Growth Beyond OGSE: Charting Malaysia's Next Frontier



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For decades, Malaysia's Oil & Gas Services and Equipment (OGSE) industry has been one of the country's backbones that drive the development of Malaysia by supporting the Oil and Gas sector. It has built and maintained offshore platforms, safeguarded subsurface assets, delivered world-class engineering and anchored a sophisticated upstream ecosystem. Along the way, OGSE companies have underpinned national energy security, supported hundreds of thousands of high-value jobs and contributed to Oil & Gas export earnings.

OGSE industry, however, is now being tested heavily than at any time in recent memory. The sector stands at an inflection point shaped by four powerful, overlapping shifts: the global energy transition, new volatility and discipline in upstream capital spending, tighter sustainability and compliance expectations, and a potential structural shift that many still underestimate as changing trade agreements and regulatory requirements take hold, the liberalisation of the oil and gas sector stemmed from the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).

Countries around the world are accelerating towards low-carbon energy systems, reshaping demand for oil and gas and redirecting capital into renewable energy (especially large-scale solar), as well as green hydrogen, carbon capture, utilisation and storage (CCUS), and green infrastructure. While oil and gas will remain important for the foreseeable future, most major forecasts indicate moderating growth, increasing scrutiny of emissions, and a growing focus on producing oil and gas with lower emissions and a smaller carbon footprint. At the same time, investment decisions by investors have become far more controlled, selective and climate driven.

The Shifting Landscape: Why Diversification Matters

In Malaysia, ongoing low-carbon and energy-transition initiatives introduced under RMK-12 and further articulated through the National Energy Transition Roadmap (NETR) as new sources of economic growth will be strengthened and scaled under RMK-13, where the low-carbon economy is positioned not just as an environmental agenda but as a core engine of future industrial expansion. This direction is reinforced by the National OGSE Industry Blueprint 2021-2030, which explicitly embeds Low-Carbon and Diversification as two of its four strategic thrusts—calling for OGSE players to decarbonise operations, strengthen climate-risk management, and, crucially, to "accelerate companies to capture opportunities in energy transition and adjacent industries."

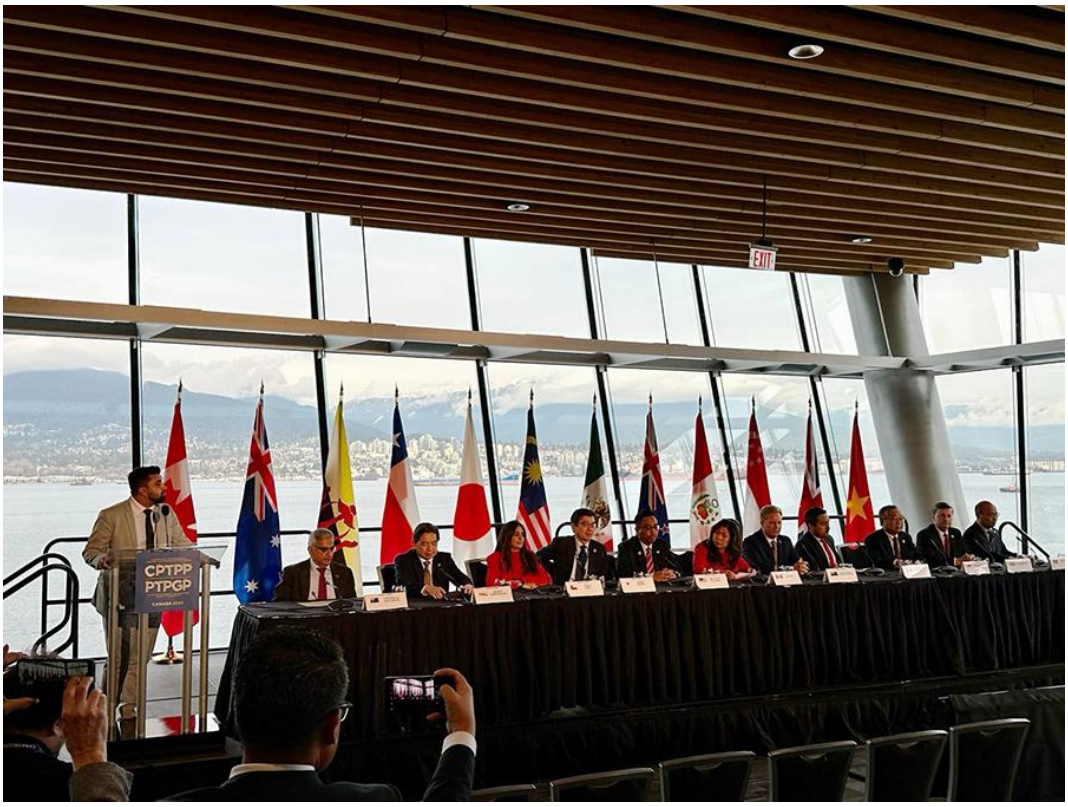
In other words, moving into low-carbon and new-energy segments is no longer outside the OGSE story; it is now central to how the sector is expected to grow and remain relevant and competitive in the decades ahead. On the regulatory front, Malaysia is preparing a Climate Change Act and a domestic carbon tax framework, alongside the global rise of measures such as the European Unions' Carbon Border Adjustment Mechanisms (CBAM). These will introduce new compliance obligations and costs for high-emission supply chains, including upstream oil and gas operations and their service providers. For OGSE players, this will change the economics of projects and the criteria for winning work: low-carbon engineering, emissions reduction solutions and credible climate disclosures will increasingly move from "nice to have" to "must have".

Then comes CPTPP – and this is where the ground reality becomes very immediate and very real. Malaysia's entry into CPTPP opens market access abroad, but it also liberalises 12 key upstream-related services at home[1]. For upstream activities (excluding liberalised segments), the domestic preferential treatment currently accorded by PETRONAS will be capped at 70% of annual spend for purchases upon ratification, gradually declining to

[1] Ministry of International Trade and Industry. (2022). *Cost-Benefit Analysis on the Potential Impacts of the CPTPP on the Malaysian Economy and Key Economic Sectors* (Final Report). https://fta.miti.gov.my/miti-fta/resources/CPTPPA/25072022_CPTPP_Cost_Benefit_Analysis_Final_Report_-_for_publication.pdf fta.miti.gov.my

40% by the sixth year of CPTPP's entry into force[2]. For downstream activities, the cap is set at 40% from day one, effective November 2022. For OGSE players, this effectively means that the long-standing comfort of guaranteed local preference may decrease over time[3]. Access to permits, licences and vendor lists will be open to international players.

Figure 1: Press Conference of CPTPP Members



Note: From *Australian Government Department of Foreign Affairs and Trade, November 2025, https://www.dfat.gov.au/trade/agreements/in-force/cptpp/commission-meetings*

Taken together, these forces send one unmistakable message: growth beyond traditional OGSE is critical and it is a national imperative. Companies that diversify into new energy,

[2] Ministry of International Trade and Industry. (2022). *Cost-Benefit Analysis on the Potential Impacts of the CPTPP on the Malaysian Economy and Key Economic Sectors* (Final Report).

[3] Ministry of International Trade and Industry. (2022). *Cost-Benefit Analysis on the Potential Impacts of the CPTPP on the Malaysian Economy and Key Economic Sectors* (Final Report).

industrial services, digital solutions and infrastructure will capture emerging opportunities in Malaysia and abroad. Those that remain in the traditional OGSE space will increasingly be squeezed by margin pressure, regulatory risk and stronger competition.

Against this backdrop, diversification is to redeploy OGSE strengths into adjacent, fast-growing segments of the new energy and industrial economy. The volatility of traditional cycles, declining oil and gas project opportunities in Malaysia, combined with capex discipline from PETRONAS and other NOCs, means fewer large exploration projects and more scrutiny on emissions, cost and local value creation. Fabrication yards, offshore construction specialists and well service companies are now competing within more stringent economic and compliance frameworks. Financiers are simultaneously tightening ESG standards, adopting emissions-linked lending and setting portfolio decarbonisation targets. Firms that rely solely on upstream revenue streams are increasingly seen as higher-risk entities.

At the same time, Malaysia's policy architecture is evolving rapidly. The National Energy Transition Roadmap (NETR) lays out a pipeline of investment opportunities in utility-scale solar, Hybrid Hydro–Floating Solar (HHFS), CCUS hubs and grid-supporting infrastructure. These are sectors that map naturally onto OGSE strengths in engineering and EPCC, marine and offshore structures, subsurface and wells, asset integrity and project management. The 13th Malaysia Plan (RMK-13) will deepen this push, emphasising green manufacturing, high-tech industrialisation, renewable energy expansion, climate-resilient infrastructure and low-carbon development pathways. For OGSE players, this means the "usual playground" in traditional oil and gas services is gradually being squeezed—by evolving trade commitments, intensifying competition and tightening sustainability expectations—while new arenas are opening up in low-carbon technologies, renewables, green infrastructure and advanced manufacturing. In this context, it is not only logical but necessary for Malaysian OGSE companies to move decisively into these new areas if they are to secure future growth, remain competitive and continue to play a central role in the nation's industrial and energy ecosystem.

Leveraging on the Transferable OGSE Skills to Adjacent Sector

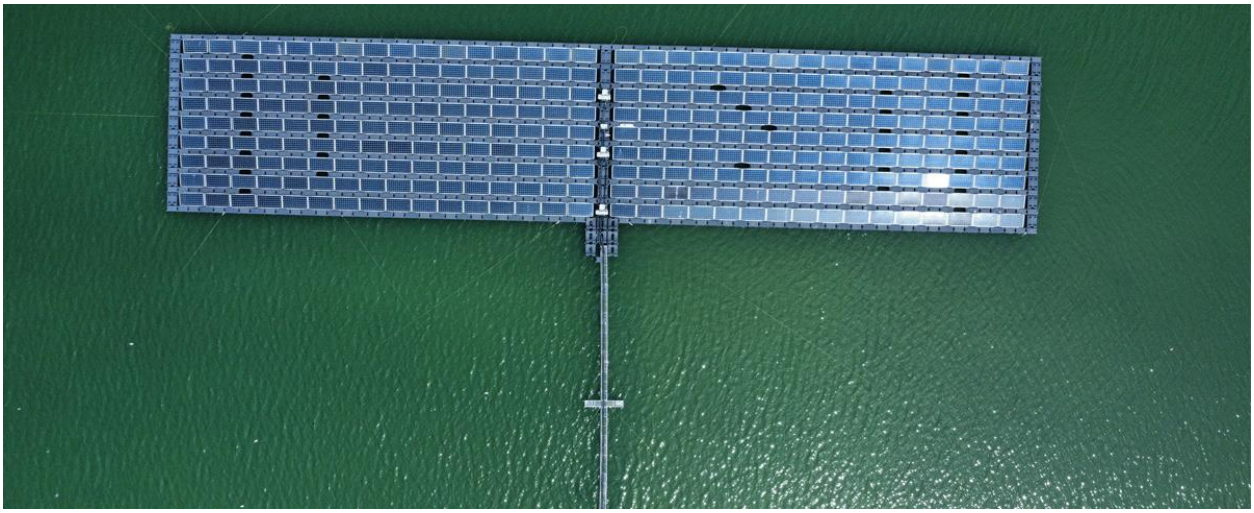
In other words, the national growth story itself is moving – towards a high-value, low-carbon industrial future. The question facing OGSE players is whether they will move with it.

One of the most compelling aspects of this transition is that the immediate opportunities are already visible. Three clusters in particular stand out as OGSE-friendly and policy-aligned: Hybrid Hydro Floating Solar, Large-Scale Solar, and CCUS. Across these, there are domains where OGSE players bring niche, high-value skill sets (such as subsurface engineering, marine and offshore systems, complex integration and O&M in harsh environments), and there are also more general domains—notably EPCC and project management—where the required competencies are not uniquely adjacent to OGSE but are widely applicable across many industries. Together, this mix of niche capabilities and transferable, general skill sets offers both quick wins and longer-term plays that can re-anchor the sector's relevance in a decarbonising world.

Malaysia's Hybrid Hydro Floating Solar initiative, led by TNB, is one of NETR's flagship projects. With a total planned capacity of around 2.5 GW across multiple hydro reservoirs, HHFS integrates floating solar photovoltaic systems with existing hydropower assets to boost renewable generation while enhancing grid stability. The combination of solar and hydro allows intermittent power to be balanced with flexible hydropower, maximising land use and optimising output from Malaysia's reservoir network[4]. The programme, spanning Kenyir, Temengor, Nenggiri, Kenering and Bersia, carries multibillion-ringgit value estimated at RM13 billion and targets phased commercial operation dates from 2026 to 2029.[5]

[4] Tenaga Nasional Berhad (TNB) Genco. (2025, November 4). *Project Opportunity #1: Hybrid hydro-floating solar (HHFS)* [Session presentation]. **Energy Transition Growth Opportunities,** Terengganu, Malaysia.
[5] Tenaga Nasional Berhad (TNB) Genco. (2025, November 4). *Project Opportunity #1: Hybrid hydro-floating solar (HHFS)* [Session presentation].

Figure 2: Full view of floating solar pilot project at the ash pond of Stesen Janakuasa Sultan Azlan Shah



Note: From *Tenaga Nasional Berhad, n.d.,* https://www.tnb.com.my/sustainability/esg-stories-tnb-hybrid-hydro-floating-solar

Under TNB Genco's multi-package procurement framework, HHFS will create tender opportunities across the value chain: design and supply of floaters, anchoring and mooring systems, subsea and land cabling, PV modules and inverters, energy storage integration, interconnection facilities and long-term operations and maintenance[6]. For OGSE companies, the parallels with offshore oil and gas are obvious. The project's marine and engineering requirements – floating platform design, mooring analysis, structural fabrication, marine installation, subsea works, asset integrity management and lifecycle maintenance – mirror long-standing OGSE competencies. The familiar project lifecycle of feasibility, engineering, EPC execution and O&M allows OGSE firms to repurpose vessels, fabrication yards, engineering teams and safety systems towards renewable infrastructure with minimal reinvention.

Large-Scale Solar (LSS) offers another practical and scalable entry point: it is effectively open to everyone, but in reality, tends to favour players with deeper pockets and stronger balance sheets, given its capital-intensive nature. Malaysia's LSS programme is a central

[6] Tenaga Nasional Berhad (TNB) Genco. (2025, November 4). *Project Opportunity #1: Hybrid hydro-floating solar (HHFS)* [Session presentation].

pillar in expanding the national renewable mix and achieving NETR's target of 70% renewable energy capacity by 2050. With initiatives such upcoming LSS6 adding several gigawatts of capacity, solar energy is expected to grow at double-digit rates over the next two decades and contribute to more than half of electricity generation by mid-century. [7] The Energy Commission's competitive bidding mechanism for Peninsular Malaysia creates structured opportunities for engineering, procurement, construction and commissioning work, as well as for grid interconnection, module and inverter supply, and the integration of battery energy storage systems[8].

Figure 3: Uzma Berhad's 50MWac Large Scale Solar Photovoltaic Plant under the LSS Project in Kedah



Note: From *Uzma Group, 2024,* https://uzmagroup.com/press-release/uzma-achieves-cod-for-its-50mwac-large-scale-solar-plant/

Solar farms might look very different from offshore platforms, but the underlying disciplines are surprisingly similar. High-voltage electrical works, EPC coordination, large-

[7] Suruhanjaya Tenaga. (2025, November 4). *Project Opportunity #2: Large Scale Solar (LSS)* [Session presentation]. **Energy Transition Growth Opportunities**, Terengganu, Malaysia.
[8] Suruhanjaya Tenaga. (2025, November 4). *Project Opportunity #2: Large Scale Solar (LSS)* [Session presentation]. **Energy Transition Growth Opportunities**, Terengganu, Malaysia.

scale logistics, HSE management and rigorous QA/QC are all areas where OGSE companies have decades of experience. By partnering with renewable developers, OEMs and utilities, OGSE firms can diversify their portfolios, enter the solar construction and maintenance space and position themselves as turnkey partners for industrial and utility customers navigating their own decarbonisation commitments. Long-term solar power purchase agreements provide the revenue visibility that banks and investors favour, while programmes like the Green Electricity Tariff and corporate renewable schemes broaden the customer base. [9]Crucially, OGSE players are not confined to EPC or service roles; they can also become operators of LSS assets. A small but growing group of OGSE companies—including players such as Uzma and Reservoir Link—are already adopting this operator model, signaling a viable pathway beyond traditional contracting.

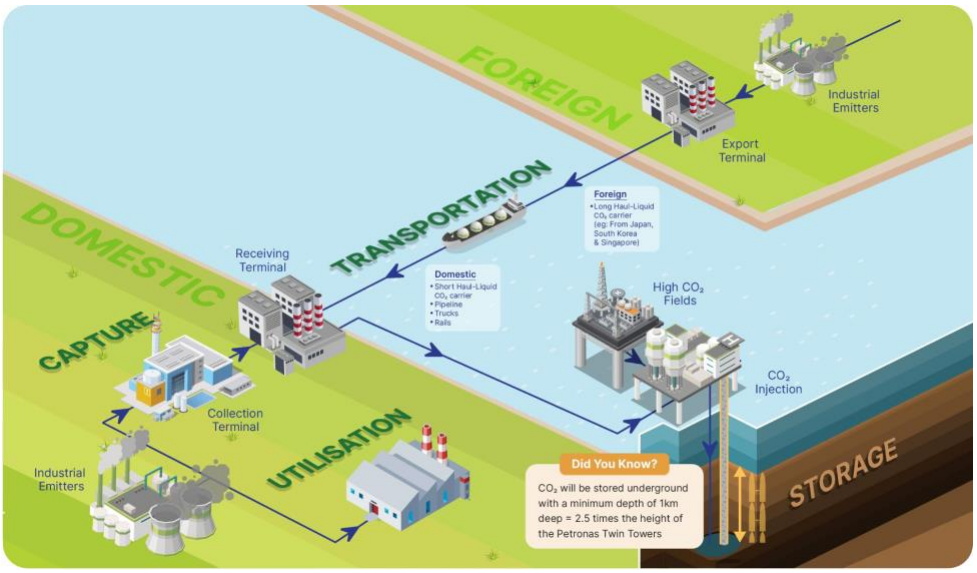
If HHFS and LSS represent near-term diversification and reputation-building, CCUS is the long-term, high-value play that speaks directly to OGSE's technical DNA. Malaysia's CCUS initiative is moving from concept to implementation under NETR and the newly enacted CCUS Act. Together with offshore permit and licensing regulations, the Act provides legal clarity and incentives for large-scale carbon storage and utilisation. CCUS has been designated as one of NETR's ten flagship projects and a key enabler under the New Industrial Master Plan 2030 (NIMP), linking climate ambition with new industrial growth.

The current development model envisions a major CCUS hub along the east coast of Peninsular Malaysia, anchored by an onshore terminal and linked to offshore storage sites such as depleted oil fields and saline aquifers. The phased rollout – from ongoing front-end engineering design studies, to final investment decisions expected in the second half of the decade, and EPCC works through to 2030 – will require a deep and wide supply chain[10]. CO_2 capture systems and compression, pipeline and subsea transportation, injection wells, storage monitoring, inspection and long-term integrity management all sit squarely within or adjacent to OGSE core skills.

[9] Suruhanjaya Tenaga. (2025, November 4). *Project Opportunity #2: Large Scale Solar (LSS)* [Session presentation].

[10] PETRONAS, Carbon Management Division. (2025, November 4). *Project opportunity #3: Carbon capture, utilisation and storage (CCUS)* [Session presentation]. **Energy Transition Growth Opportunities: Business Networking Session**, Terengganu, Malaysia.

Figure 4: An infographic on a simplified version of the CCUS process



Note: From *MyCCUS, n.d.,* https://myccus.ekonomi.gov.my/

Subsurface characterisation, reservoir modelling, well design and abandonment, offshore installation, marine operations, integrity inspections and digital monitoring are all core OGSE competencies that translate almost directly into the CCUS value chain. These adjacent skill sets mean OGSE firms are naturally positioned to plan, execute and operate CO_2 storage and transport projects. For companies that move early, CCUS offers not only a pipeline of domestic projects but also the potential to export CCUS solutions across the region—aligned with Malaysia's ambition to emerge as a regional CCUS hub in the future.

These three growth areas are not random. They form a coherent transition story that fits OGSE capabilities and Malaysia's policy direction. Large-Scale Solar offers near-term, scalable work with manageable technical risk and clear project pipelines – good for quick wins and revenue diversification. Hybrid Hydro Floating Solar provides a more differentiated niche where OGSE's offshore and marine strengths create a defensible advantage that generic contractors will struggle to replicate. CCUS, meanwhile, is a long-term, high-value space deeply aligned with subsurface and project-integration skills and central to national and regional net-zero strategies.

Together, they give OGSE companies a balanced transition portfolio: some projects that pay off now, some that build a specialty brand and export story, and some that anchor long-term relevance in a decarbonising world.

MPRC's Growth Beyond OGSE (GBO)

This is where initiatives such as MPRC's Growth Beyond OGSE (GBO) come into play. GBO is designed to help OGSE firms pivot into energy-transition and industrial markets by matching existing capabilities to priority opportunities and smoothing the path to entry. It does this by mapping where companies can realistically compete in sectors like HHFS, LSS and CCUS; facilitating partnerships and consortia; and working with government and financiers to improve access to funding, grants and risk-sharing instruments.

Underpinning this is a clear message: the status quo is not acceptable—OGSE players must look beyond the domestic upstream "comfort zone" and go regional. Programmes such as the Regional Champions Programme (RCP) and the Strategic Partnership Support Programme (SPSP) can help OGSE companies build regional footprints and redeploy capabilities into new segments, including offshore wind and other marine-based renewables, while GBO helps surface concrete opportunities in neighbouring markets.

Figure 5: A group photo of the OGSE Strategic Partnership Support Programme Business Matching in Terengganu



Note: From *Malaysia Petroleum Resources Corporation, 2025*

Wasco Berhad's Batam fabrication yard has expanded its capabilities to support energy transition infrastructure, including modules relevant to CCUS and low-carbon projects[11], while Yinson Holdings Berhad has strengthened its CCUS position through the acquisition of Norway-based Stella Maris CCS, providing end-to-end carbon storage development capabilities.[12]

Figure 6: Illustration of the Stella Maris CCS which has been acquired by Yinson Holdings Berhad



Note: From *alterainfra, n.d.,* https://alterainfra.com/articles/one-step-closer-to-realising-stella-maris-ccs

[11] Upstream Online. (2024). *Wasco's Batam facility celebrates 300th module milestone*. Upstream Online. https://www.upstreamonline.com/sponsored-content/wasco/wascos-batam-facility-celebrates-300th-module-milestone/?utm_source=chatgpt.com

[12] Yinson Holdings Berhad. (2025, February 19). *Yinson Production completes acquisition of Stella Maris CCS, expanding its carbon capture and storage ecosystem*. Yinson. https://www.yinson.com/news/yinson-production-completes-acquisition-of-stella-maris-ccs-expanding-its-carbon-capture-and-storage-ecosystem/

For OGSE leaders, the call to action is clear. CPTPP is real, and its impact on permits, licences and tender dynamics will only grow more visible over the next few years. Climate rules are becoming stricter, and investors are increasingly choosing where to put their money based on this. At the same time, NETR, RMK-13 and the CCUS framework are putting substantial, policy-backed opportunities on the table. The companies that move early, experiment, build reference projects and invest in new capabilities will be those that preserve – and even strengthen – their strategic relevance.

Malaysia's OGSE sector has already shown it can compete at the highest levels of technical sophistication. The next step is to apply that same capability beyond traditional oil and gas, into the fast-growing arenas that will shape Malaysia's industrial and energy landscape for the next 20–30 years.

This is where MPRC, through the Growth Beyond OGSE (GBO) programme, provides a practical pathway for OGSE companies to diversify and scale—by pinpointing where your capabilities fit into new sectors (including Energy Transition), opening access to regional markets, brokering strategic partnerships, and connecting you to funding, incentives, and risk-sharing support.

We are specifically looking to engage OGSE companies that are clear on the Energy Transition opportunities they want to pursue—companies with a strong technical and commercial track record, who know what they want, and are ready to move decisively.

If this describes your company, do contact MPRC at strategicpartnership@mprc.gov.my to explore how GBO can accelerate your next move.

With this additional push, OGSE firms can move first, move faster—and lead in a bigger, more complex game.