

O(GSE100



TOP 100
OGSE COMPANIES
IN MALAYSIA

FY2020



Malaysia Petroleum Resources Corporation (MPRC) is an agency under the Economic Planning Unit in the Prime Minister's Department. Established in April 2011, MPRC provides recommendations to the Government on development policy, industry master plans, business regulations, investments and fiscal incentives for the oil, gas and energy industry.

To encourage competitiveness and nurture long-term resilience among Malaysian OGSE players, MPRC works with relevant government agencies to implement industry development initiatives covering technology and innovation, human capital development, market access and internationalisation, and access to finance facilitation.

For more information, please visit www.mprc.gov.my

ABOUT OGSE100

OGSE100 lists the top 100 Oil and Gas Services and Equipment (OGSE) companies registered in Malaysia and ranks them based on their revenue. MPRC conducts its study by acquiring financial information of OGSE companies on a consolidated basis.

The purpose of OGSE100 is to highlight the growth of OGSE companies and serve as a point of reference for industry players, potential investors and relevant stakeholders. The OGSE companies are mapped based on the industry segments they are operating in, followed by a segment analysis.

We use a small sample of public-listed OGSE companies reflective of the major OGSE activity in Malaysia in the Southeast Asia (SEA) regional comparison section for the year for review. Also, OGSE100 contains forward-looking statements based on assumptions, information and various perspectives made available to MPRC to provide a holistic picture and direction of the industry.

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IN OGSE

Our study is based on Malaysian-licensed companies whose primary business is related to the OGSE sector. We have also included listed companies with licensed subsidiaries or associates. These companies are assessed based on their consolidated financial results for the financial year (FY) 2020. We had an initial population of 2,299 companies for FY2020. Our primary source of data is the Companies Commission of Malaysia's (SSM) Corporate and Business Information Data (CBID) database, from

which we obtained financial records of these companies.

The analyses and study are based on data available as of November 2021. After applying our methodology (see pages 41 and 42), we arrived at a final population of 1,328 OGSE companies. These companies are further categorised into the top 100 of OGSE100 companies, 154 non-OGSE100 Mid-Tiers and 1,074 non-OGSE100 Small and Medium-sized Enterprises (SMEs).

INITIAL POPULATION

2,299

COMPANIES FOR FY2020

FINAL POPULATION

1,328

OGSE COMPANIES

MOVEMENT

FY2020 saw major rank climbers within the top 100 list, including MKN Odyssey Ventures Sdn Bhd, Aker Engineering Malaysia Sdn Bhd, Integrated Petroleum Services Sdn Bhd, Executive Offshore Services Sdn Bhd, VSD Automation Sdn Bhd and Esstar Vision Sdn Bhd.

The year under review also includes new entrants into OGSE100, namely Almitra Energy Services Sdn Bhd, Synergy Marine Sdn Bhd, BWS Engineering

Sdn Bhd, TMM Engineering Services Sdn Bhd and Redtech Offshore Sdn Bhd.

Alongside new entrants are comebacks by previous OGSE100 companies, including Ocean Vantage Holdings Bhd, FMC Wellhead Equipment Sdn Bhd, Eastern Pacific Industrial Corporation Bhd, Daya Materials Bhd, Punj Lloyd Sdn Bhd, Bintang Samudera Sdn Bhd, and Sumisaujana Sdn Bhd.

MESSAGE FROM CEO

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Bismillahirrahmanirrahim.

FY2020 ended on a sombre note as effects of the COVID-19 pandemic took hold and demand for energy, in particular oil, reduced due to restrictive movement rules around the world. Whilst there is some light at the end of a very long tunnel with the rollout of vaccination programmes and resumption of economic activities, the pandemic has impacted the oil and gas industry drastically.



For the year in review, effects of the pandemic and movement control rules affected the performance of Malaysian OGSE companies, with industry revenue declining substantially during the year. The domestic sector incurred a loss due to necessary impairment costs. FY2020 also saw a collapse in oil demand and rising inventories. This weighed on the price of crude

oil and saw WTI crude oil futures contract falling briefly below zero, setting a sombre tone for the rest of the year. Nonetheless, some Malaysian OGSE players persevered and faced challenges head-on, maintaining their industry position and future growth. Due to their efforts, Malaysian OGSE sector had a relatively lower performance decline compared with their regional peers.



In FY2020, Malaysian OGSE companies registered a double-digit decline for all three segments, including the Mid-Tiers and SMEs, with industry revenue at RM56.2 billion. However, on the back of this decline, MISC Bhd. and Sapura Energy Bhd. maintained their top two spots, having recorded strong revenue performance during the year. In the third and fourth spot are Yinson Holdings Bhd. and Bumi Armada Bhd., respectively, while Dialog Group Bhd. maintained its fifth position. Overall, the sector incurred a loss of RM4.0 billion on asset impairments by several major OGSE players, without which, the industry would have registered a profit of RM781.4 million.

REGIONAL PERFORMANCE **FY2020**

In Southeast Asia, pandemic-related lockdowns also led to a drastic drop in fuel demand, notably in the transportation, shipping and aviation sectors. Subsequently, countries like Malaysia, Indonesia, Thailand and the Philippines have had to halt or delay energy-related developments, including deep-water projects, due to a shortage of workers during the lockdown.

Throughout FY2020, Southeast Asia OGSE companies' focused on managing cashflows for survival whilst prioritising projects and maintaining future growth. Against regional peers, Malaysian OGSE companies coped better with the pandemic, having registered an average decline of 14.2 per cent compared to regional peers that saw a 23.1 per cent decline in revenue performance.

Despite the decline, some Malaysian OGSE companies have remained resilient with sizeable growth, namely Sapura Energy Bhd., Bumi Armada Bhd. and MISC Bhd. The former two recorded double-digit revenue growth of 37.5 per cent and 10.1 per cent, respectively, while the latter with 2.2 per cent.

2021 AT A GLANCE

2021 marked the second year of COVID-19 with accelerating rollouts of vaccinations in most major economies. Widespread fiscal responses to the economic crisis also boosted the outlook for economic growth, leading to a rebound in energy demand in 2021.

In Malaysia, borders have gradually reopened, and the national economy is on the road to recovery, even as risks remain from the ongoing COVID-19 crisis. Nevertheless, the Government is committed to the economy's return to pre-pandemic growth rates by focusing on three areas – recovery, resilience and reforms. The National Recovery Council has also outlined five initiatives for the Malaysian economy to recover and chart new paths for the future. These include loan moratorium and government guarantee schemes for companies, including OGSE companies.





2022 5 WHAT'S NEXT FOR OGSE?

The path of global recovery is still underway, and Malaysia will continue to monitor the economic impact of the COVID-19 pandemic. Although the pandemic has been relatively well managed so far, its continuing impact on the OGSE sector in the upcoming financial year remains to be seen. At present, uncertainties still abound for the vaccination or booster coverage and any emerging variants of the coronavirus.

Nevertheless, we are cautiously optimistic. The National OGSE Industry Blueprint 2021-2030 that was introduced by the Government endeavours to grow Malaysia's OGSE sector in capacity and capability to ensure greater competitiveness and long-term sustainability.

The Government is also expected to launch the new National Energy Policy, which focuses on achieving long-term energy security at competitive prices while ensuring environmental sustainability, and complements the National Gas Roadmap that strives to optimise the value of indigenous gas resources, enhance the security of supply and access to cost-competitive gas, amongst others. Equally important, the coalto-gas switching is also addressed in the 12th

Malaysia Plan, whereby cleaner electricity generation will be implemented through the operation of several gas power plants in Peninsular Malaysia to replace coal-fired power plants.

Looking beyond 2022, Malaysian OGSE players are to remain steadfast and agile while navigating the turbulence ahead. Above all, MPRC firmly believes the Government roadmaps and blueprints shall be the pathways to follow and could set a clear direction towards industry recovery, resilience-building and future-proofing businesses.

On behalf of MPRC, I would like to thank all industry players and stakeholders for your continuous support and participation in MPRC's initiatives.

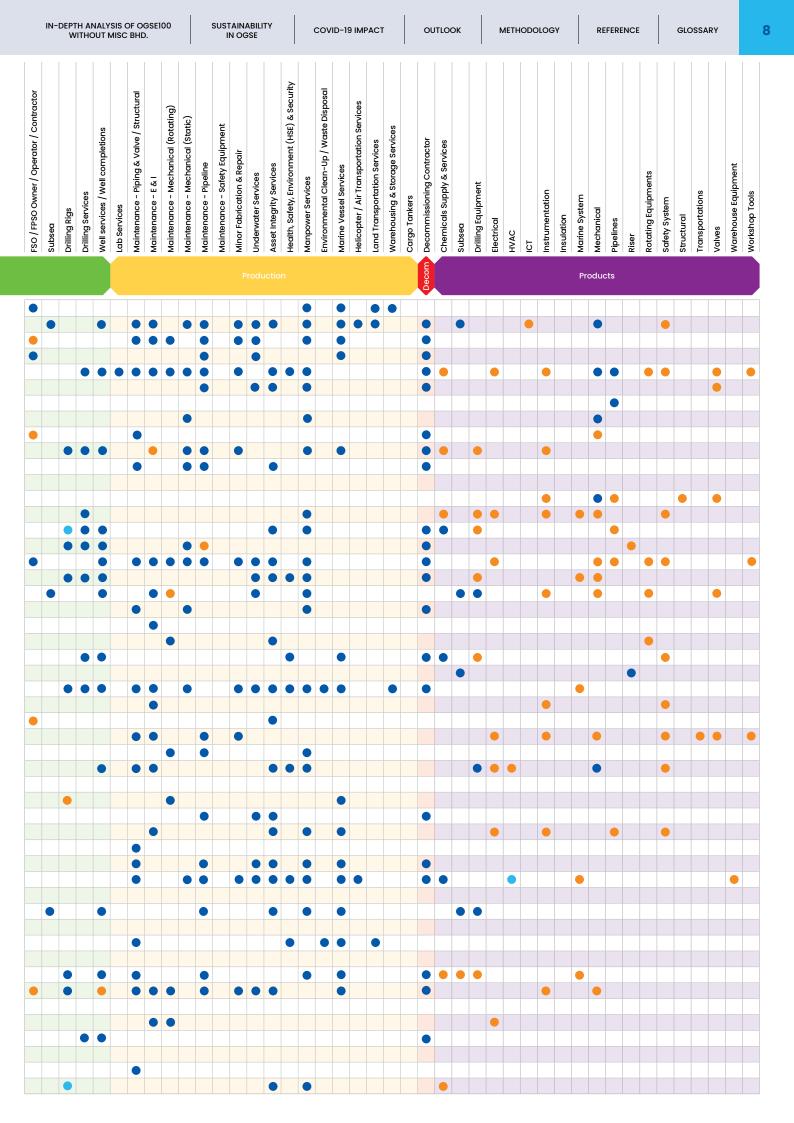
Mohd Yazid Ja'afar President/CEO

December 2021

RANKINGS & CATEGORIES OGSE100

Group	Services Modus Operandi	Products Modus Operandi
•	Self-Operated, Rig Owner Operator, Vessel Owner-Operator	Manufacturer, Fabricator
•	Rig Operator, Vessel Operator	Assembler, Chemical Blender, Packager, System Integrator
	Agent, Buying Arm	Agent, Dealer, Buying Arm

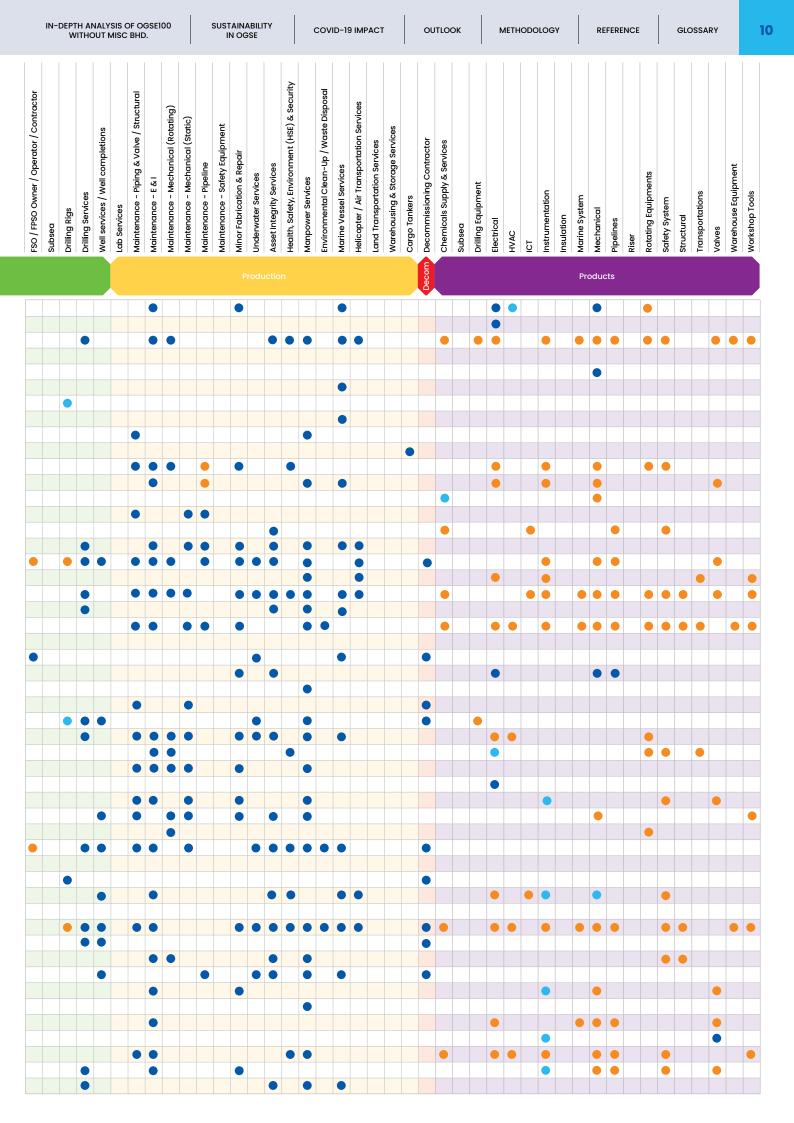
0	G!	5	E100 RANKING CATEGOR						Field Development / Reservoir Management Services	lltancy				Production / Upstream Consultancy								Offshore Support Vessel Contractor	tor
Group Services Modus Operandi Products Modus Operandi							. <u>-</u>	40	servoir	Project Management Consultancy	ancy		ancy	m Cons			ator	ator	_	Se Se	SU	sel Cor	Pipeline Installation Contractor
Self-Operated, Rig Owner Operator, Vessel Owner-Operator Manufacturer, Fabricat					_		Geological / Reservoir	Geophysical Services	ent / Re	ement	Engineering Consultancy	5	Geophysical Consultancy	ostrea	VICES	, _	Major Platform Fabricator	Minor Platform Fabricator	Onshore Construction	Onshore Tank Facilities	Offshore Constructions	ort Ves	ortion 0
			rator, Vessel Operator Assembler, Chemical Packager, System Int	egrator	_		al / Re	ical Se	-mdol	anage	ng Co	HSE Consultancy	S S	/u	Geomatics services	Building Design	fform	tform	Const	Tank	Const	oddns	nstallo
	Age	ent, E	Buying Arm Agent, Dealer, Buying	Arm			ologica	physi	Deve	ectM	ineeri	Cons	phys	ductio	manic /OC's	dina	or Pla	or Pla	shore	hore	shore	shore	eline II
Ranl	king	ent			FY2020		Geo	Geo		Pro	E G	X S	96 Geo	g S	ğ S	; <u>=</u>	Σ	Ξ	ő	ő	o W	o#	ğ.
2020	2019	Movement	Company Name	Revenue (RM mil)	PBT Margin	Total Fixed Assets	Exp	lorat	ion										Deve	lopn	nent		
		2			(%)	(RM mil)																	
1	1	=	MISC BHD.	9,401.20	-1.3	39,463.1																	
3	2	=	SAPURA ENERGY BHD. YINSON HOLDINGS BHD.	6,449.20 2,519.30	-70.6 13.1	18,765.7 7,321.0					•					1							
4	6	_	BUMI ARMADA BHD.	2,339.90	5.5	10,803.3															•	•	
5	5	=	DIALOG GROUP BHD.	2,303.40	32.4	4,697.3		•	•		•		-				•	•	•	•	•	•	•
6	9	_	TECHNIP GEOPRODUCTION (M) SDN. BHD.	1,953.20	0.1	134.9															•		
7	4	•	WAH SEONG CORPORATION BHD.	1,409.10	-19.0	1,266.5																	•
8	7	•	KNM GROUP BHD.	1,343.30	5.6	2,885.6				•							•	•	•				
9	8	•	MUHIBBAH ENGINEERING (M) BHD.	1,199.60	-4.7	1,875.1				•							•	•	•				
10	12	-	HALLIBURTON ENERGY SERVICES (MALAYSIA) SDN. BHD.	1,068.70	2.0	202.3							- I'										
11	10	•	DAYANG ENTERPRISE HOLDINGS BHD. TUMPUAN MEGAH DEVELOPMENT SDN. BHD.	731.40 645.30	12.1 0.6	1,979.7 42.7																	
13	17	_	PANTECH GROUP HOLDINGS BHD.	602.50	7.6	354.4																	
14	13	•	DELEUM BHD.	592.10	4.6	221.1											•						
15	22	_	UZMA BHD.	552.40	-1.8	773.1	•	•	•				•					•			•		
16	15	•	VELESTO ENERGY BHD.	546.90	-87.2	2,732.6																	
17	18	_	PETRA ENERGY BHD.	422.40	5.5	293.2				•	•		- 1					•	•				•
18	52		INTEGRATED PETROLEUM SERVICES SDN. BHD.	385.50	0.8	4.1				•)							
19	NA 23		FMC WELLHEAD EQUIPMENT SDN. BHD. CARIMIN PETROLEUM BHD.	378.40 373.90	-2.7 4.9	116.3																	
21	20	_	SHOREFIELD SDN. BHD.	346.30	10.2	108.1																	
22	27	_	ADVANCE GAS TURBINE SOLUTIONS SDN. BHD.	329.10	18.4	0.2																	
23	16	•	SCOMI ENERGY SERVICES BHD.	327.00	-55.2	298.7				•													
24	24	=	ASIAFLEX PRODUCTS SDN. BHD.	311.60	0.0	244.4																	
25	NA		EASTERN PACIFIC INDUSTRIAL CORPORATION BHD.	305.80	6.4	1,077.1									•)	•	•					•
26	25	•	YOKOGAWA KONTROL (MALAYSIA) SDN. BHD.	296.40	14.0	4.0																	
27	29 31		E&P O&M SERVICES SDN. BHD. TRANSWATER API SDN. BHD.	294.00 285.60	10.9	6.2												•					
29	35		SANKYU (MALAYSIA) SDN. BHD.	285.30	9.1	58.5																	
30	28	•	SOLAR ALERT SDN. BHD.	278.30	14.4	57.1						•											
31	62	_	EXECUTIVE OFFSHORE SERVICES SDN. BHD.	278.20	-2.6	121.9																•	
32	84	_	MKN ODYSSEY VENTURES SDN. BHD.	273.30	1.9	0.1																	
33	32	•	ALAM MARITIM RESOURCES BHD.	255.20	-46.9	262.7																•	
34	33	•	EMERSON PROCESS MANAGEMENT (MALAYSIA) SDN. BHD.	255.10	15.0	18.2				•													
35 36	40 26	-	ASIAN SUPPLY BASE SDN. BHD. BARAKAH OFFSHORE PETROLEUM BHD.	221.20 221.00	15.0 9.1	387.3 86.0				•													
37	NA		DAYA MATERIALS BHD.	214.90	-27.9	43.1				•								•	•	•			
38	39	_	MARINE & GENERAL BHD.	213.60	-30.7	833.3																•	
39	71	_	AKER SOLUTIONS APAC SDN. BHD.	212.60	5.0	6.9				•	•												
40	44	•	ICON OFFSHORE BHD.	212.10	21.1	651.1																•	
41	46	•	KUALITI ALAM SDN. BHD.	211.60	16.7	240.7													•				
42	NA O4		PUNJ LLOYD SDN. BHD.	207.70	78.3	1.0																	
43	34	-	DESTINI BHD. T7 GLOBAL BHD.	190.10 189.40	-101.5 4.0	156.9 291.1				•													
45	42	-	OCEANMIGHT SDN. BHD.	173.10	14.2	2.5											•						
46	86	_	VSD AUTOMATION SDN. BHD.	168.80	14.5	9.0																	
47	59	_	SETEGAP VENTURES PETROLEUM SDN. BHD.	157.70	18.1	103.0																	
48	317	•	ALMITRA ENERGY SERVICES SDN. BHD.	146.60	1.0	0.1		•															
49	49	=	BOUSTEAD HEAVY INDUSTRIES CORPORATION BHD.	145.20	-22.6	135.3				•							•						
50	43		PETRONNIC SDN. BHD.	136.00	0.9	1.4																	



OGSE100 RANKINGS & CATEGORIES

Group	Services Modus Operandi	Products Modus Operandi
•	Self-Operated, Rig Owner Operator, Vessel Owner-Operator	Manufacturer, Fabricator
•	Rig Operator, Vessel Operator	Assembler, Chemical Blender, Packager, System Integrator
	Agent, Buying Arm	Agent, Dealer, Buying Arm

Field Development / Reservoir Management Service: Production / Upstream Consultancy Offshore Support Vessel Contractor Project Management Consultancy Pipeline Installation Contractor **Seophysical Consultancy** Minor Platform Fabricator Engineering Consultancy Major Platform Fabricatoı Onshore Tank Facilities Offshore Constructions Geological / Reservoir Geophysical Services **Onshore Construction Seomatics Services HSE Consultancy 3uilding Design** o[∀] Company Name Maraii Exploration (%) 51 DYNAC SDN. BHD 125.8 1.5 94.4 64 EWT TRANSFORMER SDN. BHD 14.8 15.4 52 63 118.7 53 60 FP FNGINFFRING SDN. BHD 115.7 1.7 1.3 114.9 54 61 LUBRICLEUM SDN. BHD. 0.4 8.1 55 88 ESSTAR VISION SDN. BHD. 114.6 1.8 14.6 78 -1.3 1.2 56 HEMAT MARINE SDN. BHD 114.3 -0.6 57 250 RELATION FIELD SDN BHD 1118 0.0 58 109 SYNERGY MARINE (M) SDN. BHD. 109.5 8.4 7.1 59 100 AKER ENGINEERING MALAYSIA SDN. BHD. 109.3 -16.9 38.9 ORKIM MARINE SDN. BHD. 109.3 5.3 48.8 60 73 17.3 6.0 61 66 TRACTORS PETROLEUM SERVICES SDN. BHD. 102.4 62 93 ALKAHFI LESTARI OIL & GAS SDN. BHD. 102.3 1.0 26. 63 92 ENRA KIMIA SDN. BHD. 101.3 10.2 19.1 187 BWS ENGINEERING SDN. BHD. -0.4 64 101.0 12.6 20.2 65 NA SUMISAUJANA SDN. BHD. 99.5 19.7 66 48 VELOSI (M) SDN. BHD. 98.9 1.2 5.2 67 91 OCEANCARE CORPORATION SDN. BHD. 97.9 7.6 7.2 68 119 SIME DARBY ENERGY SOLUTIONS SDN. BHD 97.2 2.2 2.1 1.3 69 CEKAP TECHNICAL SERVICES SDN. BHD 96.6 1.1 54 BUREAU VERITAS (M) SDN. BHD. 70 79 929 77 3.5 71 146 TMM ENGINEERING SERVICES SDN. BHD. 926 26.5 18.1 72 NA BINTANG SAMUDERA SDN. BHD. 91.8 56.5 103.6 73 97 MTC ENGINEERING SDN. BHD. 91.0 13.9 189.3 74 83 SBN INDUSTRIES SDN. BHD. 87.3 -0.29.6 75 222 ARMADA BAIDURI SDN. BHD. 86.6 0.4 2.0 76 41 ICE PETROLEUM ENGINEERING SDN. BHD. 86.6 -25.7 7.0 77 107 RESERVOIR LINK SDN. BHD. 86.2 21.0 29.2 138 PIONEER ENGINEERING SDN. BHD. 86.0 0.6 32.6 78 79 98 UMW INDUSTRIAL POWER SERVICES SDN. BHD 85.6 53 34 U B F MAINTENANCE SDN. BHD. 1.9 80 50 85.4 3.8 INDKOM ENGINEERING SDN BHD. 11.0 81 85.2 24.2 NA 82 104 WZS MISI SETIA SDN. BHD. 811 22 12.9 83 81 ENPROSERVE (M) SDN. BHD. 80.3 5.0 26.3 17.5 84 MAN ENERGY SOLUTIONS MALAYSIA ES SDN. BHD 80.3 3.0 85 REDTECH OFFSHORE SDN. BHD 79.8 2.7 0.2 249 86 96 KEYFIFLD OFFSHORE SDN. BHD. 75.2 24.0 87.4 87 72 PERISAI PETROLEUM TEKNOLOGI BHD. 744 -8907 290.4 88 101 TRISYSTEMS ENGINEERING SDN. BHD. 74.2 17.1 17.0 89 94 MICROSITE ENTERPRISE SDN. BHD 74.0 -3.0 15.0 OCEAN VANTAGE HOLDINGS BHD 73.7 14.0 90 NA 7.9 91 69 DIMENSION BID (M) SDN. BHD. 73.6 -17 O 23.3 92 169 AWORLDTEC ENGINEERING SDN. BHD 73.5 1.4 2.4 93 BINTANG SUBSEA VENTURES (M) SDN. BHD. 72.8 1.5 2.3 80 71.7 28.9 5.1 94 82 PENAGA DRESSER SDN. BHD. 95 115 AIR ENERGY CONSULTING (MALAYSIA) SDN. BHD. 70.2 32 01 96 111 SWIS RESOURCES SDN. BHD. 69.5 13.3 19.8 97 106 68.8 0.3 6.3 MIR VALVE SDN. BHD HYPERWAVE SYSTEMS ENGINEERING SDN. BHD 98 121 65.5 16.6 20.4 99 103 MATCO (MALAYSIA) SDN. BHD. 65.4 17.1 18.7 100 120 DNV GL MALAYSIA SDN. BHD. 64.1 13.9 0.4

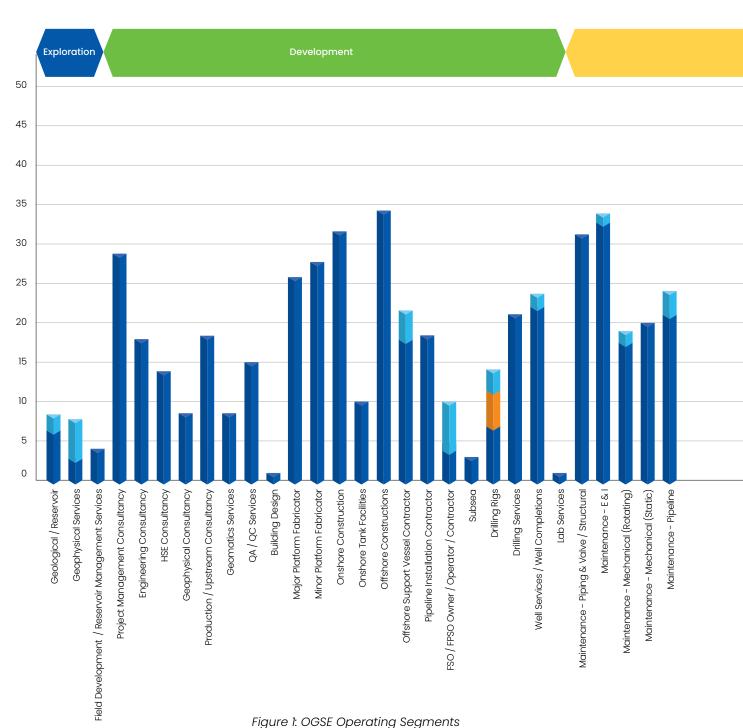


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WHERE DO OGSE100 COMPANIES OPERATE

The oil and gas services supply chain can be categorised into four segments: Exploration, Development, Production and Decommissioning, corresponding with the various phases along a project's life cycle.

Guided by PETRONAS' Standard Work & Equipment Categories (SWEC), the segments are further divided into 45 services and 23 product sub-segments. The OGSE100 companies are then mapped according to their corresponding operating segments, as illustrated in Figure 1.



SUSTAINABILITY

IN OGSE

The degree of value-added activities of these companies is based on the logical grouping of their respective mode of operations, as shown in the table below.

Group	Services Modus Operandi	Products Modus Operandi
	Self-Operated, Rig Owner Operator, Vessel Owner-Operator	Manufacturer, Fabricator
	Rig Operator, Vessel Operator	Assembler, Chemical Blender, Packager, System Integrator
	Agent, Dealer, Buying Arm	Agent, Dealer, Buying Arm

Based on Figure 1, we can deduce that OGSE100 companies operate across all categories of the oil and gas services and products supply chain and continue to exhibit a higher degree of value-added activities in the services categories.

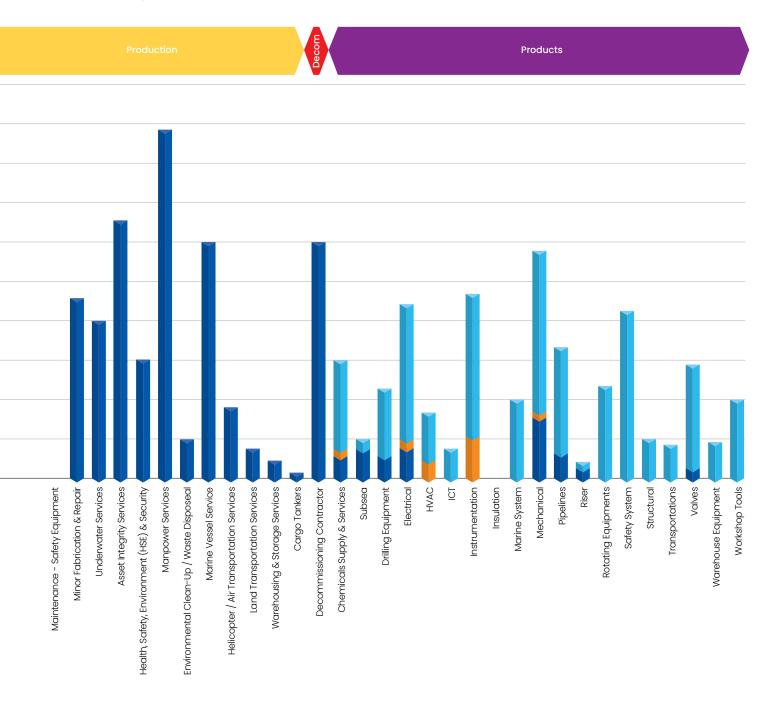


Figure 1: OGSE Operating Segments

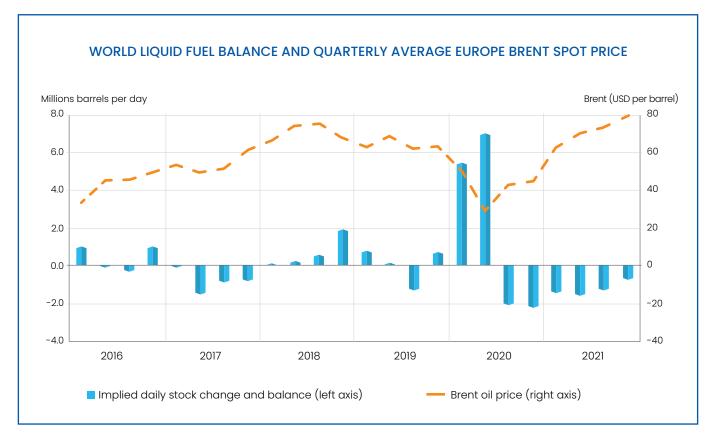


Figure 2: World Liquid Fuel Balance and Quarterly Average Europe Brent Spot Price

In FY2020, the COVID-19 pandemic triggered an unprecedented demand shock in the oil industry, leading to a historic market collapse in oil prices. As a result, the global oil price was lower in FY2020, with an average of USD41.8/bbl compared to USD64.4/bbl in 2019.

In April 2020, oil demand fell as governments worldwide imposed lockdowns and travel restrictions. The combination of falling demand, rising supply and decreasing storage space caused the crude oil price to plunge. Exacerbated by the oil price war between Saudi Arabia and Russia, global oil price collapsed to a 21-year low of USD18.4/bbl in April 2020.

Subsequently, the second half of FY2020 saw the global oil price gradually recover following the OPEC+ compliance to an unprecedented production cut of 9.7 mb/d starting in May 2020 and the strict US sanctions on Iran and Venezuela oil output. Nonetheless, the oil price recovery was still constrained by the slow demand in the transportation industry and the abundance of oil supplies kept in storage facilities, both land and sea.

PETRONAS' CAPEX

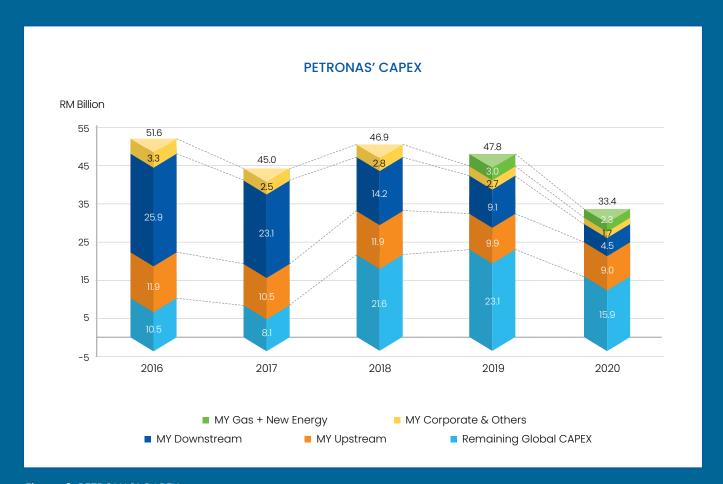


Figure 3: PETRONAS' CAPEX

In 2020, PETRONAS recorded RMI5.9 billion total global capital expenditure (CAPEX), whereby RM5.4 billion was allocated to international portfolio investments in key countries such as Canada, Iraq, Azerbaijan and Mexico. Among notable investments is Upstream's first entry into the Gulf of Mexico's oil and gas operations. Through its subsidiary, Progress Resources USA LLC (PRUL), PETRONAS acquired a 30 per cent working interest in the Monument Prospect earlier in FY2020.

For the Gas + New Energy (GNE) segment, capital investments for FY2020 were primarily spent on international ventures, particularly for the liquefied natural gas (LNG) project in Canada, with additional investments to acquire solar assets under Acme Solar in India.

In FY2020, PETRONAS recorded a domestic CAPEX spend of RM17.5 billion compared to RM24.7 billion in the previous year. Spending across all segments decreased for the year under review, with Downstream spending being significantly reduced to almost half than in 2019.

Domestically, RM9.0 billion or 51 per cent of Upstream's CAPEX was allocated for key projects, including the Kasawari Gas Field Development, Bayan Phase 2, Baram Delta Enhanced Oil Recovery and Pegaga Gas Field Development.

2020: MALAYSIA'S OGSE SECTOR IN REVIEW

1. TOTAL REVENUE DECLINED BY 13.7%



Figure 4: Industry Revenue

For the year under review, Malaysian OGSE sector recorded total revenue of RM56.2 billion or a 13.7 per cent decline against RM65.1 billion in 2019. Meanwhile, OGSE100 total revenue stood at RM46.8 billion, 10.5 per cent lower than 2019 (RM52.4 billion). Subsequently, FY2020 saw a more significant reduction in total revenue for non-OGSE Mid-Tier companies and SMEs with declines of 22.9 per cent (RM4.9 billion) and 30.4 per cent (RM4.5 billion), respectively.



2. INDUSTRY NEGATIVE PROFIT BEFORE TAX (PBT) OF RM4.0 BILLION

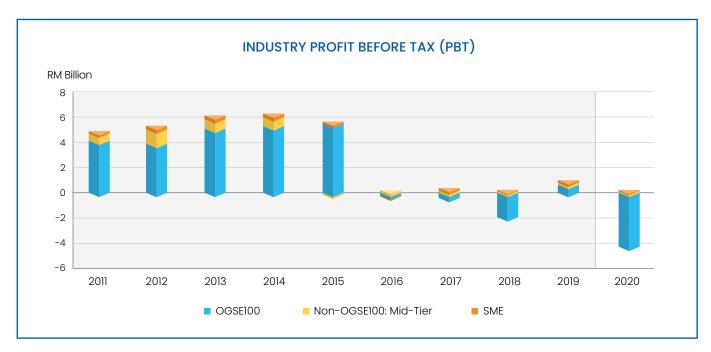


Figure 5: Industry PBT



Figure 6: Industry PBT Margin

Malaysia's OGSE industry recorded a loss before tax (LBT) of RM4.0 billion with an average loss margin of 7.1 per cent against a PBT of RM1.1 billion in 2019. Moreover, the OGSE100 industry reported a massive LBT of RM4.3 billion with an average loss of 9.2 per cent due to impairment exercises by several asset-heavy players including Sapura Energy Bhd recognising an RM3.3 billion impairment in its books.

Without these charges, the total PBT and average PBT margin for OGSE100 companies would have been in the black, with the amount slightly over RM0.5 billion and 1.1 per cent, respectively.

Both non-OGSE100 Mid-Tier companies and SMEs continued to record positive PBT of RM224.1 million and RM56.2 million, correspondingly.

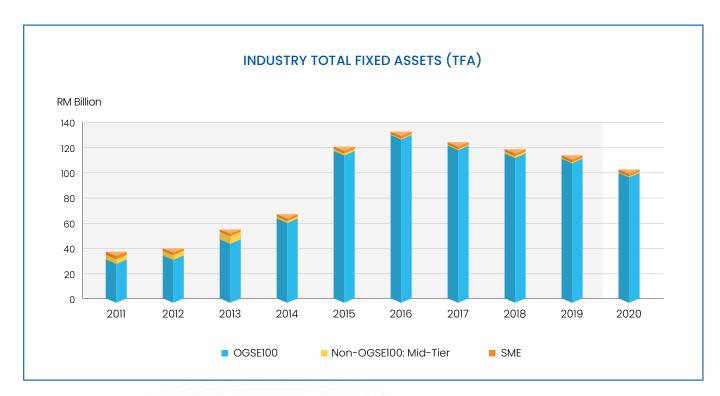


Figure 7: Total Fixed Assets

Overall, the industry continued efforts in reducing asset ownerships in FY2020, with a year-on-year decline by 8.6 per cent to RM103.1 billion compared to RM112.7 billion in 2019. The decline is due to industry players reducing liabilities created through asset ownerships and diversifying into less asset-intensive sectors.

In FY2020, OGSE100 companies still owned circa 97.6 per cent of the assets totalling RM100.7 billion, whereas non-OGSE100 Mid-Tier companies and SMEs recorded assets worth RM1.2 billion each.



IN-DEPTH ANALYSIS OF OGSE100

WITHOUT MALAYSIA INTERNATIONAL SHIPPING CORPORATION (MISC) BHD.

For the FY2020 edition, we continue to provide an in-depth analysis of the industry by excluding MISC Bhd. (MISC), as its size and contribution could distort our sector analysis in terms of revenue, PBT and Total Fixed Assets (TFA).

On average, MISC accounted for 17 per cent of the OGSE100 revenue and 14 per cent of the total industry for the last five financial years since its addition to the population in 2016. Therefore, this analysis intends to provide an alternative view on the industry's movement and traction of the OGSE sector with the exclusion of MISC.

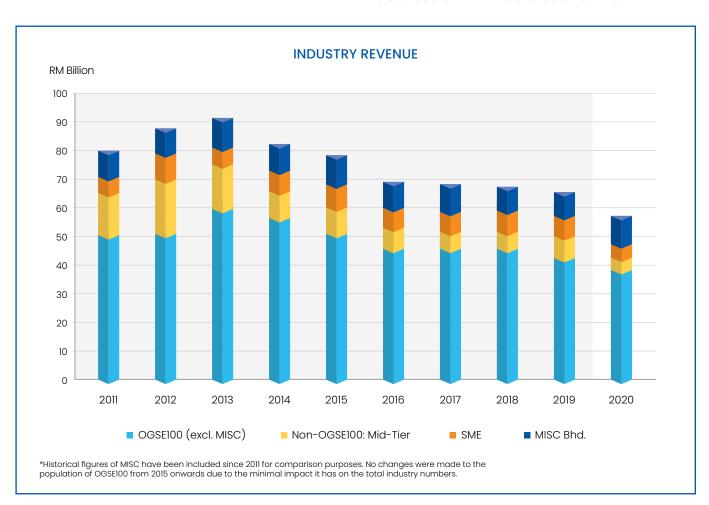


Figure 8: Industry Revenue excl. MISC

FY2020 saw total OGSE revenue of RM46.8 billion, a 16.6 per cent decline from RM56.1 billion in the previous year. Excluding MISC, OGSE companies reported total revenue of RM37.4 billion, a decline of 13.7 per cent compared to the RM43.4 billion in 2019, of which the top 10 companies contributed 57 per cent of the revenue. One of the major deliverables was the Central Processing Platforms for Mubadala Petroleum's Pegaga field in Sarawak by Sapura Energy Bhd.

The year under review also saw exemplary performance by Dialog Group from its terminal business, in particular the completion and commissioning of its petroleum terminal with an additional storage capacity of 430,000 m3 at Pengerang Independent Terminals Sdn Bhd (PITSB) and an additional 120,000 m3 at Dialog Terminals Langsat (3) Sdn Bhd (DTL3).

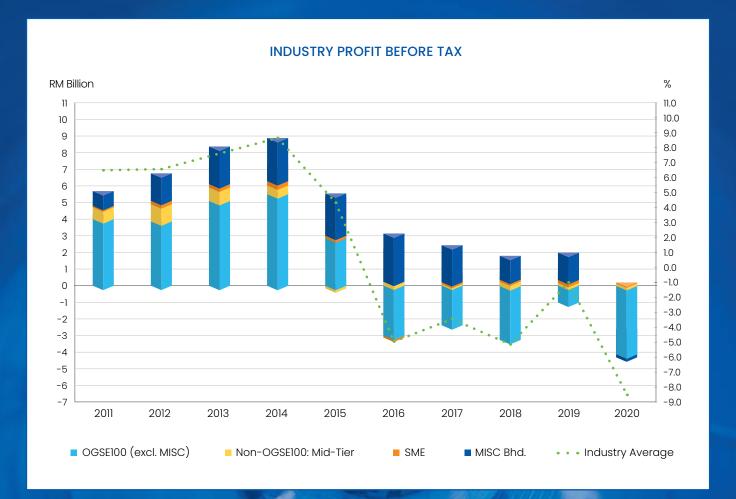
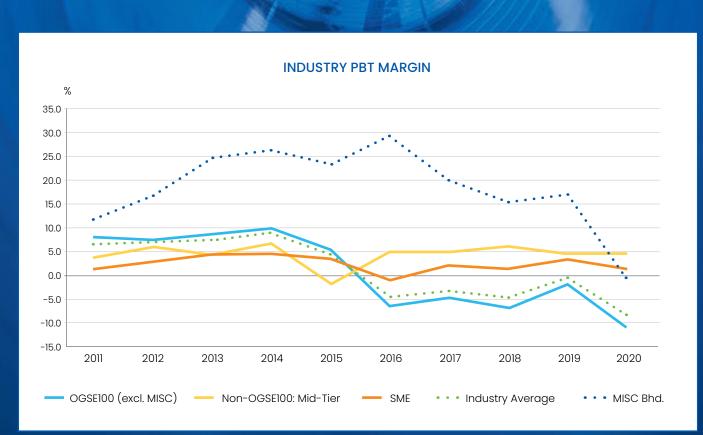


Figure 9: Industry PBT excl. MISC

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IN OGSE

Excluding MISC, the Malaysian OGSE sector saw an LBT of RM3.9 billion from RM450 million in 2019, which is the fifth consecutive loss since 2016.

Similarly, the same trend was witnessed by the OGSE100 group of companies recording an LBT of RM4.2 billion with an average margin loss of 11.1 per cent, a further decline from over RM900 million loss in the year before.

In contrast, non-OGSE100 Mid-Tier companies and SMEs continued to record positive PBT of RM224.1 million and RM56.2 million, respectively.

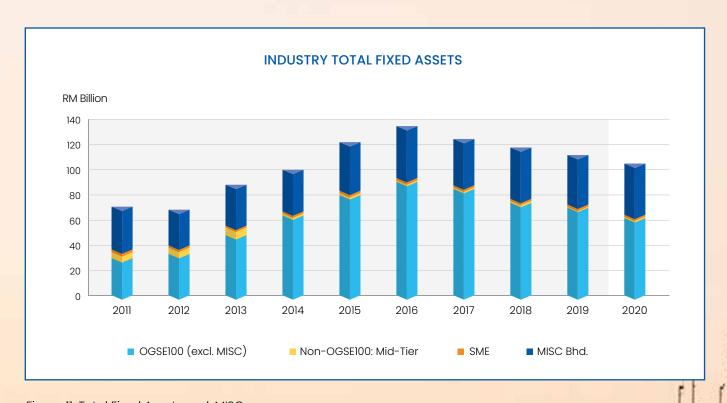


Figure 11: Total Fixed Assets excl. MISC

By omitting MISC, the domestic OGSE sector accumulated a TFA worth RM63.6 billion in FY2020, a decline of 11.8 per cent compared with 2019. The accumulation of TFA has seen a continued downward trend since 2016, aggravated by the unprecedented outbreak of COVID-19 during the year under review. Also, OGSE100 companies acquired a cumulative TFA of RM61.2 billion in FY2020, an annual decline of 11.7 per cent from the previous year.



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ABOUT MPRC MESSAGE FROM CEO OGSE100 RANKINGS & CATEGORIES WHERE DO OGSE100 COMPANIES OPERATE UPSTREAM OIL & GAS INDUSTRY – THE MOVEMENT PETRONAS' CAPEX 2020: MALAYSIA'S OGSE SECTOR IN REVIEW











TAKING STOCK OF SUSTAINABILITY IN MALAYSIA'S OGSE SECTOR

This section assesses sustainability reporting OGSE100 companies. Content among the analysis was used on data sourced from the publicly available annual reports for FY2020 to identify the extent of the reporting covering the sustainability aspects for the OGSE sector as shown in the table of OGSE100 Public Listed Companies Sustainability Reporting Themes based on Environment, Social and Governance (ESG) criteria.

OGSE INDUSTRY SUSTAINABILITY REPORTING OVERVIEW

OGSE100 POPULATION

REPORT **SUSTAINABILITY PRACTICES**

(39 COMPANIES OUT OF 100)

14%

25%

OUT OF 100 COMPANIES



25 PLCS REPORTING ON SUSTAINABILITY FROM OGSE100

20% (From 25 PLCs)

OGSE PLCs reporting progress towards achieving their long term targets

20% (From 25 PLCs)

OGSE PLCs reporting progress towards achieving their climate change target

SUSTAINABILITY REPORTING ANALYSIS

ENVIRONMENT



(8 out of 25 PLCs)

Companies report on their greenhouse gas (GHG) emissions by disclosing their data of Scope 1 and Scope 2 of GHG emissions

SOCIAL



(24 out of 25 PLCs)

Reported on Health, Safety and Environment (HSE) practices,



(8 out of 25 PLCs)

OGSE PLCs are found to have at least 30 per cent of women directors in their company (as per MCCG requirement as of 2021)

GOVERNANCE



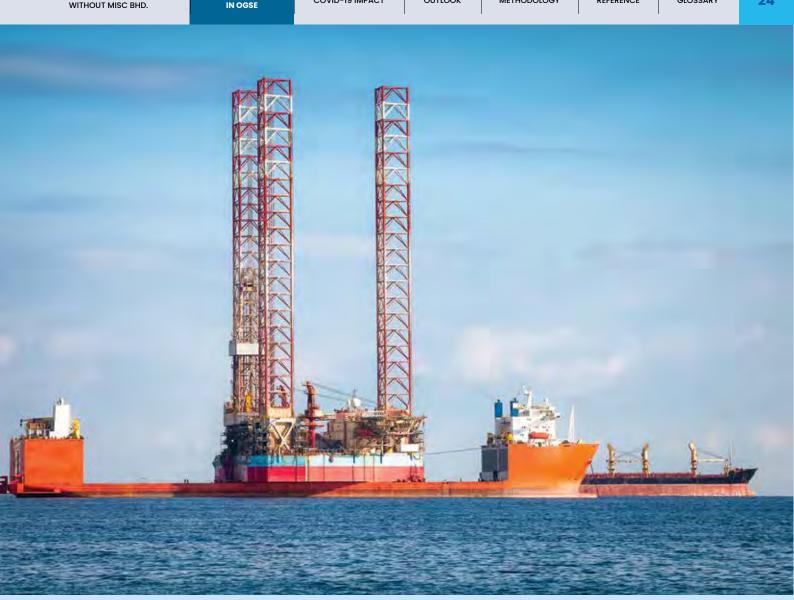
(22 out of 25 PLCs)

Companies have adopted sustainability governance to oversee the implementation of sustainability (as per MCCG requirement as of 2021)

- This section attempts to provide an overview of the current status of sustainability compliance and adoption among 25 Malaysia's public-listed companies based on their FY2020 filings to Bursa Malaysia].

 Report on sustainability practices are screened based on the availability of the sustainability statements for both PLCs and non-PLCs.
- 3. This infographic is not indicative of the table in page 27 to 30.

SUSTAINABILITY



Malaysia's OGSE sector has made significant progress in adhering to health, safety, environmental regulations and also stepping up contributions to communities they operate in. For FY2020, we noted 25 out of 26 OGSE100's public listed companies have incorporated the Environmental, Social and Governance (ESG), Economic, Environmental and Social (EES), and Global Reporting Initiative (GRI) frameworks in their respective sustainability progress reports.

According to Bursa Malaysia, the phrases EES and ESG are commonly interchangeable since they are not well defined. Both terms are also used in the GRI Guidelines, which is a more detailed standard reporting guideline for corporations. For a more holistic management approach, EES serves as a framework for businesses to assess economic, environmental and social risks and possibilities.1

We observed the following companies have taken steps to publish and align their sustainability targets to United Nations* 17 Sustainability Development Goals in their sustainability reports. These companies are: MISC Bhd. (MISC), Yinson Holdings Bhd. (Yinson) and Boustead Heavy Industries Corporation Bhd. (Boustead).

The year in review saw 20 per cent of companies have complied with the requirement of disclosing sustainability by reporting the current progress of their long-term target. In contrast, 16 per cent of companies reported future targets but did not disclose progress towards achieving it and the year (specific or estimate) of its realisation.

Under the Environment aspect, 32 per cent of the companies have been reporting on their greenhouse gas (GHG) emissions by disclosing their Scope 1* and Scope 2* of GHG emissions. Five OGSE PLCs have reported their progress and specified their climate change target for the future. Among them, Velesto Energy and MISC's mentioned target is aligned to the Paris Agreement target of Net Zero Carbon Emission by 2050. PETRONAS has also outlined their short-term target of capping GHG emissions at 49.5 million tonnes of carbon dioxide equivalent (MtCO2e) for its Malaysian operations by 2024.

Note

- 1 Scope 1 refers to direct emissions from assets and sources owned or controlled by the company.
- ² Scope 2 refers to indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company.

ENVIRONMENT



Companies have been consistent in reporting workforce diversity by disclosing their age, gender composition and nationality. Eight OGSE PLCs have a minimum of 32 per cent of women directors in their company. In this regard, OGSE PLCs should improve their diversity and inclusion measures at the board level as well as senior management as the Government and Securities Commission have strengthened the requirements in these areas.

In addition, almost all, or 96% of OGSE PLCs reported progress and updates on Health, Safety and Environment (HSE) in their respective sustainability reporting. For the year in review, measures for protecting workers and COVID-19 management in the workplace were planned and mapped out. These include mass COVID-19 screening, provision of medical equipment to frontliners and the move towards virtual interactions between employees and key stakeholders.



GOVERNANCE



terms of Governance, 88 companies have developed sustainability governance structure ensure the implementation of sustainable business strategy and practices. They each maintain their own stance towards bribery and corruption involving their organisation and stakeholders. Most companies have established a zero-tolerance policy towards bribery and corruption.

WHAT'S NEX

In recent years, investors, financiers, and governments have shifted their focus towards sustainability agenda projects. BlackRock, the world's largest asset manager, has put climate change at the centre of its investment strategies, having announced its divestment from coal in its portfolios.² Sustainable investments in five major international markets also saw an increase of 15 per cent within two years, valued at USD35.3 trillion in early 2020.3 Malaysia saw similar uptick in sustainabilitycentric investments or financial instruments as well, with the launch of US1 billion Sustainable Sukuk, where proceeds will be used for eligible social and green projects that are aligned to the SDGs.

Closing on the heels of sustainability financing was the MYSDG Trust Fund, to also facilitate Malaysia's sustainable development agenda. This signals an increase in fund availability for OGSE players with innovative, sustainability-focused solutions to tap into.

The Economic Action Council (EAC) has also proposed shared responsibility, responsible governance, and

sustainability, including mandatory green government procurement for all Government-Linked Companies and incentive packages to attract more green investments.

Bank Negara Malaysia (BNM), Malaysia's central bank, has also established a Joint Committee on Climate Change for building resilience within Malaysia's financial sector.

What is worth noting is access to financing for SMEs towards sustainability-centric projects or solutions will also step up significantly in 2022, with access to a RM1 billion financing facility.4

The growing number of grants and funds could help accelerate sustainability adoption among OGSE players, particularly SMEs, in Malaysia, but the path towards OGSE sustainability requires a roadmap towards collaboration and realistic pathways towards adopting sustainability.

LIST OF THEMES AND ACTIVITIES OF 25 PLCS IN OGSE100 SUSTAINABILITY REPORT CRITERIA

This is MPRC's first attempt at listing activities/items that 25 PLCs in the OGSE100 report on ESG.

The table merely depicts the themes as presented by OGSE companies in their respective annual reports in FY2020. MPRC took note that these companies may have progressed in the disclosure of ESG practices.

The table also focused only on environment and social aspects, as the governance element has been extensively covered as part of Bursa's listing requirements and the MCCG. For further details, kindly contact the respective Investor Relations Department of the companies or refer to the relevant annual reports.

No	Company Name	Environment	Social
1.	ALAM MARITIM RESOURCES BHD	 Waste Management and Pollution Prevention Vessel Fuel & Energy Management 	 Talent Management and Development Corporate Social Responsibility Quality and Health, Safety, Security and Environment Organisational Culture Development
2.	BARAKAH OFFSHORE PETROLEUM BHD	Energy ConsumptionWater ConsumptionWaste Management	 Employee Retention Diversity and Equal Opportunity Community Engagement Training Occupational health and safety Recognition for Good Safety Practices New Employee Hire and Employee Turnover
3.	BOUSTEAD HEAVY INDUSTRIES CORPORATION BHD	Waste and Water Management Greenhouse Gas (GHS) Emissions and Energy Management	 Occupational Health and Safety Employee Diversity Profile Employee Training, Education, and Development Labour Practices and Human Rights Community Contributions and Development
4.	BUMI ARMADA BHD	 Spill Management GHG Reduction Biodiversity 	 Health, Safety, Security, Environment & Quality Integrated Management System ("IMS") Corporate HSSEQ policies Operational Excellence Health and Safety Process Safety COVID-19 Management Embarking On Digital HSSEQ Cyber Security Risk Management In Safety Collaboration with Malaysia Oil and Gas Service Council Security Corporate Social Responsibility ("CSR")
5.	CARIMIN PETROLEUM BHD	Waste Management	 HSE Committee HSE Performance HSE Highlights HSE Promotion Programmes HSE Compliance Quality Customer Satisfaction Cyber Security Talent Retention and Development Upholding Diversity Remuneration and Benefits Enhancing Local Content Community Outreach Initiatives
6.	DAYA MATERIALS BHD	Safety and Environmental	 Safety and Environmental Social Responsibilities People Development Operational Efficiency Business Continuity

SUSTAINABILITY IN OGSE

No	Company Name	Environment	Social
7.	DAYANG ENTERPRISE HOLDINGS BHD	 Vessel Emission Reduction Water Conservation Energy Management Waste Reduction Storage and Collection of Recyclables 	 Health, Safety, Security and Environmental The Importance of Community Aproach to the Community
8.	DELEUM BHD	 Environment Management Environmental Regulations And Compliance Waste Management Utilising Cleaner Technologies Water Management Energy Efficiency 	 Human Capital Management Diversity Within Our Workforce Employee Training and Development Employee Engagement Safety Practices, Procedures And Processes Group QHSE Governance HSE Assurance and Management Review Process Occupational Safety and Health (OSH) Safety Training Sessions OSH-related Initiatives Safety Performance Community Outreach Practices
9.	DESTINI BHD	Operations Waste Management Water and Energy-Saving Initiatives	Succession PlanningSafe WorkplaceTalent Motivation and Skill DevelopmentCorporate Social Responsibility
10.	DIALOG GROUP BHD	Environment Protection	Health, Safety & Environment Policy and Guidelines Occupational Safety Employee Health and Wellbeing Employee Management Local Hiring Diversity Conducive Workplace Employee Share Option Scheme Whistleblowing Training Career Development A Helping Hand to the Community Additional COVID-19 Assistance Employee Volunteer Programmes CSR Events
11.	ICON OFFSHORE BHD	 Fuel Management Waste Management and Recycling Climate Change Environmental Non-Compliance 	 HSE Excellence Talent Management and Development Corporate Social Responsibility
12.	KNM GROUP BHD	Energy Efficiency Water Consumption Sustainable Waste Management	 Workplace Health and Safety Ethics and Business Conduct Human Capital Development Succession Planning & Talent Development Employees' Share Option Scheme Community
13.	MARINE & GENERAL BHD	Environmental Compliance Effluents and Waste Management	 Employment Diversity and Equal Opportunity COVID-19 Occupational Safety and Health Alcohol and Drug Policy Stop Work Policy
14.	MISC BHD	Towards Decarbonisation Promoting Circular Economy Biodiversity Conservation	Health and Safety Talent Excellence Community Investment

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OGSE100 RANKINGS & CATEGORIES

No	Company Name	Environment	Social
15.	MUHIBBAH ENGINEERING (M) BHD	Hazardous Waste Management Regulatory Compliance	 Customer Satisfaction Ethics and Integrity Employee Wellbeing Human Rights and Labour Practices Occupational Health and Safety COVID-19 Initiative Quality Control Talent Retention Training and Development Community
16.	OCEAN VANTAGE HOLDINGS BHD	Sustainability Management (Environment)	Sustainability Management (Social)
17.	PANTECH GROUP HOLDINGS BHD	Energy Water Effluents, Waste and Emissions Corporate Responsibility	 Labour Practices Occupational Safety and Health Training and Education Diversity Anti-Corruption/Bribery Corporate Responsibility
18.	PETRA ENERGY BHD	Climate Change Impact of Climate Change on Group Operations Electricity Consumption Diesel Consumption Water Consumption Waste Management	Occupational, Health and Safety Cyber Security Awards and Commendations Worker Representation on Joint Health and Safety Committee Progressing on the PETRA Safety Ladder Accident Control Technique HSE Alerts PETRA HSE Day HSE Management Visits Emergency Drill and Business Continuity Management HSE Performance Overal OSH Performance in FY2019 HSE Programmes and Training Employee Grievance Mechanism Diversity and Equal Opportunity Training and Education Corporate Social Responsibility
19.	SAPURA ENERGY BHD	Spills Management Hazardous Waste Management Environmental Training	Workforce Health and Safety Improving Reporting System Conducting HSE Audits Raising Awareness and Building Capacity Industry Recognition for our HSE Practices and Performance Accreditation COVID-19 Response Emergency Preparedness Workforce Diversity and Inclusion Talent Management Employee Engagement Corporate Social Responsibility Community Development
20.	SCOMI ENERGY SERVICES BHD	Environmental, Social and Governance	Environmental, Social and Governance
21.	T7 GLOBAL BHD	Environment	Our People Employee Diversity Corporate Social Responsibility QHSE Policies and Procedures

SUSTAINABILITY IN OGSE

No	Company Name	Environment	Social
22.	UZMA BHD	 Energy Management Paper Consumption Management Water Management Waste Consumption Management Staff Environmental Awareness Programme 	Health and Safety Performance Heightened Safety Awareness Culture HSE Compliance Throughout All Projects Ensuring the Safety of Our Frontliners Pro-actively Identifying Hazards Ensuring Safety via UZMASAFE HSE Programmes Conducted in FY2020 Employee Engagement Survey Employee Recognition Award - UZMAGRIT Employee Piversity Employee Performance Management System Training and Development Building a Robust Leadership Pipeline Anti-Corruption Training Internships Grievance Mechanisms Employee Benefits and Compensation Vendor Development Programme Customer Programmes and Surveys CSR Activities
23.	VELESTO ENERGY BHD	 Biodiversity Climate Change Energy Consumption GHG Emissions Impact of Climate Change on Group Operations Spills Management Wastewater Waste Management Water Consumption Environmental Spills Decommissioning 	 Covid-19 Prevention Group Workforce Workforce Diversity and Equal Opportunity Employment Reskilling and Upskilling Opportunities Youth Unemployment Initiatives, Apprenticeships, or Graduate Placements Staff Remuneration and Benefits Approved Applications for Maternity Leave and Return to Work Rates Minimum Wage Compliance Employee Appraisals Statutory Contributions to Employees Retirement/Pension Savings Employee Engagement - Communication Learning and Development Talent Management and Succession Planning Freedom of Association Grievance Procedures Corporate Social Responsibility Quality, Health, Safety and Environment
24.	WAH SEONG CORPORATION BHD	Energy Management Water Management	Business Continuity Health, Safety and Environment Group HSE Performance People Total Headcount by Location Community Outreach Programme Calendar
25.	YINSON HOLDINGS BHD	 Carbon Emissions Management Material Management Pollution Management Waste Management Energy Management Biodiversity Management Water Management 	 Operational Health and Safety Antidiscrimination Workforce Diversity Community Engagement Employee Rights and Benefits Training and Development Customer Engagement Child and Forced Labour

















IN-DEPTH ANALYSIS OF OGSE100 WITHOUT MISC BHD.

SUSTAINABILITY IN OGSE

COVID-19 IMPACT

OUTLOOK

METHODOLOGY

REFERENCE

COVID-19 IMPACT ON SOUTHEAST ASIA'S OIL AND GAS INDUSTRY





SOCIO-**ECONOMIC IMPACTS**

The fight against COVID-19 came at an enormous socio-economic cost in SEA. While battling the unprecedented threat to public health, SEA countries struggled to find a balance between economic priorities and slowing the spread of COVID-19 in communities. The movement controls imposed by countries brought trade, tourism and travel to a deadlock and resulted in loss of employment, reduced operations in manufacturing, production, and service sectors as well as reduced consumer demand.

This also meant unstable FDI prospects, which further deteriorated the region's economic prospects. For instance in Malaysia, unemployment rate skyrocketed to 4.5 per cent in 2020, the highest rate recorded since 1993,8 due to the unpredictability of the labour market. In the second quarter of 2020, Malaysia's economy contracted by a whopping 17.1 per cent,9 followed by the Philippines, down 16.9 per cent.10 Thailand and Indonesia were down 12.2 per cent and 5.3 per cent, respectively.^{11,12}

The pandemic also created a wide range of social consequences. The movement restrictions imposed have seen an increase in food costs, due to disruption to transportation of produce from farm to consumers while also impacting the lives and livelihood of marginalised wage workers, those in agriculture and more. Furthermore, the pandemic has also magnified the education gap as students were required to shift to online learning – where those without internet or appropriate learning tools were left behind. There is also the problem of 'fake news' or misinformation - instilling public fear and confusion, impacting businesses, and heightening discrimination against minorities.



IMPACTS ON THE OIL AND GAS INDUSTRY

Beyond the health sector, the impact of the COVID-19 pandemic has been felt significantly across industries, including the energy sector. As individuals were urged to stay at home, vehicle usage was cut, planes were grounded, and economic activities were curbed to prevent the virus from spreading. In addition, there was a significant drop in fuel demand, particularly in the transportation sector. This intensified the pricing war between Russia and Saudi Arabia, which drove prices lower. Oil and gas prices have witnessed extraordinary volatility as a result of the glut. In April 2020, West Texas Intermediate (WTI) futures contract fell to below zero as WTI crude oil traded at negative prices, triggering pressure on oil producer countries, including Malaysia, affecting their national finances. As oil and gas account for the largest energy supply and consumption in SEA and several member states rely their revenue on oil and gas, the impact of COVID-19 on this sector is inevitable.

In 2020, oil and gas players in SEA started the year with new licensing rounds and extensive exploration and seismic programmes. Due to the COVID-19 pandemic, these activities were suspended, significantly impacting OGSE players. Only around 300 million barrels of oil equivalent (boe) of resources from six assets reached FIDs.¹³

The key oil and gas projects in the region that were suspended, include three strategic deep-water-stranded gas sites - Petronas' Kelidang Cluster in

Brunei Darussalam and Malaysia, and two sites in Indonesia, namely Inpex Corporation's Abadi and Chevron's Indonesia Deepwater Development. The Liquefied Natural Gas (LNG) tank project in Cambodia also faced a similar situation when it was temporarily delayed due to disrupted import progress from China.¹⁴

Besides that, four SEA nations - Malaysia, Indonesia, Thailand and the Philippines reported drops in national electricity demand, followed by delays in energy efficiency development projects. In Singapore, its peak power consumption dropped 8 to 9 per cent on day one of lockdown. Due to an almost 54 per cent drop in jet fuel prices in March alone, the country's differential cash flow for aviation fuel has plummeted to its lowest level in over a year. The drop in demand had also cut down refinery activities, with Thailand reducing its oil refineries run rates by 10 to 20 per cent.

This saw several oil and gas companies in SEA reporting a substantial net loss in 2020. Pertamina, Indonesia's national oil company, recorded a revenue fall of 19.8 per cent year-on-year to USD20.48 billion. Besides that, PETRONAS' earnings dived by 42 per cent based on its second-quarter financial report. The pandemic has also forced industry players to strike a delicate balance between prioritising projects, managing cashflows to stay afloat, and ensuring future growth.

IN OGSE



It is essential to chart the best pathway for the energy sector in economic recovery plans due to the vital link between the energy sector and economic growth.

RESPONSE AND RECOVERY EFFORTS

In response to the pandemic, SEA countries have allocated a total of USD350 billion, or 3.74 per cent of regional GDP, in stimulus packages as of July 2020.¹⁷

Aside from stimulus packages, other measures taken by governments in SEA to cushion the impact of the pandemic include providing subsidised gas prices and limiting fuel imports. Both Malaysia and Indonesia took the initiative to give discounts to electricity consumers, which also includes the latter giving free electricity to the poorest households in the country.18 Indonesia also subsidised gas prices without affecting gas producers' income and lowering its oil and gas investment target. In the Philippines, the government temporarily increased tariffs on imported oil and took advantage of cheap global oil prices by stockpiling to protect from the shock of rising prices post-crisis. In Thailand, retail price of compressed natural gas (CNG) for all public transport was reduced, among the many efforts to reduce the expense of citizens' cost-of-living.¹⁹ Meanwhile, lower oil prices have allowed Vietnam to maintain a large petroleum stockpile, with oil and gas inventories exceeding the necessary threshold by more than 90 per cent.

In response to the pandemic, most regional oil and gas players have cut capital and operating expenses, particularly new investments in nonlucrative production and exploration projects. For instance, PETRONAS' FY2020 spend on capital investments fell to RM33.4 billion from RM47.8 billion in the previous year - slightly more than half went towards domestic upstream projects, while CAPEX for its international ventures was primarily spent on its LNG business in Canada and its shipping arm in the USA.²⁰ In March 2021, the company also announced further CAPEX cuts to RM40 billion and RM45 billion per annum for the next five years in anticipation of the industry outlook and projected global oil prices in the near future.21

ECONOMIC PRIORITIES MOVING FORWARD

As governments in the region continue to manage the pandemic, economic recovery is their main priority and focus. In Malaysia, for instance, the Economic Action Council has identified eight reset agendas in December 2021, covering 30 focus areas and 152 reset initiatives to drive the national economic transformation in the new post-COVID-19 crisis landscape, which is in line with the National Recovery Plan.²² Furthermore, it is also equally essential to chart the best pathway for the energy sector in economic recovery plans, considering the vital link between the energy sector and economic growth.

Green recovery strategies are increasingly becoming an important aspect. According to an Oxford University poll involving 230 leading economists from 53 nations, using COVID-19 stimulus funds to launch green policy initiatives can drive a superior economic recovery.23 It's also worth noting that some Asian and European governments have pledged to decarbonise their economies in response to COVID-19.17 Nonetheless, urgent investments backed by fiscal policy to rebound "green" from COVID-19 consequences will be a critical factor in achieving net-zero emissions by the mid-century. Further, efforts to embrace sustainability practices through Environment, Social and Governance (ESG) reporting would also assist industry players in longterm growth, as investors and the general public increasingly emphasise ESG matters as a social licence to operate.

The region's prospects for recovery from the pandemic recession are clouded by both optimism and uncertainty. Thailand is certain that COVID-19 will not jeopardise the country's goal of becoming a regional liquefied natural gas (LNG) hub,24 while Myanmar plans to build new high-quality oil refineries to reduce import reliance and fulfil the local demand for oil products.²⁵ PETRONAS, on the same optimistic note, is making every effort to promote favourable investment circumstances. Above all, PETRONAS is progressing along its recovery paths by focusing on technology as a differentiator, digitalisation as an accelerator, and data as

Whilst economic recovery is underway, some economies will bounce back faster than others, while the road to recovery may have more challenges for the rest of the region.



REGIONAL RANKING OF OGSE COMPANIES

SUSTAINABILITY

IN OGSE

In addition to pre-COVID-19 economic circumstances and against the backdrop painted in the previous sub-sections, we have identified the ranking of OGSE companies in the SEA region. The identified 19 companies come from Singapore (4), Malaysia (9), Indonesia (3), Thailand (2) and Vietnam (1).

No	Company	Country	FY2019 (USD Mil)	FY2020 (USD Mil)	YoY Growth (%)	Segment
1.	KEPPEL CORP LTD	(c)	5626.3	4935.3	-12.3	Offshore Fabrications
2.	MISC BHD.	(•	2190.0	2237.5	2.2	Floaters
3.	SAPURA ENERGY BHD.	(•	1116.3	1534.9	37.5	Offshore Fabrications
4.	SEMBCORP MARINE LTD	(:	2139.7	1133.8	-47.0	Offshore Fabrications
5.	BUMI ARMADA BHD.	(•	505.9	556.9	10.1	Floaters
6.	DIALOG GROUP BHD.	(•	583.1	548.2	-6.0	Plant Turnaround
7.	PT ELNUSA TBK		597.8	527.6	-11.7	Marine Vessels
8.	THORESEN THAI AGENCIES PCL		508.1	407.8	-19.7	Offshore Installations
9.	PT PETROSEA TBK		476.4	340.7	-28.5	Others
10.	WAH SEONG CORPORATION BHD.	(•	614.5	335.4	-45.4	Pipelines
11.	KNM GROUP BHD.	(•	398.9	319.7	-19.9	Floaters
12.	MUHIBBAH ENGINEERING (M) BHD.		375.6	285.5	-24.0	Offshore Fabrications
13.	PETROVIETNAM DRILLING AND WELL SERVICES CORP	*	188.5	225.0	19.4	Marine Vessels
14.	DAYANG ENTERPRISE HOLDINGS BHD.	(•	255.6	174.1	-31.9	HUC & MCM
15.	MERMAID MARITIME PCL		105.9	83.8	-20.9	Marine Vessels
16.	SCOMI ENERGY SERVICES BHD.		157.2	77.8	-50.5	Others
17.	DYNA-MAC HOLDINGS LTD	C	72.6	63.1	-13.1	Offshore Fabrications
18.	PT APEXINDO PRATAMA DUTA TBK		93.9	54.8	-41.7	Drilling Rigs and HWUs
19.	EZION HOLDINGS LTD	(:	56.0	24.7	-55.9	Pipelines

Malaysian OGSE companies recorded average decline of 14.2 per cent compared to their regional peers with 23.1 per cent. Despite that, Sapura Energy Bhd.'s Engineering and Construction business unit has shown significant growth in Engineering, Procurement, Construction, Installation, and Commissioning (EPCIC) works globally. They include commencing construction on two major Central Processing Platforms (CPP) at Lumut Yard for Mubadala Petroleum's Pegaga field in Sarawak, Malaysia and the ONGC's 98/2 project in India. The company also marked its maiden entry into Egypt by installing subsea pipelines for the Gulf of Suez Petroleum Company (GUPCO).

Furthermore, Bumi Armada's commendable growth was attributed to the improved performance of its Floating Production Storage and Offloading (FPSO) fleets. Armada Olombendo,

Armada TGT 1, Armada Sterling, Armada Sterling II, and Armada LNG Mediterrana FSU outperformed their contractual obligations. Moreover, both Kraken and Karapan Armada Sterling III exceeded their 2019 performance, as did the utilisation of the company's OSV fleets, increasing from 50 per cent in 2019 to 54 per cent in 2020.

In Vietnam, domestic advantage has helped Petrovietnam to grow tremendously in FY2020. PV Drilling had specific competitive advantages, especially when most international competitors could not bring equipment and human resources into the Vietnam market during the pandemic. Additionally, the company successfully implemented several new services for customers, including providing Wellbore Clean-up Services for HLJOC, JVPC and Managed Pressure Drilling & Software in Rosneft's drilling program.

OUTLOOK

Navigating into 2022, the World Bank forecasts global GDP growth of around 4.3 per cent. The global outlook will remain subject to significant downside risks, including the possibility of COVID-19 recurrence and the financial stress amidst high emerging markets and developing economies (EMDE) debt levels. Foremost on policy makers' minds will be to balance the need to support the recovery while safeguarding price stability and fiscal sustainability and promoting growthenhancing reforms.

Driven by favourable growth in the United States and OPEC+ nations, The International Energy Agency (IEA) expects global oil production to exceed demand following December 2020. As the upward supply momentum continues to rise, the United States, Canada and Brazil are forecast to pump at record-high annual levels, lifting overall non-OPEC+ output by 1.8 mb/d in 2022. Should the remaining OPEC+ oil supply curbs be fully eased, Saudi Arabia and Russia could also set record outputs. If so, global supply would surge by 6.4 mb/d in the upcoming year compared to the 1.5 mb/d increase in 2021.

On the domestic front, Bank Negara Malaysia (BNM) expects the growth to accelerate in 2022 to between 5.5 and 6.5 per cent. Besides, there is no indication of a broad-based price increase or excessive wage pressure, and price pressure is expected to remain moderate in 2022 amidst the spare capacity in the economy.

Based on the recent PETRONAS Activity Outlook 2022 – 2024, PETRONAS remains cautiously optimistic as mixed forecasts circulate across the value chains. There is a rise in the 2022 activity forecasts for most sub-segments. However, the increase may only be a reflection of the delayed jobs occurring in 2022 as actual activities for most sub-segments failed to meet last year's plan.



Moreover, the lagging effects of delayed jobs in 2021 may increase the value chains involving drilling rigs, hook-up and commissioning (HUC), decommissioning and offshore maintenance, construction and modification (MCM).

Potential beneficiaries from the forecast in HUC like Dayang, Deleum, Sapura Energy, PETRA and Carimin are expected to see a strong year for 2022, with man-hours significantly rising from 4.7m in 2021 to 6.3m (base case) in 2022. Uzma, Velesto, Destini, Reservoir Link and T7 Global are among the players that may benefit from a considerable increase in wells decommissioning planned activities, specifically those anticipated to cause substantial results in the three upcoming years. On the other hand, Dayang, T7 Global, Sapura Energy, PETRA and Carimin could gain from modest improvements in the offshore MCM. Flat movement in plant turnaround (i.e. Dialog) and supporting vessels could translate to stable work orders for MMHE, Alam Maritim, and Icon Offshore.

On the contrary, local fabricators such as Sapura Energy, Brooke and MHHE may find limited opportunities due to the decline in offshore planned projects, particularly in fixed structure fabrication.

The OGSE sector has slashed costs and optimised operations to stay afloat even before the pandemic. The sector, traditionally dependent on upstream cycles, is now likely to see a permanent structural shift as rapid energy transition shifts the scales of oil and gas earnings and expenses. With margins at the mercy of another price cycle and reduced spending, we can expect to see OGSE companies diversifying their survival strategies for the future of energy.

With demand growing for decarbonisation and climate action across sectors, this opens up possibilities for companies to transform traditional OGSE operating models and offerings apart from the typical OGSE services and shift towards other industries. Aside from digitalisation, the industry should also focus on efficiency and cleaner energy. Key drivers of the OGSE's future strategic roadmap may include deploying integrated solutions for the decarbonisation of upstream operations, transitioning to low-carbon systems.

We anticipate a rise in companies demonstrating their commitment towards ESG principles in the near future as well as increased pressure from international and domestic investors to invest in ESG-compliant businesses. Working towards their net-zero targets, companies are seen either shifting to low-carbon-intensity barrels or divesting their high-carbon-intensity assets. As such, this is an opportunity for OGSE companies to accelerate their efforts to meet these targets, as this signifies that an acreage consolidation or portfolio restructuring is imminent. Overall, business activities should be aligned to ESG outcomes, in addition to being financially accretive.

There will also be discussions on why traditional OGSE businesses should diversify outside the OGSE sector and other industries, though the bigger question will be how. Presently, there are already many large service providers who have diversified beyond core services. For example, Uzma has expanded its business reach to renewable energy towards stake acquisition in the solar energy value chain and digitalisation. For the latter, it has developed a system for satellite imaging services that will complement offshore oil and gas projects and weather observation that could be handy for projects such as solar farms. Yinson has diversified its business into the renewables market by owning a controlling stake of two operational solar plants in Bhadla Solar Park, Rajasthan, India. In addition, the company recently ventured into green technologies by investing in a Norwegian start-up, Lift Ocean As, for the development and commercialisation of hydrofoil technology for marine harbour crafts, and an agreement with Wilhelmsen, a global maritime industry company, for exclusive access to 3D printing technology and products.

The confluence of the COVID-19 pandemic and urgency of climate change will continue to bring about uncertainties and volatility to the OGSE players. To emerge stronger and cleaner, policymakers and OGSE players have to do their parts to build competitiveness, and ensure a robust and resilient ecosystem for the sector to thrive and grow a cleaner, sustainable OGSE sector.



METHODOLOGY

STEP 01

POPULATION SAMPLING

Initial list as of November 2021, including companies with or without PETRONAS' SWEC licence and associated subsidiaries of listed OGSE companies.

Started with 4,735 companies with non-corporate entities included in the population



Companies are excluded if it falls within the following segments or specific SWEC but not limited to:



Civil, Structural & Building Maintenance, Consultancy, ICT, Leasing & Rental, Mail & Cargo Transport, Manpower Supply, Marketing & Sales Support, Office Administration and General Maintenance



Materials and/or Equipment:

Automotive, Containers, Mechanical, Office Supplies, Telecommunication Equipment/System, Packaging, Workshop and Warehouse Equipment



Core business activities

described in the business website do not indicate O&Grelated activities.



DATA ACQUISITION

Requested audited financial information from SSM to be extracted from their CBID database in Microsoft Excel format.

▶ The financial request is made for the FY2011 - FY2020 period

Successfully purchased data for

COMPANIES

The purchase to SSM was made as of **November 2021.** If no accounts are lodged by that period, MPRC assumed

- The company is late in submitting its accounts; or
- The company had a change in its financial year-end





STEP 03 DATA PROCESSING

TRANSLATION

The raw financial information from SSM's CBID is translated based on the sum of corresponding parameters ending in each calendar year.

- Revenue, PBT and TFA parameters were translated accordingly to fit our analysis purposes.
- Historical revisions are done based on the latest financial information made available during the data acquisition.

FINAL SCREENING

To identify any irregularities of the raw financial information which may affect the analysis if not corrected.

- The identification is made by factoring in the parameters of year-on-year change 500. Value indicated by more than 500 (or less than 1/500 but greater than zero) could indicate an error in the data entry process.
- A total of 109 companies were affected.

CONSOLIDATION

108 COMPANIES CONSOLIDATED

- 108 companies with immediate shareholders and subsidiaries of listed companies as recorded in the recent audited accounts.
- Final population of the sample of 1,328 companies.



STEP 04

DATA INTERPRETATION

1,328 companies are ranked only by their revenue in FY2020 and grouped into OGSE100, non-OGSE100 Mid-Tier and SME. Audited annual reports were then purchased to verify and validate the top 150 companies prior to the final ranking of OGSE100 companies.



CRITERIA FOR NON-OGSE100 MID-TIER AND SME

STEP 05

PUBLICATION

Draft, concept design, copywriting and print OGSE100 FY2020 edition ready for circulation.

Non-OGSE100 Mid-Tier:

Sales turnover > RM50 mil and < RM500 mil (Manufacturing) OR Sales turnover > RM20 mil and < RM500 mil (Services and other sectors)

► SME

Sales turnover > RM50 mil and < RM20 mil (Services and other sectors)

- 12 companies recorded no revenues for FY2020 based on SSM's CBID
- If a business exceeds the threshold set for 2 consecutive years (based on financial year), it can no longer be deemed an SME. Similarly, a previously mid-tier business needs to maintain the consecutive 2 years of mid-tier revenues threshold.

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SUSTAINABILITY

IN OGSE

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GLOSSARY

Anti-Bribery and Corruption				
Asian Development Bank				
Asian Infrastructure Investment Bank				
Capital Expenditure				
Companies Commission of Malaysia (Suruhanjaya Syarikat Malaysia)				
Corporate and Business Information Data				
Coronavirus Disease				
Central Processing Platforms				
Economic, Environmental and Social				
US Energy Information Administration				
Emerging Markets and Developing Economies				
Enhanced Oil Recovery				
Engineering, Procurement, Construction, Installation, and Commissioning				
Economic Planning Unit				
Environmental, Social and Governance				
Financial Year				
Floating Production Storage				
Floating Production Storage & Offloading				
Greenhouse Gas				
Gas & Energy				
Gulf of Suez Petroleum Company				
Global Reporting Initiative				
Heating, Ventilation & Air Conditioning				
Hook-up & Commissioning				
Hydraulic Workover Unit				

ICT	Information and Communications Technology
LBT	Loss Before Tax
LNG	Liquefied Natural Gas
LTI	Lost Time Injury
мсм	Maintenance, Construction & Modification
MEA	Ministry of Economic Affairs
MPRC	Malaysia Petroleum Resources Corporation
MRO	Maintenance, Repair & Overhaul
MTPD	Metric Tonne Per Day
OGSE	Oil & Gas Services and Equipment
O&M	Operation & Maintenance
OPEC	Organization of the Petroleum Exporting Countries
PBT	Profit Before Tax
PDT	Pengerang Deepwater Terminal
PelP	Pengerang eco-Industries Park
PLC	Public Listed Company
RAPID	Refinery and Petrochemical Integrated Development Project
RGT	Regassification Terminal
SDG	Sustainable Development Goals
SEA	Southeast Asia
SME	Small and Medium-sized Enterprise
SWEC	Standard Work & Equipment Categories
TFA	Total Fixed Assets
WTI	West Texas Intermediate

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