



Net zero, purpose at pace.

Complex journey.
Clear destination.

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The process of decarbonisation is long and complex. Every step taken on the journey will impact people, the environment, the economy, and organisations.

It requires a fundamental shift in the way we live and operate our businesses. Yet we don't have time to procrastinate; all the signs are pointing to the need to stop talking and start acting. To reach net zero, we must work together with all stakeholders to create purposeful partnerships. And we need the right tools, capital and knowledge to chart the course.

Why it's time to focus on the journey, not just the destination

The ambitious aim of net zero is to limit global warming to within $<2^{\circ}\text{C}$ – with a focus on ensuring global emissions reach zero or as close to zero as possible before 2050.

The call to action on climate change has advanced significantly in the last two years and is now pervasive across every sector and industry, all levels of government, and communities globally.

Now that this end goal is firmly in sight, it is time to focus on the **journey towards net zero**, commonly referred to as decarbonisation.

Climate change is shifting our way of life

Few would disagree that climate change is one of the greatest challenges of our time. The [KPMG Survey of Sustainability Reporting for 2022](#) revealed almost two-thirds of the world's top 250 companies report climate change as a business risk. And in small and medium-sized enterprises, and non-profit organisations, climate change and sustainability challenges resonate among all stakeholders.

Achieving the goals of net zero requires a redesign and overhaul – a fundamental shift – in the way we live in modern society.

This is hardly the first time the world has faced such a crucial shift. The Industrial Revolution evolved as a solution to the challenges associated with a burgeoning world population. It solved several social and economic problems of the time by ushering in major shifts in modes of production and economic thinking, but at the same time, created new ecological and social problems.

Similarly, today's digital revolution and the harnessing of technologies has created new possibilities for climate change mitigation and adaptation. Technology can have transformative effects on achieving the [United Nations Sustainable Development Goals](#) if developed and executed with environmental and societal impacts in mind.

According to the [World Economic Forum](#), digital technology has the potential to cut emissions by 20 percent and can contribute to efforts to adapt to life in a changing climate. However, the Information Communications Technology (ICT) sector, including personal computers, laptops, smartphones, tablets and digital infrastructures such as data centres and communication networks, is [expected to contribute to the global carbon footprint by 14 percent in 2040](#). And we shouldn't forget the social effects, including data security and privacy breaches, terrorism and crime, and negative effects on wellbeing.

By solving one problem, we often create new and more complex ones. One of the fundamental causes of this dilemma is a consistent and pervasive reticence to apply a systems lens to the world's challenges. It can be easier to focus single-mindedly on seemingly simple solutions to complex challenges. By the time solutions are implemented, and our goals are achieved, we may have lost sight of the new challenges created as a by-product along the way. Unless we very quickly recalibrate efforts to ensure the journey to net zero is a just, equitable and ecologically sound one, we run the risk of repeating our past errors.

Global and local inclusion

Net zero therefore, is more than just the end goal – zero emissions. Net zero is about the inclusion and participation of all peoples and communities affected by climate change. It is important to develop strategies that allow us to thrive as a community and develop resilience to the effects of a changing climate. Net zero is about ensuring we do not neglect the domains of natural capital on which our efforts depend (such as biodiversity, natural resources and biogeochemical flows) on our way to a zero CO₂-equivalent future.

This journey is a global challenge, requiring complementary and equitable effort by all nations. At the same time, it requires reconsidering the design of our economic systems and markets in a manner that rewards systems-oriented solutions to the world's complex sustainability challenges.

The 27th United Nations Climate Change Conference (more commonly known as COP27) concluded in late 2022 with key messages reinforcing the urgent need for action across several industries and sectors, and with Australia signing up to the Global Offshore Wind Alliance. During COP27 and some of its associated events, we heard from Indigenous communities, as well as leaders from emerging markets, about the need for action to make the net zero transformation more just, equitable, and inclusive of the variety of communities affected by climate change.



Necessary investments

A key takeaway from COP27 included the agreement for a new “Loss and Damage” fund for vulnerable countries, affirming climate finance as a pivotal enabler for the decarbonisation journey. COP27’s final agreement highlighted the requirement for us all to help mobilise “US\$4 to \$6 trillion a year to be invested in renewable energy until 2030 – including investments in technology and infrastructure – to allow us to reach net-zero emissions by 2050.”

The Organisation for Economic Co-operation and Development (OECD) puts the cost of achieving the UN’s Sustainable Development Goals, in a way compatible with the Paris Agreement, at \$6.9 trillion a year by 2030. We cannot afford to get this transition wrong this time.

The Australian landscape

Australia could be a global leader in just and sustainable decarbonisation pathways through the development of innovative energy transition technologies, low-carbon transport, renewable energy solutions, sustainable supply chain development, and sustainable land management mitigating the social impacts and risks related to decarbonisation and changes in climate.

Reducing Australia’s emissions intensity to net zero by 2050 will require deep transformational change across most industries with an underlying imperative for strong commitment from government, corporate, academia and industry. The Climate Council and Melbourne Sustainable Society Institute (MSSI), part of the University of Melbourne, has modelled showing that the costs to Australia from not meeting the Paris Agreement target is \$1.19 trillion.



An organisation's path to net zero – purpose at pace

Beyond the strategic focus on net zero as an end goal, it is important to be intentional about the operational shifts required of organisations as they embark on their own just and sustainable decarbonisation journey.

Decarbonisation transformation requires a long-haul journey involving several decisions and actions at multiple stages along the way. At every stage, organisations will need the right tools, capital, and capabilities to get the job done.

Many organisations have outlined decarbonisation strategies to achieve their targets. These strategies rely on a number of levers that include accelerating the shift to renewables, developing new product offerings, relocating facilities, investing in carbon capture and nature-based offset projects. While these detailed strategies vary significantly across industries, there are a few basic elements that apply to every organisation.

Where are you on your journey?

We believe the path to net zero for every organisation includes four elements:



01

Get ready

This means making sure you understand the implications of net zero as the end goal, as well as your own starting point relative to this goal.



02



03

Set targets and commit

After you understand your starting point, your supply chain engagement and capital requirements, you will need to define your organisation's pathway towards net zero.



Act now, to deliver on your commitments

Once targets are set and the commitment has been made, proactive organisations will begin focusing on meeting each milestone. Organisations in this phase recognise the value of skills and advice in responsible leadership, change management, and organisational transformation.

04

Enablers

For an organisation on the journey to net zero, enabling factors like the sustainability skills and capabilities of its people and access to capital make the transition smoother and more integrated.

01.

Get ready



01. Get ready

The first step to net zero is to understand where your organisation currently sits on the journey, your level of decarbonisation maturity and the benchmark for your industry.

There are a few common challenges and considerations at this stage. For instance, while accounting for indirect emissions remains a challenge across all industries, aiming to understand one's baseline direct and indirect emissions is the expected starting point for organisations of all sizes. There is a strong need for data, automation, electrification of fleet and equipment, AI and blockchain to solve the remaining challenges associated with this foundational stage of the decarbonisation journey. Organisational readiness to integrate these solutions is another important consideration.

To trace supply chain emissions more accurately and credibly, you will need a comprehensive strategy around the procurement of sustainable energy and products. On 15 December 2022, the Federal Clean Energy Regulator announced the [Guarantee of Origin \(GO\) scheme](#), designed to track and verify the emissions associated with hydrogen, renewable electricity, and potentially other Australian-made products in the future, such as metals and biofuels.

The scheme will verify a product's origins, how it was made and the carbon intensity across its lifecycle, allowing investors and consumers to make informed decisions around the integrity of product purchases.

The prevalence of such schemes globally and domestically will continue to increase, providing opportunities for businesses to track Scope 3 emissions more readily throughout their supply chain and make informed decisions about energy procurement.

At this stage, it is also critical to consider the differences in industries, which need to be understood and explored in the first stage of your decarbonisation journey through maturity assessments, industry benchmarking exercises, and readiness reviews.



01. Get ready

We're here to help

KPMG recently supported an ASX 200-listed tech organisation by informing and guiding their responses to investor queries about climate-related risks and opportunities. To do this, we benchmarked the organisation against similar peers to canvas the significant risks and opportunities their industry will be exposed to in a world that is 2°C and 4°C warmer. As a result, we recommended actions tailored to the industry and the organisation's position – improving their alignment with reporting frameworks and industry expectations, and drafted the organisation's sustainability report narrative.

We can help you get ready for your decarbonisation journey and provide services to tackle the first steps, including:

- initial readiness reviews and gap analyses (e.g. Taskforce for Climate-related Financial Disclosures (TCFD))
- baseline material and energy flows
- determining your greenhouse gas (GHG) inventory and carbon footprint
- undertaking maturity assessments and industry benchmarking analyses to calculate your emissions, operations and business forecast.

Regardless of your industry, supply chain mapping, transformation program design, systems audits and monitoring frameworks are all critical to ensuring a successful transition to the second stage of your decarbonisation journey: **Set and commit.**

Questions to consider



How mature is my organisation along the path to decarbonisation?



Is my organisation prepared for change and transformation?



Do I know what skills and capabilities are available to support this transformation?



Do I know my emissions baseline and the Scope 1 and 2 emissions profile of my company/asset?



Do I consult with stakeholders, including community groups and employees, about where we're at today, and what they think my company should be doing?



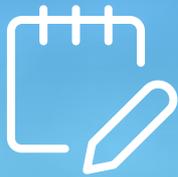
How far away is my organisation from achieving net zero emissions across its supply chain?



How does my organisation compare to others within the same industry?

02.

Set and commit



02. Set and commit

Once your organisation has understood its starting point, it will be time to set goals.

First, you will need to define the end state your organisation is aiming for. Then, consider how you will measure and report on your progress towards that goal.

Not all net zero commitments are created equal. Different businesses and industries have different decarbonisation commitments and goals with highly bespoke considerations around supply chain, capital works, and baseline emissions. For example, the infrastructure and construction industry will need to consider emerging emissions abatement opportunities arising from the use of alternative materials and processes, and carbon capture technologies, in the production of steel and cement. In fact, [a 2019 World Bank estimate](#) suggests the necessary global infrastructure investment towards net zero would cost \$90 trillion by 2030. On the other hand, oil and gas companies are beginning to assess their long-term operating models as carbon pricing, markets and net zero aligned legislation mature.

Risk assessment is a crucial component of any organisation's decarbonisation journey, especially at the point where you're deliberating your future commitments. Risk assessment informs the targets set, as well as the likelihood of achieving them.

Well-established reporting guidelines from the Taskforce for Climate-related Financial Disclosures (TCFD) respond to demand from investors, lenders, insurance underwriters, and other stakeholders for climate-related financial information that could effectively inform their decision-making. [The Australian Government is currently collecting feedback](#) on the key aspects to be considered as the nation designs its own mandatory internationally aligned requirements for climate-related financial disclosures.

The existing international guidelines have served as a catalyst for businesses, as challenges around the mitigation of transition risks related to climate policy changes, zero-emission technology development and market and reputational risks, for instance, are being considered by almost everyone – from governments and international agencies to Australia's largest corporations and small and medium enterprises. The need to address transition risks highlights many of the considerations by financial services and management consulting professionals, which are relevant in the **Act and deliver** and **Enablers** steps of the decarbonisation journey.

Still, the challenges surrounding physical risks need to be addressed. [According to Morgan Stanley](#), climate-related disasters amounted to a global cost of \$650 billion for the period 2016–2018. Much of this was due to infrastructure damage (\$611 billion in lost property values) and agricultural and labour productivity losses (\$211 billion). Losses in biodiversity and human health also add considerably to the total (\$368 billion). However, none of these measures fully account for extreme weather events, including damage from potential bushfires.

In addition, the [Cost of Doing Nothing report](#), published by the International Federation of Red Cross and Red Crescent Societies (IFRC) in 2019, estimates the number of people in need of humanitarian assistance because of storms, droughts and floods could climb beyond 200 million annually – compared to an estimated 108 million today. Conversations around how organisations mitigate and/or adapt to both the acute and chronic physical risks related to climate change remain challenging, especially for organisations needing to report mitigation strategies, which are likely to continue to develop in the long term.

02. Set and commit

We're here to help

KPMG as an example partnered with the South Australia Government on a landmark study to facilitate investment in South Australia's emerging hydrogen export industry. We examined locations for hydrogen production and export, volume of supply, the needs of potential hydrogen supply chain infrastructure, and associated costs. Our work helped the government understand the state's hydrogen export opportunities and attract private sector investment.

We can support you to **Set and commit** to your decarbonisation journey. We can help with a range of services including scenario analysis and scenario planning workshops, implementation of risk management frameworks, infrastructure and asset transition road-mapping and reporting and assurance. Each of these services will assist your business in its ability to **Act and deliver** on its decarbonisation commitments.

Questions to consider



Have I defined my climate ambition?



Has my organisation committed to a decarbonisation goal?



Do I understand the standards and norms for my industry?



Have I modelled my target for economic and ecological optimisation?



Do I know what proportion of my emissions target will be achieved through emission reductions, versus carbon removals and carbon offsets?

03.

Act and deliver



03. Act and deliver

Once organisations have planned their journey to net zero, it's time to get it done.

What new business and operating models will you adopt? What new skills and capabilities will you need? And how will your organisation ensure a just transition for its stakeholders?

For example, if your organisation operates in an industry with hard-to-abate emissions such as oil and gas or chemical processing, then carbon offset programs and global carbon markets will play a critical role in your ability to reach net zero. Ask yourself how the use of these abatement drivers will affect decisions surrounding your long-term operating model. And, what upskilling will be needed for your workforce to expand their capabilities and successfully transition across to a net zero operating model?

Also, the advent of a low-carbon economy requires equal focus on a just transition. Businesses must consider how they can decarbonise while investing in the communities in which they operate, securing well-paying, long-term employment for their workforce, and ensuring their transition allows for open dialogue which includes all stakeholders.

As Australia's largest carbon emitters, the mining, materials and resources sector has committed to net zero goals.

However, these industries will need additional support to decarbonise operationally – including support to integrate new technologies, upskill and/or reskill staff, engage sustainable supply chain partners, and navigate challenges around the availability of low carbon fuel. In most cases, the financial services industry will play a crucial role in enabling the decarbonisation of the mining and resources sector. And, in all cases, the sector will need support with various forms of change and transformation across the value chain.

The outcomes of benchmarking activities have highlighted the challenges for investors to interpret and compare decarbonisation ambitions and business strategies across industries. Engaging with capital providers will be an important factor for delivering transformative change across organisations.

If target-setting and implementation are to be coherent across Australian industries, the financial services sector should be equipped with effective frameworks and guidance to inform their lending and investment decisions, and inform their own reporting of their Scope 3 financed emissions.

03. Act and deliver

We're here to help

KPMG were recently engaged by a large global mining organisation to assist with emission reductions for critical minerals. Subject matter experts from across KPMG provided the organisation with an effective, holistic understanding of the net emissions avoided from the use of low-carbon technologies and how the benefits could be allocated across the company's value chain.

KPMG can support you to act and deliver on your decarbonisation goals. We can help with a range of services including climate modelling, procurement, transaction and capital advisory, Renewable Energy and Power Purchase Agreements (PPAs) and transformation program delivery.

Questions to consider



Do I understand what new skills and capabilities I will need to lead and champion a transformation program?



How much capital will I need?



What new/additional revenue streams can I expect from my low-carbon operations/assets/products?



Do I have tools, systems, and processes to identify and implement incremental process improvements?

04. Enablers



04. Enablers

It is often said that an organisation's greatest asset is its people, and every employee has a role to play in the transition to net zero.

The latest survey report by Eversheds Sutherland and KPMG explores how employees are factored into companies' decarbonisation plans. Drawing on the perspectives of 1,095 global leaders and interviews with leading voices on climate change, the results indicate a potential gap between their net zero goals and the strategies and talent in place to achieve them. There is power in organisational culture to navigate climate change and it is imperative that organisations consider staff retention and upskilling, company policy and ESG/decarbonisation commitments, and investor and supplier relations, if they are to achieve success.

Strategic alliances allow collaboration between organisations to build innovative solutions, enable more sustainable business operations, increase data transparency, scale quickly and improve brand and customer loyalty. ESG Alliance Partnerships help organisations join forces with other players and combine valuable expertise and competencies to work toward a net zero economy and world.

Whether you're ready, set and committed, or in the implementation stage, you are not alone.

Ready to take the next step?

Regardless of where you are in your journey to net zero, KPMG Australia stands ready and waiting to assist in solving the decarbonisation challenges that affect your organisation.

Scott Mesley
**ESG Growth Leader,
Client Growth & Markets**
KPMG Australia
T: +61 3 9288 6748
E: smesley@kpmg.com.au

Sabine Schleicher
**Partner, Infrastructure,
Assets & Places**
KPMG Australia
T: +61 7 4139 5443
E: ssschleicher@kpmg.com.au

Steven Casey
**Partner, Policy, Programs
& Evaluation**
*ESG Industry Lead for Infrastructure,
Government & Healthcare*
KPMG Australia
T: +61 2 9455 9470
E: stevencasey@kpmg.com.au

Adrian King
**Partner in Charge, Climate
Change & Sustainability Service**
KPMG Australia
T: +61 3 9288 5738
E: avking@kpmg.com.au

Nick Harridge
**Partner, National Mining Leader,
Transaction Services**
*ESG Industry Lead for Energy,
Mining & Property*
KPMG Australia
T: +61 3 9288 6067
E: nharridge@kpmg.com.au

Robert Poole
**Partner, National Consumer
& Food Leader**
ESG Industry Lead for Corporates
KPMG Australia
T: +61 3 9288 6209
E: robertpoole@kpmg.com.au

Cle-Anne Gabriel
**National Lead
Decarbonisation**
KPMG Australia
T: +61 7 3233 3207
E: cgabriel1@kpmg.com.au

Benjamin Kilpatrick
**Partner, Financial Services
Transformation**
*ESG Industry Lead for
Financial Services*
KPMG Australia
T: +61 2 9346 6335
E: bkilpatrick1@kpmg.com.au

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