



وزارة الطاقة والمعادن  
Ministry of Energy and Minerals

نتقدم بثقة  
Moving Forward  
with Confidence



# Annual Report 2021

COMMITTED TO  
SUSTAINABLE DEVELOPMENT

“We stand today with firm invincible will on the threshold of a vital stage of development and nation building. It is a stage which you all have participated in drawing out its prospects in Oman 2040 Future Vision, and contributed to devising its economic, social and cultural goals, in a manner that embodies a clear-cut vision, great expectation towards a more prosperous future.”

  **Speech of His Majesty Sultan Haitham bin Tarik**  
23 February, 2020





**H. E. Dr. Mohammed Bin Hamad Al Rumhi**  
**Minister of Energy and Minerals**

**We, at the Ministry of Energy and Minerals, are working on enhancing our performance in line with the Ministry's vision to the development and the exploitation of our natural resources, in order to support the national economy and to be aligned with Oman Vision 2040. We were able to achieve the Ministry's objectives and ambitions, by enhancing our continuous and strategic business, which has resulted in increasing the production in oil and gas, adding volumes to our reserves, and supporting sector development projects. Aiming to ensure continuous improvement through using the latest technologies, ensuring quality for the continuous effective production, as well as continuing the efforts in developing the in-country added value programs to localize industries and support local suppliers.**

**We also worked on the plans of developing the clean hydrogen production and its appliance, through the signed agreements and projects. We were able to increase the production of electricity generated from the renewable energies to nearly 2% of the total energy used to produce electricity during this year.**

We have successfully worked with our partners to increase the crude oil and condensate production in 2021 with an average daily production of 971,000 barrels compared to 951,000 barrels in 2020, which increased 2.1%. While Oman's average of natural gas production has reached 132 million cubic meters per day with a total production of 48,238 million cubic meters in 2021.

As we are continuously concerned of enhancing our reserves of Oil and Gas, the exploration and production companies have drilled, tested and evaluated 66 exploration and appraisal oil wells and 14 exploration and appraisal gas wells. The results were promising in a number of them, and exploration were announced in others. Those wells were linked to the production line, to be developed in a later phase, which has provided additional reserves of Oil and Gas. As the total expected reserves of crude oil and condensate have reached (4876) million barrels in 2021 with an increase of 4% compared to Last year, while the expected natural gas reserves in 2021 amounted to 23 trillion cubic feet.

The total production of electricity has reached 42.2 TWh for the year 2021, with an increase of 11% compared to last year. The net production of electricity generated from solar energy has notably increased as a result of operating a new solar energy plant in July 2021, in addition to the operation of Amin solar energy plant of PDO with a capacity of 100 MW. The total net production of electricity generated from solar energy has reached 626,504.3 MWh. In 2021, the Ministry of Energy and Minerals has established a national hydrogen alliance (known as Hy-Fly) which aims to build a strong position for Oman on the map of clean hydrogen production and appliance. It consists of 13 major public and private sector institutions, including government authorities, oil and gas operators, and educational and research institutions, as well as ports, which will work together to support and facilitate the production, transportation, local utilization, and exportation of green hydrogen.

For the minerals sector, the production in 2021 has increased in some of minerals ores by 4.5% compared to 2020. The highest increase witnessed by the production of Gypsum and Limestone with an increase of 2 million tons than the previous year. The total mineral production has reached 60.3 million tons, 57.5 million tons of which were sold with an amount of RO 90.3 million. The in-country value in the energy sector is considered as

a basic pillar and one of the main priorities of the Ministry of Energy and Minerals. The Ministry is looking forward to develop the ICV programs despite the implications of the global pandemic Covid-19. The ICV programs has contributed to encourage local companies to compete upon some of the oil activities, as 16 opportunities were assigned to local companies in 2021. The program has also contributed to create and localize some investment opportunities, where four opportunities were localized in the same year.

As for corporate social responsibility programs, which are implemented under the supervision of Ministry of Energy and Minerals, Outward Bound Center was established in Al Jabal Al Khdhar by the end of 2021 as one of the Ministry CSR projects, in addition to the implementation of two of the four vocation workshops held by the energy and minerals sector for people with special needs in the Wilayats of Salalah and Rustaq, sponsored by PDO, OQ, Occidental Oman, BP Oman, Daleel Petroleum, CC Energy Development & its partners.

One of the important project operated in 2021 is Liwa Plastic Industries Complex of OQ Group, with a total cost of RO 2.7 billion, which was established at Sohar Industrial Port. The completion of the complex comes as part of the government's plans to diversify sources of income and enhance manufacturing industries as one of the investment projects in the petrochemical sector aiming to maximize the value of natural resources in Oman.

On September 21, 2021, the commence of production was announced in the "Yibal-Khuff" project of PDO over an area of 1.68 square kilometer - the second largest project in the company's history and the most complicated one technically. This project- after being fully operated will produce five million cubic meters of gas per day and approximately 20,000 barrels of crude oil per day.

In conclusion , I would like to grant my sincere thanks and appreciation to everyone working in the energy and minerals sector for their hard work in serving the sector, and their commitment to achieve the desired goals. We are pleased with what have been achieved as reflected by the indicators and numbers, and we look forward to continue these efforts to achieve what is best for this beloved country under the wise leadership of His Majesty Sultan Haitham bin Tariq Al Said.

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# Introduction



The Sultanate of Oman since the beginning of the year 2020, has immediately taken all the possible precautionary measures to minimize the negative impact of the pandemic at all levels. A number of policies and measures have been adopted and implemented in order to reduce the impact of the economic contraction and ensure the sustainability of the economic and commercial activities, especially the most affected sectors by the pandemic.

The implementation of most of these measures has continued until the year 2021 to help support the gradual return of the economic and commercial activities, and contribute to the return of the economic growth after GDP contraction with about a percentage of 3.2% during 2020. The recovery phase has improved during 2021 due to higher oil prices, as most macroeconomic indicators witnessed an improvement in their performance in the same year.

The total GDP as per the current prices reached RO 24.2 billion by the end of September 2021, with a growth rate of about 12.7%. As for the sector level, the added value of Oil activities has reached RO 7.4 billion by the end of the third quarter of 2021, registering a growth rate of 26.5% compared to the same period in 2020. The contribution of these activities has formed about 31% of the GDP, at the same time non-oil activities has registered a growth rate of 7.8% by the end of the third quarter of 2021.

The Ministry of Energy and Minerals is paying great efforts to achieve a lot of goals related to the developing and improving the performance of Oil, Gas, Minerals, Electricity and Renewable Energy sectors, which are all important sectors for the national economy. We are pleased to represent in this report the most important indicators and achievements made by these sectors by the end of 2021.

As for the Oil and Gas sector, a number of exploration and production companies have conducted many seismic surveys covering multiple concession areas. The total area size of the conducted 3D seismic surveys has exceeded 6,800 square kilometers by the end of the year .80 exploration and evaluation wells were drilled and studied in the oil and gas sector during the year which has resulted into adding new reserves for Oil and Gas and thus maintaining continuity of production.

Regarding the reserves indicators, the expected reserves of crude oil and oil condensate in Oman have reached around 4,876 million barrels by the end of 2021. While the natural gas reserves have reached about 23 trillion cubic feet by the end of the year. A number of two new petroleum agreements were signed with a number of local and international companies through which the agreed investment amount during the first period is about 20 million U.S. dollars.

The year 2021, has also witnessed an increase in the export volume of crude oil and oil condensate by 0.7% compared to the the same period in 2020. As the export volume reached about 289 million barrels in 2021, compared to 287 million barrels in the same period in 2020. China has topped the countries importing Oman oil during the year 2021, as it imported 84%.of exports.

Aiming at providing job opportunities for Omanis in all oil and Gas companies, the Ministry has set out qualifications plans and training programs to develop the manpower and urge oil companies to recruit the local Omanis instead of the expatriate manpower. The Omanisation rate in the companies operating in both the upstream and downstream of the oil and gas sector has reached 88% in 2021 with an increase in Omani manpower by 3.9% compared to last year.

Despite the impacts facing the Minerals sector during the year 2021 of slowed global growth and declined demand, it has registered a GDP growth rate of 6.2% by the end of the third quarter of 2021 compared to the same period in 2020. Some of Minerals sector indicators have witnessed an improvement in its performance in 2021.The mineral production increased by 4.5%, and the mineral exports has also increased by 0.7% compared to the same period last year. The building materials production has declined by 33% due to the current economic conditions mainly, and the outbreak of the global pandemic of Covid-19. In addition to the decreased demand for these materials as well as the delay of companies in submitting their monthly production reports.

In concern of the number of new licenses issued, the data shows a marked decrease in the number of exploration and mining licenses issued in 2021 compared to the same period last year. Several measures have been taken to ensure the continuous licenses issuance within the preventive measures followed to control the spread of Covid-19.

Based on the latest available data on the electricity sector, the total electricity energy production in 2021 was 42.2 TWh and a net production of 40.7 TWh, with an increase of 11% compared to the previous year.



# Most Significant Events **in 2021**

## Ministry of Energy and Minerals signs an agreement with Shell and its partners for the development of gas concession block 10 in Saih Rawl Field.

December 21, 2021, The Ministry of Energy and Minerals has signed a concession agreement with Shell Integrated Gas Oman BV, a subsidiary of Royal Dutch Shell, along with its partners, OQ and Marsa Liquefied Natural Gas ( a joint venture between Total Energies and OQ). The agreement aims to develop and produce natural gas from Block 10 of the Saih Rawl gas field with a total area of about 1200 square kilometers. The parties also signed a separate gas sales agreement for gas produced from the block. The two agreements follow an interim upstream agreement signed in February 2019.



## Liwa Plastic Industries Complex (LPIC) starts operations in Sohar Industrial Port

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December 20, 2021, The Ministry of Energy and Minerals has celebrated the opening of Liwa Plastic Industries Complex of (OQ Group) in Sohar Industrial Port with a total cost of 2.7 billion OMR. The ceremony was held under the patronage of His Highness Sayyid Asa'ad bin Tariq Al Said, Deputy Prime Minister for International Relations and Cooperation Affairs and Personal Representative of His Majesty the Sultan. The completion of the project comes as part of the government's plans for diversifying the sources of income and enhancing manufacturing industries, as one of the investment projects in the petrochemical sector aimed to maximize the value of natural resources in the Sultanate of Oman.



## The Ministry of Energy and Minerals of Oman and the Ministry of Energy of Belgium signs an MOU in the field of green energy

September 26, 2021, the Ministry of Energy and Minerals of Oman signed a Memorandum of Understanding with the Ministry of Energy of Belgium in the field of green energy.

The MOU stipulates the strengthening of cooperation related to the strategic Hyport project in Duqm, supporting the cooperation efforts made by companies in the Sultanate of Oman and the Kingdom of Belgium to build an international alliance for producing and importing green hydrogen for the Kingdom of Belgium and its neighboring countries.

The MOU also called for the implementation of standards for green certification for the electricity grid, and interaction between universities, scientific research institutions and the private sector of both countries. The cooperation aims to train, educate, and exchange students, promote research and development. In addition to other forms of cooperation and technical training related to the value chain of Belgian Omani green hydrogen companies.



# Yibal-Khuff' Gas Project Starts Production

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Production started at Petroleum Development Oman's Yibal Khuff oil and gas mega project (YKP) in September, 2021. The export of crude oil to the Main Oil Line has begun and the plant's first acidic wells have opened to introduce acidic oil to the Yibal Khuff Central Processing Facility. The YKP is of a high strategic value towards meeting Oman's growing medium and long-term oil and gas demands as well as reducing PDO's net non-associated gas import.



## The Sultanate of Oman and Republic of India signs an MOU in the field of mining

Stemming from the distinguished relations between the Ministry of Energy and Minerals and Rare Earths Limited (IREL) in the Republic of India, a Memorandum of Understanding has been signed on August 12, 2021, to enhance and develop cooperation between Oman and India in the field of mining. The MOU encourage the cooperation in the field of exchanging the laws and regulations endorsed in the two countries regarding the exploitation of mineral resources and the exchange of information on investment opportunities available in both countries.



# Establishment of the National Hydrogen Alliance to drive Oman's National Hydrogen Economy

August 12, 2021, the Ministry of Energy and Minerals has established Oman's National Hydrogen Alliance known as "Hy-Fly" which aims to build a strong position for Oman on the map clean hydrogen production and its appliance. The alliance consists of 13 major public and private institutions including government authorities, oil and gas operators, educational and research institutes, in addition to ports, which will work together to support and facilitate the production, transportation, local utilization and exportation of clean hydrogen.

Hy-Fly will promote clean hydrogen by focusing on investments, technologies, policies and expertise at all the Hydrogen supply chain as it will support the national energy security, decarbonization efforts, and ultimately lead to a successful transition towards a green economy.

This alliance will be led by the MEM, facilitated by PDO's Energy Renewal Unit, in partnership with the Authority for Public Services Regulation, Petroleum Development Oman, Energy Development Oman, OQ Group, Oman LNG, BP Oman, Shell Oman, Total Energies Oman, Sultan Qaboos University, GUtech University, Sohar Port and Duqm Port.



## The Ministry of Energy and Minerals signs a production sharing agreement with Majan Energy

February 8, 2021, the Ministry of Energy and Minerals signed a petroleum agreement in concession Block 71, an area of 282 square kilometers.

The agreement was signed on behalf of the government of the Sultanate of Oman by His Excellency Dr. Mohammed bin Hamad Al Rumhy, Minister of Energy and Minerals, and Ehab Al Haj, Chairman of Majan Energy Company.

The agreement stipulates the company's commitment during the agreement effective period to conduct geological and geophysical studies in the field, drill a number of evaluation and experimental investigation of wells. In addition to the usage of the latest technologies in the field of enhanced recovery of heavy oil located in this area.



# 2021

key indicators of Energy and Minerals  
sectors





# Oil and Gas Indicators



The Sultanate's total reserves of crude oil and condensates are about **4,876 Million barrels**

Average daily production of crude oil and condensates reached **971 thousand barrels**

Total exports of crude oil and condensates touched **289 million barrels**

The average price of Omani crude oil was **USD 64.29**

China topped the list of importing countries at **84%**

Total petroleum products output from Mina Al Fahal and Sohar refineries was **108 million barrels**



Total natural gas reserves are **23 trillion cubic feet**

Average daily production of natural gas was **132 million cubic metres**

LNG exports were **10.6 million metric tonnes**

The Sultanate's production of LPG was **617 thousand metric tonnes**

**Two petroleum agreements** for oil and gas exploration were signed

**80** Exploration and appraisal wells, where **66** are oil wells and **14** are gas wells

The total number of productive fields in the sultanate of Oman are **431**, of which **357 are oil fields** and **74 gas fields**



**Omanisation** in the oil & gas sector reached **88%**

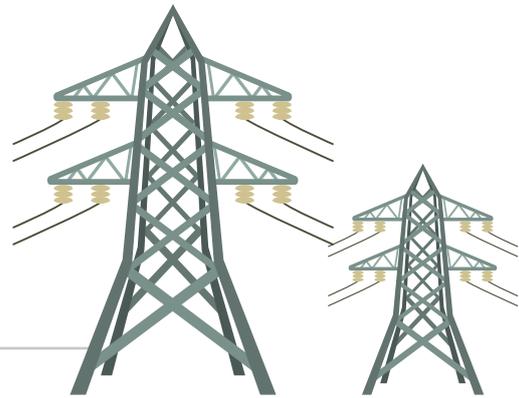


# Electricity and Renewable Energy Indicators





The Electricity  
Net Production of about  
**40,716,720.7 MWH**



The Capacitance  
of about  
**12,960 MW**



Omanisation in the  
electricity sector  
of about **95%**

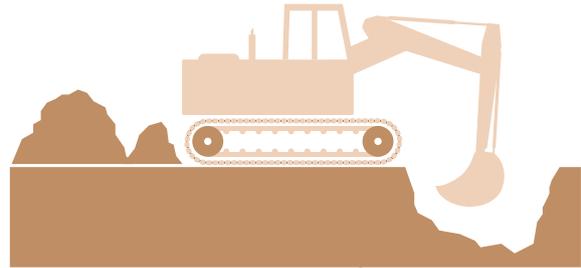
# Minerals Indicators



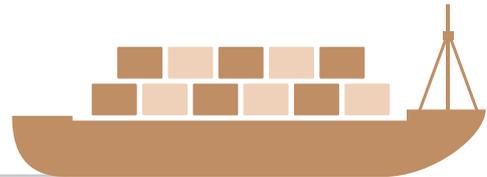
Total production was  
**60.3 Million tons**

Total sales quantity  
was about **57.5 Million  
tons**

Sales values of about  
**90.3 Million R.O**



Exported quantities  
are **37 Million tons**



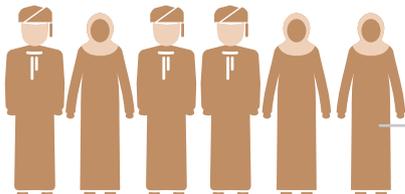
Total Mining  
licenses issued

**13**



Total exploration  
licenses issued

**9**



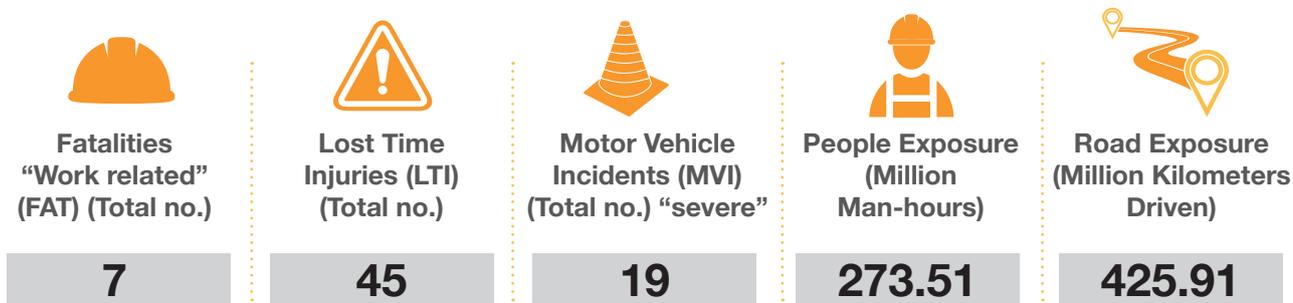
Omanisation in the  
mining sector of  
about **19%**

# Oil and Gas Sector



## Healthy, Safety, Security and Environment (HSSE)

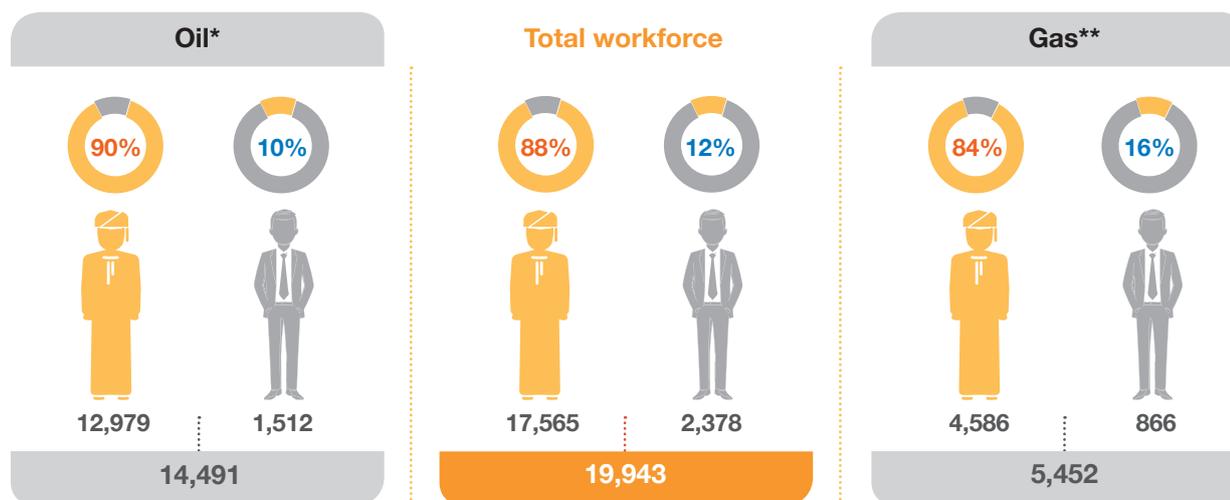
The Ministry of Energy & Minerals emphasizes the importance of adherence to HSSE standards as production operations are prone to risk. The operating companies consider health and safety as one of their main priorities. Therefore, they organize awareness programmers for their employees and develop health and safety procedures in the work environment to protect employees working in the sector from risks, as well as to protect and preserve the environment from harm.



## Omanisation

By the end of 2021, Omanisation in the upstream and downstream businesses of the oil & gas sector reached 88%, an increase of 3.9% in number of Omanis workforce against 2020. These figures do not include the workers in the contracting and services companies operating in the oil & gas sector.

## Workforce volume and Omanisation in the oil & gas sector



\*Includes all production, exploration companies in the oil & gas sector

\*\*Includes O LNG & O QGN

## Companies operating in concession areas

By the end of 2021, 19 companies were involved in oil and gas exploration and production operations in 39 concession areas. Moreover, the Ministry of Energy and Minerals signed two petroleum agreement, as follows:

List of new petroleum agreements in 2021

Company	Concession Area	Date Signing	Investment Value for Phase 1 ( Million USD)
Majan Energy LLC	71	8/2/2021	15
Shell Integrated Gas Oman B.V	10	21/12/2021	5

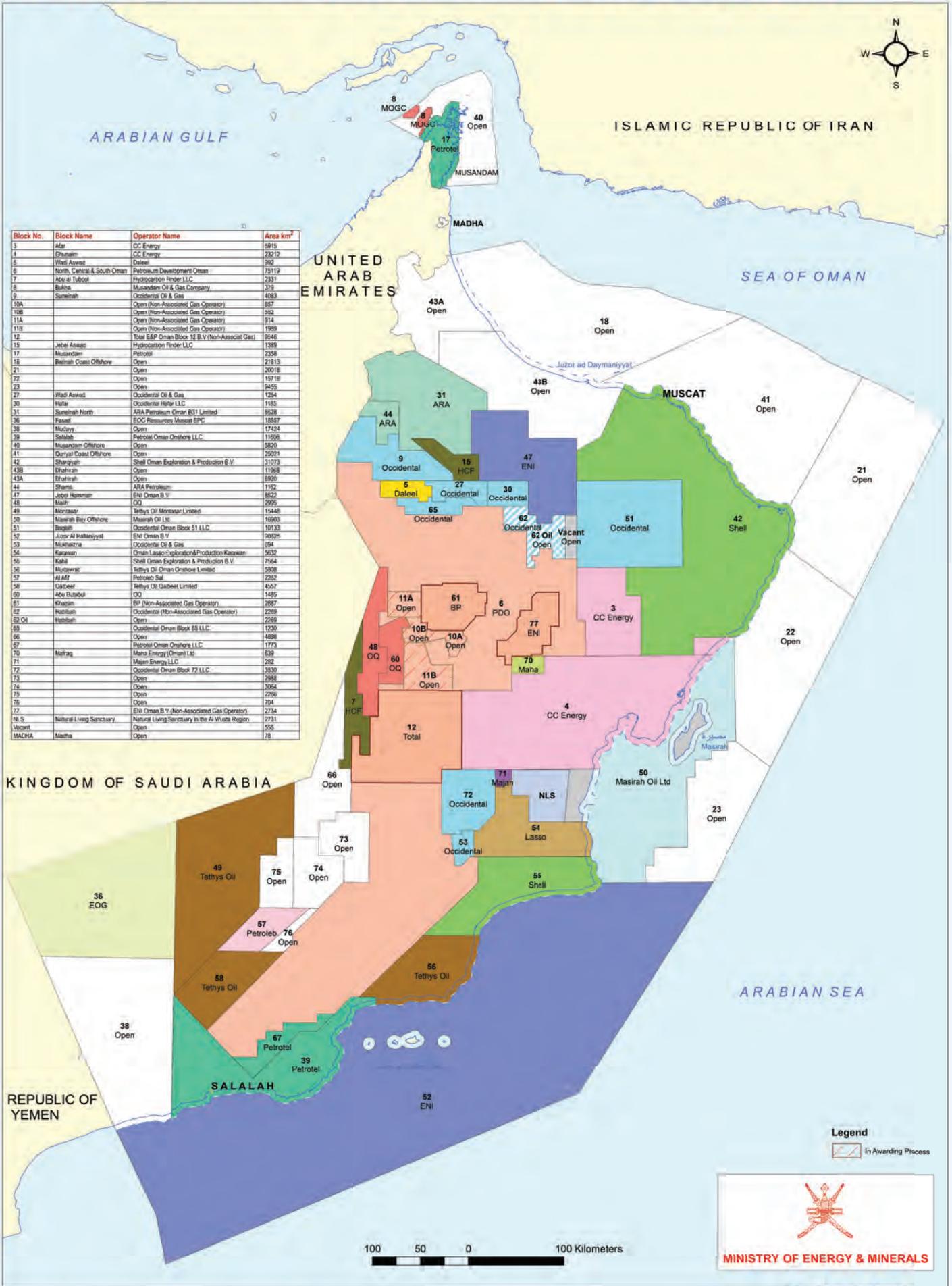
# Oil & Gas exploration and production companies operating in the Sultanate at the end of 2021



Company Name	Blocks	Nationality	Date of Singed EPSA
1 Petroleum Development Oman (PDO)	6	Omani	19/12/2004
2 Occidental Oman	Occidental of Oman, INC 9	American	7/12/1975
	Occidental Oil and Gas (Oman) LTD 27		15/6/1998
	Occidental Hafar, LLC 30		14/11/2017
	Occidental Mukhaizna, LLC 53		21/6/2005
	Occidental Oman Gas Company LLC 62		22/11/2008
	Occidental Oman Block 72, LLC 72		28/2/2019
	Occidental Oman Block 65, LLC 65		16/12/2018
	Occidental Oman Block 51, LLC 51		16/12/2018
3 ARA Petroleum	ARA Petroleum LLC 44	Omani	21/7/2002
	ARA Petroleum Oman B31 Limited 31		14/11/2017
4 Daleel Petroleum LLC	5	Oman/China	7/8/2019
5 EOG Resources Muscat SPC	36	American	10/8/2011
6 CC Energy Development S.A.L *	3 , 4	Lebanese	9/2/2003
7 Hydrocarbon Finder E&P	15	Omani	06/09/2005
	7	Omani	28/1/2016
8 BP Exploration ( Epsilon)	61	British	22/1/2007
9 Petrotel Oman	PetroTel Oman LLC 17	American	23/5/2009
	PetroTel Oman Onshore LLC * 39		26/3/2013
	67		
10 Masirah Oil Ltd	50	British	28/2/2011
11 Shell Development Oman	Shell Development Oman B.V. 42	Holland	11/10/2011
	Shell Development Oman B.V. 55		10/10/2019
	Shell Integrated Gas Oman B.V. 10		21/12/2021
12 OQ	60	Omani	19/3/2011
	48		31/01/2017
	Musandam Oil and Gas company LLC 8		1/1/2019
14 Tethys Oil	Tethys Oil Montasar Limited 49	Sweden	14/11/2017
	Tethys Oil Qatbeet Limited 58		5/7/2020
	Tethys Oil Oman Onshore Limited 56		20/11/2014
13 Oman-Lasso E&P Karwan Limited	54	American	22/9/2015
15 ENI Oman	ENI Oman B.V. 52	Italian	14/11/2017
	ENI Oman B.V. 47		14/1/2019
	ENI Oman B.V. 77		31/7/2019
16 Petroleb SAL	57	Lebanese	10/1/2018
17 Total E&P Oman Block 12 B.V.	12	France	19/2/2020
18 Maha Energy Oman Ltd	70	Sweden	5/10/2020
19 Majan Energy LLC	71	Omani	8/2/2021

\*Two Blocks in one EPSA

# SULTANATE OF OMAN CONCESSION BOUNDARIES



Block No.	Block Name	Operator Name	Area km <sup>2</sup>
3	Atar	OC Energy	4915
4	Chunam	OC Energy	23212
5	Wadi Aswad	Daleel	892
6	North, Central & South Oman	Petroleum Development Oman	73119
7	Alu al Tuboof	Hydrocarbon Finder LLC	2331
8	Bukha	Musandam Oil & Gas Company	378
9	Sunehah	Occidental Oil & Gas	4083
10A		Open (Non-Associated Gas Operator)	857
10B		Open (Non-Associated Gas Operator)	302
11A		Open (Non-Associated Gas Operator)	914
11B		Open (Non-Associated Gas Operator)	1989
12		Total E&P Oman Block 12 B.V (Non-Associated Gas)	2546
15	Jebel Asaah	Hydrocarbon Finder LLC	1389
17	Musandam	Petrorel	2358
18	Balnah Coast Offshore	Open	21813
21		Open	40018
22		Open	13718
23		Open	9455
27	Wadi Aswad	Occidental Oil & Gas	1254
30	Hafir	Occidental Harir LLC	1185
31	Sunehah North	ARA Petroleum Oman B31 Limited	8528
36	Faaid	EOG Resources Muscat SPC	18557
38	Mudary	Open	17434
39	Salah	Petrorel Oman Onshore LLC	11608
40	Musandam Offshore	Open	5621
41	Qubail Coast Offshore	Open	29501
42	Sharghal	Shell Oman Exploration & Production B.V.	31073
43B	Dhahran	Open	11968
43A	Dhahran	Open	8520
44	Shams	ADA Petroleum	1152
47	Jebel Haganjar	ENI Oman B.V.	8622
48	Mah	OO	2995
49	Morshar	Tethys Oil Morshar Limited	15448
50	Masirah Bay Offshore	Masirah Oil Ltd	16903
51	Baqah	Occidental Oman Block 51 LLC	10133
52	Juzor Al Mallahiyat	ENI Oman B.V.	30925
53	Mushayra	Occidental Oil & Gas	594
54	Karman	Oman Lasso Corporation & Production Karaman	3532
55	Kahl	Shell Oman Exploration & Production B.V.	7564
56	Mudawani	Tethys Oil Oman Onshore Limited	5808
57	Al JAF	Petrorel Sal	2262
58	Qadaf	Tethys Oil Qadaf Limited	4557
60	Alu Subah	OO	1485
61	Khagan	BP (Non-Associated Gas Operator)	2887
62	Hadhah	Occidental (Non-Associated Gas Operator)	2269
63	Hadhab	Open	2268
65		Occidental Oman Block 65 LLC	1720
66		Open	4888
67		Petrorel Oman Onshore LLC	1773
70	Mafraq	Maha Energy (Oman) Ltd	539
71		Majan Energy LLC	262
72		Occidental Oman Block 72 LLC	3530
73		Open	2988
74		Open	3064
75		Open	2286
76		Open	704
77		ENI Oman B.V. (Non-Associated Gas Operator)	2734
NLS	Natural Living Sanctuary	Natural Living Sanctuary in the Al Wusta Region	2731
Vacant		Open	555
MADHA	Madha	Open	78

This map is not an authority on international boundaries.

Print Date : 21-Sep-2021

## Oil sector

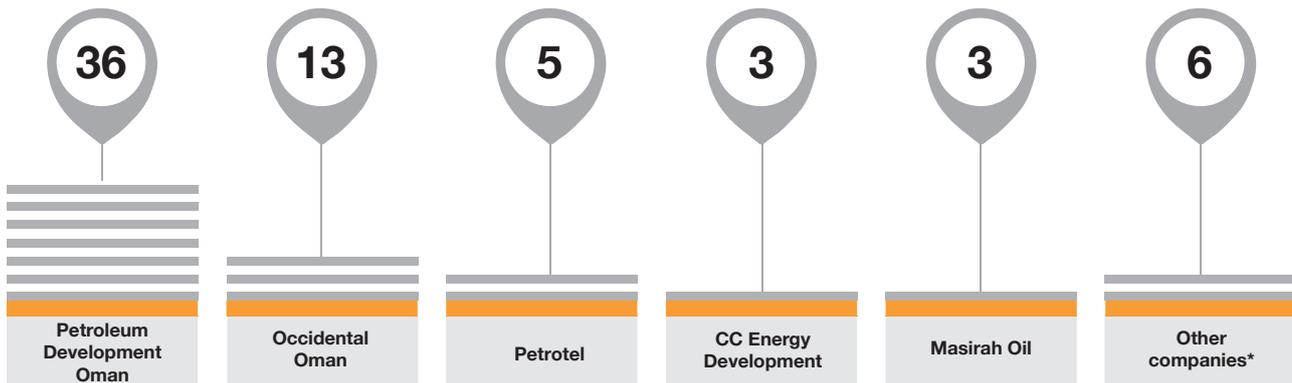
1. Exploration
2. Reserves
3. Production
4. Crude oil and condensates exports
5. Price of Omani crude oil
6. Refining industry



### 1. Exploration

Oil and Gas companies operating in the concession areas in 2021 drilled, tested and evaluated 66 exploration and appraisal oil wells, including some wells that were drilled previously, tested and evaluated in 2021. The petro-physical analysis and productivity tests in some of the wells showed positive results, which added new oil reserves.

#### Number of exploration and appraisal wells of each company in the oil sector for the year 2021



\*Others companies Includes (Daleel Petroleum, ARA Petroleum, Tethys Oil, EOG company)

### 2. Reserves

The total reserves of crude oil and condensates in the Sultanate amounted to about 4876 Million barrels increasing by 4% in comparison with 2020. Petroleum Development Oman contributes about 64.4% of the total reserves of the year.

#### Expected reserves of crude oil & condensates at the end of 2021



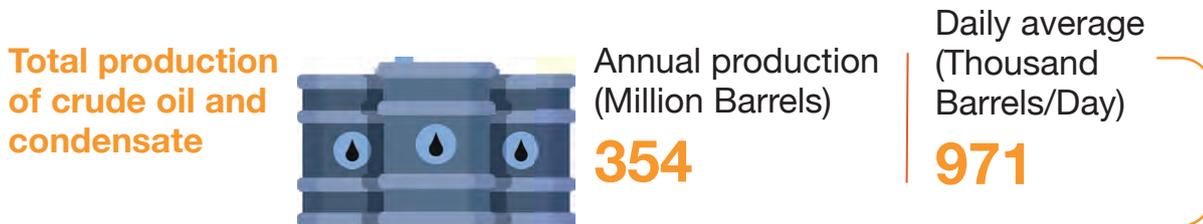
Expected Reserve  
(Million Barrels)

**4,876**

### 3. Production

The average daily production of crude oil and condensates during 2021 is amounted to 971 thousand barrels per day against 951 thousand barrels per day in 2020, by an increase of 2.1%. The Sultanate maintained its level of oil production in compliance with the agreement to curb output among the OPEC and non-OPEC producers in order to stabilise the international oil supply and demand.

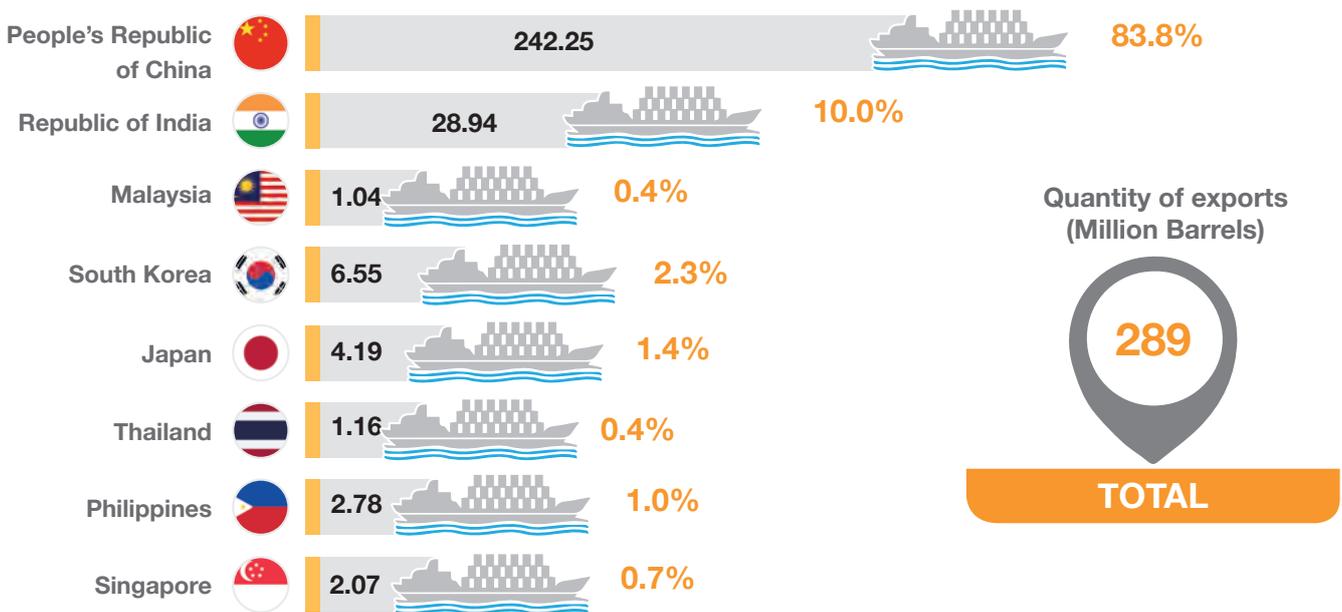
#### Production of crude oil & condensates at the end of 2021



### 4. Crude Oil & Condensates Exports

The total exports of crude oil and condensates during 2021 amounted to 289 million barrels. People’s Republic of China topped the list of the countries importing crude oil from Oman; with 83.8% followed by Republic of India with 10%, the rest of the countries represented 6.2% of the total exports of crude oil and condensates in 2021.

#### Exports of crude oil and condensates as per importing countries in 2021



### 5. Price of Omani Crude Oil

In 2021, the average price of Omani crude oil reached USD 64.29 per barrel, increasing by 40% against 2020. Omani crude oil prices averaged at a minimum of USD 43.83 per barrel in January and a maximum of USD 81.58 per barrel in December.

#### Average prices of Omani crude oil for the year 2021



USD per barrel

Average: 64.29

## 6. Refinery Industry

### 6.1 Production

Total petroleum products output of Oman Oil Refineries and Petroleum Industries Affiliate of OQ Company about 108 million barrels. The contribution of Mina Al Fahal Refinery was 29 million barrels, and Sohar Refinery contribution was 79 million barrels. The production of gas oil (diesel) was about 31% of the total production of the two refineries and industries Affiliate of OQ Company for the year 2021.

#### Production of Oman Oil Refineries and Petroleum Industries Company in 2021



Petroleum products	Quantity (Million Barrels)	%
Gas oil (diesel)	33	31%
Long residue	14	13%
Regular gasoline ( 91)	15	14%
Premium gasoline (95)	12	11%
Aviation fuel	6	5%
Naphtha	13	12%
LPG (cooking gas)	6	5%
Propylene	4	4%
Pet Coke	3	3%
Others*	2	2%

108

TOTAL

\*Others Includes: (bitumen, fuel oil, solid sulphur, isomerate, heavy raffinate, products of LP complex)

### 6.2 Domestic Sales of Petroleum Products

\*\*The total sales of petroleum products during 2021 amounted to 37 million barrels, of which 1 million barrels were sold by Mina Al Fahal Refinery, and 36 million barrels were sold by Sohar Refinery. OQ sales of naphtha presented 35% of the total domestic sales of petroleum products in 2021.

#### Domestic sales of petroleum products of Oman Oil Refineries & Petroleum Industries Company in 2021



Petroleum products	Quantity (Million Barrels)	%
Propylene	3	8%
Gas oil (diesel)	4	11%
Naphtha	13	35%
Regular gasoline (91)	3	8%
Premium gasoline (95)	3	8%
LPG	3	8%
Others*	8	22%

37

TOTAL

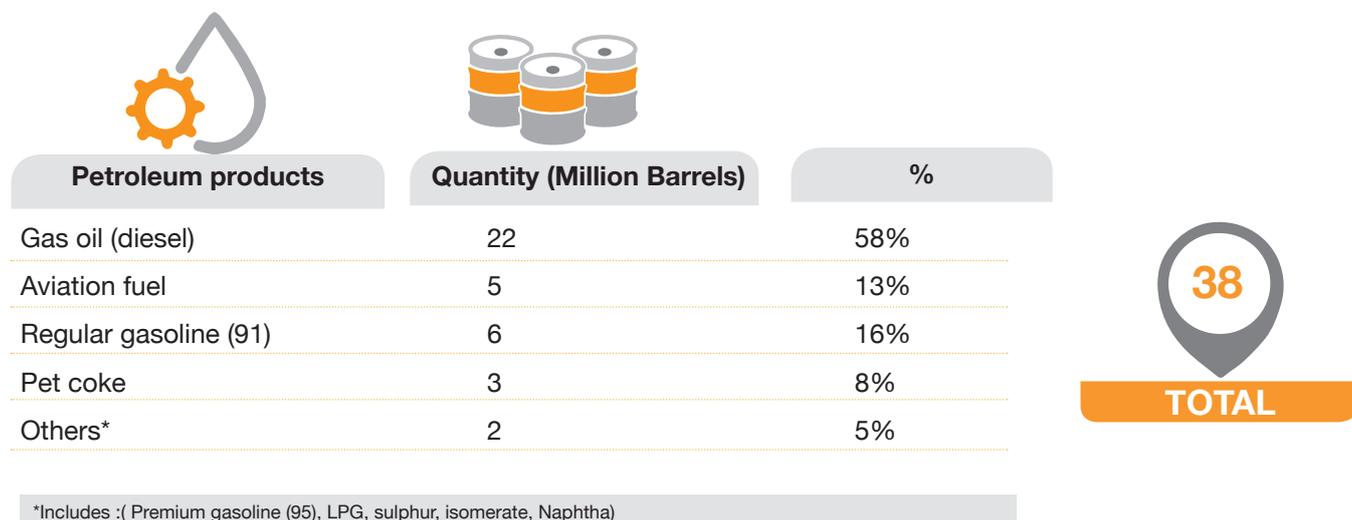
\*Includes oil jet, solid sulphur, raffinate, isomerate, ptrolum products sales to LP complex.

\*\*Does not include sales to MAF, Raysut Port and Jifnain Station, Residual oil after liquidation (re-injection)

## 6.3 Exported Quantities of Petroleum Products

The total quantities of petroleum products exported during 2021 by Oman Oil Refineries and Petroleum Industries Company through Sohar Refinery amounted to 38 million barrels, and 0.3 million barrels by Sohar Refinery. Exports of gas oil (diesel) represented 58% of the total quantities of petroleum products exported in 2021.

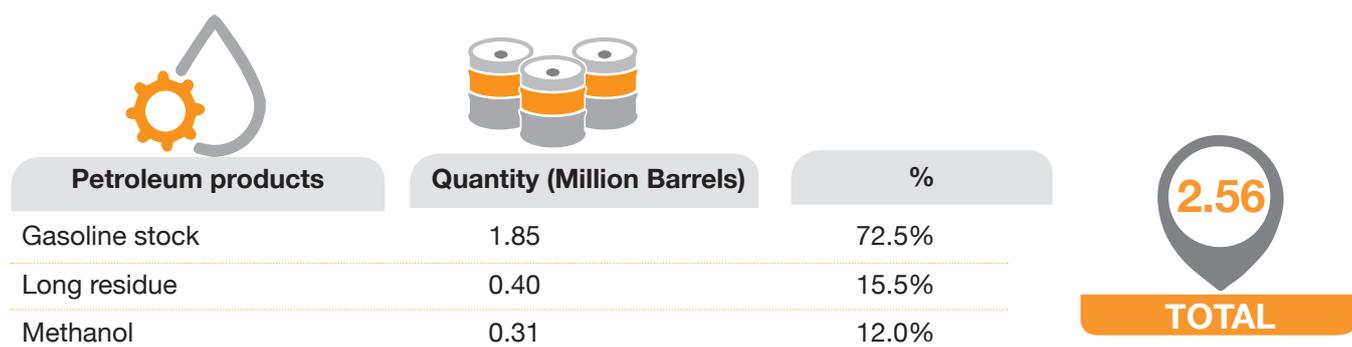
### Petroleum products exported by Oman Oil Refineries & Petroleum Industries Company in 2021



## 6.4 Imported Quantities of Petroleum Products

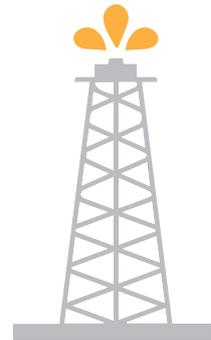
The total quantities of petroleum products imported by Oman Oil Refineries & Petroleum Industries Company through Sohar Refinery during 2021 reached 2.56 million barrels.

### Petroleum products imported by Oman Oil Refineries & Petroleum Industries Company in 2021



## Gas Sector

1. Exploration
2. Reserves
3. Production
4. Consumption
5. Exports of Liquefied Natural Gas (LNG) and Natural Gas Liquid (NGL)
6. Production of Liquefied Petroleum Gas (LPG)



### 1. Exploration

The oil and gas companies operating in the concession areas in 2021 drilled, tested and evaluated 14 exploration and appraisal gas wells, including wells that were drilled previously, tested and evaluated in 2021. The analysis and productivity tests in some of the wells showed positive results, which added new gas reserves.

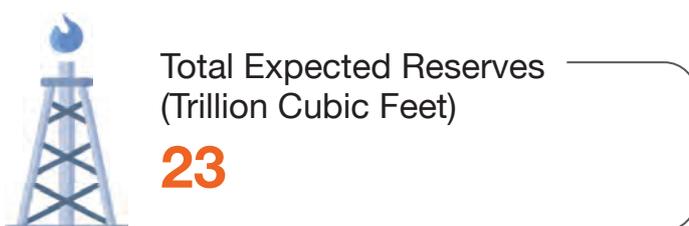
#### Number of gas exploration and appraisal wells in gas sector for the year 2021



### 2. Reserves

The expected reserves of natural Gas in the Sultanate at end of 2021 amounted to be 23 trillion cubic feet, Petroleum Development Oman contributes about 55% of the total reserves of the year, followed by BP Khazzan and Ghazeer with 39 %, and 6 % of other companies.

#### Expected reserves of natural gas at the end of 2021

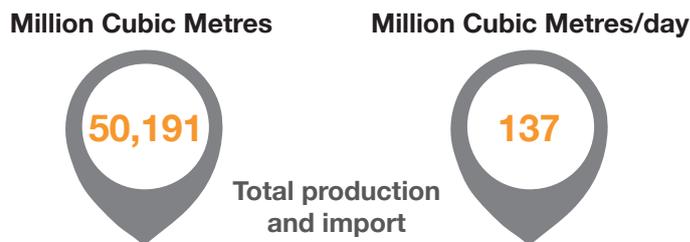


### 3. Production

The Sultanate’s average production of natural gas during 2021 amounted to 132 million cubic metres per day, 18.9% of which was associated gas at an average of 25 million cubic metres per day. Non-associated gas constituted 81.1% of the total production at an average of 107 million cubic metres per day. In addition, by an average 5 million cubic metres per day of natural gas was imported through Dolphin Energy Company.

#### Natural gas production and import in 2021

Details 	Production  (Million Cubic Metres)	Daily average  (Million Cubic Metres/day)
Total associated gas	9,211	25
Total non-associated gas	39,027	107
Total production	48,238	132
Total import through Dolphin Energy	1,953	5



### 4. Consumption

The total consumption of natural gas during 2021 reached 50,191 Million cubic metres. Oman LNG and Qalhat LNG projects ranked highest in terms of natural gas consumption, accounting for about 15,822 million cubic metres, 31.5% of the total consumption in 2021, followed by local industrial projects, with 26.8% consumption, 25.6% for field operations and other uses, and 15.7% for power and desalination plants. Consumption at industrial areas constituted only 0.4% of the total consumption of natural gas in 2021.

#### Consumption of natural gas as per consumers in 2021

Consumer 	Production  (Million Cubic Metres)	%	Million Cubic Metres  <b>TOTAL</b>
LNG*	15,822	31.5%	
Power and desalination plants	7,885	15.7%	
Local industrial projects	13,424	26.8%	
Industrial areas	222	0.4%	
Field operations and other use	12,838	25.6%	

\*Includes Oman LNG & Qalhat LNG

## 5. Export of Liquefied Natural Gas and Natural Gas Liquids

Total exports of LNG during 2021 amounted to 10.6 million metric tonnes in 163 shipments. The exports of Natural Gas Liquids were 0.189 million metric tonnes in 29 shipments. At the end of 2021, Oman LNG represented 73% of the total liquefied natural gas exports, while Qalhat LNG accounted for about 27% of the total.

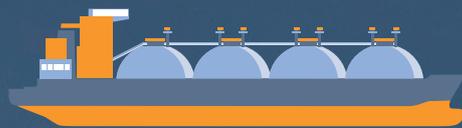
### Exports of Liquefied Natural Gas in 2021

Exports of Liquefied Natural Gas (LNG) (million metric tonnes)

7.67

Number of shipments

119



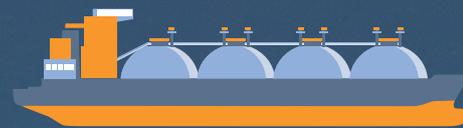
Oman LNG

Exports of Liquefied Natural Gas (LNG) (million metric tonnes)

2.89

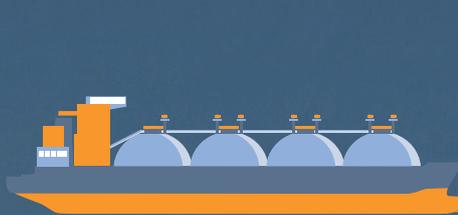
Number of shipments

44



Qalhat LNG

### Exports of Natural Gas Liquids in 2021



Oman LNG

Number of shipments  
30



## 6. Production of Liquefied Petroleum Gas (LPG)

The total production of LPG during 2021 reached 617 thousand metric tonnes. Quantities produced by Oman Oil Refineries and Petroleum Industries Company (Mina Al Fahal and Sohar) constituted 531.9 thousand metric tonnes, i.e. 86% of the total LPG production, followed by 14% for the rest of the companies.

### Production of Liquefied Petroleum Gas by company & source in 2021

Company 	Source	Quantity  (thousand metric tonnes)
OQ	Sohar Refinery	471.2
	Mina Al Fahal Refinery	60.7
Petroleum Development Oman	Saih Rawl Field	34.2
Daleel Petroleum	Wadi Aswad Field	45.2
MOGC	Bukha & West Bukha	5.7

Quantity (thousand metric tonnes)

617

TOTAL



# Major Projects in the Oil & Gas Sector

The Oil and Gas industry has been the foreground of economic diversification in ensuring sustainable development. Going on with this clear objective, the Ministry has sought to supervise the implementation of many projects with oil and gas operating companies.

To achieve in-country value, create job opportunities and find sustainable oil and gas production, the Ministry as an industry leader ensures the necessity of keeping pace with the new technologies and establishing new projects, that add quality and ensure continuity of production. The following are the most major oil and gas projects undertaken by the operators.







# شركة تنمية نفط عُمان Petroleum Development Oman

The major highlight was the inauguration of the Yibal Khuff mega project, the second largest and most technically complex in our history, which started producing in September 2021. When fully operational, the project deliver five million cubic metres of gas per day and around 20,000 bpd of crude, in addition to extracting 235 tonnes of sulfur per day.

This project has achieved several significant firsts, including the delivery of the tallest column ever fabricated for PDO in Oman. It has also delivered one of PDO's first Steam Turbine Generators, taking the heat from some of the facilities' processes and using it to generate steam. Some 1,200 Omanis have been employed on the site during construction with a further 200 nationals deployed as fully qualified welders. Around US\$400 million was also awarded to Omani companies for the provision of goods and services.

Since its successful commissioning in 2020, our ground-breaking Amin 100-megawatt (MW) Photovoltaic (PV) Power Plant has generated over 340 TWh of solar energy in 2021 alone. This is expected to provide an equivalent annual gas saving of 95.5 million cubic metres.

PDO also delivered another solar voltaic facility at our Mina Al Fahal headquarters in 2021, bringing the total installed capacity at the Coast to 10 MWP. Unlike our earlier MAF solar developments, the Wahaj plant is fixed on a ground-mounted structure rather than as part of a carpark shade. It consists of multiple cutting-edge technologies such as bifacial half-cut PV modules and a single-axis solar tracking system. White gravel is laid below the panels to increase the power gain from direct and reflected solar irradiations.

All target project milestones in the Oil North, Oil South and Gas assets' portfolios were fully delivered, while the Marmul Polymer Phase 3 scheme began the introduction of hydrocarbons from existing wells.





The 2021 program resulted in six discoveries; distributed as three discoveries in Block 9 and three discoveries in Block 65 for the year. Oxy Oman completed 3D seismic acquisition in Blocks 30 & 62 ahead of schedule and with zero HSE incidents.

The 2021 Mukhaizna facilities work focused on kicking off the Thulielat Handling Facilities project, with related off-plot infrastructure of the new wells, field improvement projects, permanent power conversions, and Garif debottlenecking scopes. As part of the Permanent Power project, 172 wells were converted from diesel generators.

In addition, Oxy Oman commenced the execution of Thulielat water flood expansion scope and expansion of the Casing Vapor Recovery (CVR) network. Several debottlenecking projects were also progressed for the base oil production facilities and in the off-plot gathering infrastructure.

The Oman North 2021 program primarily focused on Developing Production Gathering Facilities by expanding Safah South Wedge E area, Water Flood EOR Surface Facilities (FW water injection pumps, Al Barakah WI pumps), progressing additional Gas Compression Facilities (FW rental compressors and Jalal/WL compressors) and conversion of diesel-powered wells to electric power.

The program expanded Safah South Wedge E gathering capacity by an additional 15,000 BPD to support development drilling in this area. Additionally, 43 wells were hooked up to permanent power.



# دليل للنفط ش.م.م. DALEEL PETROLEUM L.L.C.

## Additional Water Injection Pumps:

The objective of the project is to install two electric driven water injection pumps in B-Block to cater the increases of water injection demand and to reduce the dependence on the gas engines driven water injection pumps due to frequent failure of the gas driven pumps. Both pumps were commissioned successfully between Oct 2021 & Jan 2022.





## Growth Project

### Duqm Refinery (OQ8)

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Duqm Refinery Project is being located in the Special Economic Zone Authority of Duqm (SEZAD), 600 km south of Muscat on the Arabian Sea coast of Sultanate of Oman. Once the refinery is completed, it will have the capacity to process around 230,000 barrels of crude oil per day. Diesel, jet fuel, naphtha LPG, Sulphur and Petcoke are to be its primary products.

**Investment: USD 8.3 Bn**

**Overall project progress till end 2021 is 89%**

### OQ AMMONIA

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OQ Ammonia project, which is being built adjacent to the methanol plant in Salalah, will utilize hydrogen rich purge gas generated by the methanol plant as feedstock making it capable of producing ammonia. The ammonia plant is utilizing commercially proven technology from Linde AG holding Haldor Topsoe license and has a design life of 20 years.

**Investment: USD 463 Mn**

**Overall project progress till end 2021 is 98%**

### OTTCO

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OTTCO, part of OQ group of companies, is Oman's independent tank storage company. It emerged in 2014 with the objective to develop Oman's Crude Oil Hub in Ras Markaz, 70km south of Duqm, with a potential total storage capacity of up to 200 million barrels. The first phase of the development, with a designed capacity of 25 million barrels, is partly used to accommodate for the crude oil supply to OQ8 refinery in Duqm. We are determined to develop key storage infrastructure solutions in Oman whereby we partner with local and international companies in the hydrocarbon sector to increase value for the shareholders and reap greater benefits for the communities.

**Investment: USD 524 Mn**

**Overall project progress till end of 2021 is 81%**

# IN-COUNTRY VALUE Programme

The energy and minerals sector continues its efforts in promoting and supporting the in -country value, despite the challenges faced by the sector considering the COVID-19 pandemic, which had a direct and negative impact on most economic and social aspects in the Sultanate. The sector has continued to attain several achievements in the fields of Omanisation and the local supplier’s development program. The following are the major projects and programs that have been achieved in the current year so far:

## Localization of industries and services:

- Manufacture of Cable Trays
- Manufacture of Integrated Skids
- Manufacture of Overhead Line Insulators (33 KV)
- Establishment of Special Materials Testing Laboratory

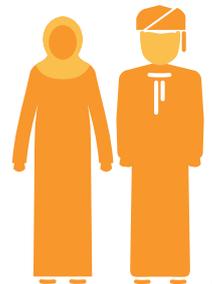


## Local Suppliers Development Program:

- Pit Less Drilling Technology
- Well Stimulation

## In addition to a number of other achievements:

- The In-Country Value Program has contributed to the increase of expenditure in small and medium enterprises (SMEs), to reach approximately 14% of the total expenditures.
- The program has contributed to encourage local companies to compete in some oil activities, as around 16 opportunities were allocated for local companies.
- The program has helped with the creation and the localization of some oil investment opportunities, including 4 opportunities during 2021.



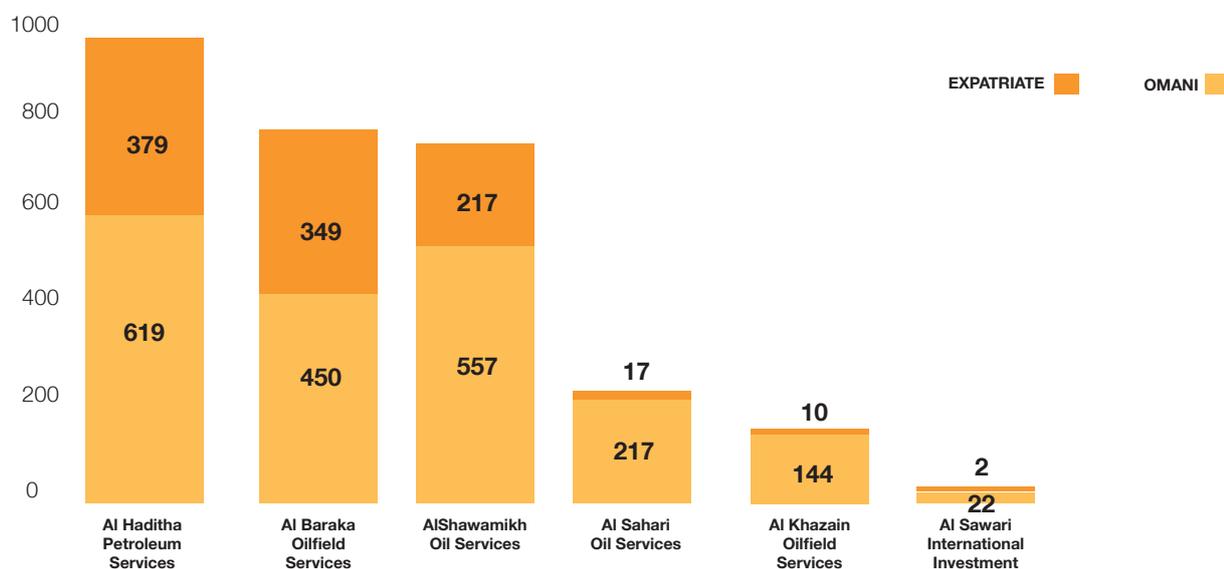
## Super Local Community Contractors (SLCC)

The Super Local Community Contractors are closed joint stock companies that are established by locals from the concession areas. The number of shareholders in these companies as at the end of 2021 stood at 9,400. These companies provide a wide range of basic services including logistics, electrical, equipment rent, road maintenance, civil and construction services, oilfield maintenance and pipelines maintenance.

They are playing a key role by diversifying the sources of income for citizens residing in the concession areas, replacing international companies with local companies and providing opportunities to the local companies to move up in the value chain in the oil & gas industry, apart from providing training and jobs & skills development opportunities. Almost 2009 Omanis are working in these six SLCCs including Al Haditha, Al Baraka, Al Shawamikh, Al Sahari, Al Khazain and Al Sawari.

Company	Concession Areas and states nearby	No of share holders	Capital (RO)	Contract Value	Production (Million Cubic Metres)	Daily average (Million Cubic Metres/day)
AlShawamikh Oil Services	North Concession Area, Adam-Ibri-Bahla	1596	4,048,783	358	PDO	<ul style="list-style-type: none"> <li>• Hoists</li> <li>• Pipelines maintenance</li> </ul>
Al Haditha Petroleum Services		3017	5,367,288	333	PDO	<ul style="list-style-type: none"> <li>• Flow line replacement</li> </ul>
Al Baraka Oilfield Services	South of Concession Area Shaleem and Halaniyat Island	1168	3,499,990	529	PDO	<ul style="list-style-type: none"> <li>• Hoist</li> <li>• Flow line replacement</li> </ul>
Al Sahari Oil Services	South of concession area Thumrait and Maqshan	2059	4,751,295	152	PDO	<ul style="list-style-type: none"> <li>• Oilfield maintenance services</li> </ul>
Al Khazain Oilfield Services	Middle of concession area Haima & Al Jazir	1189	4,000,000	-	OXY	<ul style="list-style-type: none"> <li>• Hoist</li> <li>• Logistic services</li> </ul>
Al Sawari International Investment	Middle of concession area , Duqm and Mahout	371	383,300	-	CCED	<ul style="list-style-type: none"> <li>• Logistic services</li> </ul>

## Workforce and Omanisation percentage at SLCC in 2021



# Corporate Social Responsibility (CSR)



The Ministry of Energy and Minerals has continued its efforts in the role of social responsibility to promote and improve the role of social responsibility and unit the efforts of the sector to serve the largest part the of society and implement sustainable projects in line with Oman Vision 2040.

This cooperation has resulted in many projects during the past decades, which have effectively strengthen the social partnership between energy and mineral entities and the local community.

This role has grown up by establishing joint projects under the supervision of the Ministry of Energy and Minerals, starting in 2020. By the end of 2021, the construction of “Outward Bound Oman Center” in Jabal Al-Akhdar was completed and it will be officially opened during the first quarter of 2022. In addition to the final implementation of two out of the four vocational workshops held by the energy and minerals sector for people with special needs in Salalah and Rustaq, and the completion of 80% of Nizwa and Al Mudhaibi workshops in energy and minerals. The two projects were sponsored by Petroleum Development Oman (PDO), Occidental Oman, British Petroleum Oman (BP Oman), OQ, Daleel Petroleum, and CC Energy Development and its partners.

A Memorandum of Understanding was signed to implement the Culture and Innovation Center in Musandam in cooperation with the contributing companies, Petroleum Development Oman (PDO), Occidental Oman, British Petroleum Oman (BP Oman), OQ, Daleel Petroleum, CC Energy Development and ARA Petroleum. The MOU aimed to serve citizens in Musandam within two years. Also, it has been agreed to support the furnishing and the preparation of the four vocational workshops for people with special needs as mentioned earlier. The sector has generously contributed towards recovery and mitigation of the impacts of cyclone “Shaheen”a to help people overcome the impacts in the affected areas.

## Center of Culture and Innovation in Musandam

Aiming to enhance innovation, an agreement was signed to establish a culture and innovation, center in Musandam. It aimed to provide a model for effective cooperation between government and private sectors. It will feature a cultural center, managed by the Ministry of Culture, Sports and Youth, in addition to an innovation center in the public education sector managed by the Ministry of Education. Also, an investment center which will be managed by the municipal sector in the governorate and a water sports club affiliated with Oman Sail Company.

This center is considered as one of the mechanisms for achieving cultural development in the governorate. It will support events and activities like conferences, forums, art exhibitions, as well as raising cultural awareness and transforming all initiatives into innovations of high economic value.

The centre will be established on a 10,000 square meters area in a strategic location near the port of Khasab. The project is expected to be launched in 2024.



# Highlights about the role of oil and gas companies in the corporate social responsibility field

To ensure their social responsibility, the Oil and Gas companies continue their role for supporting various initiatives and projects that meet the aspirations and visions of the Omani society.

Companies' purposeful projects and efforts in different fields during 2021 are shown below:



Company name	Projects completed in 2021	Total cost of social responsibility projects (Million dollars)	Major projects
PDO	21	16	<ul style="list-style-type: none"> <li>Establishment of Shaleem and AlHallaniyat desalination plant</li> <li>Establishment of a rehabilitation Center in Muscat.</li> <li>Establishment of Administrative offices and 10 classrooms in Abu Mudaibi School.</li> </ul>
Occidental Oman	47	10	<ul style="list-style-type: none"> <li>Funding the NXT program for developing entrepreneurship in the field of modern technologies and the fourth industrial revolution.</li> <li>Establishing of 3.5 km long Park, the first of its kind in Mubailah.</li> </ul>
bp Oman	16	3.4	<ul style="list-style-type: none"> <li>Supporting program for developing the administrative, financial, and marketing skills of small and medium enterprises' entrepreneurs.</li> <li>Supporting program to enhance the capabilities of local competencies and train job seekers in areas related to the water desalination sector.</li> </ul>
Okio Oman	6	1.2	<ul style="list-style-type: none"> <li>Funding the program of admitting hearing impairment student at Sultan Qaboos University.</li> <li>Supplying equipment for chemistry laboratory at the University of Technology and Applied Sciences in Salalah.</li> <li>Developing science and innovation in several vocational colleges in the Sultanate.</li> </ul>
Daleel Petroleum	17	1.5	<ul style="list-style-type: none"> <li>Building commercial shops for Ibri Sports Club.</li> <li>Establishing of a public walk in Yanqul</li> <li>Establishing a solar energy system to generate electricity in the Association of Early Intervention for Children with Disabilities.</li> </ul>
CC Energy & Partners	11	1.2	<ul style="list-style-type: none"> <li>Funding the establishment of a Dialysis Unit in Adam.</li> <li>Providing a kidney stone removal device at Sultan Qaboos University Hospital.</li> <li>Support 'Youth Vision Program for Career Preparation.</li> </ul>



# Electricity and Renewable Energy Sector



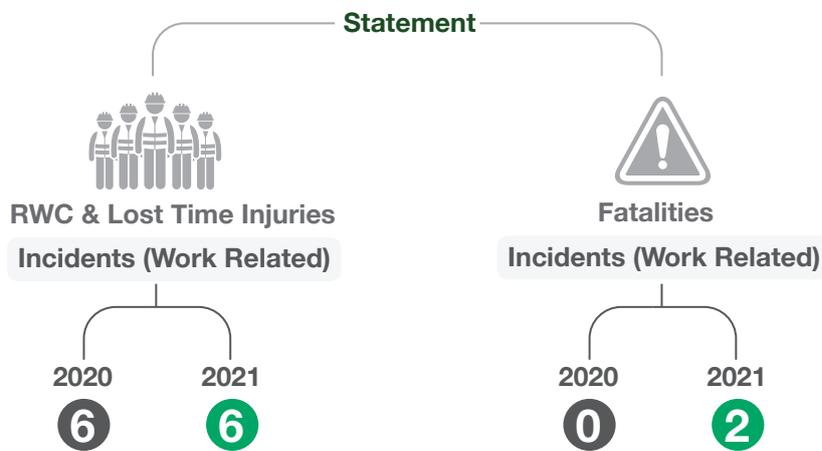
# Electricity and Renewable Energy Sector

1. Health, Safety, Security and Environment
2. Omanisation
3. Statistical Data
4. Electricity and Renewable Energy Sector Projects



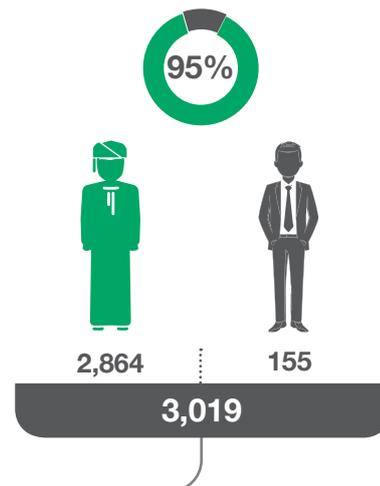
## 1. Health, Safety, Security and Environment

Health, safety, security and environment statistics in the electricity and renewable energy sector 2020-2021



## 2. Omanisation

Workforce and Omanisation in electricity sector 2021

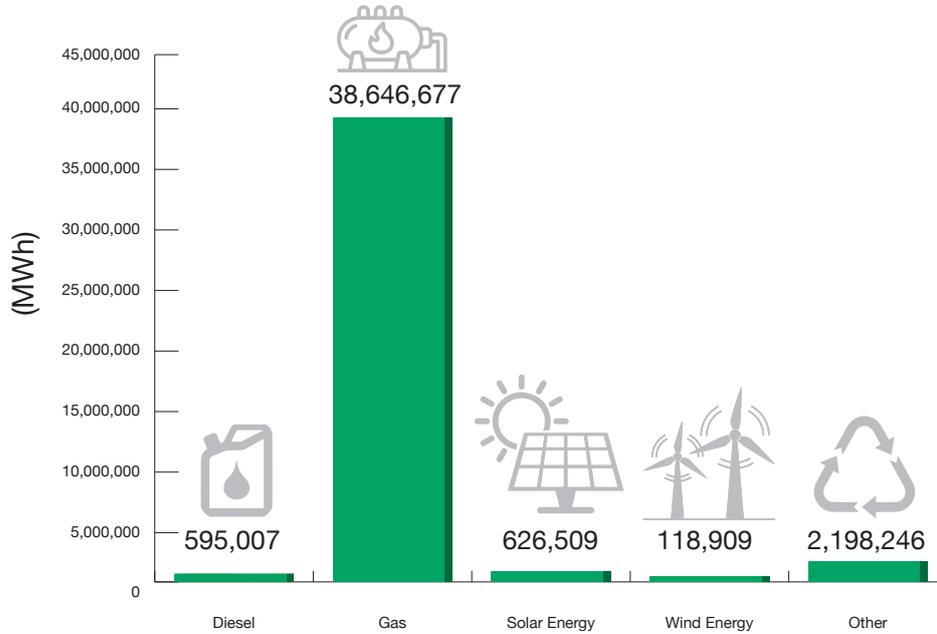


\*These figures do not include the workers in the contracting and services companies operating in the Electricity and Renewable Energy Sector

### 3. Statistical Data

The total electrical energy production in 2021 amounted to 42.2 TWh, with a net production of 40.7 TWh, an increase of 11% compared to the previous year. Where the net electric energy produced from natural gas amounted to 37.2 TWh, constituting 91% of the total energy sources used to produce electricity. The net production of electric energy using the solar energy source also increased significantly as a result of operating a new solar power plant (Shams Al Dhahirah) in July 2021, where the total net electric energy produced was 626,504.3 MWh.

#### Gross production of electricity according to its sources 2021\*



#### Net production of electricity according to its sources 2020- 2021\*



	Net Production (MWh)		Change Rate
	2020	2021	
<b>Diesel</b> 	543,540.5	575,396.3	6%
<b>Gas</b> 	35,592,674.3	37,197,673.7	5%
<b>Solar Energy</b> 	537.9	626,504.3	116364%
<b>Wind Energy</b> 	104,120.2	118,909.1	14%
<b>Other</b> 	491,225.5	2,198,237.3	348%
<b>Total</b>	36,732,098.3	40,716,720.7	11%

\*it is not including SEZAD's data



## Electricity and renewable energy sector projects

### Launching instant electricity market

At the beginning of this year, specifically the first of January 2022. Oman has started the official opening of the instant electricity market. As per the market rules and laws, the prices of electricity generation are determined daily every half hour, based on the capacities offered for trading.

The market provides a competitive environment for current and future power generators, which will reduce the cost of power through daily competition and avoid long-term contracts upon fixed capacities that might be greater than the demand.

### Sahim solar energy initiative

In 2017, ‘Sahim’ initiative has been launched, which has set out the regulatory framework for linking solar energy in buildings to the electricity distribution networks. The initiative has included defining the required technical standards, procedures for submitting connection requests, registration requirements for contractors of installing solar panel systems, and the required incentives to export the overflow of power from the network. Based on the latest available data, 107 solar power systems in buildings have been installed for different users (residential, commercial, government) with a total generating capacity of 17.5 MW. Also, forty licenses have been registered for local companies specialized in solar panels installations.

### Ibri 2 Solar Power Project

The Ibri II solar power project, was launched as part of the program by the end of 2021 with a total production capacity of 500 MW.

As an independent project to develop, build, and operate a solar power plant, it is the Sultanate’s largest of its kind. This project is part of the Sultanate’s efforts to diversify its energy generation sources, aiming to generate 20% of the local power from energy resources by 2030.

### Manah 1&2 solar energy project

The project’s tender has been floated, and the final offers are due to be received by the end of the first half of 2022. It’s worth noting that the project is expected to have a production capacity of around 1,000 MW and will contribute to the reduction of green house gas (GHG) emissions equivalent to 680,000 tons of CO<sub>2</sub>.

# Minerals Sector



## Mining Sector

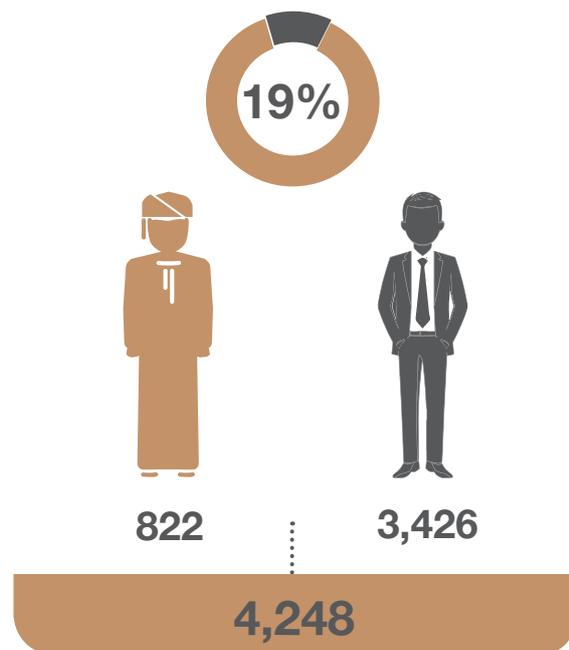
1. Omanisation
2. Production Quantities
3. Sales Volume
4. Sales Value
5. Mineral Ores Exports
6. Licensing System
7. Mining projects



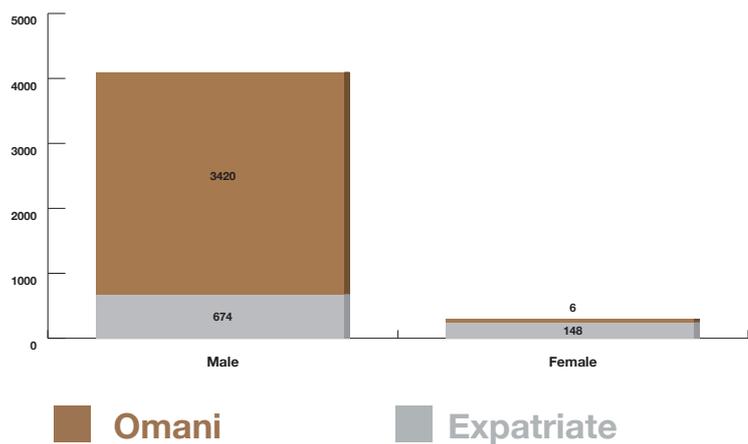
### 1. Omanisation

The number of Omani Workers in mining companies during the year 2021 reached 822 (male and female employees) out of 4,248 employees, which was about 19%.

#### Workforce and Omanisation in Mining Activities 2021



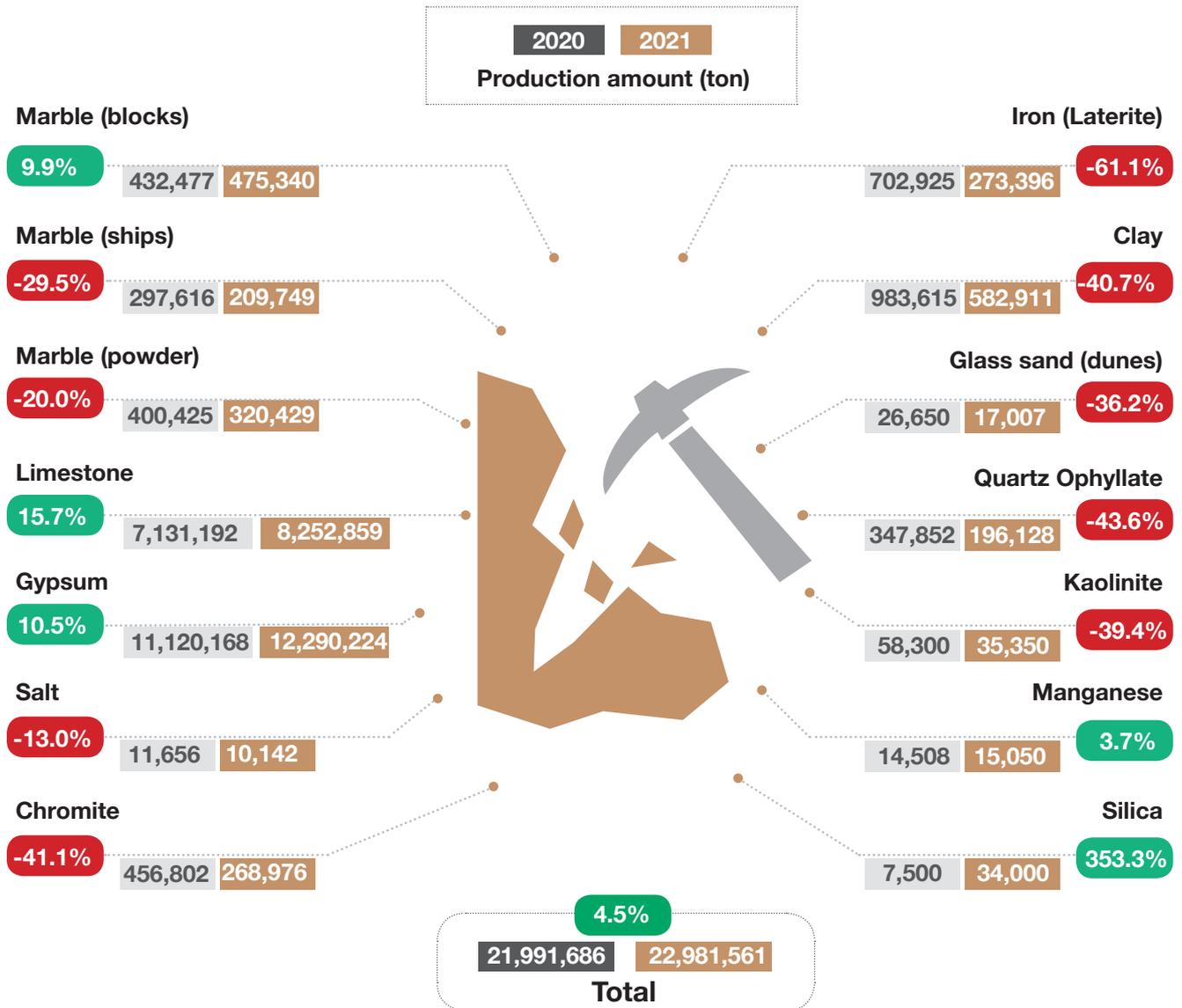
#### Number of Manpower in Mining Activities 2021



## 2. Production

During this year, the total production amount of some mineral ores reached 23 million tons, increasing by 4.5% compared to 2020, there was an increase in production amount of gypsum and limestone by 2 million, which constitute 89% of the total production. While the production of building materials continued to decline compared to previous years, declining by 32.9% compared to the previous year. The declines in some mineral ores were due to the lack of demand upon these materials.

### Production amounts of mineral ores 2020-2021

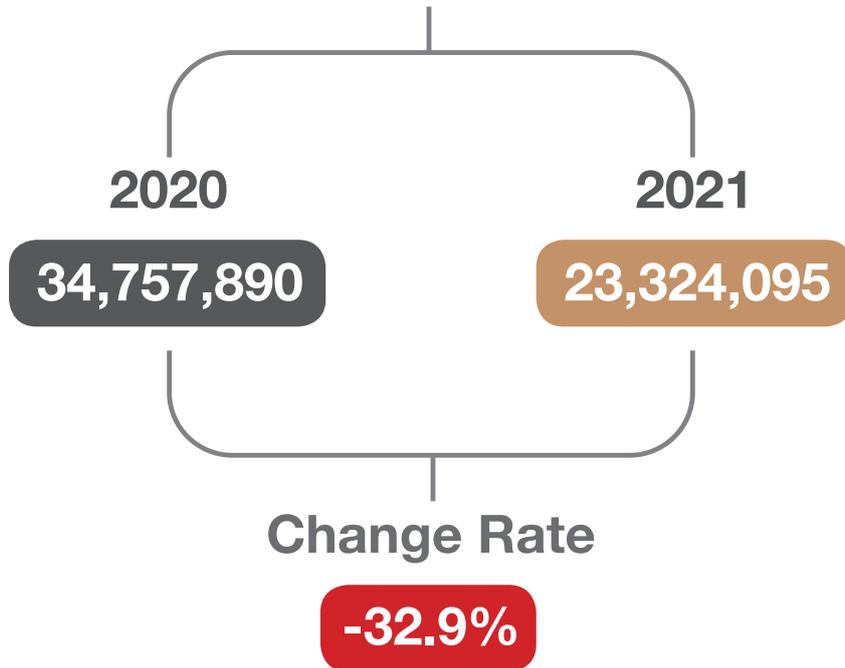


# Production amounts of building materials 2020-2021

## Building material



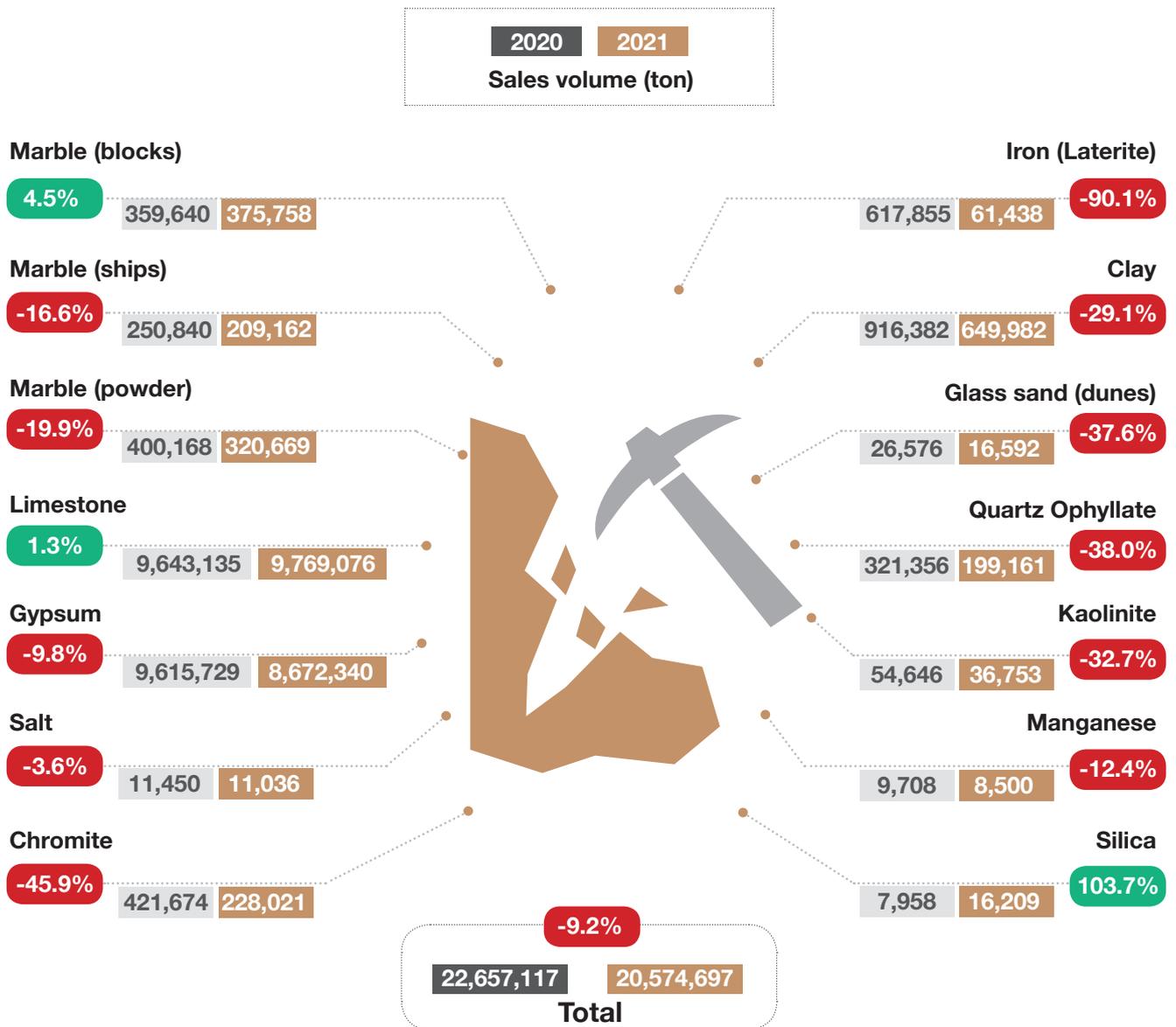
Production Amount (m3)



### 3. Sales Volume

The total sales volume of mineral ores for this year reached 21 million tons, dropped by 9.2% compared to the previous year, the decline in gypsum sales was recorded by nearly one million tons, which constitutes 42% of the total sales. On the other hand, limestone sales increased by 1.3%, which constitutes 47% of the total sales. Building materials continued to decline, declining by 26.3% compared to the previous year. The declines in some mineral ores were due to the lack of demand upon these materials.

#### Sales volume of mineral ores 2020-2021

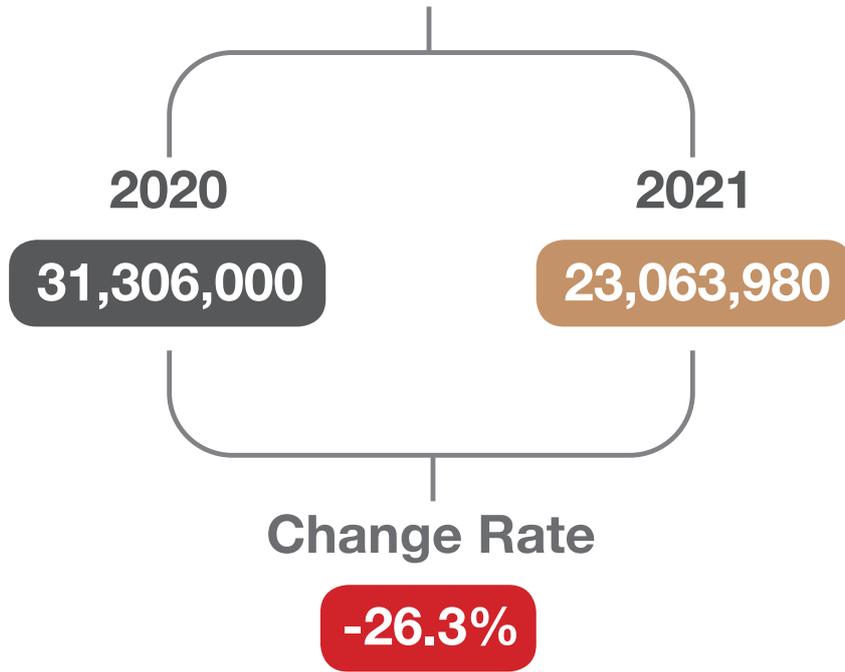


# Sales volume of building material 2020-2021

## Building material



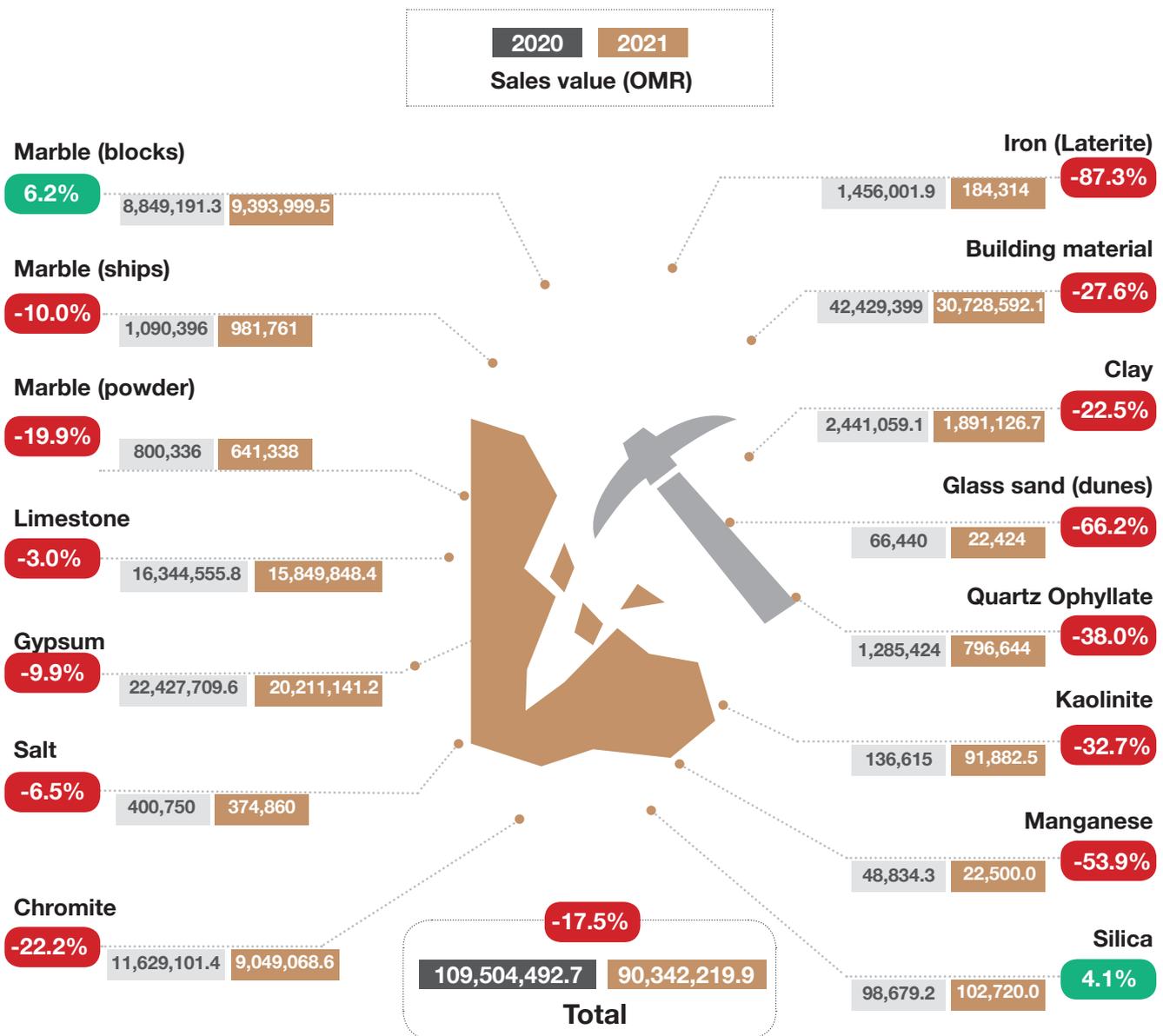
Sales Volume (m3)



## 4. Sales value

The value of mineral ores sales for this year amounted to 90.3 million Omani riyals, where the sales value index recorded a decrease of 17.5% compared to last year, as the value of building materials sales decreased by nearly 12 million tons, the value of iron ore sales decreased significantly, by one million Omani riyals. On the other hand, the value of marble blocks sales increased by half a million Omani riyals compared to the previous year.

### Sales value of mineral ores 2020-2021



## 5. Mineral Ores Export

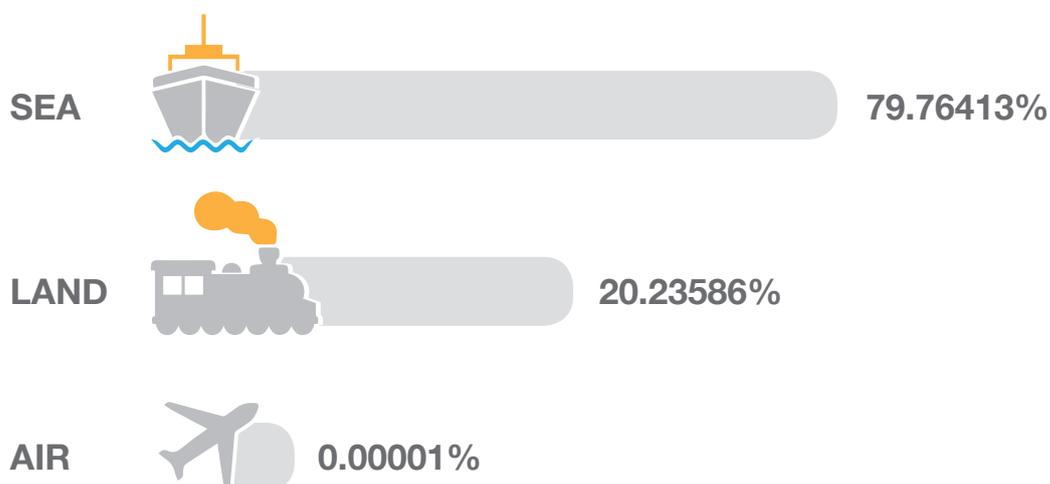
The export of mineral ores amounted to nearly 37 million tons, an increase of 0.7% compared to previous year, as the exports of gypsum and building materials increased by nearly 11 million tons in this year, building materials exports constitute 62% of the total exports of mineral ores, followed by gypsum ore by 25%, whereas exportation through sea ports has recorded the highest exportation rate 80% compared to the land and air exportation.

### Quantity of exported mineral ores 2020-2021

Exported mineral amounts (tons)

	2020			2021		
	Land	Sea	Air	Land	Sea	Air
<b>Building material</b>	7,701,527.0	14,027,919.0	1.5	6,428,907.8	16,441,777.5	-
<b>Gypsum</b>	37,551.0	8,752,999.0	-	72,833.4	9,242,188.2	-
<b>Iron (Laterite)</b>	225,260.0	-	-	207,203.6	69,253.0	0.2
<b>Kaolinite</b>	3,100.0	-	-	14,950.0	-	-
<b>Stones and Powder</b>	14,292.0	184,197.0	-	-	1,000.8	-
<b>Limestone</b>	759,417.0	4,426,967.0	1.4	585,198.3	3,430,433.2	0.7
<b>Silica</b>	5.0	2.0	-	35.6	9.1	-
<b>Marble</b>	149,943.0	180,536.0	1.2	217,042.9	142,465.8	4.0
<b>Chromite</b>	80,360.0	348,013.0	-	-	231,033.8	-
<b>Manganese</b>	1,000.0	6,650.0	-	-	2,910.2	-
<b>Donomite</b>	10.0	49,500.0	-	-	105,000.0	-
<b>Total</b>	8,972,465.0	27,976,783.0	4.1	7,526,171.6	29,666,071.6	4.9
	36,949,252.1			37,192,248.1		

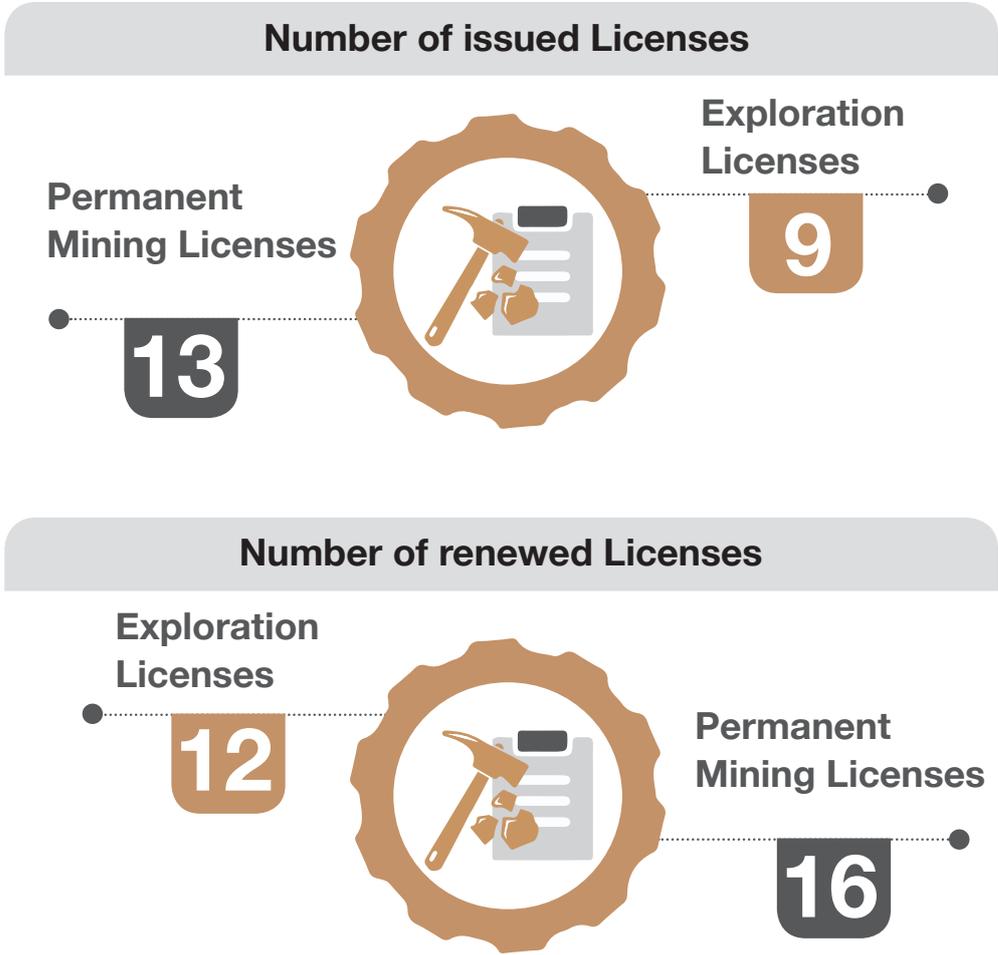
### Exports as per of shipping method 2021



Exported mineral amounts (tons) 2021			
Building material	22,870,685	Silica	45
Gypsum	9,315,022	Marble	359,513
Iron (Laterite)	276,457	Chromite	231,034
Kaolinite	14,950	Manganese	2,910
Stones & Powder	1,001	Dolomite	105,000
Limestone	4,015,632	<b>TOTAL</b>	<b>37,192,248</b>

## 6. Licensing System

Number of permanent Mining licenses and exploration licenses for the year 2021

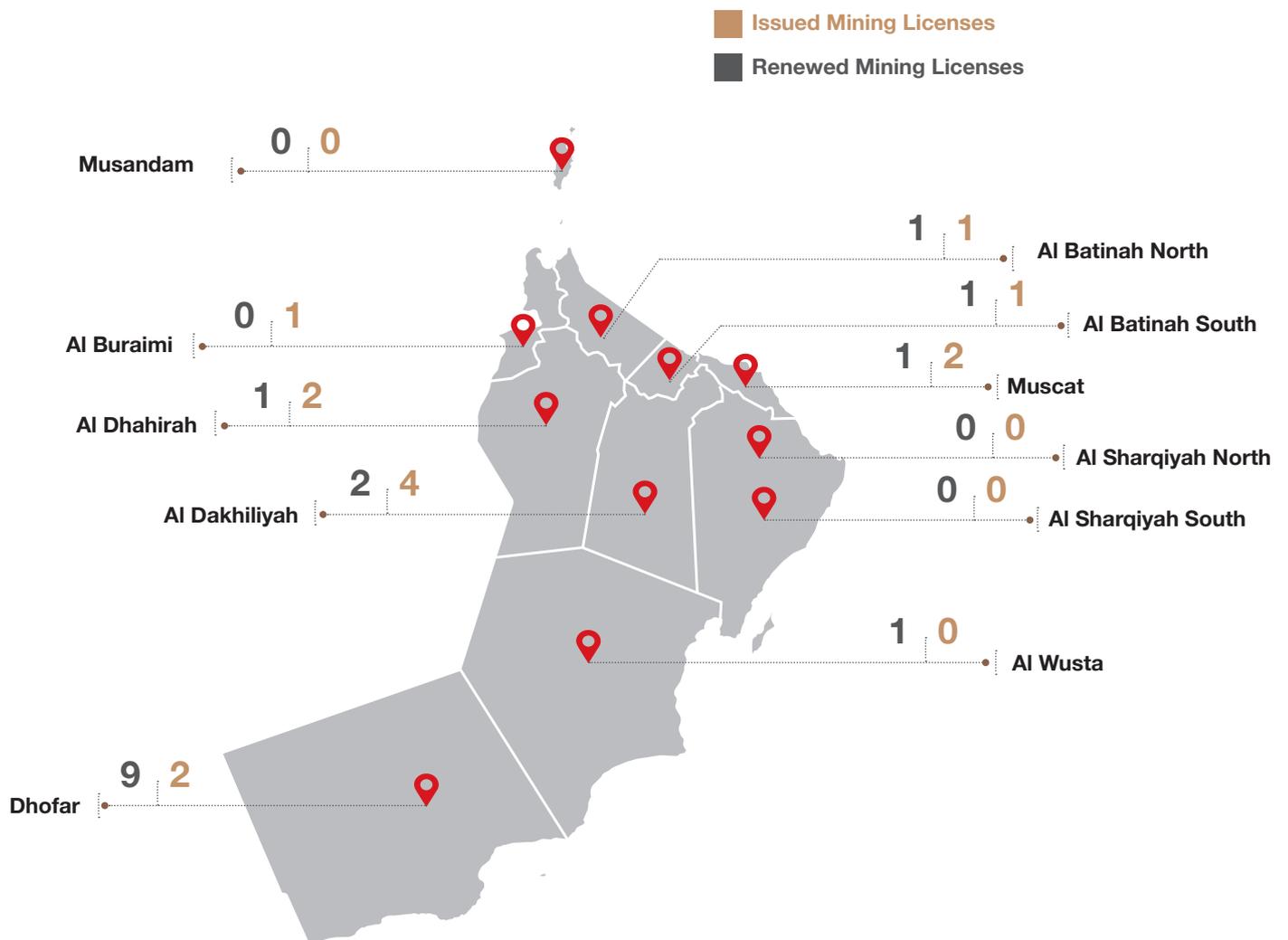


## 6.1 Mining Licenses

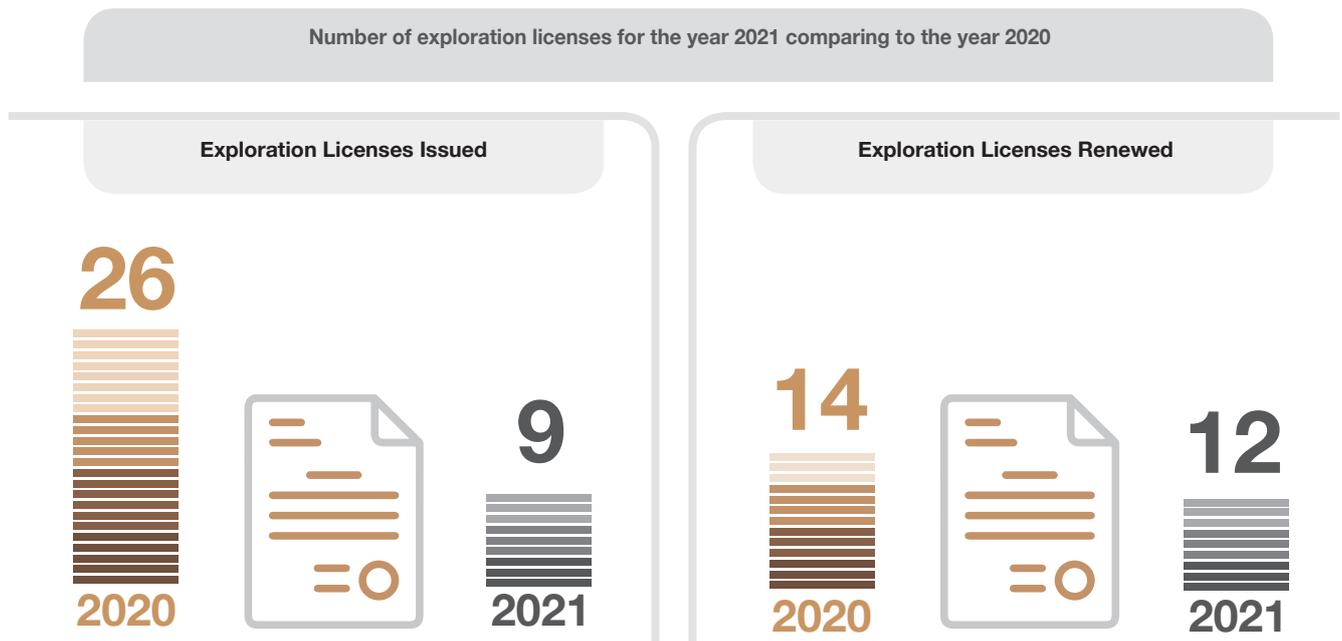
Number of Mining License for the year 2021



Number of Mining Permanent Licenses issued in 2021  
based on governorates



## 6.2 Exploration Licenses



### Number of Exploration Licenses for the year 2021 based on Mineral Ores





# Mining Projects

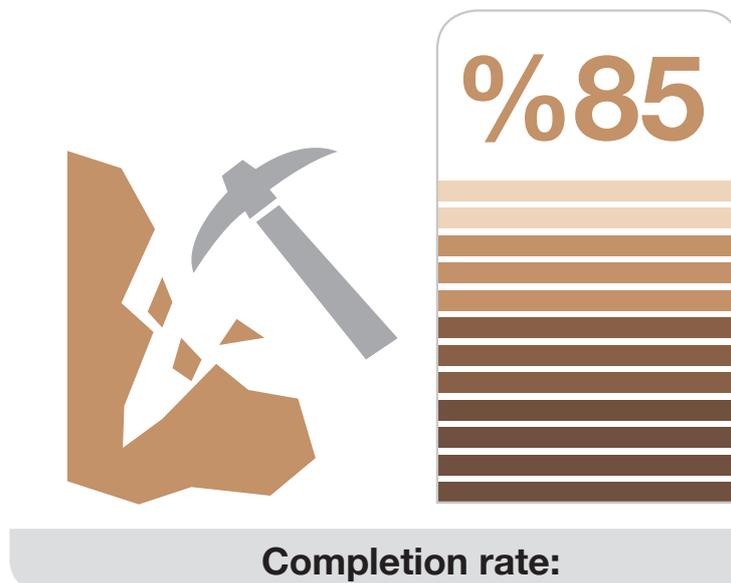
## Identifying potential mining concession areas, and preparing a concession agreement form

This project is considered as one of the important and value-added projects. It is one of the mining labs output projects which aims to develop the mining sector through concession areas that will enable the collection of mining data, and attraction of foreign direct international investment to establish downstream and midstream industries.

It will contribute to overcome the challenges of current licenses and the challenges of waiting on a long list, by creating a linked and organized environment that will also create job opportunities.

This project entails drafting clear formal documents that addresses both technical and commercial terms, and manage the mining concession areas' long-term investment.

In the current stage of the project, the concerned authorities have concluded their review of the agreement. The internal experts' comments have been reviewed. The agreement is awaiting His Excellency the Minister's approval. A total of 30 concession sites have been identified, and Minerals Development Oman was granted 12 areas to start the prospection works.





# Overview of companies in Oil and Gas Sector

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شركة تنمية نفط عُمان  
Petroleum Development Oman

## 2021 Performance

### PDO Vision

**“To be renowned and respected for the excellence of our people and the value we create for Oman and all our shareholders.”**

## Introduction

In 2021, PDO continued to navigate a difficult path through the challenges arising from the COVID-19 outbreak and rising climate change realities. Throughout, we remained committed to excellence by creating value across all aspects of our business, achieving key milestones in our main mandate: the safe and proficient exploration and production of hydrocarbons. At the same time, we made tangible strides in our transition to renewables, specifically solar and wind energy.

We also met, and in some cases surpassed, a range of targets to proudly serve Oman.

In 2021, PDO:

- Provided significant medical, financial and logistical support for the national effort to combat COVID-19
- Booked 111 million barrels of oil and 0.6 trillion cubic feet (Tcf) of non-associated gas as Commercial Contingent Resource volumes (CCR)
- Cut the number of Tier-1 and Tier-2 process safety incidents
- Recorded significant reductions in greenhouse gas emissions, flaring and waste
- Achieved the highest Omanisation level in our history with a record number of Omani women staff.

## COVID-19

PDO continued to support the Government in its efforts to combat the spread of the Coronavirus, while at the same time managing measures internally to safeguard the welfare of our staff and contractors and the continuity of our business operations.

Our Medical department supported the enhancement of the the field hospital at the old Muscat airport with 100 additional beds including 32 high-dependency beds utilised for critical patients, which had increased the capacity to a total of 241. When most of the beds in Ministry of Health hospitals were occupied, a further extension was made in the field hospital by increasing the capacity by 84 beds including 40 for high-critical patients.

The Medical department also donated equipment to health institutions in Oman included digital laryngoscopes, ultrasound, ECG machine, infusion pumps and syringes and cardiac monitors.

PDO also pioneered the local manufacture and distribution of face masks and hand sanitiser to health institutions and other bodies across the country.

Meanwhile, following the adoption of new work patterns to limit our exposure to the virus and control its transmission as much as possible, new measures were introduced to support greater balance between office and homeworking as necessitated by the COVID-19 situation, with a focus on ensuring the safety of staff in the office.

## Health, Safety and the Environment (HSE)

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Safety remains PDO's overarching priority with an unrelenting focus on Goal Zero – no harm to people, environment and assets.

However, there is no doubt that COVID-19 and social distancing constrained our overall ability to engage, and ensure appropriate supervisory site interventions, impacting assurance and leading to more workplace risks being taken. PDO concluded 2021 with a Lost Time Injury Frequency (LTIF) per million manhours worked of 0.21 (0.17 in 2020), while the Total Recordable Case Frequency (TRCF) per million manhours worked was 0.72. Sadly, there were five work-related fatal incidents involving contractors. The annual exposure was 181.8 million manhours worked and 300.65 million kilometres driven.

Looking forward, we will work hard to improve our compliance and assurance performance, evidence-based verification and the embedding of learnings from incidents.

On the environmental front, the number of spills per million tonnes of oil production fell to 0.47, with a 79% reduction in the quantity of oil spilled compared to 2020. Our greenhouse gas intensity dropped 7% to 0.19, with a 0.17 million tonne reduction in carbon dioxide emissions.

There was a 22% fall in the volume of gas flared, and a 16% decrease in the overall volume of waste generated, and a 17.5% drop in hazardous waste.

## Production

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As the country's largest hydrocarbon producer, we continued our role as the country's swing producer, requiring us to operate in a highly dynamic mode.

PDO average oil production for 2021 was 635,000 barrels per day (bpd), which is 5,000 bpd lower than the planned target due to higher unscheduled activities and lower than expected new oil performance.

Condensate output was 103,000 bpd, while gas production was 57 million m<sup>3</sup>/d, consistent with lower customer demand. The combined total average barrel of oil equivalent production per day (oil, condensate and gas) was 1.223 million boepd. The coming years will see continued production growth, in line with our ambition for a sustainable 700,000 bpd production plateau.

## Exploration

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PDO's strong delivery focus helped complete another successful year with oil and gas bookings made across Block 6 and from various plays from the core Shuaiba and Gharif reservoirs to the emerging such as Mesozoic clastics. A total of 111 million barrels of oil and 0.6 trillion Tcf of non-associated gas were booked as CCR volumes in 2021. The overall unit finding cost was just US\$1.36 per barrel of oil equivalent. The unit technical cost of these discoveries was also highly competitive, with early wells already in production and full field development plans underway. Significant oil and gas portfolios were evaluated in 2021 which will lead to an increased drilling activity programme in 2022 and beyond.

## Well Engineering

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The Well Engineering Directorate delivered 684 wells, achieving a new drilling Non-Productive Time record of 4.8%, compared with the 6.7% in 2020, despite COVID-19 challenges.

PDO ended the year by setting a new cost per metre record at US\$1,035 with 76% of our wells being rated in the top quartile, and 35% best-in-class through our relentless pursuit of Continuous Improvement (CI) and reducing the Gap to Potential.

## New Technology

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Although placing the business under unprecedented pressure, the low oil price era and the Coronavirus outbreak have accelerated our efforts in adopting new technology and digitalisation. PDO deployed a record number of game-changing solutions last year while also maintaining our focus on maximising value from more than 40 trail-blazing innovations in the past five years.

In 2021, a record number of 11 technologies were concluded by proof-of-concept or proof-of-value trials, while 18 new trials were initiated after a rigorous market analysis and a rapid contracting and procurement process. These address pressing technical challenges such as produced water management, energy efficiency, artificial lifting, EOR, and well construction and production measurement.

PDO has also continued its support to develop local academia by nurturing the Ejaad research and development platform to assist the sector. To date, we have awarded 17 joint projects for joint academia-industry projects to different Omani universities to tackle some of our technical challenges.

## Lean/Business Efficiency

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We strengthened our Lean and (CI) programmes across the entire organisation. These provided a solid foundation to help many teams transition seamlessly to virtual operations and maintain performance levels despite the disruption caused by the pandemic.

The Company held 10 Cost Optimisation Reviews (CORs), which are focused, multi-day workshops where PDO, together with the relevant contractor, identified opportunities for efficiency enhancement and waste elimination. These identified near-term savings of US\$3.5 million over a 3-4 year period.

## In-Country Value (ICV)

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To boost national employment and economic diversification, we helped deliver more than 3,110 job opportunities in different areas such as training for employment, redeployment, transferability and scholarships with our contracting community and as part of our own internal recruitment.

We stayed the course with our commitment to retain more of the wealth of the oil and gas industry in Oman have played a significant role in the industry's ICV Blueprint Strategy since its launch in 2013. The value retained in country through our activities in 2021 was 38%, up from 34% in 2020.

In 2021, the total cumulative revenue from PDO contracts for Super Local Community Contractors was more than US\$186 million, the Local Community Contractor spend was around US\$220 million and matured LCC spend was around US\$268 million. The total SLCC/LCC turnover for the full year was around US\$674 million. More than 5,880 Omanis are currently working with SLCCs and LCCs in different disciplines.

## Staff Development and Recruitment

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At the end of 2021, PDO employed 8,853 staff, of which 7,711 were Omanis. The Omanisation rate increased from 86% to a record 88%. There were 1,220 women on staff, including 1,181 Omanis, the highest number in PDO's history. A total of 441 nationals were hired in the year and the total number of Omani graduates was 201.

## Social Investment

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Our focus was on eight social investment themes: health and safety, environment, water, energy management, education and science, community welfare, civil society organization and youth and women empowerment.

We committed to 83 new social investment projects, up from 48 in 2020, totalling around US\$10.16 million. These include infrastructure development, training and the provision of technology and equipment and will have tangible impacts on the quality of life of thousands of people living in our concession area and beyond. A further US\$1.4 million was distributed in sponsorships, grants and donations to support impactful initiatives by local organisations.



العَمَانِيَّةُ لِلْغَازِ الطَّبِيعِيِّ الْمُسَالِّ

## Oman LNG

Oman Liquefied Natural Gas (Oman LNG) is a joint venture established by a Royal Decree in 1994. It operates under the laws of the Sultanate of Oman and engages in the business of selling liquefied natural gas (LNG) and its by-products as well as natural gas liquids (NGLs).

The company undertakes project operations and related activities essential to liquefy, store, transport and market Oman's natural gas and deliver LNG to costumers aligned with the Government's objective of diversifying the economy.

Oman LNG operates three liquefaction trains; two owned by Oman LNG and one by Qalhat LNG SAOC, with an enhanced capacity of 11.4 million tonnes per annum (mtpa) at its plant in Qalhat in South Sharqiya Governorate.

## Health, Safety and Environment (HSE)

Since inception, Oman LNG heavily emphasised on safety as its first and foremost priority at all times. It is a key element in all activities and projects executed on behalf of the company.

The Company scored a regional milestone in the successful delivery of the Middle East's first carbon-neutral cargo in 2021. This is a clear testament to our commitment to restoring the delicate, natural eco-system with favourable consequences for future generations and ours.

Despite the challenging circumstances brought by COVID-19 pandemic, Oman LNG marked various achievements in HSE among many other business areas. This is testified by completing nearly 10 Million Man-Hours without Lost-Time Injury (LTI), the equivalent of 688 days. Additionally, we also recorded 5 million man-hours LTI-free on the company's Power Plant Project.

Such step reflects the company's bold commitment in maintaining safety and meeting its requirements, without compensating on its journey towards delivering clean and reliable energy.

## Key Achievements

2021 was an exceptional year to Oman LNG. While the COVID-19 pandemic continued to surge; the dedication of our Board of Directors and Management Team, accompanied by the commitment of our staff and contractors alike, allowed us to overcome these challenges and turn them into success stories.

Our remarkable achievements in 2021 were testified by various projects. Among those is the delivery of the first carbon-neutral LNG cargo in the history of Oman and the Middle East.

Another milestone included conducting the largest maintenance activities since the company's inception. Such activities are better known as "Turnaround" in Oman LNG's glossary and involve carrying out maintenance to the different trains in the company's world-class Plant in Sur. The turnaround activities covered several crucial projects that ensure the high reliability of the plant. This time, it was extremely challenging due to restriction and supply chain limitations imposed by COVID-19.

The company equally continued working on its Debottlenecking Project, which refers to the process of highlighting specific areas in production trains, machinery equipment or the workflow configuration that would limit or constrain the flow of product inside the plant.

Oman LNG is delighted to load 163 LNG cargoes to the global market. This highlights Company's resilience and flexibility to The ambitious Power Project, new gas-engine power plant, is progressing very well and expected to full delivery by 2022. The power project will not only increase our plant efficiency but will boost our environmental performance and reduce our carbon footprint.

## In-Country Value (ICV)

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Since its start; Oman LNG made a clear commitment to nurture local talents and capabilities, boost performance and support the local youth through enhancing and developing its In-Country Value efforts.

In 2021, the company provided a total of 500 training and employment opportunities targeting local youth. Such step translates the company's robust commitment to maximise and develop the capabilities and skills of our youth.

Among the major ICV initiatives conducted in 2021 involves providing training opportunities for 165 job seekers from the nursing fields; in collaboration with the Ministry of Labour and the Ministry of Health. In addition, Oman LNG signed an agreement with Petroleum Development Oman (PDO), Opal and OQ to include local workforce in its Turnaround activities. Additionally, Oman LNG collaborated with the University of Technology and Applied Sciences to provide training opportunities for 200 students and instructors on cybersecurity.

To further support our In-Country Value efforts and to complement our commitment to reduce Green House Gas (GHG) emissions, Oman LNG inked a pivotal agreement with Ejaad and Mazoon Dairy, to finance the provision of the Oman's first-of-its-kind Biogas to Power Generator, which will be installed at Mazoon Dairy's Site.

The company also offered training opportunities for 30 Small and Medium Enterprises (SMEs) in different technical disciplines including maintenance, HSE and solar power. Such step is complemented by the company's fiscal support to the Entrepreneur Incubator at Sur Industrial City in collaboration with The Public Establishment for Industrial Estates – Madayn.

## Corporate Social Responsibility (CSR)

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Corporate Social Responsibility is considered to be an integral part of Oman LNG. The company spares no efforts to extend its cooperation with the public and private sectors to address the needs and wants of the society.

A total of 1.5% of Oman LNG'S Net Income After Tax (NIAT) is earmarked annually to invest in its social programmes that touch a variety of pivotal sectors, from education and learning all the way to tourism and environmental protection.

In 2021, the sphere of the Social Investment Programmes under Oman LNG continued to grow and prosper. Some of the projects to highlight include:

- Contribute a total of 6 Million Omani Rials to support the nationwide relief efforts in areas effected by Shaheen Cyclone.
- Inaugurate the Fatah Al Khair Centre in Sur to preserve and showcase the city's ancient maritime history.
- Finance the rehabilitation project of the UNESCO-listed Ancient City of Qalhat in Sur.
- Fund the purchase of solar panels to 32 different locations of the Omani Women's Association across the Sultanate of Oman.
- Provide cancer detection devices at the Royal Hospital in Muscat and complete blood count (CBC) devices in 5 health centres across North Sharqiyah Governorate.
- Support electronic platforms and tailored programmes for children with disability including aquatic therapy in 7 units across the country.
- Purchase of modern learning equipment for visually impaired people to Al Noor Association in Al Dakhiliyah Governorate.
- Establishment of a pilot project to support livestock breeders in the South Sharqiyah Governorate.
- Equip the mechanical engineering labs at Saham Vocational College with the latest modern equipment.





Oxy Oman is a wholly owned subsidiary of Occidental (Oxy), an international oil and gas exploration and production company. Oxy has been producing in Oman for over 30 years, where it has steadily increased production and reserves and is honored to partner with the Government of Oman. Today, Oxy is the largest independent oil producer operating in the country, covering more than 6 million gross acres. Oxy's major operations are located in northern Oman, primarily in Safah and Wadi Latham Fields in Block 9, Khamilah Field in Block 27, and in Block 62, where we operate the Muradi Huraymah gas plant, and in south-central Oman in Block 53 at Mukhaizna Field, the largest producing oil field in the country. Oxy is committed to safeguarding the environment, protecting the safety and health of employees and neighboring communities and upholding high standards of social responsibility throughout its worldwide operations.

## Health, Safety and Environment (HSE)

Oxy Oman continues to emphasize safety in the workplace. Oxy Oman's combined Total Recordable Case Frequency (TRCF) 0.19 in 2021 equalled the lowest reported in the company's history and was 17% lower than 2020. In 2021, Oxy Oman had zero employee recordable injuries and seven recordable contractor injuries. Together, Oxy Oman employees and contractors worked more than 36 million personnel-hours in 2021. Other HSE metrics, including Total Injury Rate (TIR), 0.81 and Total Motor Vehicle Incident Rate (TMVIR) 0.13 were the best-ever reported. Also, for the first time in Oxy Oman's history, together with our contractor community, we achieved a ZERO Lost Time Incident Rate (LTIR).

In 2021, Oxy employees and contractors worked 334 days with ZERO Harm (no recorded injuries) – a 3% increase in ZERO Harm days over 2020. These efforts resulted in a reduction in the total number and severity of injuries incurred, including first aid cases, which fell by 21% when compared to 2020. In addition, a total of 26 high level risks were mitigated during 2021. Oxy continued to emphasize several HSE programs despite the pandemic situation, including, "HandSafe+", "Short Service Employees", "Hazard Recognition", "HSE Data Analytics", and "Health Surveillance" for employees and contractors.

Oxy Oman continues to implement a COVID-19 Business Continuity Plan across the organization and cascaded the plan to all contractors to help protect those working for Oxy and minimize any disruptions in operations. Oxy Oman and our contractor community established and implemented Vaccine Distribution Programs to stem the tide of COVID-19 transmission within our community and country. Oxy Oman and its contractors achieved a 100% vaccination rate for employees.

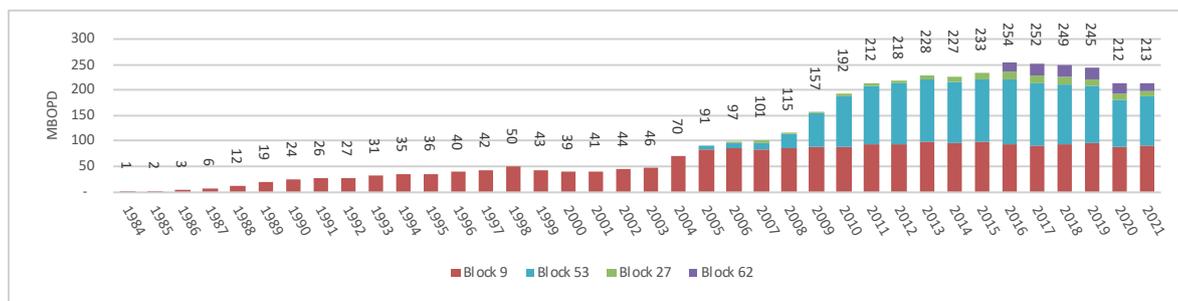
In 2021, Oxy's Environmental Performance continues to be outstanding, with zero reportable spills and zero Non-Conformances (NCRs), as part of the ISO14001 Environmental Management System Third-Party Audits. During the year, Oxy also advanced its net-zero initiatives, combined with ISO5001 EnMS, to focus on energy sustainability and lowering emissions. The 2021 – 2030 Green House Gases (GHGs) Emission Reduction plan was developed, and work is ongoing to build new technologies and explore opportunities toward unlocking further GHG reduction projects.



### Key Achievements in 2021

Oxy Oman's gross production was 213 MBOED in 2021. It had an excellent HSE performance, with 0.04 IIR, and 0.13 MVIR, its lowest ever, and a 39% reduction of the High-Risk Scenarios identified from the previous year.

## Production Growth



## Human Resources

Oxy Oman has developed and implemented a long-term sustainable hiring strategy for Omanis. This strategy has contributed to generating more than 3,400 employment opportunities, resulting in 94 percent Omanisation of Oxy Oman's workforce as of 2021:

- Approximately 45% of Omani hires were job seekers. More than 1600 job seekers were hired, including fresh graduate degree holders and diploma holders.
- A total of 440 locals from concession areas were hired and trained to become certified operators and technicians.
- In 2021, Oxy Oman hired around 58 job seekers, and efforts are ongoing to define more opportunities to support its long-term Omanisation plans
- In 2021, Oxy Oman enrolled 134 interns in its internship programs.

Oxy Oman's Talent Management Strategy has resulted in the development of Omani leaders who have stepped into varying leadership roles. As of 2021, Oxy Oman's overall leadership roles are at 90% Omanisation.

## Sustainable Development and Social Responsibility Programs

Oxy Oman has sponsored a variety of projects in 2021 focusing on sustainable, long-term impact to Oman's communities. Some of the highlights include, but are not limited to:

- Exclusively sponsoring the .NXT Program for Entrepreneurial Development in Frontier Technology, targeting higher education students and job seekers.
- Constructing a first-of-its-kind linear park in Al Maabilah, Muscat governorate in collaboration and coordination with Muscat Municipality.
- Sponsoring the Oxy Sports program for school students across Oman.
- Sponsoring Oman's first participation in the upcoming Venice Biennale 2022, a global art exhibition hosted in Venice, Italy to showcase the talents of Omani artists.
- Exclusive sponsorship of the Ultra Marathon Mountain Race.
- Honoring of high performing school students in Al Wusta Governorate, Wilayat Adam, Bahla and Hamra Al Duru, as well as honored the top 100 General Education Diploma Graduates all Oman.
- Funding "Tech for All - Makers Oman" to enhance STEM education programs.
- Sponsoring the sport of camel racing, an important historic and cultural element to Oman's local communities.
- Sponsoring the Youth Center, a major project by the Ministry of Culture, Youth, and Sports.
- Funding the Environment Authority's deployment of mooring buoys in the Dimaniyat Islands.
- Funding the purchase of COVID-19 Vaccines for the Ministry of Health.
- Funding the Ehsaan Association to provide medical equipment to the elderly in need across Oman.
- Funding the Oncology Center to support genetic testing in cancer patients.
- Contributed to Cyclone Shaheen 'Together for Oman' welfare and relief campaign.

## In-Country Value (ICV)

Oxy Oman continues to prioritize efforts to maximize In-Country Value (ICV) initiatives, by improving and building the capacity and capability of Omani contractors in efforts to develop a competitive and sustainable Omani supply chain. ICV contribution of Oxy Oman contractors increased from 49.5% in 2020 to 53.22% in Q3 2021. The overall Omanisation headcount within Oxy Oman contractor's community increased from 51% in 2020 to 53% in Q3 2021, with approximately 10,000 total headcount. In addition, the SME spend has increased from 18% to 20% during the same period.

In support of the In-country value (ICV) initiative, Oxy Oman has established the Tasharuk Program to support Omani SMEs' capacity building. The first phase of the program was launched in 2013, and by the end of Q4 2021, the participating SMEs from all phases have achieved over 405 headcounts with 71% Omanisation; 207% contract value growth, 13 ISO and API Certifications acquired, 36% increased SMEs workforce, and 100 personnel enrolled in technical or soft skill training.

As part of Phase 5 of the Tasharuk program, a new contract was awarded for the Provision of a Solar Hybrid Power System for Wells. This is a pilot project in which Oxy will be utilizing renewable energy as an alternative to the conventional diesel power generators.

In addition, Oxy Oman has initiated and supported several ICV initiatives in 2021 to improve the capacity & capability of Omani contractors:

- Provision of Temporary Power Generators Services, under Vendor Development Program.
- Provision of Workover Equipment Management Services, under Vendor Development Program.
- Provision of Oman Chlorine for Supply of Hydrochloric Acid, as a Ring Fencing Initiative.
- Provision of Maintenance Services for Power Generators, PSV & All Actuated Valves, as a Ring Fencing Initiative.
- Provision of Surface Fluid Sampling & PVT Analysis Services, as a Ring Fencing Initiative.
- Supply of Coiled Rods and Related Services, as an ICV Opportunity.





## bp and Oman – a strategic partnership

bp has a long history in the Middle East and is a major investor in Oman. 2021 was an important year in bp's strategic partnership with Oman. Despite the ongoing challenges of Covid-19 pandemic, bp managed to increase its production from Block 61 after the successful start-up of Ghazeer in 2020.

Earlier in 2022, bp signed strategic agreements with the Ministry of Energy & Minerals to support the potential development of a multi-gigawatt, world-class renewable energy and green hydrogen project in Oman by 2030.

### 2021 key highlights:

- Block 61's gas production increased to 1.5 billion cubic feet per day (bcf/d) with over 99% of plant reliability, one of the best in bp's global operations
- 146 wells up and running
- \$312m spent with Omani registered companies
- 90% Omanisation achieved
- Seventh year of our successful social investment programme
- Safely reduced around 65,000 tons of CO<sub>2</sub> equivalent emissions

### Keeping our people safe

We aim to foster a genuine culture of care for our workforce, whether it's our own employees or those indirectly working for us. We care about everyone's safety as if they are our own family. Our safety approach adheres to internationally recognised industry standards, but also draws on the decades of experience across bp's wider global operations.

### In 2021 we:

- Successfully rolled out the 'Life-Saving Rules' for both bp staff and contractors
- Vaccinated over 5000 bp staff and contractors and their families (100% at site and 99% in Muscat)
- Drove 12.72 million kilometres at Block 61 without an accident, and over 48.76 million kilometres since the last severe vehicle accident in 2019
- Worked 8.12 million hours, with zero major incidents and one day away from work case "LTI"
- Registered zero Process Safety Event Tier 1 incident

### Protecting the communities and environment in which we operate

In 2021, bp Oman set up a net zero taskforce to lead our carbon emission reduction strategy in Oman. The taskforce has established a roadmap of sustainable emissions reduction initiatives that could lead to a 56% reduction of Greenhouse Gas emissions by 2030.

We have also joined the national green hydrogen alliance, Hy-Fly, to promote clean hydrogen in line with Oman's 2040 vision.

### In 2021 we:

- Emitted 15% less carbon despite production increasing by 50% in 2021
- 65,000 tons of CO<sub>2</sub> equivalent emissions reduction through several sustainable emission reduction projects
- Green completed 10 wells with zero flaring which led to safely avoiding around 90,000 tonnes of CO<sub>2</sub>e in 2021
- Planted 2,000 indigenous trees in Block 61 and aiming to plant a total of 5,000 trees by the end of 2024

## Committed to in-country value

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We are proud to support the sustainable development of Omani society. We do this by supporting local business growth; encouraging the development of Omani skills and capability; and supporting contractor's Omanisation rate.

### In 2021 we:

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- Spent over \$312 million, with Omani registered companies, which accounts for 89% from our total spend
- Spent over \$19.5 million with Omani SMEs, 6% from our total and 2% increase from 2020
- Partnered with a local Omani company; Fahud Oil Services & Energy (FOS Energy) to carry out the first successful well test at Block 61, with zero flaring. The contract was previously managed by a large international company. FOS Energy will support well testing and cleanout services at Block 61 over the next five years, testing around 50 wells

By end of 2021, the Omanisation of contractor's workforce reached to 68%.

## Our people

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In 2017, we set a goal to achieve 90% Omanisation by 2025. In 2021, we achieved this four years earlier than planned. Nearly 70% of our leadership are Omanis – compared to 50% in 2020.

- **Challenger programme**  
By 2021, 89 Omani's have been recruited through bp's Challenger programme which offers the graduates' hand-on experience as they work in full-time roles.
- **Technician development programme**  
Since its start in 2012, 108 technicians graduated from the technician development programme. An 18-month intensive programme aimed to empower them to take on technical professions as they enter the labour market.
- **International assignments and global roles**  
Since 2010, over 120 Omanis have held assignments at different bp locations including the UK, US and Azerbaijan to gain, share knowledge and boost their capabilities. In addition, 36 Omanis have been selected to take up global roles supporting regions or entities from across bp, while still based in Oman. This includes supporting UK, US, Africa and Middle East.

## Delivering the seventh year of our successful social investment programme

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We believe creating value for our stakeholders more widely – for society, our employees and our shareholders – is key to the long-term resilience and value of our business.

bp long-standing social investment programme is a unique model that works towards supporting local Omani capabilities in driving Oman towards a self-sufficient and progressive future.

107,000 people have benefitted directly through 106 initiatives since the launch of the programme in 2014. Initiatives are delivered under three main themes: enterprise development, education and energy sustainability.

### In 2021 we:

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- 13,816 individuals benefited from our social investment programmes in Oman including 8,704 females.
- We celebrated with Oman Sail & Oman Paralympic Committee the official announcement of the first national parasailing team in the GCC and Middle East region
- Our gift to the nation project in partnership with the Ministry of Education signed in 2020 of digitizing Oman's educational curriculum saw progress in 2021, by awarding project implementation to Bahwan Information Technology
- Over 48 workshops delivered by Children Public Library benefiting more than 1500 children and parents

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## DALEEL PETROLEUM L.L.C.

Daleel Petroleum aims to maximize the development of oil and gas reserves at Block-5 in a responsible and cost effective manner for the best interest of the stakeholders to meet both social and economic benefits for the community and the stakeholders.

Committed to Safeguard our Health, Secure our Safety, Maintain our Business and Sustain our Environment

Daleel Petroleum strives to enhance its QHSSE performance by contributing to the maintenance and upgrade of safety levels for the people, communities and assets.

## Key Highlights in 2021



Daleel Petroleum has maintained its International Standards ; Management Integration System (MIS) since 2014:

- Quality Management System- 9001:2015
- Environmental Management System -14001:2015
- Occupational Health & Safety Management System 45001:2018

In addition, the company managed to complete more than a year and half without any PSM Tier-1 incident.

## Operational Excellence

Daleel Petroleum is committed to Operational Excellence, which reflects positively on the efficiency and productivity. The Company aspires to continue excellence in different areas that include both operational and informative opportunities. Daleel Petroleum received OPAL Best Practice Award for “Daleel UeR Development Project” presented under the category of Research & Development. The project gave positive indications that oil was produced from the Tertiary UeR formation for the first time in the Sultanate.

One of the key 2021 highlight was the discovery of Dahab field and producing from Shammar formation for the 1st time in Daleel. Daleel Petroleum continues to promote major projects that support continuation of operations, and one of the key commissioned projects is the additional water injection pumps project, which aims to reduce dependence on gas-powered water injection pumps.

Also, there are several ongoing strategic projects that are progressing as per the plan and will be commissioned in the coming few years like the Upgrade of Storage Tanks Capacity, AP Flare Recovery Facilities & OHL Integration with PDO.

## Omanisation & Empowerment

Daleel Petroleum has maintained its strive to create an environment that encourages development and growth, raising work efficiency and developing the capabilities of employees. Daleel Petroleum is proud that most of its employees are young and passionate Omanis. In 2021, it has managed to maintain its Omanisation record at 96% across all levels.

## Corporate Social Responsibility

Daleel Petroleum believes in the importance of contributing to social responsibility programmes that promote the development of local communities. Following are some of the key projects executed in 2021:

- The Solar Panel Project for the benefit of the Centre of Early Intervention for Children with Disability, with an objective to develop environmental sustainability.
- The construction of a Public Walkway offering a convenient environment that encourages a healthy lifestyle.
- The development of Chemistry Labs for two vocational training institutions in Seeb and Shinas.

The Annual Ramadhan Campaign to support the families in need in Al Dhahirah.

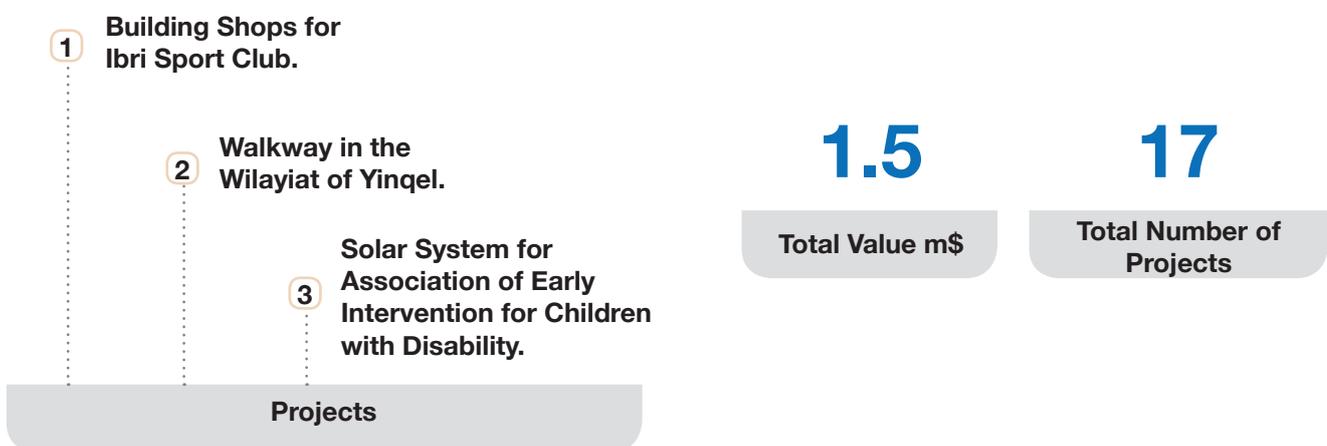
## In-Country Value (ICV)

Creating and retaining value within Oman is a mission for Daleel Petroleum, implemented through driving sustainable development of local human capabilities, local businesses, local goods and services by integrating ICV initiatives into day-to-day organizational activities.

ICV Initiatives in 2021:

- Daleel Petroleum has sponsored Oman SME academic to develop Entrepreneur's lecturer in Oman.
- Daleel Petroleum signed two MOUs' with two national Banks (Bank Nizwa & Bank Muscat) to provide financial solutions and support SMEs.
- Organizing a program in Al Dhahira Governorate targeting local company contractors (LCCs) in cooperation with Oman Chamber of Commerce & Industry in Ibrai and Madayan ; National Business Centre (NBC).
- Supporting Development Awareness Program sessions on Green Hydrogen in cooperation with Oman Society for Petroleum Services (OPAL) for Energy and Mineral sector.

## KEY CSR Projects in 2021





CC Energy Development (CCED) is an independent upstream international oil and gas operator that began operations in the Sultanate of Oman in 2007. Through our associated companies, we bring over 20 years of exploration, development, and production experience in the oil and gas industry, both as an operating and non-operating co-venture partner. Guided by our growth mindset that thinks globally and acts locally, we are a diverse, ethical, eco-conscious and responsible organization that believes people are the key to our success. As a prime contributor in the hydrocarbon sector in Oman, our primary goal is to benefit the communities within which we work in and deliver socio-economic value for the nation.

## Our Vision

- HSE at the forefront of decision making
- Long-term value generating growth agenda
- Value from every barrel
- Cost-efficient and enabled by technology

## Our Assets & Milestones

CCED's operating footprint is in Blocks 3 & 4, one of the largest concession areas in the Sultanate of Oman.

### CCED Assets in Oman

Onshore Blocks 3 & 4

- CCED Operator
- Tethys Oil Partner
- Mitsui E&P Middle East B.V Partner

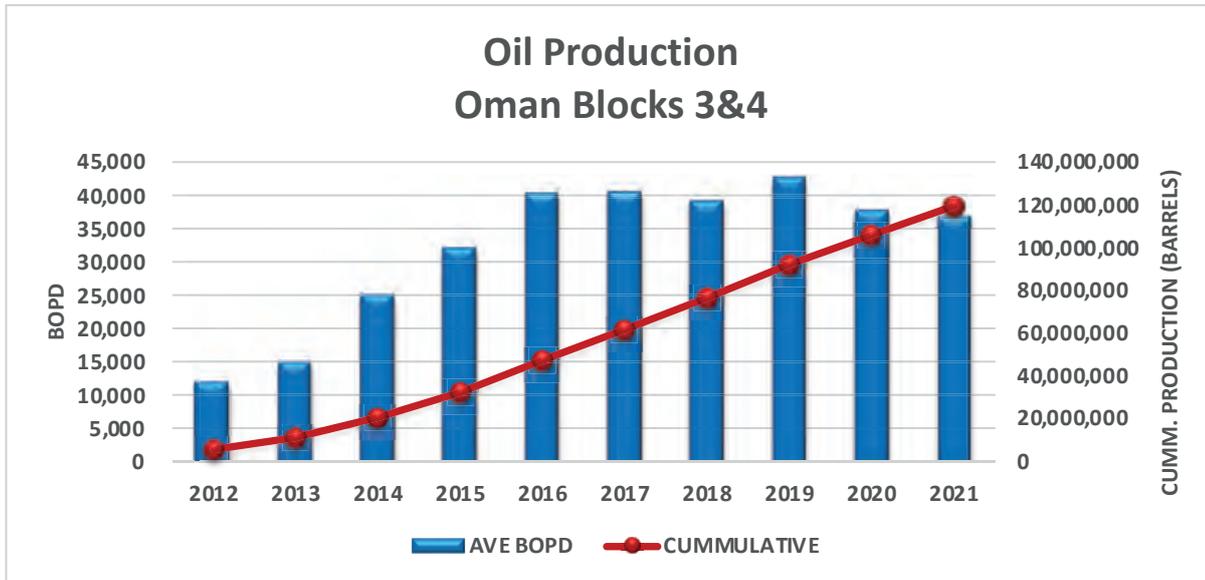
### CCED Key Milestones in Oman (until 2021)

- **2008:** License Acquired
- **2009:** Exploration Well Drilled
- **2010:** Early Production Commenced
- **2012:** Commercial Declaration
- **2016:** Average Production of 40,000 bopd
- **2017:** Milestone of 50 million barrels produced
- **2019:** Record production of over 45,000 bopd
- **2019:** An extensive further phase of exploration work agreed upon
- **2020:** Milestone of 100 million barrels produced
- **2021:**
  - o Total recordable case frequency (TRCF) reached 0.66 in 2020 vs. 0.35 in 2021
  - o Added 11 development wells during 2021
  - o Reactivated drilling rigs to have 3 operating to meet production targets
  - o Despite the challenges of the pandemic, we exported, on average, over 37,000 bopd.
  - o As shown below 89% of the total commitment purchases from local suppliers

Country Classification	Count of Agreements	Approved Contract Value US\$	% of ACV
International	83	36,249,883.44	11%
Oman	410	306,154,241.11	89%
<b>Grand Total</b>	<b>493</b>	<b>342,404,124.54</b>	<b>100%</b>

# Oil Production

## Oman Blocks 3&4 (2012 – 2021)



### Drilling

- Rig count in 2012: **2 Rigs**
- Rig count in 2013: **2 Rigs**
- Rig count in 2014: **3 Rigs**
- Rig count in 2015: **4 Rigs**
- Rig count in 2016: **4 Rigs**
- Rig count in 2017: **3 Rigs**
- Rig count in 2018: **3 Rigs**
- Rig count in 2019: **3 Rigs**
- Rig count in 2020: **3 Rigs**
- Rig count in 2021: **3 Rigs**

### Seismic

- 2013 CCED completed 1,668 km2 3D and 850 km 2D
- 2014 CCED completed 1,600 km2 of 3D
- 2015 CCED completed 1,300 km2 of 3D
- 2017 CCED completed 320 km2 of 3D
- 2018 CCED completed 2,470 km2 of 3D
- 2019 CCED completed 2,695 km2 of 3D
- 2020 CCED completed 1,650 km2 of 3D
- 2021 CCED completed 1,220 km2 of 3D

## Building Capability

CCED believes its technical excellence is built on the ability and potential of its people. We are committed to developing Omani capability at all levels of the organisation. The total workforce is around 685 people and currently 92% of these are Omani, including engineers and senior management.

We continue to nurture the next generation of energy sector qualified experts through a number of on-the-job training programs to significantly accelerate their skills development. For example, 95% of our maintenance technicians and production team have acquired the Advanced Diploma in Oil & Gas Operations from City & Guilds in the UK.

## Growing the Economy

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As a sustainable contributor to the Sultanate's long-term hydrocarbon vision, CCED and its partners Mitsui E&P Middle East B.V. and Tethys Oil Block 3 & 4 Limited are dedicated to the sustainable development of the industry, diversification and the overall socio-economic welfare of the nation. Moreover, we believe that it is our responsibility to invest in the communities we work with and develop a business that can bring long-term value to Oman.

## Creating In-Country Value (ICV)

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CCED continues to seek opportunities to create value chains in drilling and exploration and beyond in order to deliver sustained In-Country Value (ICV) for the communities we operate with and the Sultanate of Oman in general. In addition to developing the Omani workforce, we work directly with SMEs by providing guidance and assistance in bid preparation and strategic planning, helping them improve their competitive advantage. Meanwhile, in support of the development of the Super LCCs, we recently signed our second contract with Al Sawari.

## Health, Safety & Environment (HSE)

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HSE is a core value of CCED's business. Strong and visible leadership is delivered through our commitment to building trust, adhering to Life Saving Rules, empowering our workforce to intervene without repercussion and showing zero tolerance to unsafe behaviour. We focus on parallel themes of cultural development and excellent systems to continuously improve on HSE performance:

- **Trust:** We always put safety first in order to build trust amongst our employees and contractors. Safety is in our core and is an expectation rather than only a priority.
- **Commitment:** Our Life Saving Rules are an integral part of the way we operate on a daily basis. As a collective, we inspire confidence in our team by following the Rules, which will constantly provide a safe working environment for all.
- **Empowerment:** Our resolve is unwavering when it comes to ensuring individuals' feel empowered to stop operations, without repercussion, if they believe the job is unsafe, do not understand the job or are not clear on what they should be doing.
- **Zero Tolerance:** We lead by example in ushering a culture of intervention and zero tolerance when it comes to unsafe behaviour. We believe this will deliver our goal of an environment where all employees and contractors share the 'value of delivering everything we do with-zero injuries'.

The pandemic has seen, more than ever, wellbeing take priority in and out of the workplace. For CCED, this has meant facilitating working from home, implementing extra health and safety measures, or even checking in on how people have been coping mentally, as we did with our recent Mental Health campaign. This six-month-long initiative included a range of activities from virtual coaching sessions to surveys and informative content, providing our teams with the tools to recognize the warning signs in themselves and others, to understand the risks and, most importantly, to know where and how to seek help.



## About the Company

The Sultanate of Oman has been the core area for Swedish oil company Tethys Oil since 2006. As an active partner, Tethys Oil has contributed to the success of Blocks 3&4 where oil production started in 2009. Over time, Tethys Oil's operations in Oman have expanded into other geographical areas, starting in 2017 when Block 49, with 100 per cent interest, was awarded to Tethys Oil as operator. In 2020, Tethys Oil was awarded the operatorship on Block 58, also with 100 per cent interest. In parallel, Tethys Oil has in two steps farmed into Block 56. First at a 20 per cent interest in 2019 and later through a farmin agreement in February 2021 with Medco Arabia Ltd for an additional 45 per cent, at which point Tethys Oil assumed operatorship of the Block.

Tethys Oil aims to conduct its exploration and production of oil and gas in an environmentally, socially and economically, responsible way to achieve long-term sustainable development in the Omani oil and gas industry. In 2021, Tethys Oil performed a materiality analysis that led to updated material topics that in turn will set the base for the evolving sustainability strategy going forward.

## Tethys Commitment

### Environment

We use natural resources responsibly

To conduct operational activities in ways that create minimal disturbance to the environment and people

### Social

We invest in our local communities

To contribute positively to quality of life in communities where we operate by reducing impacts and creating benefits

### Governance

We live by the highest ethical standards

To have management procedures in place that promote honesty, integrity, transparency and accountability

## Organisation

All Tethys Oil's technical work is performed in the Sultanate of Oman by an exploration, development and production focused organisation with a team of highly trained Omani engineers and subsurface specialists. In recruiting staff, preference has always been given to Omani nationals, and currently the Omanisation rate amounts to about 85 per cent.

Health, Safety and Environment

The genuine care for Health, Safety and Environment is a core value for Tethys Oil, and shall be transparent through all plans and actions. Through fostering a culture of transparent decision making, responsibility and thorough planning, Tethys Oil strives to create a safe, accident-free work environment. In 2021, Tethys Oil continued to strengthen its HSE capabilities and preparedness by executing risk assessments and risk mitigation plans for the ongoing activities.

## Figure below shows incident report during 2021

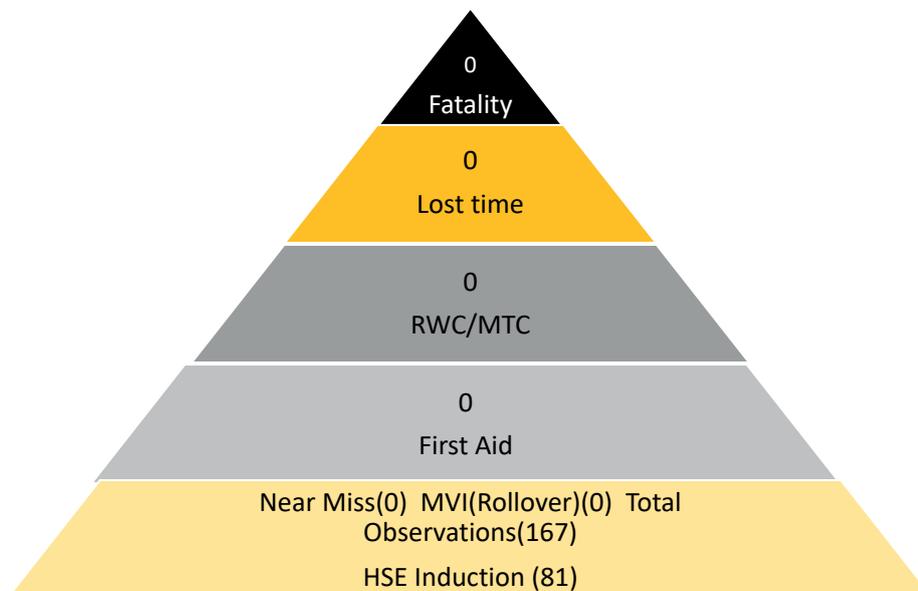


Figure: HSE statistics from Jan 1, 2021 to 31 Dec 2021

Tethys Oil and the Group's contractors have during all operations since field work started on Block 49 achieved 966 days without any Lost Time Incidents (LTI). The work programme has included a total of 111,480 Man-Hours and 288,594 km has been driven by different vehicles.

## Sustainable Operations

Sustainable considerations exist at all stages of the Company's activities in varying ways. For example, environmental impact during exploration and appraisal activities, such as on Blocks 49, 56 and 58 is minimal as operations are sparse, targeted and sporadic, whereas more detailed and broader spectrum analysis are customarily required on areas undergoing production activities, such as on Blocks 3&4.

Tethys Oil issued 51 subcontractor agreements in 2021 at a total value of approximately MUS\$ 39, all of which went to locally based contractors and suppliers.

### Block 49

The work programme on Block 49 was in 2021 focused on the drilling, testing and evaluation of the Thameen-1 exploration well in the north eastern part of the Block.

- Thameen-1 successfully drilled and tested without any incidents
- All 1st phase EPSA commitments met
- A feasibility study to review the Thameen-1 and other areas of the Block from an unconventional development point of view will be performed during 2022

### Blocks 56

In 2021, preparations for the three well drilling campaign on the Al Jumud trend in the north-western part of the Block was prioritized and drilling began in early 2022 with the Al Jumud-2 well.

The 2021/2022 3D seismic acquisition campaign covering more than 2,000 km<sup>2</sup> of the central area of the Block had begun by year-end 2021 and it will together with the drilling campaign be the main focus of 2022 on Block 56.

### Block 58

Tethys Oil procured a seismic survey that was conducted during the fourth quarter of 2021 in the South Lahan area, located in the central and eastern portion of the Block bordering Block 6. Over 450 km<sup>2</sup> of 3D seismic was acquired in South Lahan where Tethys Oil had previously identified leads based on data from previous operators.

# Tethys Oil's Community Engagement

The Group is committed to achieving a beneficial impact on its host communities by engaging in a dialogue with the Group's stakeholders, whether these are local communities or relevant interest groups, such as local governments and civil society. Tethys Oil engages in an active relationship with stakeholders to understand the concerns surrounding the Group's operations and to set mutually beneficial goals.

## Corporate Social Responsibility

Tethys Oil's activities strive to create shared prosperity between stakeholders. It seeks to respect and gain the respect of the people and governments of countries in which it operates. Good relations with host countries are prerequisites to Tethys Oil's business. Wherever operations are conducted, the sovereignty of the state is respected and the rule of law is observed and promoted.

### In 2021 the following initiatives has taken place:

- Supported Families under Social Security in Wilate Thumriate with "Iftar Saeem" initiative during the holy month of Ramadan
- Provided Al Kihil school in Wilate Al Jazir in Al Wusta Governorate with 10 screen projects
- Supported 2021 Empty Quarter Festival in the Wilayat of Thumrait in Dhofar Rejoin
- Sponsored Photography Competition organized by Directorate of Water Resources in Dhofar
- Sponsored Dhofar University to hold Literary Competition in writing short story and poetic recitation to discover the literary talents of young students

In addition, Tethys Oil along with joint venture partners, CC Energy Development S.A.L. and Mitsui E&P Middle East B.V. in Blocks 3&4, is pursuing several CSR initiatives.





## About OQ

OQ is a GLOBAL INTEGRATED ENERGY COMPANY with roots in Oman – operating in 17 countries around the world and covering the entire value chain from exploration and production to marketing and distribution of end-user products. Our fuels and chemicals are sold in over 60 countries worldwide, making us a key player in the energy sector.

## Integrated Structure and Business Model



## Corporate Social Investment

In 2021, OQ adopted a new social investment strategy framework that is aligned with Oman’s Vision 2040, the United Nation’s Sustainable Development Goals 2030, the company’s strategic priorities and the needs and aspirations of local communities, three focus areas were identified, stemming from the four pillars of the company to achieve the set vision in social investment.

Three key areas on which company’s social investment projects will focus were identified. These are:

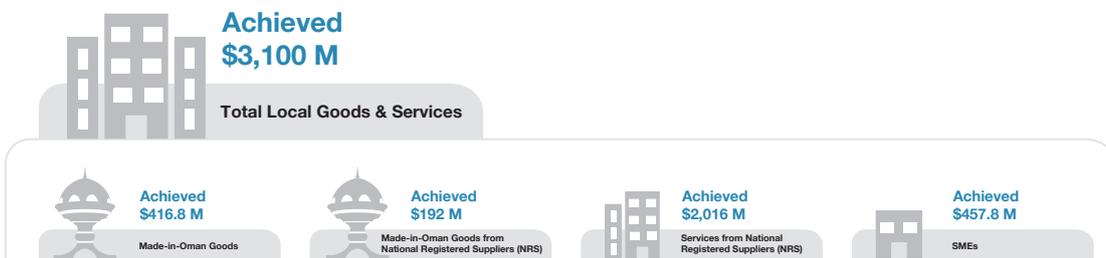
- **Education and Health**
- **Economic Prosperity**
- **Environment Stewardship**

## OQ’s CSI projects Map



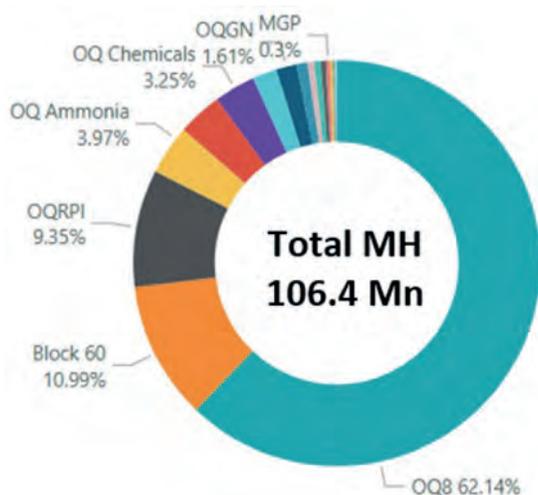
# In-Country Value (ICV)

Year	2020	2021	Description
OQ Total spend (USD M)	1,001	1,358	Total Spend of OQ core assets: OQEP, OQ GN, OQ Meth., OQ RPI and OQ8 (exclude EPC)
Local spend (USD M)	712	931	Value spend on local goods, services and SMEs in country.
In Country Value Index:	28%	29%	ICV Index is calculated based on factors applied only on parts of the expenditure which considered to be local, this approach is used by the oil and gas sector to calculate ICV retained value on the basis of the blueprint strategy & MEM directives.
In Country Value spend (USD M)	282	392	
SME spend (USD M)	89	165	Total spend of OQ to SMEs out of total OQ spend.
SME% (Out of total OQ spend)	8%	12%	



# CHSSE Overview

## Total ManHours - FY 2021



## HSSE Statistics - FY 2021

