ZCA’s top 5 trends for 2026

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Introduction

Overview

In this report, Zero Carbon Academy (ZCA) have identified our top 5 trends for 2026 within the sustainability and cleantech space. These are trends we feel will define the coming 12 months and substantially alter the sustainability landscape.

Our top 5 trends for 2026 are as follows:

Source: ZCA

1. Sustainability regulation becomes operational

Whilst last year saw companies preparing for new regulation, 2026 is the year that major pieces of legislation come online. At the forefront is the EU's Carbon Border Adjustment Mechanism (CBAM) which will move from what was previously a reporting phase, to a financial obligation.

2. Green skills in short supply

2026 is the year organisations finally confront the skills gap standing between ambition and action. As governments tighten environmental regulations and companies accelerate their net zero strategies, demand for green skills is rising faster than supply. Today green skills are no longer confined to niche sustainability teams, instead they're becoming a core competency across industries. From construction and finance to manufacturing, logistics, and technology, the question isn't whether companies need green skills, but how quickly they can acquire them.

3. Climate adaptation

COP30 saw adaptation rise up the agenda as countries called for a tripling of adaptation finance by 2035, with $310 billion required annually. Given much of this will fall to the private sector, companies need act now to prioritise adaptation to safeguard resource access, protect infrastructure, and maintain competitiveness. Solutions will often be nature-based, requiring companies to build expertise in ecosystem restoration, water management, and biodiversity strategies.

4. Tackling AI's sustainability problem

While 2025 was the year that AI entered the mainstream, with adoption soaring, 2026 is the year that businesses need to address the technologies environmental impacts. With the rapid rise of AI usage, there has been a corresponding clamour for data centre capacity to meet demand, and this comes with significant pressure on resources. Research released by the IEA last year found that growth in the use of Artificial Intelligence will lead to the global electricity demand from data centres more than doubling by the end of the decade.

5. EV battery advancements

2026 will be the year in which EV batteries experience significant change which will have major consequences for the EV industry as a whole. major improvements to EV batteries are coming, including falling costs, new technologies, reduced charging times, and improved mileage. In the first instance, the most widely used battery technology, lithium-ion, has begun to see costs ease following years of volatility driven by supply chain shocks and mineral bottlenecks. Expectations are that prices will continue to fall during 2026. Improvements in energy density with the use of alternative chemistries such as sodium-ion and lithium iron phosphate will also aid change, but the biggest advancement this year will be in the development of all solid-state batteries (ASSBs). These are seen by some as the future of EV batteries and a strong alternative to lithium-ion. They use solid electrolytes and hold a wealth of benefits over lithium-ion.

Methodology

ZCA set out to identify a broad range of trends, utilising our experience and understanding of developing stories and subject areas over the past 4 years. We then shortlisted 5 topics which we feel will most significantly impact the sustainability space over the course of the next 12 months.

The top 5 trends are then ranked in order from what we consider the least impactful trend (5) to the greatest impact (1). To produce the ranking, we have scored each trend based on a range of factors. Each factor has been scored from 5 (low impact/probability) to 1 (high impact/ probability). These factors are as follows:

- Impact on consumers
- Impact on businesses
- Likelihood of happening in 2026
- Risk from failing to take action
- Complexity of action required

We provide a heatmap of the scoring on the next page.

Figure 1: ZCA's top 5 sustainability trends for 2026

	Climate adaptation	Tackling AI's sustainability problem	Sustainability regulation becomes operational	EV battery advancements	Green skills in short supply
Impact on consumers	3	3	3	2	3
Impact on businesses	2	2	1	2	2
Likelihood of happening in 2025	3	3	1	4	2
Risk from failing to act	2	2	1	3	2
Complexity of action required	3	3	2	3	3
Total	**13**	**13**	**8**	**14**	**12**
Rank	**3**	**4**	**1**	**5**	**2**

Source: Zero Carbon Academy

Top 5 trends: analysis and explanation

In the following section, we analyse and provide reasoning for ZCA's top trends for 2026, descending from 5 (least likely/impactful) to 1 (most likely/impactful).

5. EV battery advancements

EV batteries come of age

EV adoption has steadily increased over the past few years and could soon be further bolstered by major improvements to EV batteries. These changes include falling costs, new technologies, reduced charging times, and improved mileage.

In the first instance, lithium-ion costs have begun to ease following years of volatility driven by supply chain shocks and mineral bottlenecks, with expectations that prices will continue to fall during 2026. Lithium-ion batteries are currently the most widely used battery type within the EV space. Diversified chemistries will also play a part this year, whereby manufacturers are increasingly leaning on LFP (lithium iron phosphate) cells for mass market vehicle models, a trend that began in China but is now spreading globally. The lower cost, longer cycle life, and improved cold weather performance make LFP's an attractive option for fleet led electrification. At the same time, nickel rich chemistries remain the go to for long range and premium vehicles. But even here, incremental improvements in energy density and thermal management are helping reduce the cost per mile of range.

Other innovations include sodium-ion batteries. The first vehicles featuring CATL Naxtra sodium-ion batteries, are due on the market in early to mid-2026. CATL says the battery will reduce dependence on lithium resources by swapping to sodium, while reaching 80 percent charge state within 15 minutes and working well in low temperatures.

New technologies

A major advancement comes in the form of All solid-state batteries (ASSBs) are seen by some as the future of EV batteries and a strong alternative to lithium-ion. These batteries use solid electrolytes, rather than liquid ones, which makes them less volatile than lithium-ion. In addition, they have the capacity to store more energy and offer better performance at both high and low temperatures. These batteries are cheaper, lighter, and faster to charge, as well as offering greater range. However, they are notoriously difficult and expensive to scale-up, with this old technology having previously been used for very small devices such as hearing aids or pacemakers.

Now, whilst these batteries are not yet being produced on a mass-scale they are finally entering a phase of meaningful real-world testing. Further, several manufacturers are expected to begin limited deployments in late 2026, this includes Stellantis which will demonstrate solid-state batteries this year, and several Chinese automakers (such as Chery and Dongfeng) who are planning demonstration fleets or limited production for 2026.

Why 2026?

2026 won't be the year solid state batteries take over, but it will be a year of steady, meaningful progress - falling lithium-ion prices, maturing supply chains, smarter battery systems, and the first credible steps toward an ASSB future. In other words: the EV battery revolution is no longer theoretical, the trajectory is towards more efficient and capable batteries, lower emissions, smarter resource use, and a more sustainable battery economy.

4. Tackling AI's sustainability problem

Rise of Artificial Intelligence risks environmental consequences

Artificial Intelligence entered the mainstream in 2025, with adoption soaring. The technology has a wealth of applications and has woven its way through business operations. However, with the rapid rise of AI usage, there has been a corresponding clamour for data centre capacity to meet demand.

With this comes increased pressure on resources. Research released by the IEA last year found that growth in the use of Artificial Intelligence will lead to the global electricity demand from data centres more than doubling by the end of the decade to reach 945 terawatt-hours (TWh) in 2030. Notably this figure is equivalent to Japan's current annual electricity usage and represents an almost 128% increase from the 415 TWh of power used by data centres in 2024.

"AI will be the most significant driver of this increase, with electricity demand from AI-optimised data centres projected to more than quadruple by 2030,"[i] the IEA claimed.

UNESCO & UCL report that the use of Artificial Intelligence (AI) is growing substantially, with compute demand doubling every 100 days[ii]. To showcase the energy this requires they cite the example of generative AI platform ChatGPT. This uses roughly 0.34 Wh of electricity per query, similar to the energy needed to power an LED lightbulb for a few minutes. Given that ChatGPT receives approximately 1 billion queries each day, this adds up to roughly 124GWh per year.

"Generative AI's annual energy footprint is already equivalent to that of a low-income country, and it is growing exponentially. To make AI more sustainable, we need a paradigm shift in how we use it, and we must educate consumers about what they can do to reduce their environmental impact" Tawfik Jelassi, Assistant Director-General for Communication and Information at UNESCO has said.

However, it is not just energy usage that is cause for concern. Data centres are notoriously thirsty, with many facilities using fresh water to keep servers and equipment cool and prevent overheating. With data centres running 24/7 and new facilities coming online to meet demand, there is growing stress being placed on water courses and supply networks particularly as most centres source their water in the form of potable (drinkable) water from utility companies[iii]. Further, the rapid expansion of data centre capacity risks creating a shortfall in the materials required to meet demand. Recent data from BloombergNEF found that the race to meet AI (Artificial Intelligence) demand risks further tightening the global copper market. Their research finds that the supply shortfall could reach as much as 6 million tonnes by 2035, given that global copper supplies are projected to reach 29 million tonnes in 2035, well short of the required 35 million tonnes in expected demand.

As AI's adoption increases so too do associated emissions, whether this is from energy generation to power AI, water to cool data centres, or the heat released. To combat this many larger technology companies are exploring greater investment in new technologies and efficiencies, alongside renewable energy sources to power their AI data centres.

These changes include the use of innovations to improve data centre efficiency, such as data optimisation agents, and scheduling software, alongside new technologies such as Snowcap Compute which is building a superconducting compute platform could help data centres slash energy use and emissions.

Why 2026?

Last year saw AI use grow significantly, and with the technology now being adopted on a large scale, the environmental consequences cannot be ignored. So too are the associated business costs, soaring demand for data centres (and the resources required to construct and run them) means that it makes sense for companies to address efficiency and usage now, rather than later.

3. Climate adaptation

Climate-related loss to drive action on adaptation

Last year saw extreme weather events result in significant financial losses, with a recent report from Christian Aid finding that climate-related disasters caused more than $122 billion in economic loss worldwide in 2025[iv]. These events, which included storms, droughts, wildfires, and floods took a horrific toll; the most expensive event was found to be the California wildfire which caused approximately $60 billion in damages and killed more than 400 people. Alongside this, natural disasters are creating 'uninsurable' areas, regions where spiralling costs and increased frequency of climate-related risks make them financially unviable[v].

Last year the WEF cautioned that firms which fail to address climate risks now face substantial financial losses. Businesses that delay could see up to 7% of annual earnings wiped out by 2035, an impact the WEF argues is akin to COVID-19-level disruptions every two years[vi].

To tackle risk, climate adaptation (adjusting to both current and anticipated risks of climate related events) is crucial, with common adaptation actions including:

- Infrastructural Adaptation: Building seawalls, flood defences, and resilient infrastructure to withstand extreme weather events.
- Nature-Based Solutions: Restoring ecosystems, such as wetlands and mangroves, to enhance natural resilience against climate impacts.
- Behavioural Changes: Adjusting agricultural practices, such as changing crop varieties or planting schedules, to cope with changing climate conditions.
- Institutional Measures: Developing policies and frameworks that support adaptation efforts at local, national, and international levels.

The benefits for business are significant- research published by the Alliance of CEO Climate Leaders found that every dollar invested in climate adaptation and resilience can generate up to $19 in avoided losses.

Finance flows are presently lacking

Climate adaptation and resilience are increasingly recognised as essential and formed a key part of recent COP30 discussions. The UN Environment Programme (UNEP) estimates that developing countries will need between $310bn and $365bn per year by 2035 to adapt to climate impacts. However, current international public flows are far below this, falling from $28bn in 2022 to $26bn in 2023.

COP30 in December last year concluded with an agreement to triple adaptation finance specifically- raising the target to $120bn per year as part of a broader $300bn per year climate finance goal agreed at COP29. Additionally, COP30 saw nations adopt a new global set of 59 adaptation indicators.

Why 2026?

COP30 saw adaptation rise up the agenda as countries called for a tripling of adaptation finance by 2035, with $310 billion required annually. Given much of this will fall to the private sector, companies need act now to prioritise adaptation to safeguard resource access, protect infrastructure, and maintain competitiveness. Solutions will often be nature-based, requiring companies to build expertise in ecosystem restoration, water management, and biodiversity strategies.

Clearly climate risk is no longer a future concern, rather it is a present financial reality. As a result, businesses should act strategically- companies that integrate adaptation into their planning now will gain a competitive advantage over those that wait.

2. Green skills in short supply

As businesses confront the skills gap, green talent will be in short supply

2026 is the year organisations finally confront the skills gap standing between ambition and action. As governments tighten environmental regulations and companies accelerate their net zero strategies, demand for green skills is rising faster than supply. Today green skills are no longer confined to niche sustainability teams, instead they're becoming a core competency across industries. From construction and finance to manufacturing, logistics, and technology, the question isn't whether companies need green skills, but how quickly they can acquire them.

The Rise of the "Green Collar" Workforce

The green collar workforce, a term once used mainly for renewable energy jobs, is expanding into new sectors. Construction firms are hiring specialists in low carbon materials, manufacturers are retraining technicians to work with electrified machinery, and logistics companies are upskilling drivers and planners to operate EV fleets and optimise routes for emissions reductions. Even traditionally white-collar sectors are transforming. Finance teams need expertise in climate risk modelling, legal teams must navigate evolving environmental regulations, and crucially, marketing teams are learning to communicate sustainability claims without falling into greenwashing traps.

In addition, the rise of AI is also playing a role in accelerating the demand for green skills. The technology is enabling more sophisticated environmental modelling, emissions tracking, and resource optimisation, these are tools that require skilled operators who understand both the sustainability topic and the data behind it. AI can't close the skills gap and instead risks widening it - companies adopting advanced sustainability tools quickly discover they lack the human expertise to interpret outputs, integrate insights, and drive change.

What This Means for the Environment

The rise of green skills has direct environmental implications. A workforce equipped to design low carbon products, optimise energy use, and manage natural resources more responsibly can accelerate progress toward climate goals. Better trained employees mean fewer compliance failures, more efficient operations, and more credible sustainability reporting.

Perhaps most importantly, green skills help embed environmental thinking into everyday decisions, from how products are sourced to how buildings are heated. This cultural shift is essential for achieving meaningful, long term environmental impact.

Why 2026?

In 2026, green skills are becoming the new professional currency. They're reshaping industries, redefining career paths, and accelerating the transition to a low carbon economy. Companies that invest in building these capabilities will be better positioned to meet regulatory demands, attract talent, and deliver on their sustainability commitments.

1. Sustainability regulation becomes operational

Major regulation comes online

Whilst last year saw companies preparing for new regulation, 2026 is the year that major pieces of legislation come online. At the forefront is the EU's Carbon Border Adjustment Mechanism (CBAM) which will move from what was previously a reporting phase, to a financial obligation.

The EU has introduced CBAM to tackle 'carbon leakage'- the effect caused by companies based in the EU moving carbon-intensive production abroad. This means that EU products, which are subject to stringent climate regulation can be out-competed by more carbon-intensive imports.

Essentially, CBAM is a system to confirm that a price has been paid for the embedded carbon emissions generated in the production of certain goods imported into the EU. This ensures that both the carbon price of imports is equivalent to the carbon price of domestic production, and that the EU's climate objectives are not undermined[vii].

As of 1st January 2026, CBAM preparation is no longer optional for importers into the EU, and while it initially impacts six sectors (cement, iron and steel, aluminium, fertilisers, electricity and hydrogen), the goal is for it to expand to cover a wealth of products in the future. Therefore, companies must finalise robust emissions-data systems, map supply-chain carbon exposure with precision, and integrate carbon pricing into procurement and sourcing decisions. Those who treat CBAM as a narrow compliance task will be caught off guard. Those who treat it as a core strategic variable will be better positioned in a carbon-constrained global market.

Critics say that it will drive up costs and restrict trade particularly with regards to developing countries. However, proponents say it will cause exporting countries to consider their own carbon pricing. Known as the 'Brussels Effect', this is the idea that EU regulation is exported through market mechanisms and can be used to model regulation in countries outside of the EU.

Why 2026?

This is the year that major regulation comes into play, moving from a testing base to having real-world implications. Companies can no longer sit back and wait, 2026 is the year where action must be taken, additionally whilst CBAM currently touches goods in six specific sectors within the EU, expect the legislation to expand its reach into further product areas and see replication in additional regions.

References

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