EUROPEAN
RENTAL
ASSOCIATION



HANDBOOK ON SUSTAINABILITY IN RENTAL

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1. INTRODUCTION

Sustainability is a critical topic for most business sectors today and is firmly on the agenda for the majority of boards. Yet the proliferation of legislation and voluntary standards, together with the complexity of subjects such as climate change, can make it a challenging area to engage with. Companies and managers are faced with an increasing challenge to both keep abreast of their obligations, as well as identify opportunities for growth and value creation as the transition economy emerges.

This challenge is particularly acute in the **equipment rental industry**. The industry is in the process of **energy transition and decarbonisation** while grappling with the challenges of immature energy systems and uncertainties around future technology, economics and regulation. In addition, the equipment rental industry sits downstream from extensive **global supply chains** which bring their own issues in supplier management, whether in human rights, sustainable resource extraction or other areas of responsible business conduct.

For forward-thinking companies, however, the opportunities of sustainability can be even greater than the challenges. When clients and regulators are demanding greater transparency and action, it is the early adopters and fast followers who are best able to respond, reduce compliance risk and position themselves to secure new business with major customers. At the same time, these companies build sustainability credentials that satisfy investors that are increasingly driven by sustainability, as well as helping them to engage with and retain a more productive workforce.

Furthermore, the equipment rental model itself is inherently a more **sustainable business model** than the "owner-operator" model, offering substantial efficiency savings by better utilising valuable equipment assets. This is a fact that can be leveraged by forward-thinking rental companies to further build and communicate their sustainable credentials. Indeed, the **EU's Circular Economy** Action Plan[1] specifically aims to encourage and incentivise the product-as-a-service business model.

There are also clear opportunities for rental companies to further develop their business models, and to support customers who require new services in order to improve sustainability. For example, rental companies may be able to advise customers on integrating electric equipment into their work programme to allow recharging, or to provide charging facilities or access to biofuels as additional services.

In the light of these trends and opportunities in the equipment rental industry, this report was commissioned by the **European Rental Association (ERA)** to assist parties in the equipment rental sector to engage further with the sustainability agenda, no matter what their scale. It draws together a range of accessible best practice to help equipment manufacturers, rental companies, and others active in the European equipment rental sector reach greater levels of maturity and unlock the value of sustainability on a practical level – for themselves, for their clients, and for the wider world.



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This report provides a practical guide for European rental companies on the sustainability issues that are relevant to them. The following Executive Summary provides a summary of the key points from the report. Readers seeking a more detailed treatment of the topics should refer to the relevant chapters within the report, which also provide references and signposting to useful external resources.

There are three key 'macro-trends' that are driving the sustainability issues faced by the European rental market:

1. Net Zero: The topic of Net Zero refers to the **aim of eliminating most greenhouse gas emissions from human activities**, with those that remain balanced by processes which lock up carbon such as carbon sequestration and carbon capture and storage (CCS). Generally, it is accepted that Net Zero plans should aim to follow a carbon reduction trajectory that limits global warming to a maximum of 1.5°C by 2050 versus pre-industrial temperatures. The Net Zero agenda is driving governments and businesses to reduce their greenhouse gas emissions through initiatives such as setting science-based reduction targets, encouraging clean electricity generation, and promoting the electrification of transport and use of biofuels in sectors that are difficult to electrify.

2. Circular Economy and Zero Waste: While the topics of Circular Economy and Zero Waste have received less attention than Net Zero, they are important sustainability topics in their own right. The Circular Economy and Zero Waste agendas are closely connected with each other, as they both refer to economic and production systems that keep materials in valuable use, rather than disposing of them. Circularity considers the **re-use** of materials and products, aiming to keep these items in continuous higher value usage rather than 'down-cycling' them to lower value stages. Zero Waste refers to systems that do not generate waste, perhaps by re-using packaging or by products having **sustainable end-of-life** plans whereby manufacturers accept them back for recycling. Circular Economy and Zero Waste are emerging trends that feature in upcoming regulation like the **EU CSRD** (see Regulation section) and manifest themselves in the rental industry through topics like **equipment reconditioning and remanufacturing**.

3. Social and Workforce Sustainability: Social sustainability is a particularly important topic for European rental companies, as **workforce and staffing** issues are a recurring challenge for the industry. Many companies find that **attracting and retaining good workers** is difficult (specific issues are discussed in Chapter 3). Trends such as **Equality, Diversity and Inclusion (EDI)** are demanding continued focus from companies on how they manage their internal workforce while increasingly stringent **Due Diligence legislation** is also extending the remit of their human rights obligations in the wider value chain.

A key result and proliferator of the three macro-trends is the European regulatory environment for sustainability and CSR matters, which is going through an unprecedented shift through a raft of new European Union (EU) legislation, most notably the upcoming **Corporate Sustainability Reporting Directive (CSRD)** and the proposed **Corporate Sustainability Due Diligence Directive (CSDDD)**. While these directives are expected to be directly applicable to larger organisations such as those with 250+ employees, they will also indirectly impact smaller rental organisations who sit in the supply chain of larger companies.

The provisions of CSRD are focused on **sustainability data and reporting**, covering a wide range of environmental, social and governance topics that companies in scope must disclose, including:



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1. **Climate Change**
2. **Pollution**
3. **Water & Marine Resources**
4. **Biodiversity & Ecosystems**
5. **Resource Use & Circular Economy**
6. **Own Workforce**
7. **Workers in the Value Chain**
8. **Affected Communities**
9. **Consumers and End Consumers**
10. **Business Conduct**

CSDDD in contrast is focussed on the process of **due diligence** including potential and actual **Environmental and Human Rights** violations in **company operations or wider value chains**, and ensuring that companies are managing risk assessment, prevention, mitigation and remediation in accordance with recognised good practice.

CSRD is particularly important for European rental companies because of its imminent implementation as well as its significant breadth and depth of coverage. Larger companies will be required to report in 2025, and smaller companies (and, in some cases, non-European companies with European operations) will be in scope in the following few years. Companies may also find a number of novel aspects in the legislation challenging, such as the requirement to consider **'double materiality'**. This means companies must address both their sustainability risk factors (such as exposure to ESG issues) and also their sustainability impacts on the external world (such as the effects of supply chain waste and pollution).
There are also other areas of EU legislation which are potentially relevant to rental companies, such as **regulation of hazardous chemicals (REACH)**, forthcoming legislation around the sustainability of **batteries**, and legislation to encourage the uptake of **low-carbon transport**. These are discussed briefly in the relevant chapter, although rental companies are likely to be less affected by these laws than equipment manufacturers.

The upcoming EU legislation will build on or replace a number of national laws such as the French Devoir de Vigilance and the German Supply Chain Due Diligence Act (LkSG). Other national legislation, such as the creation and enforcement of low-emission and ultra-low emission zones (ULEZ), is more locally relevant and can have significant impacts on rental companies operating in particular regions or cities.

As a result of these macro-trends and regulatory drivers, there are a number of practical sustainability topics that European rental companies should consider. These include:

- **Customer Requirements.** Customer concerns, priorities and demands are evolving in response to the changing sustainability agenda. Some of these will represent challenges to rental companies, while others may offer opportunities to provide new or additional equipment, or to differentiate through sustainable practices. Rental company customers can range from large construction companies to individuals carrying out work on their homes, and their priorities can vary accordingly. Rental companies serving larger customers are advised to be aware of the increased need for **operational and supply chain transparency**, and prepare for customer **requests for sustainability data** and information as part of due diligence and CSR reporting requirements. Larger customers will also increasingly demand **greater sustainability credentials, commitments and performance** by their suppliers. This is likely to be embedded into their procurement processes, and rental companies may find it helpful to obtain various **certification schemes** to demonstrate their sustainability efforts, be able to demonstrate commitments (such as carbon reduction targets) and provide evidence of improved performance on CSR matters.



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- **Asset Purchasing.** The decision to purchase new assets is a critical one for rental companies, as equipment must not only earn the projected income, it must also meet lifespan, reliability and utilisation assumptions in order to be profitable. Many rental companies are finding that the landscape of asset purchasing has become complicated by the introduction of new technologies such as battery-electric equipment, which has a different profile of costs and benefits within its **total cost of ownership (TCO)** compared to diesel or petrol equipment. There are a number of key considerations in decision-making for sustainable asset purchasing, such as manufacturer and supply chain transparency and trust, standardisation, and equipment lifecycles. There are a number of useful tools available to support these decisions, such as the **ERA's TCO calculator**. 'Remanufacturing' is also becoming an increasingly viable option for end-of-life equipment. The equipment is taken back by the manufacturer, if it meets certain specifications, and can then be restored to 'as new' condition. Rental companies could consider working with manufacturers who offer these kinds of options in order to improve the circularity of equipment, as well as potentially benefitting from the reduced carbon footprint of a remanufactured item.

- **Telematics.** The growth of telematics and wider remote monitoring and control systems is a significant opportunity for rental companies, both from a sustainability perspective as well as for broader asset management and customer success. Telematics systems can not only spatially **locate an equipment asset** (such as via GPS systems), but can also provide detailed **information about the usage, performance or health of the equipment**. This is especially important when customers begin to use new equipment which they are less familiar with, such as when electric equipment is substituted for diesel-powered equipment. In this situation, customers may need to be reminded to recharge equipment, or given feedback about how to use it more effectively. Notably, telematics can be used to **improve vehicle and mobile equipment productivity**, therefore saving carbon emissions.

- **Environmental Controls.** While most rental companies will be aware of their obligations in respect of pollution control, environmental stewardship is becoming an increasingly important topic. Rental companies may need to be aware of environmental controls, either because of the equipment they hire or because of their own depots and operations. Equipment may need to be hired out with pollution control measures in place (spill kits, drip trays, bunded or double-skinned tanks or environmentally-friendly hydraulic fluids), especially if customers are using the equipment in environmentally sensitive areas such as near watercourses. Air emissions are especially relevant in urban areas or where **Ultra-Low Emission Zones (ULEZ)** are in place. The concept of the 'hierarchy of waste' is a helpful tool which can aid rental companies within the depots. The concept encourages people to look for uses of materials and products that do not result in degradation or the generation of waste, ideally by re-thinking the process or organisation to ensure that a waste does not arise in the first place.

- **Vehicles, Equipment and Site Power Options.** There are a number of different fuelling and power options for vehicles and equipment used and offered by European rental companies. Sustainable solutions such as **biofuels, hydrogen** and **battery electric solutions** offer various unique benefits and challenges.

Biofuels are an accessible solution to rental companies looking to reduce their emissions, as many commercially-available biofuels can be blended or 'dropped in' to diesel. However, in order to offer rigorous, sustainable emission reductions, biofuels need to be accompanied by detailed information about their feedstock and proof they have been grown in a way that does not degrade land, destroy habitats or compete with food production. EU legislation is becoming increasingly prescriptive in this regard, and now distinguishes between **different generations of biofuels**.



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Hydrogen has become a high-profile alternative to fossil fuels and has attracted significant public investment, but is not yet at a technically or economically viable stage for large-scale adoption by rental companies. Hydrogen can be used as a **zero-emission energy source**, but suffers from a number of drawbacks due to the challenges in generating hydrogen in a sustainable way, storing and distributing it. Hydrogen may, however, offer a viable solution for zero emission equipment working on remote sites without charging infrastructure or in heavy applications where batteries cannot currently complete the required duty cycle.

Battery-electric equipment is increasingly mature and for some applications this technology is widely available. Small battery-electric excavators for example are offered by many manufacturers, while larger equipment still tends to be diesel-powered (although, there are increasingly viable options being offered by manufacturers such as Volvo). The use of battery-electric equipment presents additional considerations to rental company customers, who may have to consider aspects such as **grid connections** and work scheduling more carefully and earlier in the work programme than previously. Rental companies offering electric equipment should expect to advise customers of how to integrate the equipment most effectively into their programmes.

The use of batteries has also raised questions about the **sustainability of batteries and battery use**, despite the potential benefits offered by electrification. Rental companies should be aware of the sustainability of electricity used to charge batteries – in some countries, electricity may be nearly zero carbon, while other countries still have significant carbon intensity in their electricity grid due to generation methods such as coal-fired power stations (for example, Poland has a carbon intensity of over 630g of CO2 per kWh of electricity, which is 14 times that of Sweden). Batteries are also raw-material intensive and use a number of rare minerals, some of which are typically sourced from unstable regions, so good procurement practice is recommended especially in the light of the proposed **Corporate Sustainability Due Diligence Directive (CSDDD)** and the **EU Batteries Regulation**.

Governance and Anti-Bribery and Corruption (ABC) considerations remain important for European rental companies. ABC is most relevant for rental companies doing business outside the EU, especially in countries where public institutions are less well-established, or where there are traditions of bribes being paid as part of business or regulation. National and forthcoming EU legislation could seriously penalise companies found to have breached ABC rules, and rental companies are therefore advised their staff should maintain a good level of awareness of the rules.

Cybersecurity is also an important consideration considering trends such as remote working, supply chain integration and electronic banking, and also specific rental sector risks such as the growth of smart machines and telematics, with some professionals identifying the risk of internet-connected machinery being hacked, instructed to perform dangerous acts, or frozen with ransomware. Good practice in this space involves working with OEMs to ensure that equipment security specifications are rigorous, ensuring that each rental business is aware of its legal obligations (such as under the General Data Protection Regulation, GDPR[2]), considering implementing a security standard such as **ISO 27001**, and obtaining **insurance** that covers cybersecurity incidents. The ERA has provided comprehensive guidance on cybersecurity in our report 'A guide to cybersecurity leading practice in the equipment rental industry'.

Social issues are an important component to any company's sustainability strategy, and especially in the rental sector where the workforce is critical to delivering value to customers. The social, workforce and people theme covers a range of topics, including sickness, **health and safety**, **diversity** and discrimination (disabled, gender, minority, aged workers). Aspects such as health, safety and **wellbeing policies** and implementation, EDI (equality, diversity and inclusion) and staff training on sustainability are increasingly expected by clients in order to satisfy **due diligence requirements**.



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Rental companies consistently find that **attracting and retaining staff** is one of their more difficult tasks. Companies report that the rental industry (and wider construction sector) is not always seen as an attractive place to work, and that companies must consider how they can show it is an innovative and sustainable industry with good long-term prospects for employees. A high level of staff turnover can affect the morale of remaining staff and damage team cohesion, as well as creating burdens in onboarding and training new staff and affecting the customer experience.

There are a number of key ways in which rental companies can aim to improve their staff recruitment and retention. Some rental companies for example have reported that they have seen a good response from both existing and new staff after investing in their physical office and workshop facilities. Modern and well-designed facilities make staff more productive, but also emphasise that a company cares about their staff and sees them as a valuable part of the company identity. Further guidance will be forthcoming from the ERA, which is running a project titled ***'Attracting and Retaining People in Rental'***, which we expect to be finalised in the first half of 2024.

There are also specific ways in which companies can target and support certain groups of employees, and meet EDI targets while also improving staff satisfaction and retention. Some rental companies have found that creating and implementing a **"People Charter"** focused on how a company will support their workforce and ensure that they feel safe, respected and positive about working for that company is a positive first step for improving EDI and employee experience.

Key actions for the rental sector to take to improve workplace **health, safety and wellbeing**, include:

- Ensuring risk assessments are current and comprehensive, and that control or mitigation actions are being implemented;
- Following the hierarchy of risk control – elimination; substitution; engineering controls; administrative controls; Personal Protective Equipment (PPE);
- Being aware of the ERA's ongoing work on Occupational Health and Safety, for which a new ERA project is due to be delivered by the end of 2024.

Providing training opportunities for rental company staff is both important for staff performance and also for good employee retention. At a minimum, rental companies should:

- Understand the skills required for each employee role;
- Provide suitable training to ensure that employees are competent in their roles;
- Record training undertaken (especially in key topics such as environmental protection, health & safety and anti-bribery & corruption) and expect to provide examples of this to major customers, if requested.

With regards to sustainability, new challenges around sustainability mean that customers are likely to have questions about topics such as battery life, charging times, and even the availability of certified green electricity tariffs.

There are a wide range of **sustainability standards and certifications** that rental companies can choose to align to in order to demonstrate their sustainable credentials and meet customer requirements. Many of the better-known schemes and frameworks are applicable across multiple industries and are well-recognised by clients and the wider public, including:



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- **CDP (previously known as the Carbon Disclosure Project):** a scheme and questionnaire-based tool which allows companies to report their carbon footprints (and some other specific sustainability information, such as carbon reduction plans and water consumption) onto a public platform, and optionally receive a CDP sustainability score from A to D.
- **SBTi (Science Based Targets Initiative):** a standard for companies to set validated science-based targets for emissions reduction targets and achieving Net Zero.
- **GRI (Global Reporting Initiative):** one of the most widely used and best-known standards in the world for corporate sustainability reporting, providing a framework for disclosure across different sustainability topics along with suggested KPIs and their definitions.
- **International Standards Organisation (ISO):** an organisation providing standards across a range of topics including sustainability—relevant standards such as ISO14001, a guideline for implementing site Environmental Management Systems.

The rental sector and wider construction industry also has access to **specific sustainability schemes** which can help demonstrate rental companies' commitments to sustainability, such as:

- **The Fleet Operators Recognition Scheme:** covering safety and quality of fleet management as well as sustainability.
- **CESAR Emissions Compliance Verification:** a process to show the EU Stage emissions class of construction equipment.
- **SafeHire:** a voluntary scheme for European rental companies set up by the Hire Association Europe to demonstrate the quality of their offering and engage in continuous improvement.
- **Supply Chain Sustainability School (SCSS) Plant Charter:** a public declaration that construction companies can sign up to in order to demonstrate their commitment to addressing climate change.

Overall, sustainability is a wide-ranging and complex area, with a dynamic regulatory environment and constantly changing stakeholder expectations. This report has shown however that there are a number of key practical considerations that rental companies can focus their efforts on to not only respond to changing requirements, but also maximise their **opportunity to drive additional performance and growth through sustainability.**



3. SUSTAINABILITY MACRO-TRENDS

The theme of sustainability is composed of many major topics and issues. Currently, the trends of **Net Zero**, **Circular Economy** and **Zero Waste** are particularly high profile, especially in the EU, and are likely to remain so for the coming decade. Social and Workforce sustainability is also a key trend, with increasing social focus on diversity, equity and inclusion, alongside rising standards on human rights due diligence, especially in extended supply chains.

3.1 Net Zero

Net Zero refers to an aim for humankind's greenhouse gas emissions to be effectively brought to zero by 2050. It is expected that achieving Net Zero by 2050 could avoid global temperature rises of greater than 1.5°C above pre-industrial temperatures, in line with the aims of the **Paris Agreement** of 2015, avoiding the most severe impacts of climate change.

Net Zero does not mean that all greenhouse gas emissions will be stopped, but rather that they will be very significantly cut and human emissions will be balanced by carbon 'sinks' that capture and lock up carbon for the long term.

The timing and profiling of Net Zero is important, because it is not just the annual emissions which drive climate change but rather the cumulative emissions over decades and centuries. This means that increased emissions over the next few years will mean cuts will need to be made more intensively in later years.

The important aspects of Net Zero are:

2040-2050 Target Date

A global balance of emissions and carbon capture, so emissions "net off" to zero after emissions reductions and carbon offsets are compared to the remaining emissions footprint. This must be achieved by latest 2050, and so many companies and countries are setting **more ambitious target dates, such as 2040**.

Science Based Targets

Companies are being encouraged to set Net Zero "science-based targets", which set a standard for the reduction of a company's entire value chain emissions, including those produced by their own processes **(Scope 1)**, purchased electricity and heat **(Scope 2)**, and generated by suppliers, partners and end-users **(Scope 3)**. Most companies will require deep decarbonisation of 90% to reach Net Zero per the Science Based Targets Initiative (SBTi) standard.

Setting both near-and long-term targets

Companies aiming for Net Zero are required to set both near- and long-term science-based targets. This means making rapid emissions cuts now (within the next 5-10 years), thereby roughly halving emissions by 2030. In this way, the targets aim to ensure the right trajectory to meet **Net Zero by 2050**, when organisations should produce close to zero emissions and will neutralise any residual emissions.

Net Zero Claims

A company is only considered to have reached Net Zero when it has achieved its long-term science-based target. Most companies are required to reduce emissions by least 90% by 2050 and must use carbon removals to neutralise any remaining emissions. These removals must meet specific requirements, such as **true additionality** (ensuring that the offset project actually results in reduced emissions) and guarding against **spillover effects** that would mean emissions are simply displaced elsewhere in the economy.

3. SUSTAINABILITY MACRO-TRENDS

Offsetting Guidelines (beyond value chain mitigation)

The Science Based Targets Initiative (www.sciencebasedtargets.org) recommends that companies to go further by making investments outside their science-based targets to help mitigate climate change. However, these investments should be in addition to deep emission cuts, not instead of them. Companies should follow the mitigation hierarchy, committing to reduce their value chain emissions and cannot substitute offsetting for actual carbon reduction at source. High quality **incremental contributions beyond a company's value chain** are not mandatory but are encouraged. One example could be the installation of electric vehicle charging points, which are then available to users outside the rental company's direct fleet and contribute to reducing wider vehicle emissions in addition to a company's own direct emissions.

Overall, Net Zero is driven by a need for aligned emissions reduction and neutralisation targets that limit global temperature rises to 1.5°C above pre-industrial levels, which the **IPCC report** advises would avoid the most severe effects of climate change. For companies this involves committing to science-based carbon reduction targets aiming for deep decarbonisation of their operations and wider value chain by latest 2050, including interim short-term targets and reporting.

3.2 Circularity and Zero Waste

Zero Waste is a concept similar to Net Zero, but applies to waste instead of carbon emissions. Under Zero Waste, an organisation or production system is designed to generate no wastes or residues. Companies aiming for Zero Waste follow a set of principles that encourage **redesigning material and resource life cycles** so that all products and materials, whether demanded by a customer or not, are reused. This approach therefore requires **waste prevention**, rather than end-of-pipe waste management, to ensure that wastes do not arise in the first place (rather than finding uses for wastes already in existence). It is therefore a whole-system approach, aiming for fundamental changes in the way materials flow through, and are valued by, society. Zero Waste and circularity therefore go beyond reducing, reusing and recycling, by fundamentally **restructuring production and distribution systems to reduce waste** and the need for primary raw material inputs. It is an important consideration for rental companies, as some construction customers may have set, or will be in the process of setting, Zero Waste or circularity targets

The rental industry inherently supports its customers in greater circularity by **removing the need** to **purchase assets**, **removing their responsibility for repair**, **refurbishment** and **end of life treatment**. In addition to assisting customers to meet their own Zero Waste goals, many rental companies are now considering **requiring their suppliers to have Zero Waste goals** themselves.



3. SUSTAINABILITY MACRO-TRENDS

Developments such as the focus on construction in the **EU's Circular Economy Action Plan**[3] mean that rental companies will increasingly need to provide customers with equipment that supports a Zero Waste construction site. This could mean:

- Providing equipment that can manage excavation arisings, such as stone cleaning machinery and trommels, so that arisings meet specifications to be re-used either on site or elsewhere.
- Providing equipment that can treat or process waste, especially during demolition or refurbishments. For example, machines that can quickly clean and straighten rebar so it can be re-used in a secondary process.
- Ensuring that deliveries of equipment and consumables are made without any packaging that cannot be efficiently recycled.
- Providing equipment that can carry out excavation or demolition in a way that renders the arisings suitable for re-use. For example, equipment that can systematically target sections of a building during demolition, rather than reducing an entire building to unsorted rubble, may be beneficial.

3.3 Social and Workforce

Social issues have become an increasingly important part of the sustainability agenda, as was recognised by the inclusion of a substantial number of key metrics in the **ERA's Sustainability KPI Framework**[4] which cover topics such as Equality, Diversity and Inclusion (EDI), employee engagement and satisfaction, health and safety, training and fair working practices.

Some aspects within social sustainability are of particular importance to larger rental companies, who are compelled to report on certain metrics by **national legislation** (see the UK's Gender Pay Gap legislation for example, or proposals to introduce a 'senior index' report in France). However, these rules are not generally applicable to SMEs. Similarly, standards for gender diversity on boards of large listed companies may seem irrelevant to smaller rental companies.

However, the rental industry is extremely reliant on a dedicated, experienced workforce which can provide high levels of customer service and support at short notice, and so workforce considerations are highly relevant to rental companies of all sizes. The rental sector, as well as the wider construction sector, has faced **labour shortages** for many years and with the wider labour force increasingly seeking benefits from their work beyond a simple pay packet [5], it is important for the rental industry to position itself as an **attractive, sustainable, and long-term employer**. Issues such as equality, diversity and inclusion (EDI) are also becoming more important to a workforce composed of younger people, with research showing that 83% of Generation Z (now aged between late-teens and late-20's) consider EDI in their choice of employer[6]. Workers also now have higher expectations around benefits such as flexible and remote working, clear career progression and the quality of their working environment. Campaigns such as the **ERA's *'Working in Rental'***[7] initiative can help promote the sector as an attractive place to work.

A well-trained, motivated and competent workforce is even more vital in an industry moving towards greater sustainability, and supporting construction customers with topics such as electrification. Similarly, as equipment becomes more technically complex and digitised, new skills are needed in workshop technicians and fitters, as well as customer-facing staff and fleet managers who may need to understand digital construction sites or interpret telematics data in the so-called industry of **'Construction 4.0'**. [8]

While social sustainability legislation has tended to focus on setting minimum standards for the welfare of workers (for example, health and safety or minimum wage legislation), it is starting to develop in the wider **sustainability reporting** and **supply-chain due diligence** sphere. Rental companies (including SMEs) should therefore be aware of the requirements likely to be introduced by legislation such as CSRD (profiled later in this report in the 'Legislation' section). CSRD will require substantial disclosures and management in its social sections on topics such as adequate wages, collective bargaining, social protection and work-life balance. While this legislation directly impacts large and companies listed on a public stock exchange, it is likely to be flowed down to smaller, unlisted companies where they work with customers who are in-scope.



4. REGULATORY FRAMEWORK

Sustainability regulations have expanded significantly in recent years, and this trend is set to continue over the coming decade. Major pieces of legislation such as the **EU Corporate Sustainable Reporting Directive (CSRD)**[9] and **Corporate Due Diligence Directive (CSDDD)**[10] will not only intensify the need for large companies to understand, manage and disclose the impacts of their operations and supply chains, but will affect smaller companies as well, both inside and outside the EU. The **impacts of this legislation can be direct**, by bringing rental companies directly into their scope, or **indirect**, by requiring larger customers to comply, in which case these customers place reporting or compliance burdens onto rental companies in their supply chain.

This all makes it increasingly **important for rental companies of all sizes (including SMEs) to have a reasonable understanding of current and upcoming sustainability legislation**. While such legislation has previously been the preserve of specialist HSEQ (health, safety, environment and quality) experts or compliance officers, the breadth and depth of regulations such as CSRD and CSDDD requires co-ordination across companies. For example, both reporting and due diligence rules will require much greater control over and visibility of companies supply chains than has previously been seen.

The following table summarises when key legislation is likely to come into force for companies of different sizes. This is then followed by a short explanation of key legislation, together with more detailed explanations of topics of particular relevance to the equipment rental sector.

4. REGULATORY FRAMEWORK

Applicability of EU Legislation		
Legislation	**Large rental companies**	**Small or medium rental companies**
Non-Financial Reporting Directive (NFRD)	Already in force for large companies	Not in scope
EU Taxonomy	Already in force for large companies	SMEs in scope of CSRD must comply from 2026 (see below)
Corporate Sustainability Reporting Directive (CSRD)	From 2024, if previously covered by NFRD (listed companies with 500+ employees) From 2025 if listed on regulated EU markets or meeting two of the following criteria: • 250+ employees • €40m+ revenue • €20m+ balance sheet From 2028 for non-EU companies with net turnover of €150m+ and at least one subsidiary or branch in the EU	From 2026, if listed on regulated EU markets and meeting two of the following criteria: • Balance sheet total of €4m+ • Net turnover of €8m+ • Average of 50+ employees during the financial year Other SMEs are not directly in scope, but are likely to be indirectly affected via large customers (such as data requirements to support Scope 3 emissions reporting)
Corporate Sustainability Due Diligence Directive (CSDDD) (predicted[11])	From 2027, EU companies of substantial size and economic power (proposed thresholds are 1000+ employees and €150m+ in net turnover worldwide) Between 2027-28 other large EU companies (proposed thresholds are 500+ employees and €150m+ in net turnover worldwide) From 2029, EU companies operating in defined high impact sectors with 250+ employees and a net turnover of €40m+ worldwide, plus non-EU companies in these sectors with a net EU-wide turnover of €40m+	Not directly in scope, but may be indirectly affected via large customers

4.1 EU TAXONOMY

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The EU Taxonomy is a classification system establishing a list of environmentally sustainable economic activities. It is designed to play an important role in helping the EU to scale up sustainable investment and implement the European Green Deal. The Taxonomy provides companies, investors and policymakers with appropriate definitions for which **economic activities can be considered environmentally sustainable**.

Reporting under the EU Taxonomy classification system applies to companies subject to the NFRD or the CSRD. Based on current rules, large listed companies (more than 500 employees) will have to disclose to what extent the activities they carry out meet the criteria, however requirements on reporting and disclosure as expanded significantly under CSRD. Reporting under the EU Taxonomy may have benefits not only by **demonstrating a company's sustainability contribution** (by disclosing how much economic activity is linked to EU environmental criteria), but also in terms of unlocking **greater access to Green Financing**. Concerned companies will have to make mandatory disclosures in their non-financial reporting (annual report or sustainability report), on the taxonomy alignment of three KPIs: **turnover**; **capital expenditure**; **operation expenditure**. [12]

Companies should be aware that the rental sector has been included in the Taxonomy delegated act as a sector activity substantially contributing to the transition to circular economy. **Investors and rental companies may therefore be able to include the rental part of portfolio under Taxonomy** alignment. The ERA continues to lobby the EU to broaden the product scope of the rental model being recognized in EU taxonomy. [13]



4.2 EU NON-FINANCIAL REPORTING DIRECTIVE (NFRD)

The NFRD currently requires certain large companies to disclose information about the way they **assess and manage social and environmental issues**, in order to assist investors, civil society organisations, consumers, policymakers and other stakeholders evaluate the non-financial performance of large companies. This scrutiny is intended to encourage these companies to develop a responsible approach to business.

NFRD defines rules on the disclosure of non-financial and diversity information by large companies (currently large public-interest companies with more than 500 employees). This coverage currently extends to approximately 11,700 large companies and groups across the EU, and includes listed companies, banks, insurance companies and other companies designated by national authorities as public interest entities.

Under NFRD, large companies must publicly disclose information related to environmental matters, social matters and treatment of employees, respect for human rights, anti-corruption and bribery and diversity on company boards (in terms of age, gender, educational and professional background).

In 2024, the Non-Financial Reporting Directive will be replaced in the EU by the significantly more comprehensive CSRD (see below). It will **continue to have effect in countries not covered by CSRD, such as the UK**, where it was transposed through the Companies, Partnerships and Groups (Accounts and Non-Financial Reporting) Regulations 2016 and the Companies Act 2006 (as amended). The UK is also considering the introduction of its own **Sustainability Disclosure Standards (SDR)**.[14]



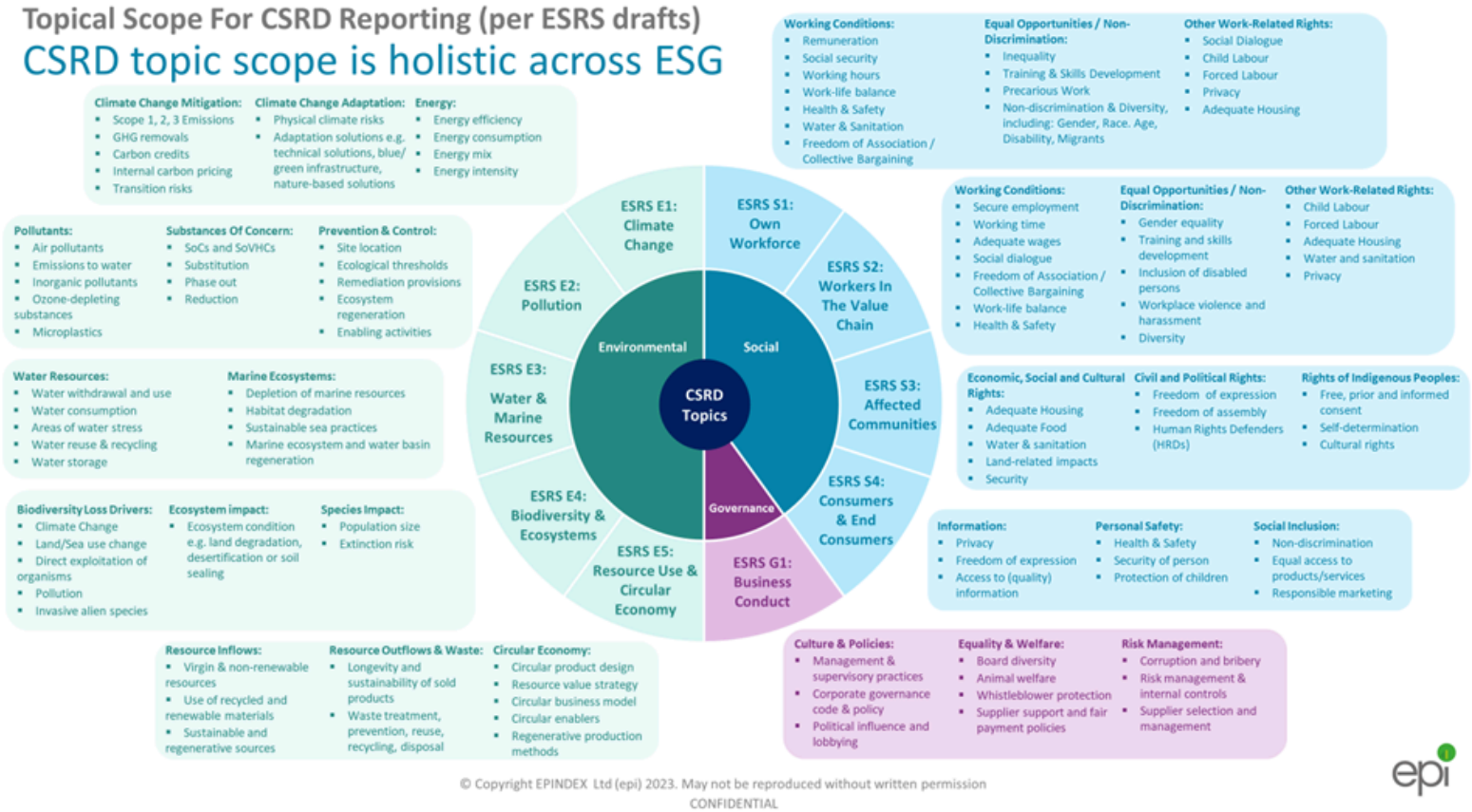
4.3 EU CORPORATE SUSTAINABILITY REPORTING DIRECTIVE (CSRD)

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On 5 January 2023, the EU's Corporate Sustainability Reporting Directive (CSRD) entered into force. The new rules aim to ensure that all stakeholders have **access to the information** they need to assess risks arising from sustainability issues across 10 different topical areas:

1. **Climate Change**
2. **Pollution**
3. **Water & Marine Resources**
4. **Biodiversity & Ecosystems**
5. **Resource Use & Circular Economy**
6. **Own Workforce**
7. **Workers in the Value Chain**
8. **Affected Communities**
9. **Consumers and End Consumers**
10. **Business Conduct**

The first companies will have to apply the new rules for the first time covering financial year 2024, with reports published in 2025, and will have to follow the **European Sustainability Reporting Standards (ESRS)**, which are still passing through draft iterations as of late 2023, however the current drafts suggest a very comprehensive topical scope:



CSRD may also introduce mandatory rules for companies to have sustainability **information audited by a third party to a level of limited or even reasonable assurance**. In addition, the CSRD provides rules governing the digitalisation of sustainability information in company reports, such as mandating that reports are digitally tagged and machine readable.

4.3 EU CORPORATE SUSTAINABILITY REPORTING DIRECTIVE (CSRD)

Aside from its comprehensive topical scope, CSRD differs from other reporting standards such as the recent ISSB rules by requiring companies to not only report on how sustainability issues, such as climate change, impact their business but also how their operations in turn affect people and planet – a unique principle called 'double materiality'. More information on double materiality is provided below, as this is a key concept in CSRD and one which rental companies are finding a challenging topic in their preparations for CSRD compliance.

The coverage of CSRD is extensive. Almost 50,000 companies are expected to be impacted by CSRD, covering some three quarters of business in the European Economic Area as well as a number of businesses based outside Europe.

Companies must publish their information in a dedicated section of their company management reports, usually included in their annual report. Current proposals are for CSRD to features mandatory assurance for reporting by an independent assurance service provider against sustainability reporting standards. This is to make sure information is accurate and reliable.

The challenge of collecting data to report on the required KPIs across CSRD's 10 topical areas, to a level of quality, rigour and transparency that can pass external assurance is a significant challenge. However, rental companies that have started to implement the **ERA's Sustainability KPI guidelines** will be well placed to further develop their reporting framework to meet the requirements of this legislation.

Double Materiality

Double materiality is a central concept in CSRD. It refers to the requirement for companies in scope of CSRD to determine which sustainability matters are relevant to them by considering both matters which are significant enough to affect the company, and matters where the company impacts other stakeholders or the wider world. In conducting this assessment, the company is thereby expected to consider both **"financial materiality"** and **"impact materiality"**, hence the term "double materiality".

What threshold makes an issue, risk or opportunity 'material'?
The European Sustainability Reporting Standards (ESRS) Draft [15] states:

- "A sustainability matter is material from an **impact perspective** if it is connected to actual or potential significant impacts by the undertaking on people or the environment over the short-, medium- or long-term." *ESRS para 49*

- "A sustainability matter is material from a **financial perspective** if it triggers or may trigger significant financial effects on undertakings, i.e., it generates or may generate significant risks or opportunities that influence or are likely to influence the future cash flows and therefore the enterprise value of the undertaking in the short-, medium- or long-term, but it is not captured or not yet fully captured by financial reporting at the reporting date." *ESRS para 53*

Through the double materiality assessment, companies are expected to assess sustainability matters and identify material impacts, risks and opportunities on a case-by-case basis. Material topics, which are mandatory to report on, may therefore vary across the rental industry. There is not yet guidance from the EU on objective thresholds that make an issue, risk or opportunity material under either approach.

Are financial and impact materiality separate?

Although the two approaches are separate, there are important areas of overlap and it can be helpful to address both aspects of materiality together at some points.

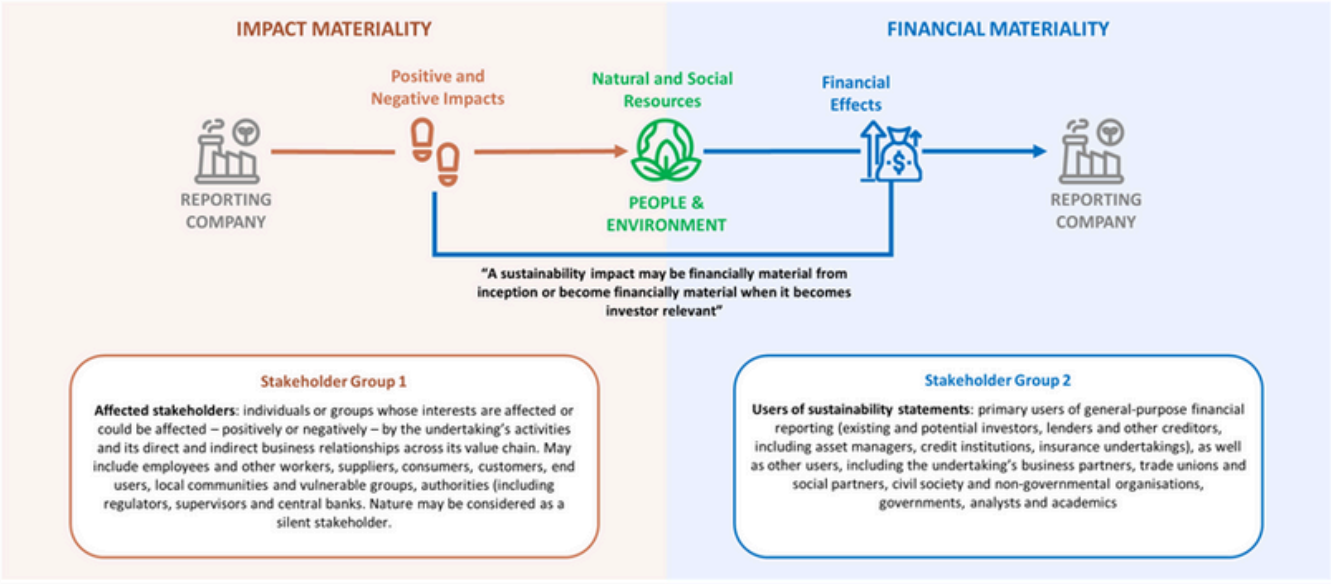
4.3 EU CORPORATE SUSTAINABILITY REPORTING DIRECTIVE (CSRD)

For example, a common issue which is financially material to companies is **carbon pricing**. For example, the EU ETS (Emissions Trading System) was introduced in 2005 and for most of its life was set well below €20/tonne of CO2, limited to specific energy-intensive heavy industry sectors. Further plans could expand carbon pricing significantly to new sectors and companies (see, for example, the EU Carbon Border Adjustment Mechanism or CBAM). Due to this risk of increased compliance cost per tonne of CO2, companies with significant greenhouse gases embodied in their value chains, may view carbon emissions as both a wider societal and environmental impact, as well as a financialrisk that exposes them to the risk of rising future carbon costs.

In another example, a company spills hazardous chemicals into a watercourse. This is would be an **environmental impact**, but could also be a **financially-material risk** if the company were at risk of being prosecuted by a regulator. It can therefore be seen that financial and impact materiality can be considered separately but are often inter-related, with financial materiality representing the 'outside-in' view of company sustainability while impact materiality represents the 'inside-out' view. This logic is shown in the direction of the arrows in the diagram below.

CSRD Double Materiality Assessment Requirements

Per the ESRS guidance, CSRD compliant Double Materiality Assessment generally starts with Impacts and then examines Financial Effects



REFERENCE: Draft ESRS 1 General requirements, p.9-13, p.28 Download (efrag.org)

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Why can double materiality be challenging for companies?

- Lack of familiarity in integrating ESG issues into existing risk management processes
- Lack of existing enterprise risk management (ERM) processes, particularly in SMEs (Small and Medium Enterprises)
- Unclear which issues may be material under either impact or financial materiality, without extensive modelling and analysis of unfamiliar scenarios
- Lack of data or widespread modelling expertise in certain topics, for example physical climate change hazards

4.3 EU CORPORATE SUSTAINABILITY REPORTING DIRECTIVE (CSRD)

Example: What issues are likely to be material to European rental companies?

While this Guide can only provide a general overview of legislation, and is not legal advice, there are certain topics that are highly likely to be material to companies purchasing and renting out construction equipment in Europe.

Impacts

- **Greenhouse Gases and Air Pollution:** Emissions of greenhouse gases and other pollutants to air.
- **Land and Water Pollution:** Actual or potential emissions of wastes or pollutants to water or land, especially REACH or RoHS
- **Supply Chain Issues:** Upstream supply chain impacts relating to climate change, pollution, waste, sustainable resource usage (including contribution to the circular economy), workforces, human rights, community rights, governance issues including Anti-Bribery and Corruption.

Risks

- **Physical Climate Change Risks:** Physical hazards of climate change if the company is especially exposed (e.g. its offices or depots are within an area of high flood risk)
- **Carbon Pricing:** Carbon pricing. As noted above, industries which currently have high emissions are exposed to implementation of wider or stricter carbon pricing rules, such as the proposed EU Carbon Border Adjustment Mechanism (CBAM) which will target imports of materials such as steel, aluminium and hydrogen.

Opportunities

- **Demand for Sustainable Rental Services:** Changing, or additional, client requirements or industry growth due to sustainability factors. For example, the focus on the construction sector and circularity in the EU's Circular Economy Action Plan, which could increase demand for equipment used in site waste management, insulation installation and other specific trades.

Rental companies will find it helpful to engage with the **ERA's Sustainability KPIs Framework** (erarental.org/wp-content/uploads/2023/06/ERA-Sustainability-KPIs-2.0-Guidance-Framework.pdf). This provides rental companies with an extremely clear framework for **selecting relevant KPIs** and sustainability measurements, as well as **guidance on how to implement measurement and reporting** through a business. Adopting the ERA's Sustainability KPI's Framework can therefore assist rental companies accelerating their sustainability measurement and management to take an early lead in complying with the requirements of CSRD.



4.4 EU CORPORATE SUSTAINABILITY DUE DILIGENCE DIRECTIVE (CSDDD)

In February 2022, the European Commission adopted a proposal for a **Corporate Sustainability Due Diligence Directive (CSDDD)**. The proposed directive aims to foster sustainable and responsible corporate behaviour throughout the global value chains of companies within its coverage, recognising that many of these entities will play a vital role in building a sustainable economy and society. Companies will be required to **carry out assessment of their operations and value chains**, identify and, where necessary, prevent, end or mitigate adverse impacts of their activities.

The directive covers a range of sustainability impacts, including human rights, such as forced labour, child labour and workforce wellbeing as well as environmental issues such as climate change, pollution and biodiversity loss. For businesses, these new rules will bring **legal certainty** and a **level playing field across the EU**, while for consumers, investors and other stakeholders they will provide more **transparency**. The CSDDD rules will apply to the following companies and sectors:

EU companies

- **Group 1:** All EU limited liability companies of substantial size and economic power (with 500+ employees and €150 million+ in net turnover worldwide).
- **Group 2:** Other limited liability companies operating in defined high impact sectors, which do not meet both Group 1 thresholds, but have more than 250 employees and a net turnover of €40 million worldwide and more. For these companies, rules will start to apply 2 years later than for Group 1.
- **Non-EU companies:** active in the EU with turnover threshold aligned with Group 1 and 2 generated in the EU. Small and medium-sized enterprises (SMEs) are not directly in the scope of this proposal. This proposal applies to the company's own operations, their subsidiaries and their value chains (direct and indirect established business relationships).

In order to comply with their duties under this directive, companies must:

1. Integrate due diligence into policies
2. Identify actual or potential adverse human rights and environmental impacts
3. Prevent or mitigate potential impacts
4. Bring to an end or minimise actual impacts
5. Establish and maintain a complaints procedure
6. Monitor the effectiveness of the due diligence policy and measures
7. Publicly disclose their efforts on due diligence.

The proposed CSDDD would cover a broad range of Human Rights and Environmental risks:

Human Rights Risks	Environmental Risks
1. Child Labour	1. Mercury (Minamata convention)
2. Forced Labour	2. Waste disposal (Basel convention)
3. Health & Safety	3. POPs (Stockholm convention)
4. Labour Rights	4. Climate Change & Greenhouse Gas (GHG) reduction
5. Discrimination	5. Biodiversity
6. Adequate Wages	6. Air, water, soil pollution
7. Environmental Pollution	7. Ecosystem degradation
8. Land Rights	8. Deforestation
9. Torture/inhumane treatment	9. Waste & hazardous substances
10. Right to life and security	10. Ozone layer depletion
11. Right to privacy	11. UNCLOS (Marine Activities)
12. Freedom of thought and religion	12. Aarhus convention
13. Adequate standard of living	13. Transboundary watercourses
14. Adequate housing for workers	
15. Self-determination	
16. Human trafficking	

4.4 EU CORPORATE SUSTAINABILITY DUE DILIGENCE DIRECTIVE (CSDDD)

The CSDDD is a substantial piece of legislation and will place significant challenges on companies. Those in scope will need to take appropriate measures depending on:

- The severity and likelihood of different impacts they assess;
- The measures available to the company in the specific circumstances;
- The need to set priorities.

National administrative authorities appointed by Member States will be responsible for supervising these new rules and may impose fines in case of non-compliance. In addition, victims will have the opportunity to take **legal action for damages** that could have been avoided had appropriate due diligence measures been in place.

The proposal also introduces directors' duties to set up and oversee the implementation of due diligence and to integrate it into the corporate strategy. While discharging their duty to act in the best interest of the company, directors will need to take into account the human rights, climate change and environmental consequences of their decisions.

Furthermore, under Article 15 of the proposed directive, Group 1 companies will be required to adopt a plan that ensures their business is compatible with limiting global warming to 1.5°C, in line with the Paris Agreement, essentially mandating Net Zero targets and plans for all in scope companies.

A number of similar **national due diligence laws** have already been enacted or are being enacted, with the most notable being the French and German laws as detailed below:



4.5 RELEVANT NATIONAL LAWS

The French 'Devoir de Vigilance' (Duty of Vigilance) [16]

The French Corporate Duty of Vigilance Law, in force since 2017, places a duty on large companies in France to **identify and prevent risks to human rights and the environment** that could occur as a result of their business activities. These activities can include those of the company itself, of their suppliers or subcontractors, as well as subsidiary companies they control. Companies are required to create, implement and disclose vigilance plans for which they can be held accountable. The law is designed to improve the corporate social responsibility programmes of the companies in scope, as well as to aid the victims of any sustainability impacts in achieving justice.

German Supply Chain Due Diligence Act (SCDDA or LkSG in German) [17]

Germany passed a supply chain due diligence act in 2021, requiring companies to comply with new due diligence obligations in regard to their suppliers. These rules also capture foreign companies with German subsidiaries or German branches with more than 1,000 employees in Germany. Companies are required to establish processes to **identify, assess, prevent and remedy violations of human rights** and **the environment in their wider value chain – with the primary focus on Tier 1 suppliers**, but they may also be required to act on issues where they have "substantial knowledge" of potential violations further upstream in the supply chain.

Companies with at least 3,000 employees must comply by 1 January, 2023, and companies with at least 1,000 employees by 1 January 2024. Fines of up to 2% of global annual turnover may be levied at large firms in breach of the act.

Reporting and Due Diligence Summary

It can be seen that both general disclosure and due diligence requirements are becoming significantly tougher in Europe and are likely to have significant impacts on the rental industry.

If a CSRD program has not already been mobilised within the company, rental companies operating in the EU should work with legal or compliance experts to determine if CSRD applies to them and if so, mobilise a program to conduct a gap analysis of their CSRD readiness. In most cases, companies will need to:

- Redevelop their materiality processes to incorporate double materiality assessment;
- Develop new sustainability data controls and reporting capability to report on required KPIs for material topics;
- Develop a new annual reporting structure and process to meet the CSRD requirements.

Large rental companies also need to consider the potential impacts of the CSDDD. Although CSDDD legislation is currently at proposal stage, it is expected by any experts to pass without major changes to the substance of the current text.

For companies in scope, the CSDDD will mean enhancements to due diligence procedures, even for companies currently complying with the French or German due diligence laws, requiring not only a wider topical scope of potential and actual harms, but also a potentially deeper "value chain" scope for risk assessment.

Whilst SME companies are unlikely to be in the direct scope of CSDDD, being aware of the requirements faced by their larger customers will allow them to be prepared to anticipate potential data requests or begin to mitigate potential harms for which a customer may flag them or their extended supply chain.

As noted above for CSRD, the **ERA's Sustainability KPI Framework** is helpful to rental companies seeking to ensure they are compliant with CSDDD ahead of implementation.

4.6 EU BATTERIES REGULATION

The forthcoming **EU Batteries Regulation**[18] due diligence requirements cover cobalt, lithium, nickel and natural graphite, and requires from August 2025 that companies in scope of the regulation establish a **strong due diligence** system that includes:

- Creating, implementing and monitoring a battery due diligence policy;
- Establishing a chain of custody or traceability system;
- Assessing and managing both environmental and social risks in the battery value chain, and having their due diligence systems third-party verified;
- Establishing a grievance process.

Companies in scope are manufacturers, importers and distributors of batteries, so this will include European vehicle and equipment manufacturers who import batteries for use in their products or who manufacture batteries themselves within the EU.[19] Rental companies who purchase batteries from retailers in the EU should not be subject to additional duties.

There are a number of other provisions in the Batteries Regulation, that can be of benefit to rental companies and their customers, such as:

- The requirement for **portable consumer batteries to be removable and replaceable** from appliances (such as power tools, for example) by the end-user (from August 2027);
- The requirement for large batteries to have a **carbon footprint declaration** (from 2026 at the earliest);
- Batteries will have to fulfil **minimum performance and durability requirements** set out by secondary legislation;
- Every large battery will have a **digital passport** containing all required information about the lifetime of the battery;
- There are also provisions on **restriction of substances in batteries**, with similar effect on end-users such as described below for REACH.



4.7 REACH LEGISLATION

REACH stands for the Registration, Evaluation, Authorisation and Restriction of Chemicals [20], and is one of the key pieces of EU legislation protecting human health and the environment from the **effects of chemicals**, dating from 2006. REACH requires all companies manufacturing within, or importing into, the EU, more than one tonne of a chemical each year, to **register the substances** with the European Chemical Agency (ECA).

There are additional restrictions around chemicals known as **Substances of Very High Concern (SVHCs)** such as carcinogens and other toxins, and the ECA must be notified if these chemicals are present in articles at a concentration of greater than 0.1% by mass.

REACH also requires companies to communicate information about risk assessments and management up and down their supply chains. This means there is established practice and guidance on matters such as how companies should record relevant data in **safety sheets** to be passed onto downstream users, and how upstream suppliers of substances can be informed of possible exposure or release mechanisms by which their substances could cause a hazard.[21]

This means that for rental companies, REACH will be relevant where the company is a user of the chemical substances covered by the legislation. **Companies will provide user sheets** explaining which substances can be found in different equipment components, what hazards they can cause and if personal protective equipment is needed to handle or work with that component. For example, 1,2-Dimethoxyethane is a toxic chemical which is present in some vehicle components. [22]

For rental companies, the relevance of REACH is primarily in terms of their **supply chain due diligence**. The manufacturers, importers and distributors of equipment, parts and consumables will be responsible for complying with their duties under REACH, but rental companies coming in scope of forthcoming due diligence legislation should be aware of the potential for negative impacts through the value chain.



4.8 LOW-EMISSION AND ULTRA LOW EMISSION ZONES

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Low Emissions Zones (LEZ) and Ultra-Low Emission Zones (ULEZ) are **areas legally designated to restrict the operation of polluting vehicles or machinery** in order to control emissions and improve air quality. LEZ and ULEZ have become widely established across Europe, for example the 'milieuzone' in the Netherlands, the 'umweltzonen' in Germany and the 'Zone à Circulation Restreinte' (ZCR) in France.

The exact rules governing LEZ and ULEZ in different countries and regions can differ significantly. Some areas enforce and **absolute ban on certain types of vehicles** (for example, diesel vehicles or vehicles over a certain age). Some areas require vehicles to display information about their emissions.

For example, Germany has had a national framework of low emission zones since 2007, which affect all vehicles other than motorbikes and requires vehicles travelling into the zones to display stickers showing their emissions classes. All diesel vehicles built before 2000 are banned. This framework has then been applied to multiple zones (73 zones, as of 2015). A number of German cities have additional restrictions on vehicles within their boundaries, such as prohibiting HGVs from entering the city centre or **requiring all diesel vehicles to reach Euro 6 standard for emissions**.

In the UK, the city of London has gone further and expanded its **Ultra-Low Emission Zone** to the entire city in 2023. Cars or vans which do not meet minimum standards (Euro 6 for diesel and Euro 4 for petrol) will have to pay a charge of £12.50 per day, or will be fined. This is in addition to the Congestion Charge of £15 which applies to most vehicles entering the centre of London, and the LEZ penalty of £100 for commercial vehicles entering Greater London which do not meet minimum emission standards.

Due to the variety of rules in different areas, it is important for operators to be aware of **specific local constraints** and to plan accordingly. More information is available online, for example at www.urbanaccessregulations.eu.

The business case for going beyond compliance

As well as regulatory compliance, there are many other benefits to companies who engage proactively with sustainability. It is well established that **strong management of sustainability risks** and impacts such as climate change, pollution, waste and social issues means a company will be viewed positively by investors, staff, customers and suppliers. In recent years, this benefit has extended into the realm of financing. According to a report by Moody's[23] credit agency, the global issuance of green, social, sustainability and sustainability-linked bonds will grow by 10% in 2023 from 2022 to approximately $950 billion.



4.8 LOW-EMISSION AND ULTRA LOW EMISSION ZONES

Case Study: Green Financing

European equipment rental company Riwal was able to secure preferential finance rates on a €300m **Revolving Credit Facility (RCF)** by signing up to a number of sustainability commitments. The RCF is provided by a syndicate of European banks, including ABN AMRO, Commerzbank, Deutsche Bank, ING and Rabobank. The interest rate on this facility depends on the company's performance against a number of sustainability metrics.

The metrics come from Riwal's 'Sustainability 2025' strategy, and include:

- Increasing the number of sustainable products;
- Reducing solid waste;
- Increasing the company's Ecovadis score from Silver to Platinum level;
- Reducing Riwal's overall carbon footprint.

This is a strong example of how financial service companies are increasingly keen to associate their lending and investment practices with more sustainable companies, and how rental companies can see additional benefits from their sustainability action.

Further Legislation

In addition to the legislation described above, there are also other national laws in place that we are not able to cover in this guide, such as the Norwegian Transparency Act and the **Netherlands Child Labour Due Diligence Act**, and further legislation is developing around national corporate carbon disclosure (such as SDR in the UK), other areas of the EU Green Deal such as circular economy, and various modern slavery legislation (most immediately at country level, as well as in the longer term at EU level). For example:

- **Alternative Fuels Infrastructure Regulation:**[24] this aims to ensure there is sufficient charging infrastructure and refuelling stations in Europe. It does not specifically cover machinery yet, but certain provisions will be helpful to rental companies planning to electrify their delivery fleets – such as the requirement for EU Member States to ensure there are electric charging stations every 60km along main transport corridors by 2025;
- **Energy Taxation Directive Revision:**[25] this revision sets minimum tax rates and a set of rules to ensure that fuels are taxed according to their energy content and sustainability. Tax exemptions for air and sea travel and home heating are to be phased out;
- **Ecodesign for Sustainable Products Regulation:** [26] a framework to regulate product groups with requirements on product durability, reusability, upgradability, reparability and other aspects of the circular economy;
- **EURO 7 and CO2 standards on cars and vans:** these standards reduce the emission limits for buses and trucks, but leave the limits for cars and vans unchanged from Euro 6 [27] Emissions from tyre and brake wear are included for the first time, as are Nitrous Oxide (N2O) emissions. These specific emission limits do not apply to Non-Road Mobile Machinery (NRMM) which is covered by the NRMM Regulation[28] finalised in 2016 with the 'Stage V' standard applicable to all engines used in NRMM over 56kW and all compression ignition diesel engines.

Overall, the regulatory environment around sustainability is currently dynamic and it is important for rental companies to invest time to understand the specific implications of current and emerging legislation for their specific entities, both in terms of direct compliance, and to be prepared to support indirect requirements from larger customers who may be in scope for legislation such as CSRD and CSDDD.

5. PRACTICAL GUIDES

5.1 Customer Requirements

European rental market customers are a complex mixture of companies and individuals. At the larger end of the market, there are **large construction contractors**, construction developers or infrastructure owner-operators. At the smaller end of the market, there are thousands of **small construction and civil engineering firms** as well as individuals carrying out "Do-It-Yourself" construction work.

The professional construction industry is subject to significant economic and political forces, some of which are highly relevant to sustainability considerations. For example, the EU's Circular Economy Action Plan [29], states:

- The Commission will launch a new comprehensive Strategy for a Sustainable Built Environment
- The Commission may set higher mandatory material recovery rates from construction wastes
- Initiatives may be introduced to reduce soil sealing, rehabilitate abandoned or contaminated brownfields and increase the safe, sustainable and circular use of excavated soils;
- Construction clients will also be mindful of the wider 'Renovation wave' proposed under the Green New Deal, which will prioritise the renovation and improvement of energy efficiency in existing buildings.

Similarly, as discussed in the Regulation section, many larger customers will be subject to the full weight of CSRD and CSDDD, which is likely them **passing on indirect regulatory requirements to suppliers**. Suppliers of large companies should therefore expect:

- To be subjected to a rigorous level of environmental and social due diligence.
- To provide transparent data, compliant with ESRS (which goes beyond GRI (Global Reporting Initiative) standards, although GRI is a good start) across a number of sustainability topics. This could include:
  - Full Scope 1, 2 and 3 Greenhouse Gas (GHG) emissions disclosure
  - Product or service level carbon emissions
  - Other data on waste, circularity, pollution, social and biodiversity impacts
- To be able to showcase examples of good practice (including EU Taxonomy alignment) as well as risk and impact management in tender responses.

Small companies may still service larger customers, and should consider the following as 'minimum sustainability requirements':

- Ensure people risks are well managed. Even small companies should be able to answer all Health & Safety (H&S) questions and provide certificates when requested. ISO 45000 in the Nordics is a default, but alternative proof could be SafeHire[30] or VCA[31] which are available across Europe. The ERA is also preparing a digital toolbox for rental companies covering practical aspects of occupational health and safety. This is likely to be published by the end of 2024.
- Staff training undertaken should be recorded and evidenced.
- Companies should have at least a policy or code of conduct in place for equality, diversity and inclusion (EDI).
- Ideally small companies supplying into larger companies will have full ISO 14001 (Environmental Management) coverage across sites, but at the very least, have an environmental policy in place.
- Small companies should at minimum have their own energy measurements, Scope 1 and 2 measurements and a reduction plan to impact Scope 1 and 2, and may increasingly need to consider Scope 3 (note that ERA will publish sectoral guidance in 2024 for rental companies covering the calculation and reporting of corporate carbon including scope 3).
- Privacy and GDPR compliance, as well as IT security should be comprehensive and rigorous.

Carbon accounting - An important consideration from the customer point of view when deciding to buy or rent is their carbon accounting. A (larger) contractor will need to report their emissions on an annual basis and they will only include in their company carbon footprint a small amount of carbon for when they rent (based on the rental charges and any fuel usage). Comparatively, if they buy a piece of equipment, they will have to account for the entire embodied carbon footprint of the machine in the first year of ownership.

5. PRACTICAL GUIDES

5.2 Asset Purchasing

For rental companies, making decisions about purchasing new assets is one of the most important aspects of their business. A good decision about asset purchasing can ensure the company has a reliable and affordable asset that delivers what customers want, while a poor decision may mean the company is left with a poorly performing asset that is also difficult to dispose of.

Rental companies today have additional challenges when considering sustainability. Companies may wonder which sustainability parameters should be considered when evaluating different asset options, or the extent to which it is worth paying more for assets which deliver sustainability advantages. Tools such as the **ERA Equipment CO2** and **TCO Calculators**, available at www.equipmentcalculator.org, are independent and free-to-use for making economic and environmental choices when using construction equipment.

Key sustainability considerations in asset purchasing:

- **Asset powering and in-use emissions:** The decision of whether to purchase a diesel, electric, hybrid or other type of asset is one of the key elements in asset purchasing today. See the section of this guide titled 'Vehicles, Equipment and Site Power Options' for more detail.
- **Manufacturer and supplier transparency:** Purchasing from a manufacturer or dealer who is responsive and knowledgeable about their products, especially in terms of their sustainability performance, is vital for rental companies today. The increasing trends of sustainability disclosure (e.g. CSRD) and supply-chain due diligence (e.g. CSDDD) mean that rental companies may need to interact with and obtain **extensive data from equipment manufacturers and suppliers**. Having a good relationship with a professional and appropriately resourced supplier will make due diligence and disclosure processes significantly easier.
- **Lifespan, lifecycle and circularity:** While many rental assets are traditionally assumed to last for 10,000 hours operation or seven years before reaching the end of their economically useful life, there are many other considerations which can play into this. The existence and strength of a **second-hand market** is clearly important to rental companies purchasing new equipment, but there are increasing options from manufacturers offering **buy-back** or **re-living options** [32] , as well as new obligations being placed on manufacturers by legislation to take responsibility for their products back at the end of life (for example, see the new extended producer responsibility rules applied to batteries in the EU's Batteries Regulation). Purchasing assets that have a clear and sustainable end-of-life or re-life plan is therefore likely to become simpler for rental companies. However, there are challenges where the asset incorporates relatively novel technology and so **data on residual values** and **economic lifespan** is therefore limited (for example, as new types of battery are brought onto the market)
- **Standardisation:** Rental companies should consider whether equipment is sufficiently standardised and flexible, for example in having a universal charger (standardized plugs and sockets) for large equipment and machinery, or having swappable batteries which could help in improving circularity and lifespan of equipment.
- **Embodied emissions and supply chain impact:** As well as the emissions from an asset while it is operated on a client site, rental companies should also consider the embodied emissions and wider supply chain impact of the equipment. These **'upstream' value chain impacts** are specifically required to be reported under CSRD and conducting due diligence into the manufacturer supply chain is required under CSDDD (see Regulation section in this Guide for more details on this legislation). Typically, certain materials and activities in the supply chain will have the greatest sustainability impact – for example, producing certain metals such as aluminium from mined ores is highly energy intensive, leading to a higher **Scope 3** footprint in Category 1: Purchased Goods and Services.
- **Cost:** The cost of new assets is clearly a critical consideration for rental companies, as the depreciation and initial cash flow must be covered by rental income.

5. PRACTICAL GUIDES

What does good practice look like for rental companies in sustainable asset purchasing?

- Be aware of any legislation that applies to your company or your clients, or which is likely to apply in the future.
- Build close relationships with key suppliers and equipment OEMs to ensure you understand the benefits and drawbacks of their products.
- Incorporate sustainability into decision-making by considering the six points outlined above.

Case study: Remanufacturing and re-living machinery

Caterpillar Inc is a USA-based company and one of the largest manufacturers of construction equipment in the world with revenues of over $60Bn. The company has targeted aggressive growth in remanufacturing of equipment and components, achieving a 19% increase in revenues for remanufactured products between 2018-2022.

Remanufacturing refers to the process of restoring product at the end of their lives back to the Original Equipment Manufacturer (OEM) standards or specifications. It therefore requires high levels of skill and precision in labour and tooling, as well as access to the OEM's intellectual property, and can often therefore be distinguished from **recycling** (where materials are extracted for a range of other, generally lower-value, uses) and refurbishment/reuse (where a product is typically placed into a less-onerous application after minor repair).[33] For example, **remanufacturing** can add value through the specialist cleaning and inspection processes used by OEMs, the use of additive manufacturing technologies and other techniques such as laser welds, metal spraying, re-coatings and the inclusion of upgrades which can make the product **'better than new'**,[34] and at least means they are sold with the same warranty as new products.

Caterpillar state that their 'Cat Reman' programme has achieved 140 million pounds (c63,000 tonnes) of material taken back for remanufacturing in 2022, with the process producing 65-87% less GHG process emissions and requiring 80-90% less material by mass compared to manufacturing of new parts [35]. The company now has 17 remanufacturing facilities worldwide, employing over 4,000 staff.

5.3 Telematics

Telematics is a blanket term for technologies that can **track physical assets and collect and transmit data** on them remotely. Telematics is therefore part of the wider drive for digitalisation in many industries, particularly in transport and construction. It has close connections to asset management as well as **Building Information Modelling (BIM)**.[36] A wide range of telematic systems exist, both integrated by OEMs (Original Equipment Manufacturers) and aftermarket, but many can allow equipment rental companies and operators to:

- Track the physical location of an asset;
- Obtain information about the asset's attributes e.g. state of battery charge, fuel consumption;
- Obtain information about how the asset is being operated e.g. speed, changes in direction etc.

Implementation of telematics can offer the following sustainability benefits:

- Insight into driver and operator usage, providing opportunities to offer training to improve safe and fuel-efficient usage and aiding both environmental and social goals;
- Availability of more precise data from equipment can improve maintenance regime and energy efficiency;
- Provision of data to end client for their own utilisation and sustainability reporting;
- Better information can significantly reduce the likelihood of environmental incidents with some assets e.g. site accommodation and toilets which automatically flag when they need emptying, thereby removing the risk of overflow;
- Reminders to charge electric equipment at appropriate times can eliminate flat battery instances and increase utilisation of a more sustainable asset.

There are also, of course, numerous benefits from telematics in terms of **customer satisfaction** and **fleet management** which are not directly relevant to sustainability.

5. PRACTICAL GUIDES

The **ERA report**[37] ***'The Impact of Digitalisation in the Rental Industry'***, available at https://erarental.org/publications/the-impact-of-digitalisation-in-the-equipment-rental-industry/, contains additional information for rental operators interested in the benefits of telematics and how to deploy systems into fleets. The ERA has also published **recommendations from the rental companies** to OEMs **on the data points** that the rental sector needs to have in telematics. [38]

Case study: Telematics and digitisation for earthmoving machinery

The HS2 project is a large infrastructure project in the UK to create additional high-speed rail capacity. The project recently announced[39] that the use of telematics on earthmoving equipment has successfully saved £25m of costs as well as substantial amounts of carbon emissions, due to greater efficiency.

Advanced telematics including electronic weight sensors have been mounted on the 700 machines in use by the EKFB Joint Venture working on HS2's central section. These allow a central team at the central Brackley site base to view the work status of excavators and identify instances where machines are idling because they are waiting for a dump truck to haul away arisings. The team can then redeploy equipment into more efficient work, as well as identify pinch points on sites where logistics need to be improved to allow better flow of mobile equipment.

5.4 Environmental Controls

Environmental controls are procedures covering aspects such as emissions of pollutants or wastes to air, water and land. International treaties, national regulations and local bye-laws can all affect how companies control these emissions, and whether they have to be approved or permitted.

Aspects likely to be important to rental companies are:

- **Emissions to air of engines and other equipment using fossil fuels:** This equipment can produce Nitrous Oxides (NOx) and particulate matter, as well as the well-known greenhouse gas CO2. Particulate matter is generally classified into either PM2.5 or PM10, depending on the size of the particles produced, and many urban areas today have limits on the type of engines that can be used because of the PM25 or PM10 they produce;
- **Emissions to water and land:** These are most likely to be relevant to rental companies in the case of accidents or incidents where substances are inadvertently or negligently released, or potentially where staff or individuals intentionally or maliciously allow harmful substances to enter the environment. For example, stored quantities of fuels might be accidentally lost from a bowser if it is damaged by a collision;
- **Generation and management of wastes:** especially when wastes have the potential to be hazardous to the environment or people. For example, used engine, hydraulic and lubricating oils, antifreeze, paints and waste fuels can all cause serious harm if incorrectly disposed of.

What should rental companies be aware of?

- Ensure they are aware of relevant local regulations so as to be able to advise clients on the safe, sustainable and legal use of hired equipment and equipment e.g. the operation of local **ULEZ (Ultra Low Emissions Zone)**;
- Ensure they are aware of the relevant rules covering **emissions from vehicles** (Euro 6/7 especially) and Non-Road Mobile Machinery (Stage V). Although it is the manufacturer's responsibility to design and build compliant engines, rental companies can show their commitment by aiming for the highest standards of sustainability in equipment specification;
- Have a clear list of any hazardous or environmentally-damaging **chemicals** or materials being stored under their control, and make the control and management of those substances part of their regular risk management and incident planning;
- Ensure equipment that is rented out meets the latest **standards for environmental protection** (e.g. double-skinned or bunded bowsers, use of drip trays, emissions filters etc);
- Follow the **waste hierarchy**, which means making business decisions that minimise the generation of waste and maximise the valuable use of materials, rather than disposing of items or recycling them to lower-value uses.

Example: The Hierarchy of Waste

The hierarchy of waste is a conceptual model of different actions that can be taken with waste products or materials, ranked from 'most' to 'least' preferable. In general, actions are preferable if they keep products or materials in a higher value state (i.e. the loss of energy, quality or organisation is minimised). For example, a computer could be crushed and made into a doorstop, but a higher-value use would be to salvage and reuse any working components and high value materials.



5.5 Vehicles, Equipment and Site Power Options

Energy usage in the rental sector

Many rental providers have significant fleets of heavy and light commercial vehicles, in order to deliver, maintain and collect the equipment they provide to clients. Historically these fleets have primarily been powered by **internal combustion engines** (ICEs), but the environmental impacts of burning petrol and diesel are now well understood. As a result, different energy sources and stores are being developed to offer **ultra-low emission vehicles** (ULEVs) and **zero emission vehicles** (ZEVs).

Two technologies currently in use and undergoing further development are hydrogen and biofuels, and this section of the guide provides readers a short overview of these technologies, as well as their advantages and disadvantages. It also covers the topic of electrification and the advantages and disadvantages of batteries as energy stores for vehicles, equipment and wider site power, which are highly relevant to rental companies both for their own operational fleets, but also the equipment they can offer to customers.

Biofuels

Biofuels are broadly any fuel produced from contemporary biological material rather than from fossil fuels. They cover a wide range of products, some of the most common of which are:

- HVO – Hydrotreated Vegetable Oil;
- Bioethanol

5. PRACTICAL GUIDES

Biofuels are typically classified into one of four 'generations', depending on the original source of their material:

- 1st generation biofuels are produced from food crops such as maize, soybeans and sugarcane;
- 2nd generation biofuels are produced from wastes and residues such as used cooking oil, wood chip or waste straw;
- 3rd generation biofuels are produced from algae and cyanobacteria, and therefore cause minimal Land Use Change (LUC).

Biofuels are already routinely blended with fossil fuels for road vehicles in Europe by either 5% or 10% by volume. 40

Biofuels are often regarded as more sustainable as fossil fuels, and the reasoning behind this is that, if the **entire fuel lifecycle** is considered, the carbon dioxide produced by combusting biofuels is re-captured by the biological material that is being re-grown. In this way, it can be claimed that biofuels are carbon neutral.

Biofuels can therefore offer a simple way to reduce emissions for rental companies. However, there are a number of disadvantages which must be considered:

- The assumption that emissions are sequestered by the growing crop is subject to challenge, and must be rigorously backed up with evidence;
- There can be side effects from biofuel production, such as land use change or loss of land for food production, which must be considered when making a sustainability assessment in the round. For example, conversion of peatland to oilseed production is likely to represent a significant loss of soil carbon which means the fuel produced is not carbon neutral;
- Combustion of biofuels still produces greenhouse gases in the same way that fossil fuels do. Some of these are not sequestered, and are still contributing to climate change (for FAME biodiesel, around 8% are not sequestered);
- There is a small price premium still for good quality biofuels over diesel, typically in the order of 10%. Furthermore, biofuels are not as widely available at public refuelling stations as diesel, and will often have to be ordered as a bulk delivery and then stored.

Shall we make a provocativenote here that sometimes when OEMs (or rental companies) promote in their marketing certain machines as "zero emission" or similar green claims, they often do not take into consideration the points mentioned above?

The European Commissioner for Energy regulates biofuel in the EU, and set a number of standards for biofuels to meet 41 :

1. Biofuels were mandated to achieve greenhouse gas savings versus fossil fuels, reaching a 60% savings target by 2018. The rising standards are only for new production equipment (the entire life cycle emissions of the fuel are taken into account in these savings which includes cultivation, processing, and transport);
2. Biofuels must not be grown in areas that are currently, or were previously, carbon sinks (e.g. wetlands, forests);
3. Raw materials obtained from areas with high biodiversity, such as forests or grasslands, cannot be used to produce biofuels.

Recent updates to RED II include the phase-out of palm oil and soybean-based biofuels from 2023, and the banning of subsidies for 1st generation biofuels in all Member States. 42

In summary:43

First-generation biofuels, on average, have lower GHG emissions than fossil fuels, but the reductions for most feedstocks are insufficient to meet the GHG savings required by the **EU Renewable Energy Directive (RED)**. Furthermore, there are spillover effects in the cultivation of feedstocks which lead to Land Use Change (LUC) and subsequent emissions.

5. PRACTICAL GUIDES

Second-generation biofuels have greater potential to reduce emissions than first-generation fuels, provided there is no Land Use Change.

Third-generation biofuels are not a widely-available option at present as their GHG emissions are higher than those from fossil fuels and they are also very expensive.

Case Study: Using HVO Biofuel in a light commercial fleet

M Group Services is a diversified construction and civil engineering company in the UK, with a stated commitment to achieve a 50% reduction in the Groups emissions by 2030. The company has started using **Hydrotreated Vegetable Oil (HVO**) to replace fossil-based diesel fuel in its fleet.[44] The HVO being used is a second-generation biofuel produced from a blend of waste and residue derived feedstocks such as vegetable and animal oils. The HVO meets EN15940 specification, meaning it is a certified replacement for diesel.

M Group Services states that the carbon reductions achieved from using HVO are over 80%. As described above, the emissions associated with HVO are treated as 'short cycle carbon' because they are derived from elements that are already part of our current natural ecosystem, rather than releasing carbon locked up in fossil deposits over geological timescales. The use of a second-generation biofuel also addresses concerns that biofuels can displace food crops or lead to deforestation, and the company has worked with Green Biofuels (www.gbf.ltd) to source appropriate fuel, whose provenance is certified through the ISSC (International Sustainability & Carbon Certification) scheme.

Hydrogen

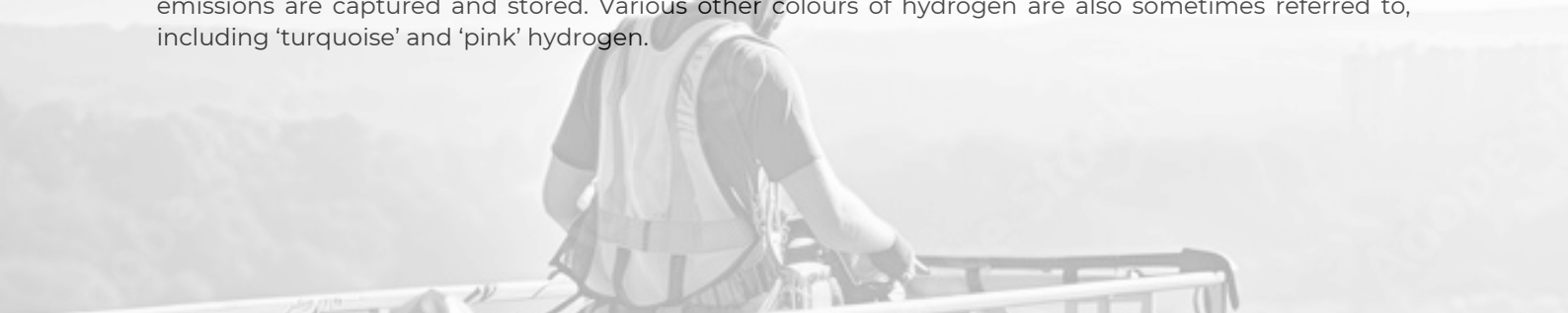
Hydrogen is the simplest and most abundant element in the universe. It has been used as a fuel for many years, but poses significant engineering challenges in its capture, storage and energy extraction. Hydrogen can be used as a fuel in two principal ways – in **combustion engines** and in **fuel cells**.

In a **combustion engine**, hydrogen gas is burned in air in a similar way to conventional fuels like petrol. Unlike fossil fuels, however, hydrogen gas does not have carbon atoms in its chemical formula, and so combustion does not produce carbon dioxide (CO2) or methane (CH4), which are two of the most important greenhouse gases. Small amounts of waste gases such as nitrous oxides (NOx) are produced.

Efforts have been made to develop **hydrogen-combustion engines for construction equipment**,[45] although at the time that this report was written we are not aware of any vehicles or mobile equipment of this type actually available for rental companies to purchase.

A more popular method of using hydrogen is in **hydrogen fuel cells**. These take hydrogen and the oxygen in air and, using a chemical process with a catalyst, output energy and water. Fuel cells have been used in construction equipment and rental applications for a number of years, for example in applications where emissions or noise must be minimised such as working in tunnels or confined spaces. An example is the BOC Hymera hydrogen-fuelled small tool generator, which can provide 175W with 7kWh of power using a hydrogen cylinder. [46]

Hydrogen is often given labels depending on the method used to obtain it. He vast majority[47] of hydrogen today is **'grey'** or **'brown' hydrogen**, produced by gas reforming or coal gasification which emits significant greenhouse gases. **'Green' hydrogen** would be needed in order to ensure that a hydrogen system is sustainable – that is hydrogen produced using renewable and clean processes, typically electrolysis powered by renewable energy. **'Blue' hydrogen** is grey hydrogen but where the emissions are captured and stored. Various other colours of hydrogen are also sometimes referred to, including 'turquoise' and 'pink' hydrogen.



Overall, the **disadvantages** of hydrogen are:

- Low energy density (1 kWh of energy in hydrogen takes up a lot of space, so tanks must bigger);
- Hydrogen is a very small molecule and hydrogen gas is very explosive. There are therefore significant engineering challenges around ensuring a hydrogen system is leak-free and safe, and resultant cost of these systems is high;
- Inefficiencies in storing and transporting hydrogen;
- Currently there are very limited sources of truly sustainable 'green' hydrogen (less than 1% of hydrogen production globally);
- In most places there are limited places to purchase or fill up vehicles with hydrogen.

The **advantages** of hydrogen to the rental industry are:

- It does not produce significant quantities of greenhouse gases (if produced sustainably);
- In principle, it can be stored and transported in a manner akin to conventional fossil fuels, making it a more flexible option than options like electric power (although note the challenges in doing this identified above);
- Vehicles can be refuelled more quickly than batteries can be charged (although in some cases charged batteries can be swapped in);
- As noted above, fuel cells have already been used successfully in certain industrial and construction applications where silent and emission-free electricity generation is required.

Batteries

There are many types of electric batteries in use globally, ranging from **conventional lead acid batteries** found in internal combustion engine vehicles (ICEVs) to very sophisticated and expensive **vanadium flow batteries used in electrical grid balancing**. The most common type of batteries used in electrified vehicles, mobile equipment and tools in the rental industry are **lithium-ion batteries**, which have an acceptable price and power-to-weight ratio. However, the development of batteries still continues at pace, and new variants and completely new batteries are likely to emerge regularly.

Advantages

- Battery electric vehicles (BEVs) are typically **zero emission at the tailpipe**, and can be very low emission overall if charged using a clean and renewable source of electricity;
- Use of electric motors can provide high torque and other attractive performance characteristics;
- In some cases, the simpler powertrains and reduction in moving parts can result in significantly **lower maintenance** than ICEVs;[48]
- **Charging** is not dependent on new infrastructure (such as hydrogen fuelling stations and distribution networks) and can generally be undertaken anywhere with a grid connection.

Disadvantages

- Generally, there is a need for any electric vehicle or item of equipment to remain inactive for a period in order to recharge. This can be relatively short (<1hr if fast charging is available) or more extended, such as overnight charging;
- Many electric vehicles still have a somewhat lower range or endurance than ICEVs, although this is being extended all the time and in some cases is now comparable to ICEVs;
- Similarly, many electric vehicles have lower carrying and towing capacities than their diesel equivalents, due to the additional weight of their battery. For example, the electric Renault Kangoo E-TECH has around a 20% lower payload than the diesel equivalent;
- Current generations of EV batteries demand significant quantities of scarce resources, such as lithium, nickel and cobalt. Extraction of these resources in the supply chain must be managed extremely sensitively to avoid environmental or social impacts, while end-of-life considerations are only slowly emerging (perhaps only 5% of lithium-ion batteries were being recycled a few years ago).[49] However, note that additional regulation of batteries, including use of recycled content and transparent and ethical sourcing of raw materials is addressed in the new EU Batteries regulation enters in to force gradually starting February 2024;

- A grid connection is generally required for recharging, and for fast charging there needs to be a specialised connection. If a grid connection is not available, operators will need to consider a conventional generator (which negates many of the benefits of electrification) or a battery-based power management solution. [50]

Sustainability of Batteries

As mentioned above, concerns have been raised about the wider sustainability of batteries, following media coverage. Specific concerns are often voiced around:

- Extraction of **cobalt** in the Democratic Republic of Congo (DRC), which is used in lithium ion battery cathodes and has been linked to a number of social issues including child labour, low wages, the abuse of women and financing of warfare. The situation is further complicated because of the presence of both large scale and small-scale (artisanal) mining, and the limited opportunities for workers locally which may make mining the most attractive or viable livelihood for them;
- Environmental concerns around **lithium** extraction. 65% of lithium resources are in areas of medium-to-high water risk areas[51], while conversely 84% of platinum resources and 70% of cobalt resources are in high-ESG risk areas. There is certainly criticism of mining companies' approaches to managing local water scarcity, for example in Chile [52]and Argentina[53]; however there are significant differences between the footprints of lithium extracted from brine in South America and lithium extracted from spodumene in, for example, Australia. Furthermore, there is scope for water saving even in brine-based production[54]; if more effective water management practices are introduced following customer or regulator pressure;
- Limited **recycling** capacity and challenges around battery **re-use**, **recovery**, and **recycling**. There are a number of technological challenges around re-using lithium-ion batteries or the materials within them, including the safety concerns around handling batteries, a lack of standardisation of cell materials and designs and the costs and energy intensity of pyrometallurgical and hydrometallurgical recycling processes. This is an area of significant public investment and regulatory interest, such as the **EU's Batteries regulation** which specifically considers batteries in vehicles and other machinery and appliances.

The planned growth of electric vehicles and wider electrification envisaged by the **International Energy Agency (IEA) Net Zero Roadmap**[55] is significant, with 60% of global car sales needing to be electric by 2030 and 50% of heavy truck sales being electric by 2035. The required growth in use of transition materials, such as lithium, to meet these goals, is undoubtedly a significant challenge that will require careful management. Businesses, such as rental companies and their customers, can play an important role by carrying out appropriate due diligence and understanding the wider environmental and social implications of their purchasing and operational decisions.



5. PRACTICAL GUIDES

How costly is battery technology?

In terms of cost, rental companies are likely to often see battery-electric equipment and vehicles being somewhat more expensive than diesel-powered equipment today, at least in capital cost. However, there are a number of important considerations for operators:

- In some cases, **customers** may be willing to pay more for an electrically-powered asset, either because it helps them reach their own sustainability goals, or because it offers additional benefits such as silent or exhaust-free operation;
- The initial cost of acquisition is offset to some extent (or completely) by the **fuel savings** over the asset's lifetime. It should be noted that this payback can be complicated by the rental company purchasing the asset while the operator pays for the fuel or electricity, so the costs and benefits may accrue to different parties;
- The **costs of electric technology** have already fallen dramatically in many asset segments. In some cases, purchase costs of electric assets are still much more expensive than equivalent diesel-powered assets, and these are the asset segments that are slowest to decarbonise currently. For example, heavy goods vehicles (HGVs) and heavy construction equipment still have diesel power as the default, and the electric alternatives of many types of equipment are typically 50%-100% more expensive (although, note the earlier point about savings in fuel through-life). However, it is expected that by 2030 at least half of medium and heavy-duty trucks (those in excess of 6.3t) will be cheaper to buy, maintain and operate than their diesel equivalents[56], and there are already numerous options for smaller electric HGVs today from both established and start-up manufacturers. For light commercial vehicles, electric variants should typically be no more than 30% more expensive than the diesel version, which is likely to be offset over the vehicle's life through reduced fuel costs;
- **Total cost of ownership of electric machines** is also improved by **lower need for maintenance** and **lower need for replacement** parts, when compared to diesel machines. However, resale prices of used electrical rental equipment including their batteries is still uncertain, as the market for this equipment is relatively immature. Batteries may also be re-purposed in coming years into different applications (such as static energy storage);
- Rental companies should ensure they, and the renters/operators, carefully follow the manufacturer's instruction about **battery maintenance**, especially with regards to over-charging or over-discharging, including under different temperature conditions. Most manufacturers will provide battery management technology to prevent damage to the battery, but if this is not in place, or fails, the battery's performance and lifespan can be very seriously affected.

Case Study: Light commercial vehicle fleet electrification

Sunbelt Rentals, an equipment rental company owned by Ashtead Group, has recently announced the purchase of over 650 electric Ford F-150 Lightnings for its USA division. The electric F-150's will contribute significantly to Sunbelt Rental's plan to reduce emissions by 35% by 2030. The company will also supply and install a large number of fast chargers at employee's homes.

The F-150 Lightning starts at around $50,000[57] with a towing capacity over 3.5t but is currently only available in the USA (although expected to be available in Europe shortly). However, a number of other manufacturers including Tesla, Rivian and Chevrolet expect to release electric pickup trucks in 2023 or 2024, and these offer a towing alternative to the diesel vans many rental companies currently use (note that most electric vans have a reduced towing capacity compared to the diesel alternatives – some of the leading options currently are the Renault Kangoo E-TECH with 1,500kg towing capacity and the Ford e-Transit with 2,000kg capacity).[58]



Site Power

Although the energy needs of vehicles and mobile equipment are significant, there are also other energy needs on a construction site. Site accommodation, small tools, lighting and other energy needs exist, some of which can be satisfied relatively easily with a grid connection.

However, for sites that cannot access a grid connection, or where an uninterruptible power supply (UPS) is needed, site power is often supplied by a diesel generator, which can be fuelled from the same bowser as the mobile equipment.

More sophisticated site power solutions are now available however, with many options in the 60-90 kWh range right up to large remote charging options such as Volvo's mobile Power Unit[59] which can offer 600V fast charging and 400 kWh of energy.

Example: Key questions for rental companies to ask customers considering integrating electric mobile equipment into site operations

1. What class of equipment do you need? If under 10t, there are likely to be many effective electrical options. Over 10t the choice may be more restricted.
2. Will you have a grid connection available? If not, can one be made available earlier than initially planned in the construction programme? Can 3-phase power be made available for faster charging?
3. How will you recharge the equipment? Can you charge the machine overnight (i.e. will a machine only require 1 battery's worth of energy a shift) or will recharging be required during the day (due to a demanding operation, such as breaking out reinforced concrete).
4. Can you move the machine to the charger (either under its own power or on a transporter)? Is this feasible within the working shift, or do other restrictions prohibit this e.g. vehicle movements limits on urban sites?

Summary of Vehicles, Equipment and Site Power Options

There are many ongoing developments in the field of sustainable energy for transport. Significant effort and investment has already been put into biofuels, and to a certain extent they are already a mature component of the energy mix through their blending into conventional fossil fuels.
Hydrogen is at a lower stage of maturity than biofuels, and significant questions remain about its appropriateness in applications that can be served by BEVs. At a small scale, hydrogen has been used on sites for some time (e.g. hydrogen fuel cells used as power packs on underground rail infrastructure).[60] However, it may be appropriate for larger scale applications where:

- Recharging of batteries is impossible or impractical;
- There is significant value from retaining combustion technology;
- Heavy work is required over an extended working day, beyond the capacity of batteries.

The sustainable energy technology with the greatest scope for sustainability in the rental sector appears to be battery electric, however this is very dependent on the type of equipment and its duty. In some classes of equipment, battery electric products have been mainstream for some time in specific applications (e.g. lighting towers) or are being quickly adopted (e.g. mini excavators[61]). However, rental companies and clients are still finding wider adoption challenging without early and comprehensive planning for electric equipment integration into the work plan and site.

6. GOVERNANCE, ANTI-BRIBERY AND CORRUPTION (ABC)

In 2023, the EU proposed a **new directive**[62] covering anti-corruption which will escalate corruption prevention significantly. The directive will extend the definitions of criminal corruption offences beyond the more traditional bribery scenarios to include offences such as misappropriation, trading in influence, abuse of function, obstruction of justice and illicit enrichment adjacent to corruption offences. The proposal would introduce **minimum criminal penalties and sanctions** for different offences to ensure a level playing field across the EU.

Domestic law related to bribery and corruption is mature in many jurisdictions. For example, in the UK, the Bribery Act 2010 is well established, and generally understood by companies covered by it. It is worth noting that companies can be liable under anti-corruption and bribery legislation even if the person attempting to bribe another party is not actually an employee, or if the bribery takes place in another country. Furthermore, as well as the usual civil and criminal penalties, companies and individuals can find themselves disbarred from bidding for new work, or winning places on new frameworks.

What risks are companies in the rental sector exposed to?

- Doing business in countries, or with companies based in countries, where there is a tradition of bribes being paid as part of business;
- Pressure from other parties, or public officials, to obtain materials or access services that are critical to the rental sector's business.

It is worth noting that these risks are generally low in Europe.

What can rental companies do to manage their ABC risks?

- Create a clear ABC policy and ensure it is understood by all staff and business partners;
- Monitor operations for any indications of unsafe behaviour;
- Avoid doing business in regions with high ABC risks or conduct due diligence before doing business there.

Governance more broadly can include **financial, legal, and reputational risks** around information security, tax compliance, wider legal compliance, board remuneration and a range of other issues as well as anti-bribery and corruption. Rental companies are exposed to these risks in an equivalent way to other companies operating in Europe, and should be well aware of their obligations in these areas. Smaller rental companies may need, of wish to consider, hiring appropriate independent specialists who can support their boards and managers, such as company secretary specialists or independent non-executive directors.

Cybersecurity

Information security and wider cybersecurity is a specific risk area that the ERA has investigated and produced guidance on. Damages from cybercrime are forecast to reach $10.5 trillion annually by 2025, and trends such as remote working, supply chain integration and electronic banking provide new hazards for security managers to respond to.

The growth of **smart machines and telematics** also creates some vulnerabilities that the rental sector is particularly exposed to, with some professionals identifying the risk of internet-connected machinery being hacked, instructed to perform dangerous acts, or frozen with ransomware[63]. While incidents of this nature have not been widely reported so far, 'white hat' hackers have already demonstrated the feasibility of attacking construction equipment, such as cranes, in tests in Italy.[64]

6. GOVERNANCE, ANTI-BRIBERY AND CORRUPTION (ABC)

Good practice in this space involves therefore working with OEMs to ensure that equipment security specifications are rigorous, ensuring that each rental business is aware of its legal obligations (such as under the General Data Protection Regulation, GDPR) and considering implementing a security standard such as **ISO 27001**. Implementing a security standard such as ISO 27001 can be a time-consuming exercise, but will ensure that a company has a high level of credibility to clients by having carried out wide-ranging risk assessments, ensuring staff competence and auditing or penetration testing vulnerabilities. Some standards such as the **UK's Cyber Essentials** scheme also come with free cyber insurance for companies who complete the assessment successfully.

As well as implementing cybersecurity good practice and standards, rental companies should also consider obtaining insurance which covers cybersecurity incidents. Smaller rental firms (under 250 staff) are much less likely to have cyber insurance than large firms, but the impacts of a cybersecurity incident can be just as serious[65]. **Cybersecurity insurance** can not only cover the direct business costs resulting from a cybersecurity incident (such as extortion or third part damages for data loss) but provide access to expert advisors such as technical specialists, business continuity managers and law firms, who can cover aspects of cybersecurity response such as containment, IT forensics, public relations and assessing the legal implications of a data breach.

For more information, please refer to the **ERA report *'A guide to cybersecurity leading practice in the equipment rental industry'***.[66]



7. SOCIAL SUSTAINABILITY, WORKFORCE AND PEOPLE

The social, workforce and people theme covers a range of topics, including sickness, health and safety, diversity and discrimination (disabled, gender, minority, aged workers). Social issues are an important component to any company's sustainability strategy, and especially in the rental sector where the workforce is critical to delivering value to customers. Aspects such as health, safety and **wellbeing policies** and implementation, **EDI (equality, diversity and inclusion)** and staff training on sustainability are increasingly expected by clients in order to satisfy their own due diligence requirements.

Rental companies consistently find that **attracting and retaining staff** is one of their more difficult tasks. Companies report that the rental industry (and wider construction sector) is not always seen as an attractive place to work, and that companies must consider how they can show it is an innovative and sustainable industry with good long-term prospects for employees. A high level of staff turnover can affect the morale of remaining staff and damage team cohesion, as well as creating burdens in onboarding and training new staff and affecting the customer experience.

There are a number of key ways in which rental companies can aim to improve their staff recruitment and retention. Some rental companies have reported that they have seen a good response from both existing and new staff after investing in their physical office and workshop facilities. Modern and well-designed facilities make staff more productive, but also emphasise that a company cares about their staff and sees them as a valuable part of the company identity. There are also specific ways in which companies can target and support certain groups of employees, and meet EDI targets while also improving staff satisfaction and retention.

Further guidance will be forthcoming from the ERA, which is running a project titled ***'Attracting and Retaining People in Rental'***. The project will be finalized by the first half of 2024.

Case study: Attracting and retaining staff

Sunbelt Rentals, a rental company owned by Ashtead Group, have made a particular effort to attract military veterans, who are in many places a marginalised group facing significant challenges after leaving miliary life. Sunbelt has set up a veterans programme[67], recognising that many of the attributes and skills learned in military life such as teamwork and self-sufficiency are also highly valuable in the equipment rental industry. The programme provides tailored support, including guidance on accessing benefits, introductions to new teammates and access to accommodation, to make the transition to civilian life as easy as possible. Sunbelt's team in the USA is now staffed 10% by veterans.

Health, safety and wellbeing

Health, safety and wellbeing topics are generally well established in mature legislation across Europe, particularly the aspects of workplace safety. Broader wellbeing, including mental health, is also increasingly an important subject, with estimates ranging between 30%-60% of absence being due to mental ill-health[68]. The wider construction industry has a relatively high accident rate, with (for example) 2,880 reported accidents per 100,000 workers in the UK against an average across all industries of 1,650. [69]

Much of the key legislation is mature. The **European Framework Directive**[70] for occupational health and safety dates from 1989, and provides for general principles such as employers' responsibilities for the health and safety of their workforce, the corresponding duties of those workers and the use of risk assessments to manage occupational health and safety. Over twenty further occupational health and safety directives have followed, as well as numerous pieces of national legislation. Of particular interest in the rental and construction sectors are:

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- Directive 2009/104/EC, which covers safety and health requirements for the use of work equipment by the workforce;
- Directive 89/656/EEC which covers the use personal protective equipment (PPE) by the workforce;
- Directive 90/269/EEC which covers manual handling of loads where there is a specific risk of back injury to the workforce;
- Directive 1992/57/EEC which specifically covers health and safety on construction sites;
- Directive 2003/10/EC and Directive 2002/44/EC which cover vibration and noise.

Key actions for the rental sector to take on workplace health, safety and wellbeing

- Ensure risk assessments are current and comprehensive, and that control or mitigation actions are being implemented;
- Follow the hierarchy of risk control – elimination; substitution; engineering controls; administrative controls; PPE;
- Be aware of the ERA's ongoing work on Occasional Health and Safety. A new project in this space is due to be delivered by the end of 2024.

Equality, diversity and inclusion

It is recommended that Rental companies create and implement a **People Charter** (see example below). This is a document that focuses on how a company will support their workforce and ensure that they feel safe, respected and positive about working for that company. It goes beyond values statements (although there can be some overlap) in how it emphasises the experience, feelings and priorities of people, rather than the priorities of the organisation.

Example People Charter

At [insert Company Name here] we are committed to ensuring all staff have a positive working experience. How you feel while working here is central to that experience. This People Charter describes how we believe you have a right to feel in the workplace.
While at work, you should:

- Feel safe;
- Feel respected by colleagues and leadership;
- Feel proud of your work;
- Feel valued;
- Feel supported by your line manager, other managers and the whole organisation in your personal and career development;
- Feel excited and confident about the organisation's future;
- Feel empowered to make changes to improve our organisation's processes;
- Feel aligned to the organisation's values;
- Feel a sense of belonging to something special.

Creating these conditions is a shared obligation amongst us all. Together, we can create a positive, energising culture and experience in which we can all thrive.

Signed [Director].

This is adapted from the Good Work Charter's Toolkits – for more information, see https://www.ifow.org/toolkit/the-good-work-charter#section-2. A People Charter an also contain more detailed aims and plans for organisational implementation, such as commitments from the organisation about how it will support professional development and training.

7. SOCIAL SUSTAINABILITY, WORKFORCE AND PEOPLE

Training and Skills

Providing training opportunities for rental company staff is both important for customer satisfaction and also key to providing a stimulating work environment with good employee retention. Rental companies report that their customers expect rental staff to be highly knowledgeable about a wide range of equipment, which can be a challenge as many rental staff will not have operational experience using the equipment. Furthermore, the new challenges provided by sustainability mean that customers are likely to have questions about topics such as battery life, charging times, and even the availability of certified green electricity tariffs.

At a minimum, rental companies should:

- Understand the skills required for each employee role;
- Provide suitable training to ensure that employees are competent in their roles;
- Record training undertaken (especially in key topics such as environmental protection, health & safety and anti-bribery & corruption) and expect to provide examples of this to major customers, if requested.

High quality training with a clear route to career progression is an important consideration for many motivated prospective employees, and this is something that most rental companies will need to consider as they work towards a sustainable future. It can also be a differentiator when companies seek to secure staff in a competitive job market.



8. STANDARDS AND CERTIFICATIONS

General Sustainability Standards and Certifications

There are a wide range of generic sustainability standards and certifications that rental companies can choose to align to and aim to meet. Broadly, these systems fall into one of three categories:

- Standards and guidelines that specify how sustainability matters should be measured. For example, the ISO14064 standards specify how carbon footprints or inventories should be calculated, while the guidelines from the Taskforce for Climate-related Financial Disclosures (www.fsb-tcfd.org) specify how organisations should conduct climate risk assessment and disclosure and have been incorporated into the international reporting standards of the ISSB[71]. Organisations may be accredited against some standards – for example, an ISO-accredited auditor may certify that an organisation's carbon footprint is compliant with the ISO-14064 standard;
- Standards and certifications that specify how plans and targets should be set. For example, the Science-Based Targets Initiative (www.sciencebasedtargets.org) sets a clear standard for what a good decarbonisation or Net Zero target looks like for a company in a particular sector;
- Standards and certifications that specify how organisations should manage and deliver improvements in their sustainability impacts more widely. For example, ISO14001 sets out guidelines for site Environmental Management Systems.

Formal standards and certifications should not be confused with initiatives or schemes that aim to encourage **collective commitments** or raise the level of general aspiration, but which are not formal enough to be considered standards or certifications. For example, there are many **voluntary schemes** that organisations can sign up to, such the United Nations Global Compact (www.unglobalcompact.org), where the commitments and principles are relatively general, making it difficult for an independent third party to assess the adherence of a company to the scheme's principles.

Similarly, the **United Nations Sustainable Development Goals** (www.sdgs.un.org/goals) is a set of 17 goals for sustainable development adopted in 2015 by all United Nations member countries as part of the 2030 Agenda for Sustainable Development.These goals are very specific (for example, Goal 6 is 'Ensure availability and sustainable management of water and sanitation for all', which breaks down into eight well-defined and measurable targets). However, they tend to be targets intended for countries or government bodies to measure and influence, and companies' impact on many of the targets is incidental. Some of the SDGs are more relevant to companies – for example, SDG 8 'Decent work and economic growth' is a theme where rental companies can have a real impact.

Some of the more important voluntary standards and schemes are described briefly below:

CDP – www.cdp.net

The CDP (previously known as the Carbon Disclosure Project) is a scheme and tool which allows companies to report their carbon footprints (and some other sustainability relevant information, such as carbon reduction plans and water consumption) onto a public platform, in a standardised format. The data can also be released in a controlled way to customers to use for their scope 3 footprinting.

CDP is a chargeable platform, although the costs may be waived for small companies and those headquartered in some developing countries. Please see below for more information about costs of sustainability schemes.

The Science-Based Targets Initiative (SBTi) – www.sciencebasedtargets.org

The SBTi is an initiative to improve and standardise companies approaches to setting Net Zero targets. The SBTI produces extensive guidance and standards for companies to set rigorous and transparent targets for achieving Net Zero, and the organisation will also review and accredit those targets for maximum credibility.

8. STANDARDS AND CERTIFICATIONS

The Global Reporting Initiative (GRI) – www.globalreporting.org

The Global Reporting Initiative is one of the most widely used and best-known corporate sustainability reporting standards in the world. The GRI standard is actually a module set of three standards, which can apply to different types of organisations in different industries, but which totals around 40 separate disclosures across environmental, social and governance issues. Crucially, the GRI standards are focussed on 'impact' or 'inside-out' issues, rather than pure financial materiality. The GRI standard has also been substantially referenced in the EU's European Sustainability Reporting Standards that make up the framework of the CSRD legislation.

Construction and Rental Industry Standards and Certifications

ERA Sustainable Supplier Framework

The **ERA's Sustainable Supplier Framework**[72] is a leading framework that sets best practices across the industry in sustainability assessments of suppliers. The goals of the Framework are to reduce the administrative burden from supplier assessments for rental companies and suppliers and to provide rental company customers with a better understanding of how rental companies approach sustainable supply chains.

The framework helps rental companies to define minimum sustainability requirements and aspirations for all their suppliers to rental companies:

- Human rights and working conditions;
- Health and safety;
- Responsible sourcing of components and raw materials;
- Environmental performance;
- Business ethics;
- Product sustainability performance.

Rental companies and their suppliers wishing to use the ERA Sustainable Supplier Framework do not need to be members of the European Rental Association or one of national rental associations, but can access resources freely on the ERA website at www.erarental.org/sustainable-suppliers.

Fleet Operators Schemes

There are several industry schemes which encourage fleet operators to meet particular levels of sustainability, and which may offer badges to organisations who comply with the scheme. For example, the Fleet Operators Recognition Scheme (www.fors-online.org.uk) in the UK is a voluntary scheme that aims to raise the level of quality in the industry, and which includes sustainability considerations within its coverage.

CESAR Emissions Compliance Verification[73]. This is a process to show the EU Stage emissions class of construction equipment.

SafeHire. SafeHire is a voluntary scheme for European rental companies set up by the Hire Association Europe to demonstrate the quality of their offering and engage in continuous improvement. SafeHire has now been endorsed by the British Standards Institutes as a 'private standard'. The stated benefits of SafeHire are:

- Demonstrating competence in safety, health, environment and quality;
- Meeting client demands for high standards of service;
- Demonstrating a well-trained workforce to support customers;
- Participants can receive a 10% discount from the liability section of the rates/premiums on HAE EHA insurance policies.

8. STANDARDS AND CERTIFICATIONS

Supply Chain Sustainability School (SCSS) Plant Charter[74]. This is a public declaration that construction companies can sign up to in order to demonstrate their commitment to addressing climate change. Signatories commit to adhering to the minimum standards published by the Supply Chain Sustainability School, which aim to reduce tailpipe emissions, educate employees on sustainability topics and engage clients and suppliers. Signatories can be awarded either a Gold, Silver or Bronze badge depending on relevant activities they have engaged in.

There are also many standards and certification systems across the built environment and construction, some of which may have relevance to equipment rental companies. For example, wherever scheme carbon footprints are being produced (for example, to contribute to a LEED or BREEAM rating), the emissions from rental equipment and equipment will be a key input into the measurement for the scheme rating. While an overview of built environment sustainability standards such as BREEAM and LEED is beyond the scope of this Guide, rental companies should be aware that construction clients may require equipment emission data for this purpose.

Costs of Standards and Certifications

The costs of different standards and certification schemes vary widely, partly due to different schemes offering different things. Some schemes provide only limited support or oversight before providing their kitemark, while others provide access to comprehensive tools, resources and guidance.
CDP is a common scheme for companies to join, as it allows them to disclose their carbon footprints and other environmental data to customers and other interested parties. CDP costs vary depending on several factors, including the exact services the company wishes to access, where the company is headquartered, and whether the company has been asked to disclose by an organisation who is a member of another initiative. As a general guide, most European companies will pay €2,825 to disclose via CDP under the Foundation Tier 2024 pricing [75], with a higher price of €6,850 payable for the Higher Tier which provides additional benefits such as listing on the DCP website, access to regional events and screening of the company's supply chain.

SBTi is also a chargeable scheme, with the scheme operators providing a review and validation against the published standards for companies wishing to declare that they are SBTi-compliant. The full Net Zero target validation service is normally $9,500, but a discounted option is available for companies with fewer than 500 employees[76]. This is only available to companies that are independent (are not a subsidiary of a larger company).

Some standards are free to access (such as GRI and TCFD), while others must be purchased (such as ISO 14064 or ISO 14001). In general, even when the standard is free or inexpensive to access, companies should budget for implementation and independent audit or verification costs. For example, the ISO 14001 standard can be purchased for around €160, but implementing the required management system and having it audited is likely to cost at least €20,000.
Proprietary and private schemes such as FORS, SafeHire and SCSS often vary in pricing depending on the size of the organisation, so interested companies should enquire directly with the scheme operators.

9. GLOSSARY

Carbon footprint. A carbon footprint measures the amount of carbon dioxide and methane produced by individuals, organizations, products or practices.
Carbon neutral. The ideal balance between carbon dioxide emissions produced by human activity and carbon absorption by the atmosphere; the calculation should come to zero.
Carbon offset. A carbon offset is an activity or purchase that is intended to compensate for carbon emissions produced by individuals and organizations. Carbon storage through tree planting or land restoration is a common example. Businesses that create carbon offset programs receive carbon tokens.
Circular economy. The circular economy keeps products in circulation to the fullest extent possible by reducing material consumption, streamlining processes and collecting waste for reuse.
Climate adaptation. The act of preparing for and adjusting to climate change's current and projected consequences. For example, cities can build seawalls to protect from rising sea levels.
Climate resilience. The ability to support a community, company or the natural environment before, during and after a climate event in a timely, efficient manner. Climate resilience differs from climate adaptation, but the two are often used synonymously.
Closed-loop. A production process that reuses material waste to create additional products or repurpose recycled materials.
Corporate social responsibility (CSR). For-profit companies use the CSR business model to gauge social and environmental benefits alongside organizational goals such as profitability.
Environmental, social and governance. Sustainable and ethical interests that can be central to an organization's financial and corporate interests. Otherwise known as ESG.
CDP. A not-for-profit global environmental disclosure system for investors, companies, cities, states and regions use the system.
Global Reporting Initiative. A nonprofit and independent standards organization that helps organizations report ESG impacts.
Science Based Targets Initiatives. A nonprofit partnership that helps private sector organizations set science-based emissions goals meant to uphold climate science and the Paris Agreement. The partnership is between the CDP, World Resources Institute, World Wide Fund for Nature and UN Global Compact.
Greenhouse gas emissions. The sum of emissions of various heat-trapping gases. Greenhouse gases include carbon dioxide, methane, nitrous oxides and fluorinated gases such as hydrofluorocarbons.
Greenhouse Gas Protocol. A globally recognized set of reporting and accounting frameworks for managing greenhouse gas emissions from private and public sector operations, value chains and mitigation actions.
Greenwashing. Deceptive, misleading or false claims or actions that an organization, product or service has a positive environmental effect is called greenwashing. Whether intentional or unintentional, the practice is detrimental.
Net Zero. The result of lowering greenhouse gas emissions as close as possible to zero and balancing remaining emissions with removals.
Paris Agreement. The Paris Agreement is a legally binding international treaty on climate change that aims to limit global warming to a 1.5°C temperature increase by the end of the century. The Agreement was adopted at the 2015 UN Climate Change Conference.
Recycling. The process of collecting and processing waste materials, ideally to make new products.
Scope 1 emissions. The direct emissions generated by an organization's operations. Running machinery, manufacturing products, driving vehicles, heating buildings and providing power to devices generate emissions.
Scope 2 emissions. The indirect emissions generated by an organization's energy purchase and usage. Investment in renewable energy sources may help lower these emissions.
Scope 3 emissions. The indirect emissions generated by an organization's customer and supplier activities.
Transition Plan. A business' stated set of assumptions and future activities over the coming years, that will ensure it is sustainable in a low-carbon economy where its emissions are Net Zero.
Zero waste. The concept of managing products, packaging and materials responsibly to minimize environmental harm.

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EUROPEAN
RENTAL
ASSOCIATION



Av. de Tervueren 188a, 1150 Brussels

era@erarental.org

www.erarental.org