

**Alkaline fuel cell (AFC)**

Relatively low operating temperature (60 to 80°C) and one of the oldest designs for fuel cells, used in the United States space programme since the 1960s. AFCs require pure hydrogen as fuel.

**Annual General Meeting (AGM)**

AGM is a yearly gathering of our interested shareholders where our executive team present our annual report about Ceres' performance and strategy.

**Annual report (AR)**

The AR is a document that public corporations provide annually to shareholders and other interested stakeholders to describe their activities, strategy, and financial and operational conditions.

**Carbon dioxide equivalent (CO<sub>2</sub>e)**

CO<sub>2</sub>e is a comparative measure of the global warming potential (GWP) of various greenhouse gases (GHGs) by converting amounts of the mixture of GHGs to the equivalent amount of carbon dioxide (CO<sub>2</sub>) with the same warming potential.

GWP accounts for the difference in the effects of GHGs, namely the efficiency at which they absorb energy and how long they stay in the atmosphere. The time period usually used for GWP is 100 years.

**Carbon disclosure project (CDP)**

CDP is a not-for-profit organisation that runs a global disclosure system for investors, companies, cities, states and regions to report and benchmark their environmental impact.

**Chief Executive Officer (CEO)**

The CEO implements the goals, targets and strategic objectives of the company as overviewed by the Board of Directors. The CEO reports status of the company to the Board of Directors, motivates employees and drives change within the organisation.

**Chief Financial Officer (CFO)**

The CFO is responsible for managing the company's financial operations and strategy. Reporting to CEO, the CFO has a substantial say in the company's investments, capital structure and long-term business strategy.

**Control of substances hazardous to health (COSHH)**

COSHH is a law that requires employers to control substances that are hazardous to health.

**Diversity equity, belonging and inclusion (DEBI)**

Ceres' diversity and inclusion programme.

**Decarbonization**

The process of lowering the amount of greenhouse gas emissions (mostly carbon dioxide, CO<sub>2</sub>) produced by the burning of fossil fuels from a process.

**Efficiency, electrical/thermo**

The amount of electricity/heat that is produced by a process for each unit of energy supplied to the process, often expressed as a percentage.

**Efficiency, total**

The amount of useful energy in any form that a process produces for every unit of energy supplied to the process, often expressed as a percentage.

**Electric vehicle (EV)**

An EV is a vehicle that can be powered by an electric motor that draws energy from a battery and is capable of being charged from an external source.

**Electric vehicle range extender (EVRE)**

An EVRE extends the range of EVs by supplying additional electricity to the electric powertrain, either through combustion or through fuel cells.

**Electrolyser**

A device that uses an electric current to drive a chemical reaction, the reverse process to that of a fuel cell. There are several types of electrolysis technologies:

Alkaline electrolysis (AEL): in use for more than 100 years, it uses a liquid alkaline electrolyte solution and operates at low temperature with liquid water. It is the greatest scale and lowest cost technology today, but is not as efficient as other technologies.

Proton exchange membrane (PEM) electrolysis: uses a solid electrolyte that requires expensive rare metal catalysts. It can operate at high current densities at low temperature with liquid water and has a high dynamic response.

Solid oxide electrolysis cell (SOEC): the least mature technology, it works at high temperatures from steam, giving it significantly higher efficiency and lower operating costs than other technologies when integrated to use waste heat with existing processes such as steel, ammonia and synthetic fuel.

**Energy**

In physics, energy is the capacity for doing work. It may exist as potential, kinetic, thermal, electrical, chemical, nuclear or other various forms. Measured in joules or watt-hours.

**Environment, social and governance (ESG)**

ESG is a framework to assess companies on their environmental and social issues with a corporate governance structure to encourage companies to act responsibly, often driven by

shifting regulations, prioritising long term sustainability or political agendas as opposed to companies exclusively focusing on financial metrics.

ESG recommendations are designed to encourage companies to disclose their impact on and risks from environmental and social issues, such as employee satisfaction, human rights and environmental impact. How these impacts are managed are outlined in the company's government processes and structures.

### **Engineering and Physics Sciences Research Council (EPSRC)**

EPSRC is a British Research Council that provides government funding for grants to undertake research and postgraduate degrees in engineering and physical sciences. Prof. Brian Steele received a grant to develop his ground-breaking SOFC research.

### **European Union (EU) taxonomy**

A classification system established by the European Commission to clarify which investments are environmentally sustainable.

### **Financial Conduct Authority (FCA)**

The FCA is a financial regulatory body in the United Kingdom but operates independent of the UK government and is financed by charging fees to members for the financial services industry. It aims to protect consumers from bad conduct and financial services as well as ensuring financial markets operate fairly.

### **General data protection regulation bracket (GDPR)**

GDPR is a regulation in European Union law that sets guidelines on collecting and processing data of individuals who live within the EU or outside of it.

### **Greenhouse gases (GHG)**

GHG are gases in the Earth's atmosphere that absorb infrared radiation energy and reflect it back to Earth, trapping heat radiated by the Earth's surface in the atmosphere. The most common GHGs are water vapour (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), ozone (O<sub>3</sub>) and various synthetic chemicals.

Excess GHGs produced by human activity, also known as anthropogenic GHG emissions, can amplify the greenhouse gas warming effect in the atmosphere, which can lead to instability in the Earth's climate system.

### **Health, safety and environment (HSE)**

HSE implements the practical aspects that protects the environment and maintain health and safety in occupation.

### **Hydrogen (H<sub>2</sub>)**

A highly abundant naturally occurring gas commonly cited as a fuel for the future as it has a high chemical energy content for its mass and creates no harmful emissions when it is burned to release energy. Hydrogen is currently used as a feedstock for a number of industrial processes, such as metal smelting and fertiliser production, and is commercially defined by its method of production and the treatment of the waste gases produced:

Brown: produced using coal where the associated production emissions are released to the air.

Grey: produced from natural gas where the associated production emissions are released to the air.

Blue: produced from natural gas where the associated production emissions are captured using carbon capture and storage.

Pink: produced from electrolysis powered by nuclear energy, emitting no carbon emissions during production.

Green: produced from electrolysis powered by renewable electricity, emitting no carbon emissions during production.

### **Innovate UK**

Innovate UK is the United Kingdom's innovation agency, which provides support and funding to organisations that make new products and technologies. It is a non-department public body operating at arm's length from the Government as part of the United Kingdom's Research and Innovation organisation.

### **Intellectual property (IP)**

An asset that is created by the innovative activities of people and businesses. IP can be in the form of inventions, literary and artistic works, designs and symbols, names and images used in commerce. In business, unique IP is often the basis of competitive advantage and is therefore closely protected, for example by calling out a copyright, registering a table or filing a patent. Intellectual Property Rights are protected by law and allow the holder to assert control over how they are used through contracts and licences.

### **International Chamber of Shipping (ICS)**

ICS is concerned with all technical, legal, employment and trade policy issues that impact on international shipping operations.

### **International Energy Association (IEA)**

The IEA is an autonomous intergovernmental organisation based in Paris that provides policy recommendations, analysis and data on the global energy sector. The member countries and associated countries represent 75% of global energy demand.

### International Organisation for Standards (ISO)

ISO is a non-governmental standard development organisation comprising individuals from national standards organisations of more than 160 member countries.

### International Marine Organisation (IMO)

As a specialised agency of the United Nations, IMO is the global standard-setting authority for the safety, security and environmental performance of international shipping.

### Key performance indicator (KPI)

KPIs are quantifiable measures of performance to gauge progress for a specific objective over time.

### Natural gas (NG)

A fossil fuel energy source that is formed deep beneath the Earth's surface. The largest component of natural gas is methane, composed of carbon and hydrogen. When natural gas is burned or used in a fuel cell, it produces energy and waste carbon dioxide.

### Nitrous oxide (NO<sub>x</sub>)

A gas that is often formed as an unwanted byproduct of combustion: the higher the temperature or pressure of the combustion, the more NO<sub>x</sub> is formed. It is a significant cause of poor air quality.

### Original equipment manufacturer (OEM)

A company that manufactures and sells products or part of a product to another company.

### Platinum group metals (PGMs)

PGMS are a group of six metallic elements that have similar physical and chemical properties and that tend to occur together in the same mineral deposits. These elements play a vital role in many industries due to their extraordinary and unique properties. The six PGMs are platinum, palladium, rhodium, osmium, ruthenium, and iridium.

### Research and development (R&D)

R&D is any innovative activities undertaken by universities, corporations or governments to develop nascent services, products or technologies.

### Ricardo

Ricardo is a global engineering services company Ceres has engaged to establish a science-based pathway to reduce greenhouse gas emissions in line with SBTi initiative.

### RIDDOR

Reporting of Injuries, Diseases and Dangerous Occurrences Regulation.

### Science based targets initiative (SBTi)

SBTi is a partnership between CDP, the United Nations Global Compact, World Resources Institute and the World Wide Fund for Nature. SBTi defines and promotes best practise in emissions reduction and net zero targets in line with climate science to meet the goals of the Paris agreement - limiting global warming to well below 2°C above pre dash industrial levels and pursuing efforts to limit warming to 1.5°C. There are currently three verifiable, accountable scopes of GHG emissions on which companies must report, as set out by the Greenhouse Gas Protocol.

#### Scope 1 emissions

Direct GHG emissions from operations that are owned and or controlled by the organisation.

#### Scope 2 emissions

Indirect GHG emissions from energy imported from third parties, heating, cooling and steam consumed by the organisation.

#### Scope 3 emissions

All GHG emissions that occur as a consequence of the operations of the organisation but are not directly controlled or owned by the company, such as the production of upstream and downstream activities and materials.

#### Scope 4 emissions

Scope 4 emissions refer to emission reductions that happen outside of a product's life cycle or value chain, but as a result of the use of that product.

### Solid oxide fuel cell (SOFC)

High operating temperature (up to 950°C) but highly efficient fuel cell able to generate electrical power from multiple fuel types including natural gas, biofuels, hydrogen blends and pure hydrogen. However these cells are typically expensive as they tend to be constructed from exotic, but fragile, materials resistant to the high operating temperatures.

### SOFC system

An assembly that is made up of the fuel cell, fuel input handling components and components engineered to manage electrical power output and waste heat and gases.

### Stack

An assembly of individual fuel cells into a device that can deliver a large amount of electrical power. Ceres' stacks are commonly manufactured in 5kW and 10kW units. These can be connected in a modular manner to create higher power systems.

### **Sulphur oxide (SO<sub>x</sub>)**

The gaseous substance formed when sulphur compounds such as those found in many fossil fuels are burned. Before low-sulphur fuels were regulated, they were a significant cause of poor air quality vehicles.

### **Sustainable Accounting Standards Board (SASB)**

Founded in 2011, SASB is a non-profit organisation focused on independent standards setting.

### **Synthetic fuel (synfuel)**

Synfuels, also known as synthetic advanced fuels or e-fuels, are fuels in liquid or gaseous form that are made by combining captured CO<sub>2</sub> emissions with hydrogen produced using renewable or CO<sub>2</sub>-free electricity. Examples are e-kerosene, e-methane, and e-methanol. They are a sustainable alternative to fossil fuels but often release CO<sub>2</sub> when combusted. E-kerosene is part of so-called sustainable aviation fuels.

### **Task force on Climate-Related Financial Disclosures (TCFD)**

TCFD is an international framework of disclosure recommendations developed to improve and increase reporting of climate-related financial impact of climate change. As of 2022, UK premium listed companies are required to report using the TCFD framework in their AR.

### **Taskforce for Nature-related Financial Disclosures (TNFD)**

Based upon the TCFD, TNFD is a set of disclosure recommendations developed for companies to assess, report and act on their nature-related dependencies, impacts, risks and opportunities to support a shift away from nature-negative outcomes toward nature-positive outcomes.

### **Technology Strategy Board (TSB)**

TSB is now Innovate within Ceres.

### **The Paris agreement**

A legally binding international treaty on climate change. It was adopted by 196 parties at COP21 conference in Paris, on 12 December 2015 entered into force on 4 November 2016. Its goal is to limit climate global warming to well below 2°C, preferably 1.5°C compared to pre-industrial levels.

### **Total recordable incident rate (TRIR)**

TRIR is the percentage of incidents per 100 employees (Number of Incidents x 200,000/ total number of hours worked in the year). Recordable incidents include all work-related deaths and illnesses and those work-related injuries which result in death, loss of consciousness, restriction of worker motion, transferred to another job or require medical treatment beyond first aid.

### **Watt (W)**

The unit by which power is measured. The amount of energy, measured in joules, delivered in a fixed amount of time, for example joules per second. Values are typically expressed in kilowatts (1kW equals 1000W); megawatts (1MW equals 1,000kW); gigawatts (1GW equals 1,000MW).

### **Zero emission**

Refers to a vehicle, engine, motor, process or some other energy source, that emits no waste products that pollute the environment or disrupt the climate.