MEED
Middle East business intelligence

GCC 2023 Projects Outlook

And 2022 Review

26 January 2023, MEED Webinar

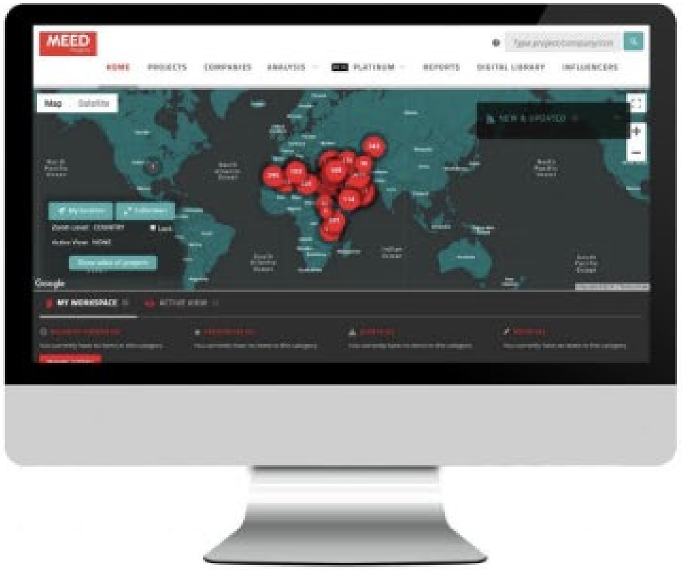
Ed James, Head of Content & Research, Middle East & Africa
Edward.james@meed.com

MEED
Middle East business intelligence

Middle East Business Intelligence since 1957

MEED.com

MEED Projects



www.meedprojects.com

MEED
Middle East business intelligence

Content Solutions

- Our unique content and data generates highly engaged audiences
- Our team leverage our content expertise and reach to create unique ways for vendors to connect with their target clients
- Our marketing experts help to plan campaigns which target specific companies and individuals in engaging ways
- In print, online or in person we are experts at brand positioning and lead generation

FORMATS

PRINT

DIGITAL

LIVE

EVENTS

CLIENTS

المشرق mashreq WE MAKE POSSIBLE

NEOM نيوم

EDB ECONOMIC DEVELOPMENT BOARD BAHRAIN

ارامكو السعودية Saudi Aramco

HUB71

PROCORE

ORACLE

SIEMENS

HSBC

DP WORLD

Daman ضمان Your Health Insurance Specialists

حديد الإمارات emirates steel

دائرة الصحة DEPARTMENT OF HEALTH

pwc

IHG HOTELS & RESORTS

Cigna

ASGC

Deloitte.

Bentley Advancing Infrastructure

LAFARGE

GE

Maire Tecnimont

FedEx Express

البواني AL BAWANI

www.meedprojects.com

GCC 2023 Planned Projects Awards Report

Report's pre-launch ~~$4,000~~ $3,500

Further $100 discount for attendees with code:

WEBINAR100

Visit **buy.meed.com**

or scan the QR code

SCAN ME

to buy the full report

before 31st January 2023

Buy **GCC 2023 Planned Projects Awards** report to:

- Listings of hundreds of projects to be awarded in 2023 with their client, value, and status information
- Project award forecasts for each market and sector for 2023
- Market sizing for each market and sector
- Historical data to compare the forecast with past trends
- Identification of the key clients involved in 2023 contracts
- Analysis of the projects pipeline

MEED
Middle East business intelligence

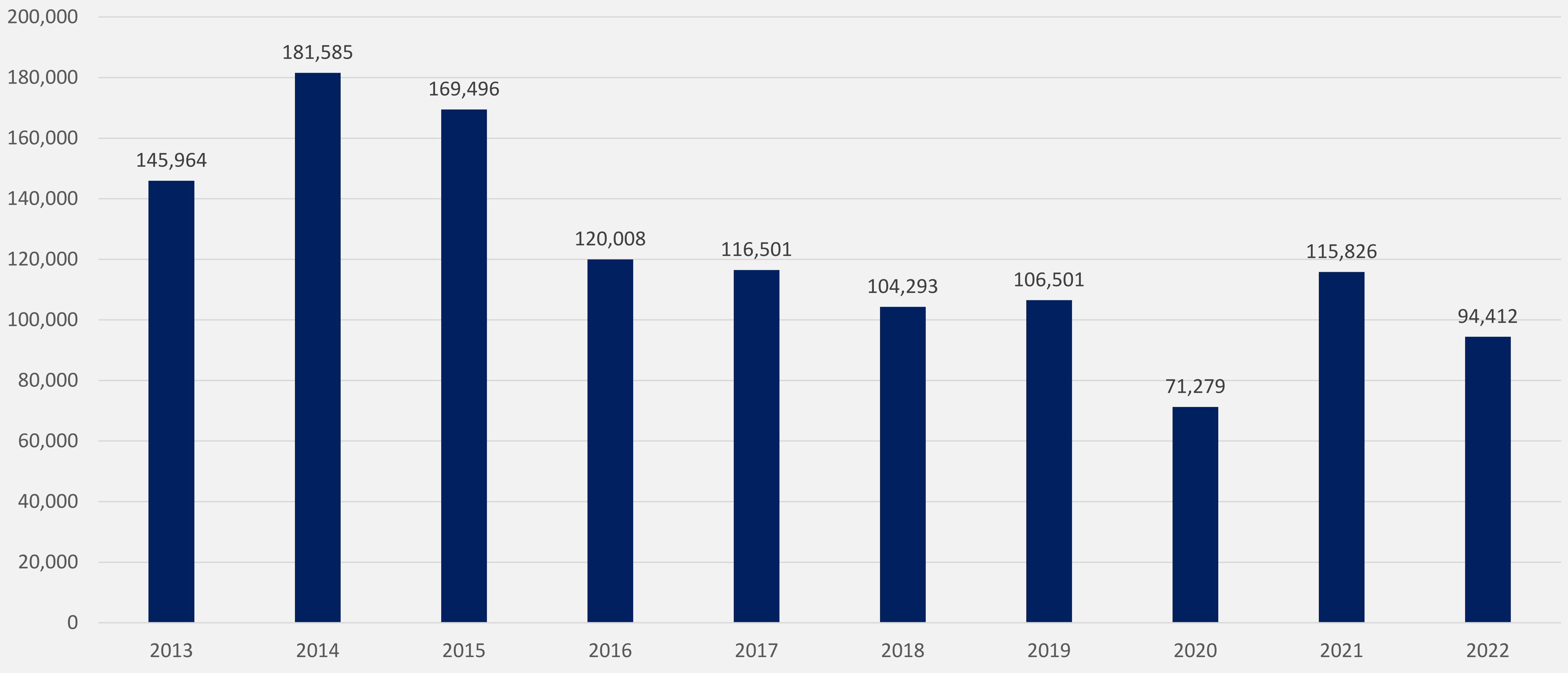
www.meedprojects.com

2022 Review

2022 Review

A very disappointing 2022 especially given the recovery in 2021 and higher oil prices. Expectation at the start of the year was high, but this was not borne out by the value of work awarded. It can be argued that the Qatargas LNG project distorted the 2021 number and that without it, 2022 was roughly in line with the previous year

Value of GCC contracts awarded 2013-22 ($m)

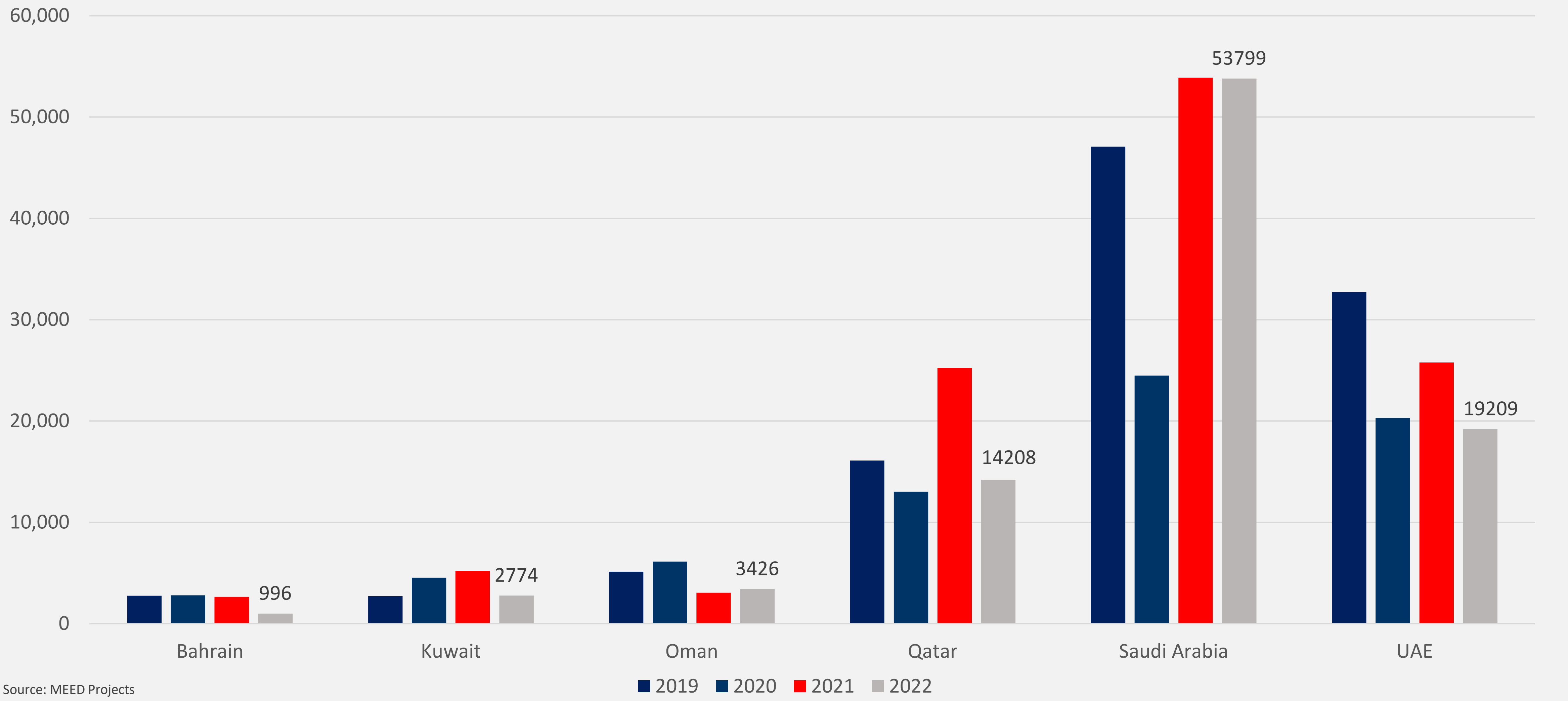


Source: MEED Projects

2022 Review

While Saudi Arabia continued its strong performance by matching its 2021 number, it was offset by falls in the UAE and Qatar, which remain disappointing. No surprise that the kingdom is the number one target market for GCC companies today as evidenced by contractors moving out of Qatar and UAE into Saudi. In total it comprises more than 50% of the total GCC market. Is this a natural position given the size of its economy, population and oil production? Historically did the UAE outperform and today is its natural size?

Value of GCC contracts awarded by country, 2019-22 ($m)



Source: MEED Projects

MEED
Middle East business intelligence

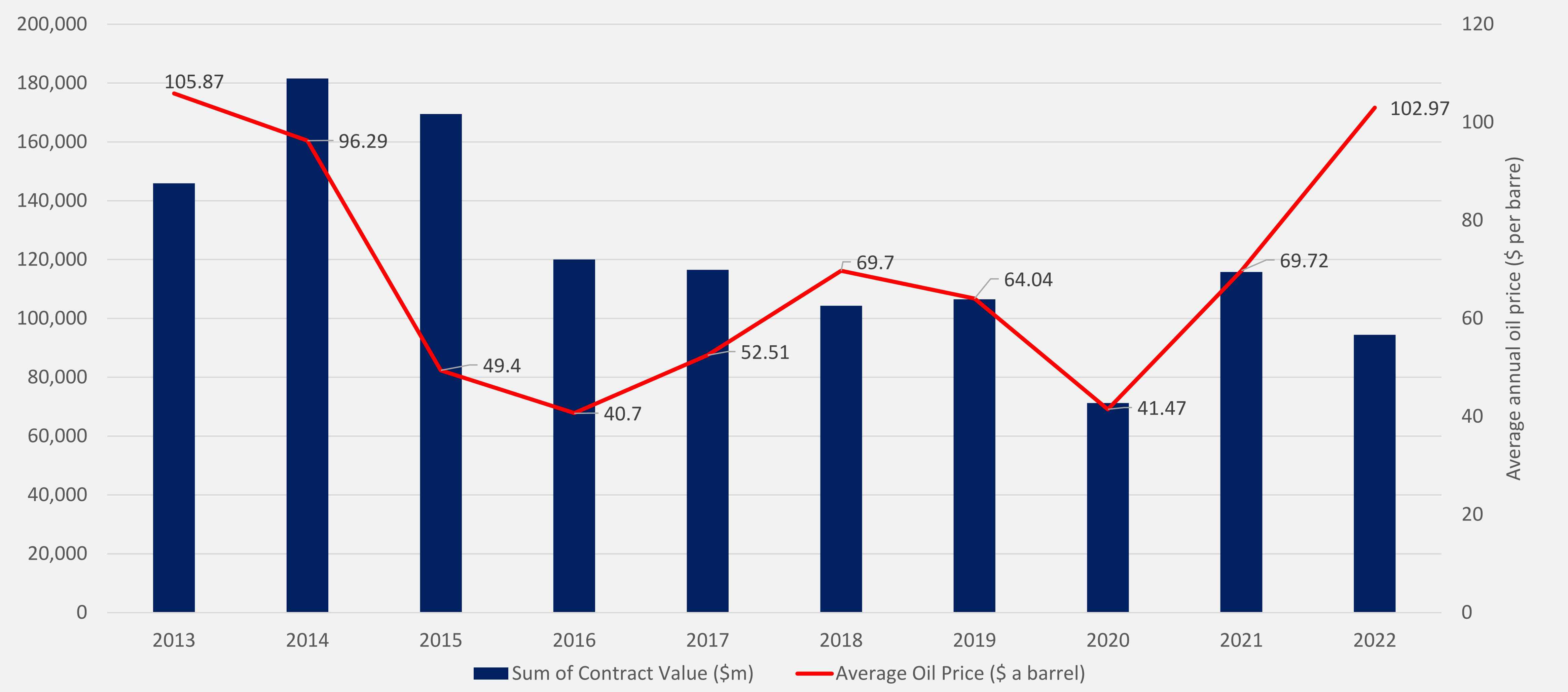
www.meedprojects.com

2022 Review

MEED
Middle East business intelligence

Last year was all the more disappointing given the higher average oil price and subsequent increase in government revenues. The implication therefore is that there is an increasing disconnect between the oil price and actual project market activity (which may or may not be a positive development). Or it may be there is a lag of one or two years before the oil price has an impact

Value of GCC contract awards vs oil price, 2013-22 ($m)



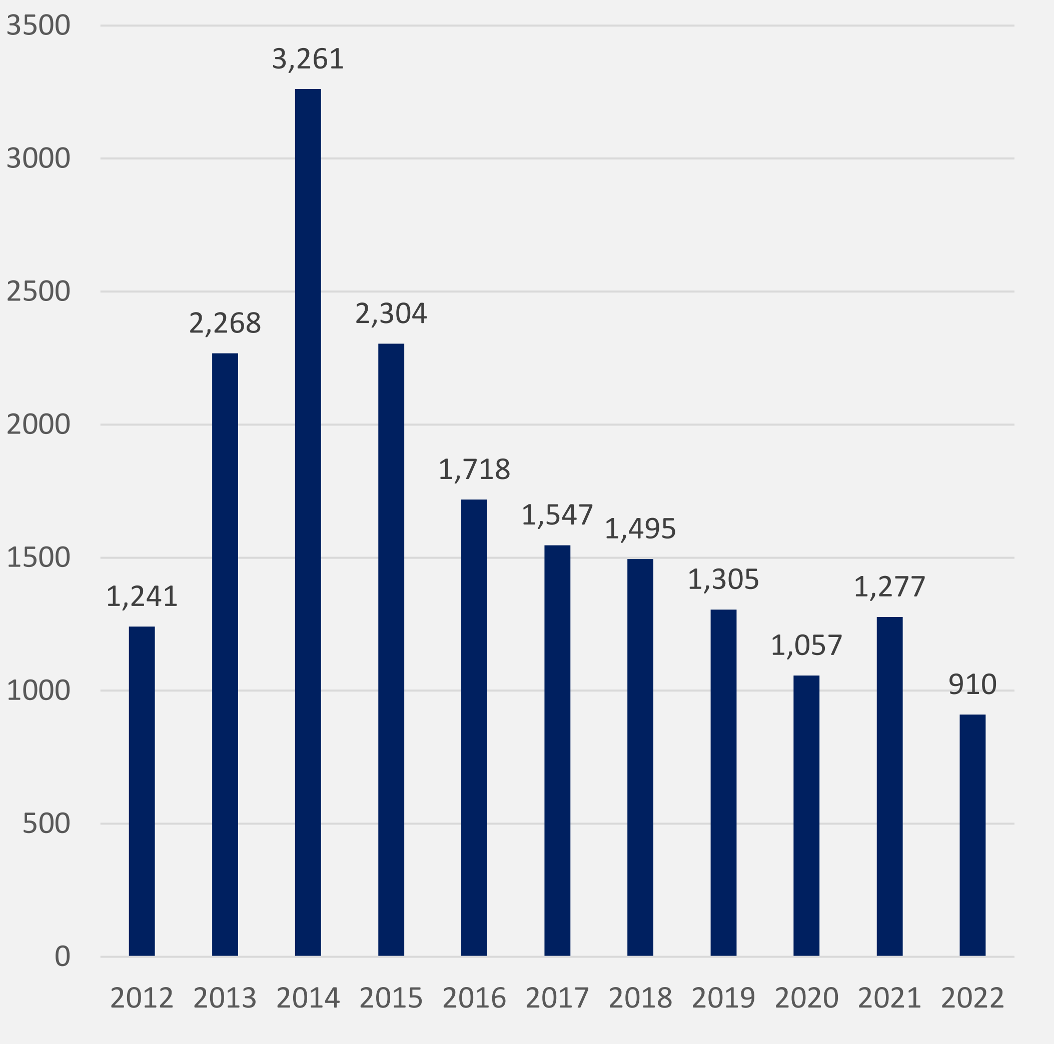
Source: MEED Projects

www.meedprojects.com

Historical Performance

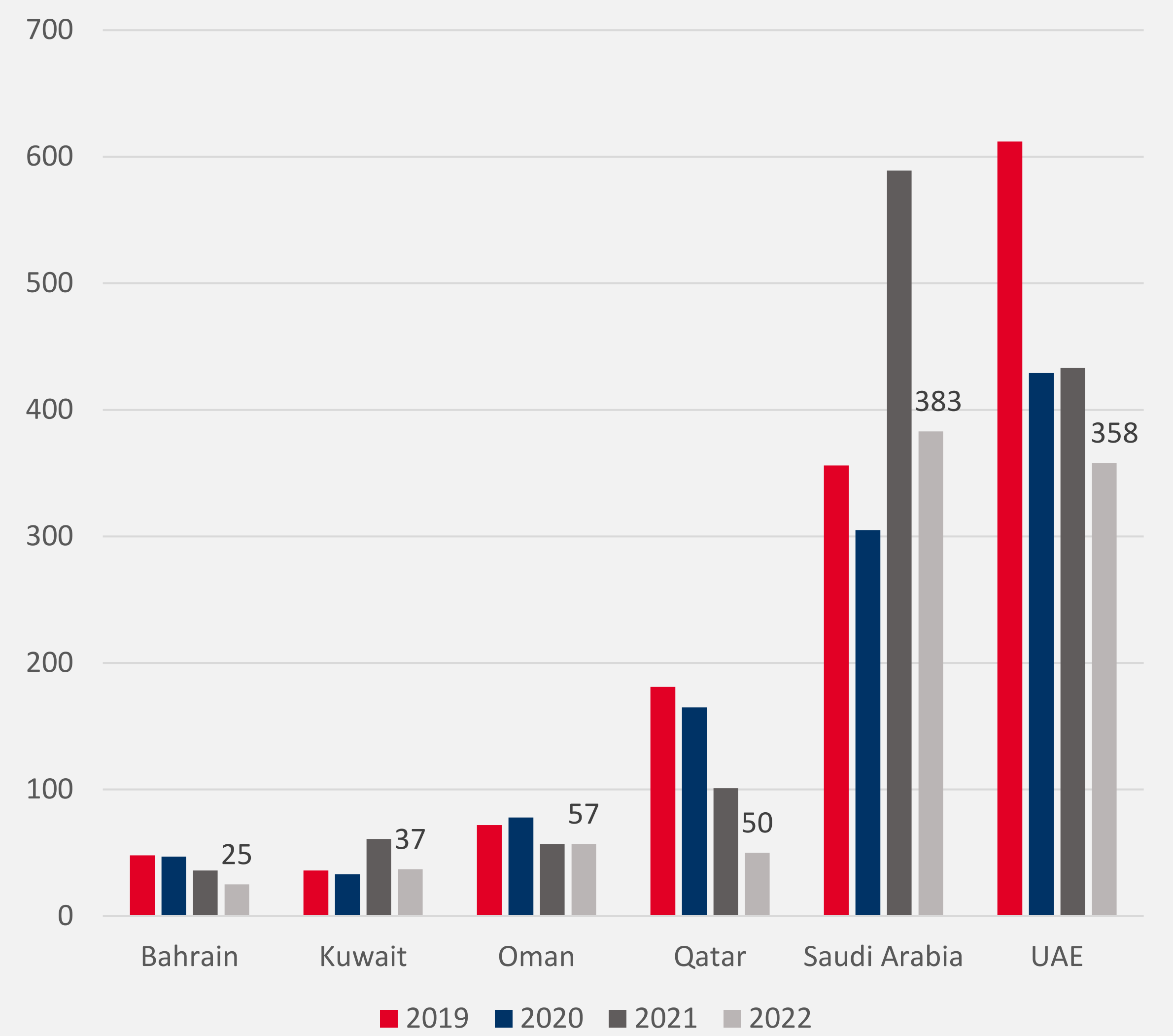
The general decline in projects market spending is reflected by the gradually decreasing number of projects with a value of more than $10m. At the same time, it’s clear that the average of individual projects are going up and that the average value of each contract in the UAE is much higher than those in Saudi Arabia

Number of $10m+ GCC contracts awarded, 2012-22



Source: MEED Projects

Number of $10m+ GCC contracts awarded by country, 2019-22



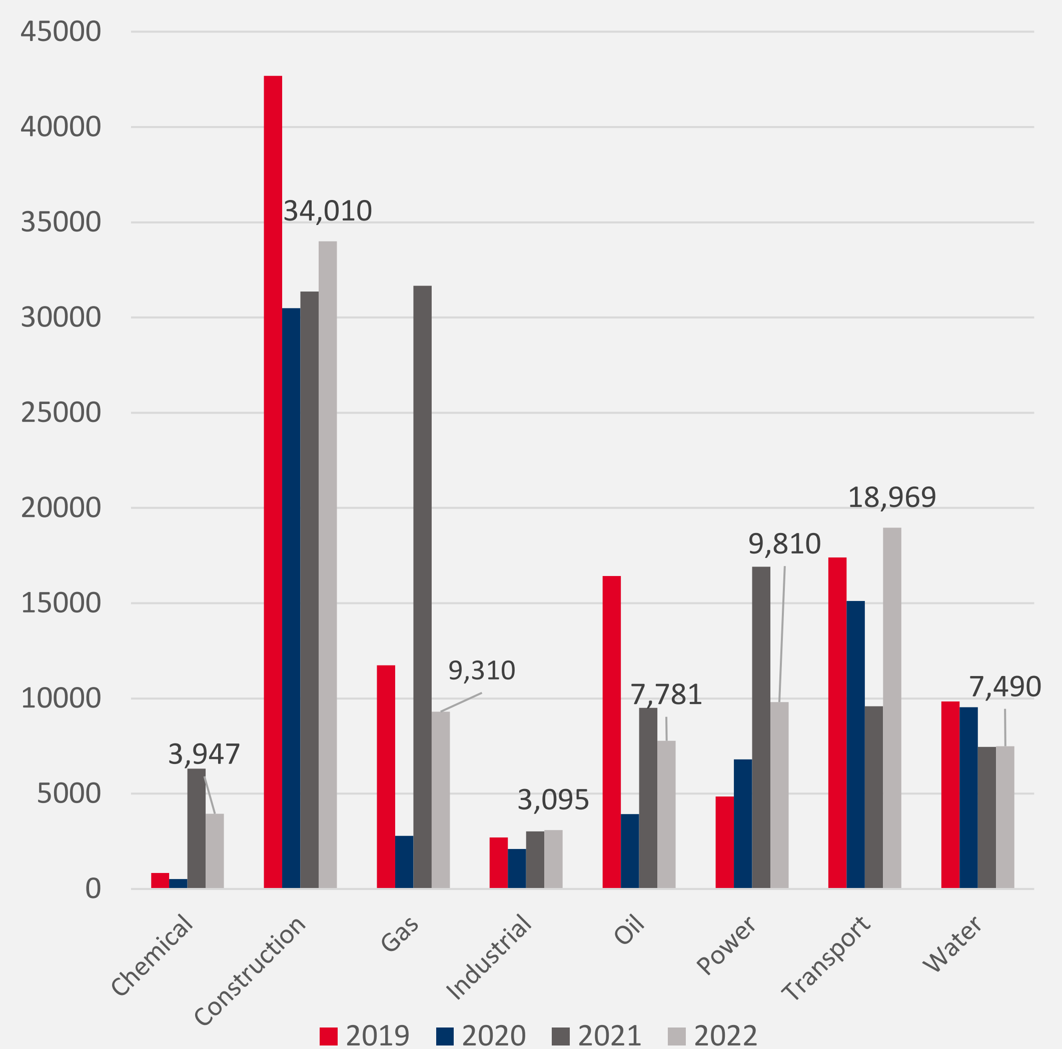
Source: MEED Projects

www.meedprojects.com

2022 Sector Performance

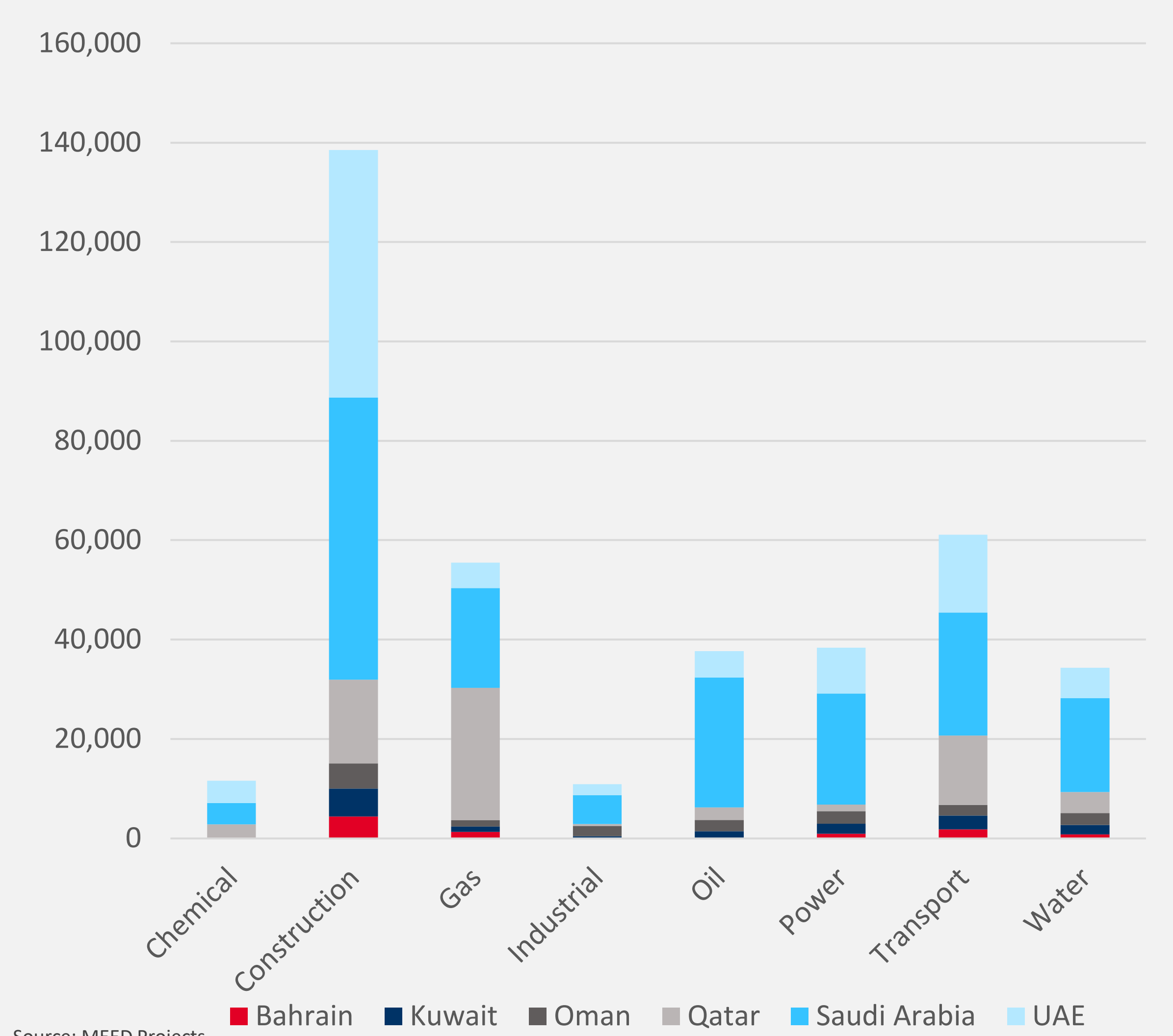
Construction is once again the largest sector after being edged out in 2021 by gas due to the Qatargas LNG expansion. It also tends to be along with the water sector the most consistent market segment over the past few years, whereas other sectors tend to have more peaks and troughs

Value of GCC contracts awarded by sector, 2019-22 ($m)



Source: MEED Projects

Value of GCC contracts awarded by country and sector, 2019-22 ($m)



Source: MEED Projects

Top 2022 Contracts

MEED
Middle East business intelligence

The list of the top contracts awarded in the region in 2022 is dominated by Saudi Arabia as would be expected. However, there is a more even distribution of projects across sectors

Top 25 GCC contracts awarded in 2022

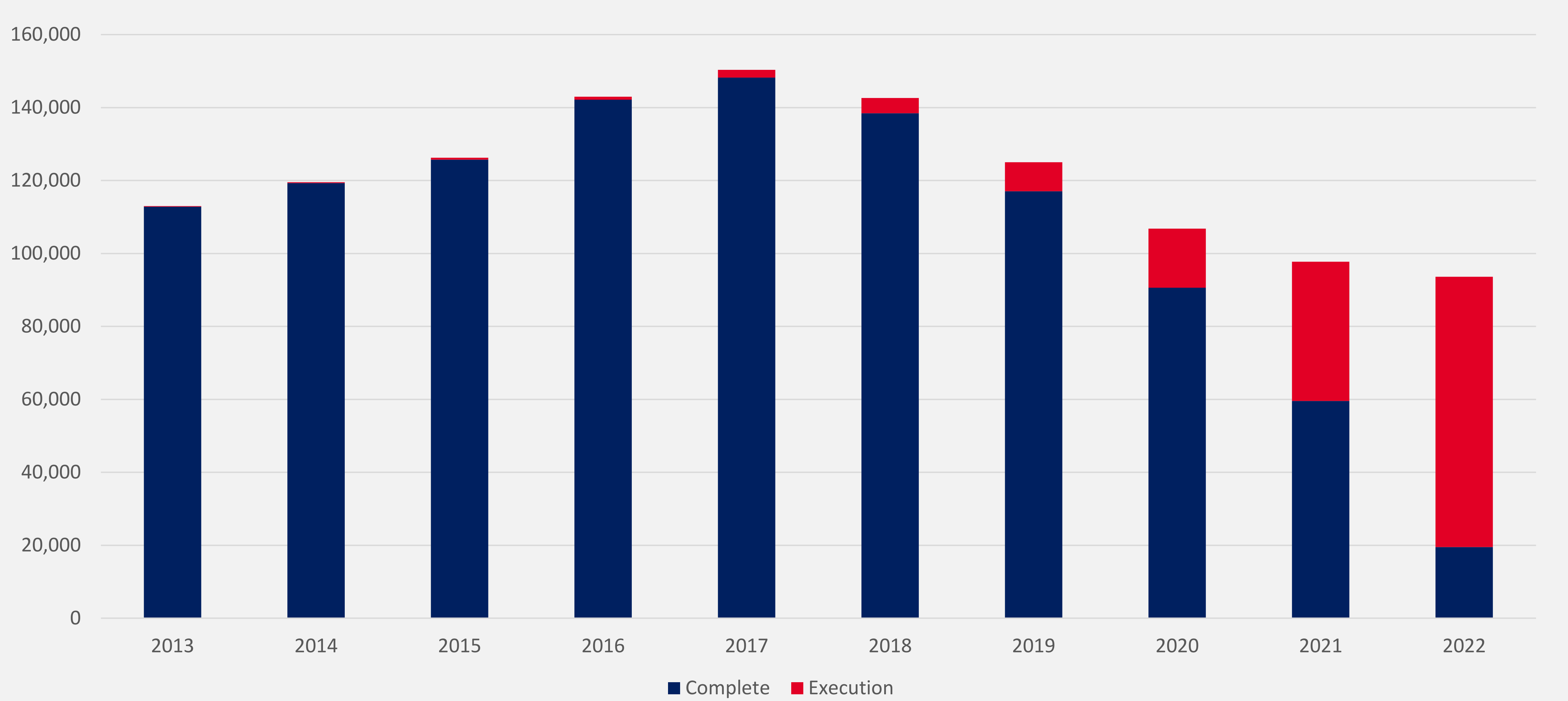
Project	Country	Sector	Contract Value ($m)
Qatargas - North Field Production Sustainability: Phase 2: Scope B	Qatar	Gas	4,500
NEOM - NEOM City: Community Villages: Phase I : Five Housing Clusters	Saudi Arabia	Construction	3,500
NEOM – NEOM City: Backbone Infrastructure: Drill and Blast Running Tunnels	Saudi Arabia	Transport	2,780
ACWA/PIF - Renewable Energy Program: Phase 2: Shuaibah 2 Solar PV Power Plant	Saudi Arabia	Power	2,560
Saudi Aramco - ZOFD: Onshore: Hydrocarbons Processing Facilities: Package 1	Saudi Arabia	Oil	2,500
Umm Al Qura - Masar: Package A: Hotel Towers	Saudi Arabia	Construction	2,000
NEOM– NEOM City: Backbone Infrastructure: Drill and Blast Tunnel Section	Saudi Arabia	Transport	1,850
NEOM - NEOM City: Community Villages: Phase I: 3 Housing Cluster	Saudi Arabia	Construction	1,500
HIA - HIA Expansion: Phase 2B: Concourse D and E	Qatar	Transport	1,360
RCRC - King Salman International Park: Royal Art Complex	Saudi Arabia	Construction	1,333
Chevron Phillips Chemical/Qatar Energy - RLPP: Polyethylene Derivative Units	Qatar	Chemical	1,300
ASHGHAL - Al Wakrah and Al Wukair STP	Qatar	Water	1,186
QAFCO - Ammonia-7 Blue Ammonia Plant	Qatar	Chemical	1,100
Saudi Aramco - ZOFD: Onshore: Utilities & Water Treatment Facilities: Package 2	Saudi Arabia	Oil	1,000
Qatargas – NFED: Pipelines and Topsides Facilities	Qatar	Gas	1,000
NEOM - NEOM City: Community Villages: Phase I: Two Housing Clusters	Saudi Arabia	Construction	1,000
DGDA - Diriyah Gate Development: Super Basement	Saudi Arabia	Transport	983
RMH - Rua Al Madinah Development: Infrastructure Package 1 & 2	Saudi Arabia	Transport	974
ADNOC Offshore - Umm Shaif Field Long Term Development Plan: Phase 1	UAE	Oil	946
NGHC – NEOM Green Hydrogen Company - Green Fuels Plant	Saudi Arabia	Chemical	900
TCFC - TUWAIQ Casting & Forging Facility	Saudi Arabia	Industrial	777
QIC - The Qiddiya Project: Resort Core: Water Park	Saudi Arabia	Construction	750
MAF – Riyadh North Development: Mall of Saudi : Main Package	Saudi Arabia	Construction	700
RCRC - Riyadh Sports Boulevard: Zone 5A	Saudi Arabia	Transport	689
RCJY - Jizan Economic City: Sea Water Cooling System: Phase 1	Saudi Arabia	Water	650
Seven - Al Nahdah Entertainment Complex (Exit 15)	Saudi Arabia	Construction	650

Source: MEED Projects

Cashflow

Cashflow naturally tends to lag contract awards, and the effects of the decline in project spending was felt by many in the market only from 2018 onward. As illustrated below, despite the recovery in 2021 after the Covid slump, the market is still shrinking, and it is only now that this is starting to trickle through

GCC Project Cashflow, 2013-22 ($m)

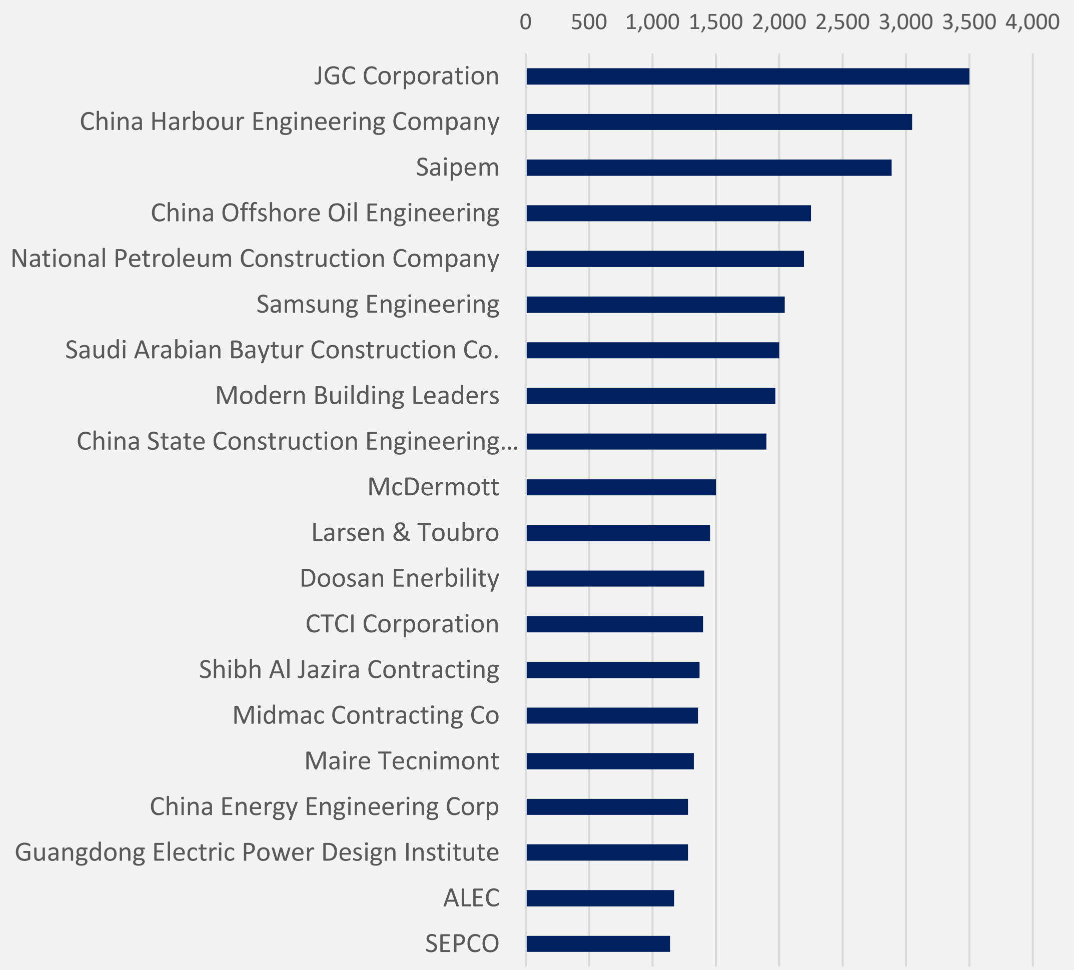


Source: MEED Projects

Top 2022 Contractors and Clients

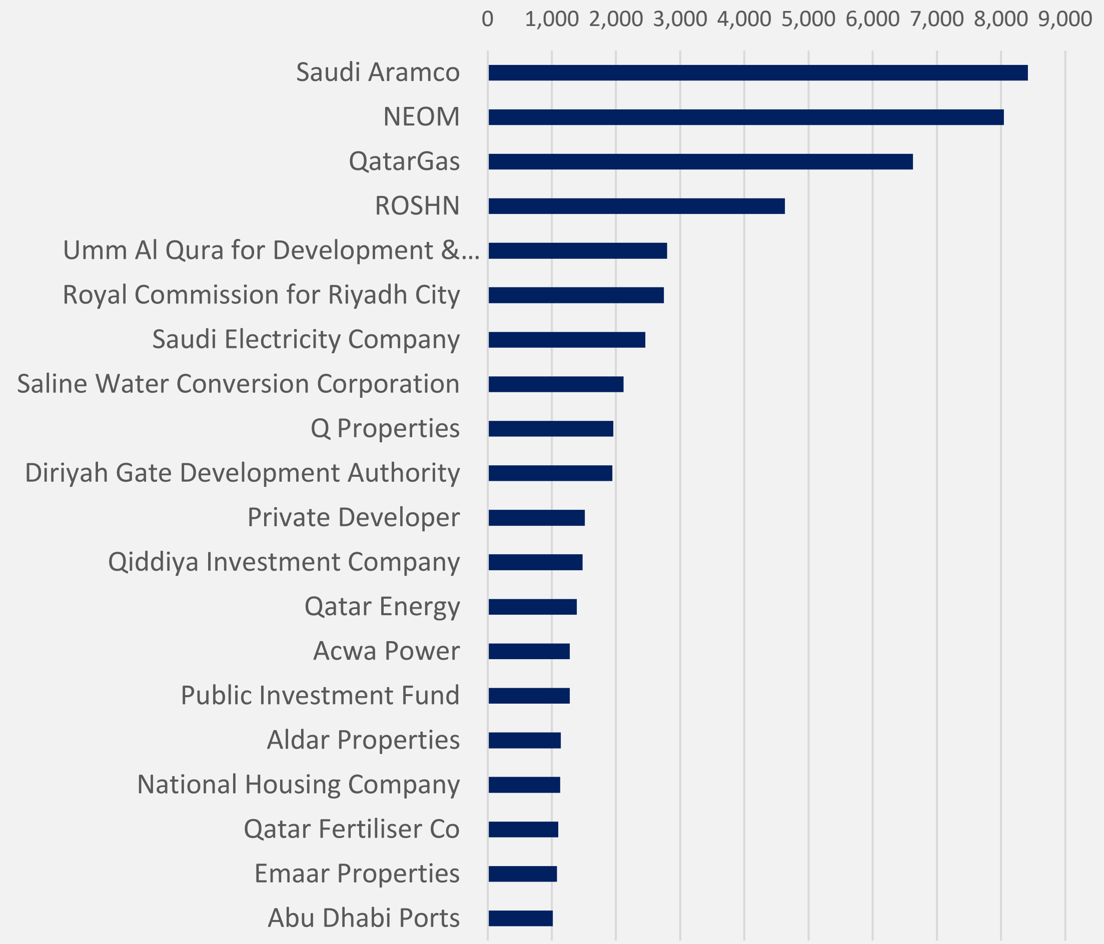
JGC leads the rankings of the top contractors by work won in 2022. Japanese contractors have been fairly quiet over the past decade but its performance along with Chiyoda's success on the Qatar LNG program mark a strong return for them. Another notable observation is the increasing presence of Chinese firms, with 6 of the top 20 coming from China. On the client side, Aramco again leads the way followed by the NEOM giga project and Qatargas

Top GCC contractors by value of work awarded in 2022 ($m)



Source: MEED Projects

Top GCC clients by value of work awarded in 2022 ($m)



Source: MEED Projects

MEED
Middle East business intelligence

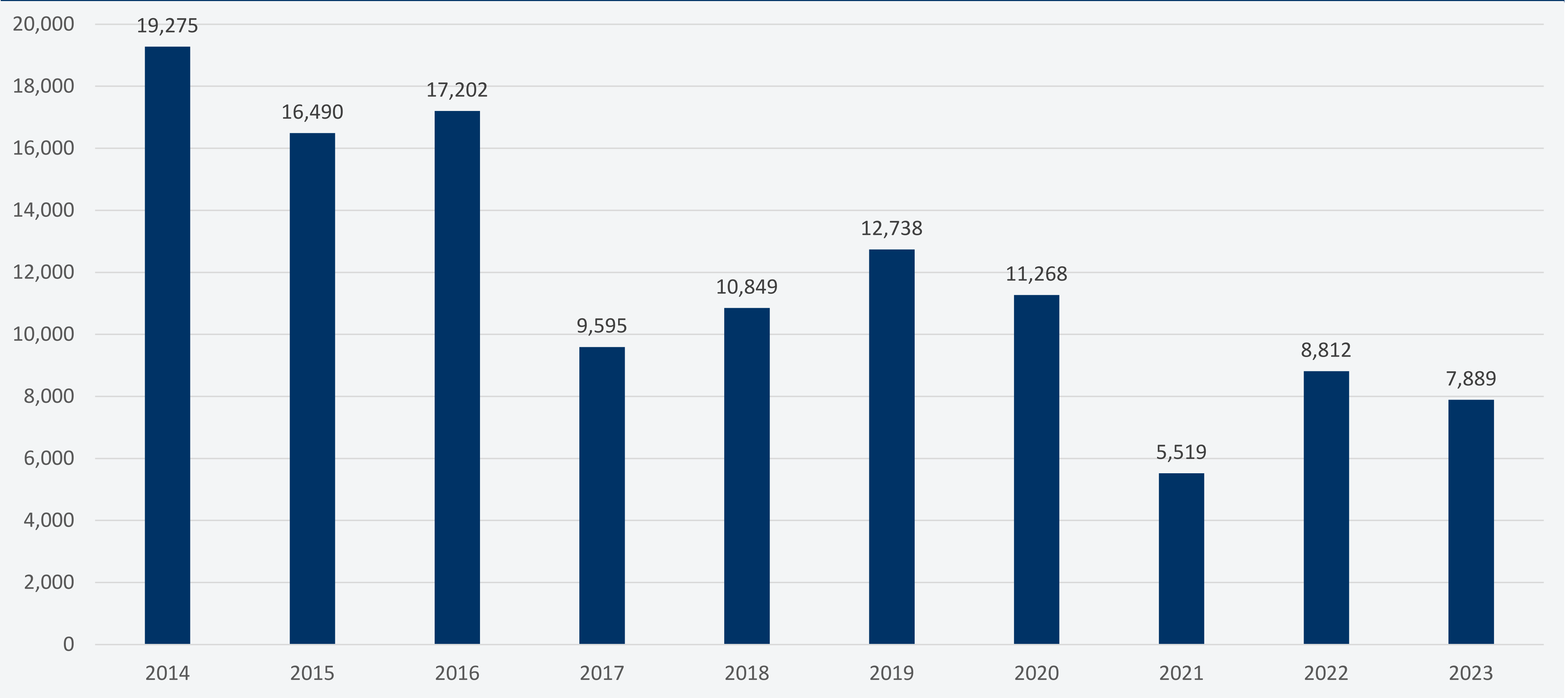
www.meedprojects.com

Short-term Outlook

2023 January Performance

Difficult to judge outlook on the basis of an incomplete month, but data suggests that the market is holding up, although still not close to the 2014-206 period

Comparison of January GCC Contract Awards, 2014 – 2023 ($m)



Source: MEED Projects

MEED Projects

www.meedprojects.com

Top 25 GCC contracts awarded January 2023

MEED Projects

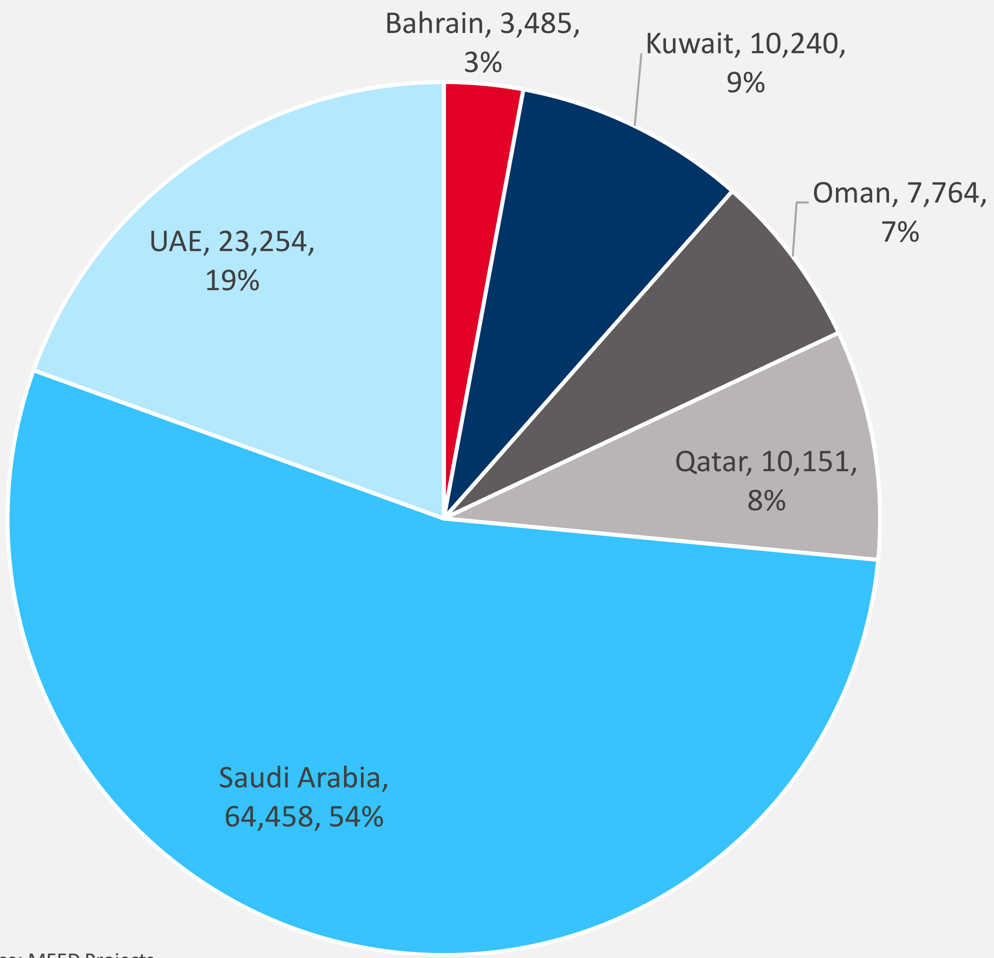
Project	Country	Industry	Contract Value ($m)
Chevron Phillips Chemical/Qatar Energy - RLPP: Ethane Cracker	Qatar	Chemical	2,800
Mawani - Upgrade of Container Terminals at King Abdulaziz Port in Dammam	Saudi Arabia	Transport	1,860
Saudi Aramco - Al Jafurah Seawater Reverse Osmosis Plant (IWP)	Saudi Arabia	Water	693
Damac Properties - Cavalli Casa Tower (Plot No. A-001-003-3827585)	UAE	Construction	436
Select Group/ESIC - Six Senses The Palm (Plot No. PJCRC08_200)	UAE	Construction	200
NWC - King Abdulaziz International Airport: Sewage Lift Station II	Saudi Arabia	Water	180
Elsewedy Electric - 300MW Solar Power Plant	Saudi Arabia	Power	176
GCCIA - 400kV Power Transmission Line Interconnection	Kuwait	Power	150
Bloom Properties - Bloom Living: Cordoba (Phase 1)	UAE	Construction	128
Emaar - Emaar Beachfront: Beach Mansion Tower	UAE	Construction	122
Arada/Emaar - Naseej District Residential Complex: Vida Aljada Hotel Complex	UAE	Construction	120
Qatargas - Wastewater Recycle and Reuse Project (QGWP) in Ras Laffan	Qatar	Water	120
Damac Properties - Damac Lagoons: Portofino	UAE	Construction	100
Saudi Aramco - Abu Ali Bachelor Camp	Saudi Arabia	Construction	90
Select Group - Peninsula Three	UAE	Construction	84
ADNOC Onshore - Jebel Dhanna Crude Underground Storage Facilities (Salt Dome)	UAE	Gas	80
ADNOC - Hail and Ghasha Sour Gas Development: Offshore Pkg: Early Development	UAE	Gas	80
ADNOC - Hail and Ghasha Sour Gas Development: Onshore Pkg: Early Development	UAE	Gas	80
Capital Markets Authority - Permanent Headquarter Building in Kuwait	Kuwait	Construction	72
ADNOC Onshore - Bu Hasa SWAG CO2 EOR Pilot Project	UAE	Oil	70
Select Group - Peninsula Five: The Signature Collection	UAE	Construction	58
MOH - Saudi Housing Project: Rawabi Housing Complex in Jizan	Saudi Arabia	Construction	43
Alargan - Al Nakheel Integrated Tourism Complex: Phase 2 (Infrastructure Works)	Oman	Transport	40
SWCC - Water Transmission Systems of New Small Stations: Phase 2	Saudi Arabia	Water	32
MoWMAUP - Zinj Trunk Sewer (ZTS)	Bahrain	Water	20

Source: MEED Projects

2023 Outlook

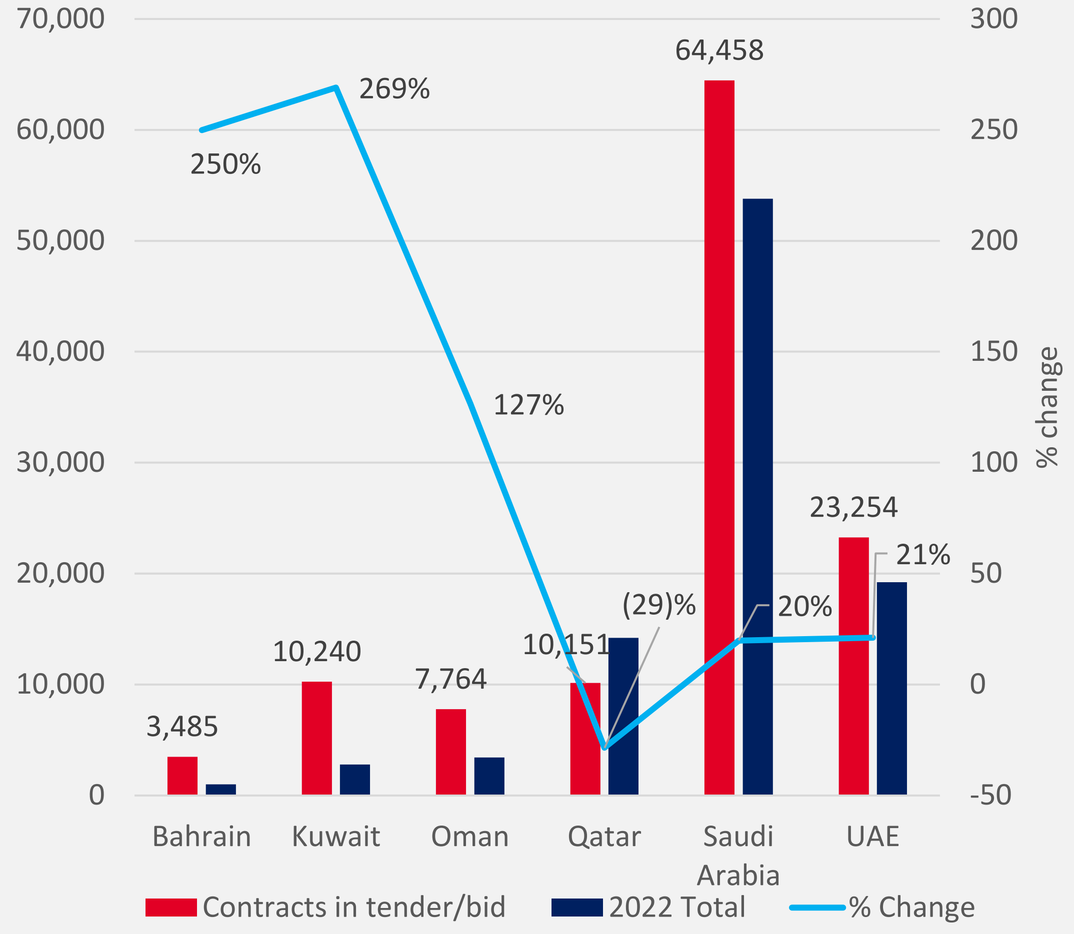
Taking only contracts already in tender and thus most likely to be awarded this year, we have visibility on more than $110bn worth of projects. Based on this, we can see Saudi Arabia and the UAE could grow by 20% this year, with even sharper increases in Kuwait, Oman and Bahrain (albeit from much smaller bases). The only market that could decline in Qatar, which has still to provide clarity on its post FIFA 2022 World Cup and its project plans as part of its 2030 National Vision

Value of GCC contracts in tender or bid evaluation ($m)



Source: MEED Projects

Value of GCC contracts in tender or bid evaluation compared with 2022 totals ($m)

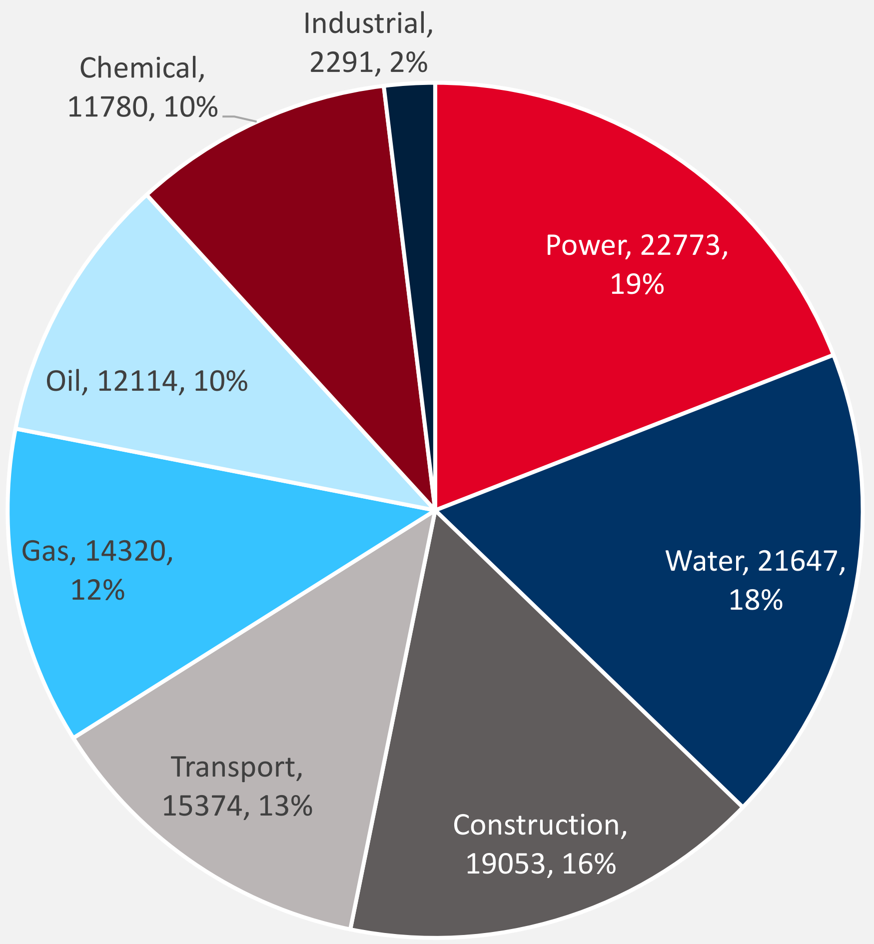


Source: MEED Projects

2023 Sector Outlook

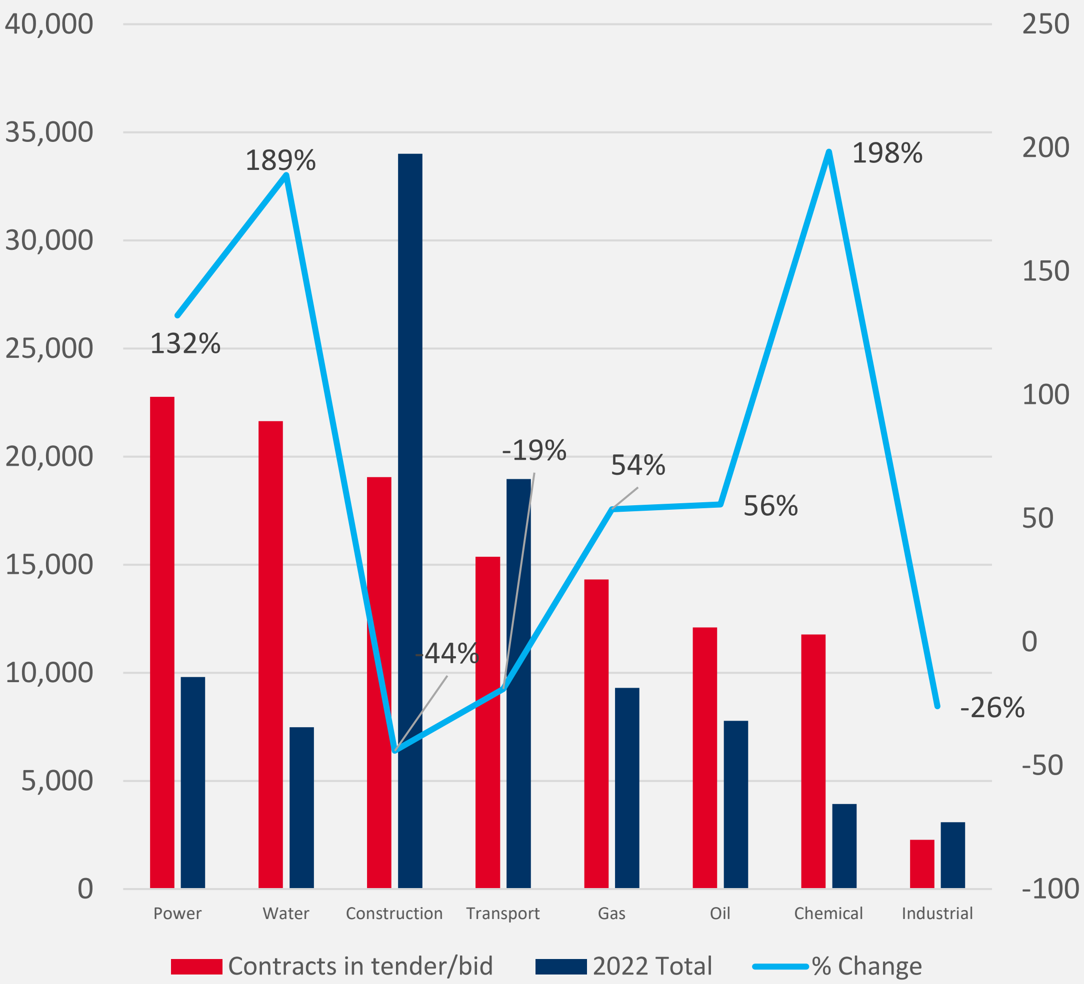
The spread of sector performance in 2023 is remarkably evenly apportioned between segments. Construction appears to be well down on 2022 but this also reflects the lower short-term visibility of the sector and its tendence to see a quick turnover of project awards in a given year. Power, petrochemical and water projects are anticipated to perform exceptionally well thanks to a handful of large, significant projects out to bid

Value of GCC contracts in tender or bid evaluation ($m)



Source: MEED Projects

Value of GCC contracts in tender or bid evaluation compared with 2022 totals ($m)



Source: MEED Projects

www.meedprojects.com

Top 2023 Planned Contracts

Again, in terms of contracts likely to be awarded this year, Saudi Arabia dominates. Likewise, there continues to be a fairly even spread of awards across sectors.

Top Selected GCC contracts scheduled to be awarded in 2023

Project	Country	Sector	Estimated Value ($m)
Qatargas - North Field South Development : Two Mega LNG Trains	Qatar	Gas	6,000
Marjan/RAK Hospitality/Wynn Resorts - Al-Marjan Multipurpose Integrated Resort	UAE	Construction	2,500
Adnoc - Mirfa Seawater Treatment Plant	UAE	Water	2,500
NWC - Upgrade of Sewage Treatment Plants: 5 Packages	Saudi Arabia	Water	2,150
SPPC - 3.6GW GFPP: Qassim IPP 1 1,800 MW	Saudi Arabia	Power	2,000
SPPC - 3.6GW GFPP: Taiba IPP 1 1,800 MW	Saudi Arabia	Power	2,000
Saudi Aramco - Tail Gas Treatment Desulphurization Project	Saudi Arabia	Gas	2,000
SATORP - Amiral Complex: Derivatives Unit : Package 2	Saudi Arabia	Chemical	1,900
Maaden/Mosaic/Sabic - Waad Al Shamal Phosphate City: DAP Package 1	Saudi Arabia	Chemical	1,500
ADNOC/Total/PetroChina/ENI - Umm Shaif Gas Cap Condensate Development: Phase 1	UAE	Gas	1,500
REPDO - Renewable Energy Round IV: 1,100MW Al-Hinakiyah hybrid CSP/solar project	Saudi Arabia	Power	1,500
SATORP – Amiral Complex: Mixed Feed Cracker : Mixed Feed Cracker: Package 1	Saudi Arabia	Chemical	1,400
Saudi Aramco - Zuluf Oil Field: Upgrade of Infrastructure works (CRPO 100)	Saudi Arabia	Oil	1,200
Red Sea Global - Amaala: Utilities Package	Saudi Arabia	Water	1,200
EWEC - Al Ajban Solar PV IPP	UAE	Power	1,125
NEOM – NEOM City: Trojena: Trojena Valley Cluster: Dams	Saudi Arabia	Water	1,000
KOC - North & South Kuwait Revegetation Project	Kuwait	Construction	1,000
NEOM - NEOM City: The Line: The Spine: Railway Network: Type A Works	Saudi Arabia	Transport	1,000
REPDO - Renewable Energy Program Round IV: 700MW Yanbu wind IPP	Saudi Arabia	Power	1,000
Maaden/Mosaic/Sabic - Waad Al Shamal Phosphate City: DAP Package 2	Saudi Arabia	Chemical	1,000
NEOM - NEOM City: Oxagon: NICC: The Connector Depot	Saudi Arabia	Transport	1,000
SEC/NEPCO - Saudi To Jordan Power Interconnection	Saudi Arabia	Power	1,000
NEOM – NEOM City: Oxagon: NICC: Connector South	Saudi Arabia	Transport	600
Wasl - MGM Resort, Bellagio and Aria Hotels Development	UAE	Construction	500
DGDA - Diriyah Gate: Phase I: Gardens and Diriyah South Districts	Saudi Arabia	Construction	500

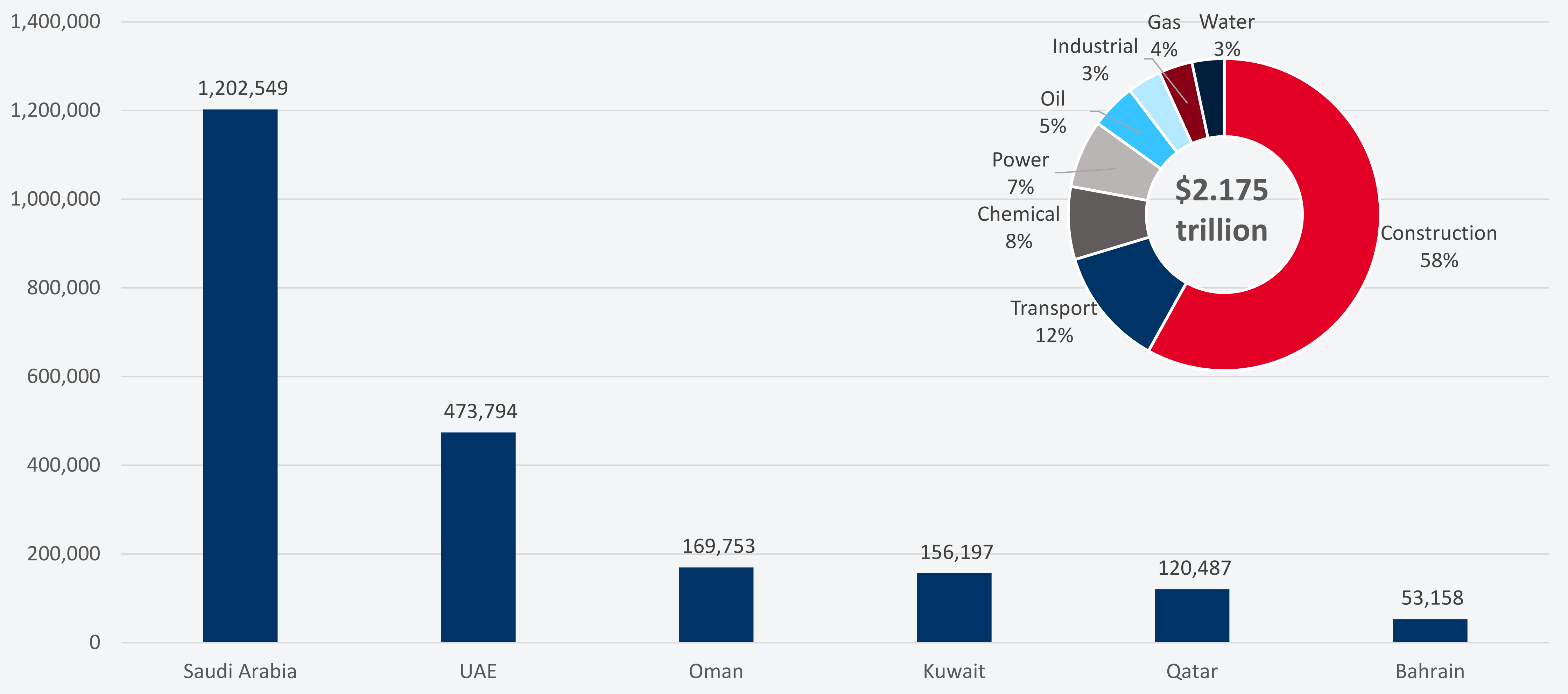
Source: MEED Projects

2024 and Beyond

GCC Future Pipeline

In keeping with the theme of this presentation, Saudi is by far the largest projects market in terms of its projects pipeline, with more than $1.2 trillion worth of known, planned and un-awarded work. Construction continues to dominate with more than half of known future projects by sector

Value of known, planned and un-awarded GCC projects ($m)



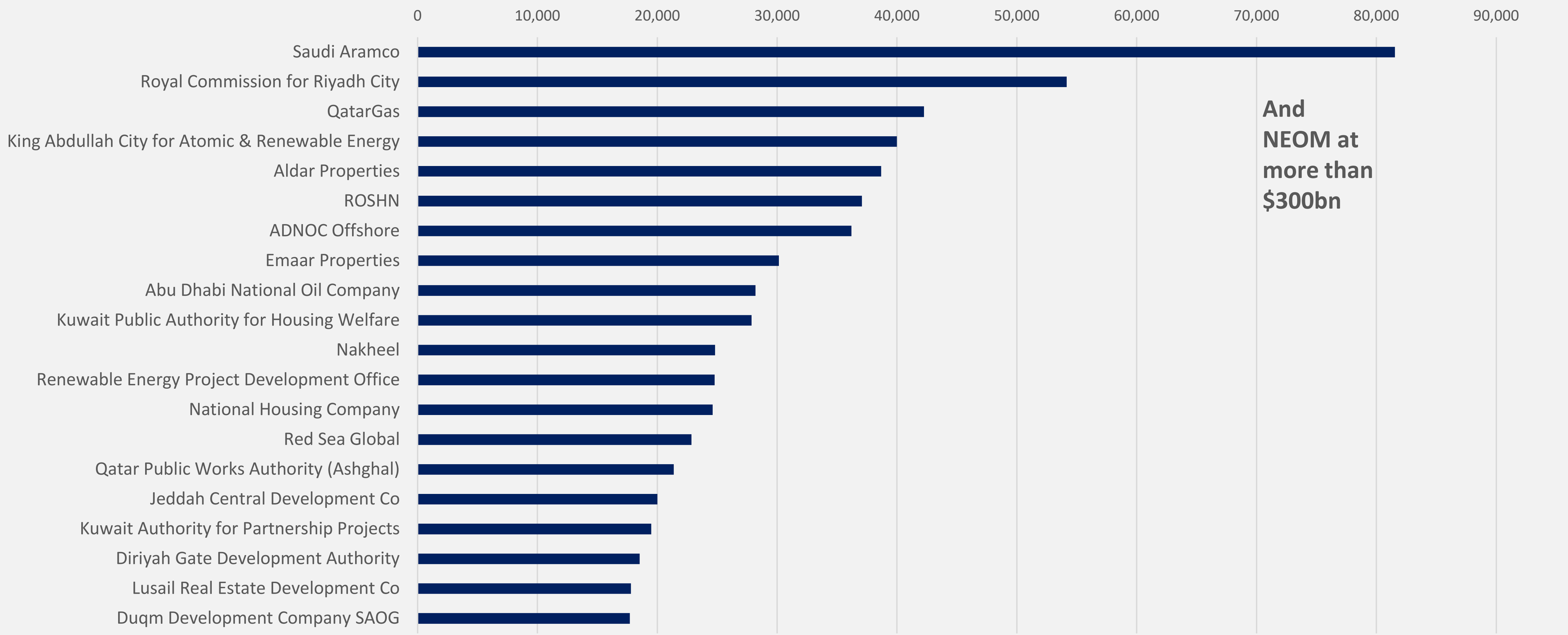
Source: MEED Projects

www.meedprojects.com

Top Future Clients

NEOM is by far the largest future clients as befits its status as the world's biggest project. Aramco is a familiar face as are other major clients such as Qatargas, Aldar and Adnoc. But other clients are coming such as the ROSHN, Red Sea Global, Jeddah Central, and Diriyah Gate mega/giga projects that are all part of the Saudi 2030 Vision

Top GCC future clients by value of known, planned and unawarded work ($m)*



Source: MEED Projects *excludes NEOM for graphical illustration purposes

www.meedprojects.com

Top Selected GCC Future Projects

MEED Projects

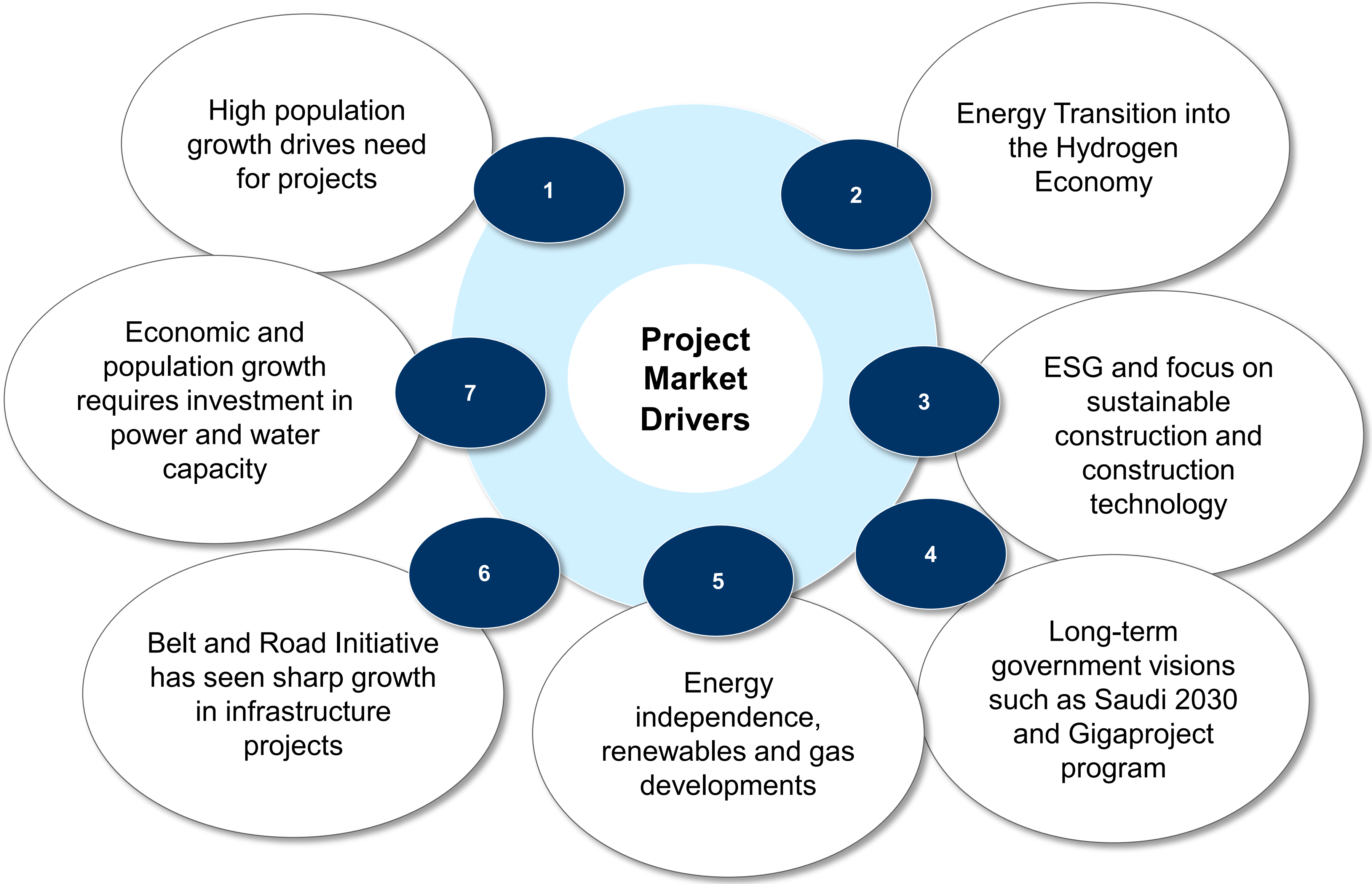
Project	Country	Industry	Estimated Value ($m)
NEOM – NEOM City Development Program	Saudi Arabia	Construction	297,529
KA-CARE - Nuclear Power Program	Saudi Arabia	Power	33,550
RCRC - Green Riyadh	Saudi Arabia	Construction	22,398
OQ/ICE/Enertech - Green Energy Oman Integrated Green Fuels Project	Oman	Chemical	20,000
ROSHN - Sedra District Community Homes	Saudi Arabia	Construction	18,281
ADNOC Offshore - Upper Zakum Full Field Development	UAE	Oil	15,999
JCDC - Jeddah Central Project	Saudi Arabia	Construction	15,625
RCRC - King Salman International Park in Riyadh	Saudi Arabia	Construction	14,344
Emaar - King Abdullah Economic City (KAEC)	Saudi Arabia	Construction	13,628
PIF - King Salman International Airport	Saudi Arabia	Transport	12,000
Abu Dhabi Future Energy Company (Masdar) - Masdar City	UAE	Construction	11,857
PAHW - South Al Mutlaa City	Kuwait	Construction	11,714
Tourism Development & Investment Company - Saadiyat Island	UAE	Construction	10,954
ASDA - The Arabian Highland	Saudi Arabia	Transport	10,300
RCU - Al Ula Tourism Development	Saudi Arabia	Construction	9,823
Seven - New Entertainment Complexes	Saudi Arabia	Construction	9,773
RMH - Rua Al Madinah Development	Saudi Arabia	Construction	8,410
Omran - Madinat Al Irfan Urban Development	Oman	Construction	8,137
KAPP - Al Zour North IWPP	Kuwait	Power	6,910
PAHW / LH - South Saad Al-Abdullah Residential City	Kuwait	Construction	6,700
Mawani - Jeddah Islamic Port Expansion	Saudi Arabia	Transport	6,628
Emaar/DP World - Mina Rashid Redevelopment	UAE	Construction	6,490
LREDC - Lusail	Qatar	Construction	6,450
Emaar - The Valley	UAE	Construction	6,231
REPDO - National Renewable Energy Program	Saudi Arabia	Power	6,079
ADNOC - Hail and Ghasha Sour Gas Development	UAE	Gas	6,015
MOT - Bahrain Integrated Public Transport Network	Bahrain	Transport	5,900
Modon - Jizan City for Basic Industries and Conversion	Saudi Arabia	Construction	5,393
ADNOC/DUSUP – Jebel Ali Gas Reservoir Project	UAE	Gas	4,952
Dubai RTA - Dubai Metro Line Development	UAE	Transport	4,651
DEWA - Mohammad Bin Rashid Al Maktoum Solar Park	UAE	Power	4,618
Abu Dhabi Municipality - Mohammed Bin Zayed City Development	UAE	Construction	4,411
Nakheel - Dubai Islands	UAE	Construction	4,392

Source: MEED Projects

Key Trends

Long-Term Projects Market Drivers

Key Drivers for Investment in Projects



Saudi Giga Projects

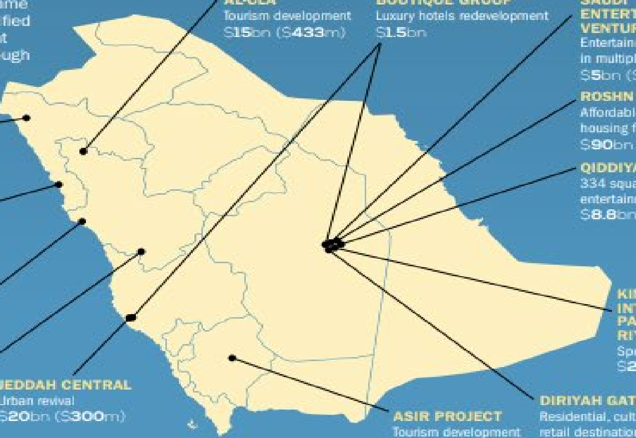
The number project theme is the Saudi giga projects program that is likely to be main source of work in the region of years to come

MARKET SNAPSHOT: SAUDI ARABIA'S GIGAPROJECTS

In the government's own words, the kingdom's gigaprojects are the 'crown jewels' of Vision 2030 and are therefore intrinsically linked to Saudi Arabia's future

THE PROJECTS

The gigaproject programme is geographically diversified and focused on different market segments, although leisure and tourism development is a core focus



NEOM
City, tourism destination and industrial hub
$500bn ($13.4bn)

AMAALA
Luxury coastal resort project
$5.1bn ($1.7bn)

RED SEA PROJECT
28,000 square-kilometre luxury coastal development
$16bn ($6.6bn)

RUA AL-MADINAH
Islamic and cultural destination for pilgrims
$10bn ($1.03bn)

JEDDAH CENTRAL
Urban revival
$20bn ($300m)

AL-ULA
Tourism development
$15bn ($433m)

BOUTIQUE GROUP
Luxury hotels redevelopment
$1.5bn

SAUDI ENTERTAINMENT VENTURES
Entertainment complexes in multiple cities
$5bn ($197m)

ROSHN
Affordable residential housing for nationals
$90bn ($687m)

QIDDIYA
334 square-kilometre entertainment city
$8.8bn ($2.3bn)

KING SALMAN INTERNATIONAL PARK, GREEN RIYADH
Sports boulevard
$23bn

DIRIYAH GATE
Residential, cultural and retail destination
$20bn ($2.9bn)

ASIR PROJECT
Tourism development
$3bn ($300m)

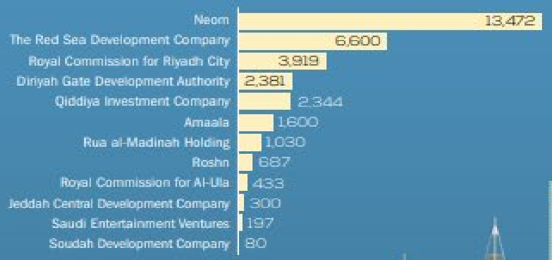
Figures in brackets are the value of contracts awarded to date

PROGRESS MADE ON THE GIGAPROJECTS SO FAR

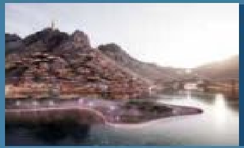
In terms of value Neom has the highest value of work. The Red Sea Project is the most advanced

TOTAL VALUE OF CONSTRUCTION CONTRACTS AWARDED, 2018-22 ($m)

TOTAL VALUE OF CONSTRUCTION CONTRACTS AWARDED BY CLIENT ($m)



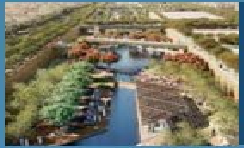
Source: Saudi Gigaprojects 2022 report; MEED Projects. Visit our reports store at buy.meed.com



TROJENA MOUNTAIN RESORT

Trojena is a 1.2 million square-metre masterplan mountain destination for tourists and residents, set for completion by 2026. The project is one of Neom's 10 regions and will feature six districts named Gateway, Discover, Valley, Explore, Relax and Fun. The development in the northwest of Saudi Arabia has been chosen to host the ninth Asian Winter Games in 2029.

Developer:	Neom
Stage:	Under construction
Clusters:	There will be a snow cluster and an ice cluster
Games Village:	Renewable energy-powered village will include 14 luxury hotels



RIYADH SPORTS BOULEVARD

Some 135 kilometres of boulevards across the centre of Riyadh with 50 sports facilities, 44 million square metres (sq m) of green spaces and 2.3 million sq m of investment plots. It comprises eight districts including arts, entertainment, athletics and sports. Firms were invited to submit bids by the end of November for a contract to provide project and construction management services.

Developer:	Royal Commission for Riyadh City
Stage:	Work has begun on the basic infrastructure
Estimated value:	$5bn

SAUDI DOWNTOWN

Launched in October, Saudi Downtown covers the development of mixed-use projects across 12 smaller cities in the kingdom covering a total area of more than 10 million square metres. It is expected that other private sector investors will come in to develop their own projects within the overall scheme. The project ensures that the gigaprojects programme is not limited to just the major cities and high-end tourist resorts.

Developer:	Saudi Downtown Company
Stage:	Project management contracts tendered
Cities:	Medina, Khobar, Al-Ahsa, Buraidah, Najran, Jizan, Hail, Al-Baha, Arar, Taif, Dumat al-Jandal and Tabuk

TOP FUTURE CONTRACTS

There are thousands of contracts to be tendered over the next five years

SELECTED GIGAPROJECT PACKAGES IN BID PHASE ($m)

Amaala: Utilities package	2,780
RCU: Al-Ula tourism development: Tramway	1,850
QIC: Qiddiya: Motion Core	1,333
Amaala: Water transmission pipeline from Neom to Amaala	1,100
Neom City: Islands infrastructure framework project	1,000
QIC: Qiddiya: City centre	1,000
QIC: Qiddiya: Public utilities infrastructure package	983
QIC: Qiddiya: Golf course and residential facilities	974
Roshn: Sedra district community homes: phase 2: package 3A, 3B & 3C: 2,171 homes	946
RCU: Al-Ula tourism development: infrastructure	900
Red Sea Global: Red Sea project airport: landside package	836
QIC: Qiddiya: sports complex	800
Neom City: Transmission pipeline from Oxagon to Gayal	800
Neom City: Oxagon: dredging and quay wall: package 16C	750
Neom City: The Line: eastern water transmission line	640
Neom City: Water transmission line from RE3 to mountain reservoir	625
Neom City: The Spine western water transmission line	560
Roshn: Community homes in Eastern Province: Qatif	542

SELECTED GIGAPROJECT PACKAGES IN DESIGN ($m)

Neom City: The Line: mirror towers	1,500
DGDA: Diriyah Gate: Wadi Safar resort development	1,283
JCDC: Jeddah Central project: phase 1	1,260
Neom City: The Line: The Spine: railway network	1,250
JCDC: Jeddah Central project: phase 3	1,000
RCU: Al-Ula tourism development: renewable energy plant phase 1	1,000
RCU: Al-Ula tourism development: infrastructure: water supply and treatment plant	1,000
RCU: Al-Ula electrical network upgrade	932
JCDC: Jeddah Central project: phase 2	850
Amaala: The coastal development	845
DGDA: Diriyah Gate: phase 1: mixed-use development	800
QIC: Qiddiya airport: aerodrome and airfield	500
JCDC: Jeddah Central project: phase 1: residential units	500
DGDA: Diriyah Gate: phase 1: gardens and Diriyah South districts	500
QIC: Qiddiya: Eco Core	400
Enowa: Neom City development programme: water desalination plant (IWP): phase 3	400
Enowa: Neom City: Oxagon: district cooling plant	400
Enowa: Neom City development programme: water desalination plant (IWP): phase 2	400

RCU=Royal Commission for Al-Ula; QIC=Qiddiya Investment Company; DGDA=Diriyah Gate Development Authority; JCDC=Jeddah Central Development Company; IWP=Independent water project

MEED
Middle East business intelligence

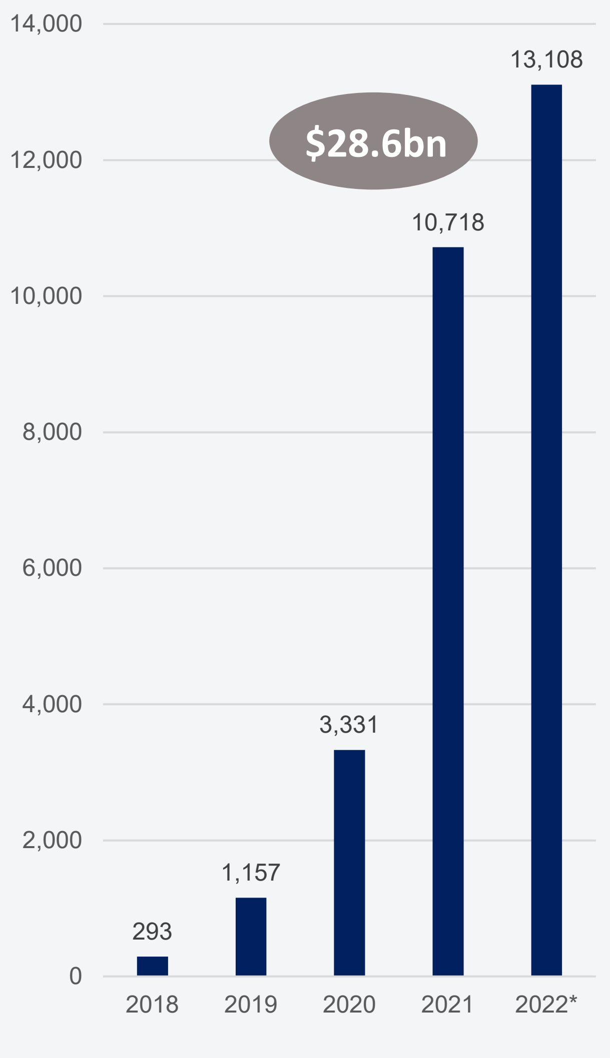
www.meedprojects.com

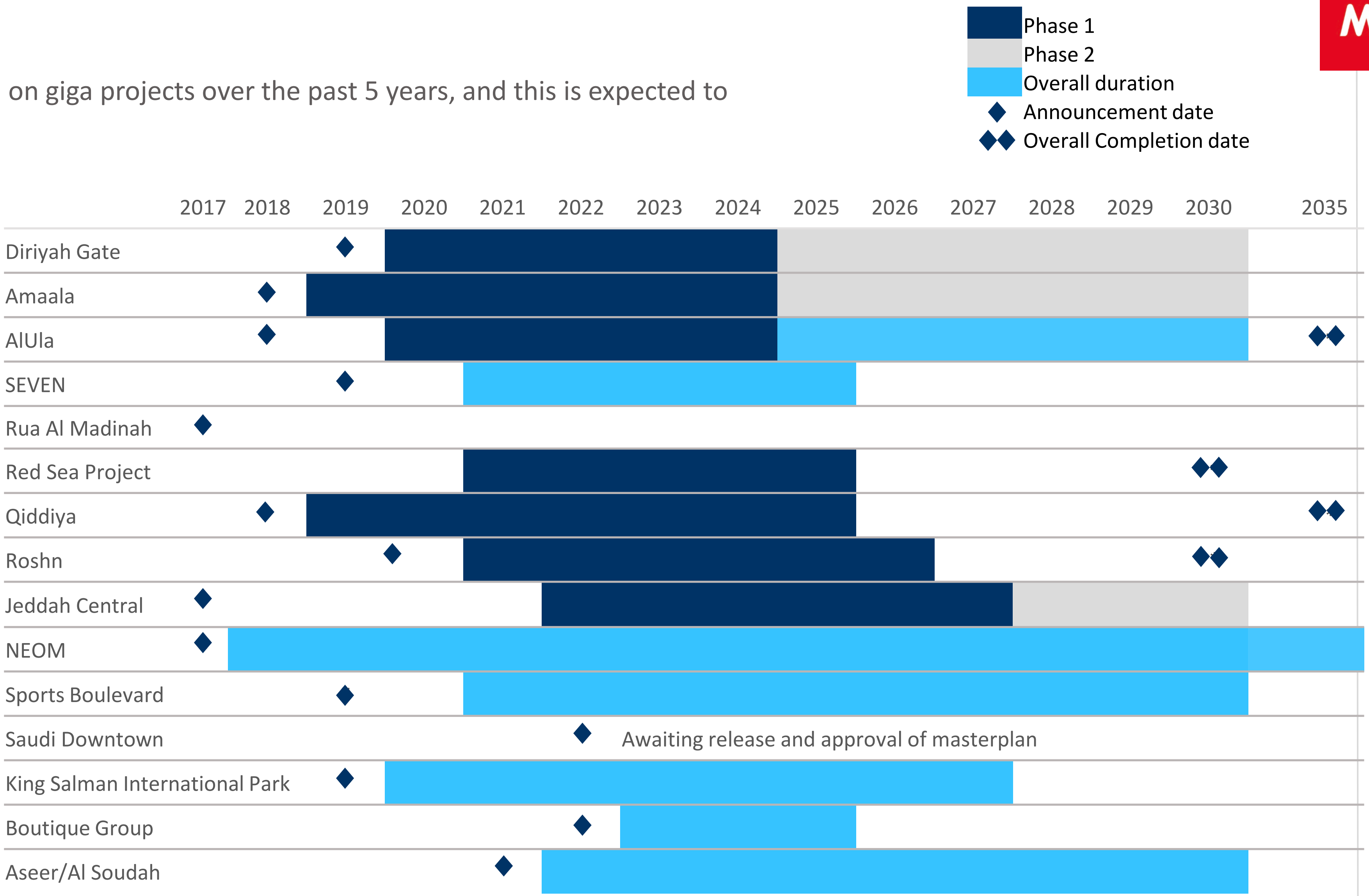
MEED Projects

Saudi Giga Projects

There has been year-on-year growth on giga projects over the past 5 years, and this is expected to continue in 2023 and beyond

Total value of giga project contracts awarded 2018-2022 ($m)





Source: MEED Projects

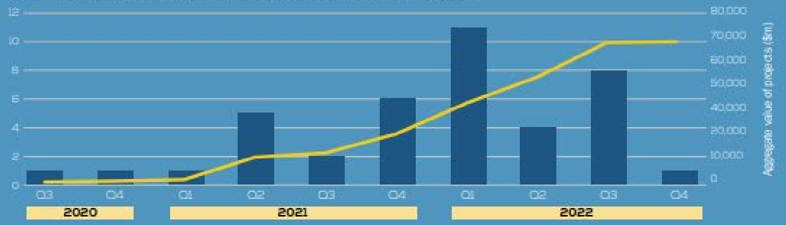
Hydrogen

MARKET SNAPSHOT:
HYDROGEN PROJECTS

The value of all announced hydrogen plants in the Middle East and Africa is estimated at over $70bn and more than $120bn when factoring in associated elements such as air separation units, export facilities and renewable energy complexes

MIDDLE EAST AND AFRICA HYDROGEN PROJECT LAUNCHES BY YEAR AND QUARTER

The acceleration in the market is reflected by the rapid increase in announced projects. In the first quarter of 2022, there was the equivalent of one new project announced a week.



Covers only hydrogen plant element | Source: MEED Projects

ACTIVE PROJECTS

While hydrogen is fast emerging as Mena states seek to take advantage of cheap solar energy and enhance their position as global energy exporters, only two projects so far are under construction (Ain Sokhna pilot and Neom)

SELECTED ACTIVE MIDDLE EAST AND AFRICA RENEWABLE ENERGY PROJECTS

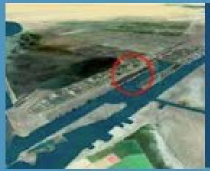
Project	Country	Budget ($m)	Status	Electrolyser capacity (MW)	Renewable energy capacity (MW)	Green hydrogen (t/y)	Ammonia (t/d)	Stakeholders
Green Energy Oman	Oman	28,000	Feasibility	13,000	25,000		27,400	OQ, InterContinental Energy, EnerTech
Amun	Morocco	16,000	Concept		15,000			CWP Global
Acme Group green hydrogen hub	Egypt	13,000	Concept					Acme Group
SCZone hydrogen plant 4	Egypt	11,000	Concept					Globeleq Company
Masdar: Hassan Allam SCZone green hydrogen project	Egypt	10,000	Feasibility			100,000		Masdar, Hassan Allam
RenewPower SCZone green hydrogen project	Egypt	8,000	Concept			220,000		Renew Power, NREA, EETC, TSE
Neom Helios Green Fuels	Saudi	6,500	Execution	2,000	4,000	650,000	3,290	Acwa Power, Air Products, Neom, Baker Hughes, Thyssenkrupp
Posco green ammonia plant	Oman	5,000	Concept		4,000			Posco
H2 Oman	Oman	5,000	Concept	2,200	3,500	1,000,000	2,740	Acwa Power, OQ, Air Products
Engie-Masdar hydrogen hub	UAE	4,200	Concept		200	34,700		Engie, Masdar
Sohar Port/Port of Rotterdam project	Oman	4,000	Concept		3,500			Sohar Port, Port of Rotterdam
Green hydrogen export plant	Saudi	4,000	Concept					PIF, Posco, Samsung C&T
Phelan green ammonia project	Egypt	3,500	Concept				6,849	Phelan Energy Group
SCZone hydrogen plant 1	Egypt	3,500	Concept					Alfanar
1GW waste-to-hydrogen project	Egypt	3,000	Concept			300,000		SCZone, H2Industries
Sasol Boegoebaai Green Hydrogen Project	Saudi	3,000	Concept	2,800		400,000		Sasol, Itochu
Acme green hydrogen and ammonia facility	Oman	2,500	Feasibility				2,200	Acme Group, Tatweer, Scatec
Hyphen green hydrogen complex	Namibia	2,000	Concept			125,000		Enertrag, Nicholas Holdings
Taqa: AD Ports green ammonia plant	UAE	2,000	Concept		577	100,000		Taqa, Abu Dhabi Ports, Thyssenkrupp
Taqa-Emirates Steel	UAE	2,000	Concept					Taqa, Emirates Steel
Sonangol Angola hydrogen project	Angola	2,000	Concept					Sonagol
HDF Energy Swakopmund hydrogen project	Namibia	2,000	Concept					Hydrogene de France

Source: Hydrogen projects 2022 report; MEED Projects. Visit our reports store at buy.meed.com

GREEN ENERGY OMAN

Located in Duqm, Oman, this plant will transform renewable energy through electrolysis to produce 1.8 million tonnes of green hydrogen a year. Production, storage and export of ammonia of up to 10 million tonnes annually is planned. Prequalification of EPC contractors is expected to start in 2025, with first production anticipated in 2028.

Estimated cost:	$28bn
Solar/wind energy capacity:	25GW
Electrolyser capacity:	14GW
Project sponsors:	OQ, Intercontinental Energy, EnerTech
Start date:	2026



H2 WASTE TO HYDROGEN PLANT

This project involves developing a 1GW liquid organic hydrogen carrier hub at Egypt's northern entrance to the Suez Canal. Production of 300,000 tonnes of green hydrogen a year with electricity generated from 4 million t/y of organic waste and non-recyclable plastic is planned. The project is expected to be implemented in three phases with the first phase due for completion by the end of 2026.

Estimated cost:	$3bn
Location:	East Port Said Industrial Zone
Status:	Study
Project sponsor:	H2 Industries
Start date:	2024

KEZAD BROOGE HYDROGEN

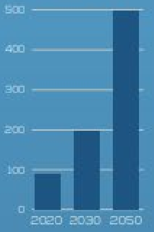
Planned for Abu Dhabi's Khalifa Industrial Zone, this project is anticipated to have a capacity of 300,000 metric tonnes of green ammonia in its first phase. A capacity expansion of up to 600,000 metric tonnes of green ammonia a year is planned under the second phase. Main contract tender issue, as well as commercial bid submission, are expected during Q3 2023.

Estimated cost:	$1.5bn
Ammonia capacity:	822 tonnes a day
Project sponsor:	Brooge Energy
Start date:	2024

FORECAST GLOBAL HYDROGEN DEMAND

Thanks to factors such as net-zero targets, diversity and security of supply, and increasing gas prices, demand for hydrogen is expected to increase dramatically. As more production comes onstream and technology improves, the average cost of green hydrogen is forecast to decrease to about $2 a kilo in 2030 from $5 today

DEMAND GROWTH
Million tonnes a year



Source: IEA

MARKET DRIVERS

MIDDLE EAST & AFRICA HYDROGEN PROJECTS 2023

MEED's latest report helps you make the most of the opportunities in one of the world's largest and most innovative projects markets. The 200-page-plus report includes dozens of tables, graphs and maps, covering each of the hydrogen projects. Please visit buy.meed.com/product/middle-east-africa-hydrogen-projects to purchase.

MEED
Middle East business intelligence

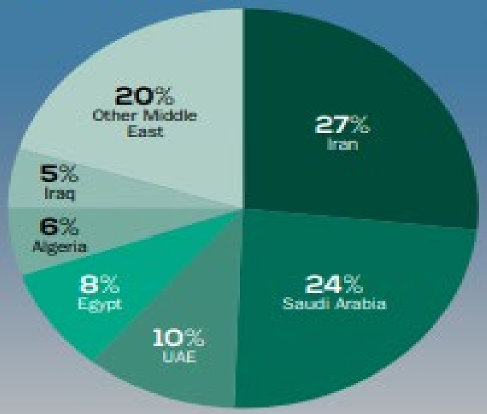
Another major theme has been the emergence of the hydrogen projects sector. There are now more than 40 greenfield hydrogen projects planned in MENA worth in total more than $100bn. It represents the largest future growth sector

www.meedprojects.com

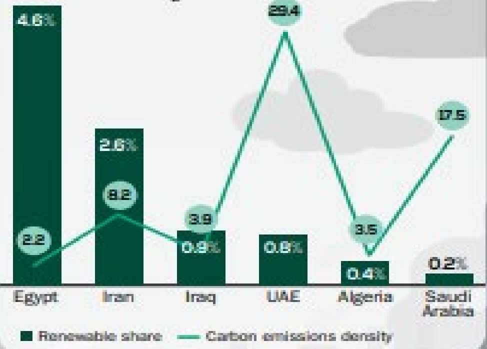
CARBON CHALLENGE

High energy and low renewables use, particularly among the carbon-dense GCC countries, make decarbonisation an uphill battle in the region, but many of the leading polluters also have ambitious emissions reduction targets

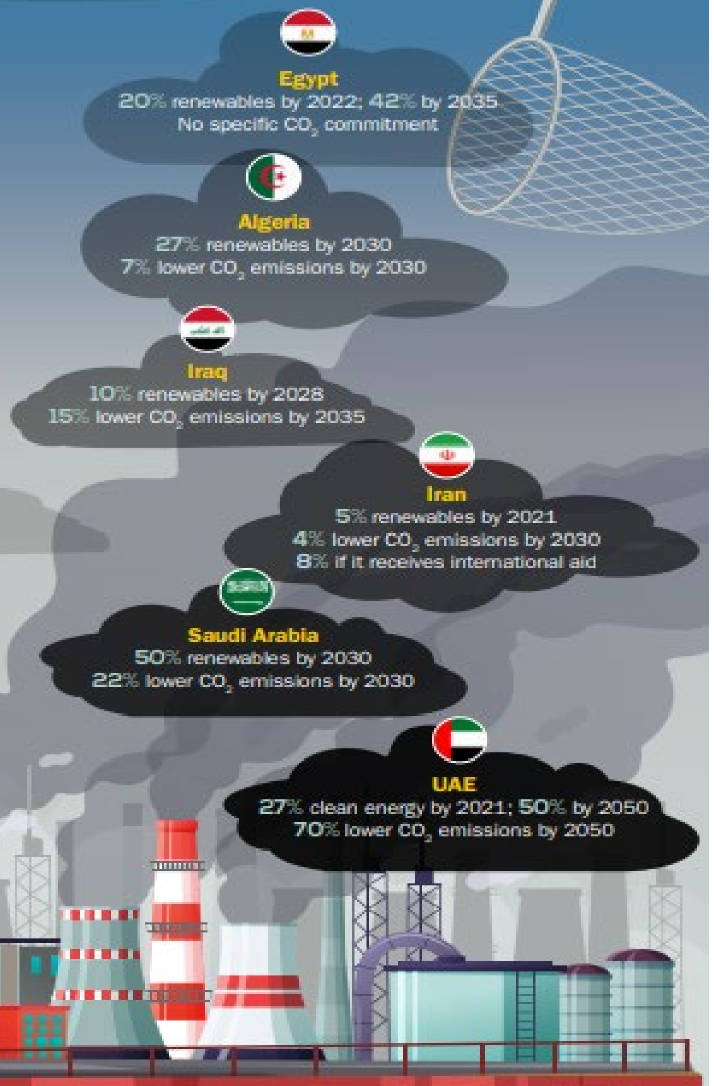
SPLIT OF REGIONAL PRIMARY ENERGY CONSUMPTION



RENEWABLES AS SHARE OF ENERGY MIX (%) AND CARBON EMISSIONS DENSITY (CO_2 TONNES PER CAPITA)

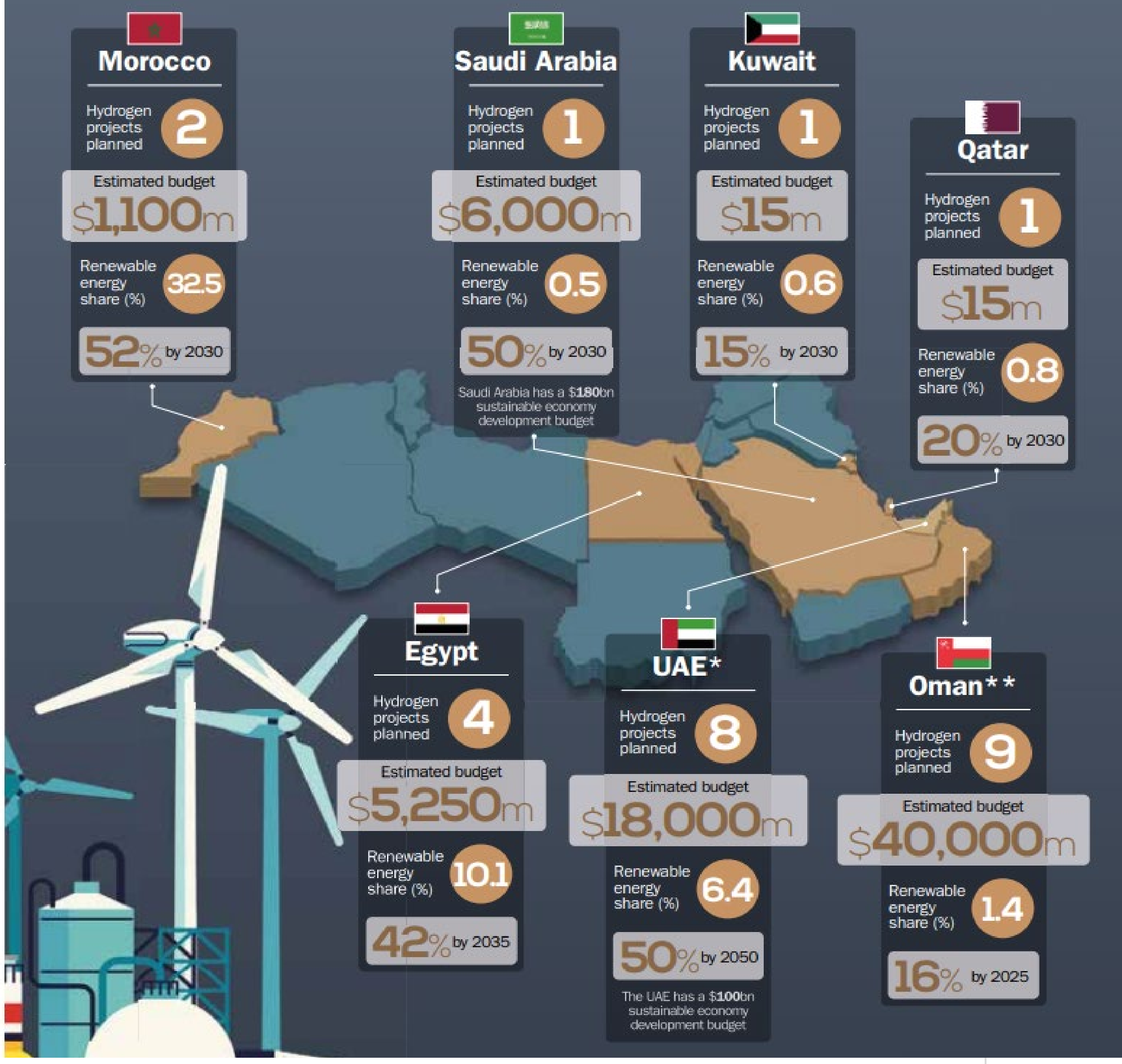


Sources: BP, MEED



GREEN PLANNING

More than a dozen regional governments are now supporting their energy transition with both renewable energy targets and efforts to kick-start their country's hydrogen economy



Other Trends

There are a number of other trends facing the projects market

- Green buildings – increasing emphasis on sustainable construction
- Construction Technology – clients increasingly focused on the use of technologies like robotics, drones, BIM, IoT, 3D Printing which can make construction more efficient and reduce carbon footprint
- ESG – huge focus especially in advance of COP28. Emphasis on ESG in the supply chain, gender equality and opportunity, staff treatment, and demands from clients
- Resources – people and materials, particularly in Saudi Arabia, could be stretched given the expected requirements from the giga projects program
- Modular buildings – MMC, offsite fabrication, pods are increasingly viewed as an efficient and cost-effective means for rapid construction
- PPP – PPP projects are finally spreading beyond the power and water sectors, with the first PPPs in education, roads, healthcare and education either awarded in the past 2 years or in tender

Q&A

Do you have any questions?

Further $100 discount for attendees with code: **WEBINAR100**

Visit **buy.meed.com**
or scan the QR code

SCAN ME

to buy the full **GCC 2023 Planned Projects Awards** report
before 31st January 2023

Ed James
Head of Content
MEED
edward.james@meed.com
Tel: +971 50 661 4048

www.meedprojects.com