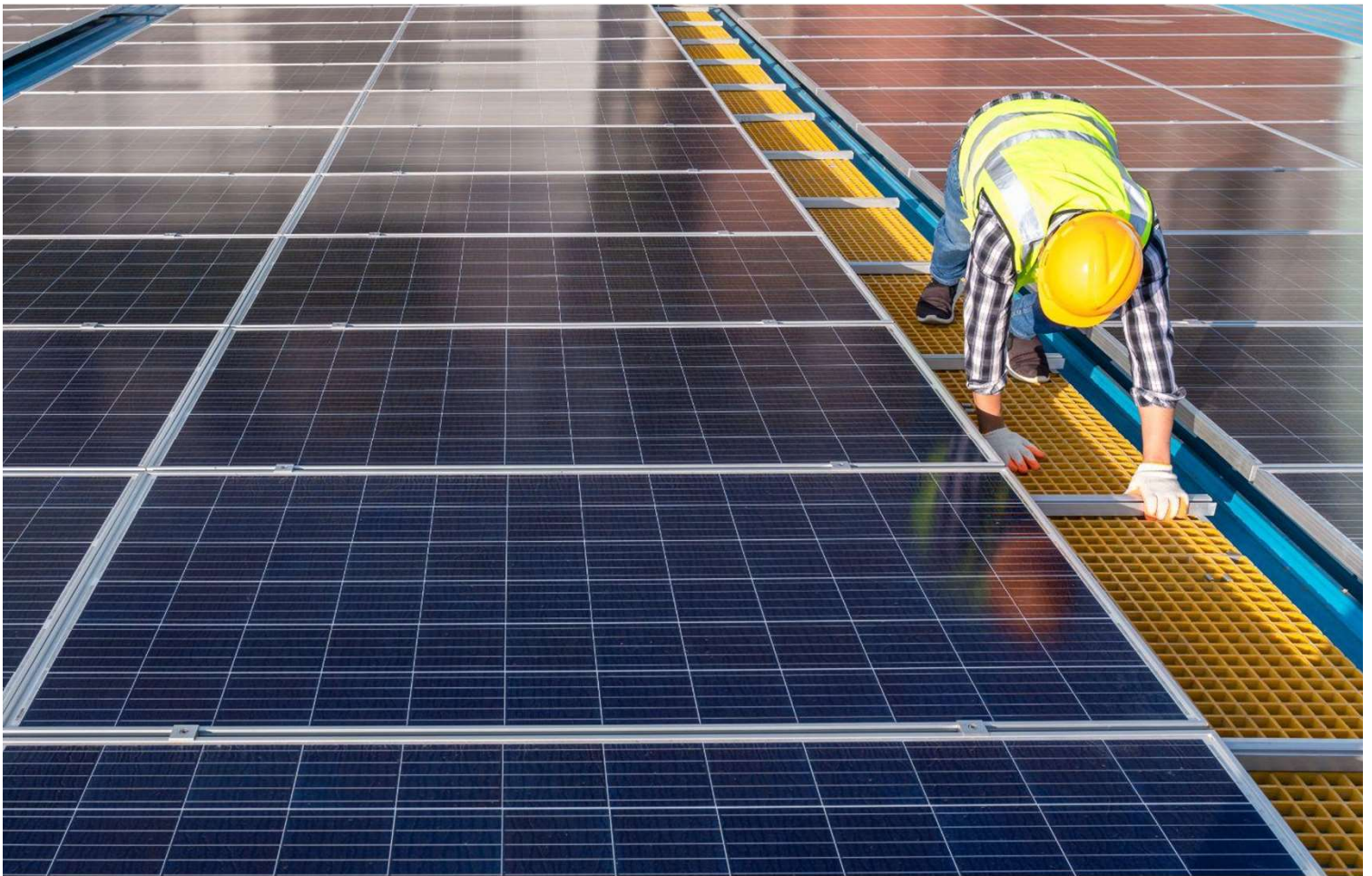


Laying the Foundation for a Just Energy Transition

November 2023



About PETRONAS

PETRONAS is a global energy group with presence in over 100 countries. PETRONAS produces and delivers energy and solutions that power society's progress.

PETRONAS seeks energy potential across the globe, optimising value through an integrated business model. PETRONAS portfolio includes oil and gas, renewable sources and a ready range of advanced products and adaptive solutions.

PETRONAS' commitment to sustainability starts at the core of our operations and extends throughout our value chain. PETRONAS understands that countries face an energy trilemma, with security, affordability and sustainability concerns that require a unique spectrum of solutions.

About PwC Malaysia

PwC's history in Malaysia dates back to the early 1900s. Over the years, the firm has worked with many different types of clients – large multinationals, public sector entities and growing Malaysian businesses.

PwC Malaysia's Assurance, Tax and Advisory services are rendered through separate legal entities focusing on different aspects. Each entity draws on the collective resources and experience of PwC, both locally and worldwide.

The firm proactively embrace Corporate Sustainability both as the right thing to do and as the key to future success as responsible corporate leaders. PwC has committed to achieve Net Zero by 2030.



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1

About this Report



1.2 Foreword

Journey to an Equitable Net Zero Future

The Paris Agreement acknowledges the importance of aligning climate change initiatives with human rights obligations and the broader aim of achieving sustainable development. As the push to limit global temperature rise to well below 2°C accelerates, the transition towards a low-carbon economy will present new job and business opportunities, while also potentially disrupting more traditional labour markets across the entire energy value chain.

Successfully transitioning to a well-functioning, inclusive, low-carbon economy occurs when it is just, ensuring that people have access to equitable social and economic growth opportunities and no one is left behind. For the transformation of the energy system to be sustainable, tailored policies, regulations, private sector investment as well as an unwavering commitment to championing innovation, new technologies and collaboration will be required.

Here in Malaysia, the Government recently launched the National Energy Transition Roadmap (NETR) to accelerate Malaysia's energy transition in key economic sectors.

To better understand how a just energy transition can be shaped in Malaysia, where the energy sector contributes 28% of national Gross Domestic Product (GDP)¹ and 25% of total workforce², PETRONAS partnered with PwC Malaysia to organise a series of roundtables to discuss the opportunities and barriers to a just transition.

For PETRONAS, leveraging on our experience as a global energy company and as custodian of Malaysia's hydrocarbon resources, we are committed to championing a just energy transition that is responsible and sustainable. This will be accomplished through actions such as delivering our Pathway to Net Zero Carbon Emissions by 2050, and by engaging with stakeholders to understand how our activities can best contribute towards progress for society.

We would like to extend our appreciation to all participants who attended the roundtable sessions. Representatives from government agencies, business, international and non-governmental organisations, financial institutions, and industry associations from the energy value chain, provided valuable insights and perspectives that helped shape this summary report in which we have tried to capture the broad spectrum of viewpoints.

We hope that this report will serve as a key resource, raising public awareness, fostering a deeper understanding of key themes, and encouraging stakeholders to actively shape a common view of what a just transition means for Malaysia and its energy sector.



Charlotte Wolff-Bye
Vice President and
Chief Sustainability Officer
PETRONAS



Andrew Chan
South East Asia's Sustainability
and Climate Change Leader
PwC Malaysia

Source: 1) *National Energy Policy 2022-2024*, 2) *National Energy Policy 2022-2024*

1.2 Executive Summary

Overview of Just Transition

A just transition recognises the social and economic implications of a transition away from carbon intensive activities into a low-carbon economy. If not accounted for, adverse social impacts on the workforce, supply chain and broader community may outweigh the benefits of a net zero future. No one single organisation can achieve a just transition alone. Thus, collaboration and cooperation amongst key stakeholders, including government, business, financial institutions and members of civil society, are important to shape the success of an equitable energy transition.

In the recent Economic Outlook 2024 by the Ministry of Finance (MOF), Government of Malaysia, it was mentioned that the “just transition concept underscores the essential interplay surrounding nation building, climate mitigation and adaptation as well as social justice... the concept of a just transition forges a pathway towards a sustainable future that leaves no one behind.”

Roundtable Discussion Topics

In collaboration with PwC Malaysia, PETRONAS conducted a series of roundtable sessions in 2023 to capture insights and perspectives from across sectors, on the following topics:

<i>Enabling Frameworks for a Just Transition</i>	<i>Workforce and Skills for the Future of Energy</i>	<i>Supporting the Supply Chain</i>	<i>Building Resilient Communities</i>
<ul style="list-style-type: none">● Social aspects to consider in a just transition● Just transition standards and frameworks● Stakeholders involved in a just transition	<ul style="list-style-type: none">● Creation of decent jobs and new skills● Retaining, retraining, and redeployment● Key enablers for the workforce	<ul style="list-style-type: none">● Understanding supply chain readiness● Impacts of net zero to the supply chain ecosystem● Key enablers for the supply chain	<ul style="list-style-type: none">● Needs of the community● Shared benefits from green investments with the community● Key enablers for the community
<i>Refer to Chapter 2</i>	<i>Refer to Chapter 3</i>	<i>Refer to Chapter 4</i>	<i>Refer to Chapter 5</i>

These sessions brought together more than 140 participants from over 40 organisations to engage on what it means to achieve a just energy transition in the context of Malaysia, as well as the possible impacts, positive and negative, on different stakeholder groups and areas of society.

The valuable inputs gathered from these roundtable sessions form the foundation of this synthesis report. This report aims to further elevate conversation on the topic of just transition, whilst exploring potential next steps for organisations to consider while navigating the energy transition.

2

Introduction



2.1 Purpose of this Report

Facilitating Just Transition Dialogues

As part of raising awareness and understanding stakeholders' expectation on just transition for the energy sector in Malaysia, four roundtable sessions were co-organised by PETRONAS and PwC Malaysia in 2023. These roundtable sessions were designed to bring together key stakeholders to facilitate discussion and capture insights on four themes:

- Enabling Frameworks for a Just Transition
- Workforce and Skills for the Future of Energy
- Supporting the Supply Chain
- Building Resilient Communities

More than 140 participants from over 40 organisations, representing government agencies, international and non-governmental organisations, businesses, financial institutions, industry associations and others, took part in these roundtable sessions.

Opportunities for Businesses to Consider Just Transition in Their Activities

Businesses play an important role in shaping a just transition with its own set of challenges that will need to be overcome.

Taking into consideration key discussion points from the roundtable sessions, as well as the varying stages of current net zero progress, this report highlights examples to illustrate just transition-related responses businesses can consider as they mature in their net zero approaches.

Please refer to Chapter 6 for more details on opportunities for businesses to consider in a just transition.



Pictured above: Participants from PETRONAS Just Transition Roundtable Series #3: How to go from Net Zero to a Just Net Zero - Supporting the Supply Chain

2.2 Context of Just Transition

Overview of the Energy Transition

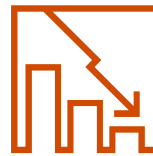
According to the Intergovernmental Panel on Climate Change (IPCC), “irreversible climate tipping points lie alarmingly close”, and so efforts to decarbonise and transition the global energy system need to be accelerated. Consequently, a fundamental paradigm shift of our existing economic and business models is needed to transition towards a low-carbon economy. Moving forward, the future of energy systems is expected to transition from carbon intensive to renewable and low-carbon sources, of which newer energy systems will further emerge.

The adoption of the Paris Agreement in 2015 secured a historic commitment to limit global temperature rise to well below 2°C above pre-industrial levels, while pursuing efforts to limit the increase to 1.5 degrees. There is also an emphasis on a just transition, where no one is left behind, in accordance with nationally defined development priorities. This marked the evolution of “just transition” from grassroot origins in the 1970s, where trade union and workers fought for environmental justice, into the mainstream discourse on climate change mitigation discussions.



73%

Of global GHG emissions are from the energy sector¹



29%

Estimated loss in ASEAN GDP with 2.6°C temperature rise²



“Just transition is the process of shifting away from carbon-intensive industries, energy generation methods, production practices, and operating models whilst ensuring that socio-economic considerations are integrated holistically at all levels. ”

- International Labour Organisation (ILO)³

Source: 1) *Our World in Data*, “Emissions by Sector”; 2) *Swiss Re Institute* 3) *ILO*, “Frequently Asked Questions on just transition”

Enabling Frameworks

Most of current net zero carbon emissions plans are focused on achieving environmental objectives, with less consideration given to the social implications of the transition itself. A whole-of-society approach, which engages and collaborates with all stakeholders, particularly those most impacted by the energy transition, is required for the transition to be successful.

The World Bank states net zero carbon emissions ambitions are best achieved when the poorest and most vulnerable are provided ample opportunities¹.

However, there are numerous standards and frameworks defining the concept of a just transition which can be difficult for stakeholders to navigate and impede consensus building efforts. Reflecting this, the first roundtable session, held in May 2023, highlighted the following considerations:

- To account for socio-economic impacts, aligning frameworks with an organisation's core purpose is key to promoting equity, equality and minimise social injustice
- Just transition considerations should be embedded into pathways towards a low-carbon economy, as it supports good governance practices whilst accounting for the needs of vulnerable stakeholders throughout the energy transition
- Responding to a just transition can be complex and requires continuous improvement, hence strong social consensus through dialogues is needed to align on goals and pathways towards a sustainable future

Additionally, four essential components for a just transition were noted:

Conduct human rights due diligence to prevent and mitigate risks to individuals

Identify opportunities and beneficial aspects of energy transition to communities

Promote agency and accountability through procedural rights (e.g. free, prior and informed consent, collective bargaining, remedy) and justice

Recognise the transformative potential of addressing unequal power dynamics across stakeholders in the energy transition

“The main question to address is, how to balance equitability, while trying to sustain a green economy to ensure that no one is left behind?”

- Prof Dato' Dr Rahmat Bin Mohamad, Chairman, SUHAKAM (Malaysia Human Rights Commission)

**PETRONAS Just Transition Roundtable Series #1:
How to go from Net Zero to a Just Net Zero - Enabling Frameworks for a Just Transition**

Source: 1) [PwC Malaysia: Asia Pacific's Just Transition](#);

The Many Stakeholders of a Transition

In the first roundtable session, it was quickly established that shifting to a low-carbon economy will significantly impact carbon intensive industries and create downstream effects for many stakeholders, particularly the workforce, supply chain, and the broader community engaged in high-carbon activities.

Furthermore, there are subsets within these stakeholder groups particularly vulnerable to the impacts of energy transition due to lower economic resources, less access to relevant training, and/or lack of capacity. They oftentimes face structural disparities and inequities, affording them less agency in influencing the transition.

Stakeholders vulnerable in a low-carbon transition



- Potential loss of work, negatively impacting job security and livelihoods
- Limited access to reskilling, upskilling, and training opportunities, particularly for informal workers



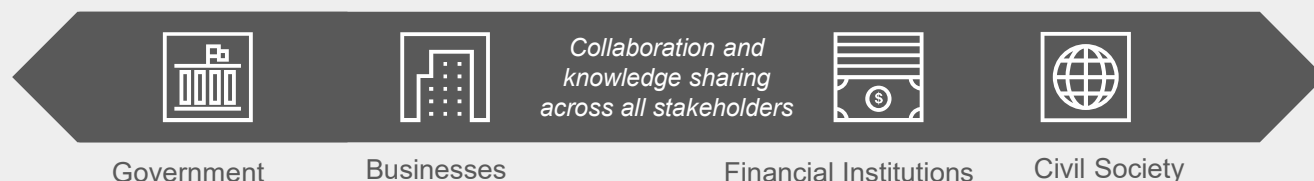
- Limited awareness and knowledge to keep up with expectations related to the energy transition, especially amongst small and medium-sized enterprises (SMEs)
- Limited resources to adopt sustainable practices



- Disproportionate impact on lower-income communities in regards to affordability, accessibility and reliability of alternative energy sources
- Displacement of local communities reliant on the traditional carbon intensive sector

Roundtable participants agreed that a just transition would be primarily led by collective efforts of four key stakeholder groups – government, businesses, financial institutions and civil society – they must account for socio-economic impacts on vulnerable stakeholders as part of their decision-making processes. These stakeholder groups will also need to factor in considerations for the emerging economics, like Malaysia, when tailoring their respective approaches, to reflect the unique set of demands, priorities and challenges.

Stakeholders shaping a just transition



An ecosystem including both public and private actors is required to facilitate the transition to a low-carbon economy. Each stakeholder has a unique role with varying degree of responsibilities to ensure no one is left behind throughout the energy transition. Collaboration will be essential, in order to effectively address the challenges that vulnerable groups may face as new energy value chains take shape.

3

Workforce and Skills for the Future of Energy

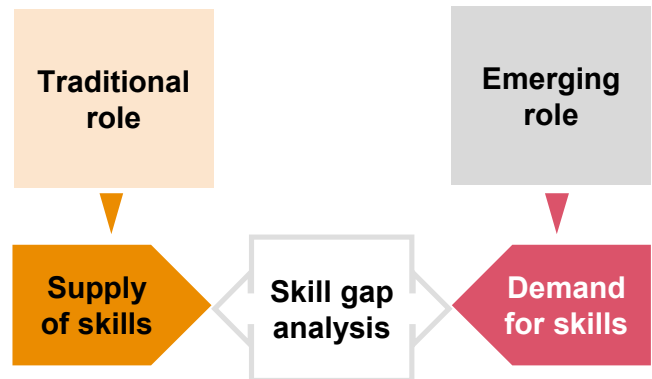


3.1 Overview of Roundtable #2

Evolution of Job Roles and Skills

The transition to a low-carbon economy, exacerbated by digitalisation and the need for business models to pivot accordingly, has accelerated the evolution of job roles and skills. Certain skills and jobs will need to be retired as they become irrelevant in this new economy, and are likely, to some extent, to be offset by the emergence of new jobs.

Effectively managing talent supply and demand, as well as analysing skills gap, will be key imperatives in efficiently upskilling and reskilling the current and future workforce.

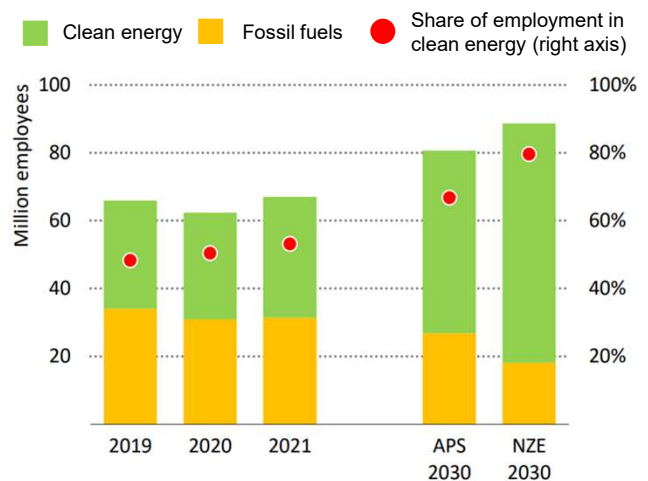


Workforce Transition in the Energy Sector

In all scenarios from the International Energy Agency's World Energy Outlook 2022¹, job growth in renewable energy will outweigh the loss in fossil fuel industries. The Sustainable Energy Development Authority (SEDA) Malaysia estimates planned investments in Malaysia's renewable energy sector will generate 28,416 new jobs by 2025².

Fortunately, there is high skills transferability amongst the existing workforce in the fossil fuel industries and it is therefore, possible that many roles will be able to pivot from fossil fuel to renewable or low-carbon energy activities.

However, strong policy frameworks and a multisector approach to reskilling, upskilling and job transformation is required to avoid any potential negative socio-economic impacts to the workforce that may arise from the energy transition.



“Coordination of efforts from various stakeholders from the public and private sectors are an integral part of facilitating a just transition.”

- Tim Rawlings, *Partner at PwC Skills for Australia, PwC Australia*
PETRONAS Just Transition Roundtable Series #2: How to go from Net Zero to a Just Net Zero - Workforce and Skills for the Future of Energy

Source: 1) IEA: World Energy Outlook, 2) SEDA: Shaping A Sustainable Energy Transition

3.2 Key Discussion Outcomes

Topic 1: Creation of decent jobs and new skills

Below are key discussion points from the roundtable participants highlighting potential impacts the energy transition on the workforce in Malaysia:

Net Positive Job Creation	<p>New jobs in renewable and low-carbon energy will outweigh job losses in fossil fuel industries due to:</p> <ul style="list-style-type: none"> ● Increase in investments and adoption of innovative solutions to facilitate the energy transition will drive new job creations ● Rapid economic and population growth across the ASEAN region, including Malaysia, contributes to a continuous rise in energy demand and growth of renewables in primary energy mix
Skills Transferability	<p>Transversal, commercial and business skills have a higher degree of transferability:</p> <ul style="list-style-type: none"> ● Leveraging technical skills in the traditional oil and gas sector to fulfill the skills requirements in adjacent sectors (e.g. carbon capture storage, hydrogen, CO₂ transportation) ● Broadening the availability of upskilling and reskilling programmes will drive capacity development across the energy value chain

Topic 2: Retaining, retraining and redeployment of workforce

90% of jobs in the oil and gas industry have medium to high transferable skills into the renewable industry¹. Companies can leverage on existing capabilities of their workforce to ease the transition from high-carbon to low-carbon activities. Below are the key discussion highlights:

Forward-Looking Approach	<ul style="list-style-type: none"> ● Regular strategic workforce planning is needed to translate strategy into actions for implementation ● Proactive skills gap analyses can identify future skills that are critical ● Developing a sound employee value proposition (e.g. maintaining pay levels) will enable businesses to retain highly valued skill sets
Data Collection and Analytics	<ul style="list-style-type: none"> ● Improved data collection is required to inform the needs of the current workforce, enabling targeted actions ● Information sharing amongst key stakeholders to promote good practices in managing workforce implications from the energy transition
Upskilling and Reskilling Efforts	<ul style="list-style-type: none"> ● Training initiatives need to be focused and intentional ● Continuous improvement of transversal skills to complement technical reskilling and upskilling efforts ● Awareness sessions to help the workforce understand new opportunities and the degree of skills transferability

Source:1) Robert Gordon University: A Review of Energy Workforce

Topic 3: Key enablers for the workforce

The energy sector impacts jobs across its value chain, including the workforce of SMEs in their supply chain, and those beyond its sector via indirect and induced jobs. As such, a whole-of-society approach is required to address workforce implications throughout the energy transition. Below are key enablers to support the workforce that were introduced by roundtable participants:

Sector-Level Guidelines	<ul style="list-style-type: none">● Develop a sector-by-sector policy to provide clear guidelines and tailored solutions to outline key actions by relevant stakeholders● Contextualise key focus areas and importance of each relevant stakeholder's role in supporting the workforce throughout the energy transition
Collaboration Across Key Stakeholders	<ul style="list-style-type: none">● Conduct regular dialogues with relevant stakeholders (e.g. labour unions, academia) to account for viewpoints and perspectives related to workforce transformation● Establish public-private partnerships that support tailored and job-specific training to facilitate upskilling and reskilling efforts
Financing Support	<ul style="list-style-type: none">● Provide scholarships, grants and funds to allocate appropriate resources to support upskilling and reskilling efforts● Roll out financing solutions to enable equal access to upskilling and reskilling opportunities to relevant stakeholder groups in the workforce of the organisation

Case Study

United Kingdom's (UK) North Sea Transition Deal (NSTD)

In March 2021, the UK government and the UK's offshore oil and gas sector formed a transformative partnership to unlock up to £16 billion of investments, and up to 40,000 energy jobs. The partnership focuses on supply decarbonisation, hydrogen fuel uses and carbon capture utilisation and storage capacities.

In collaboration with Robert Gordon University, the partnership assessed demographics and plans to guide inclusive, flexible and transparent recruitment and promotion pathways for jobs in the new sectors. The assessment covered the following areas:

- Identification of standards and qualifications required for the new jobs
- Development of an educational framework that is understandable
- Identification of future roles
- Reinforcement of diversity, equity and inclusion (DEI)
- Introduction of appropriate interventions for future roles

The NSTD highlights the value of creating an enabling ecosystem amongst key stakeholders to collaborate and align on the direction forward in supporting the workforce impacted by the energy transition.

For more information, refer to the following links: [OEUK NSTD](#), [North Sea Transition Deal](#)

3.3 Key Takeaways

1

The energy transition is disrupting carbon intensive industries, which will have a cascading effect on the workforce, particularly in terms of job losses. However, there is likely to be a net new increase in job opportunities.

2

Key considerations to enable a just transition for the workforce include identifying skills gaps, understanding the needs of the workforce, providing accessible upskilling and reskilling opportunities and enabling dialogues between relevant stakeholders to allay concerns.

3

Collaboration and coordination of efforts amongst key stakeholders in a “whole-of-society” approach are crucial to enable initiatives tailored to the needs of the workforce throughout the energy transition.

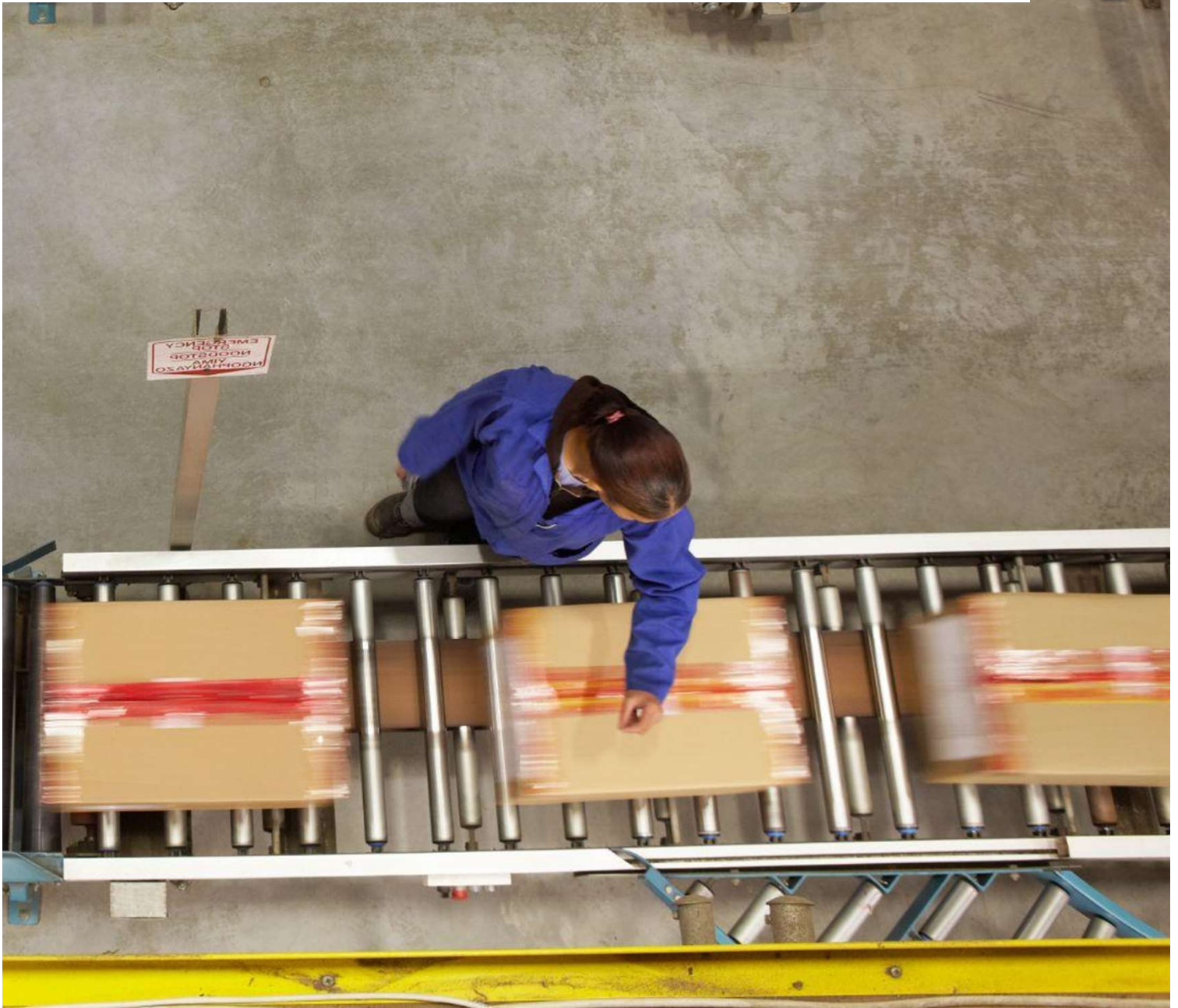
“Ministry of Human Resources (MOHR) oversees training for future workers and is involved in the retraining of existing workers. Acknowledging that there will be a new workforce from the green transition, MOHR is looking forward to introducing new skills training and technologies for students.”

- Ts. Kamaruzaman Md Ali, Deputy Director General, Manpower Department, MOHR Malaysia

*PETRONAS Just Transition Roundtable Series #2:
How to go from Net Zero to a Just Net Zero - Workforce and Skills for the Future of Energy*

4

Supporting the Supply Chain



4.1 Overview of Roundtable #3

Challenges Faced by Small and Medium-sized Enterprises (SMEs)

SMEs are the backbone of the Malaysian economy, acting as key players across the energy supply chain. Given the pressure for all stakeholders to support the net zero carbon emissions agenda, expectations for SMEs to align their practices accordingly are manifested through multiple channels, such as supplier onboarding processes, buyer surveys and audits, and requirements from finance providers.

However, SMEs have difficulties meeting these expectations due to various challenges, including rising material and labour costs, labour shortages, cash flow problems, barriers to financing, and lower capacity and capability to respond to Environmental, Social and Governance (ESG) expectations.



38%

of overall GDP in Malaysia in 2022 was contributed by SMEs



97%

of business establishments in Malaysia in 2022 are SMEs

Potential Measures to Support the Supply Chain

Evolving the supply chain as part of the energy transition is essential, which is why targeted support by business and government will be required.

Corporate Sector



Transform buyer-supplier relationship

- Collaborate effectively to support the delivery of greater value, through a focus on cost-competitiveness
- Offer incentive programmes to suppliers to encourage the integration of sustainability standards



Collaborate for positive impact

- Work with peers to align on ESG expectations to reduce reporting burden
- Engage regulators to keep abreast of latest industry developments
- Support cross-industry learning to stimulate innovation



Invest in data to strengthen performance management

- Identify blind spots or areas of inefficiency to align with ESG expectations
- Enhance transparency in sustainability data
- Provide assurance on the validity of sustainability data

Public Sector



Increase government intervention

- Enhance reporting regulations to drive more transparency and action towards a low-carbon future



Incentivise public listed companies to upskill suppliers

- Provide incentives (e.g. export credit guarantees, trade finance options) to support capability building programmes for suppliers
- Establish public-private partnerships to provide tailored upskilling programmes



Drive a centralised data platform

- Drive visibility in the supply chain and improve access to funding for SMEs
- Make the platform accessible to encourage sustainability reporting



Provide access to remedial action

- Establish a platform for issues to be highlighted and addressed to enable more effective resolution

4.2 Key Discussion Outcomes

Topic 1: Understanding supply chain readiness

Suppliers' current response to the urgency to transition to a low-carbon economy varies, given the different levels of awareness and maturity on sustainability across the supply chain. This is even more prevalent amongst SMEs which make up a large proportion of suppliers in Malaysia. Below are key discussion areas that highlighted how to better understand the varying degrees of supply chain readiness:

Lack of Knowledge

- Varied levels of understanding of key sustainability concepts and practices, including the potential adverse impact from not participating in the transition
- Unclear expectations, given that there are many existing ESG and sustainability standards, frameworks and guidelines to align with
- Lack of structured and balanced support from larger businesses

Lack of Resources

- Concerns on potential tradeoffs, as embedding sustainable practices can require additional resources
- Difficulties in getting access to funding, as they face challenges in meeting sustainability requirements set out by financial institutions

Topic 2: Impacts of net zero carbon emissions on the supply chain ecosystem

As companies advance their commitments towards net zero carbon emissions, actively engaging and supporting their suppliers to transform their business practices and operations is important to mitigate adverse social impact and widespread market disruptions. Below are key discussion points that were highlighted to enhance sustainable supply chain practices for vendors and suppliers to support the transition towards a low-carbon economy:

Opportunities Across the Supply Chain

- Adopt innovative technologies to increase supply chain resilience throughout the energy transition
- Adopt low-carbon solutions to promote efficient, equitable, circular and transparent supply chains

Data Collection and Management

- Establish relevant baselines to inform net zero carbon emissions actions and decision-making
- Set up appropriate tools and databases to collect, monitor and track ESG data, enabling efficiency and enhanced supplier performance

Supplier Relationship Management

- Integrate sustainability more consistently into supplier engagement
- Support suppliers to shift beyond reporting and compliance to encourage ownership of sustainability practices
- Actively engage suppliers to innovate net zero solutions and enhance SME capacity

Topic 3: Key enablers for the supply chain

Given the challenges faced by SMEs, more targeted assistance from various key stakeholders would be required to support their transition. Below are key enablers mentioned to support SMEs:

Clarity in Policy and Regulatory Guidelines	<ul style="list-style-type: none"> ● Establish a clear policy for the energy sector, with guidelines tailored to the needs of SMEs ● Collaborate amongst government ministries and agencies to identify and respond to SME needs through the different stages of the energy transition
Sustainability Awareness	<ul style="list-style-type: none"> ● Roll out tailored capacity-building sessions to uplift SMEs knowledge on sustainability ● Educate SMEs on available tools that they can leverage on to advance their sustainable practices
Procurement Strategies	<ul style="list-style-type: none"> ● Transform buyer-seller relationships to support common sustainability goals through periodic engagement ● Embed sustainability considerations into procurement strategy and practices
Financing Support	<ul style="list-style-type: none"> ● Tailor financing solutions to suit SMEs needs (e.g. blended finance model) ● Inform and educate SMEs on the available sustainability and transition financing options, providing guidance in responding to financing requirements

Case Study

PKSlestari X PETRONAS SME Sustainability Workshop

PKSlestari is an initiative by SME Corp Malaysia to encourage and accelerate adoption of ESG practices among SMEs through the development of the SME sustainability ecosystem. The initiative focuses on raising awareness and education to support SMEs in adhering to sustainability standards and compliance.

Amongst the key activities, SME Corp Malaysia developed the SME ESG Assessment, a self-assessment tool that guides companies to identify gaps in their management systems based on 12 ESG indicators. The tool helps to identify the company's strengths, current level of ESG maturity, and areas to enhance their performance.

In collaboration with PETRONAS, SME Corp organised a series of workshops for over 50 SMEs in the oil and gas services and equipment industry under the PKSlestari programme to raise awareness and educate suppliers within the energy sector. The full day workshop educated participants on the importance of ESG practices, how to develop an ESG strategy and ways to measure and monitor ESG performance.

For more information, refer to the following link: [SME Corp, 'Charting the ESG Pathway for SMEs'](#)

4.3 Key Takeaways

1

SMEs, which make up a significant proportion of the energy supply chain, are facing challenges in responding to the net zero carbon emissions aspirations due to varied levels of awareness and maturity on sustainability, lack of resources, and barriers to financing.

2

Key considerations to enable a just transition across the supply chain, particularly for SMEs, include uplifting overall awareness on sustainability, providing clarity on expectations, having targeted solutions to support them in addressing these expectations, and actively engaging them to identify and respond to their needs throughout the energy transition.

3

Implementation of clear policies and provision of appropriate guidance are foundational steps to support SMEs in embarking on their respective journeys toward more sustainable practices.

“If there is one call to action, some investment needs to be done to accelerate the just energy transition. Guidelines to gain access to funding will be required to help SMEs understand and move forward with their priorities.”

-Sazrin Mohd Razak, Head Strategic Planning and Investor Relations,
Bank Islam

*PETRONAS Just Transition Roundtable Series #3:
How to go from Net Zero to a Just Net Zero - Supporting the Supply Chain*

5

Building Resilient Communities



5.1 Overview of Roundtable #4

Impact of Energy Transition on Communities

The energy sector touches nearly every aspect of our lives. However, some community groups may be impacted by the energy transition more than others due to existing disparities. Thus, managing the energy trilemma of sustainability, security, and affordability throughout the transition is crucial to avoid any potential adverse implications.

Enabling Social Inclusion

A just transition considers the direct impacts of a transition, most commonly related to the loss of jobs in specific sectors, e.g. coal miners losing their jobs, as well as the wider indirect impacts across sectors and stakeholder groups, such as energy insecurity in rural communities.

Therefore, social inclusion is a key component of a just transition and it can be achieved through enabling broad stakeholder participation that recognises vulnerable groups by including them in discussions and decision-making processes.



Potential Measures to Enhance Community Resilience

Below are sample actions that were brought to the fore for organisations to consider:

Boost Local Development

- Establish ongoing funds to provide community development grants or loans
- Empower participation and asset ownership to communities
- Develop local sustainable energy transition policies

Regenerate Infrastructure

- Invest in renewable energy infrastructure that delivers affordable energy to rural areas
- Support projects that provide access to reliable and affordable low-carbon energy

Support Local Supply Chains

- Aid suppliers in their just energy transition by mitigating some of their risks
- Establish new sourcing requirements and company standards for local suppliers

Bridge Education and Skills Gap

- Promote diversity, including gender balance, and inclusion of vulnerable groups, in science, technology, engineering and mathematics (STEM) subjects
- Promote energy literacy with cooperation of governments and non-profit organisations

“There is no short-term solution to create sustainable impact. Collaboration between government, corporation and related institutions towards a common goal is key to move forward smoothly and in a just manner.”

-Tengku Noraida Tengku Mahmood, Head of Operations, Yayasan PETRONAS
*PETRONAS Just Transition Roundtable Series #4:
How to go from Net Zero to a Just Net Zero - Building Resilient Communities*

5.2 Key Discussion Outcomes

Topic 1: Needs of the community

The energy transition affects communities across various socio-economic factors. Recognising their unique vulnerabilities and diverse needs enables a targeted response in supporting them in the transition. Below are key discussion points that were highlighted in response to community needs:

Holistic Approach

A holistic approach needs to be considered when supporting communities throughout the energy transition:

- Contextualise community needs to their respective functioning ecosystems
- Integrate considerations for nature and biodiversity to account for overall planetary health
- Attune economic growth opportunities to the distribution of benefits, and not solely on growth

Community Engagement

In order to understand community needs, the following approaches can be considered:

- Involve local communities in the development of relevant projects
- Consult appropriate stakeholders to ensure that tradeoffs have been accounted for
- Work with local communities to understand on-the-ground challenges
- Invite relevant community members to participate in policy dialogues

Topic 2: Shared benefits from renewable investments with the community

According to the International Energy Agency¹, approximately USD2.8 trillion is set to be invested into energy transformations globally in 2023, of which at least USD1.7 trillion will be in clean technologies. Below are key discussion points on measures that support local communities in benefiting from these investments:

Policy Coherence

- Review and enhance relevant policies to account for communities in a more holistic manner, taking into account adaptation and biodiversity considerations for any potential investment
- Support these policies with relevant financing and upskilling programmes tailored to impacted communities

Project Planning

- Consider the impact from operations and maintenance of energy projects, including their coexistence with local communities and natural habitat
- Conduct relevant assessments on impact to local communities to inform project adaptation measures

Financial Support

- Ensure that the needs of impacted communities are accounted for when making financial decisions
- Identify tangible impacts from relevant renewable energy projects to attract investors and build community support

Source: 1) [International Energy Agency](#)

Topic 3: Key enablers for the community

Traditionally, businesses in the private sector are set up for profit making, more than for community development. However, this narrative is evolving, as more businesses are pivoting back towards balancing profit and purpose. Correspondingly, the recognition that businesses have a critical role to play in delivering a just energy transition is also increasing. Multi-stakeholder collaboration is required to deliver a just transition and this needs to include engagement of and support for vulnerable community groups in the transition. Below are key discussion points that were highlighted for the private sector to consider:

Understanding Local Communities	<ul style="list-style-type: none">● Support communities beyond a charity-based lens, viewing them as active partners● Engage with local communities to better understand challenges faced● Have in place appropriate tools and engagement systems, e.g. grievance mechanism, remedial and compensation processes, to channel and address local needs
Valuing Impact to Communities	<ul style="list-style-type: none">● Identify and track appropriate environmental and socio-economic indicators to quantify the impact of business actions on affected communities, enabling more informed decision making● Embed a rights-based approach when making business decisions
Tailoring Financing Solutions for Communities	<ul style="list-style-type: none">● Mobilise resources to support funding capacity, e.g. provide equity crowdfunding, peer-to-peer financing solutions● Increase access to continuous sources of funding through collaboration with other stakeholders (e.g. financial institutions), considering innovative financing mechanisms and going beyond one-off philanthropic or corporate social responsibility efforts

Case Study

Japan's Feed-In-Tariff (FiT) System

Japan's FiT System is a key policy pillar of its Regional Revitalisation Policy which aims to boost the economic prospects and wellbeing of rural, depopulated parts of Japan. FiT is a critical part of Japan's renewable energy development plans - it is part of a cohesive approach to revitalising the underserved, rapidly-emptying parts of the country.

Renewable energy development is done in partnership and collaboration with local community stakeholders to ensure they receive direct economic benefits from the development of the renewables industry in rural Japan. Key activities under FiT include:

- Attracting both domestic and international investment through price incentives
- Stimulating economic activity and job creation in under-served parts of rural Japan
- Encouraging local residents, communities, and other rural landholders to participate in a thriving new industry; either through ownership stakes or hosting projects on their land

For more information, refer to the following link: [Ministry of Economy, Industry, and Trade Japan, "Design of the Japanese feed-in-tariff scheme"](#)

5.3 Key Takeaways

1

A holistic approach to supporting different communities throughout the energy transition should be tailored to their specific environmental and socio-economic needs.

2

Key considerations for the private sector to enhance community resilience throughout the energy transition include promoting local community development, regenerating local infrastructure, and bridging education and skills gaps.

3

Key stakeholders working together to provide targeted support in addressing the needs of vulnerable communities throughout the energy transition supports the vision of not leaving anyone behind.

“There needs to be tangible efforts to understand how to develop a solid impact assessment on communities and biodiversity, not just at the policy but project-level.”

-Nur Syairah Husna Binti Mohd Ridzuan, Climate Policy Strategist, Bank Negara Malaysia

PETRONAS Just Transition Roundtable Series #4:

How to go from Net Zero to a Just Net Zero - Building Resilient Communities

6

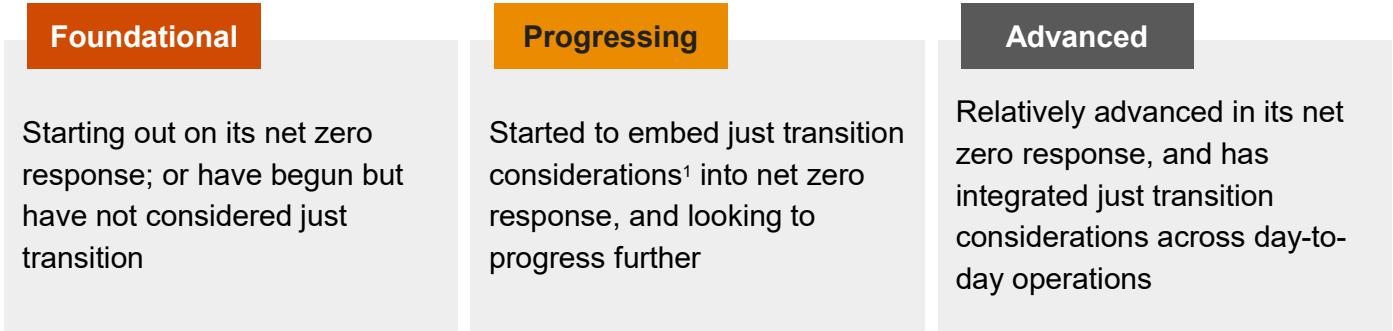
Opportunities for Businesses to Consider Just Transition in Their Activities



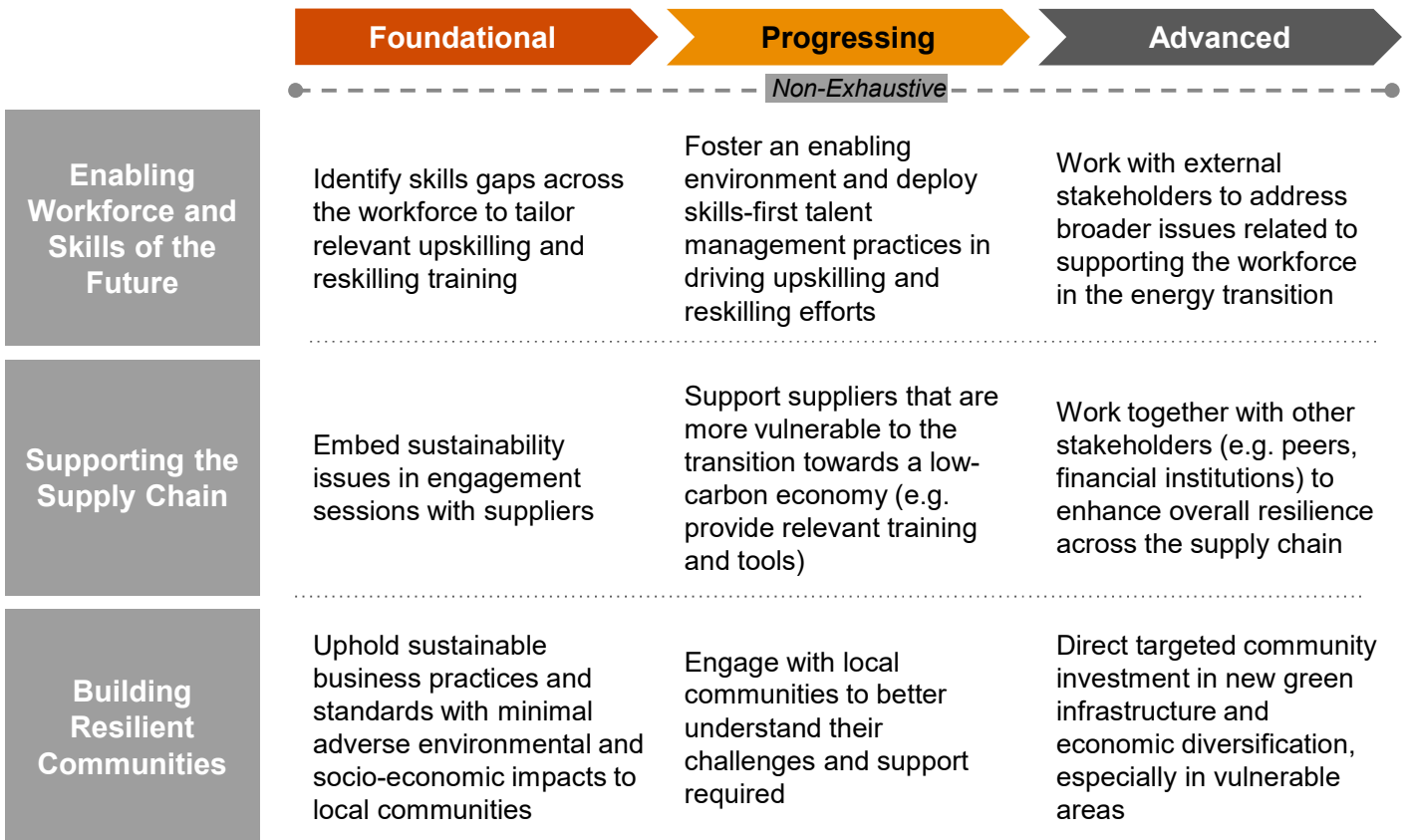
6.1 A Tailored Just Transition Response

Developing and implementing a just energy transition response is a journey for any organisation that requires thoughtful planning and resources. However, each business has its own set of constraints to respond to, which oftentimes are due to limited capacity and capabilities.

As such, a tailored approach is necessary, one which takes into account the current state of maturity in the overall net zero journey. It can be helpful to categorise the level of maturity of a business into three stages:



Below is an illustration of responses a business can consider as part of its just transition journey which are aligned to each roundtable topic.



Source: 1) For more information, refer to the following links: [Shell, "A fair and just transition"](#), [EDF Energy, "Supply Chain Finance"](#), [Equinor, "A Leading Company in the Energy Transition"](#), [Equinor, "Equinor's commitment to a just energy transition"](#)

7

Appendix



7.1 Glossary

Abbreviation	Definition
ASEAN	Association of South East Asian Nation
DEI	Diversity, equity and inclusion
ESG	Environment, social and governance
FiT	Feed-In-Tariff
GDP	Gross domestic product
GHG	Greenhouse gas
ILO	International Labour Organisation
IPCC	Intergovernmental Panel on Climate Change
MOF	Ministry of Finance
MOHR	Ministry of Human Resources
NETR	National Energy Transition Roadmap
NGO	Non-government organisation
NSTD	North Sea Transition Deal
SEDA	Sustainable Energy Development Authority
SME	Small and medium-sized enterprise
STEM	Science, technology, engineering and mathematics
SUHAKAM	Suruhanjaya Hak Asasi Manusia (Human Rights Commission)
UK	United Kingdom
WEF	World Economic Forum

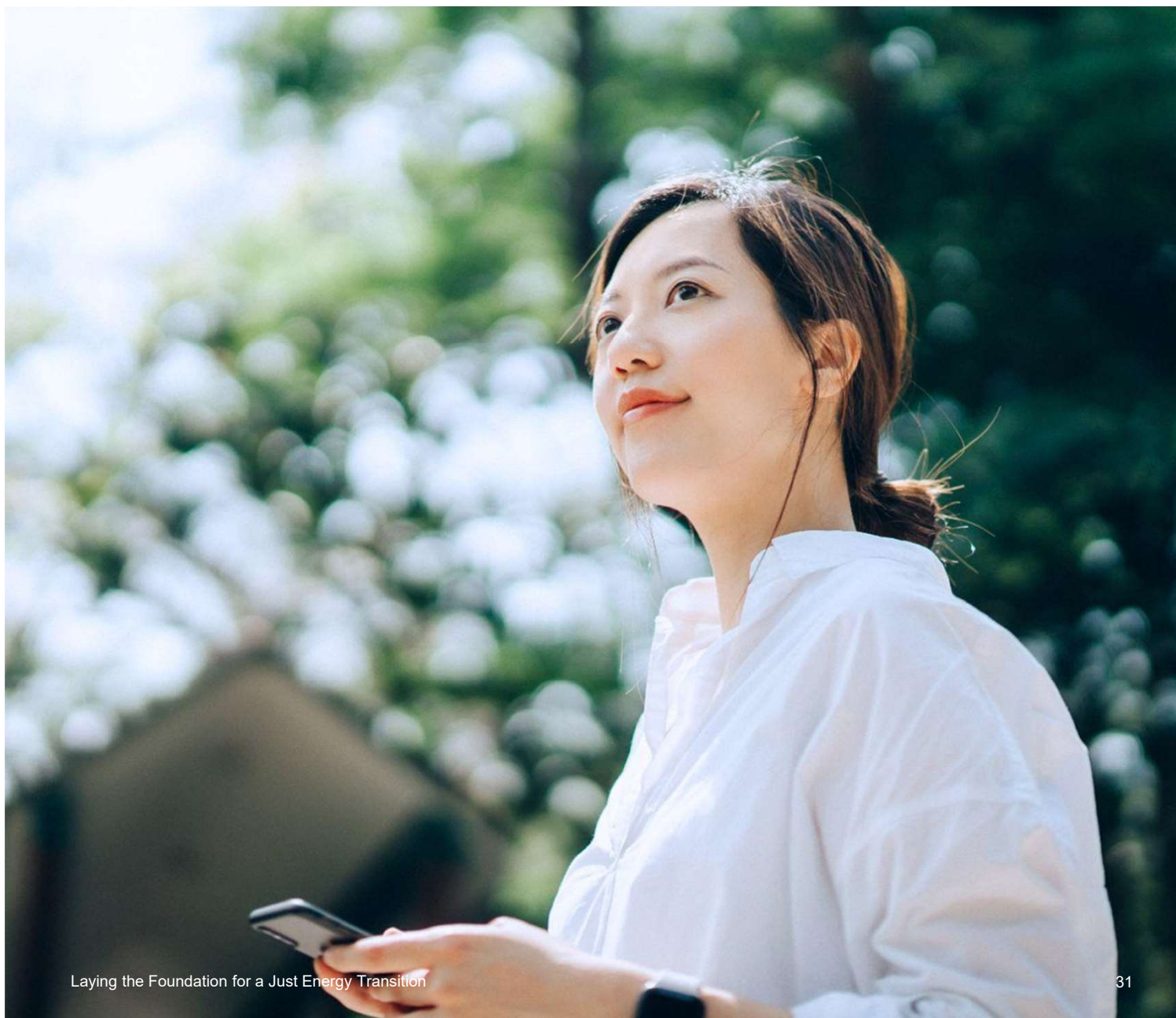


7.2 Acknowledgement

PETRONAS and PwC Malaysia wish to extend our sincere appreciation to the numerous individuals and organisations whose invaluable contributions have culminated in the realisation of this report. This report is the summation and reflection of a diverse set of viewpoints and do not represent any single organisations' view.

The wealth of input gathered from PETRONAS Just Transition Roundtable Series have been pivotal in shaping this report. The four Roundtable Sessions provided diverse perspectives and insights, enriching the content and its applicability across diverse contexts. More than 140 representatives from over 40 organisations across government agencies, the oil and gas sector, financial institutions, and civil society organisations were involved.

In addition to the above, we would like to recognise other organisations whose contribution in shaping a just transition has been referenced in this report from publicly available resources.





Thank you.

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