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A Special Report

Sustainable Ireland

April 2, 2021

Climate change

Why business must take the lead page 6

Sustainability: you can't manage what you don't measure

The European Union's new Green Deal and increasing customer expectations of climate-friendly services and products are encouraging companies to implement sustainability strategies. To help devise, implement, and communicate your strategy, BearingPoint is partnering with Clearstream Solutions to provide a robust and comprehensive sustainability consulting offering.

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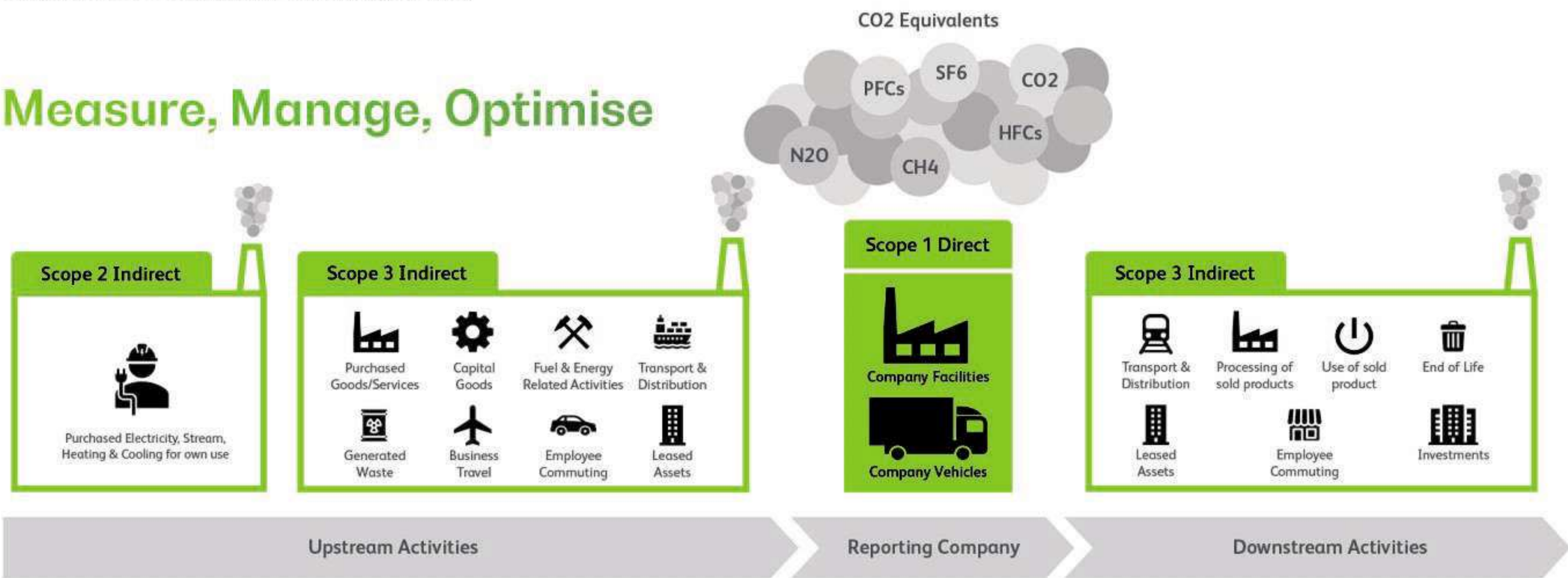

BearingPoint has developed an innovative, automated and cloud-based service that is fully certified to international standards and allows companies to track, report and reduce their emissions in real time, enabling them on their journey to become carbon neutral.

Clearstream Solutions works with many industry leaders to implement carbon management and sustainability best practice in their organisations and are a local partner of the CDP global Climate Change program.

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Contact us today to learn more

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Environment & Science Editor

Setting the course for net-zero emissions by 2050

The world is tilting the balance in favour of renewable energy over fossil fuels, and facing up to its responsibilities in pursuing meaningful decarbonisation. The two missing pieces yet to be nailed down are demanding timelines for coming decades tied into targets that add up to greatly increased ambition on reducing carbon emissions; sufficient to contain global temperature rise to well below 2 degrees.

As countries set a course to achieve net-zero emissions by 2050 at the latest, the road ahead will be immensely challenging. But, ultimately, it is in the best interests of the planet and its citizens everywhere. That includes whole economies, whether it is in the developed or developing world, and those doing business. Embracing sustainability is at last regarded as the way to go, though this is about much more than just going green.

Initially, it will be costly in the pure economic sense, as people are forced to change behaviour and the price of carbon becomes more penal.

That is why a just transition is so important. But the quicker the transition is begun in earnest, the sooner benefits emerge in terms of cleaner energy, less air pollution, nature under less stress and better quality of life.

In Ireland, that will come in the form of better transport choices and greener urban areas, especially when it comes to "15-minute cities" that require minimal travel among housing, offices, restaurants, parks, hospitals and cultural venues. It will be evident in a range of compelling options to warm our homes without traditional fuels – and at much reduced cost. It will also have huge implications for land use and how we produce food.

Unquestionably, the election of Joe Biden as US president, China confirming it is committed to carbon neutrality, further declines in the cost of renewables – especially wind and solar – and meaningful steps in building a global framework for robust green/climate investment have all played their part.

Remarkably, it's only over the past nine months that many of the political enablers have emerged. The mood music for the crucial UN Cop26 summit in November has dramatically improved since the sorry outcome of Cop25 in 2019.

In many ways, businesses have been ahead of politicians, notably in embracing "science-based" targets (SBTs). This is particularly the case with many multinational companies, who are also demanding that 100 per cent renewable energy be available to power their operations.

ESG – environmental, social and governance – considerations have moved from the periphery to the core of their operations.

For businesses embracing sustainability the task of reducing their carbon footprint, including direct and supply chain emissions, is now a key strategic focus. This, however, cannot be tokenism or entail limited actions dressed up as greenwashing. In a data-driven world transparency and accountability are easily measured, so there are few hiding places.

Seeing the number of major Irish companies signing up to SBTs and significant enhancements on sustainability under Bord Bia's Origin Green programme as they apply to major Irish food and drink companies, are welcome developments. A scenario where environmental performance in the broadest sense is routinely audited is a big indicator of change.

While all that is welcome and necessary, latest indications suggest most countries have to increase their climate ambitions by a factor of 10 to keep global warming to within the key Paris target of 1.5 degrees – and they have only a matter of months to begin scaling up ambitions if the key 2030 target of at least a 50 per cent reduction in emissions is to be realised.

"Such is the ongoing toll from Covid-19 there is temptation to revert to "normal", with its associated carbon pollution, once control of the pandemic is secured

Separately, such is the ongoing toll from Covid-19 there is temptation to revert to "normal", with its associated carbon pollution, once control of the pandemic is secured.

Too many draft "recovery and resilience plans" to accelerate EU's transition towards climate neutrality and ecological sustainability being drawn up by member states suggest a return to business as usual. They will not deliver on promises to tackle the climate crisis, to protect and restore nature, and to build a truly circular economy.

EU states have a few short weeks to address shortcomings before submitting them to the European Commission. They should allocate at least 40 per cent of all investments to climate action and nature protection, and ensure structural green policy reforms.

Applying that yardstick at this point, too many states including Ireland are short of the mark.

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Sustainable Ireland

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Top trends in sustainability

How we operate environmentally is changing and clear patterns are emerging, writes **Barry McCall**

1 Full disclosure
Organisations will no longer be able to claim to be sustainable without proving it. Consumers and investors want to know what companies are doing about their impact on the planet and how they are dealing with their own climate risks.

"Sustainability used to be a CSR issue, a business hygiene function," says Brian O'Kennedy, chief executive of sustainability consultancy Clearstream Solutions. "A box-ticking exercise with a few words in the annual report with a nice picture of employees doing voluntary work. But the market wants to see metrics now.

"This is being driven be investors, customers and consumers. Investors have realised that sustainable companies outperform the market. Companies on the Carbon Disclosure Project A-list outperformed market by 7 per cent last year. Investors want to put money into funds that are sustainable.

"The EU's core long-term strategy is to implement policies which make it easier and cheaper for sustainable companies to access capital while making it harder and more expensive for non-sustainable businesses," adds Russell Smyth, partner and head of KPMG's Sustainable Futures team. "Such policies will impact the investment decisions of both debt and equity investors."

2 All change at the filling station
What do you call a petrol station without petrol? That's going to be a big question in the coming years. "The Government ambition is to have 50 per cent of the cars on the road electric by 2030, but they need to figure out the charging infrastructure first," says Stephen Prendiville, head of sustainability with EY Ireland. "That will change our relationship with forecourts and our journeys will change. Stopping at the forecourt will be about the experience and filling stations will provide entertainment and other diversions for customers. There will be more to it than pull in, gas up, and go." He also foresees the possibility of roadside fast-charging points leading to the almost literal regeneration of towns and villages around Ireland.

3 Growing value of natural capital
An unmown lawn was once the subject of neighbourhood opprobrium, not it means you're pollinator-friendly and doing your bit to save the planet. "We are doing okay on climate change," says O'Kennedy. "We have all the elements in place to make real progress and I am very hopeful that we will get there by 2050 in terms of reversing it. In biodiversity we are not sure of the damage we have done. This could potentially be as big an issue as climate change in the next decade." He points to the international Task Force for Nature-related Financial Disclosures (TNFD) that is creating reporting standards for biodiversity and natural capital in order to "steer finance towards outcomes that are nature-positive". "That could be a very powerful tool to help in this area," he adds.

4 Green home premium
There may come a time when not only will homes with high energy ratings be more valuable but when you won't be able to sell a house with a bad rating. "The European Central Bank and the European Banking Authority are changing the rules around lending quite fundamentally," says Prendiville. "Under the Green Deal, the commission is encouraging banks to get into green lending and investing. It's going to take a while but anyone with a poorly rated home might have difficulty in selling it as buyers won't be able to get a mortgage and if they do it will be very expensive."

What do you call a petrol station with no petrol? That's going to be a big question in the coming years. PHOTOGRAPH: ISTOCK

5 Circular economy
The three Rs of the circular economy – reduce, reuse and recycle – could well be the mantra for the 2020s. "The circular economy will require Irish people to be much more conscious of where something comes from and of the whole of its life after it goes through their hands," says Prendiville. "Do we know where our recycling goes? Do we know what happens to it in the end? We need to redesign products for circularity but that's up to the manufacturers and producers. We need incentives to get there. We were well-ahead of other countries when it came to single-use plastics and we can lead in the circular economy as well."

"There will be opportunities for innovation, for start-ups to disrupt and challenge big companies who are slower to change," O'Kennedy adds. "We can see it already in the clothing industry and fast fashion. The French brought in a new labelling system to measure the circularity and repairability of clothing. The UK is looking at right-to-repair legislation meaning companies will have to provide spare parts and manufacture certain products with a view to repairability."

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Powering Ireland's green energy revolution

Energia is at the forefront of the green energy sector in Ireland thanks to its commitment to transform how customers use and generate energy

Technology is helping to power green energy generation, but consumers are the ones with their fingers on the switch.

It's a fact that is currently energising Gary Ryan, managing director of Energia Group Customer Solutions. The company is a top producer of renewable energy, accounting for 21 per cent of Ireland's renewable electricity generation.

Energia has been operating for more than 20 years here and began its commitment to renewables in 2002 with windfarms. Today, it owns and operates 300MW of wind farms in Ireland and has developed a further 1,000MW through power purchase agreements with other windfarm owners.

"Our core purpose is to transform how customers use and generate energy in a way that has a positive and sustainable impact on the environment," says Ryan.

"Previously, our core purpose was focused on competitively priced energy supply. While that's still important, our future focus is all about how we can help our customers generate and use energy from renewable sources."

As well as focusing on the generation of both on- and off-shore winds, Energia has planning permission for a number of solar farms it is now looking to develop, to help facilitate Ireland's Climate Action Plan target of having 70 per cent renewable energy by 2030.

Because renewable energy production is intermittent, the company is developing other solutions too, including battery storage technology, suitable for industrial and commercial applications.

Its bioenergy resource at Huntstown, Dublin, an anaerobic digestion facility, converts organic waste such as food waste into a methane-rich biogas used to generate renewable electricity and heat.

The company will even be powering hydrogen-fuelled double-decker buses in Northern Ireland, a major step in the North's bid to decarbonise its public transport to zero emissions by 2040.

With all these technologies proven, the challenge now is to "scale them up", says Ryan, who suggests the sector is at an important juncture, with a range of innovative new energy solutions set to emerge.

For example, the proliferation of home charging points for electric vehicles could see them used as residential energy batteries, which local windfarms could top up cheaply at times when there is excess power.

"It would mean we are solving a problem for the environment and solving an issue for the householder in terms of cheaper prices," he explains.

In time, residents with excess power could even sell it to neighbours who want it. "Customers are at the centre of all of this and play a huge part in making it work," Ryan says.

Energia has been helping introduce its customers, both residential and commercial to the benefits of energy saving technologies for years, including through the installation of energy efficient lighting systems and energy management solutions to help them lower their carbon impact and save money.

It supports the retrofitting of low energy LED lighting systems at no upfront cost, but which are paid for over time through savings.

"One of the issues with such projects is always the capital cost of installation. Solutions such as these enable people to embrace them so they can make the change immediately," he says.

Smart meters are currently being rolled out by ESB Networks in homes and businesses across the country. Customers can now choose a variety of new smart energy tariffs that suit their lifestyle, reduce their energy costs and their carbon footprint.

"Smart metering will allow us, in a GDPR-compliant way, to measure usage and use data to devise products that better match supply and demand. Not alone will smart metering do away with estimated bills but it will enable us to offer cheaper tariffs at off-peak times, incentivising people away from usage during peak demand times between 5pm and 7pm, for example," he says.

Clearly the future is bright for the green energy sector but there are challenges too, Ryan admits.

"All of this isn't easy to bring together. The intermittent nature of wind and solar requires the market to optimise the use and generation of energy. Technology will place a significant role in connecting customers to these new energy sources to optimise this experience in terms of convenience and price. We continue to develop exciting new digital solutions that will enable customers to engage in this new green opportunity," he says.

The target of 70 per cent renewable energy by 2030 is a challenge for the grid operator too. "The current grid was built to facilitate large power plants with predictable running patterns. Having all these new solutions, which operate intermittently, is a challenge for the grid operator, as is the issue of new connections to the grid," Ryan explains.

Green targets also require community buy-in. Engagement and participation by communities will be critical to green energy success.

Certainly, people understand better than ever the risks of climate change – including the risk of doing nothing. "People get it," he says. "Now we need to turn 'getting it' into action, but I do think there is a real appetite for this."

Indeed, he believes Ireland has the potential to become a world leader in green energy technologies, creating a high-value, knowledge-based industry with immense export potential.

"The whole world wants this problem solved. Climate change is on the agenda of all world leaders and economies," says Ryan. "Like the pandemic, we can see that climate change is a problem we can't fix in parts. We all have to do this together."

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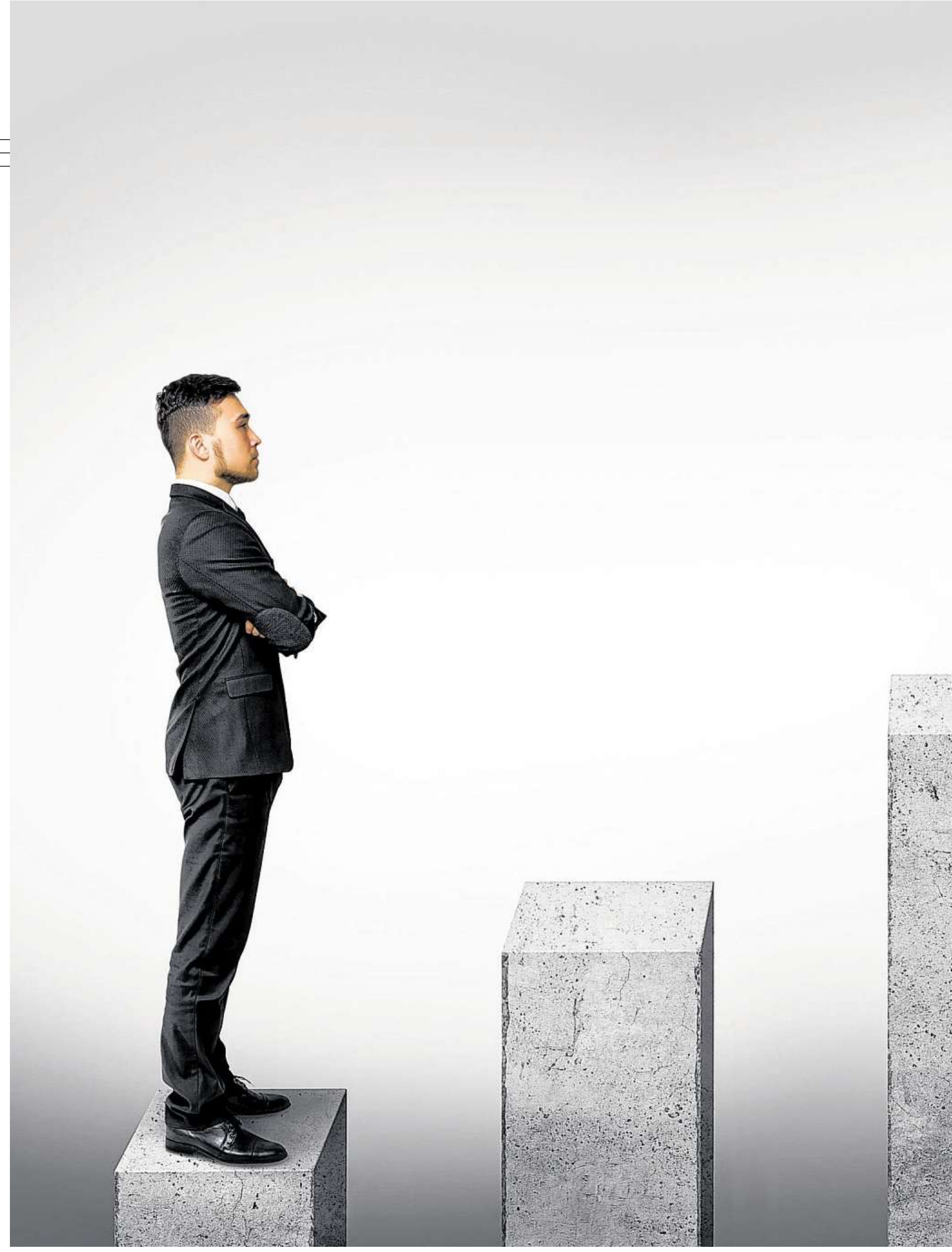

Small steps to major change

Getting business to commit to sustainability is challenging because the task is about fundamental, systemic change, writes **Kevin O'Sullivan**

For those in business, how to pursue the sustainability agenda is increasingly a critical issue for consideration when it comes to performance. A global move to decarbonisation is finally picking up momentum, while in Ireland the demands of five-yearly carbon "budgets" kick in later this year.

This means all sectors will have limits on how much carbon they can emit, while the country will be set on a course to achieve net-zero emissions by 2050. This will have to be factored into all future development and enterprise.

How a business transforms its operations under these environmental strictures will be increasingly tied into financial success. Because progress – or lack of it – can be so easily determined through improved technology, performance will be all too evident for shareholders, investors, regulators and environmentally conscious consumers.

For those directing a business – but especially mid-sized and smaller companies with limited resources – the prospect of embracing sustainability and not only determining their carbon footprint, but also reducing it, can appear daunting, according to Tomás Sercovich, chief executive of Business in the Community Ireland (BITCI).

It is a not-for-profit network of 120 companies committed to sustainability and working with some of the largest businesses in Ireland to encourage them to set more concrete targets when it comes to emissions. The challenge is formidable because the task is about fundamental, systemic change, he says: "It's about telling people their business model has to change."

BITCI works with companies on sustainability, corporate responsibility and ESG (environmental, social, and corporate governance), while the current report card for Irish businesses suggest most "are in a good place", though there is a need to push on with greater ambition and urgency.

Big multinationals based in Ireland; large food and drink companies and financial services are leading the way, Sercovich believes, because they are already exposed to demands from investors, shareholders and regulators. BITCI underlines that the benefits of collaboration, peer support and shared experiences are answering the question: "How do we get there?"

The journey, more often than not begins, with actions on renewables – energy efficiency and transportation, he explains. With tangible progress under these headings, the emphasis shifts to addressing Scope 1 and Scope 2 emissions from owned or controlled sources within their operations – and then Scope 3 emissions throughout their supply chains.

It entails taking "little-by-little" steps and getting support and advice on setting up targets, he adds. "It's about understanding this is where we have to go, and having the vision to do so", while "a bit of peer pressure among competitors is not such a bad thing".

That means understanding scenarios, the circumstances where emissions might go up, or realising investment in technological solutions may take time to have an impact. It is also about understanding expectations change and accepting the reality of more accountability and transparency, he points out.

With the particular demands on food companies because of their emissions profile, Sercovich says "clearly agriculture has a long way to go" and needs to factor in a lot of change in consumer attitudes. Envisaging what is required and deployment of technologies will be important in making the transition, whether it's adjusting livestock feeds to reduce emissions or adopting "net-zero farming".

Equally, it's about asking "what does the low-carbon plate look like, and how do we get there?" He has no doubt about the ability of the Irish food sector to innovate as it is already "internationalised" and exposed to such demands in markets where it operates.

BITCI recently launched its new "low-carbon pledge" where 60 companies including the ESB committed to setting targets based on science by 2024, known as SBTs. This is aligning carbon-reduction efforts with the Paris Agreement, ie reducing global warming to well below two degrees.

Notwithstanding progress, Irish businesses must adapt to "the risks of a more unpredictable world where climate events are intensifying and being seen more frequently than ever before", Sercovich says.

Informed by climate science, targets are likely to become more stringent, he notes. Yet there is a risk that if they are set too high initially companies will not engage with them.

"It's about taking them on the journey; otherwise there is a risk of losing companies, especially smaller ones."

Sercovich stresses the need for collaboration in the broadest sense, whereby businesses work with their suppliers, competitors and peers to develop new initiatives and approaches to decarbonising supply chains and develop the action plans of tomorrow.

The carbon disclosure project (CDP) measures the environmental impact of companies on behalf of 590 leading global investors representing €91 trillion in assets. Its disclosure system allows investors, companies, cities, states and regions to manage their environmental impacts. Progress is independently verified and graded by CDP's experts.

Irish companies are becoming increasingly willing to set externally verified emissions targets, confirms Brian O'Kennedy, director of CDP Ireland Network and chief executive of Clearstream Solutions.

The network is also a not-for-profit with

The journey to sustainability more often than not begins with actions on renewables; energy efficiency and transportation. PHOTOGRAPH:ISTOCK

a mission of encouraging companies and cities to measure, disclose, manage and share vital environmental information.

Meanwhile, Clearstream provides sustainability and carbon-management services, assisting organisations to measure and implement environmental and sustainable practices in their businesses, products and supply chains. When they set up over 12 years ago businesses were operating in the environmental space, he recalls, but did not understand the implications of climate disruption.

While there has been a dramatic change in the past two to three years, O'Kennedy says business is not yet where it needs to be. That said, when CDP Ireland set up about nine years ago, they had an average two to three "new responders" each year; notably big PLCs. Despite Covid-19, there was "a massive 52 per cent increase" in Irish companies reporting to CDP in 2020.

The average CO_2 emitted by 257 companies with operations in Ireland reporting to CDP was 50,483 tonnes; a decrease of 24 per cent on 2019.

Climate change and sustainability is now an integral part of the annual reporting cycle of many Irish companies. Moreover, he believes non-disclosing companies will increasingly be at a competitive disadvantage – that includes the ability to compete on public procurement as companies will increasingly have to demonstrate sustainability/social impact in how they operate.

This, O'Kennedy adds, means recognising sustainability is "a driver of value that must be built into everything" – and not an add-on as corporate social responsibility was in the past.

Clearstream helps companies measure and disclose their carbon footprint, he explains. That in effect focuses on the past, whereas SBTs look forward with climate ambition a key focus. The starting point is setting a baseline and targets underpinned by initiatives to improve outcomes, where "decarbonisation pathways" are most important.

It is not about penalising companies in sectors with higher emissions such as agrifood companies or cement manufacturers, he underlines. CDP is "much more interested in how you decarbonise" and show leadership. He cites the Kerry Group as an example in this regard – it is on their A-list, not because of emissions, "because of what they are doing, and implementing low-carbon solutions". That is especially important in helping others including smaller suppliers throughout their value chains address Scope 3 emissions, O'Kennedy points out.

'This has been the busiest year'

Business in the Community Ireland says more companies are now on board, writes **Mimi Murray**

Business in the Community Ireland (BITCI) is the leading adviser on sustainability in the country. For over 20 years, its team of experts have advised the largest companies in Ireland on all aspects of sustainable business. Its purpose is to inspire and enable businesses to bring about a sustainable, low-carbon economy and a more inclusive society where everyone thrives.

"We provide access to best practice and support businesses with practical management and monitoring systems. By facilitating forums for reflection and action, we ensure that businesses anticipate and are ready to meet the current, pressing challenges of climate change, the pipeline of talent as well as the issues of social inclusion, diversity and accountability," says Tomás Sercovich, chief executive of Business in the Community Ireland.

Founded in 2000, BITCI has been at the forefront of driving the sustainability agenda in Ireland and offering advice in four distinct areas; sustainability strategy and governance; corporate volunteering and community engagement; diversity and inclusion; and low carbon and environmental management.

It also runs the Business Working Responsibly Mark, the leading independently audited standard for CSR and sustainability certification in Ireland. The Mark is audited by the NSAI and based on ISO26000. It is open to both members and non-members of Business in the Community Ireland. As the only business network for sustainability in the country, it works with large indigenous and multinational companies and members include AIB, An Post, ESB, IBM, Intel, J&J, Keelings, Heineken, Musgrave, PwC, Vodafone and William Fry.

Sercovich says businesses need to put their corporate social responsibility (CSR) and sustainability policies at the centre of everything they do. "We use CSR and sustainability interchangeably. Quite simply, we believe businesses can only be sustainable on a healthy planet and in a fair society. Business can be a powerful agent for change and increasingly investors, employees, customers and communities are demanding that business takes the lead on issues such as climate change and diversity and inclusion.

"For a company to take sustainability seriously, it can never be an add-on, it must be at the core of what you do. We know that businesses with strong sustainability credentials are outperforming their counterparts on profitability, talent retention and attraction of investment. Legislation at EU level on non-financial reporting will also drive the demand for more companies to be transparent on issues such as carbon emissions and supply chains. This has finally moved from a 'nice to have' exercise to a business imperative as companies will be left behind if they don't look at how they are integrating sustainability into their business and have solid governance and reporting in place," he says.

BITCI works with its members in two ways: by providing one-to-one advice and working collaboratively. "Our members come together to collectively address issues so we run peer-group sessions on issues around ESG, non-financial reporting, circular economy, human rights, virtual volunteering, employee engagement, diversity and inclusion, biodiversity, communicating sustainability and much more. We also create collective actions as no one company on its own can address climate change or inequality. For example, in March, we launched the Low Carbon Pledge where our member companies committed to setting targets based on science by 2024.

"This has been the busiest year we have faced in our 21-year history. Companies are joining as members and they are at various stages of their sustainability journey. To celebrate 21 years, we are planning a big virtual series of events in October entitled 'The Sustainability Revolution' as we believe there is much more to be done to truly embed sustainability at the heart of businesses in Ireland."

Measuring up on footprint

Environmental, social and governance matters are increasingly relevant to investment, writes **Mimi Murray**

Auditing and transparency on carbon footprint are now core to big business and the reporting of financial risk associated with climate change is a critical requirement in the corporate world.

Carbon measuring and reporting has gone from sitting in the corporate social responsibility (CSR) space to being a part of the financial report.

Sustainability and environmental, social and governance (ESG) matters generally are increasingly relevant in investment decisions, customer choices, or in reputation risk management practices undertaken by businesses.

Large companies are now obliged to make statements (often as part of their financial statements and directors report) on non-financial reporting items, such as their carbon footprint.

"In such cases it is vital for the reader to understand carbon implications of the business model and furthermore the methodology to score and benchmark the company making the disclosure," Enda Gunnell, ceo of Pinergy says.

"It is also vital that the reader can trust the assessment, output or score achieved by ensuring it is validated by a trusted and reputable third party. Companies are keen to show their impact on the global sustainability challenge.

"Stakeholders, like their shareholders, customers and suppliers expect companies to be at the forefront of this challenge and expect consistent, high quality and comparable reporting to benchmark progress," Gunnell says.

Lorraine McCann, director, climate change and sustainability services at EY Ireland, says the investor community is driving this within big business. But because non-financial or ESG hasn't been through the same rigour or control as financial information, the same standards are not in place yet.

"They don't have the same 40 or 50-year focus on standards as financial reporting has had. However, more ESG information is making it into the annual reports and there is a real focus on companies to build credibility and increase transparency," she says.

A standardised approach to sustainability reporting and assurance is required and there is a wide range of standards and guidelines out there to help companies report on sustainability.

The world is now working in a much more socially conscious way than it did before. PHOTOGRAPH: ISTOCK

There are calls for a body to implement the same set of non-financial reporting standards that exist for financial reporting and for companies to be in a position to apply that to sustainability or ESG, so there is a move towards a space where there is much more consistent reporting, McCann adds.

The EU non-financial reporting directive came into play a couple of years ago and requires organisations to disclose that information. But there is currently no requirement for assurances in terms of the accuracy in Ireland, she says.

"A lot of our clients are coming to us with the challenges they face and there is traction on this. The world is now working in a much more socially conscious way than it did before. There is a realisation there is a climate crisis coming at us. Employees are also looking to get a sense that the company is not just about delivering profit but also purpose. Consumers and customers are buying into it too," she says.

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Committing to Ireland's net-zero transition

No one is building more offshore wind energy than SSE, one of the principal partners to Cop26

Since entering the Irish energy market in 2008, SSE has invested significantly to grow its business here, making a total contribution of €3.8 billion to Ireland's economy over the past five years.

SSE owns and operates 28 onshore wind farms across the island of Ireland, avoiding almost 630,000kg in carbon emissions annually, while also providing a route to market for the renewable energy generated to more than 750,000 domestic and business customers.

This year SSE will be a principal partner for Cop26, the annual global United Nations climate change summit which takes place in Glasgow in November.

Cop's goal is for the world to achieve "net zero" by 2050, whereby any carbon emissions are balanced by absorbing an equivalent amount from the atmosphere.

Helping the world to achieve this is at the core of SSE's low carbon strategy, helping to keep global warming to less than 1.5 degrees above pre-industrial levels.

Climate action and economic renewal are at the core of the Green New Deal set out by the Irish Government, and SSE believes that a green economic recovery from coronavirus will deliver a win-win for both economy and climate.

Its renewable energy development and operations business, SSE Renewables, is building more offshore wind energy than any other company in the world right now. In Ireland, it plans to spend up to €6 billion to deliver 2GW of offshore wind energy by 2030, beginning with the second phase of the Arklow Bank Wind Park which it is targeting to deliver by 2025 and, when complete, will power almost half a million homes, avoiding more than 460,000kg of carbon emissions annually. The company has a vision to deliver further projects at Braymore Point off the coast of Co Louth, and Celtic Sea Array off the coast of Co Waterford.

SSE is playing its part in other ways too, signing up to the Science Based Target Initiative to cut the carbon intensity of the electricity it generates by 60 per cent between 2018 and 2030. It cut absolute carbon emissions by 40 per cent over the same period. SSE also aims to ensure that at least 50 per cent of its supply chain has science-based targets by 2024.

Through its green energy supply business, SSE Airtricity, the company works closely with business customers on a variety of initiatives. It recently partnered with Microsoft Ireland on a renewable energy project that enables schools to power classrooms using energy generated from their own rooftops.

As a generator and supplier of renewable energy, SSE enables businesses of all sizes, from 10 to 10,000 employees, to run on 100 per cent green electricity.

"Sustainability defines SSE," explains Rachel McEwen, its chief sustainability officer. It is, she says, about being led by a clear purpose. "Our purpose is to find the profitable solution to the problem of climate change."

SSE is a FTSE 100 company headquartered in Perth, Scotland. Its acquisition of Ireland's pioneering wind-energy company Airtricity in 2008 was a key moment for the company, she points out, putting it in a strong position to take the lead in relation to the green transition.

"The move to 'net zero' and the 1.5 degree climate change imperative have been baked into our business operations. Our priority is to build the low carbon infrastructure to bring it about," says McEwen.

Rather than distract from it, she believes the pandemic is helping "to focus minds on climate change".

That's good because global average temperatures currently stand 1 degree higher than in the pre-industrial era, and Cop's 1.5 degree objective simply "can't be done without moving to net zero", she points out.

All businesses have a role to play by limiting their own carbon footprint and SSE is walking that walk. "We are on a mission to reduce carbon emissions and have done so by two-thirds in the past decade, but we need to get every last gram out," she says.

Setting comfortingly long-term targets isn't enough – for either companies or countries. Interim targets are required, she cautions: "People need to see what you are doing in the shorter term as well."

Ensuring "masses of renewable energy" is the quickest way to do this at scale, she points out, and that will bring down prices. "For the consumer, price is important and offshore wind is a game changer in that respect," she says.

But cheaper green energy and the good jobs it brings are only part of the story. Ultimately, it's about the planet.

"Tackling climate change is the defining challenge of our generation," she says.

Stephen Wheeler, SSE's country lead in Ireland, agrees, saying "Cop26 represents a once in a lifetime chance to do something about climate change, to get this right."

Offshore wind will do a "lot of the heavy lifting" he says, a positive whirlwind Ireland is well placed to reap. "Ireland's seabed is 10 times the size of its landmass. We have the best winds in the world and an opportunity to become a global leader in the export of offshore-generated energy," he says.

With the building of Ireland's first offshore wind turbines, off the coast at Arklow over 15 years ago, Ireland was a pioneer with huge ambition. Over time that focus was lost while interest remained with onshore wind, which has been a major success story for Ireland. "It was the low hanging fruit in some ways," he explains.

As a result however Ireland is now "behind the pack" in what has gone on to become a globally competitive market.

Given where Ireland needs to be in terms of its emissions targets by 2030, "now is the perfect time to drive this forward", says Wheeler.

Ireland hit record electricity demand on three occasions since October, he points out, and economic growth will increase demand even more.

"We have a complete advantage here. We have the best wind resource and are well positioned to take advantage of that for jobs, for investment, and, first and foremost, for creating the energy we need in Ireland," he says.

"As we come out of Covid-19, renewable energy offers an incredible opportunity to kick-start the economy in a sustainable way for future generations."

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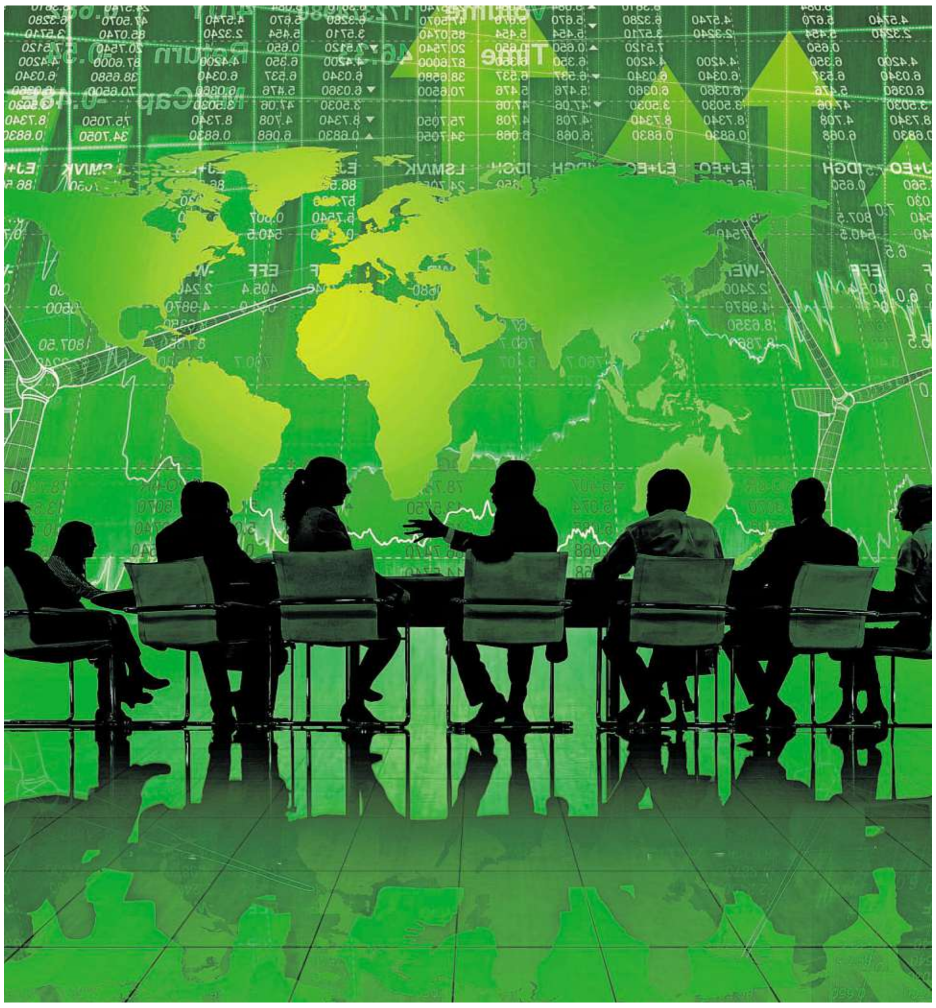


From page 8

SSE is one company that has taken strategic steps over the past few years to meet the expectations of investors and stakeholders. "At SSE, we don't have a strategy for sustainability; we have a sustainable business strategy," says Bethan May Freire, sustainability reporting manager, SSE plc.

"Companies are seeking to demonstrate their own climate credentials by setting ambitious long-term targets to reduce carbon emissions. This is welcome, but it is important that the credibility of those targets stand up to scrutiny.

"SSE is committed to open and meaningful climate disclosures, to allow stakeholders to fully assess its climate-related performance. It also believes enhanced disclosure supports a culture of continuous performance improvement.

"An important part of SSE's strategy to support the net zero transition is to measure and report performance against stretching carbon targets. These targets must be robust enough to meet the ambitions set out in the Paris Agreement and so prevent the worst impacts of climate change," she says.

SSE has worked with the Science Based Target Initiative (SBTi) to set a series of new carbon targets that reflect the climate science and global and national momentum on climate change. These targets meet the strict SBTi criteria and were approved by SBTi in April 2020, meaning SSE's stakeholders can be assured that its targets reflect the latest climate science.

From going through the SBTi approval process, SSE's 2030 goal for climate action was made more stretching for 2020/21 onwards. It is now targeting a reduction in the carbon intensity of electricity generated of 60 per cent by 2030, compared to 2018 levels (the previous target was a 50 per cent reduction from the 2018 baseline).

Two years ago this was all a relatively niche activity for large corporates, Brian O'Kennedy ceo of Clearstream Solutions says, but in that time there has been a very significant increase – around 50 per cent in companies that are disclosing. "They realise it's a core business issue and a competitive issue, competing for investment. For business, being able to disclose emissions is critical and it is built into tenders and proposals and is critical for other stakeholders and employees too," he says.

EU regulations are not "that stringent" but the real effect is seen in the fact that it mandates companies to disclose non-financial issues in their annual report and that it is now the responsibility of the board, which brings in the rigour of measurement, disclosure and verification, O' Kennedy says. Meanwhile organisations like the International Financial Reporting Standards (IFRS) are working with global voluntary organisations such as CDP to align around corporate reporting, he concludes.

Incentivising homes and businesses to invest in solar

Pinergy welcomes proposed new Microgeneration Support Scheme, writes **Mimi Murray**

Offsetting energy bills or selling excess energy back to the national grid is what is proposed under the new Microgeneration Support Scheme, that is due to be put in place by the Government in July.

Homes and businesses are set to receive incentives to invest in solar panels in order to generate their own electricity.

Pinergy, which was the first electricity company to go down the route of smart metering, has welcomed the proposed scheme, with ceo Enda Gunnell (inset) saying it is bringing Ireland in line with the rest of Europe.

"Countries around Europe have a much deeper penetration in microgeneration than we have. It hasn't yet been said what price that power can be sold at, but it could be based on an average day ahead price. Provided that represents the market price we would very much support it.

"There are certain times of day and night when, due to the predominance of renewable power, very cost-effective energy is available and we want to be able to sell that very cheap power to customers at cheap prices. The technology is there and we're ready for this, but we want to make sure the regulatory part of the networks piece is able to facilitate that," he says.

Traditional electricity companies make their money the more electricity is used.

"We want to champion the cause of reducing consumption as a means of starting a sustainable journey and helping the customer reduce their consumption over time by 50 per cent . The Irish market needs to do more to go down the energy efficiency route and people have become more conscious of the sustainability agenda over the last two years. We believe everybody has a role to play, so we want to partner with those people to help them reduce their consumption.

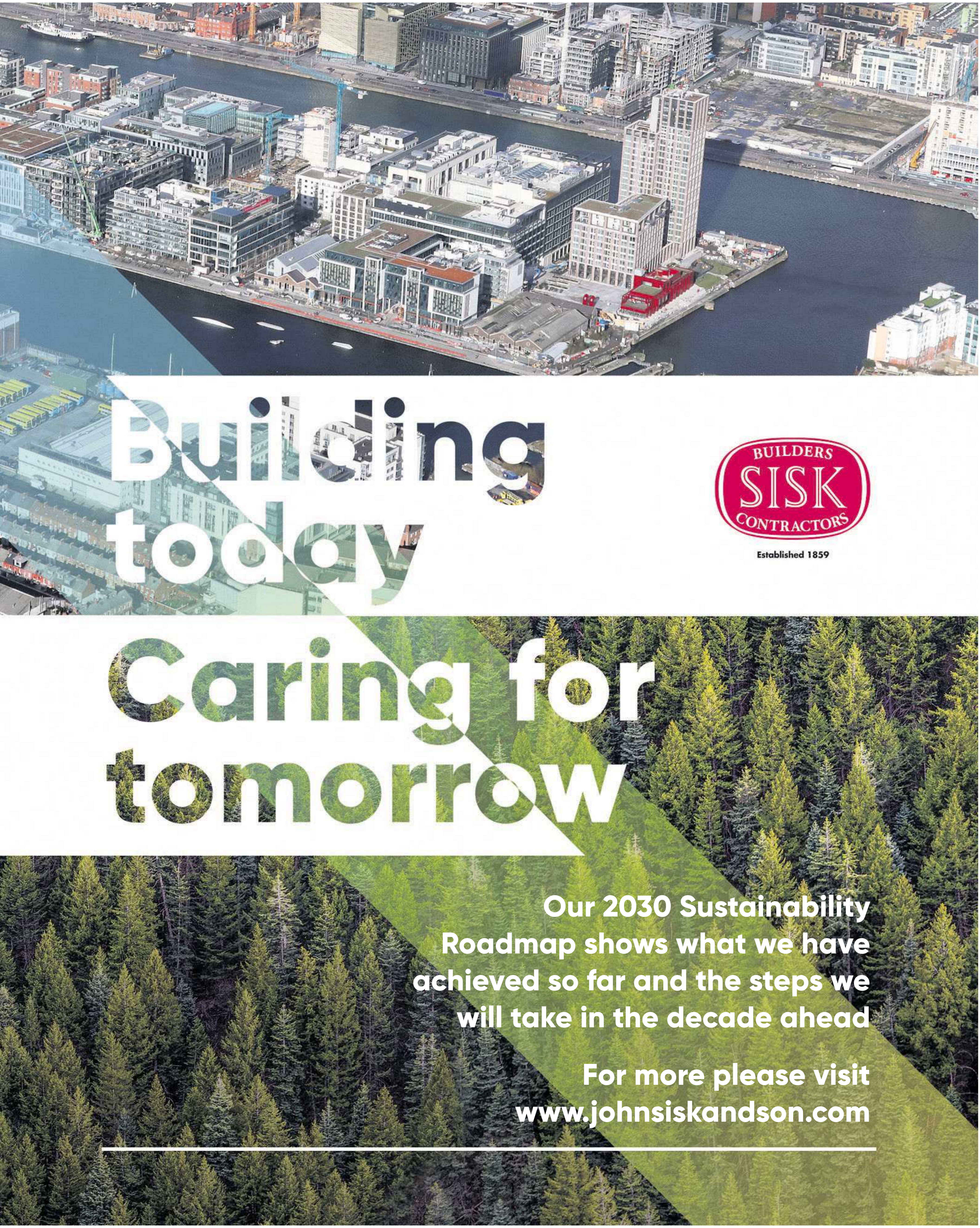
"Our brand position is that we supply and analyse. We put in smart metering technology – hardware and software to allow you, as the customer, understand your consumption, make it very understandable. Supply, analyse and then advise as part of our contract on how you reduce your consumption. How can you use microgeneration technologies or other energy efficiency technologies to bring your spend down?

"We view energy as a resource rather than a commodity but it's treated as a commodity and commodities trade on price. It's about trying to redefine an energy supply proposition," he says.

Recently the National Smart Metre programme has turned on smart services for the first time, so 250,000 houses now have a smart metre installed and that allows suppliers like Pinergy to offer different energy efficient propositions based on the data that they garner in relation to consumption.

That's not yet happening in the commercial space so they will continue to put in individual smart metres as part of their supply for now.

"We don't want state infrastructure to slow us down, we want to bring innovative propositions to our customers. Other countries are getting these dynamic tariff structures, the benefits of cheap renewable power and the ability to use battery technology to shift their demand to a different time of the day or to sell it back to the grid. We want to do all those things in Ireland and microgeneration is the first step," he says.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GREEN AGENDA

Selling Ireland's greenness

Ireland's perceived 'greenness' is a critical selling point from a global perspective, writes **Danielle Barron**

We may be the Emerald Isle but selling Ireland's environmental "greenness" on the international stage is going to be critical to our future prosperity. How can that guarantee be provided as tackling climate change becomes an integral component of economic policy?

Tomás Sercovich is ceo of Business in the Community Ireland (BITCI), an organisation that has been driving the sustainability agenda for 21 years and works with the largest companies in Ireland. He says going green is "fundamental" when it comes to Ireland's international reputation.

"From an inward investment perspective we know that investment decisions are increasingly influenced by sustainability criteria such as access to energy from renewable sources, being able to generate electricity on-site and partnering across the supply chain with companies with high environmental standards.

"Multinationals also require expertise in the green agenda. Therefore a country that can offer expertise and a broad skillset on sustainability can influence investment."

Sercovich admits, however, that some Irish companies have been slow to communicate and engage with key stakeholders on their vision for a low-carbon future.

"Although some large companies in Ireland are pioneers on energy efficiency, renewable energy, waste management and much more, the challenge I see is for smaller companies and companies that have yet to access technologies that will make their operations more sustainable."

He said BITCI launched a new initiative called the Low Carbon Pledge in March this year. "This is a huge development as companies are committing to setting science-based targets, and we hope this inspires many more companies to make such a pledge."

Stephen Prendiville, head of sustainability, EY Ireland, also sees Ireland's perceived "greenness" as a critical selling point from a global perspective. "We remain a small open economy, reliant on foreign direct investment (FDI) to maintain and grow our standard of living, so it's hugely important in terms of human, intellectual and economic capital movement."

According to Prendiville, the green agenda is driving a variety of behaviours at the corporate, investor, shareholder, worker and consumer levels. Ireland needs to be sensitive to these in order to maintain an attractive "offering" for FDI and for existing company operations to maintain and expand here.

Essentially Ireland needs to "walk the walk". Yet we are perceived by some to be relatively slow when it comes to being proactive on climate change. Is this true?

It is a mixed bag, says Prendiville. "There are Irish leaders in almost every sector, from financial services to construction to food supply chains. I would suggest that Irish corporates are not noticeably 'slower' than the majority of other nation's corporates, with maybe an exception for the Nordics who have been pursuing sustainability and climate-led initiatives for many years."

If Ireland can accelerate its efforts it has a golden opportunity to "own" this space on the international stage, Prendiville says, "acting as we always have done, as the gateway for investment flows to and from the EU to the rest of the world".

"When you consider the source of gravity that will be created by the EU Green Deal – a €500 billion budget to crowd in a further €500 billion in investment – the opportunity for Ireland to place it in the 'flow' of entrepreneurship, innovation and economic activity that will result is enormous," he says.

According to Eoin Cassidy, energy sector lead partner with Mason Hayes & Curran who specialise in environmental matters, the "greening" and decarbonisation of Ireland's economy is not just essential for the national health and wellbeing of Ireland but is critical to the State's future economic prosperity and our ability to attract long-term investment. "The dial has shifted dramatically on sustainable practices," he says.

Russell Smyth, partner and head of KPMG's Sustainable Futures division, agrees. "Ireland's success in attracting inward investment will only continue if it can communicate and deliver a policy environment conducive to corporates' net zero ambitions, including providing access to low-cost renewable electricity, renewable gas, clean water as well as other sustainable practices."

Smyth says that KPMG research has found that some Irish-based companies are well ahead of the curve when it comes to sustainability. "KPMG's Global Sustainability Reporting Survey, published in November 2020, found that the largest companies operating in Ireland are reporting on their sustainability at a higher rate than the global average, at 88 per cent compared to 77 per cent," he explains, although he adds that our communication of the specifics pertaining to this can be sub-par.

"With regards to Irish companies reporting on climate change actions more specifically, Irish companies are more likely to include carbon-reduction targets in their strategies than the global average but are less likely to acknowledge climate risks in financial reports."

Cassidy thinks it's unfair to criticise our inertia on climate change, saying there may be a limited number of true leaders on climate change amongst Irish corporates but there is good reason for that.

"Under Irish company law among a director's duties to his or her company is to act in good faith in what the director considers to be the best interests of a company and to have regard to the interests of the shareholders," he says. "To put it crudely, for trading companies this is often boiled down to maximising the company's profits to enable the shareholders to receive a return on their investment."

Nonetheless, our efforts and achievements in this space must be accompanied

PHOTOGRAPH: GETTY IMAGES

by a comprehensive international and national communication strategy, adds Prendiville. "Our global diaspora needs to hear about the great work we are doing. We need to tell our story comprehensively and with conviction – and we all have a role to play in that."

Fossil fuels How are Irish businesses faring?

Ireland benefits from a strong multinational presence, but the commitments that corporations are making with respect to achieving net-zero emissions leave us exposed, say many business experts. Multinationals want to move quickly to net-zero emissions, and will not stay in Ireland if it cannot deliver on 100 per cent renewable energy. Will Ireland's failure to fully embrace renewable technologies negatively impact us going forward?

Eoin Cassidy, partner with Mason Hayes & Curran , says it's difficult to say just yet.

"It may be that some companies monitor the extent of Ireland's adoption of renewable electricity generation technologies and draw conclusions from the extent of progress in this area. However, this is possibly the wrong way of looking at the issue. There is no shortage of ambition to fully embrace renewable technologies and the current Government has taken significant steps to date to implement the policy and legislative a framework required to take the first real steps towards the ultimate ambition of net zero by 2050." However, Cassidy stresses that multinationals with strong commitments to net zero emissions "cannot expect the Irish government to meet these commitments for them".

Ireland is one of the most fossil fuel-dependent economies in Europe

Russell Smyth, partner and head of KPMG's Sustainable Futures division, notes that KPMG is working with a number of multinationals, including leading agri-food companies such as Danone, which have actively stated that securing a pathway to net zero operations in Ireland is "an imperative" and without this further investment will be negatively impacted.

"Such multinationals have found that achieving this pathway in Ireland is currently proving more challenging than in some other continental European markets," he says.

Yet Stephen Prendiville of EY does not agree with the premise that Ireland is failing to embrace renewable tech. "Our targets to have 70 per cent generation from renewable sources in 2030 is highly ambitious, and will be the platform to push on towards 100 per cent by 2050."

Achieving these transitions takes time, he says. "You don't click your fingers [or flick a switch] and have renewable energy sources. Supply chains are not unlimited in their abilities to deliver renewables right now." Acceleration of off-shore wind and solar development should be front of mind for the Government, he adds.

Despite the efforts made to date, Ireland is one of the most fossil fuel-dependent economies in Europe, says Cassidy.

"The real leg work and heavy lifting has yet to happen, and achieving a net zero solution for Ireland's energy system will require dramatic changes necessitating societal and political support."

UN goals top of the agenda

The UN's sustainable development goals are on the 'to-do' list for many businesses, writes **Danielle Barron**

Becoming more sustainable is increasingly a no-brainer from an environmental, ethical, but also an economic perspective. Reducing carbon and the UN sustainable development goals (SDGs) feature on the "to-do" agenda for a growing number of businesses as they seek to assess their performance in this regard and ascertain how they can do better.

Carbon is the currency of sustainability, says Brian O'Kennedy, ceo of Clearstream Solutions. He says companies that have been diligently working to fundamentally remove carbon from their supply chains in recent years are those that will perform better financially into the future.

"The ceo of Logitech recently described carbon as 'the new calorie' for businesses as they begin to count every ounce of carbon they are responsible for. Carbon is such a useful tool to predict how a company will perform in the future because carbon equals money, so reducing carbon saves money. This was the initial impetus for companies but now we need to see all stakeholders engage on the topic of understanding carbon and climate change risk to businesses," he says.

Assessing and measuring carbon emissions not only gives companies a baseline from which they can set goals for carbon reduction, it also adds urgency, O'Kennedy says. "What gets measured gets done. It helps to avoid 'greenwashing' and generic CSR-type conversations, and instead use carbon to measure the impact of environmental sustainability."

Clearstream is involved in the Carbon Disclosure Project (CDP) which gives organisations a rating based on their carbon "performance". In the past 12 months it has seen a 50 per cent increase in the number of companies measuring and disclosing their carbon emissions to CDP.

"Companies need a baseline so that they can realise what they need to do in order to reduce their emissions," says O'Kennedy.

Indeed, he says many companies, both big and small, are on the right track, but just not moving quickly enough.

"There are signs there is a significant shift happening in terms of renewable energy so there are a lot of positive things, and we are decarbonising the electricity in our grid quite quickly and we are also getting better with fuels, being more efficient and using biomaterials. Removing the carbon that is embedded in our supply chains and products, that's where we are falling down and where the next phase of the work has to happen."

Business in the Community Ireland (BITCI) has been driving the sustainability agenda for 21 years, and work with the largest companies in Ireland. Its ceo Tomás Sercovich says the 17 sustainable development goals adopted by all UN member states in 2015 are about ensuring a sustainable, low-carbon economy and an inclusive society where everyone thrives.

"For business this is mission critical – it is about having a vision and a strategy to ensure your business will be successful in the future. Businesses don't succeed when societies fail or when the planet is irreversibly damaged," he says.

Yet despite a strong awareness of the SDGs in Ireland during the initial years following their adoption, Sercovich feels they have fallen down the agenda somewhat.

Assessing and measuring carbon emissions not only gives companies a baseline to set goals for carbon reduction, it also adds urgency

"We all need to work on making this agenda real and tangible for all business. You educate companies on the SDGs with simple messages; it is not about saving the world, but about how your operations can be more aligned to the principles of the goals and seeing that all companies can contribute to this agenda.

"It is about value-creation for the future, it is about the legacy of your business, it is about attracting talent that wants to work for companies with a genuine purpose, and essentially it is about avoiding the risk of making your business irrelevant."

The SDGs help to "widen the conversation", says O'Kennedy. "Sustainable development goal 13 is specifically related to climate change, but there are others focused on resource-use and water which also promise significant environmental impacts. "While companies are getting better at reducing carbon, they are starting to realise that there is a much wider range of initiatives that they need to be aware of outside of the pure carbon piece."

As a result companies are also beginning to measure their positive and negative impacts on the broader sustainability agenda as they align with the SDGs.

"They're very useful because they are very clear, and they offer a range of targets that make these top-level goals much more practical and deliverable than people realise. That's the next level we need to get to."

Bridging the energy gap

Government policies risk turning people into second class energy citizens, writes **Barry McCall**

The Government has adopted a carrot and stick approach to consumer decarbonisation. Subsidies to ease the financial pain of an electric vehicle (EV) and home energy retrofits, and increased carbon taxes to discourage fossil fuel use. A sensible and wise policy to encourage and reward behaviour change, on the face of it at least.

Sensible and wise if you have the money to buy a new car or shell out for very expensive home improvements. Not so smart if you can't afford these things and are stuck paying ever-higher carbon taxes for fuels you don't really want to use. And to add insult to Kafkaesque injury, your carbon taxes are probably paying for the subsidies for the people who can already afford these things.

And the subsidies may not be making all that much of a difference in any case. As Pinergy chief executive Enda Gunnell puts it: "A grant of €5,000 is not a factor when making a €130,000 buying decision. The grant may be relevant at the lower end of the market, but an internal combustion engine car is still cheaper to buy than an EV." There is some room for policy change in that area, according to Robert Costello, managing director, infrastructure and government with KPMG in Ireland. "To date, government incentives have been focused on reducing the cost of purchasing an electric vehicle with some subsidy for at-home charging. However, there are other policy measures that should be considered to increase take up. One of the areas of biggest impact is the provision of public charging infrastructure. The Government can facilitate this in a number of ways. For example, offer EV charging concessions using publicly owned spaces in towns and cities or create a subsidy fund to help incentivise targeted investment."

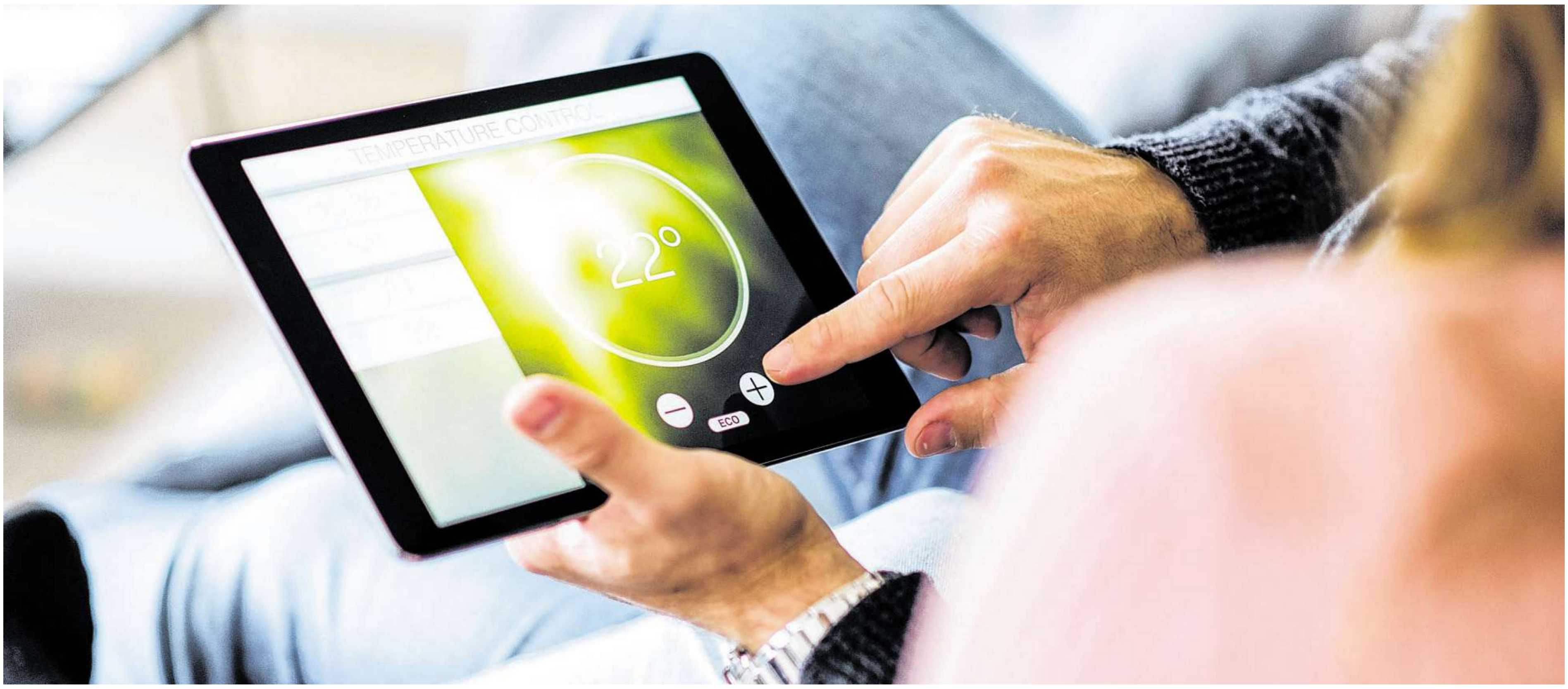
EY Ireland head of sustainability Stephen Prendiville also sees a case for a

The grant may be relevant at the lower end of the market, but an internal combustion engine car is still cheaper to buy than an EV.

policy rethink. He also believes we may be looking at the barriers to EV purchase through the wrong lens. "It comes down to the same ones as for internal combustion engine. Do you really want a new car? It's beaten into a lot of us not to buy a new car that depreciates so much the day you drive it out of the showroom. Get scratched and bumped around town and in supermarket car parks and so on. It's not really the barriers of new technology and charging and so on, but the barriers that are there already. Even if they could afford it, some people never buy a new vehicle. We need to get to a stage where there is as strong second-hand market for EVs."

But to get there we may need changes on the policy side. "There are lots of cars out there which were registered in the 1990s," Prendiville points out. "People are still driving the oldest and worst offending cars because they can't afford new ones. But the policy is to help you if you can afford it. Imagine a scenario where the Government paid people to give up their 1990s cars. That would be a payment for the carbon reduction rather than a penalty for it."

This would see current policies being turned on their head. "We design policies to encourage to improve individual behaviours rather than collective effort," he continues. "We have had sin taxes on lots of things like alcohol and cigarettes. CO_2 emissions are bad for all of us, and we need a collective rather than an individual response. It's almost a case of skipping to the last step in the process and go beyond carbon taxes to much bolder initiatives. We've almost got to get to the position where we buy EVs for people in order to get them to get rid of their 1990s cars."



Home help: get smart

Barry McCall looks at the apps that will help you to smarten up your energy consumption

1 Energia has partnered with Netatmo for the past six years. "It offers thermostat control through the phone," says Energia energy services manager Cormac Mannion. "It has been very successful as a customer acquisition and retention tool. We are now looking at what's next with smart metering and what that will enable. That will enable the design of tariffs and products to suit people's different needs."

And that means more than just heating controls. "There's been quite a leap in the last couple of years," he says. "Solar PV has come more to the forefront in Irish homes due to the fall in the cost of the technology and the availability of a feed-in tariff for microgeneration. Householders can now supply to the grid and get compensated for it. We launched our grid product late last year where we instal solar PV and a battery in the home. Customers are already getting compensated for selling power back to grid." And app control will be able to go further. "It's a very exciting time," he adds. "In the next few years more and more people will have big batteries in their driveways. This will enable V2G (vehicle to grid) services. People will be able to sell a portion of storage back to grid. Several hundred or thousand EVs could form a virtual power plant."

2 Bord Gáis Energy offers customers the Hive Active Heating smart thermostat which lets householders control their heating and hot water through mobile, tablet or PC. The Hive range of smart home devices includes light bulbs, motion sensors and smart plugs. The company's latest bundle for new customers includes a free Amazon Dot to allow people to switch their heating on and off with voice commands.

3 The Google Nest Learning Thermostat is available from Electric Ireland for €130 including professional installation. This allows householders to control and schedule their home heating from their phone or PC. It learns the temperatures you like and creates a custom schedule for the home. It automatically turns itself down after you leave so you're not heating an empty home.

Electric Ireland also offers the Irish designed and manufactured Climote device for €90. Climote features a digital time clock which allows users to control their heating using the in-home device or via an app. It also uses a SIM card, meaning there is no need for an internet connection.

4 The Pinergy App recently won the App of the Year award at the Digital Business Awards. The app gives users clear, easy to understand information on their energy consumption, hour by hour and day by day, helping them control what they use. In this case, knowledge means less power consumed.

"We have just launched our new 'Lifestyle' proposition," explains Pinergy head of marketing David Slattery. "It's targeted at people with smart meter. We are taking the information from the meter and giving it to the customer on the app. I can look at my own app and see that we used a certain amount of units yesterday and that it cost €2.48. And I can see exactly when I used it. It empowers the resident to see what they used yesterday, last week, and the last few months."

The company has also introduced time-of-use tariffs which offer discounted rates at different times. "We have a family-time tariff between 6pm and 10pm and a work-at-home tariff between 9am and 5pm. People can use the app to make sure they are making the most of those. We also have electric vehicle charging time between 2am and 5am at discounted rates."

Smart thermostats let householders control their heating and hot water through mobile, tablet or PC.

5 SSE Airtricity has an offer for new customers which includes a free smart home bundle. The bundle includes the Climote device which lets you control your heating and hot water from anywhere, as well as an Amazon Echo device, which lets you control compatible smart home devices with voice commands. Customers who switch dual fuel to SSE Airtricity get a free Climote and Echo Show 5 as well as an Echo Dot. Customers who switch electricity to SSE Airtricity get a free Climote and Echo Show 5.

One hundred per cent of SSE Airtricity's green energy product offerings are smart enabled, with time-of-use tariffs for day, night and peak times.

The company encourages customers interested in activating their smart meters to contact them in order to enable services and implement real control over their energy usage.

The company is set to launch a number of new products this summer which will further assist customers to be more efficient in their energy usage.

"Digitisation and technology play a key role in meeting the changing demands of customers and that is integral to the future of energy," says Klair Neenan, managing director of SSE Airtricity.

It pays to be smart

Pinergy's smart metering 'brings new transparency to how you use energy at home', writes **Sandra O'Connell**

ESB Networks is rolling out a smart meter programme nationwide.

Customers of renewable electricity provider Pinergy have been using smart meters for years. In tandem with the national rollout, it has launched a new product, Pinergy Lifestyle, to help users optimise their energy efficiency even more.

"Smart metering brings a new transparency to how you use energy in your home," says David Slattery, Pinergy's head of marketing.

The company has used its experience of smart metering to develop a suite of new bill pay products for consumers, called Pinergy Lifestyle.

The three new "time of use" tariffs are based on the ways in which families have adapted their lifestyles over the past year.

The plans are called Work From Home, Family Time, and Drive Time.

Work From Home offers a 30 per cent discount for energy usage from Monday to Friday, 9am-5pm.

Family Time operates daily 6pm-10pm and offers customers a 40 per cent discount of standard tariffs.

Drive Time is designed to best meet the needs of families looking to charge their electric vehicles (EVs) overnight at a low-cost rate.

They mark the company's move from being a pay-as-you-go electricity provider only, to also offering monthly bill pay options for domestic users.

The past year has seen a number of changes in the way we live, which is reflected in the plans, says Slattery. Many people are now working from home and expect to continue doing so even after the pandemic has abated.

Pinergy's smart meter data also shows how energy hungry the hours of 6pm-10pm are in a busy family home, as children come home from school or childcare and parents swap laptops for cooker tops.

The latest Pinergy Lifestyle App.
PHOTOGRAPH:SHANE O'NEILL/COALESCE

"Each of the plans was developed around people's lifestyles, as a result of the insights smart metering gives in relation to the way we live our life today," he says. "That includes the way in which we expect to interact with businesses, from shops to banks, which we now expect to do via our phones."

With traditional utility companies, bills come weeks after the billing period, making it hard to match usage with price. Estimated bills make it harder still.

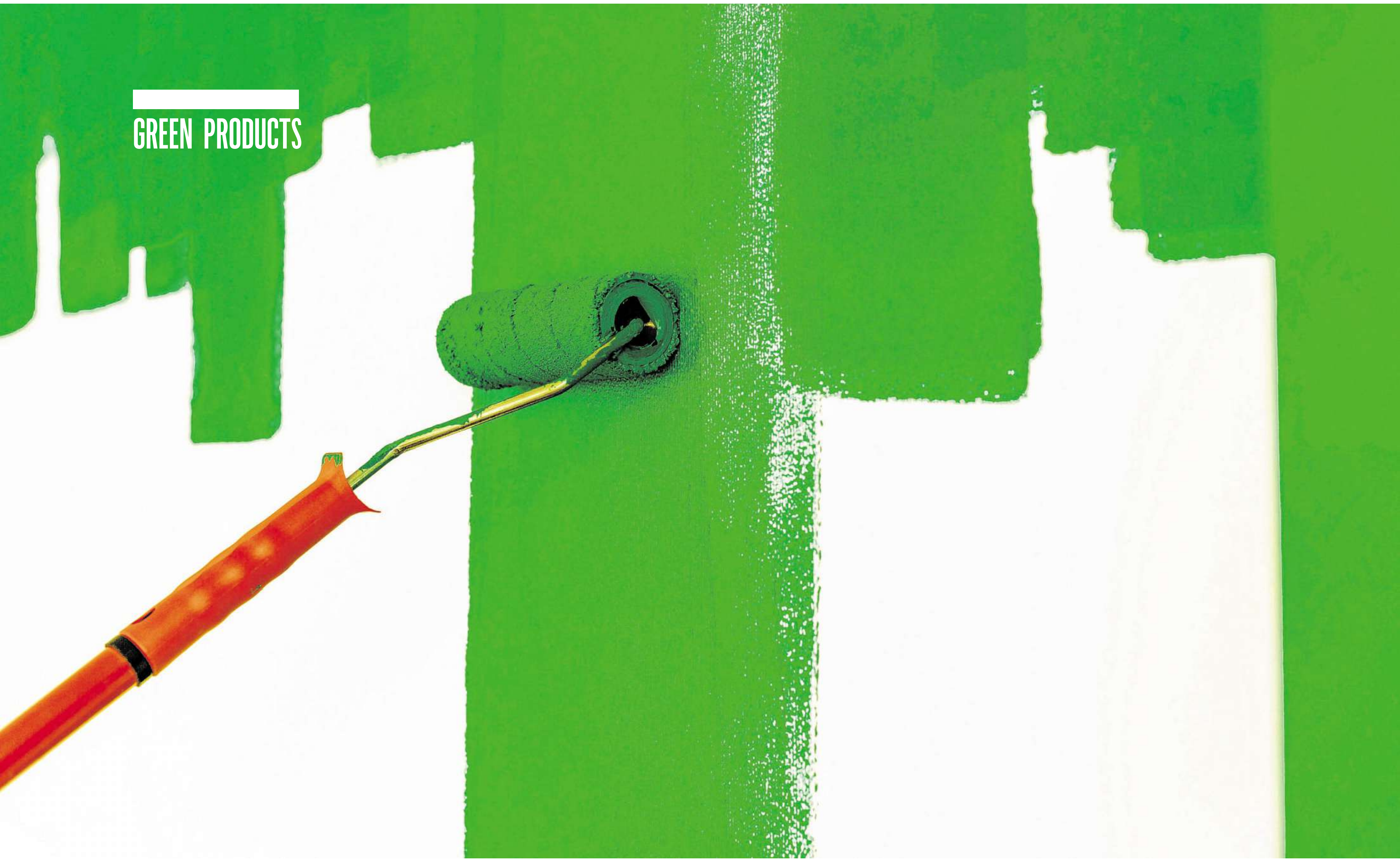
Smart metering does away with estimated bills, and Pinergy Lifestyle takes this further, allowing you to see from the app exactly how much energy you used just the day before.

You can track activity daily, weekly and monthly , and benchmark against yourself as well as similar households which makes it easier to change behaviours, save money and take a more sustainable approach.

"The move towards conscious consumption is a huge trend and people are more aware than ever of how they use things, in order to reduce waste. We see energy waste as a big problem, too, particularly as, over the coming years, demand for electricity is set to grow," says Slattery.

In time, smart metering, when combined with microgeneration tools such as solar power, will enable people to sell energy back to the grid and even to neighbours. As a utility, electricity hasn't always been the most exciting of subjects for consumers, he admits, but that's about to change. "It's going through a huge revolution," he says.

"Pinergy is 100 per cent renewable electricity, and that's really important. But the second part of that is how we use it." That's where the app comes in, he says. "It's really important that we optimise energy, not waste it."



The banning of greenwashing

Green products will need to navigate a host of consumer law developments at EU level, writes **Mimi Murray**

The decarbonisation of the Irish economy and the move to a net zero emissions situation will require dramatic change from a societal, political and economic perspective with new technology, products and infrastructure rolled out.

For large scale infrastructure to be successful legal advice is required from the early stage of development all the way through to operation – covering planning, environmental, real estate, regulatory advice, construction law and corporate governance, says Eoin Cassidy, energy sector lead partner at Mayson Hayes & Curran.

"The legal and regulatory framework that applies to large infrastructure is complex and presents objectors or other interested parties with plenty of opportunities for potential challenge to delay or prevent its rollout. A failure to take advice from experienced practitioners can result in delay, or in the worst case, the failure of the relevant project.

"Separately, much of the larger scale infrastructure will be underpinned by new revenue models (or markets) and third party funding or grant arrangements, all of which will require robust legal structures," he says.

Companies developing and marketing individual green products for sale to consumers and businesses will need to navigate a host of consumer law developments that are happening at EU level.

For example, the EU Commission adopted its first milestone in November 2020 on a proposal for a regulation to modernise EU batteries legislation as part of the Circular Economy Action Plan and the EU Commission is also planning a new regulation or directive in 2021 to empower consumers for "the green transition".

This is intended to give them better protection against practices such as greenwashing and early obsolescence, and a requirement for green claims to be substantiated based on the environmental footprint methods." he says.

The EU Commission has also outlined several innovative proposals to encourage consumers to adopt more sustainable consumption behaviours. These include the sharing economy, new business models of goods-as-a-service, repairs provided through community and social economy organisation actions – for example, repair cafés and encouraging second-hand markets.

"Sustainability and countering obsolescence are also the drivers for the review of the Ecodesign Directives, extending to new categories of product and delivering on circularity. The Single-Use Plastics Directive also bans certain single-use plastic products as well as imposing measures to reduce consumption, extend producer responsibility and design requirements for beverage containers," he adds.

EU laws are introducing durability obligations and rights of repair, promoting recyclability and ecolabelling; and banning early obsolescence and 'greenwashing'.

The EU Farm to Fork initiative has sustainable diet habits, including eating less meat, as a policy objective, and navigating regulations around novel meat-substitutes, supplements and plant-based products may become increasingly relevant. This may lead to an increase in demand for support on how to effectively commercialise innovative new food and feed products derived from sources like seaweed and insects, given the complex and sophisticated EU food regulatory environment, Cassidy says.

The sustainability of products is no longer a "nice to do". EU laws are introducing durability obligations and rights of repair, promoting recyclability and ecolabelling; and banning early obsolescence and "greenwashing". This will also present challenges for companies selling products into the EU, he adds.

SKILLNET

Helping Irish businesses get climate ready

Skillnet Ireland is preparing businesses to build sustainable models, writes **Barry McCall**

Skillnet Ireland is about to launch a new initiative aimed at equipping businesses with the skills to manage climate risks and thrive in the green economy.

The new programme will develop and facilitate learning pathways for businesses to build sustainable operating models and develop the talent they need to proposer as the country makes the transition to a low carbon economy.

Skillnet Ireland chief executive Paul Healy (inset), quoting Aristotle, says: "Courage is the first of human qualities because it is the quality which guarantees the others. That still applies today.

"We have to show courage in tackling the issue of climate change. If we don't, there will be nothing left to share with future generations."

The starting point of the new initiative is the Government's Climate Action Plan, he explains. "This is hugely ambitious and rightly so. The plan predicts that entire sectors of the economy will experience radical change and new types of enterprises and jobs will be created as a result of decarbonisation and the disruption it will create.

Irish companies have a pivotal role to play in leading this transition within their own businesses and through their supply chains. There will be huge demand for new skills, and Skillnet Ireland will help businesses and workers prepare for that."

The initiative is based on the three core pillars of the existing climate cluster created by Skillnet Ireland, a climate academy, and climate insights.

"In the climate cluster, we have already carved out a strong position in the areas of renewable energy, clean water and sustainable finance," says Healy. "We plan to invest in and grow that cluster."

The academy offers practical and specialised learning supports for businesses in the areas of climate action and sustainability.

These supports include the Sustainability Pass, a short online course designed to assist staff at all skill levels to understand how their sustainable actions will play a vital role in Ireland's collective response to climate action.

The Energy Leaders Programme, delivered in partnership with the SEAI, aims to support businesses and energy professionals with training on how to reduce energy waste, deliver cost savings and protect the environment.

The academy will also feature a series of masterclasses delivered by expert practitioners, who will share best practice on sustainability related topics.

The insights platform will promote best practice across the business community through shared knowledge, thought leadership and research.

The initiative builds on other innovative initiatives developed by Skillnet Ireland. Among these is the first-of-its-kind Water Stewardship programme, which helps businesses reduce water consumption.

"Not all aspects of climate action are as obvious as others," says Healy.

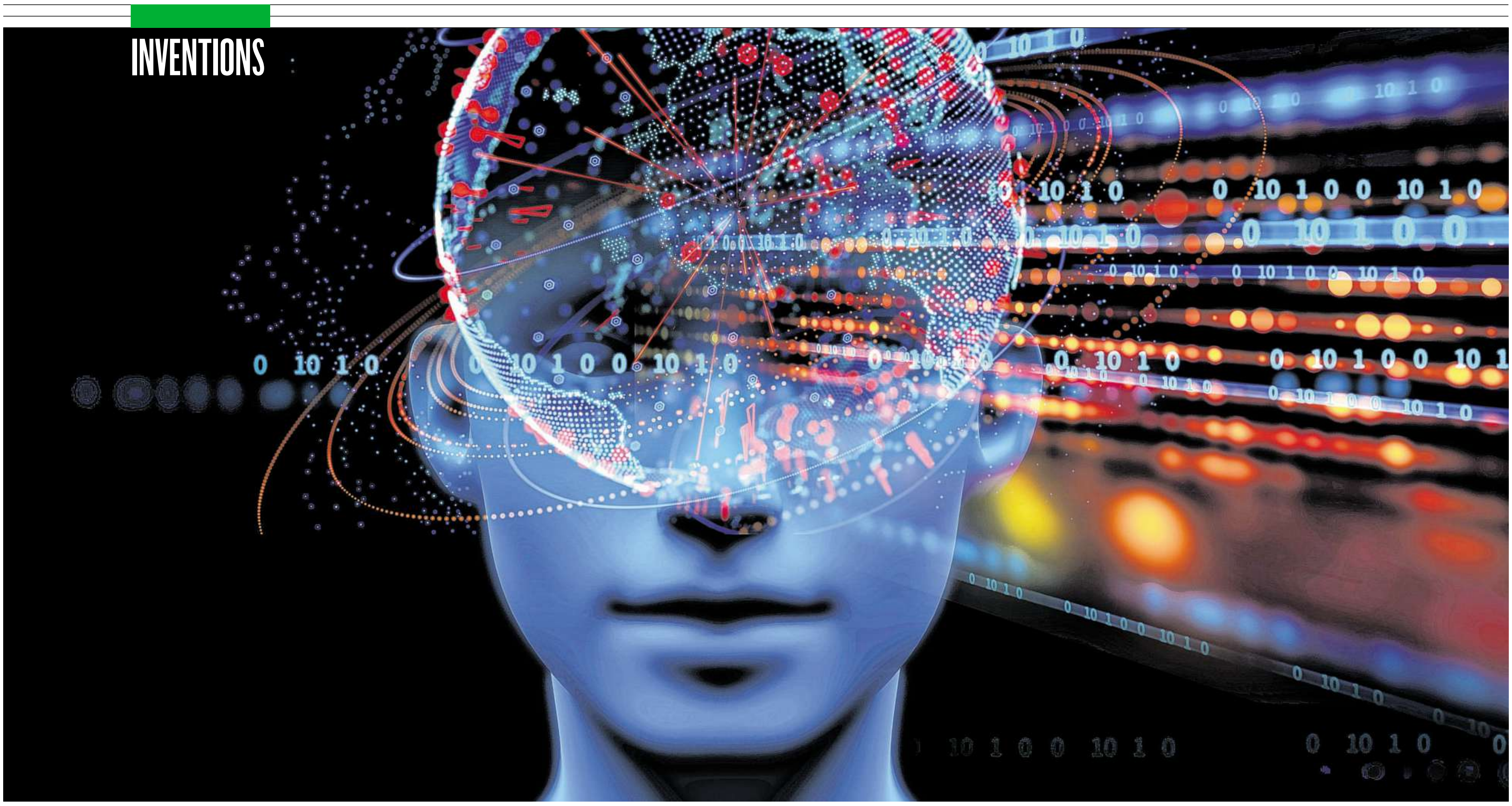
"The global water crisis is part of the climate emergency. Industries like biopharma, medtech and construction consume vast amounts of water.

"We are training water stewards to conserve water, drive efficiency, reduce costs and protect the environment."

The programme is accredited by the European Water Stewardship Standards and has trained 320 Certified Water Stewards to date.

"We want to support 1,100 companies and more than 3,000 workers this year and grow those numbers each year," says Healy.

"We will be able to achieve this as a result of the ambition of the Department of Further and Higher Education, Innovation and Science and Minister Simon Harris as well as the willingness of the private sector to step up and fund this initiative to the tune of millions of euro."



Climate-tech innovation

Experts tell **Sandra O'Connell** how Ireland can establish itself as a global hub for climate change

1 Let tech lead the transition
"From a source perspective we are still, despite all of our efforts, in an age of oil. To get to a net zero position by 2050 the economy needs to dramatically shift to an age of electricity. Any technology or invention that will facilitate or drive that transition will do well," says Eoin Cassidy, energy sector lead partner at law firm Mason Hayes & Curran.

"Examples of this will be technologies and inventions which improve battery performance and longevity for storage, which smooths out the intermittent generation from renewable sources."

Other priority areas include clean hydrogen – already being used to power busses in Northern Ireland – energy storage, and carbon capture, storage and utilisation.

Digital technologies are a critical enabler for attaining sustainability goals too.

"Artificial intelligence, 5G, cloud and edge computing, and the internet of things can accelerate and maximise the impact of policies to deal with climate change and protect the environment," he explains.

2 Build the connections that count
"Innovators do not have access to the large industrial corporates that would allow them to pilot their innovations. There is a disconnect between the individual innovators and the large players who can help make their innovation happen," says Mike Hayes, global head of renewables at KPMG Ireland.

He believes Ireland needs to develop a decarbonisation accelerator that brings together investors, large industrial players and innovators. "I'm talking with innovators every day and the thing they all say to me is that they can't get into a room with the people they need to talk to. At the same time I'm talking to big oil and gas companies asking how can we find innovators," says Hayes.

3 Establish Ireland as a climate-tech innovator
"Just as Ireland, 30 years ago, established itself as a global financial services hub, so too we can establish ourselves as a global hub for climate change," says Hayes.

"The climate crisis is the single biggest challenge facing all of us. If innovators come, investors follow. No one country has yet put up its hand to grab this space." Ireland has a history of innovation in this space, a tremendous amount of knowledge as a result, and, as a country which still trades on its clean green image, "we have the street cred to do it", he says.

4 Drive the data hard
Smart metering will lead to a new raft of energy saving innovations, predicts Cormac Mannion, head of energy services at Energia. "It will inform a lot of decisions and allow companies to tailor products to suit. It's about enabling people to be prosumers rather than consumers too because, when added to microgeneration systems, such as solar panels, it can help decarbonise the electricity system."

Blockchain technology is already enabling neighbours overseas to buy and sell energy to one another. Smart meters can also help turn the electric vehicle on the driveway into a battery that can be used to store electricity and feed it back into the grid.

5 Innovate incentives
"When recycling was first rolled out,

Financial incentives will help people feel their individual actions have a purpose and an effect in relation to climate change.

we educated people about how to separate waste and incentivised them with free bins and free recycling collections. We need a similar sort of programme for climate change," says Stephen Prendiville, head of sustainability, EY Ireland.

Technology alone isn't the answer. "We don't want a sense that people can sit back and wait for technology to catch up with the problem.

"We need to create the structures so that people can feel their individual actions have a purpose and an effect in relation to climate change."

Financial incentives will help, says Mannion. SEAI will provide a subsidy of up to 35 per cent of the cost of an energy efficiency retrofit. At around €60,000, that would leave the homeowner on the hook for €40,000.

New green finance schemes could encourage action, he says.

6 Look to the Horizon
Horizon Europe, the EU's funding programme for research and innovation from 2021 to 2027 has a budget of €100 billion, of which at least 35 per cent will go towards new solutions for climate change.

"The European Innovation Council will dedicate funding, equity investment and business acceleration services to high-potential start-ups and SMEs for them to achieve breakthrough Green Deal innovation that can be scaled up rapidly on global markets," says Cassidy.

Building today, caring for tomorrow

Sisk's sustainability roadmap is based on people, planet and performance, writes **Barry McCall**

Last year, building contractor John Sisk & Son set out its sustainability roadmap for the rest of the decade. Based on the three pillars of people, planet and performance, the "Building today, caring for tomorrow" strategy sets out a range of challenging targets linked to the UN Sustainable Development Goals which will be subject to independent verification.

"It's a very ambitious roadmap with 21 separate targets," says Sisk head of sustainability for Ireland and Europe Sinéad Hickey. "We now have to ensure that each one is properly managed and operationalised across the organisation. They need to be embedded across the organisation from board level down. My experience over the years of organisations that succeed in this area is that leadership and accountability at board level are essential. Board and ceo oversight is critical to bring the roadmap to life."

That top-level engagement is baked into the strategy, she points out. "Each board member, all eight of them, sponsors a sustainability working group. These groups address different areas such as climate change, equality diversity and inclusion, electric vehicles, social value and so on. And each group is responsible for a target. One of the primary responsibilities of the board members is to support the groups in achieving those targets."

The 21 targets address five different themes, Hickey explains. The themes cover responsible business practices; enhancing communities; embracing innovation and digital technologies; tackling climate change and air pollution; and caring for the environment.

One of the ambitions set out in the roadmap is to have targets in line with the international Science Based Targets Initiative (Sbti). Sisk has joined more than 1,000 businesses which are working with Sbti to reduce their emissions in line with climate science. The company also supports Business Ambition for 1.5 Degrees,

Sisk's sustainability roadmap has 21 targets which will be brought to life by board and ceo oversight

the UN initiative aimed at limiting global temperature rise to 1.5 degrees.

"We are not just looking inside our own four walls," Hickey adds. "We are looking all along the supply chain and the complete value chain as well. We also want to get Carbon Disclosure Project (CDP) accreditation. This is an international organisation that helps companies disclose their environmental impact. We want to achieve a CDP A rating for climate change. Our current rating is B-minus and the industry average for construction is C. We are already ahead of curve, but we have more work to do."

One of the company's most ambitious targets is to achieve carbon neutral status without the need for offsetting by 2030. "We want to achieve this right across the whole value chain and in our Scope 1, 2 and 3 emissions."

That means direct emissions from the organisation itself, indirect emissions from electricity purchased by the organisation, and all other emissions which arise from its activities.

"Construction and the built environment account for 39 per cent of the world's carbon emissions," she adds. "By 2024, 50 per cent of our fleet will be electric vehicles. All internal combustion engine vehicles will be eliminated from the fleet by 2030. We have also made a commitment to plant 1.5 million trees of natural woodland in Ireland, the UK and Europe and we are supporting the restoration of peat bogs. We want to achieve zero avoidable waste and eliminate single-use plastics by 2023. We also want to embed circular economy principles into the business."

Recycling in a pandemic

We could do a lot better in Ireland, writes **Danielle Barron.** Perfectly good recyclables are often found in our general waste

The Covid-19 pandemic may have had some benefits for the environment – less flying and driving to name a couple. But after years of effort to eradicate their use, single use plastics are everywhere – whether it's takeaway containers or gloves, and never mind the yards of packaging needed to ship our online orders.

So, have people stepped up to the (paper) plate and been recycling more during the pandemic?

Des Crinion is managing director of Irish Packaging Recycling, an arm of the Panda group. He says that, while the amount of domestic waste has gone up dramatically, there has been no discernible change in the quality of what is recycled.

"A lot more people are working from home, obviously eating more at home. The quality is much the same but the quantity of both waste and recycling has gone up. The commercial waste and recycling has reduced hugely though, so overall waste is down," Crinion explains.

But we could be a lot better at recycling here in Ireland; Crinion says that contamination of recycling waste is still a common occurrence, while perfectly good recyclables are often found in general waste.

But recycling, even when done properly, should only be the last resort, says Stephen Prendiville, head of sustainability at EY Ireland. He explains that there has been a major shift in thinking, with the Government keen to clamp down on our "consume and dispose" system and move towards a circular system, with the concepts of "reduce, repair, reuse and repurpose" at the heart of it.

Published last autumn, the Waste Action Plan for a Circular Economy is Ireland's new roadmap for waste planning and management, which aims to shift the focus from waste disposal to the preservation of resources. The plan is ambitious, admits Prendiville. "It will require a full rethink on the value chain and, to a certain degree, our economic model and the nature of consumerism. The idea is that consumers need to reduce the amount of 'new stuff' or 'virgin materials' that they consume.

"This will require the consumer to be made more aware of the degree to which their desire for a product or service is supporting recycling versus new product development."

But in order for virgin material to be unnecessary completely, Prendiville says we need systems for getting that material back to the producers in a looped (or circular) manner.

"Once the consumer has determined to consume, the next idea would be for them to not have to purchase that same product again. Instead the economic incentives should be stacked to repair and/or repurpose the use of a product. This is a critical mindset shift. Rather than throwing away the broken toaster and buying a new one – repair it."

And rather than dumping or even recycling something it should be repurposed, if possible, for another use. "Repurposing and repair are essential tenets of a circular economy. If we apply this to everything – clothes, cars, food, amenities, etc – the impact could be profound," he says.

All of the above is no mean feat, Prendiville admits. "It will challenge governments and society in a far more significant manner than tackling single use plastics, for example. But the rewards are expected to be significant – with a new and more resilient economic model that values ingenuity in minimising the footprint of our economy and society."

> "We need to make people much better at recycling and in general much less inclined to generate waste of any kind, be it recyclable or not

So how can we encourage people to reduce and reuse before they recycle? People will need real incentives, says Prendiville. "While the economic price of consuming new versus recycled/reused/repaired can be tipped in the favour of the latter through taxes, charges, etc, people will need a strong incentive to not rely on the recycling solution as the first port of call," he admits.

"While reduce and reuse will save you money, this may not offer a strong enough behavioural nudge."

Incentivisation schemes may help; for example, every household could be given a baseline waste and recycling allowance level, suggests Prendiville. "Exceeding either the waste or recycling allowance would trigger charges – but coming in lower than the target could also result in a tax rebate or 'prize' returned to the household." Manufacturers and producers will need a similar incentive structure, he adds.

One thing is for sure, says Prendiville: "We need to make people much better at recycling and in general much less inclined to generate waste of any kind, be it recyclable or not."

The quantity of both domestic waste and recycling has gone up. PHOTOGRAPH: ISTOCK

TAKE STEPS

12 ways you can make a difference

It's easy to feel helpless about climate change but every step you take can make a difference, writes **Sandra O'Connell**

As individuals, it's easy to feel helpless in the face of climate change but we're not. Every step we take can make a difference.

1 Once lockdown restrictions are lifted, think about how you'll transport yourself. Transport is the single largest energy user in Ireland, at 40 per cent with private cars accounting for one-fifth of all our energy usage. Walk, cycle, or use public transport where possible.

2 About 25 per cent of the energy used in Ireland is used in homes – that's more than in industry. The Government aims to retrofit over 500,000 homes by 2030. The average cost to homeowners is an estimated €50,000 but there are SEAI (Sustainable Energy Authority Ireland) grants available to help, worth up to 35 per cent.

3 "For people not quite ready for the costs involved in retrofitting, by far the simplest and cheapest way to get the biggest bang for your buck will be by draft-proofing your home," says Cormac Mannion, energy services manager at Energia. Look at where the gaps are and put in draft excluders. "Ireland is an incredibly windy place, it's why we can build so many turbines, but the wind really cools your house. If you don't use the fire, block the chimney and seal around windows. Plug the gap between the front door and floor."

4 Insulate the attic. You could be losing 25 per cent of your home's heat through your roof. "You can see clearly on frosty or snowy days which houses maintain their frosty roofs because they are well-insulated. Insulation should be 300ml deep, or about one foot, and fit snugly between the rafters," says Mannion.

5 Adapt your heating system into zones, with separate controls for different areas. A smart thermostat, such as Netatmo, will take external weather conditions into account, and learn household behaviours and occupancy patterns.

6 If you've a regular central heating boiler, turn the thermostat down a few degrees and set it to turn off 30 minutes early. Small tweaks add up over time and you won't feel the difference.

Getting your boiler serviced every year will keep it running optimally too, reducing its fuel consumption by 10 per cent, according to the SEAI.

7 Set your water heating to 65 degrees on your immersion heating, install a timer and keep the water warm with insulation. If you're still looking at a copper tank, an 80mm lagging jacket will save up to 30 per cent of your water heating costs and pay for itself in two to three months.

8 Switch to air-sourced heat pumps, which operate like a fridge in reverse. The Government's Climate Action Plan aims to see 600,000 installed by 2030, of which two-thirds will be retrofits. Currently there are grants available, of €3,500 to help (the pumps cost about €1,000 for a three-bedroom home).

9 Solar panels on your roof could meet about 60 per cent of your hot water requirement each year. Prices have fallen significantly in recent years and 1sq m of solar panel receives the equivalent of more than 100l of oil in free solar energy per year. Again, SEAI has a grant available.

You can help by only buying what you are going to eat. Doing so will save the average household €800 a year.

10 Embrace the circular economy by reducing, reusing and recycling more. Buy less but better quality, and local as much as possible. Avoid plastic packaging. The EU's new labelling system makes it easier to identify energy-saving electrical goods. Just don't leave them on standby, it can mean they are using 20 per cent of the energy they would if on.

11 Food systems account for almost one third of the EU's carbon emissions. You can help by only buying what you are going to eat. Doing so will save the average household €800 a year, money currently going into the bin.

12 Change your mindset. "It really is individual actions that will make the change," says Stephen Prendiville, EY Ireland's head of sustainability. "When you think about it, the three big issues for climate change are transport, housing and agriculture. Agriculture is largely down to government policy but transport and housing is down to individuals."

SEAI Local energy initiatives

Hundreds of communities across Ireland have come together to drive sustainable energy initiatives in their area, working with SEAI, the Sustainable Energy Authority.

Becoming more energy-efficient is enabling them to make a positive impact on the environment, have warmer homes and community buildings, and is saving money which they can put to use elsewhere in the community.

Members of the Sustainable Energy Community network have undertaken a range of projects covering homes, transport, businesses, schools, community centres and sports facilities.

Joining the network gives them access to mentors, workshops and networking opportunities with other communities to help them. SEAI provides grants to help too.

When the Fair Play Café, a community hub in Dublin's Ringsend, wanted to reduce its carbon emissions, it received 50 per cent grant funding from the SEAI to implement a plan that included solar panels and new LED lighting, cutting electricity consumption by 21 per cent and energy bill savings of €1,300 a year.

Sustainable Clonakilty upgraded a variety of public and private buildings to make them more energy-efficient, saving thousands of euro, and introduced Ireland's first rural community bike scheme to cut down on cars.

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