportunities
	Enriched classes through insight from experts and energy leaders		International professional recognition through Energy Institute membership
	International peer interaction		

<b>Duration</b>	8 days	<b>Date</b>	Please check our <a href="#">website</a> for the latest available dates
<b>Location</b>	Canary Wharf, London, UK	<b>Programme Fees</b>	£3,500 + VAT
<b>Scholarships</b>	A limited number of tuition-fee scholarships exist on a merit basis	<b>Application</b>	<a href="#">Apply</a>

## Admission Criteria

- A good degree in engineering, economics, business or a related field
- Prior industrial experience
- Proficiency in English (TOEFL iBT score of 100 or IELTS of 6.5 or equivalent for non-native speakers)
- Demonstrated leadership potential through roles involving team management, project leadership is highly desirable
- One reference letter

# About the College

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The London College of Energy Economics (LCEE), is a training and research institution and a Learning Affiliate of the Energy Institute, UK, which bridges the gap between economic principles and rapid technological advancements in the energy sector. Its mission is to empower the energy industry – particularly oil and gas – to navigate the complexities of the global energy transition while preparing the next generation of energy leaders.

The college was officially announced at the International Energy Week 2025 in London, aiming to be a hub where energy leaders meet future energy leaders to address one of the most pressing challenges of our time: the transition to a sustainable energy future. We empower engineers in the oil and gas industry to lead this transformation while equipping them

with the economic tools to tackle the complexities of emerging technologies. As the world shifts toward a carbon-constrained economy, LCEE stands at the forefront, bridging technical expertise with economic insight to drive meaningful change.

LCEE supports the energy sector by delivering targeted insights and thought leadership on achieving net-zero goals, including the role of emerging technologies, the Middle East's transition progress, and the competition for critical minerals essential for renewables. Through cutting-edge research, moderated discussions, podcasts, and student-led interviews, it fosters consumer-producer dialogue on balancing fossil fuels with clean energy, promoting inclusive strategies for decarbonisation and long-term industry resilience.





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