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# QAMAR ENERGY CREDENTIALS

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2020

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# ABOUT US

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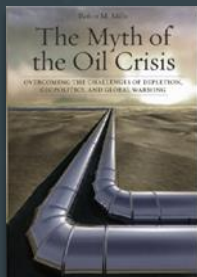


## ROBIN MILLS, CEO

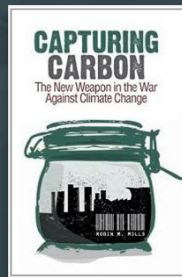
Robin is an expert on Middle East energy strategy, described by Foreign Policy as "one of the energy world's great minds". He is the author of two books, *The Myth of the Oil Crisis* and *Capturing Carbon*, columnist on energy and environmental issues for Bloomberg and The National, and comments widely on energy issues in the media, including the Financial Times, Foreign Policy, Atlantic, CNN, BBC, Sky News and others.

He worked for a decade for Shell, advancing business development efforts in Iraq, the rest of the Middle East and Russia, then for Dubai Holding and the Emirates National Oil Company. He founded Qamar Energy to deliver unique regionally-based Middle East energy insight and business opportunities for the international oil and gas industry.

He was awarded the Global Energy Prize 'Energy of Words' in St. Petersburg, Russia, 2016. He is a Fellow at the Columbia University Center on Global Energy Policy, Non-Resident Fellow with the Arab Gulf States Institute in Washington, and Senior Fellow with the Iraq Energy Institute and former Non-Resident Fellow at the Brookings Institution. He holds a first-class degree in Geology from the University of Cambridge and speaks five languages including Arabic.



THE MYTH OF THE OIL CRISIS

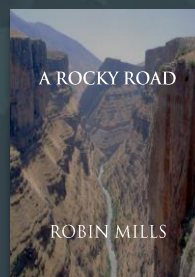


CAPTURING CARBON: THE NEW WEAPON IN THE WAR AGAINST CLIMATE CHANGE



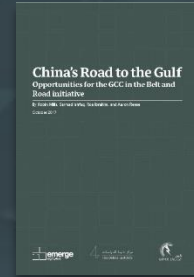
SUNRISE IN THE DESERT: SOLAR BECOMES COMMERCIALY VIABLE IN MENA

PWC/Emirates Solar Industry Association

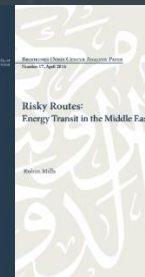


A ROCKY ROAD: KURDISH OIL AND INDEPENDENCE

Iraq Energy Institute



CHINA'S ROAD TO THE GULF: OPPORTUNITIES FOR THE GULF IN THE BELT-AND-ROAD INITIATIVE



RISKY ROUTES: ENERGY TRANSIT IN THE MIDDLE EAST

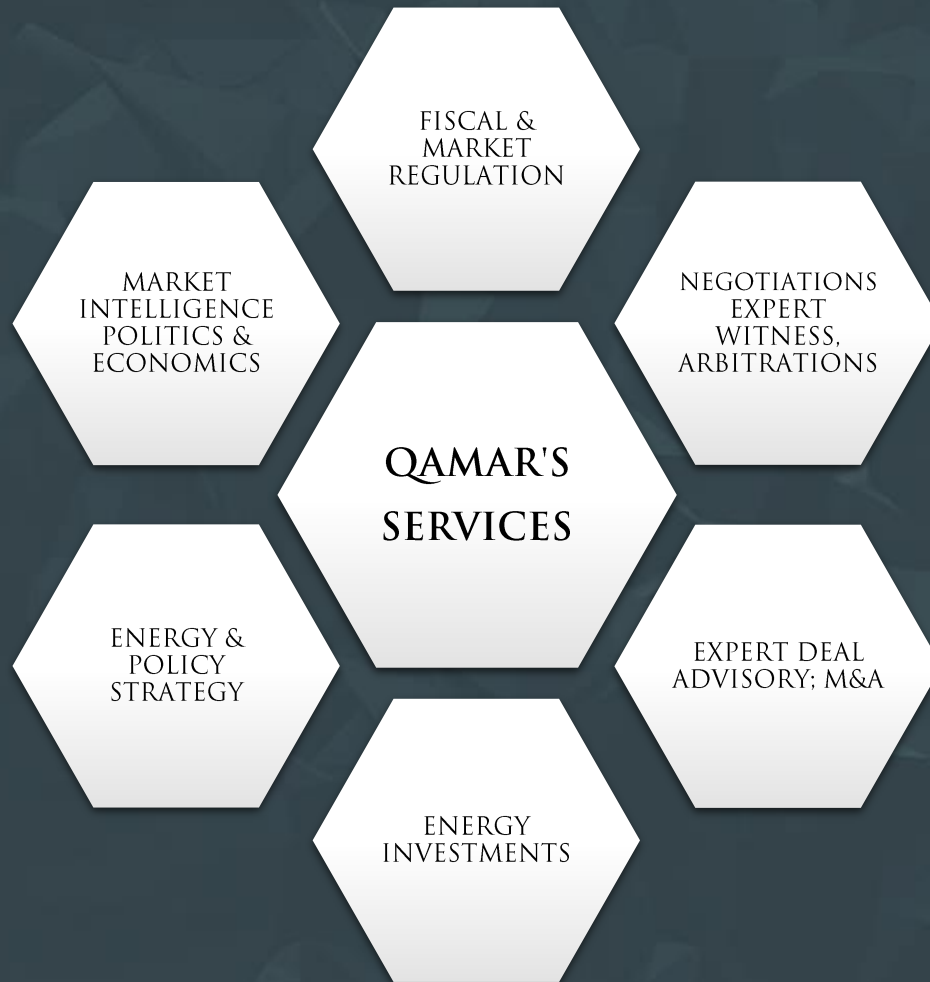
Brookings Institution



UNDER THE MOUNTAINS: KURDISH OIL & REGIONAL POLITICS

Oxford Institute for Energy Studies

QAMAR ENERGY PROVIDES LEADING-EDGE STRATEGY, COMMERCIAL AND ECONOMIC CONSULTING ACROSS THE ENERGY SPECTRUM.



## OUR SOLUTIONS

- Energy Geopolitics
- Economic and Feasibility studies
- Business and Strategic plans
- Expert Deal Advisory; M&A
- Country and Market Entry studies
- Opportunity Screening analysis
- Negotiations and mediations



WE SPECIALISE IN THE MENA REGION, BUILDING ON OUR CLOSE INDUSTRY AND GOVERNMENT LINKS. OUR PROFESSIONALS HAVE OVER 25 YEARS OF SPECIALISED EXPERIENCE ACROSS THE ENERGY SPECTRUM.

# OUR TEAM OF RESEARCHERS COMBINES OUR EXPERIENCE ACROSS THE ENERGY VALUE CHAIN WITH SPECIALISED MARKET INTELLIGENCE

## Upstream

- Geopolitics and geo-economic analysis
- Upstream country monitoring and market intelligence
- Majors, Independents, National Oil Company and Oil Service Company strategies
- Oil and natural gas supply and demand dynamics and forecasts
- Brownfield and greenfield E&P opportunity identification and negotiation
- Commercial feasibility studies
- Negotiations, expert witness, and arbitrations

## Downstream

- Downstream country monitoring and market analysis – petrochemicals, refining and fuel retail
- Fuel retail strategies
- Subsidy analysis, country benchmarking and recommendations
- Forecasted prices of petroleum products, and gas benchmarked against competitors
- Petrochemical industry commerciality and strategies
- Negotiations, expert witness, and arbitrations

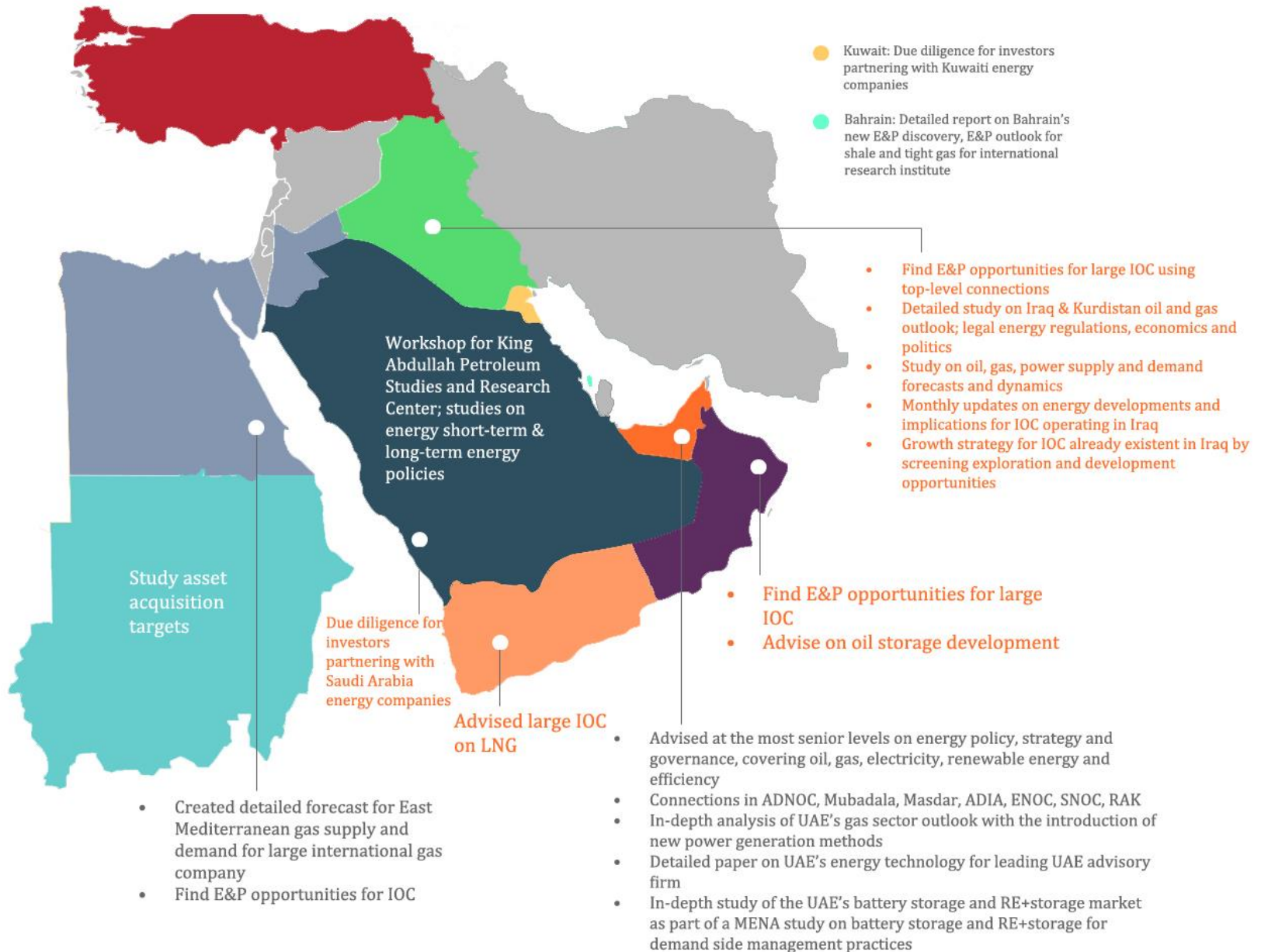
## Midstream

- Energy routes: geopolitical analysis, risk assessment and mitigations
- Mapping of existing and required infrastructure capacity to meet domestic and export demand
- LNG country/regional market analysis
- Commercial feasibility studies
- Negotiations, expert witness, and arbitrations

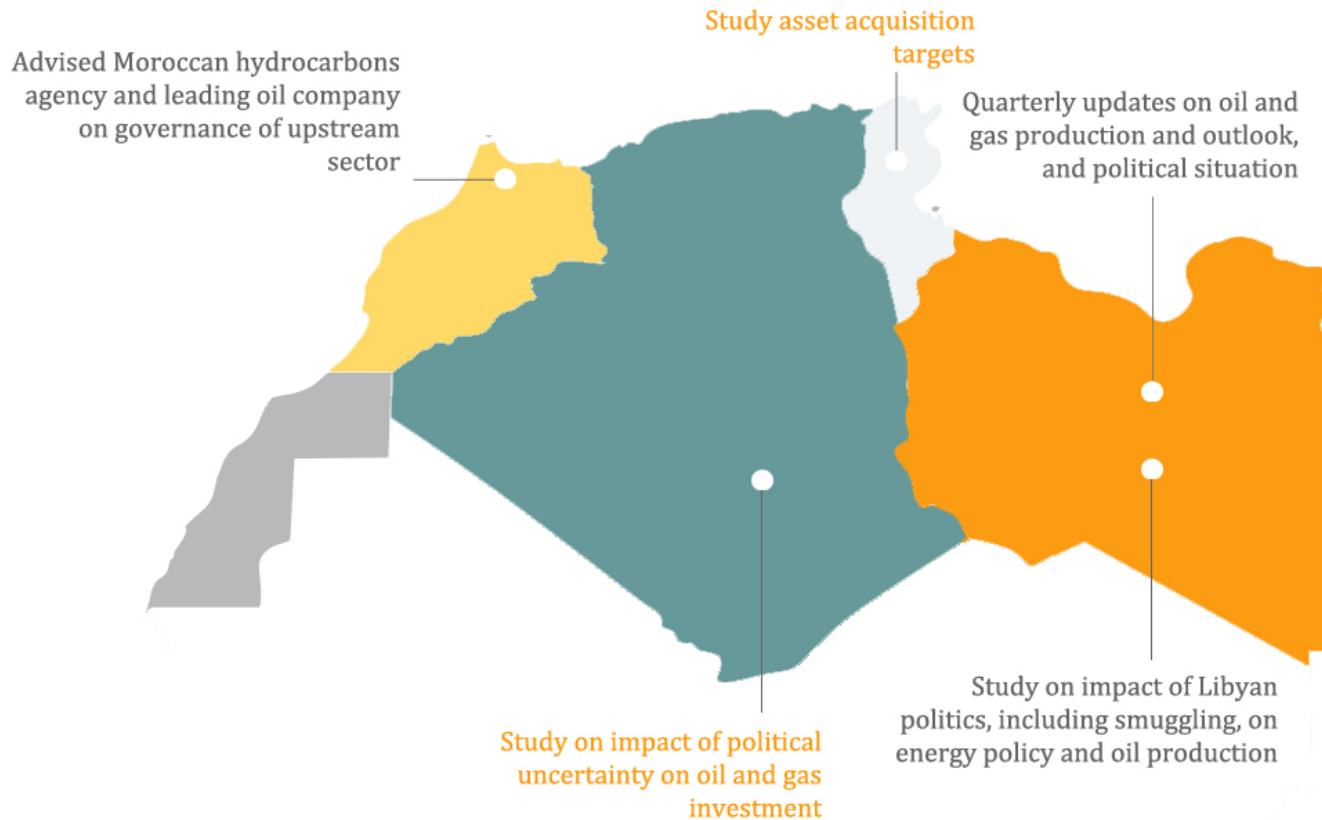
## Alternative Energy & Electricity

- Market analysis, supply and demand dynamics
- Calculations of optimal mix of renewable energy and conventional energy
- Carbon capture and storage specialists
- Existing infrastructure capacity and forecasts
- Electricity price analysis (historic and forecasted)
- Energy efficiency recommendations, policy analysis, and required execution enablers

# WE HAVE WORKED ACROSS THE ENTIRE MIDDLE EAST



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# SELECTED TEAM MEMBERS



## **DINA GUIRGUIS, LEGAL ANALYST**

Dina is a U.S. qualified Egyptian American attorney experienced in legal and policy roles, and has assumed numerous regional positions as in-house counsel for multinationals, managing all corporate legal areas from contracts to compliance. She has practiced dispute resolution in energy practices with a major U.S. law firm in Dubai, and compliance and regulatory law at a leading global firm in Washington, D.C. She has assumed numerous policy roles in Washington, D.C., including as advocacy director for the Tahrir Institute for Middle East Policy (TIMEP), and as fellow at The Washington Institute for Near East Policy (WINEP). Dina also provides legal services to international companies in the Middle East, with a focus on acquisitions, joint venture, commercial and corporate agreements, and legal due diligence. She has authored numerous policy pieces on political and legal reform in the Middle East, and is certified in International Legislative Drafting by the International Law Institute. She is professionally fluent in English, Arabic and French.



## **MARYAM SALMAN, CONSULTANT**

Maryam holds six years' experience as an energy research analyst and consultant, covering the Middle East's energy spectrum. She has been at the forefront of investigating the region's latest energy developments and providing commercial consulting, business analysis, and strategic recommendations for international energy majors, oil and gas supply chains, government entities, and private stakeholders on business development and investor relations. She has led numerous market studies analysing existing and aspirational business models across the Middle East's energy sector and has advised on key political and geopolitical issues in Iraq, Iran, Libya, and Bahrain. She graduated summa cum laude as a Master of International Studies from the University of Wollongong in Dubai, with strong proficiency in international relations and research methods. She reads Arabic and French fluently, and speaks Urdu, Hindi and English proficiently.



## **MARYEM EL FARSAOUI, RESEARCH ANALYST**

Maryem holds a Masters degree in International Relations from the University of Wollongong in Dubai, with a focus on energy security in the MENA region and especially in the United Arab Emirates (UAE). She has two years' experience in cross-sectoral market research and enjoys deep knowledge of the trade and investment environment of the UAE. Her Master's thesis studied the UAE's 2050 Energy Strategy to increase renewable energy use to 50% in 2050. She speaks Arabic, French and English fluently.



# OUR PARTNERS

<p><b>Arabia Monitor</b></p> 	<p><b>Columbia Center on Global Energy Policy</b></p> 	<p><b>Iraq Energy Institute</b></p> 
<p>Arabia Monitor is an independent research firm specialised in economic and market analysis, and strategy advice in MENA. Arabia Monitor's in-depth, locally informed analysis by Arab, Persian and Chinese speakers has placed it consistently ahead of the curve in identifying new trends within and around the region and understanding its geopolitics.</p>	<p>CGEP is one of the world's foremost energy research institutions. Its mission is to enable public and private sector leaders to make more informed choices about the world's most pressing energy issues.</p> <p>Our CEO Robin Mills is a fellow at CGEP.</p>	<p>Iraq Energy Institute (IEI) is an independent non-profit policy institute which proposes solutions to the government to meet the policy, fiscal, technical, and political challenges that are currently impeding the progress of development in Iraq's energy sector. IEI also produces research reports, training, forums and seminars on Iraq energy policy for both policy-makers and the private sector.</p>
<p><b>Horizon Insights</b></p> 	<p><b>Iraq Advisory Group</b></p> 	<p><b>Eikon Refinitiv REFINITIV</b></p> 
<p>Horizon Insights is a leading commodities and industry research company in China, providing fundamental research to institutional clients.</p>	<p>Iraq Advisory Group (IAG) provides economic, legal and geopolitical advice, networking and support services for those investing in Iraq. IAG's networks extend into the highest levels of the Government of Iraq for oil and gas legal and transactions; dispute resolution; and other matters related to doing business in Iraq.</p>	<p>Eikon Refinitiv is a global provider of financial markets and commodities' data. Qamar Energy is a leading provider of the latest energy and geopolitical data across the energy spectrum on the Eikon Refinitiv database.</p>

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## OUR CASE STUDIES

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# MIDDLE EAST GAS DEMAND OUTLOOK

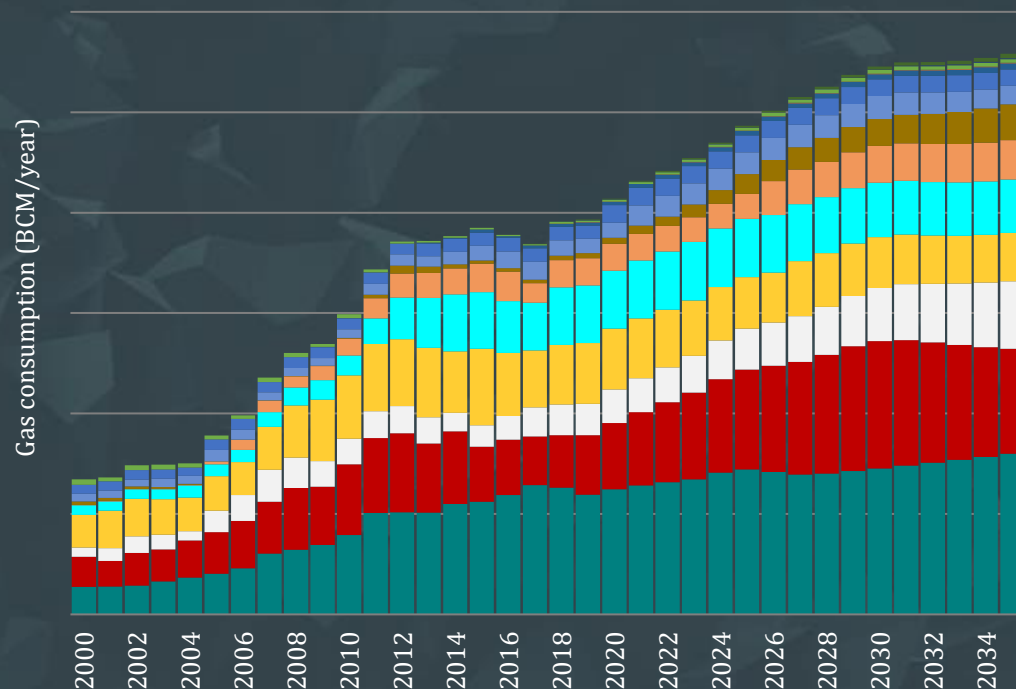
## CURRENT AND FUTURE OUTLOOK OF MIDDLE EAST GAS DEMAND

- 2020
- Columbia Center on Global Energy Policy

### Implementation:

- Analyse Middle East gas demand by sector and country
- Include main drivers of gas pricing, availability, power and industry growth, competing / alternative fuels (oil, coal, nuclear, renewables)
- Examine sensitivity to climate, subsidy reform, other policies
- Draw key conclusions for government and gas company decision-making

Middle East Industrial Gas Demand by Country



# IRAQI KURDISTAN GAS OUTLOOK AND SECTORAL DEMAND

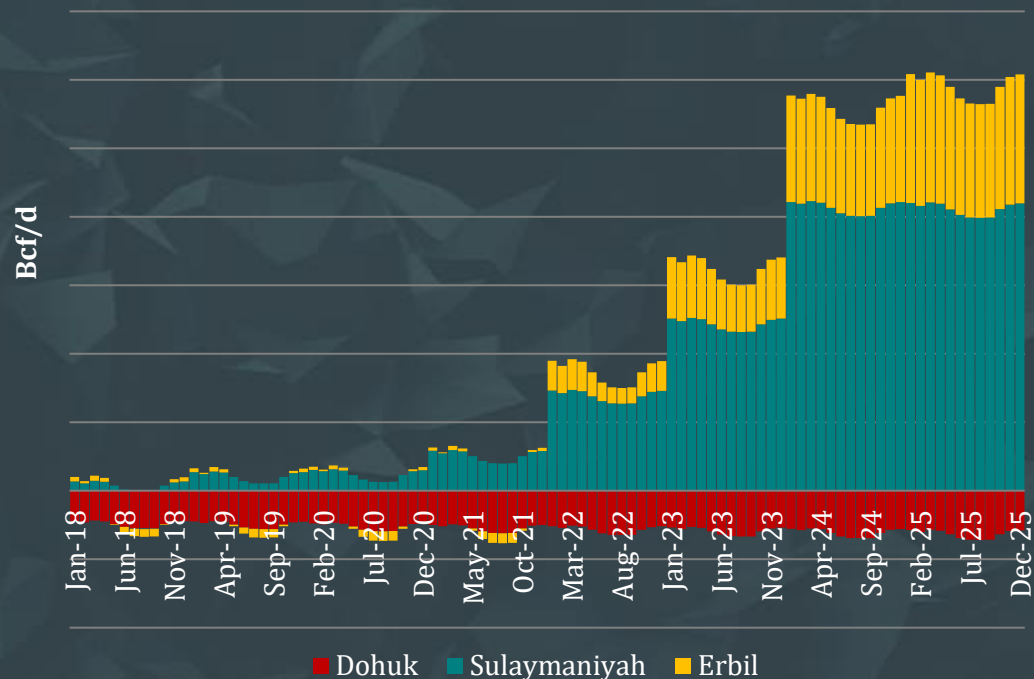
## CURRENT, NEAR-TERM, MEDIUM-TERM, AND LONG-TERM FORECAST OF IRAQI KURDISTAN'S GAS SUPPLY & DEMAND BALANCE

- 2019 – Ongoing
- Confidential Client

### Implementation:

- Analyse Iraqi Kurdistan's gas demand by sector and key economic indicators: GDP, population growth, etc.
- Include main drivers of gas pricing, availability, power and industry growth, competing / alternative fuels (oil, coal, nuclear, renewables)
- Gas utilisation rate and capacity of pipelines, and major industrial consumers
- Draw key conclusions for gas company decision-making

### Medium-term Gas Balance



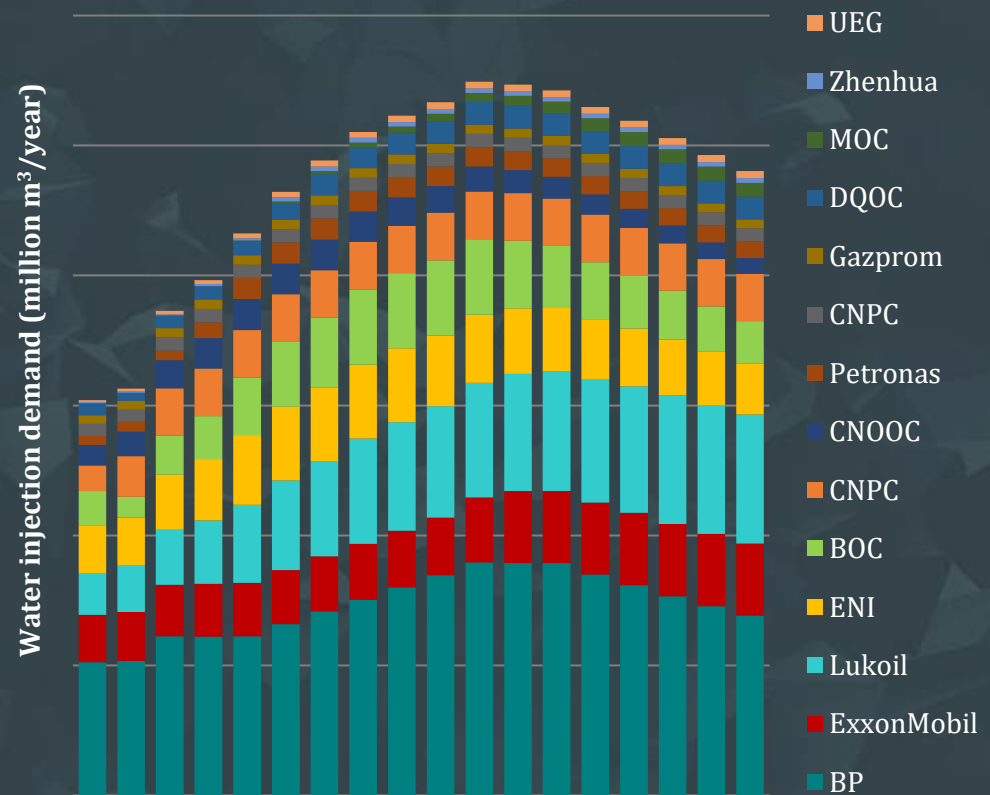
# WATER TREATMENT & DESALINATION FEASIBILITY IN IRAQ

## DETAILED ANALYSIS OF WATER DEMAND IN THE ENERGY & INDUSTRIAL SECTORS, WATER TREATMENT, DESALINATION, AND INJECTION AND DELIVERY CAPABILITIES

- 2019 - Ongoing
- International power & water company

### Implementation:

- Analyse water demand and key drivers (industry, power)
- Detailed SWOT analysis of water sources utilised on a country-wide level for injection, drinking, industry
- Comparative study: desalination versus treated water, gas-to-power solutions for powering water treatment plants
- Analyse competition, benchmark pricing, delivery options, identifying top feasible operations



# FEDERAL IRAQ & KURDISTAN GAS EXPORTS FEASIBILITY STUDY

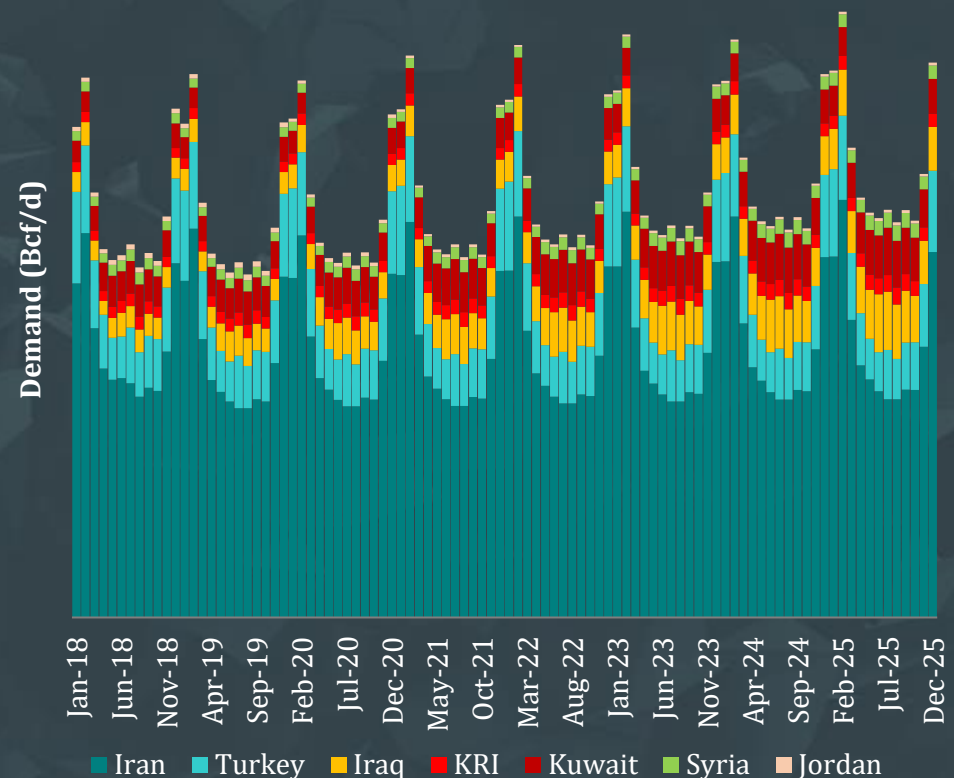
SUPPORT CLIENT'S FEDERAL IRAQ AND IRAQI KURDISTAN GAS AND GAS TO POWER STRATEGIES AND ANALYSE THE GAS SUPPLY AND DEMAND BALANCE OF KEY NEIGHBOURS

- 2019
- Gazprom Neft

## Implementation:

- Current and forecast demand for natural gas and power
- Gas infrastructure outlook: current, sanctioned, planned, proposed
- Gas utilisation rate and capacity of pipelines, LNG facilities, gas processing plants, gas power plants
- High-level commercial feasibility, including realisable gas prices
- Identifying key opportunities and assess positions of potential blockers / opposition

### Regional Gas Demand



# ENERGY STRATEGY FOR GOVERNMENT ENTITY

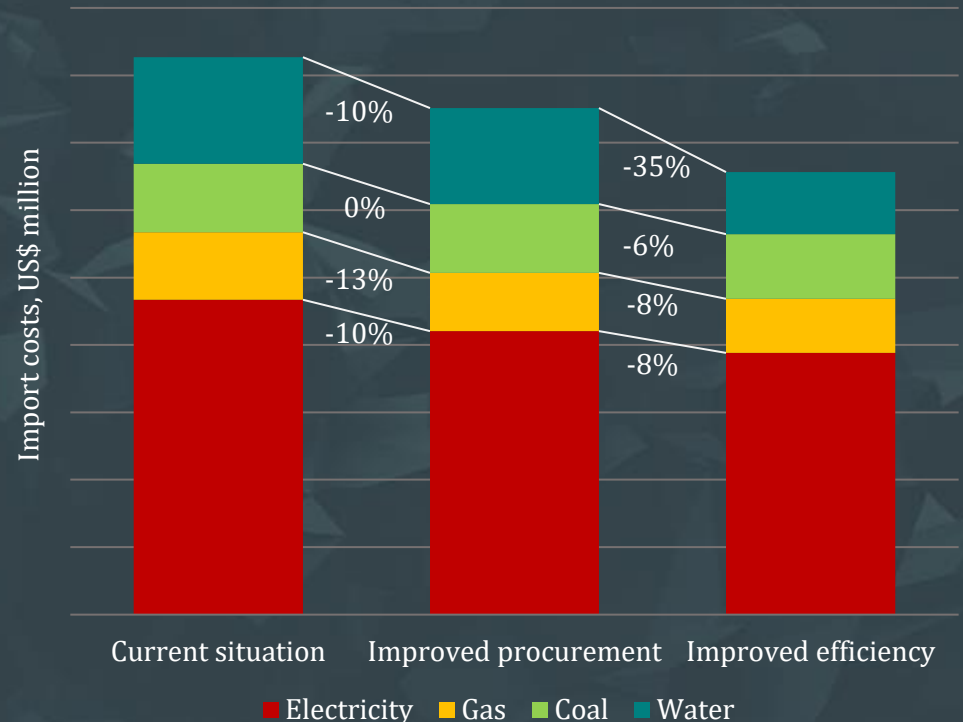
## CURRENT AND FUTURE OUTLOOK OF ALTERNATIVE ENERGY, ENERGY EFFICIENCY AND ENERGY GOVERNANCE SECTORS

- 2016-2017
- GCC Government

### Implementation:

- Map key players in energy sector and their mandates
- SWOT analysis of key existing infrastructure and bottlenecks
- Supply analysis (historical and forecasted): Production, import volumes; demand analysis and key drivers
- Benchmark energy pricing and efficiency, strategise improvement of energy import bill

Energy consumption costs (annual)



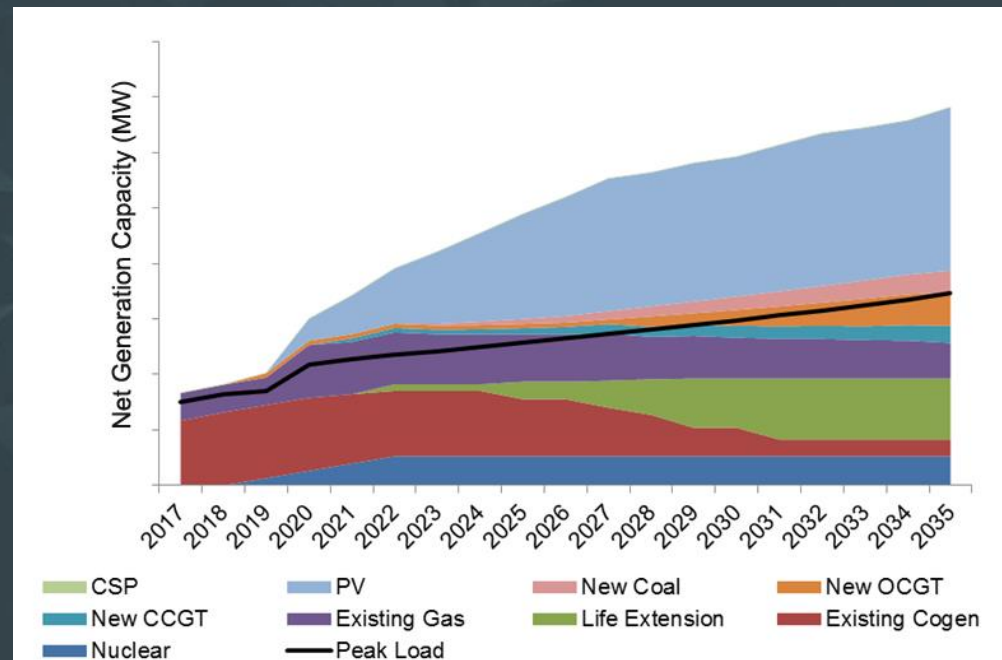
# POWER & WATER EFFICIENCY STUDY FOR GCC GOVERNMENT

## DETAILED ANALYSIS OF POWER DEMAND, ELECTRICITY & WATER CONSUMPTION, AND ELECTRICITY GENERATION CAPABILITIES

- 2017
- Confidential

### Implementation:

- Analyse demand analysis and key drivers (historical and forecasted)
- SWOT analysis; supply analysis (historical and forecasted)
- Demand analysis and key drivers for power, electricity, and water
- Analyse competition, electricity price; benchmark efficiency and pricing





# FEASIBILITY STUDY ON CCUS POTENTIAL IN THE MENA REGION

## LANDMARK STUDY OF THE REGULATORY, POLITICAL AND ECONOMIC LANDSCAPE FOR CARBON CAPTURE & STORAGE IN THE GCC REGION

- 2019
- Confidential

### Implementation:

- Information gathering, proprietary database and model, interviews with high-ranking government officials
- Market analysis and intelligence
- Specialised regulatory and investment assessment
- Comparative analysis
- Insights and recommendations

CCC COUNTRY	Environmental Commitment	Investment Climate	Financial Resources	CCS Technological capability	CO <sub>2</sub> -Capture Potential	CO <sub>2</sub> -EOR Importance
A	3	6	3	6	4	4
B	5	6	2	5	1	1
C	7	1	1	0	2	3
D	1	1	1	5	1	2
E	1	1	7	3	1	1
F	1	3	3	1	3	2
G	2	3	1	2	1	5
H	4	4	1	0	4	3
J	3	3	1	6	1	3
K	1	4	1	1	6	1
L	5	6	1	7	1	5

# ENERGY TRANSIT ROUTES IN THE MIDDLE EAST

MENA ENERGY SUPPLY AND TRANSIT, DISRUPTIONS' SCENARIOS, RISK ASSESSMENT, RECOMMENDATIONS.

- 2017
- Confidential Client

## Implementation:

- Identify key points of vulnerability in MENA energy supply and transit, including the pivotal Strait of Hormuz and a number of important pipelines
- Assess the impact of possible disruptions on both the global economy and MENA states themselves
- Recommend mitigation of disruptions



# STUDY ON OPEC STRATEGY & GLOBAL SUPPLY/DEMAND

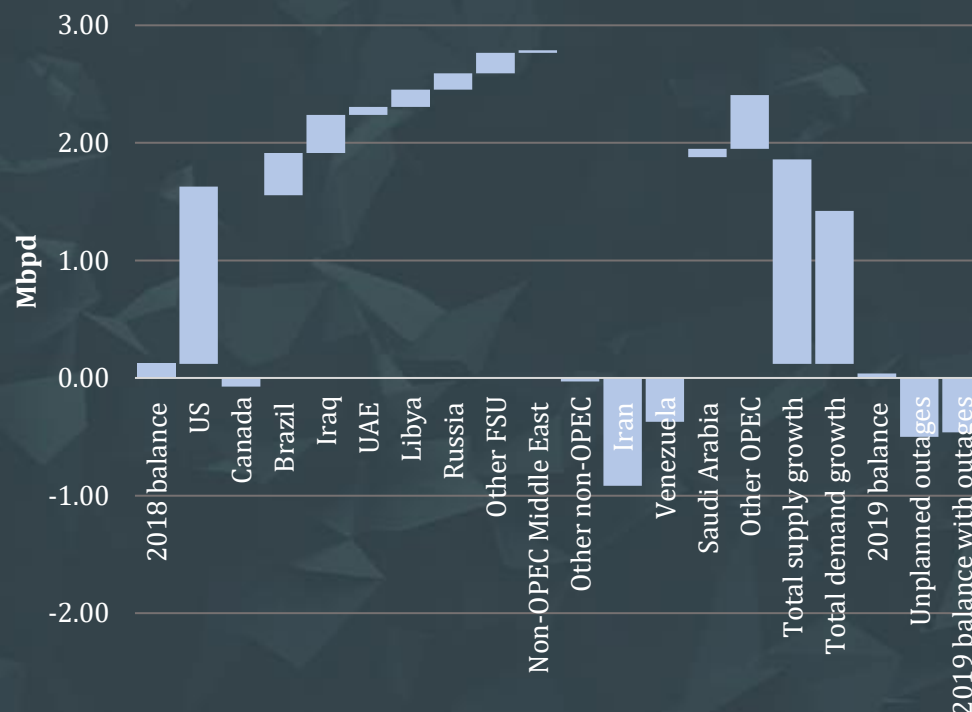
## SYNDICATED RESEARCH ON LATEST OPEC DEVELOPMENTS; IMPACT ON WORLD LIQUID INVENTORIES AND SUPPLY/DEMAND BALANCE IN THE MIDDLE EAST

- 2017-Ongoing
- Confidential

### Implementation:

- Gather information (primary and secondary sources)
- Conduct in-depth interviews with NOCs, service companies, and IOCs
- Analyse latest OPEC strategy plus impact on world liquid inventories, global oil prices, arbitrage flows
- Forecast annual and quarterly supply/demand oil balance, trends, and risk factors to oil trade

Oil Balances by country in 2019



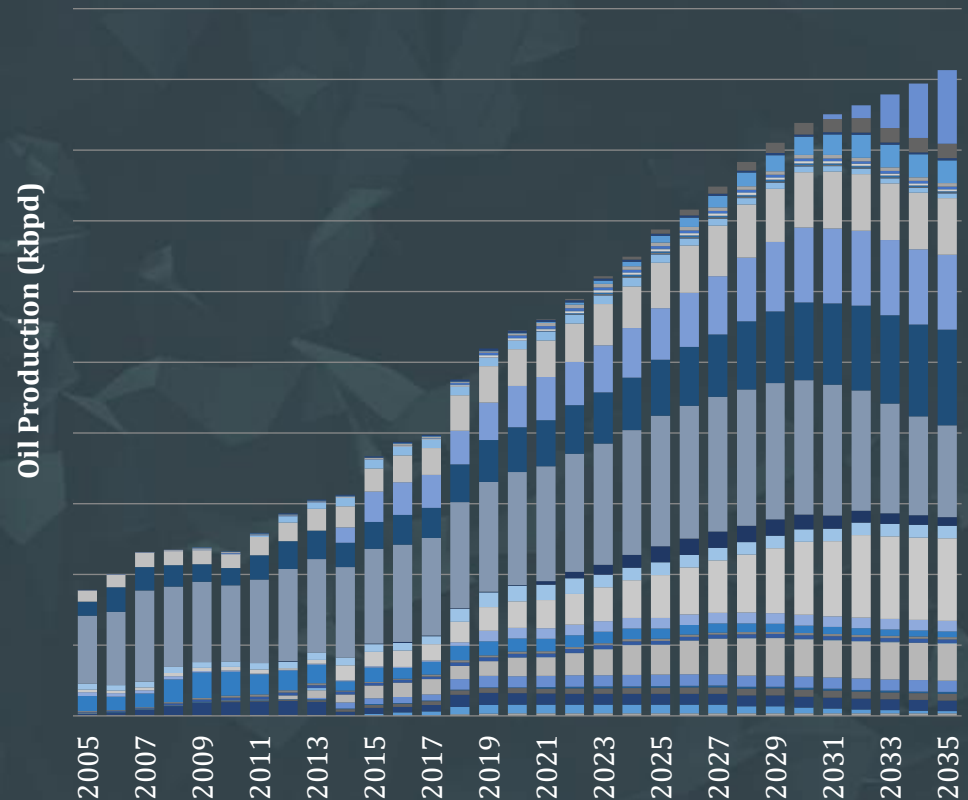
# IRAQ BUSINESS DEVELOPMENT STRATEGY

MAJOR UPSTREAM OIL/GAS PROJECTS, E&P OPPORTUNITY ANALYSIS, M&A VALUATION, OIL PRODUCTION OUTLOOK, GAS SUPPLY AND DEMAND, EXPLORATION

- 2017-2018, ongoing
- Independent IOC

## Implementation:

- Gather information (primary and secondary sources)
- Analyse market and valuations of potential E&P targets, and M&As versus current market caps
- Forecast oil and gas production and demand, trends and outlook



# LPG SOURCING STUDY FOR GCC GOVERNMENT

## POTENTIAL LPG IMPORT SOURCES, KEY MARKETS, PRODUCT SPECIFICATION & PRODUCTION CAPACITY, PRICING REGIME

- 2019
- GCC government

### Implementation:

- Analyse key LPG import markets in the Middle East and identify potential sources
- High-level comparison of suppliers, product specifications, production capacities, pricing regimes, and SWOT analysis for supply
- Provide competitor intelligence and strategic recommendations

Supplier's Name	Product Specification	Production Capacity	Load Port	Supply Risk
Supplier A	Propane Min XX% Butane Min XX%	Propane @ -- MTPA Butane @ -- MTPA	Port A	
Supplier B	N/A	Propane @ -- MTPA Butane @ -- MTPA	Port B	
Supplier C	N/A	Propane @ -- MTPA Butane @ -- MTPA	Port C	
Supplier D	Propane Min XX% Butane Min XX% Max XX% isobutene	Propane @ -- MTPA Butane @ -- MTPA	Port D	

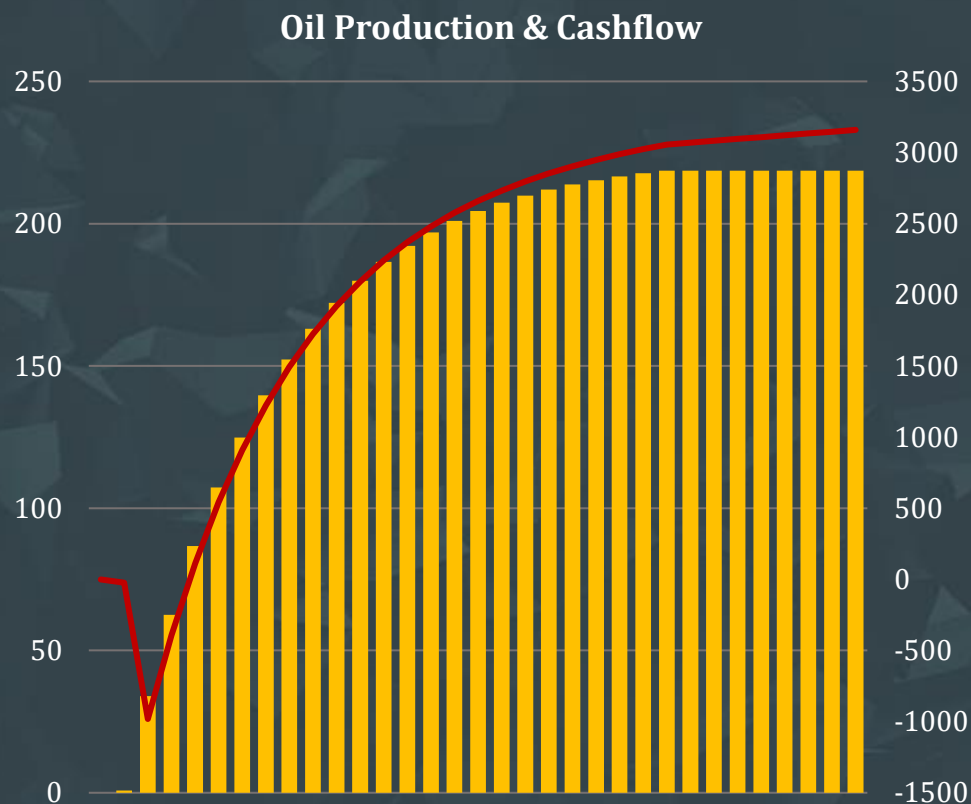
# STUDY ON BAHRAIN'S E&P POTENTIAL FOR SHALE

## EXPLORATION & PRODUCTION OUTLOOK FOR NEW BAHRAINI DISCOVERY, OVERALL POTENTIAL FOR SHALE, TIGHT GAS; FORECAST FISCAL TERMS, CASHFLOW

- 2018
- Confidential

### Implementation:

- Gather information (primary and secondary sources)
- Conduct in-depth interviews with NOCs, service companies, and IOCs
- Identify key upstream opportunity areas for shale exploitation and tight gas
- Forecast fiscal terms, expected contract model, and cashflows



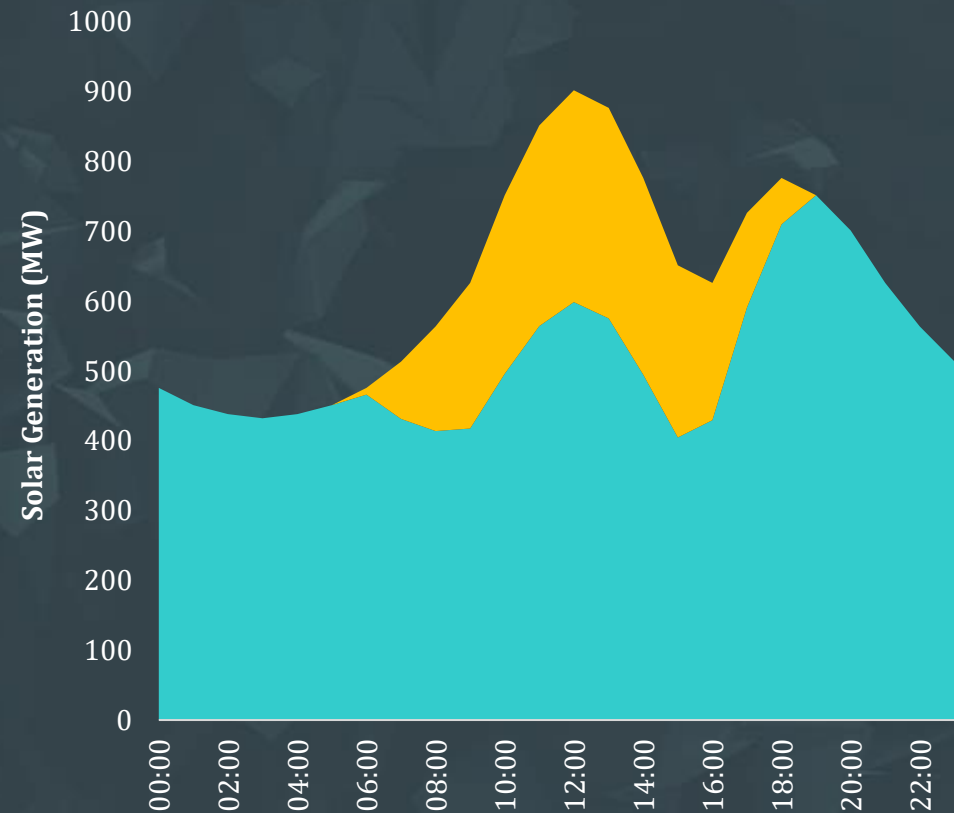
# COMMERCIAL FEASIBILITY STUDY ON SOLAR PV IN THE REGION

## ACCLAIMED STUDY OF THE ECONOMIC VIABILITY OF SOLAR PHOTOVOLTAIC POWER IN THE GULF REGION

- 2017
- Confidential

### Implementation:

- Information gathering (primary and secondary sources)
- Market analysis and intelligence
- Economic model for Gulf solar PV
- Analyse competitors, benchmark pricing
- Insights and recommendations



# GLOBAL ENVIRONMENTAL MONITORING & IMPACT ANALYSIS

## ENVIRONMENTAL ISSUES, STAKEHOLDER AND NGO RESPONSES, IOCs & ENVIRONMENTALISTS' DYNAMICS

- 2015
- Shell

### Implementation:

- Regular news updates and reports on environmental issues
- Examine dynamics between oil companies and environmentalists
- Create strategy for engaging IOCs and environmentalists
- Monitor social media sources and create statistical data on issues
- Stakeholder mapping and analysis of key environmental organisations and individuals





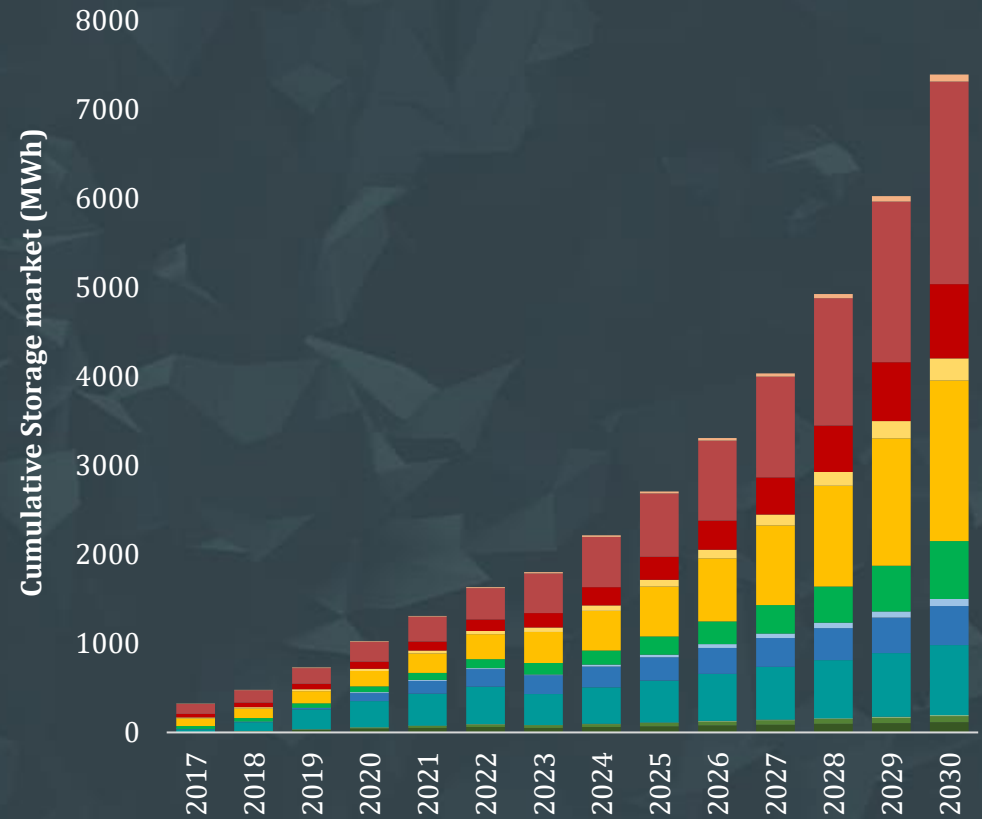
# BATTERY DEPLOYMENT & ENERGY STORAGE IN MENA

## MIDDLE EAST STRATEGY FOR BATTERY DEPLOYMENT, ENERGY STORAGE TECHNOLOGIES, AND DEPLOYMENT OF SOLAR PV + STORAGE FOR DEMAND SIDE MANAGEMENT STRATEGIES

- 2018
- Confidential Client

### Implementation:

- Forecast energy demand and production capacity growth
- Formulate a Middle East strategy for battery investment, development and deployment by sizing the battery market and specific niches
- Identify strategic partners for potential investment in RE power generation in MENA



# REGIONAL PETROCHEMICAL INDUSTRY

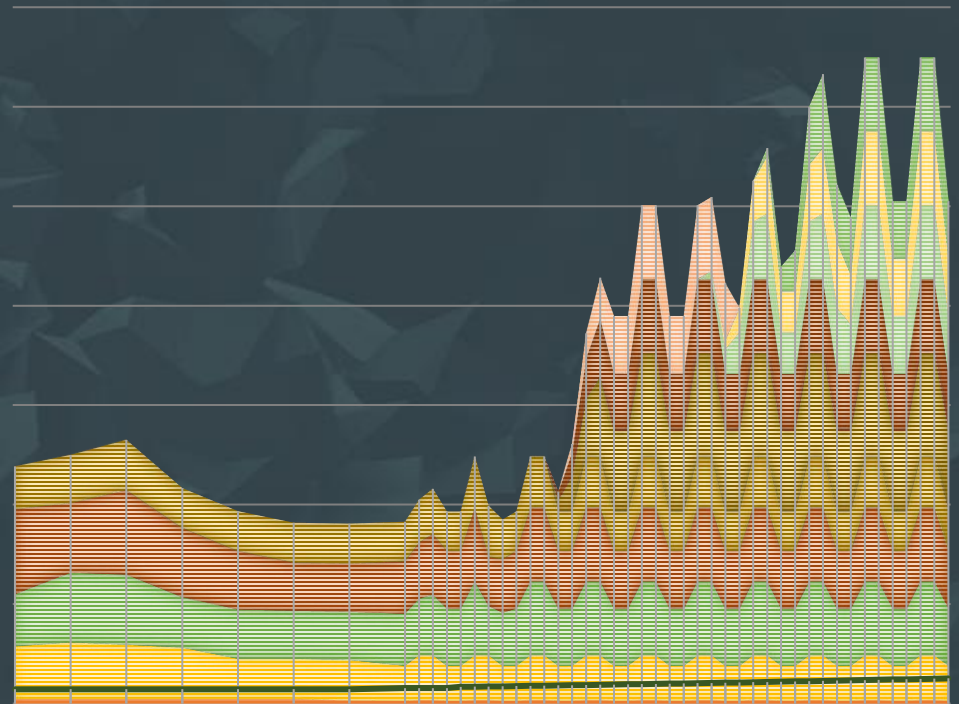
## REGIONAL GAS AND PETROCHEMICAL INDUSTRY ANALYSIS, CAPACITY AND PRODUCTION OUTLOOK/TRENDS

- 2017
- International petrochemical company

### Implementation:

- Gather information (primary and secondary sources)
- Analyse market and intelligence of project timelines: expected start-up dates, commissioning dates, completion rates, gas usage, technology
- Forecast gas demand and petrochemical production, trends and outlook

Annual Production, kTonnes



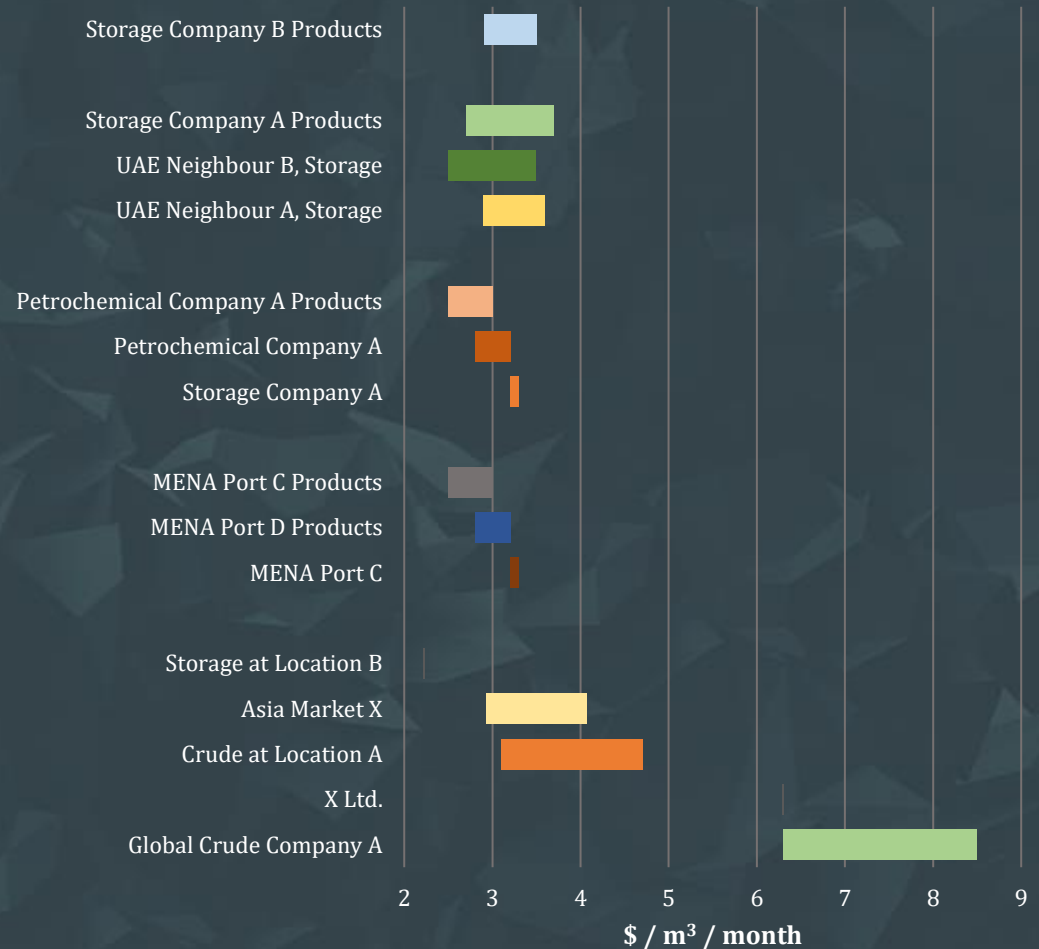
# GLOBAL & REGIONAL STORAGE STUDY

## STORAGE RATES FOR CRUDE /CRUDE PRODUCTS IN REGIONAL TERMINALS; ANALYSIS OF COMPETITION & INDUSTRY TRENDS

- 2017
- GCC oil terminal operator

### Implementation:

- Provide latest updates on storage in the Middle East and UAE
- Analyse MENA oil storage dynamics (oil prices, oil demand, related industries, infrastructure & connectivity, impact of new energies & climate change)
- Provide competitor intelligence & role of storage users



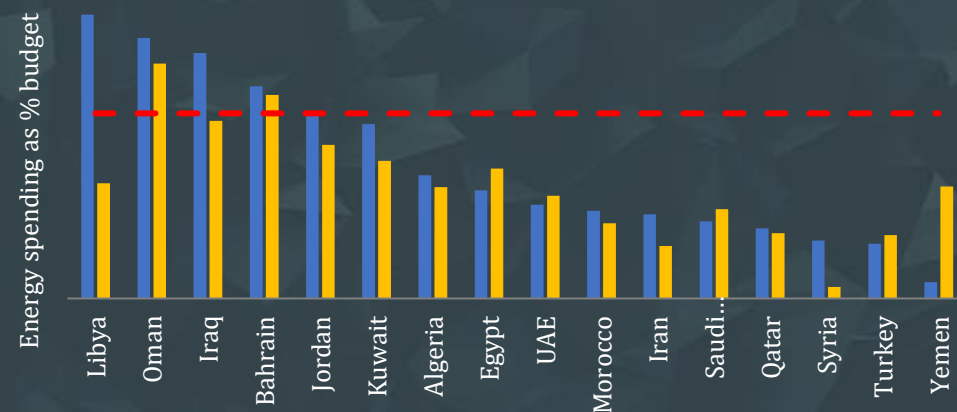
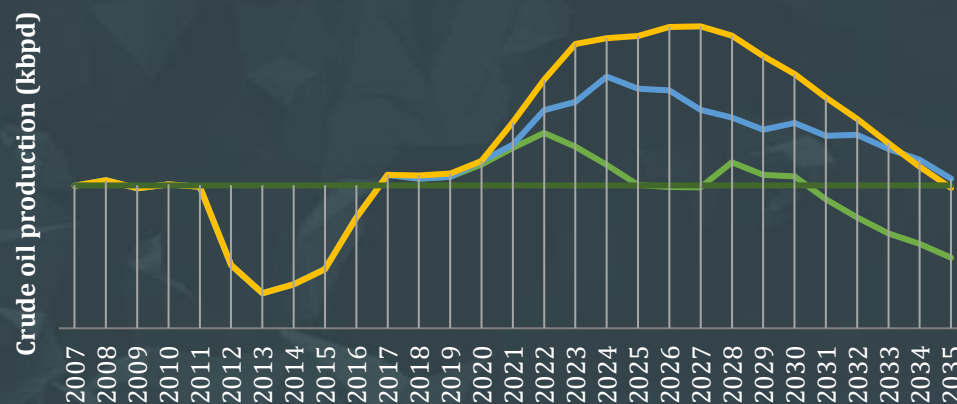
# ENERGY REPORT ON MAJOR MIDDLE EAST OIL PRODUCER

MAJOR UPSTREAM OIL/GAS PROJECTS, DRILLING RIGS, OIL PRODUCTION OUTLOOK, GAS SUPPLY AND DEMAND, EXPLORATION

- 2016
- Supermajor IOC

## Implementation:

- Track major announced oil/gas (re)-development projects
- Forecast demand depending on economic growth, infrastructure development, price changes
- Map oil and gas export scenarios
- Compare energy investment plans in country of study with regional players



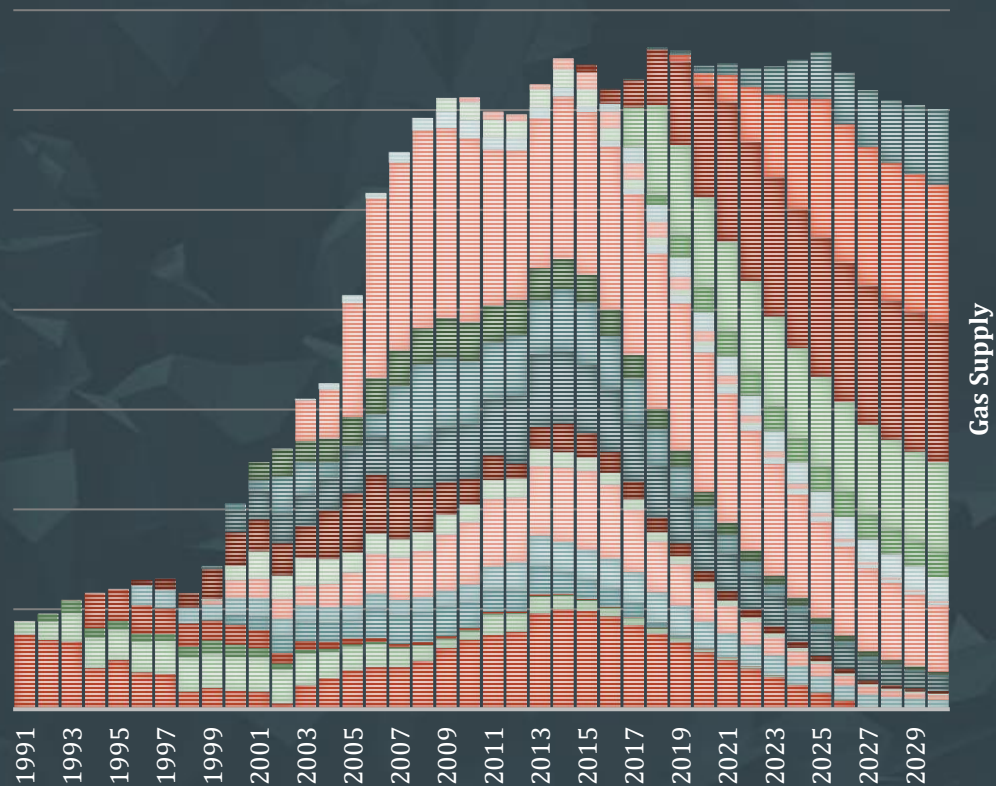
# EAST MEDITERRANEAN GAS & SUPPLY

## GAS MARKET DESIGN, REGULATORY STRUCTURE OF KEY PHYSICAL INFRASTRUCTURE FACILITATING ACCESS TO GAS MARKETS

- 2015
- International oil company

### Implementation:

- Advise on market design and regulatory structure; politics
- Provide overview of key physical infrastructure facilitating access to gas markets and gas/power sector growth: 2015 – 2030
- Analyse competition, gas price and supply overview 2015 – 2030



# MENA SHALE & HYDRAULIC FRACTURING

## STUDY OF MENA SHALE GAS POTENTIAL TO PREDICT HYDRAULIC FRACTURING MARKET

- 2014
- PacWest

### Implementation:

- Conduct in-depth interviews with operators, NOCs, service companies; and
- Predict trends for hydraulic fracturing by MENA country and support services (e.g. proppant)



# ADDITIONAL CASE STUDIES

CLIENT		STUDY
 EQUINOR	Workshop on Middle East energy politics	
 E-ON	Study of Middle East gas export options	
 PWC/GCC GOVERNMENT	Gas cost and valuation scenarios and gas valuation and allocation recommendations	
 MITSUBISHI	In-depth monthly analysis on energy, political, and economic outlook of the Middle East & North Africa (MENA) region	
 EMIRATES CENTRE FOR STRATEGIC STUDIES & RESEARCH	Paper on GCC oil policies and current oil market issues	
 OMAN TANK TERMINAL COMPANY	Advised on oil storage development in the region and prepared a marketing strategy report to support the company's strategic communication plan	
 BRAINVILLE	Analysis report on Middle Eastern country's economic, political and energy developments including oil and gas production, new project timelines, and investment feasibility	
 LIVINGSTONE & COMPANY	Quarterly report on Middle East oil developments including OPEC's current and future strategies, intra-OPEC competition and exports	
 GLOBAL GREEN GROWTH INSTITUTE	Energy economics for Green Growth strategy for the UAE Government (with PwC)	
 NATURAL RESOURCE GOVERNANCE INSTITUTE	Conducted research and peer review on the governance of the mineral extractive sector in UAE, Oman, Qatar, Bahrain, Sudan and Saudi Arabia	

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## CONTACT

