

The Road to Decarbonisation

What's the best way for business?

Corporate carbon-cutting is not easy. It is even harder in a pandemic. Of the companies with decarbonisation goals, only **28 per cent are on track** to hit their targets. So what are the most effective paths to take and pitfalls to avoid?





It is not an easy time for businesses to be thinking about how to shrink their carbon footprint. For most companies, the priority right now is survival.

The Covid-19 pandemic is projected to shave more than 5 per cent off the global economy in 2020, putting the world on course for the worst recession since World War II. Unsurprisingly, some corporate sustainability ambitions have been sidelined as CEOs fret more about how to avoid bankruptcy than carbon emissions.

But, even as large corporates appeal for government bailouts as the pandemic continues to cost billions in lost productivity and output, it has become increasingly clear to corporate leaders that lowering emissions is not just a sustainability goal—it is also very much about business survival.

Few businesses will succeed in a world ravaged by climate change, which is projected to make disease outbreaks more frequent as temperatures rise and natural areas are degraded.

“If Covid-19 is a disruption, then climate change is surely a longer lasting and more severe disruption,” warned Tan Kok Yam, deputy secretary of Singapore’s Smart Nation and Digital Government Office in the Prime Minister’s Office on a webinar last month.

Though no story this century has dominated the headlines like Covid-19, it has also raised global awareness of the consequences of humanity’s exploitation of nature and woken up boardrooms to the need for climate action.



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Steve Newman, Group Sustainability Director
Banyan Tree Hotels & Resorts

In June, the month that internet giant Amazon named a sports stadium in Seattle the “climate pledge arena”, Australian mining company Fortescue brought forward a pledge to achieve net-zero emissions by 2040, 10 years ahead of its rivals, and Unilever set the bar high for multinationals by promising to hit net-zero by 2039.

Pressure is growing on businesses to shrink their carbon footprint. South Korea and China have announced economic stimulus plans that reward or penalise companies for their

climate policies. Consumers are looking to business to take a lead on carbon reduction, particularly where governments are falling short, and employees are looking to their employers to stay on the right side of history.

Steve Newman, group sustainability director of Banyan Tree Hotels & Resorts, noted that the Covid-induced low price of oil would have slowed the transition to clean energy in the corporate sector, but he said a “mighty shift” was needed to get the world on

track to meet the climate targets of the Paris Agreement.

“It’s like the whole world is waiting for someone else to do something about climate change. We’ve got to step up efforts to decarbonise,” he said.

But decarbonisation is not easy. If it was, then atmospheric carbon would not have reached record levels last year, three years after 195 countries agreed to take unprecedented action to limit global warming to avoid the worst impacts of climate change.

The Bumpy Road to **Net Zero**

Why Decarbonisation is Difficult?



The business sector accounts for 28 per cent of global greenhouse gas emissions. In order to limit global warming to a 2°C temperature rise in line with the Paris Agreement, the business world will need to reduce emissions by 6 per cent every year for the next decade, according to sustainability consultancy ENGIE Impact.

But businesses are struggling to respond to the decarbonisation imperative. Of the companies that have decarbonisation goals, only 28 per cent are on track to hit their targets. A June 2020 survey of business executives in Asia Pacific by Eco-Business and ENGIE Impact, found that 60 per cent of companies do not have decarbonisation targets, and those that do face a range of obstacles in meeting them.

The most common hurdles [see Box 1] include finding a business case to secure funding, choosing the right

technology, and finding the right partners to execute the plan. The biggest challenge of all, according to the survey, is convincing stakeholders to cultural transform the company.

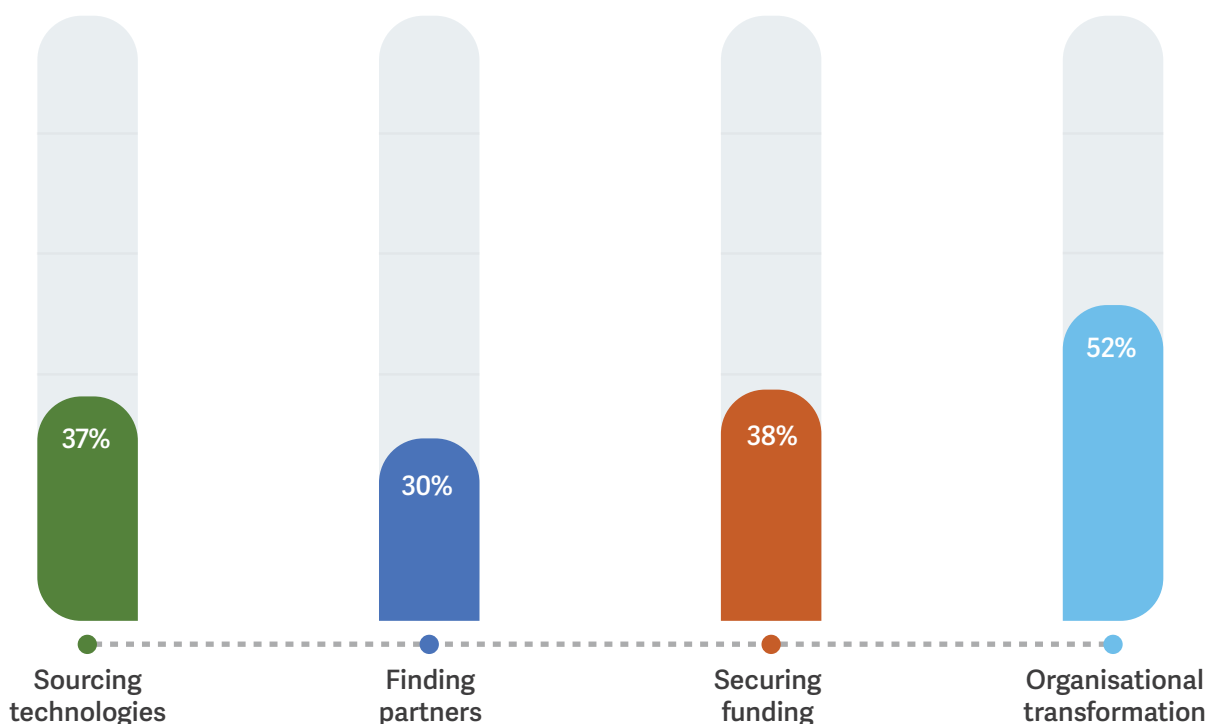
Decarbonisation “goes to the heart of business model,” said Malavika Bambawale, Managing Director, Sustainability Solutions, Asia Pacific, ENGIE Impact, during a webinar in July. It requires a company-wide cultural transformation, which is “not only a job for supply chain managers.” A visionary CEO and individual low-carbon champions who can inspire a different way of working are needed to decouple growth from emissions, she said.

Building a business case is another obstacle, as the gains of decarbonisation are not always obvious in the short term. Infrastructure like a district cooling system, which slashes energy use by chilling multiple buildings from a central source,

requires massive upfront capital that won’t be paid back in energy savings for at least four years. Companies that struggle to secure the business case of energy savings over the long term could consider outsourcing capital expenditure with an energy-as-a-service arrangement, Bambawale suggested.

Finding the right technology is also tricky. A single off-the-shelf solution does not exist, and it isn’t as simple as putting solar panels on the roof. “Data centres right now are only trying to invest in renewable energy, which may not be the most efficient solution,” noted Bambawale. Facebook and Google, which use as much energy as some countries to feed their server farms, say there are now 100 per cent renewables-powered, but actually rely on renewable energy certificates to offset the dirty energy sourced from the grid, particularly in regions like Southeast Asia, where clean energy is not easy to come by.

What’s the hardest thing about decarbonisation?



Source: Eco-Business survey, July 2020



Decarbonisation

What are the biggest obstacles?

1. Finding a business case and securing funding.
2. Accessing data to make the right decisions.
3. Finding the right partners to implement change.
4. Identifying the right technologies.
5. Culturally transforming the organisation.

Businesses need to question their fundamental processes to avoid getting locked into the wrong technologies, said Bambawale. Gas-fired cogeneration—that is, a gas power station that generates both power and useful heat at the same time—can save 20 per cent of the energy and carbon emissions of a conventional power station. But could more carbon savings be made from using heat pumps, a central heating system that draws heat from the ground?

Some technologies, like the carbon capture, use and storage complex being planned by heavy industry players in Singapore, enable carbon-intensive companies to avoid making a shift away from fossil fuels—and the technology can cost billions.

But technology that removes carbon from the atmosphere is necessary to meet the Paris Agreement target of limiting global warming to 2°C by the end of the century, experts say. Accessing the right data is the other

major pain point. Companies need visibility over their supply chains to decarbonise, and data gives that transparency. But firms fret that collecting the right data is too difficult and laborious. “And it’s scary because it may expose things you didn’t know,” said Bambawale. Companies often overcomplicate the problem with complex data-gathering solutions and analytics. But, Bambawale advised, new low-cost solutions can find answers with an acceptable level of error. “You can find proxy data without boiling the oceans,” she said.

The hardest emissions to cut are those that are hardest to control. In Unilever’s update of its 10-year sustainability programme, the consumer goods firm noted that it had cut the greenhouse gas emissions of its own factories by 65 per cent since 2008, but the emissions of its consumers have grown by 2 per cent since 2010. “Trying to persuade people to change their habits has been incredibly difficult,” admitted Sarah

McDonald, sustainability director, personal beauty and healthcare. “People love long hot showers.”

Known as Scope 3 emissions—that is, indirect emissions that come from a company’s value chain—these emissions usually account for the greatest share of the carbon footprint. Scope 3 emissions often overlap with other companies’ emissions, so strategies to reduce them are opportunities for competitors to collaborate and bring down industry-wide emissions.

To do this, Bambawale explained, firms need to first gather data on where their Scope 3 emissions are coming from, then set reduction targets. It is best to take a holistic approach, she said, and look at reduction in areas such as product and service design, procurement choices and policies, engaging with suppliers, travel and commuting policies, and engaging customers on how best to use a product.

Which is the Right **Low-Carbon Diet?**





There are many paths to decarbonisation. Taking the right one that enables companies to hit their targets is the problem that companies need the most help with, according to the Eco-Business survey.

Companies across a range of sectors in countries including Singapore, Australia, New Zealand, Indonesia and the Philippines said that the most effective way to decarbonise is by reducing energy consumption and using energy more efficiently.

Making energy efficiency improvements, such as fitting better air-conditioners and switching to LED lights, could meet 25 per cent of Southeast Asia's emissions reductions targets. ENGIE Impact is working with the

renewables arm of US conglomerate General Electric to help the firm realise its ambition to go carbon neutral in less than a year, and the focus for hitting this target is energy efficiency.


GE Renewable Energy is a US\$15 billion business that includes onshore and offshore wind, hydro, storage, and utility-scale solar. The firm provides 90 per cent of the world's utilities worldwide with its grid solutions, so energy efficiency will go a long way to reducing emissions.

Adding renewable energy capacity is the next most effective decarbonisation method, said survey respondents, followed by cutting travel and reducing waste. Activism pressure was also highlighted,

as was using hydrogen as fuel, digitalisation, localised supply chains and carbon offsets.

Of these options, carbon offsets—that is, when a company funds a project that reduces greenhouse gas emissions to make up for the emissions it cannot reduce itself—is an established decarbonisation method used by heavy emitters and is a useful short-term solution, said Bambawale.

“But in the long-run, they're not the answer,” she said, adding that firms need to decarbonise operations in various ways, because offsets alone would not be enough to meet the emissions reductions required to stay below the 1.5 degrees Paris Agreement temperature increase target.



“If they’d set targets earlier, they’d be more comfortable. But they’ve been thrown in the deep end. Many are just not ready.”

Thomas Milburn, Director, Southeast Asia
Corporate Citizenship

One survey response reflected the confusion some firms face choosing effective solutions: “We wouldn’t know if what we think is the right thing to do is resulting in any decarbonisation,” they said. Knowing where and how to cut carbon is difficult. But it starts with setting science-based targets, identifying pathways and scenarios to achieve these targets, and then developing a roadmap, said Myriam Akhoun, Director, Sustainability Solutions, Asia Pacific, ENGIE Impact

ENGIE aims to lower its carbon footprint by 85 per cent by 2050, and has cut it by 39 per cent in the last five

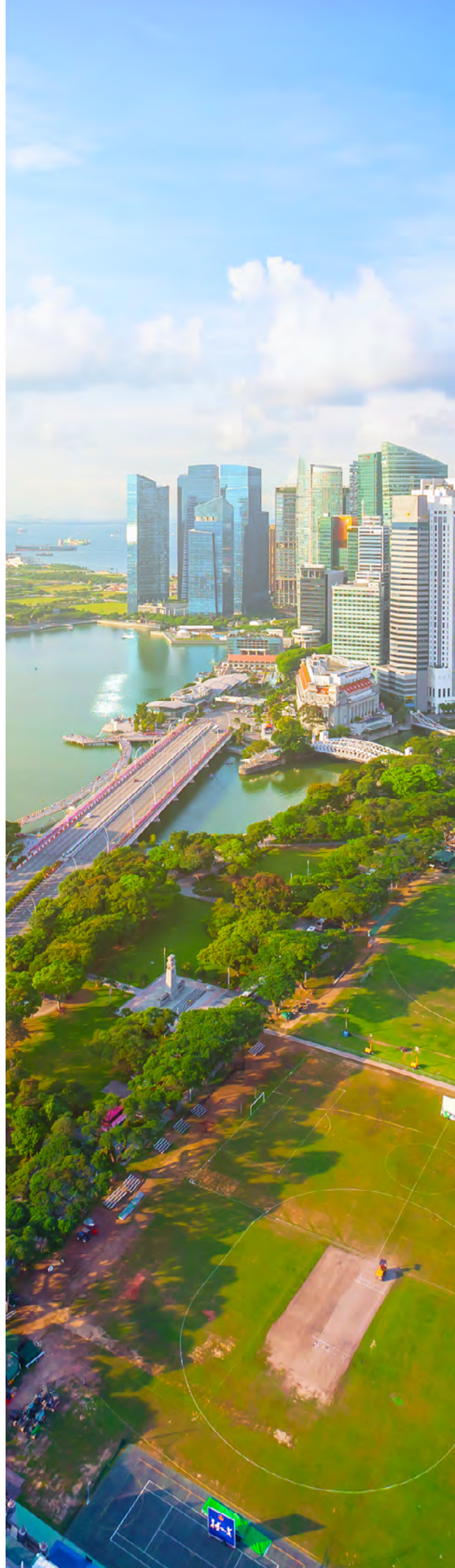
years, showing that decarbonisation is possible at speed, even for a multinational energy major. The company has closed or sold off almost all of its coal assets, and aims to be coal-free by 2023. It is in the process of adding 9 gigawatts of renewable energy capacity, in line with a target of 25 per cent of electricity production from renewables this year. Building capacity in biogas and hydrogen and carbon capture are also part of the plan.

“It has not been easy. Some moves were unpopular with shareholders,” said Akhoun. “It has taken visionary thinking for the long-term. Ambitious

bets were placed.” Like energy, shipping is a sector that is hard to decarbonise. But the International Maritime Organisation wants to cut the emissions of a sector that accounts for 3 per cent of greenhouse gas emissions globally in half by 2050. How?

The world’s largest shipping container company, Maersk, has set a course for net zero emissions by 2050, mainly by using alternative fuels. But dreams of electric ships are some way off. Conventional batteries can only pack enough power to move small ships short distances. More innovation is needed to decarbonise shipping at scale.

Setting Targets: **High or Low?**





In Asia, the more traditional companies have been resistant to decarbonisation, some believing it will hinder growth, others waiting for their competitors to go first, noted Bambawale. Firms in countries with higher environmental awareness have shown a greater appetite for carbon reduction, even if they're struggling to implement solutions.

Han van Mameren, founder of Singapore-based renewables firm Energy Renewed, noted that in Southeast Asia,

only in Singapore is there a carbon tax that pushes big emitters to decarbonise.

But the tax—starting at US\$3.60 a tonne—is too small to have much climate impact. “Companies are still free to pollute the water, land and air. If there was a stronger tax, there would be bigger incentive for companies to cut the carbon,” he said.

Van Mameren noted that the European Union’s plan to tax imports

based on their carbon footprint gives Asia-based exporters another reason to consider the emissions of their products and services.

So where do companies struggling to find a business case for decarbonisation start? The answer, said Bambawale, is where they can show cost savings. “The sweetspot of decarbonisation is where investments pay off quickly. These are the lowest hanging fruit,” she said.



“Companies should choose targets ambitious enough that they make them feel slightly uncomfortable.”

Malavika Bambawale
Managing Director, Sustainability Solutions,
Asia Pacific, ENGIE Impact



Myriam Akhoun
Director, Sustainability
Solutions, Asia Pacific,
ENGIE Impact

But what about decarbonisation setting targets? Thomas Milburn, Southeast Asia director for sustainability consultancy Corporate Citizenship, said that most companies in Asia do not have public targets yet, because they're late to the game, and are not comfortable announcing science-based targets that need to be approved by Science Based Targets initiative.

“If they'd set targets earlier, they'd be more comfortable. But they've being thrown in the deep end,” he said. “Many are just not ready.”

How high should companies set targets, in a region where corporate chest-thumping is frowned upon? Being bold is the best way to bring about change, said Akhoun. “There is a real opportunity for businesses to rise to the carbon challenge by showing ambition,” she said. “We can't be too shy when we communicate decarbonisation targets. Once we talk about it, our competitors will have to follow.

It has a positive effect on branding, and company leadership always wants a

good sustainability story to tell,” she said. Ambitious commitments can be used as a way to bargain internally for the most effective methods for reduce carbon, such as setting an internal carbon price, said Bambawale.

More than 1,400 multinational firms, including the likes of LG Electronics, Tata Steel and Volkswagen, have set an internal carbon price—an eight-fold increase in four years—according a study by carbon reduction non-profit CDP.

To set a carbon price starts with calculating the carbon footprint, identifying the highest emitting sources, then finding levers to reduce emissions, Bambawale explained. Targets are set in line with the carbon pricing programme and the decarbonisation roadmap.

But how do companies know what is an acceptable end goal for carbon reduction? Is the aim always net-zero? “Companies should choose targets ambitious enough that they make them feel slightly uncomfortable,” said Bambawale.

Decarbonisation Checklist

1. ROADMAP

A clear strategy is needed to make the right decisions at the right times.

2. CREATIVITY

A diversity of expertise is required to find the best solutions; there is no single right answer.

3. LEADERSHIP

A governance structure with clear leadership from the top should empower low-carbon ambassadors who inspire others.

4. COURAGE

Bold commitments are needed to rise to challenges such as complexity, financial constraints and stakeholder resistance.

Source: ENGIE Impact

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