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Powerhouse Energy Group PLC
03 June 2024

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Powerhouse Energy Group plc
("Powerhouse" or the "Company")

Audited Results for the Year Ended 31 December 2023

Powerhouse Energy Group plc (AIM: PHE), a company pioneering integrated technology that converts non-recyclable waste into low carbon energy, is pleased to announce its audited results for the year ended 31 December 2023.

Summary:
Corporate:

- Completed major strategic review. The business is now focused on Licensing fees, Royalties and Engineering Services Revenues with the successful acquisition of Engsolve.
- Strengthened Board with a group of Directors with appropriate expertise in engineering and finance.

Financial:

- Revenue for 2023 was £181k (2022: £380k).
- The Group reported an operating loss (pre-exceptional items) in 2023 of £1.8m (2022: £2.1m). Significant savings in administrative expenses driven by the Board.
- Cash at bank of £4.34m (2022: £5.9m).

Operational:

- Acquisition of the remaining shares in Engsolve brings the Company's engineering capability fully in-house.
- Excellent progress on the new Powerhouse Technology Centre in Bridgend, with the Centre becoming the Company's business headquarters and Registered office.

Outlook:

- National Hydrogen (NH2), Australia - gained momentum in the latter part of the year resulting in an agreement being signed since the period end, that will bring with it a front end engineering design (FEED) contract during 2024 and has the potential for significant revenue opportunities.
- The manufacturing of the 2.5 tonne per day kiln for the Feedstock Testing Unit (FTU) has been completed.
- The new kiln has been shipped and is due to arrive at the Technology Centre in the coming weeks.
- Completion of the FTU is expected towards the end of the year which will allow the Company to accelerate the development of commercial applications for its technology.
- Resolution of European Patent Challenge, ensuring that no additional challenge to Powerhouse patents worldwide can be raised by Onunda.
- Acquisition of Engsolve brings with it a history of successfully delivering engineering services to the energy, oil and gas, manufacturing, waste, and safety sectors.
- Long term pipeline of promising projects in the UK and overseas.

David Hitchcock, Acting Non-Executive Chairman, commented:
"The period under review has seen us re-assess where the focus of the business should be going forward so that as a company we concentrate on strengths in order to grow the business and deliver value for our shareholders. We strongly believe that by focusing on licensing fees and royalties and engineering services revenues we will deliver on this and ensure that we realise the full value for Powerhouse.

"The actions we have taken in the last year have left the Company on a very solid footing from which to further progress and grow in the year ahead."

Paul Emmitt, Chief Executive Officer, commented:
"Despite being a challenging year, the Company made excellent progress in 2023. Our business model of joint venture arrangements with project development partners, giving Powerhouse more control, and providing greater upside opportunity for our shareholders we believe is already gaining traction and bearing fruit.

"This year will be an exciting one for Powerhouse and we look forward to providing updates on our project pipeline as they progress but also on the Technology Centre once it is fully operational as well as proving up our technology in a commercial context."

A full copy of the Company's Report and Accounts for the year ended 31 December 2023 will be sent to shareholders shortly and available on the Company's website www.phegroup.com together with the Notice of Annual General Meeting to be held on 27 June 2024 at 11.00am at the Company's registered office at Unit 3/3a Garth Drive, Brackla Industrial Estate, Bridgend, Wales, CF31 2AQ.

For more information, contact:

Powerhouse Energy Group plc Paul Emmitt, Chief Executive Officer	+44 (0) 203 368 6399
Strand Hanson Limited (Nominated & Financial Adviser) Ritchie Balmer James Harris Rob Patrick	+44 (0) 207 409 3494
Turner Pope Investments (TPI) Ltd (Broker) Andrew Thacker James Pope	+44 (0) 203 657 0050
Tavistock (Financial PR) Simon Hudson Nick Elwes Saskia Sizen	powerhouse@tavistock.co.uk

About Powerhouse Energy Group plc
Powerhouse Energy has developed a process technology which can utilise waste plastic, end-of-life-tyres, and other waste streams to convert them efficiently and economically into syngas from which valuable products such as chemical precursors, hydrogen, electricity, heat and other industrial products may be derived.

Powerhouse Energy's process produces low levels of safe residues and requires a small operating footprint, making it suitable for deployment at enterprise and community level.

Powerhouse Energy Group also incorporates Engsolve Ltd, who offer Engineering Services across all sectors with speciality services in the development of new technologies and clean energy.

Powerhouse Energy is quoted on the London Stock Exchange's AIM Market under the ticker: PHE and is incorporated in England and Wales.

For more information see www.phegroup.com

CHAIRMAN'S STATEMENT

I was delighted to join the Board of Powerhouse Energy Group plc ("Powerhouse", "PHE" or the Group") as an Independent Non-Executive Director last year and to become Acting Non-Executive Chairman from 15 December 2023. I am truly pleased to be able to report several very positive steps forward during the short period of my tenure of office so far.

The Group has now reviewed its strategy and has adopted a model of joint venture arrangements with project development partners, giving Powerhouse more control, and providing upside opportunity for our shareholders we will maintain the licencing option where it is most suited in commercial terms . This change of direction is illustrated by our recent announcements on our projects at County Longford in Ireland, and with a very exciting opportunity with National Hydrogen in Australia and Asia.

Significantly, it also became clear that our partner at our historic Protos site near Chester (originally the site owner and licensee of our technology) no longer shared our vision for the project's development. We therefore took full ownership and control of the project into Powerhouse on terms which included acceptable lease provisions for the site.

Additionally, we were delighted to announce that we have brought our engineering capability fully in-house, having now increased our ownership of Engsolve Limited ("Engsolve"), our engineering partner, to 100%. Engsolve was established and, until this most recent transaction majority owned, by the Powerhouse Chief Operating Officer, Paul Emmitt. Powerhouse had acquired a 48% interest in Engsolve in 2021. Although the former arrangement had worked well in practice, it was not the optimal platform from which to build the business. The new arrangement hugely simplifies the Group's access to its essential engineering requirements. The Board sees it as a step forwards in presenting Powerhouse to the market as a stand-alone business, which now has all the essential components in-house. This will reduce reliance on third parties and ensures maximum potential value for Powerhouse's shareholders.

We have continued to make excellent progress on the new Powerhouse Technology Centre in Bridgend; a vitally important part of our ability to demonstrate that Powerhouse intends to place itself at the forefront of businesses aspiring for leading positions in the waste-to-energy sector. Hydrogen fuel is actually only one part of the waste-to-energy picture though our Group has maintained a watchful eye on the market for hydrogen, particularly in relation to the publicity attracted by the use of hydrogen as a transport fuel. This particular market remains in its infancy and as such we will continue to develop our capabilities in electricity and heat production. This is fuelled by raw materials (non-recyclable waste products with no use) that to others are a growing problem but which, to us at Powerhouse, are very useful indeed.

We are now exploring the right mix of equity and project finance options, given our growing list of project opportunities, to be ready on a case by case basis.

As Acting Chairman, my focus is on planning the pathway to financial sustainability, ensuring that we have the right skills and other resources within the Group, on the right terms, and that Powerhouse continues to develop and protect its intellectual property. I expect to see Powerhouse prove its viability in a commercial context in late 2025, whilst we develop our working relationships with third parties and maintain their confidence in order to deliver our projects economically.

Our Board has been reshaped and strengthened with a highly experienced group of Directors with long careers in Engineering and Finance. I would like to thank them for all their efforts and wise counsel as we have worked through the change in corporate strategy.

Finally, I wish especially to thank Paul Emmitt for stepping up to become CEO post the acquisition of Engsolve, where he has already made a huge impact. Above all, I would also like to thank all of our shareholders for their continued support over the last few challenging years. The year ahead promises to be an exciting one as we deliver on expectations and progress our vision for Powerhouse.

David Hitchcock OBE
Acting Non-Executive Chairman
31 May 2024

CHIEF EXECUTIVE OFFICER'S REVIEW

The year under review was another challenging one for Powerhouse, however overall a productive one. It was a year that started with a major reconstruction of the board bringing in three new non-executive directors (**NEDs**) and a Non-Executive Chairman. The new board brought with it much needed experience in Finance, Infrastructure Project Management and Technology. These changes have already shown they have and will move the Group towards its goal of trading profitably and being at the forefront of the waste-to-energy sector. The then Acting CEO informed us of his desire to step down and I was asked to step in as Interim Chief Executive Officer (**CEO**). After a probationary period I was appointed as full time CEO and the position of Chief Operating Officer (**COO**) and Chief Technology Officer (**CTO**) were put into stasis. The board enjoyed a productive and stable period until late in the year when the Non -Executive Chairman resigned. David Hitchcock stepped up from NED to become Acting Non-Executive Chairman with a permanent appointment likely to be made in Q3 2024.

My objective both as the COO, and now as CEO, was to refocus the Group on the goals of delivering its first projects and create a qualified pipeline. These are projects that have met important criteria that includes, but is not limited to, planning permissions, a feedstock agreement detailing what and how much feedstock is available, an offtake agreement, an agreement that details what the required output is (Syngas, heat, hydrogen). This enables the Powerhouse team to assess technical commercial and financial viability and before we invest time and capital developing them and to progress the Group towards becoming a profitable enterprise. The first step to achieving this was to re-evaluate the Group's "product and value proposition" and take that to market and potential customers, clearing the deck of projects that would no longer pass the "qualified opportunity" criteria. The primary potential project that was therefore terminated as a result of this was the joint venture (**JV**) with Peel NRE Ltd. This allowed us to dedicate time to more viable opportunities whilst we retained an option on the site. We would also continue to build a strong Group culture following on from the progress introduced by the previous Acting CEO.

Pipeline Highlights

The prioritised and more importantly validated projects that progressed in 2023 and will remain the focus of operations are:

National Hydrogen, Australia
National Hydrogen (**NH2**) in Australia, which in the latter part of the year gained momentum. Since the year end, our efforts have resulted in a five-year framework agreement being signed with NH2, that will bring with it a Front-End Engineering Design (**FEED**) study to be undertaken by Engsolve during 2024. The framework agreement sets out the terms on which the Group's technology and engineering expertise would be provided, on a project-by-project exclusivity basis, to NH2 for its intended roll out of multiple hydrogen-based projects across Australia, Italy, Switzerland, and Hong Kong.

Ballymena, Northern Ireland
As with NH2, Ballymena is a validated project and has progressed steadily during the year. There are certain administrative issues that need to be overcome but we are confident in Ballymena progressing in 2024.

Longford, Ireland
In 2023 we informed Hydrogen Utopia International (**HUI**) that the Longford project would be deferred, as the cost-benefit trade-off for the project no longer fitted with the business focus. Following further negotiations and discussions with our JV partner, HUI, we committed to adding the project back into our active listing in 2024, as the terms and prospects of the project became more favourable, in particular with the opportunity to progress its development within a European Union Just Transition Fund area, which brings with it the potential of grant funding for the development.

Plastics to Hydrogen No1 (Protos)
For a long time this was our "Totemic" project. This has now moved to lower priority. PHE acquired 100% of Protos in 2023, with the JV itself being wound up, with the assets of the SPV signed over to PHE, and the agreement that PHE will retain the option (for a fee) until March 2025.

Corporate and Operational Highlights

We have had positive movement on our patents and IP, however toward the end of the year, we met some headwinds when one of our pending patents was challenged. This issue was resolved in early May 2024 to the Board's satisfaction and our commercialisation plans are back on track.

The other hurdle we encountered was due to our proposed kiln supplier, Mitchell Driers, entering into liquidation in October 2023, thus meaning our scale up test facility was now at risk. We have since identified and qualified a new supplier and have placed an order for an alternative kiln, that is currently being shipped to the UK, and that will enable us to have the Technology Centre available in Q4 2024.

Engsolve has provided engineering support to Powerhouse for many years, with the Group holding 48% of the shareholding since August 2021. The Group acquired the remaining shares in June 2023, such that Engsolve is now a shareholding since August 2021. The Group acquired the remaining shares in June 2023, such that Engsolve is now a wholly owned subsidiary of the Group. Engsolve brings with it a history of successfully delivering engineering services to the energy, oil and gas, manufacturing, waste, and safety sectors. It is Powerhouse's intention to build on this legacy, taking advantage of its specialist knowledge and the R&D capability emerging from the Technology Centre, to become a significant service provider. This will bring new revenue streams into the Group and help build its reserves to support the capital projects.

Financial Highlights

The highlights from the financial report are as follows. Further information is covered in the strategic report.

The Group reported an overall loss in 2023 of £1,427,648 as it continued to develop the technology and pipeline. This was compared to a loss in 2022 of £46,198,679 (with the majority of this being driven by an impairment charge).

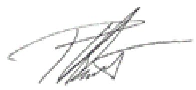
Revenue for 2023 was £180,959 which was derived from Engsolve Limited which became part of the Group in June 2023. This revenue was generated through Engsolve providing Engineering Services to third party customers. The Group will be looking to continue providing third party Engineering Services through Engsolve Ltd and to further develop this revenue stream, both through internal and external work. Non engineering revenues will be generated by Powerhouse Energy as laid out in the business strategy below.

Business strategy

The strategy was revised in 2023 when it was agreed by the Board that waste to hydrogen would not be the primary marketing focus of the Group and that it would be waste to energy, based on the production of syngas. Hydrogen would be an option for projects that have a validated feedstock and most importantly a validated offtake. The successful and profitable production of hydrogen relies heavily on the growth of demand to ensure offtake. Demand is growing, and we continue to field a number of opportunities. The Board has every confidence this demand will continue to increase and by the end of this decade, the use of hydrogen as both a transport fuel and industrial natural gas substitute will be common. Powerhouse is in an excellent position to take advantage of this, and in parallel will leverage other sources of revenue. The recent full integration of Engsolve into the Group provides this opportunity and in the Strategic Report we set out the role Engsolve will play.

Our strategy is now one focussed on Licensing fees, Royalties and engineering services revenues which include potentially providing third party testing of waste streams at the Brackla Technology centre. This concentrates funding needs to that of costs of operations, further research and development to prove our technological capabilities, and de-risking the financial position of the business, until such time that revenues generate sufficient free cash flow to self-fund operations.

In summary, following a few years of instability, Powerhouse now has a strong board with a focussed strategy. Projects that do not meet the strict criteria set by the Board are declined and we have a pipeline of exciting project opportunities that are commercially and financially suitable. In addition, we have a good funnel of work via Engsolve from which we can grow our revenue, and the integration of Engsolve with the wider Group continues to strengthen our technical capabilities and improve efficiency in the business.



Paul Emmitt
Chief Executive Officer
31 May 2024

STRATEGIC REPORT

This strategic report presents the Directors' opinion regarding the future direction of the Group and contains certain forward-looking statements. These statements are made by the Directors in good faith, based on the information available to them at the time of writing and such statements should be treated with caution as they address uncertainties.

Path to revenue profit and valuation strategy

Revenue

During 2023 the Group received two main sources of income:

1. £180,959 of third party Group Revenue from Engsolve in the second half of 2023 post acquisition of 100% of the share capital.

2. £76,206 arising from Engsolve profit share in the first half of 2023 (as a result of Powerhouse's then 48% interest in Engsolve).

Profit and Loss

Following the full acquisition of Engsolve in 2023 and the move to the Bridgend Technology Centre the CEO and CFO have implemented a review and a cost cutting exercise, removing or renegotiating duplicated contracts resulting in a considerable reduction in the cost base.

Goodwill

The Directors reviewed last years key assumptions and came to the conclusion that the Goodwill should remain at the same valuation of £2,300,000. The Group acquired £573k of Goodwill in the year due to the acquisition of Engsolve. The Group completed an impairment review and fair value review of Engsolve Limited as part of our year end Accounts FY 2023. The outcome of this impairment review was that we believe the Goodwill valuation at £573k should not be impaired at the year-end December 23. The Key assumptions and sensitivities of the above are set out in Note 11 intangible assets

The Vision and the Mission

Powerhouse's vision is to be a leader in technology solutions that utilise non-recyclable wastes to produce sustainable energy whilst mitigating climate change impacts.

The Group's mission is to provide flexible, innovative solutions to global pollution and adverse environmental impacts by converting such non-recyclable wastes into valuable end products, including low carbon energy. We will impacts by converting such non-recyclable wastes into valuable end-products, including low carbon energy. We will work with clients and partners to evaluate, design and develop facilities and will license third party developers to deliver similar facilities that reduce environmental impact.

The Commercial Offering

The commercial offering of Powerhouse is to apply its expertise in engineering and technology delivery to the development of facilities that can generate continuous profit streams for the Group through design consultancy and client management fees, licensing and royalty agreements. It specialises in low carbon energy production from waste materials but is able to apply its know-how and expertise to any application that reduces the impacts to the environment, both pollution and climate change.

The Group has developed as its core technology in Pyrolysis/gasification and proprietary control system, based upon the Powerhouse Energy Rapid Modelling System that can process organic or fossil-based carbonaceous materials using pyrolysis and gasification. This produces a synthetic gas (or syngas) that can produce a range of products including:

- Gaseous fuels
- Electrical power
- Heat
- Chemical feedstocks
- Char
- Liquid fuels

Sources of Revenue

Our revenue generation will be derived from:

- Licensing our technology to developers globally
- Royalties - revenue sharing from output of Powerhouse designed solutions
- Engineering design
- Project and client engineer fees

Project Development

To develop an operating waste-to-energy facility based on the Powerhouse solution requires a construction and commissioning programme of at least 18 months. Specialist materials are required for some of the equipment due to the high operating temperatures, especially with hydrogen as the required output. This means that some of the equipment can only come from specialist manufacturers and the delivery periods are currently longer than historically due to ongoing supply chain issues. Prior to construction, it is necessary to obtain planning permission and the necessary environmental permits, so the typical project cycle time from conception to reality of a Powerhouse technical solution is around four years. With other configurations - for example, an electricity generation only facility - it can be a few months less, but not substantially shorter. Whatever the period of development, construction and setting to work, the Group previously earned no revenue during that period whatever business model was adopted. The new strategy will include payment for feasibility and engineering designs before financial close. Therefore, it is increasingly important that projects are validated more stringently before heavy costs are incurred.

To date, shareholder funds have financed the Group's working capital. This will remain the case until greater revenues are earned from design fees and longer term licensing and profit share. As mentioned, Powerhouse will not actively look to engage in developing projects, whether in partnership or alone given the difficulty of a Group of our size being able to raise project capital. This position could potentially change in the event of the right project with the right partner who would give the markets sufficient confidence that Powerhouse could go to the market and raise the additional capital funding.

It is anticipated that Engsolve, which is now fully integrated within the Powerhouse Group and bringing with it a history of providing engineering services to third party clients, will continue to contribute to the Group's revenue. It forms a more stable and less risky base on which the Group can build a revenue stream, both internally and externally, whilst the capital projects are developed. This will inevitably require recruitment of some new personnel and a deliberate drive to sell these services as the business grows. Engsolve has an existing base and a successful track record. With positioning of the Group within its specialist areas, it will be possible to build the client base rapidly, producing income from engineering services to reduce the cash requirement from shareholder funds.

Research & Development (R&D)

The application of R&D has always been a key factor in Powerhouse's development. Powerhouse initially tested its technological capabilities in practice using the Demonstrator Unit in Thornton to convert feedstock into syngas, at a relatively small scale but which provided the Group with significant data and information on the process. The Demonstrator Unit has a capacity of 750kg waste per day. In 2022, the Group announced its intention to enhance its R&D capacity by establishing the Powerhouse Technology Centre at Bridgend. A purpose-designed Feedstock Testing Unit (**FTU**) is in the manufacture stage and will be installed within the Centre during 2024. The FTU will have a capacity of 2.5 tonne per day of waste. This is 12 months behind plan due to Mitchell Driers going into liquidation in late 2023 after months of being assured that our kiln was being manufactured.

The FTU is essentially a much larger version of the Demonstrator Unit and is a scaled version of the proposed commercial Thermal Conversion Chamber (**TCC**) which will allow testing of the commercial operating plant to be carried out under controlled conditions. The commercial TCCs are expected to have capacities in the range of 40 tonne per day. It is anticipated that this will enable the Powerhouse technology to be demonstrated in practice, independent of building the commercial unit and hence give comfort to potential investors that the technical risk can be mitigated.

It is the directors' firm belief that the use of thermal processes such as pyrolysis and gasification will grow in forthcoming years as chemical recycling develops and overtakes, and possibly replaces for some materials, physical recycling. Building the Group's expertise and knowledge in this field will allow Powerhouse to be at the forefront of this transition. The ambition is for the Group to be the go-to Group in the UK for these thermal treatments and associated materials behaviour, and for the Powerhouse Technology Centre to become a profit centre in its own right.

PRINCIPAL RISKS AND MITIGATIONS

The Board of Directors is responsible for ensuring that the risk register is maintained and updated. This ensures a reasonable, but not absolute, assurance that significant risks are mitigated and managed to an acceptable level.

The Executive Directors are responsible for establishing and maintaining the risk register on all capital projects. This identifies risks and assesses their potential impact using quantification techniques. Mitigations are then considered, and the residual risk identified.

Significant risks are those which if materialise will have material impact on the Group's long-term performance and delivery of its business strategy. These are summarised in the following table.

Risk	Description	Mitigation

Risk	Description	Mitigation
Operations	Greater than anticipated increases in global pricing and pressures on supply chain adversely impact financial viability of capital projects. Supply chain manufacturing capacity is constrained and cannot meet required delivery times. Longer development timescales than anticipated. Key contractors/suppliers are unwilling to provide required performance guarantees.	All suppliers to be pre-qualified for their relevant experience and stability. Regular review of supply chain and maintain competitive tension. General cost-side inflation will be reflected in offtake price escalation. Contract security and performance requirements to be included in all major supplier contracts, where possible. In-house team to be strengthened with competent personnel, whilst also working with experienced partners - eg strategic framework agreement with Petrofac.
Technical Risk	Risk that the technical solution chosen does not perform to the standards anticipated.	Pyrolysis and gasification are well established technologies, widely reported in research literature. Substantial testing of the feedstock conversion to syngas process has been carried out by PHE using the Demonstrator Unit at Thornton. Powerhouse works with academia to deploy latest computer-aided tools. Independent due diligence on the process will be carried out prior to implementation. The new FTU to be installed at Bridgend will have the capability of simulating the commercial kiln to enable predictive testing to be performed.
Intellectual Property	Patent applications may not be granted. Patents may be contested. Maintaining patents is costly and cannot cover the whole world.	Patents give Powerhouse unique control over its technology, but knowhow and expertise is considered to be more important and can mitigate against copying.
Government Policy	Drivers of demand for pollution reduction, recycling and climate change avoidance rely on support from Government policy. Policy supports for reducing CO_2 emissions and counterfactuals are important to provide Powerhouse with competitive advantage.	Maintain presence and communicate with government departments on Low Carbon Fuels Standards. Currently counterfactuals are not recognised within UK policy.
Competition	Competition may depress revenues or even act as a barrier to Powerhouse's entry to the market.	The evidence to establish and deliver commercial projects acts as a high barrier to entry, which deters competition. Powerhouse is not aware of any significant competitor within its business strategic area. Once access to land is established, competitive pressures lie with waste gate fees and offtake sales. PHE strategy now is to target waste streams that can command adequate gate fees and adapt offtakes to match market demand - hence the broadening of offering beyond plastics and hydrogen.
Funding of working capital/cash flow	Cost of development significantly above ability of shareholder equity to fund. Cash position inadequate to fund project development.	All capital projects are programmed, budgeted and the spend controlled. Most of the development spend on Protos is already expensed. Cash flow is managed and reviewed monthly. New business strategy of providing engineering services through Engsolve will improve cash flow. The Group considers various forms of funding at a Group and project specific level.
Financing of capital projects	Shareholder equity cannot finance capital projects. Cost of capital projects increase and depress IRR below investment level.	Project finance approach to be followed. Powerhouse will de-risk each element required to achieve an investable project. Engineering design completed. Specifications available for plant & equipment to be contracted using model form contracts. Projects value engineered to minimise cost prior to design freeze. Capital costs to be fixed as early as possible.

		Currency risk to be hedged.
Feedstock supply risk	Feedstock unavailable or only at negative gate fees.	Feedstock supply risk will be held by developer / client. Powerhouse will only validate projects that have feedstock supply agreements in place.
Offtake market risk	Offtake market at different price point than anticipated. Lack of demand for offtake.	Offtake agreements will be outside scope of Powerhouse, other than when Powerhouse carries out commercial feasibility study on behalf of a client. Off take agreements will be required for validation. These studies will be paid for by the client.
Regulatory and Compliance Risk	Regulations may change.	Projects designed to meet existing regulations. Change in law provisions included in project contracts.

Key Performance Indicators (KPIs)

The Group now has five full time equivalent employees and will introduce KPIs across all aspects of the business, including business development, operations and finance. In particular, the appointment of a full time Chief Financial Officer in December 2023 requires new KPIs that drive improvements in financial management.

The top level KPIs

- Deliver fully functional FTU facility at Bridgend
- Sign and commence first licensed commercial project
- Develop and maintain technically and commercially qualified project pipeline that will have five projects in design within the next six years

Financial measures:

- Underlying profit and loss to measure the Group's profitability for the year attributable to equity shareholders of the Group. It will exclude exceptional items, remeasurements, timing and force majeure incidents from the calculation;
- Research and Development spend. This will measure expenditure invested in the development of decarbonisation of energy systems, and will provide a transparent view of the Group's compatibility with reduction in contamination, pollution and climate change mitigation.
- Return on capital employed (ROCE). The Group will provide a target and forecast on the potential ROE of its capital investments to provide an indication of its performance in generating value for shareholders.

Non-Financial Measures

- Contamination & Pollution Reduction. This is a projected measure of the reduction the Group's projects will have on reducing contamination and pollution by the waste products processed by the Group's capital projects and engineering services provided to others.
- Business Development metrics such as a rolling pipeline of opportunities being taken through from viability studies to FEED, financial close and into build.
- Climate change mitigation. This is a projected measure of the reduction the Group's projects and engineering services will have on reducing climate change impacts.
- Stakeholder satisfaction. Customer and stakeholder satisfaction will be measured with a view to maintaining engagement with these groups and improving service levels.
- Employee Engagement. The Group will measure how engaged our employees feel, based on the percentage of favorable responses to questions repeated annually in our employee engagement survey. The target will be to increase engagement compared with the previous year. A review of diversity within the workforce will also be carried out a with view to increasing diversity as the workforce grows.

Statement of Directors' Duties to Stakeholders under s.172 Companies Act 2006

The Directors acted in in good faith throughout the year with a view to promoting the long-term success of the Group for the benefit of its members as a whole, with due regard to stakeholders and the matters set out in section 172 of the Companies Act 2006.

The Board recognises its responsibilities to each of the Group's stakeholders and to society, and have endeavoured to ascertain the interests and views of its stakeholders and consider these when making decisions. The Board acknowledges its responsibility for setting and monitoring the culture, values and reputation of the Powerhouse Energy Group, and seeks to live by its values.

When making decisions, the Directors have regard to all stakeholders but acknowledge that not every decision will result in a preferred outcome for all. The Group regards its shareholders, employees, customers, contractors, consultants and advisors, business partners and suppliers as forming part of the wider stakeholder group. The Board strives to balance the different and competing priorities and interests of our stakeholders in a way compatible with the long-term, sustainable success of the business and which maintains a standard of business conduct aligned to our values and purpose.

The Directors are aware of their duty under section 172 of the Companies Act 2006 to act in the way which they consider, in good faith, would be most likely to promote the success of the Group for the benefit of its members as a whole and, in doing so, to have regards (amongst other matters) to:

- The likely consequences of any decision in the long term;
- The interests of the Group's employees;
- The need to foster the Group's business relationships with suppliers, customers and others;
- The impact of the Group's operations on the community and the environment;
- The desirability of the Group maintaining a reputation for high standards of business conduct; and
- The need to act fairly between members of the Group.

The Board recognises that the long-term success of the Group requires positive interaction with its stakeholders. Positive engagement with stakeholders will enable our stakeholders to better understand the activities, needs and challenges of the business and enable the Board to better understand and address relevant stakeholder views which will assist the Board in its decision making and to discharge its duties under Section 172 of the Companies Act 2006.

We reproduce here the Code of Conduct of the Group for easy reference, which the directors believe meet the requirements of s172 of the Companies Act 2006.

Group's Code of Conduct

1. **Introduction**

This Powerhouse Energy Group (Powerhouse) Code of Conduct is a steering document that defines how the Group will act towards its employees, towards its clients, business partners, suppliers, competitors, and other organisations in all situations related to our business. The Code of Conduct is an integral part of the Group's Environmental, Social and Governance (**ESG**) Strategy and defines our corporate responsibility in society.

It is mandatory that this Code of Conduct is understood and complied with by all personnel working for the Group and its subsidiaries or on their behalf, including Representatives.

The Powerhouse Board of Directors are ultimately responsible for the Code and its implementation. The Board will monitor its compliance through annual performance reviews, annual employee surveys and internal and external audits.

All Powerhouse officers, employees and those representing the Group represent the Group's brand and reputation through the solutions and value we create and through our behaviour.

2. Our People

Powerhouse will maintain a structured recruitment process with a structured performance appraisal and talent management process. We will create development opportunities and continuous learning for our employees. By encouraging a feedback culture and working with the insights from our employees, we increase their engagement.

It is the responsibility of each employee to look after their own personal and professional development, but at all times supported by the Group. Employees will be given equal opportunities for professional development both within their existing fields and in new areas.

The Group believes that diversity is an important asset within the Group and in our relationships with clients and stakeholders. We promote equal rights and opportunities of employees in the workplace regardless of their gender identity, age, ethnicity, religion or other belief, disability, or sexual orientation.

3. Social Responsibility

The Group accepts continuing responsibility for its services to its clients and thereby to society. The Group will permanently contribute to the benefit of its clients and society through sustained technological development and personnel training aimed at improving its performance.

Sustainability is a permanent goal in every project. The largest contribution to sustainability lies in the projects Powerhouse develops and has three facets:

1. Our projects must contribute to sustainable development;
2. We will strive to increase the sustainability performance of our clients' projects; and
3. We will act sustainably in our own operations and performance.

Powerhouse is committed to improving the lives of people and to respect human rights. We aim to always act in a socially and ethically responsible way, within the laws of the countries in which we operate. We support and respect human rights, as defined by the UN in the Universal Declaration of Human Rights.

4. Quality of Service

The Group will only undertake project assignments in its areas of expertise where it has the capabilities to deliver efficient and effective service to its clients. We are committed to providing high quality services to clients and will focus on quality management as a working methodology and on permanent improvement as a means to improve that quality of service. It is our intent to be certified in Quality, Environment and Health & Safety in accordance with ISO 9001, ISO 14001 and ISO 45001 and we are committed to continuously improve our management system. We should note that the integration of Engsolve brings with it full ISO 9001 and 14001 accreditation and a robust management system that can be adopted by Powerhouse.

Health and safety is a top priority for the Group, with a zero-incident target. We are committed to eliminate hazards, reduce risk and ensure that health and safety information, instruction, training, and supervision is provided to all.

The Group is committed to the continual improvement of its knowledge base, abilities and tools in the area of its expertise. The Group will focus on technology management as a working methodology and shall extend to its clients the benefits of its professional achievements.

5. Objectivity

Powerhouse will be loyal to its clients and will maintain the confidentiality of any information from the client that is obtained in the process of performing services. The Group will also keep confidential the documents and reports prepared for the client.

The Group will avoid any conflict of interest and will inform a client beforehand of any potential conflict of interest that could emerged during the execution of its services.

The Group will only offer its services under contracting terms that do not interfere with its independence, integrity and objectivity.

Powerhouse will not accept any remuneration that could encourage the offering of a biased opinion.

6. Corporate integrity

Powerhouse complies with all applicable laws, regulations, and other requirements applicable to operations in the countries where Powerhouse is active. This Code applies to all parts of the organisation, irrespective of where we are based, or where our projects are performed.

The Group will operate and compete in accordance with the legislation of each territory in which it operates and will not accept fraud, corruption, bribes, or unpermitted competition-restricting practices. We are committed to supporting international and local efforts to eliminate corruption and financial crime. We will not commit to activities that we cannot defend or account for, and we must not make decisions based on improper relationships or personal relationships. We also undertake to maintain correct and accurate accounting and reporting in accordance with the accounting rules in each territory in which we operate.

The Group will act at all times for the benefit of clients, and will carry out services with professional integrity, whilst not jeopardising the interests of society.

The promotional activity of the Group and its services will uphold the dignity and reputation of the industry. Brochures and other formal documents describing resources, experience, work and reputation will reflect the Group's actual circumstances in a truthful manner.

The Group will manage with integrity its internal and external clients. It will focus on business integrity management as a working methodology.

management as a working methodology.

We respect the privacy of individuals and recognise the importance of personal data entrusted to us by our employees, clients, and other parties. Confidential information received by Powerhouse from clients and other external parties must as a minimum be treated and protected in the same way as the Group's own confidential information. It is the responsibility of every employee and representative to process and protect all personal data compliant with the applicable privacy legislation in a relevant and proper manner.

Employees and representatives must report any violations of business ethics or human rights that arise in their course of work, even if the Group is not directly involved or party to it. In addition, employees should report incidents which could be a breach of business ethics and may remain anonymous if they so wish.

7. Communications
Powerhouse employees are encouraged to communicate and share information but must at the same time ensure that the Powerhouse brand is strengthened and not weakened.

Our communications must always reflect, protect and develop the Group's position in the market as well as show that we are available to our stakeholders. Every Powerhouse employee and representative is an ambassador for theGroup. Communications must support the Group's business goals and profitable growth strategy while securing a cohesive brand identity in the market. All managers are responsible for ensuring that they and their employees comply with the guidance documents that apply for communication within and from Powerhouse.

As a Group quoted on the AIM Market of the London Stock Exchange, we are obliged to communicate anything related to, *inter alia*, the Powerhouse business, financial condition and results in line with the laws and rules that apply to such companies. We report transactions correctly and in a true and fair way.

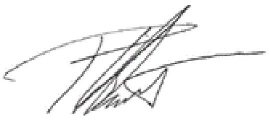
8. Competition
The Group will only solicit work and participate in private and public competitive tendering under a high standard of corporate ethics and competitive practices, and with total integrity in its transactions. The Group will not participate in prohibited anti-competitive activities, illegal price-fixing agreements, market sharing or abuse of dominant position.

The Group favours quality-based selection for the contracting of services.

If solicited to review the work performed by another Group, the Group will act in accordance with its business integrity and objectivity policies.

The Group will not endorse compensation or contribution arrangements destined to influence or secure work, nor seek commissions from suppliers of equipment and services recommend it to the client as part of the Group's services.

The Group will not take part in activities that could damage the reputation of its business or the business of others.



Paul Emmitt
Chief Executive Officer
31 May 2024

INDEPENDENT AUDITOR'S REPORT
TO THE MEMBERS OF POWERHOUSE ENERGY GROUP PLC

Opinion

We have audited the financial statements of Powerhouse Energy Group PLC (the 'parent company') and its subsidiaries (the 'group') for the year ended 31 December 2023, which comprise the group Statement of comprehensive income, the group and company Balance sheets, the group Statement of cash flows, the group and company Statement of changes in equity and the related notes, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including UK adopted International Accounting Standards applicable in the UK and Republic of Ireland' (United Kingdom Generally Accepted Accounting Practice).

In our opinion:

- the financial statements give a true and fair view of the state of the group's and of the parent company's affairs as at 31 December 2023 and of the group's loss for the year then ended;
- the group financial statements have been properly prepared in accordance with UK-adopted International Accounting Standards;
- the parent company financial statements have been properly prepared in accordance with UK-adopted International Accounting Standards and as applied in accordance with the Companies Act 2006; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We are independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the United Kingdom, including the Financial Reporting Council's Ethical Standard and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Summary of our audit approach

Key audit matters Group

Key audit matters	Group • Carrying value of goodwill • Correct treatment of the acquisition of subsidiary undertakings.
Materiality	Group • Overall materiality: £100,000 (2022: £105,000) • Performance materiality: £75,000 (2022: £78,750) Parent Company • Overall materiality: £95,000 (2022: £105,000) • Performance materiality: £72,500 (2022: £78,750)
Scope	Our audit procedures covered 100% of revenue, 100% of total assets and 100% of loss before tax.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the group financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) we identified, including those which had the greatest effect on the overall audit strategy, the allocation of resources in the audit and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the group financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key Audit Matter	How the scope of our audit addressed the key audit matter
Carrying value of goodwill A key balance on the statement of financial position is intangible fixed assets of £2,533,284 (2021: £2,502,073) at 31 December 2023 in the parent's single company accounts as detailed in note 11. In addition to the above there is additional goodwill generated on consolidation with total consolidated goodwill amounting to £3,106,865 (2022: £2,502,073) as at 31 December 2023 The carrying value of goodwill in accordance with IAS36 is required to be tested for annual impairment along with whether there is any indication of impairment of the other intangibles. The measurement of the recoverable amount requires the preparation of detailed cash flow forecasts that are subject to a number of highly sensitive assumptions surrounding the future trade of the Group. During the year, the directors have assessed the valuation of goodwill internally.	**Our audit procedures:** <u>Parent Company Goodwill</u> We held various discussions and meetings with the client to review the valuation model and the assumptions used therein. This was compared to valuations completed in prior years undertaken by suitably qualified independent advisors providing reassurance of the accuracy of opening balances for our audit. We evaluated critically the assumptions by reworking the calculations and challenged the management by: • Comparing the model to the actual performance for the year ended 31 December 2023 noting that income was still not being generated • Comparing the assumptions of the prior year to the actual performance of the year ended 31 December 2023 again noting that projects had been delayed. • Comparing the assumptions used in the prior year to the current year to identify any changes and obtaining explanations from management • Recalculating the WACC and comparing the rates used. • Comparison of the outcome to reports prepared by external advisors Valuation of Goodwill was deemed to be compliant with IAS 38, Intangible Assets. No indicators of impairment were noted during 2023, or events after the reporting date that impact the valuation of Goodwill in accordance with IAS36. <u>Consolidated Goodwill</u> The goodwill arose as part of he acquisition of Engsolve Limited. The client has prepared an impairment review of the goodwill totalling £573,781. The method of ensuring no impairment was required was a review of the cash generation of the entity. The judgements and assumptions have been reviewed with management and challenged. No indications of impairment were identified upon review.
Consolidation In the previous year the company has claimed an exemption from preparing consolidated financial statements on the basis that the only UK subsidiary was non trading and not material and there being long term restrictions on the operations of the Company's subsidiaries in the US and Switzerland. This year the company has acquired material UK subsidiaries that result in a consolidation being required. The US and Switzerland companies are still subject to the same restrictions and therefore have been excluded from the consolidation.	**Our audit procedures:** The Business combinations have been reviewed and discussed with management. Calculations for goodwill were received from Management and the acquisition balance sheet values have been challenged and audited to the same materiality as noted above. These balances have then been compared to the actual Fair Values and any adjustments have been noted accordingly in accordance with IFRS3. Relevant disclosures have been verified and checked to the financial statements and reviewed accordingly. We have reviewed the applicable legislation surrounding the exclusion of the foreign entities on the basis that the company does not control these entities.

Our application of materiality

When establishing our overall audit strategy, we set certain thresholds which help us to determine the nature, timing and extent of our audit procedures. When evaluating whether the effects of misstatements, both individually and on the financial statements as a whole, could reasonably influence the economic decisions of the users we take into account the qualitative nature and the size of the misstatements. Based on our professional judgement, we determined materiality as follows:

	Group materiality	Parent company materiality

Overall materiality	£100,000 (2022: £105,000)	£95,000 (2022: £105,000)
Basis for determining overall materiality	6% of operating loss	6% of operating loss
Rationale for benchmark applied	Whilst the Statement of Financial Position has material elements included namely the Goodwill and Bank, we do not feel a materiality that is based on the Statement of Financial Position totals is appropriate as it is though that the shareholders will consider the operating loss of utmost importance to ascertain how long the company can continue to trade.	Whilst the Statement of Financial Position has material elements included namely the Goodwill and Bank, we do not feel a materiality that is based on the Statement of Financial Position totals is appropriate as it is though that the shareholders will consider the operating loss of utmost importance to ascertain how long the company can continue to trade.
Performance materiality	£75,000 (2022: £78,750)	£72,500 (2022: £78,750)
Basis for determining performance materiality	75% of overall materiality	75% of overall materiality
Reporting of misstatements to the Audit Committee	Misstatements in excess of £5,000 and misstatements below that threshold that, in our view, warranted reporting on qualitative grounds.	Misstatements in excess of £5,000 and misstatements below that threshold that, in our view, warranted reporting on qualitative grounds.

An overview of the scope of our audit

The group consists of the parent company, two trading companies and 5 other entities which were dormant or non-trading. All entities are based in the UK

The coverage achieved by our audit procedures was:

	Number of components	Revenue	Total assets	Profit/Loss before tax
Full scope audit	1	0%	82%	94%
Specific audit procedures*	2	100%	18%	6%
Total	3	100%	100%	100%

* Specific audit procedures were performed in order to obtain sufficient and appropriate coverage over the group's loss before tax and borrowings.

A full scope audit was performed for the parent company, with specific audit procedures being performed for the subsidiary company. The subsidiary companies were exempt from audit in their own right under section 479A of the Companies Act 2006.

Conclusions relating to going concern

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate. Our evaluation of the directors' assessment of the group's and parent company's ability to continue to adopt the going concern basis of accounting included:

- obtaining an understanding of management's going concern evaluation and reviewing cashflow forecasts;
- evaluating management's ability to accurately forecast performance through comparison of historic performance against forecast;
- performing sensitivity analysis to understand the impact of reasonably possible outcomes, or changes to assumptions; and
- testing the integrity and mechanical accuracy of the forecast model.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the group's or the parent company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report.

Other information

The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. The directors are responsible for the other information contained within the annual report. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Opinions on other matters prescribed by the Companies Act 2006

Opinions on other matters prescribed by the Companies Act 2006
In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Strategic Report and the Directors' Report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception
In the light of the knowledge and understanding of the group and the parent company and their environment obtained in the course of the audit, we have not identified material misstatements in the Strategic Report or the Directors' Report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of directors
As explained more fully in the directors' responsibilities statement set out on page 32, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the group's and the parent company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or the parent company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

The extent to which the audit was considered capable of detecting irregularities, including fraud
Irregularities are instances of non-compliance with laws and regulations. The objectives of our audit are to obtain sufficient appropriate audit evidence regarding compliance with laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements, to perform audit procedures to help identify instances of non-compliance with other laws and regulations that may have a material effect on the financial statements, and to respond appropriately to identified or suspected non-compliance with laws and regulations identified during the audit.

In relation to fraud, the objectives of our audit are to identify and assess the risk of material misstatement of the financial statements due to fraud, to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement due to fraud through designing and implementing appropriate responses and to respond appropriately to fraud or suspected fraud identified during the audit.

However, it is the primary responsibility of management, with the oversight of those charged with governance, to ensure that the entity's operations are conducted in accordance with the provisions of laws and regulations and for the prevention and detection of fraud.

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud, the group audit engagement team:

- obtained an understanding of the nature of the industry and sector, including the legal and regulatory framework that the group and parent company operate in and how the group and parent company are complying with the legal and regulatory framework;
- inquired of management, and those charged with governance, about their own identification and assessment of the risks of irregularities, including any known actual, suspected or alleged instances of fraud;
- discussed matters about non-compliance with laws and regulations and how fraud might occur including assessment of how and where the financial statements may be susceptible to fraud.

The most significant laws and regulations were determined as follows:

Legislation / Regulation	Additional audit procedures performed by the Group audit engagement team included:
UK-adopted IAS and Companies Act 2006 including IFRS, Companies Act 2006 and AIM Rules	Review of the financial statement disclosures and testing to supporting documentation; Completion of disclosure checklists to identify areas of non-compliance.
Tax compliance regulations	Inspection of advice received from external tax advisors specifically surrounding the application of the Research and Development Tax Credit scheme.

The areas that we identified as being susceptible to material misstatement due to fraud were:

Risk	Audit procedures performed by the audit engagement team:
Revenue	A sample of bank receipts have been reviewed and challenged with management to identify if the group has received any revenue in the year. In addition the underlying contracts have been reviewed regarding the ongoing projects of the group to ensure these are still pre revenue.
Management override of controls	Testing the appropriateness of journal entries and other adjustments; Assessing whether the judgements made in making accounting estimates are indicative of a potential bias; and Evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

A further description of our responsibilities for the audit of the financial statements is located on the Financial

Reporting Council's website at: http://www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Use of our report

This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Mario Cientanni (Senior Statutory Auditor)
for and on behalf of
Barnes Roffe LLP
Chartered Accountants
Charles Lake House
Claire Causeway
Crossways Business Park
Dartford
Kent
DA2 6QA

Date: 31 May 2024

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
For The Year Ended 31 December 2023

	Note	**31 December 2023 £**	31 December 2022 £
Revenue	2	**180,959**	380,277
Cost of sales		**(118,294)**	(295,912)
Gross Profit		**62,665**	84,365
Engineering costs		**(799,909)**	(512,504)
Administrative expenses	4	**(1,109,150)**	(1,745,673)
Acquisition costs		**(31,457)**	-
Share of associate	5	**76,206**	60,326
Operating loss (pre exceptional items)		**(1,801,645)**	(2,113,486)
Exceptional Items			
Exclusivity Impairment	6	**-**	(500,000)
Goodwill Impairment	6	**-**	(40,660,000)
Loan Impairment	7	**-**	(2,159,274)
Revenue Impairment	7	**-**	(986,392)
Fair Value Gain on Associate (Engsolve Limited)	13	**270,381**	-
Operating Loss (post exceptional items)		**(1,531,264)**	(46,419,152)
Net finance income/(cost)	8	**(6,200)**	65,448
Loss before taxation		**(1,537,464)**	(46,353,704)
Income tax credit	9	**109,817**	155,025
Total comprehensive loss		**(1,427,647)**	(46,198,679)
Loss per share (pence)	10	**(0.04)**	(1.17)

All activities are in respect of continuing operations and there are no other items of comprehensive income.

The notes numbered 1 to 32 are an integral part of the financial information.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION
As at 31 December 2023

	Note	**2023 £**	2022 £
ASSETS			
Non-current assets			
Intangible fixed assets	11	**3,106,865**	2,502,073
Tangible fixed assets	12	**1,159,636**	5,795
Investments in subsidiary undertakings	13	**-**	1
Investments in associated undertakings	13	**-**	187,638

Total non-current assets		**4,266,501**	2,695,507
Current Assets			
Trade and other receivables	15	**325,834**	403,247
Corporation tax recoverable	16	**168,527**	166,318
Cash and cash equivalents	17	**4,348,887**	5,882,897
Total current assets		**4,843,248**	6,452,462
Total assets		**9,109,749**	9,147,969
LIABILITIES			
Current liabilities			
Creditors: amounts falling due within one year	18	**(506,258)**	(279,306)
Total current liabilities		**(506,258)**	(279,306)
Total assets less current liabilities		**8,603,491**	8,868,663
Creditors: amounts falling due after more than one year	19	**(122,475)**	-
Net assets		**8,481,016**	8,868,663
EQUITY			
Share capital	22	**23,940,856**	22,900,856
Share premium	23	**61,220,809**	61,291,710
Accumulated deficit	24	**(76,680,649)**	(75,323,903)
Total surplus		**8,481,016**	8,868,663

The financial statements of Powerhouse Energy Group Plc, Company number 03934451, were approved by the Board of Directors and authorised for issue on 31 May 2024 and signed on its behalf by:

Paul Emmitt
Director

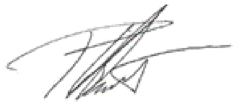
The notes numbered 1 to 32 are an integral part of the financial information.

COMPANY STATEMENT OF FINANCIAL POSITION
As at 31 December 2023

	Note	2023 £	2022 £
ASSETS			
Non-current assets			
Intangible fixed assets	11	**2,533,284**	2,502,073
Tangible fixed assets	12	**816,244**	5,795
Investments in subsidiary undertakings	13	**1,109,987**	1
Investments in associated undertakings	13	**-**	187,638
Total non-current assets		**4,459,515**	2,695,507
Current Assets			
Trade and other receivables	15	**454,087**	403,247
Corporation tax recoverable	16	**168,527**	166,318
Cash and cash equivalents	17	**3,775,250**	5,882,897
Total current assets		**4,397,864**	6,452,462
Total assets		**8,857,379**	9,147,969
LIABILITIES			
Current liabilities			
Creditors: amounts falling due within one year	18	**(1,056,183)**	(279,306)
Total current liabilities		**(1,056,183)**	(279,306)
Total assets less current liabilities		**7,801,196**	8,868,663
Creditors: amounts falling due after more than one year	19	**(122,475)**	-
Net assets		**7,678,721**	8,868,663
EQUITY			
Share capital	22	**23,940,856**	22,900,856
Share premium	23	**61,220,809**	61,291,710
Accumulated deficit	24	**(77,482,944)**	(75,323,903)

Total surplus	**7,678,721**	8,868,663

The financial statements of Powerhouse Energy Group Plc, Company number 03934451, were approved by the Board of Directors and authorised for issue on 31 May 2024 and signed on its behalf by:



Paul Emmitt
Director

The notes numbered 1 to 32 are an integral part of the financial information.

CONSOLIDATED STATEMENT OF CASHFLOWS
For The Year Ended 31 December 2023

	Note	**2023**	2022
		£	£
Cash flows from operating activities			
Operating Loss		**(1,531,265)**	(46,419,152)
Adjustments for:			
Share based payments		**40,000**	(18,629)
Amortisation		**16,997**	10,263
Depreciation		**41,885**	27,970
Goodwill & Exclusivity impairment		**(712,751)**	41,160,000
Loan Impairment		**-**	2,077,600
Share of associate result		**(76,206)**	(49,033)
Loan Interest Charge		**-**	81,674
Fair value gain on Associate		**(270,381)**	-
Tax Paid		**(58,710)**	-
Other none cash movements		**-**	3,006
-Changes in working capital:			
Decrease/(Increase) in trade and other receivables		**646,745**	560,401
Increase/(Decrease) in trade and other payables		**62,514**	(284,475)
Tax credits received		**166,318**	166,318
Net cash used in operations		**(1,674,854)**	(2,684,057)
Cash flows from investing activities			
Cash paid for investment in subsidiary	27	**(575,761)**	-
Cash acquired on acquisition of subsidiary	27	**472,580**	-
Loans advanced	14	**-**	(927,600)
Purchase of intangible fixed assets	11	**(48,207)**	(117,838)
Purchase of tangible fixed assets	12	**(671,415)**	(673)
Net cash flows from investing activities		**(822,803)**	(1,046,111)
Cash flows from financing activities			
Proceeds from issue of shares		**1,000,000**	-
Payments of principal under leases	20.3	**(30,153)**	(23,455)
Net finance costs	8	**(6,200)**	(940)
Net cash flows from financing activities		**963,647**	(24,395)
Net increase/(decrease) in cash and cash equivalents		**(1,534,010)**	(3,754,563)
Cash and cash equivalents at beginning of year		**5,882,897**	9,637,460
Cash and cash equivalents at end of year		**4,348,887**	5,882,897

The notes numbered 1 to 32 are an integral part of the financial information.

COMPANY STATEMENT OF CASHFLOWS
For The Year Ended 31 December 2023

	Note	**2023**	2022
		£	£
Cash flows from operating activities			
Operating Loss		**(2,386,537)**	(46,419,152)
Adjustments for:			
Share based payments		**40,000**	(18,629)
Amortisation		**16,997**	10,263
Depreciation		**41,885**	27,970
Goodwill & Exclusivity impairment		**-**	41,160,000
Loan Impairment			2,077,600

Loan impairment		-	2,077,600
Share of associate result		**(76,206)**	(49,033)
Fair Value Gain on Associate		**(270,381)**	-
Loan Interest Charge		**-**	81,674
Other none cash movements		**-**	3,006
-Changes in working capital:		**-**	-
Decrease/(Increase) in trade and other receivables		**(50,840)**	560,401
Increase/(Decrease) in trade and other payables		**748,586**	(284,475)
Tax credits received		**166,318**	166,318
Net cash used in operations		**(1,770,178)**	(2,684,057)
Cash flows from investing activities			
Purchase of interest in associate	13	**(575,761)**	-
Loans advanced	14	**-**	(927,600)
Purchase of intangible fixed assets	11	**(48,207)**	(117,838)
Purchase of tangible fixed assets	12	**(671,416)**	(673)
Net cash flows from investing activities		**(1,295,384)**	(1,046,111)
Cash flows from financing activities			
Proceeds from issue of shares		**1,000,000**	-
Payments of principal under leases	21.3	**(30,153)**	(23,455)
Net finance costs	8	**(11,932)**	(940)
Net cash flows from financing activities		**957,915**	(24,395)
Net increase/(decrease) in cash and cash equivalents		**(2,107,647)**	(3,754,563)
Cash and cash equivalents at beginning of year		**5,882,897**	9,637,460
Cash and cash equivalents at end of year		**3,775,250**	5,882,897

The notes numbered 1 to 32 are an integral part of the financial information.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
For The Year Ended 31 December 2023

	Ordinary share capital £	**Deferred shares £**	**Share premium £**	**Merger relief reserve £**	**Accumulated deficit £**	**Total £**
Balance at 1 January 2022	19,787,071	3,113,785	61,291,710	36,117,711	(65,224,306)	55,085,971
Transactions with equity parties:						
- Share issues on exercise warrants	-	-	-	-	-	-
- Share issues to exercise options	-	-	-	-	-	-
- Share issues in year	-	-	-	-	-	-
Share based payments	-	-	-	-	(18,629)	(18,629)
Share issue costs	-	-	-	-	-	-
Reserve transfer- goodwill impairment	-	-	-	(36,117,711)	36,117,711	-
Total comprehensive loss	-	-	-	-	(46,198,679)	(46,198,679)
Balance at 31 December 2022	19,787,071	3,113,785	61,291,710	-	(75,323,903)	8,868,663
Transactions with equity parties:						
- Share issues on exercise warrants		-	-	-	-	-
- Share issues to exercise options	-	-	-	-	-	-
- Share issues in year	1,040,000	-	-	-	-	1,040,000
Share based payments	-	-	(70,901)	-	70,901	0
Share Issue costs	-	-	-	-	-	-
Total comprehensive loss	-	-	-	-	(1,427,647)	(1,427,647)
Balance at 31 December 2023	20,827,071	3,113,785	61,220,809	-	(76,680,649)	8,481,016

The following describes the nature and purpose of each reserve within equity:

Deferred shares: Represents the combined total of all deferred shares (0.5p, 4p and 4.5p)

Share premium: Amount subscribed for share capital in excess of nominal value

Merger relief reserve: Amount subscribed for share capital in excess of nominal value where merger relief applies (Note 1.1)

Accumulated deficit: Accumulated deficit represents the cumulative losses of the Group and all other net gains and losses and transactions with shareholders not recognised elsewhere

The notes 1 to 32 are an integral part of the financial information.

COMPANY STATEMENT OF CHANGES IN EQUITY
For The Year Ended 31 December 2023

	Ordinary share capital £	Deferred shares £	Share premium £	Merger relief reserve £	Accumulated deficit £	Total £
Balance at 1 January 2022	19,787,071	3,113,785	61,291,710	36,117,711	(65,224,306)	55,085,971
Transactions with equity parties:						
- Share issues on exercise warrants	-	-	-	-	-	-
- Share issues to exercise options	-	-	-	-	-	-
- Share issues in year	-	-	-	-	-	-
Share based payments	-	-	-	-	(18,629)	(18,629)
Share issue costs	-	-	-	-	-	-
Reserve transfer- goodwill impairment	-	-	-	(36,117,711)	36,117,711	-
Total comprehensive loss	-	-	-	-	(46,198,679)	(46,198,679)
Balance at 31 December 2022	19,787,071	3,113,785	61,291,710	-	(75,323,903)	8,868,663
Transactions with equity parties:						
- Share issues on exercise warrants		-	-	-	-	-
- Share issues to exercise options	-	-	-	-	-	-
- Share issues in year	1,040,000	-	-	-	-	1,040,000
Share based payments	-	-	(70,901)	-	70,901	-
Share Issue costs	-	-	-	-	-	-
Total comprehensive loss	-	-	-	-	(2,229,942)	(2,229,942)
Balance at 31 December 2023	20,827,071	3,113,785	61,220,809	-	(77,482,944)	7,678,721

The following describes the nature and purpose of each reserve within equity:

Deferred shares: Represents the combined total of all deferred shares (0.5p, 4p and 4.5p)

Share premium: Amount subscribed for share capital in excess of nominal value

Merger relief reserve: Amount subscribed for share capital in excess of nominal value where merger relief applies (Note 1.1)

Accumulated deficit: Accumulated deficit represents the cumulative losses of the company and all other net gains and losses and transactions with shareholders not recognised elsewhere

The notes 1 to 32 are an integral part of the financial information.

NOTES TO THE ACCOUNTS
For The Year Ended 31 December 2023

1. Accounting Policies

Powerhouse Energy Group Plc is a company incorporated in England and Wales. The Group is a public limited company quoted on the AIM market of the London Stock Exchange. The address of the registered office is Unit 3/3a Garth Drive, Brackla Industrial Estate, Bridgend, Wales, CF31 2AQ. The principal activity of the Group is to continue the development of its technology and to support its customers in order to achieve its full commercial roll-out. The Principal acativity of the group also includes the provision of Engineering services by a subsidiary company. The following accounting policies have been applied consistently in dealing with items which are considered material in relation to the financial information.

1.1. Basis of consolidation

The consolidated and parent company financial statements for the year ended 31 December 2023 have been prepared in accordance with International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board (IASB), as adopted for use in the United Kingdom (UK) and with those parts of the Companies Act 2006 applicable to companies reporting under IFRS (except as otherwise stated). These accounting policies and methods of computation are consistent with the prior year, unless otherwise stated.

The consolidated group financial statements consist of the financial statements of the parent company Powerhouse Energy Group PLC together with all other entities controlled by the parent company (its subsidiaries) and the groups share of its interests in joint ventures and associates. Control is achieved where the Group is exposed to, or has the rights to, variable returns from its investments with the entity and has the ability to affect those returns through its power over the entity. The Group obtains and exercised control through voting rights.

All financial statements are made up to 31 December 2023. Where necessary, adjustments are made to the financial statements of subsidiaries to bring the accounting policies used into line with those used by other members of the group.

All intra group transactions, balances and unrealised gains on transactions between group companies are eliminated on consolidation. Unrealised losses are also eliminated unless the transaction provided evidence of an impairment of the asset transferred.

Subsidiaries are consolidated in the Groups financial statements from the date the control commences until the date that control ceases. Acquisitions of subsidiaries are dealt with using the acquisition method. The acquisition method involves the recognition at fair value of all identifiable assets and liabilities, including contingent liabilities of the subsidiary, at the acquisition date, regardless of whether or not they were recorded in the financial statements of the subsidiary prior to acquisition. On initial recognition, the assets and liabilities of the subsidiary are included in the Consolidated Statement of Financial Position at their fair values, which are also used as the cost bases for subsequent measurement in accordance with the Group accounting policies.

Goodwill is stated after separating out identifiable intangible assets. Goodwill represents the excess of acquisition costs over the fair value of the Group's share of the identifiable net assets of the acquired subsidiary at the date of acquisition.

Entities in which the group holds an interest and which are jointly controlled by the Group and one or more other ventures under a contractual arrangement are treated as joint ventures. Entities other than subsidiary undertakings or joint ventures, in which the group has a participating interest and over whose operating and financial policies the Group exercises a significant influence, are treated as associates.

Investments in joint ventures and associates are carried in the group statement of financial position at cost plus post acquisition changes in the Groups share of the net assets of the entity, less any impairment in value. The carrying value of investments in joint ventures and associates include acquired goodwill.

If the Groups share of losses in a joint venture or associate equals or exceeds its investment in the joint venture or associate, the group does not recognise further loses unless it has incurred obligations to do so or has made payments on behalf of the joint venture or associate.

Unrealised gains arising from transactions with joint ventures and associates are eliminated to the extent of the groups interest in the entity.

The Group's UK subsidiaries are both trading and non-trading. There are long-term restrictions on the operations of the Group's subsidiaries in the US and Switzerland. With these restrictions in place, the Group is also unable to exert control over the subsidiaries. As such the Group has claimed exemptions applicable to it under Companies Act section 405 (2) and 405 (3b) and IFRS 10 to not include these subsidiaries located in the US and Switzerland in the Consolidated Financial statements for the year ended 31 December 2023. Investments in subsidiaries that are not consolidated are carried at cost less any provision for impairment.

The acquisition of Waste2Tricity Limited during 2020 was transacted by way of a share for share exchange and qualifies for merger relief, meaning that no share premium is recorded on the issue of the consideration shares. The excess of the fair value of consideration shares over their nominal value has been recorded in a merger relief reserve.

Associates are entities over which the Group has significant influence but not control or joint control as defined under IAS 28. This is generally the case where the Group holds between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting.

Under the equity method of accounting, investments are initially recognised at cost and adjusted thereafter to recognise the Group's share of the post-acquisition profits or losses of the investee in the Income statement. Dividends received or receivable from associates and joint ventures are recognised as a reduction in the carrying value of the investment.

Accounting policies of the equity accounted investees are changed where necessary to ensure consistency with the policies adopted by the Group. The carrying value of equity accounted investments is tested for impairment in accordance with the policy described in Note 1.20 (ii).

As of 31 December 2023 the Group has two subsidiaries included in the Groups consolidated accounts, Engsolve Limited, the balance of the interest in which was acquired on 20 June 2023 and Protos Plastics to Hydrogen No.1 Limited that was acquired on 30 April 2023.

Other investments, which are not publicly traded, are initially measured at cost and subsequently measured at cost less accumulated losses.

1.2. Judgements and estimates

The preparation of financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the application of policies and reported amounts in the financial statements.

Areas involving a higher degree of judgements or complexity, or areas where assumptions or estimates are significant to the financial statements such as the exercise to assess the fair value of goodwill, share based payments (share options and warrants) and going concern are disclosed within the relevant notes.

1.3. Going concern

The financial statements have been prepared on a Going Concern basis. The Directors' views are based upon working capital projections which take into account the intended use of the funds in hand over the next 12 months.

As at 31 December 2023 the Group is pursuing a business strategy of selling licences for use of its technology. As at 31 December 2023, the Group had one project under development - Protos in Cheshire - with others still in prospect.

In looking forward to determine the Going Concern status, the business planning of the Group post the current reporting period, is based on the following:

- The acquisition of Engsolve, giving the Group the ability to earn revenues from engineering services. Engsolve had an existing client base, a history of providing such services and was integrated into the Group with an existing bank balance. This provides an immediate and ongoing revenue stream to the Group, extending its positive cash position;

- The development of a series of capital projects addressing contamination, pollution and climate change mitigation and deploying where possible, but not exclusively, the Group's proprietary technology. The Group will focus on a business strategy of selling licences and receiving royalty fees for the use of its technology.

Adopting this approach:

- The Group will have an ongoing revenue stream;
- Investment in the development of the capital projects will be via shareholder loans to the SPV, repayable at financial close; and
- In the event development of the project does not look viable (for example, failing to obtain the necessary permissions), expenditure will be curtailed and a replacement project identified.

The Directors consider therefore that other than fixed costs, the cash spend looking forward can be managed within the 13-month cashflow projection (May 2024 - May 2025)

A cash inflow of £0.5m is also anticipated following securing asset financing (although this is not guaranteed) of the Feedstock Testing Unit and associated equipment to be installed in the Powerhouse Technology Centre at Bridgend later in 2024, offsetting this capital purchase. In the event that the Group does not receive the asset finance it will need to reduce expenditure on capital projects, offset by income from Engsolve activities.

It was noted in the prior year's accounts that there were loans totalling £3.34m due from the Protos SPV, a company now under PHE's control. On review of the projects at acquisition it was determined that the projects were not expected to progress and as a result the amounts capitalised relating to these projects were fair valued to £330k - being materials transferred to stock for either sale or use in future projects - and the corresponding loan amounts which had been used to fund the project development and were repayable on the success of the projects were fair valued to £nil. This aligns with PHE's assessment of the recoverability of the loan in FY22 where it was deemed irrecoverable and written down to £nil also.

It is the view of the Directors, however, that should Protos generate future cash inflows from similar projects that they reserve the right to reinstate the loans and demand repayment.

1.4. Foreign currency translation

The financial information is presented in sterling which is the Group's functional currency.

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are revalued to the exchange rate at date of settlement or at reporting dates (as appropriate). Exchange gains and losses resulting from such revaluations are recognised in the Statement of Comprehensive Income.

Foreign exchange gains and losses are presented in the Statement of Comprehensive Income within administrative expenses.

1.5. Revenue

(i) Engineering services

The Group has provided engineering services to various third party customers. Revenue from providing services is recognised in the accounting period in which services are rendered. For fixed-price contracts, revenue is recognised based on the actual service provided to the end of the reporting period as a proportion of the total services to be provided to the extent to which the customer receives the benefits. This is determined based on the actual labour hours spent relative to the total expected labour hours.

Where contracts include multiple performance obligations as specified by the work scope, the transaction price will be allocated to each performance obligation based on estimated expected cost-plus margin.

Estimates of revenues, costs or extent of progress toward completion of services are revised if circumstances change. Any resulting increases or decreases in estimated revenues or costs are reflected in profit or loss in the period in which the circumstances that give rise to the revision become known by management.

In case of fixed-price contracts, the customer pays the fixed amount based on a payment schedule. If the services rendered by the Group exceed the payment, a contract asset is recognised. If the payments exceed the services rendered, a contract liability is recognised.

If a contract includes an hourly fee, revenue is recognised in the amount to which the Group has a right to invoice.

(ii) Exclusivity fees

Where the Group grants a developer exclusive rights to utilise its technology in a particular territory for an exclusivity fee, the fee is recognised in the income statement over the agreed exclusivity period.

1.6. Leases

For any new contracts entered into, the Group considers whether a contract is, or contains, a lease. A lease is defined as 'a contract, or part of a contract, that conveys the right to use an asset for a period of time in exchange for consideration'. To apply this definition the Group assesses whether the contract meets three key evaluations which are whether:

(i) the contract contains an identified asset which is either explicitly defined in the contract or implicitly specified by being identified at the time the asset is made available to the Group;

(ii) the Group has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use, considering its rights within the defined scope of the contract;

(iii) the Group has the right to direct the use of the identified asset throughout the period of use.

Where the above evaluations are met, at lease commencement date, the Group recognises a right of use asset and a lease liability on the balance sheet. The right of use asset is measured at cost, which is made up of the measurement of the initial lease liability, any direct initial costs incurred by the Group, an estimate of any costs to dismantle and remove the asset at the end of the lease, and any lease payments made in advance of the lease commencement date.

The Group depreciates right of use assets on a straight-line basis from the lease commencement date to the earlier of the end of the useful life of the right of use asset or the end of the lease term. The Group assesses the right of use asset for impairment when such indicators exist.

At the commencement date the Group measured the lease liability at the present value of the lease payments unpaid at that date, discounted using the interest rate implicit in the lease if that rate is readily available or the Group's incremental borrowing rate. For the assessment of the lease entered into in 2020 the Group applied a rate of 7.5%.

Subsequent to initial measurement the liability will be reduced for payments and increased for interest. It is remeasured to reflect any reassessment or modification or if there are any changes to the repayment schedule.

1.7. Finance income and expenses

(i) Income

Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset except for financial assets that subsequently become credit impaired. For credit impaired financial assets, the effective interest rate is applied to the net carrying amount of the financial asset (after deduction of the loss allowance).

(ii) Expense

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

1.8. Income tax expense

The tax expense for the period comprises current and deferred tax.

UK corporation tax is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax is recognised in respect of all temporary differences that have originated but not reversed at the balance sheet date where transactions or events that result in an obligation to pay more tax in the future or a right to pay less tax in the future have occurred at the balance sheet date. Temporary differences are differences between the Group's taxable profits and its results as stated in the financial statements that arise from the inclusion of gains and losses in tax assessments in periods different from those in which they are recognised in the financial statements.

A net deferred tax asset is regarded as recoverable and therefore recognised only to the extent that, on the basis of all available evidence, it can be regarded as more likely than not that there will be suitable taxable profits from which the future reversal of the underlying temporary differences can be deducted.

Deferred tax is measured at the average tax rates that are expected to apply in the periods in which the temporary differences are expected to reverse, based on tax rates and laws that have been enacted or substantively enacted by the balance sheet date. Deferred tax is measured on a non-discounted basis.

1.9. Property, plant and equipment

Property, plant and equipment is stated at cost less accumulated depreciation. Cost represents the cost of acquisition or construction, including the direct cost of financing the acquisition or construction until the asset comes into use.

Depreciation on property, plant and equipment is provided to allocate the cost less the residual value by equal instalments over their estimated useful economic lives of 3 years, once the asset is complete.

The expected useful lives and residual values of property, plant and equipment are reviewed on an annual basis and, if necessary, changes in useful life or residual value are accounted for prospectively.

1.10. Assets under construction

Assets under construction are stated at cost. Cost represents the cost of acquisition or construction, including the direct cost of financing the acquisition or construction until the asset comes into use.

Depreciation is not charged until the asset is complete and bought into use at which point it is transferred into a distinct category of property plant and equipment.

1.11. Right of Use Assets

At inception, the Group assesses whether a contract is, or contains a lease within the scope of IFRS 16. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. Where a tangible asset is acquired through a lease, the group recognises a right-of-use asset and lease liability at the lease commencement date. Right of use assets are included within property, plant and equipment, apart from those that meet the definition of investment property.

A right-of-use asset is recognised at the commencement date of a lease. The right-of-use asset is measured at cost, which comprises the initial amount of the lease liability, adjusted for, as applicable, any lease payments made at or before the commencement date net of any lease incentives received and any initial direct costs incurred.

Right-of-use assets are depreciated on a straight-line basis over the unexpired period of the lease or the estimated useful life of the asset, whichever is the shorter. Where the Group expects to obtain ownership of the leased asset at the end of the lease term, the depreciation is over its estimated useful life. Right-of use assets are subject to impairment or adjusted for any remeasurement of lease liabilities.

The group has elected not to recognise right-of-use assets and lease liabilities for short term leases of machinery that have a lease term of 12 months or less, or for leases of low value assets including IT equipment. The payments associated with these leases are recognised in profit or loss on a straight line basis over a lease term.

1.12. Intangible assets

Goodwill represents the future economic benefits arising from a business combination that are not individually identified and separately recognised. Goodwill is carried at cost less accumulated impairment losses. Refer to note 1.20 for impairment testing procedures. Goodwill impairment losses are not reversible as explained in note 1.20 (iii).

Goodwill on acquisitions has been calculated by taking the cost less the fair value of the assets and liabilities at acquisition. The Group will review the value of goodwill on their financial statements at least once a year and record any impairments. Where the goodwill generated results on a gain on bargain purchase this is credited to the Statement of Comprehensive Income in the year of recognition.

Exclusivity rights acquired in a business combination that qualify for separate recognition are recognised as intangible assets at their fair value and subsequently assessed for impairment loss.

Costs associated with patent applications are capitalised in the year of spend and amortised over their estimated useful lives of 20 years on a straight-line basis commencing from the date of patent application. Any cost associated with the upkeep of a patent is amortised over the remaining useful life of that patent.

An internally generated intangible asset arising from development is only recognised where all of the following have been demonstrated: (i) the technical feasibility of completing the asset; (ii) the intention to complete the asset and the ability to use or sell it; (iii) the availability of resources to complete the asset; and (iv) the ability to reliably measure the cost attributable to the asset during its development.

Research and development

In all other instances research and development expenditure is recognised as an expense as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

1.13. Other non-current assets

Other non-current assets represent investments in subsidiaries. The investments are carried at cost less accumulated impairment. Where a step acquisition occurs and control of a subsidiary company is achieved in stages the initial investment in associate is treated as being disposed of and reacquired at the considered fair value with any gain or loss arising being allocated to the Statement of Comprehensive Income. This is then treated as the deemed cost. Subsequently the Investment is held at deemed cost less impairment.

Financial assets

The Group classifies financial assets as loans and receivables within current assets, except for maturities greater than 12 months after the balance sheet date. These are classified as noncurrent assets. Assets are initially recognised at fair value plus transaction costs. Loans and receivables are subsequently carried at amortised cost using the effective interest rate method.

1.14. Contract costs

The Group recognises costs incurred in fulfilling contracts with customers that are directly associated with the contract as an asset if those costs are expected to be recoverable. Contract costs are amortised on a basis consistent with the transfer of goods and services to which the asset relates.

1.15. Trade and other receivables

Trade receivables are initially recognised at fair value. Subsequently they are carried at amortised cost less any provision for impairment.

1.16. Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits and are recognised and subsequently carried at fair value. For the purpose of presentation in the statement of cashflows, cash and cash equivalents include cash on hand, deposits held at call with financial institutions, other short term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value, and bank overdrafts. Bank overdrafts are shown within borrowings in current liabilities in the balance sheet.

1.17. Trade and other payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Trade and other payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

1.18. Financial assets and liabilities

i) Financial assets

Loans receivable, where forward receivables comprise solely of payments of principal and interest, are measured at amortised cost. Interest income from these financial assets is included in finance income using the effective interest rate method.

ii) Financial liabilities

Loans payable are financial obligations arising from funding received and used to support the operational costs of the Group. These are initially recognised at fair value. Loans are subsequently carried at amortised cost using the effective interest method.

1.19. Adoption of new and revised standards

i) New and amended standards adopted by the Group

New and amended standards for the current period and effective from 1 January 2023 have been applied by the Group, including:

IFRS 17 Insurance Contracts
IAS1 & IFRS practice statement 2
Definition of Accounting Estimates - Amendments to IAS 8
IAS 12 - Deferred Tax related to Assets and Liabilities arising from a single transaction
IAS 12 International Tax reform - pillar two Model Rules

There are no transitional adjustments relating to the adoption of these standards.

ii) Standards issued but not yet effective

Certain new accounting standards and interpretations have been published that are not mandatory for 31 December 2023 reporting periods and have not been adopted early by the Group. These standards are not expected to have a material impact on the entity in the current or future reporting periods and on foreseeable future transactions.

1.20. Impairment

(i) Goodwill

Goodwill and intangible assets that have an indefinite useful life are not subject to amortisation and are tested annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. This is detailed in note 1.12 above.

(ii) Other assets

At each balance sheet date, the carrying amounts of assets are reviewed to determine whether there is any indication that those assets have suffered an impairment loss. An impairment loss is recognised whenever the carrying amount of an asset or its cash generating unit exceeds its recoverable amount. Impairment losses recognised in respect of cash generating units are allocated first to reduce the carrying amount of any goodwill allocated to cash generating units and then to reduce the carrying amount of the other assets in the unit on a pro-rata basis. A cash generating unit is the group of assets identified on acquisition that generate cash inflows that are largely independent of the cash inflows from other assets or groups of assets. The recoverable amount of assets or cash generating units is the greater of their fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash generating unit to which the asset belongs.

(iii) Reversals of impairments

An impairment loss in respect of goodwill is not reversed. In respect of other assets, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount.

An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

1.21. Share based payments

Share based payments are made to employees and third parties and all are equity settled.

<u>(i) Third party provision of services</u>

a) Via issue of shares

Contractors receive remuneration in the form of share-based payments, whereby services are provided and settled by the issue of shares. The cost of equity settled transactions is determined at the fair value of the services provided, based upon invoiced amounts or formal agreements in place with suppliers.

b) Via issues of share warrants

The Group also issues share warrants to third parties in relation to services provided by suppliers. The cost of equity settled transactions is determined at the fair value of the services provided, based upon invoiced amounts or formal agreements in place with suppliers. Where no fair value of services can be directly obtained, the fair value at the grant date is determined using the Black Scholes valuation model. At each reporting date the Group revises its estimates of the number of options that are likely to be exercised with any adjustment recognised in the income statement.

(ii) Directors and employees

c) Via issues of share options

The Group has issued share options to Directors and employees through approved and unapproved option plans. The fair value of options issued is determined at the date of grant and is recognised as an expense in the Income Statement. The fair value at the grant date is determined using the Black and Scholes valuation model. At each reporting date the Group revises its estimates of the number of options that are likely to be exercised with any adjustment recognised in the income statement.

Where share-based payments give rise to the issue of new share capital, the proceeds received by the Group are credited to share capital and share premium when the share entitlements are exercised.

1.22. Employee benefits

Liabilities for wages and salaries, including non-monetary benefits, annual leave and accumulating sick leave that are expected to be settled wholly within 12 months after the end of the period in which the employees render the related service are recognised in respect of employees' services up to the end of the reporting period and are measured at the amounts expected to be paid when the liabilities are settled. The liabilities are included within creditors in the balance sheet.

For defined contribution pension plans, the Group pays contributions to publicly or privatley administered pension insurance plans on a mandatory, contractual or voluntary basis. The Group has no further payment obligations once the contributions have been paid. The contributions are recognised as employee benefit expense when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in the future payments is available.

The Group does not contribute to any defined benefit pension plans.

1.23. Segmental reporting

An operating segment is a component of the Group:

- that engages in business activities from which it may earn revenues and incur expenses (including revenues and expenses relating to transactions with other components of the Group);
- whose operating results are reviewed regularly by the Group's chief decision maker to make decisions about resources to be allocated to the segment and assess its performance; and
- for which discrete financial information is available.

The Group considers it has two business segments, being a UK based technology company intending to license its technology to projects in the UK and internationally and a UK based multi disciplined Engineering Consultancy with significant experience in undertaking engineering design and support for third party customers.

The Engineering segment, Engsolve Limited, generated all of the Group £180,959 Revenue in 2023. Engsolve became part of the Group in June 2023. This revenue was generated through Engsolve providing Engineering Services to third party customers. The Group will be looking to continue providing third party Engineering Services through Engsolve Limited and to further develop this revenue stream, both through internal and external work.

The Technology/Licensing segment (The Company), did not generate any licence income in 2023. The Group is focusing on developing this license revenue stream in future years.

2. Revenue

	Group		Company	
	2023	2022	**2023**	2022
	£	£	**£**	£
Engineering and related services	**180,959**	341,293	**-**	341,293
Exclusivity fees	**-**	38,984	**-**	38,984
Other	**-**	-	**-**	-
	180,959	380,277	**-**	380,277

During the year, the Group billed for engineering work carried out on projects. All revenue generated has arisen in the UK.

3. Employee costs

	Group		Company	
	2023	2022	**2023**	2022
	£	£	**£**	£
Directors' fees	**474,671**	581,072	**419,671**	581,072
Wages and salaries	**316,128**	174,769	**135,625**	174,769
Social security costs	**50,012**	75,609	**31,990**	75,609
Pensions	**71,655**	16,817	**23,207**	16,817
	912,466	848,267	**610,493**	848,267

Highest Paid Director - refer to note 29

The number of average monthly employees (including Directors) are as follows:

	Group		Company	
	2023	2022	**2023**	2022
Management	**7**	6	**6**	6
Operations	**4**	3	**1**	3
	11	9	**7**	9

The figures in the table above includes the average number of employees throughout the year based on the acquisition of Engsolve in June 2023. The total number of employees as at 31 December 2023 (including Directors) was 15 (2022: 9) comprising 7 in management and 8 in operations (2022: 6 in management, 3 in operations). All Directors are classed as management

4. Administrative expenses

Included in administrative expenses are:	2023 £	2022 £
Research and development costs	**561,474**	431,185
Amortisation	**16,997**	10,263
Depreciation	**11,732**	5,397
Depreciation - right of use asset	**30,153**	22,573
Gain on bargain purchase (see note 27)	**(712,751)**	-
Share based payments	**40,000**	(18,629)
Foreign exchange (gains)/losses	**-**	162
Auditor's remuneration for audit services:		
Fees payable to the group's auditor for the audit of the group's annual financial statements	**43,500**	25,000
Fees payable to the group's auditor and their associates for other services:		1,000
Non-audit fees paid to auditors		
R & D Taxation advisory and compliance services	**-**	10,000

5. Share of associate

	2023 £	2022 £
Share of profits	**76,206**	60,326
	76,206	60,326

The Group acquired a 48.39% stake in Engsolve on 12 August 2021 as explained in note 13. The Group acquired the balance of 51.61% stake in Engsolve on 20 June 2023. The above result represents both the Group and Companies share of the associate's profits arising post acquisition.

6. Goodwill & Exclusivity impairment

	2023 £	2022 £
Goodwill Impairment	**-**	40,660,000
Exclusivity impairment	**-**	500,000
	-	41,160,000

In 2020, Goodwill of £57,152,699 was recognised on the acquisition and hive up of Waste2tricity Limited. An independent fair value assessment is commissioned by the Directors on the carrying value at each balance sheet date as explained in note 11. Impairments are made based upon the results of those assessments plus input from the Board. No impairment was made in relation to the goodwill carrying value ad 31 December 2023

7. Loan & Revenue impairment

	2023 £	2022 £
Loan Impairment/(write off)	**-**	2,159,274
Revenue impairment	**-**	986,392
	-	3,145,666

The 2022 write off is a Company only write off. Further description on the impairment of the Loan impairment ("loan debtor") and Revenue impairment ("trade debtor") is disclosed in Note 14.

In 2020, Exclusivity of £500,000 was recognised on the acquisition and hive up of Waste2tricity Limited. An independent fair value assessment is commissioned by the Directors on the carrying value at each balance sheet date as explained in note 11. Impairments are made based upon the results of those assessments.

8. Net finance income/(cost)

	Group		Company	
	2023 £	2022 £	**2023 £**	2022 £
Loan interest receivable	**-**	66,388	**-**	66,388
Lease Interest	**(10,867)**	-	**(10,867)**	-
Other interest receivable	**6,184**	251	**-**	251
Bank and other interest payable	**(1,517)**	(1,191)	**(1,065)**	(1,191)
	(6,200)	65,448	**(11,932)**	65,448

9. Income tax and deferred tax

As the Group incurred a loss, no current tax is payable (2022: £nil). In addition, as there is no certainty about future profits from which accumulated tax losses could be utilised, accordingly no deferred tax asset has been recognised.

The Group submitted a claim for research and development tax credits (relating to financial year 2022) during the year amounting to £168,527 (2022: £166,318, relating to financial year 2021) which has been recognised in the accounts. The Group has not submitted a claim for research and development tax credits for financial year 2023. This claim will be submitted during 2024. Accumulated tax losses in the Group amount to an estimated £24.6 million, and Group £24.3 million (2022: £22.0 million) and reflect tax losses submitted in tax returns and arising during the period less any relief taken for research and development credits. The tax credit rate is lower (2022: lower) than the standard rate of tax. Differences are explained below.

Group

Current tax	**2023**	2022
	£	£
Loss before taxation	**1,537,464**	**46,353,704**
Tax credit at standard UK corporation tax rate of 23.5% (2022: 19%)	**361,304**	**8,807,204**
Effects of:		
Goodwill impairment not deductible for tax purposes	**-**	**(7,820,400)**
Expenses not deductible for tax purposes	**(14,411)**	**2,429**
Capital allowances in excess of depreciation	**350,121**	**-**
Allowable deduction on exercise of share options	**-**	**-**
Research and development tax credits claimed	**(146,681)**	**166,318**
Deferred tax asset not recognised	**(440,516)**	**(1,000,526)**
Income tax credit	**109,817**	**155,025**

Company

Current tax	**2023**	2022
	£	£
Loss before taxation	**2,398,469**	**46,353,704**
Tax credit at standard UK corporation tax rate of 23.5% (2022: 19%)	**563,640**	**8,807,204**
Effects of:		
Goodwill impairment not deductible for tax purposes	**-**	**(7,820,400)**
Expenses not deductible for tax purposes	**(13,845)**	**2,429**
Additions	**211,628**	**-**
Allowable deduction on exercise of share options	**-**	**-**
Research and development tax credits claimed	**(146,681)**	**166,318**
Deferred tax asset not recognised	**(446,215)**	**(1,000,526)**
Income tax credit	**168,527**	**155,025**

10. Loss per share

		Group		**Company**
	2023	2022	**2023**	2022
Total comprehensive loss (£)	**(1,427,648)**	(46,198,679)	**(2,229,942)**	(46,198,679)
Weighted average number of shares	**4,025,227,834**	3,957,414,135	**4,025,227,834**	3,957,414,135
Loss per share in pence	**(0.04)**	(1.17)	**(0.06)**	(1.17)
Diluted loss per share in pence	**(0.04)**	(1.17)	**(0.06)**	(1.17)

For the year ended 31 December 2022, 3,581,355 of the options in issue and 381,100,979 of the warrants in issue were excluded from the diluted loss per share calculation due to being anti-dilutive.

There were 208,000,000 new ordinary shares issued in the year to 31 December 2023. A total of 200,000,000 new ordinary shares of 0.5p were placed on 4 September 2023 at an issue price of 0.5p. Additionally, 8,000,000 new ordinary shares were issued at the issue price to the Group's broker on 4 September 2023.

11. Intangible fixed assets

Group	**Goodwill**	**Exclusivity rights**	**Patent costs**	**Website**	**Total**
	£	**£**	**£**	**£**	**£**
Cost					
At 1 January 2022	57,152,699	500,000	101,717	-	57,754,416
Additions	-	-	117,838	-	117,838
At 31 December 2022	57,152,699	500,000	219,555	-	57,872,254
Accumulated amortisation & impairment					
At 1 January 2022	14,192,699	-	7,219	-	14,199,918
Amortisation charge for the year	-	-	10,263	-	10,263
Impairment charge for the year	40,660,000	500,000	-	-	41,160,000

Impairment charge for the year	40,660,000	500,000			41,160,000
At 31 December 2022	54,852,699	500,000	17,482	-	55,370,181
Carrying amount					
At 31 December 2022	2,300,000	-	202,073	-	2,502,073
Cost					
At 1 January 2023	57,152,699	500,000	219,555	-	57,872,254
Additions	573,581	-	31,574	16,634	621,789
Disposals		(500,000)	-	-	(500,000)
At 31 December 2023	57,726,280	-	251,129	16,634	57,994,043
Accumulated amortisation & impairment					
At 1 January 2023	54,852,699	500,000	17,482	-	55,370,181
Amortisation charge for the year	-	-	13,130	3,867	16,997
Disposals	-	(500,000)	-	-	(500,000)
At 31 December 2023	54,852,699	-	30,612	3,867	54,887,178
Carrying amount					
At 31 December 2023	2,873,581	-	220,517	12,767	3,106,865

Company	**Goodwill**	**Exclusivity rights**	**Patent costs**	**Website**	**Total**
	£	**£**	**£**	**£**	**£**
Cost					
At 1 January 2022	57,152,699	500,000	101,717	-	57,754,416
Additions	-	-	117,838	-	117,838
At 31 December 2022	57,152,699	500,000	219,555	-	57,872,254
Accumulated amortisation & impairment					
At 1 January 2022	14,192,699	-	7,219	-	14,199,918
Amortisation charge for the year	-	-	10,263	-	10,263
Impairment charge for the year	40,660,000	500,000	-	-	41,160,000
At 31 December 2022	54,852,699	500,000	17,482	-	55,370,181
Carrying amount					
At 31 December 2022	2,300,000	-	202,073	-	2,502,073
Cost					
At 1 January 2023	57,152,699	500,000	219,555	-	57,872,254
Additions	-	-	31,574	16,634	48,208
Disposals	-	(500,000)	-	-	(500,000)
At 31 December 2023	57,152,699	-	251,129	16,634	57,420,462
Accumulated amortisation & impairment					
At 1 January 2023	54,852,699	500,000	17,482	-	55,370,181
Amortisation charge for the year	-	-	13,130	3,867	16,997
Disposals	-	(500,000)	-	-	(500,000)
At 31 December 2023	54,852,699	-	30,612	3,867	54,887,178
Carrying amount					
At 31 December 2023	2,300,000	-	220,517	12,767	2,533,284

Goodwill acquired by the Group in 2020 arose on the acquisition and hive up of Waste2Tricity Limited. It was considered attributable to the Group's DMG™ technology, which is intended to be licensed on a project-by-project basis to generate income to the Group over the lifetime of each project.

The recoverable amount of goodwill at the balance sheet date was assessed as a directors' valuation (2022: directors' valuation). The directors (2022: directors) assessed impairment of £nil to goodwill (2022 assessed impairment of £40.66m to goodwill). The directors (2022: directors) took note of the ICAEW Corporate Finance Faculty Best Practice Guideline April 2008 and applied a discounted cashflow approach, supported by the International Private Equity and Venture Capital Guidelines of December 2018.

Goodwill additions in the Group in the year relates entirely to the acquisitions of Engsolve Limited and Protos Limited as set out in Note 13 and Note 27. The goodwill generated on the acquisition of Protos Plastics to Hydrogen No 1 Ltd was calculated as a Gain on Bargain Purchase which has been expensed to the Statement of Comprehensive Income in accordance with the Group's accounting policies.

The key assumptions made by the directors in both years were:

- the expected roll out of the technology over 5 years following the delivery of the Protos project (2022: same assumption);
- that the roll out will not be significantly impacted by competing technologies (2022: same assumption);
- that the Group and roll out developer construct 5 projects (2022: same assumption);
- the expected operating life of projects from which the Group will earn licence revenues (2022: same assumption);
- the expected licence fees arising per project based upon agreements with Peel NRE (2022: same assumption);
- the expected cost of services to support annual licence fee income estimated by the Group based upon current draft project agreements (2022: same assumption);
- applying a discount rate to cashflow of 35% (2022: 35%) assessed by review of market survey reports of discount rates for projects within similar and competing sectors which was considered to provide a reasonable estimate of a weighted average cost of capital for a group benefiting from the assumed roll out.

Changes to the above assumptions would impact the valuation assessment.

The Directors believe that key sensitivities in the 2023 and 2022 valuation are as follows:

(i) The Directors have assumed a fixed number of 5 projects and 6 systems to be rolled out. Sensitivity workings with the roll out of 3 projects and 3 systems would decrease the valuation by c£0.8m to £1.5m.

(ii) The discount rate applied to the cashflows. Sensitivity workings with a discount rate 5% higher at 40% would decrease the valuation by c£0.5m to £1.8m.

(iii) Inflation - an increase in the inflation assumption above that assumed in the Directors model would result in adjustment to the licence fees and result in an increase the Director's valuation.

The Directors have not accounted for the possibility of any onerous obligations arising within the service contracts from which licence fees will be earnt as there is no reason to expect that these will arise at this stage in the business life cycle.

The Group completed an impairment review and fair value review of Engsolve Limited as part of our year end Accounts FY 2023. As part of the exercise we reviewed fixed and current assets, liabilities and the future forecast of the business. The outcome of this impairment review was that we believe the Goodwill valuation at £573k should not be impaired at the year-end Dec 23.

As explained in note 27, the Group acquired the full ownership of Protos Plastics to Hydrogen No. 1 Ltd (also known as "Protos SPV") as an indirect subsidiary into Powerhouse Energy UK Limited from Peel NRE Ltd for a nominal payment of £1 on 28 April 2023. During the year to 31 December 2022, the Group had been in discussions with Peel NRE to enter into a 50/50 Joint Venture arrangement with Peel NRE. However, this did not materialise and Peel NRE continued to own 100% of Protos SPV until the Group finally purchased 100% of the share capital of Protos SPV on 28 April 2023. The purchase agreement by the Group secures full control of Protos SPV with an option to lease on the site at Protos.

Refer to the CEO section of the Annual Report for further details.

12. Tangible fixed assets

Group

	Right of use asset Land and buildings	Property, plant and equipment	Fixtures and fittings	Assets under construction	Total
	£	£	£	£	£
Cost					
At 1 January 2022	49,250	20,413	1,203	-	70,866
Additions	-	-	673	-	673
At 31 December 2022	49,250	20,413	1,876	-	71,539
Accumulated depreciation					
At 1 January 2022	26,677	10,705	392	-	37,774
Charge for the year	22,573	4,865	532	-	27,970
At 31 December 2022	49,250	15,570	924	-	65,744
Carrying amount					
At 31 December 2022	-	4,843	952	-	5,795
Cost					
At 1 January 2023	49,250	20,413	1,876	-	71,539
Additions	180,919	32,349	10,726	958,340	1,182,334
Additions on acquisition	-	16,959	15,839	-	32,798
Disposals	(49,250)	-	-	-	(49,250)
At 31 December 2023	180,919	69,721	28,441	958,340	1,237,421
Accumulated depreciation					
At 1 January 2023	49,250	15,570	924	-	65,744
Charge for the year	30,153	9,614	2,118	-	41,885
Charges on aquisition		13,464	5,942		19,406
Disposals	(49,250)			-	(49,250)
At 31 December 2023	30,153	38,648	8,984	-	77,785
Carrying amount					
At 31 December 2023	150,766	31,073	19,457	958,340	1,159,636

Company

	Right of use asset Land and buildings	Property, plant and equipment	Fixtures and fittings	Assets under construction	Total
	£	£	£	£	£
Cost					
At 1 January 2022	49,250	20,413	1,203	-	70,866
Additions	-	-	673	-	673
At 31 December 2022	49,250	20,413	1,876	-	71,539
Accumulated depreciation					
At 1 January 2022	26,677	10,705	392	-	37,774
Charge for the year	22,573	4,865	532	-	27,970
At 31 December 2022	49,250	15,570	924	-	65,744
Carrying amount					
At 31 December 2022	-	4,843	952	-	5,795
Cost					
At 1 January 2023	49,250	20,413	1,876	-	71,539
Additions	180,919	32,349	10,726	*628,340	852,334

Additions	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Disposals	(49,250)	-	-	-	(49,250)
At 31 December 2023	180,919	52,762	12,602	628,340	874,623
Accumulated depreciation					
At 1 January 2023	49,250	15,570	924	-	65,744
Charge for the year	30,153	9,614	2,118	-	41,885
Disposals	(49,250)	-	-	-	(49,250)
At 31 December 2023	30,153	25,184	3,042	-	58,379
Carrying amount					
At 31 December 2023	150,766	27,578	9,560	628,340	816,244

*Included with fixed assets is the amount of £628,340 relating to assets under construction. As per the accounting policy, no depreciation will be charged until such a time as the asset is in use.

13. Investments

	2023	**2023**	**2023**	2022	2022	2022
	£	**£**	**£**	£	£	£
	Subsidiaries	**Associates**	**Other**	Subsidiaries	Associates	Other
Cost or carrying value at 1 January	**48,947,155**	**187,638**	**-**	48,947,155	140,540	-
Additions	**846,145**	**-**	**-**	-	-	-
Goodwill recognised	**-**	**-**	**-**	-	-	-
Dividends	**-**	**-**	**-**	-	(1,935)	-
Share of associate's net result	**-**	**76,203**	**-**	-	49,033	-
Transfers	**263,841**	**(263,841)**	**-**	-	-	-
Disposals	**-**	**-**	**-**	-	-	-
Cost or carrying value 31 December	**50,057,141**	-	-	48,947,155	187,638	-
Provision at 1 January	**(48,947,154)**	**-**	**-**	(48,947,154)	-	-
Additions	**-**	**-**	**-**	-	-	-
Disposals	**-**	**-**	**-**	-	-	-
Accumulated impairment	**(48,947,154)**	**-**		(48,947,154)	-	
Carrying value	**1,109,987**	**-**	**-**	1	187,638	-

(i) Subsidiaries

Investments relate to costs of investments in subsidiary undertakings, namely in Powerhouse Energy, Inc, Pyromex AG and Powerhouse Energy UK Limited. Powerhouse Energy, Inc is incorporated in California in the United States of America and the Group holds 100 per cent of the common stock and voting rights of the subsidiary. Pyromex AG is based in Zug, Switzerland and the Group holds 100 per cent of the shares and voting rights of the subsidiary. Powerhouse Energy UK Limited is a wholly owned UK based dormant company.

The subsidiaries included in the consolidated accounts are Engsolve Ltd and Protos Plastics to Hydrogen No.1 Limited.

The registered address of Powerhouse Energy Inc is 145 N Sierra Madre Blvd, Pasadena, CA 91107, USA.
The registered address of Pyromex AG is Chollerstrasse 3, CH-6300, Zug, Switzerland.

The registered address of Powerhouse Energy UK Limited, Powerhouse Energy International Limited, Engsolve Limited and Protos to Plastics Hydrogen No. 1 Limited is Unit 3/3A Garth Road, Brackla Industrial Estate, Bridgend CF31 2AQ.

(ii) Acquisition of interest in Engsolve Limited

On 21 June 2023, the Group acquired the remaining 51.61% of the share capital of Engsolve Limited for cash consideration of £572,896. Engsolve Limited is incorporated and operates in the UK. Summary financial information of Engsolve Limited at acquisition and balance sheet dates is provided below:

	31 Dec 2023	21 June 2023	31 Dec 2022
	£	£	£
Summarised balance sheet			
Fixed assets	13,391	11,694	6,221
Cash and cash equivalents	570,693	466,793	400,073
Other current assets	141,788	150,492	86,632
Current liabilities	(135,564)	(106,419)	(109,457)
Net assets	590,308	522,560	383,469
Group share	100%	100%	48.39%
Share of net assets	590,308	522,560	185,550
Summarised Income statement - post acquisition			
Revenue	1,120,144	596,860	976,182
Profit from continuing operations	206,840	152,936	101,334
Profit from discontinued operations	-		-
Other comprehensive income	-		-
Total comprehensive income	206,840	152,936	101,334
Group Share of pre-tax profit/(loss)	206,840	83,066	60,326
Group share of tax	(44,534)	(6,860)	(11,293)
Dividends received	-	-	1,935

The Group incurred advisory costs associated with the acquisition which were expensed in 2023.

(iii) Acquisition of interest in Protos Plastics Limited

On 21 June 2023, the Group acquired 100% of the share capital of Protos Plastics to Hydrogen No.1 Limited as an indirect subsidiary though Powerhouse Energy UK Limited for cash consideration of £1. Protos Plastics to Hydrogen No.1 Limited is incorporated and operates in the UK. Summary financial information of Protos Plastics to Hydrogen

No.1 Limited at acquisition and balance sheet date is provided below:

	31 Dec 2023
	£
Summarised balance sheet	
Cash and cash equivalents	5
Other current assets	945,715
Current liabilities	(197,324)
Net assets	748,391
Group share	100%
Share of net assets	748,391

Summarised Income statement - post acquisition	
Revenue	-
Profit/Loss from continuing operations	35,639
Profit from discontinued operations	-
Other comprehensive income	-
Total comprehensive income	35,639

The Group incurred advisory costs associated with the acquisition which were expensed in 2023.

(iv) Other investments

During 2021, the Group's investment in Waste2Tricity International (Thailand) Limited was transferred into a new Thailand based entity, Altec Energy Limited ("Altec"). The Group has not taken part in fund raises investment made by Altec subsequent to its formation. In the previous year's accounts the interest was identified as being reduced to 33.8% as at 31 December 2021 and to 30.4% since December 2021. We have been recently informed that the audit of Altec accounts picked up an error in these calculations. The share holding was in fact 33.5% as at December 2021 and 30.1% since December 2021 (a 0.3% error in the calculation). Due to the passive nature of the Group's involvement, the interest is held in other investments.

14. Loans receivable

	2023	2022
	£	£
Loans advanced	-	2,077,600
Accrued interest	-	81,674
Loan provision	-	(2,159,274)
	-	-

On 12 May 2021, the Group agreed to provide a loan facility for up to £3.8m to Protos Plastics to Hydrogen No 1 Limited, the Peel NRE special purpose vehicle and owner of the development of the Protos plant. The loan was to provide support to the plant construction and to secure long lead time items and project design services. The loan facility was made available for an initial 6-month period, accruing interest daily at the Bank of England base rate plus 2%. The availability period for the facility was subsequently extended until 28 April 2023 at which point Powerhouse Energy Group Plc acquired 100% of the share capital of Protos Plastics to Hydrogen No1 Limited for £1. From October 2022 to the year end, the directors were seeking a 50/50 JV with Peel NRE and there had been other indicators of a change in the risk profile. The directors in note 11 have assumed a discount rate of 35% for the project with Peel NRE, due to the change in the risk profile. Accordingly, the Directors impaired the loan in full as at December 31 2023. The Directors also applied the same approach to the trade debtor balance of £986,392 which existed between Powerhouse Energy Group Plc and Protos Plastics to Hydrogen No 1 Limited and subsequently impaired the trade debtor balance also to £Nil value at the year end 31 December 2022.

15. Trade and other receivables

	Group		Company	
	2023	2022	**2023**	2022
	£	£	**£**	£
Trade receivables	**79,078**	-	**-**	-
Other receivables	**157,094**	342,021	**375,864**	342,021
Prepayments and accrued income	**89,662**	61,226	**78,223**	61,226
	325,834	403,247	**454,087**	403,247

16. Corporation tax

	Group			Company
	2023	2022	**2023**	2022
	£	£	**£**	£
Corporation tax recoverable	**168,527**	166,318	**168,527**	166,318
	168,527	166,318	**168,527**	166,318

17. Cash and cash equivalents

	Group			Company
	2023	2022	**2023**	2022
	£	£	**£**	£
Cash balances	**4,348,887**	5,882,897	**3,775,250**	5,882,897
	4,348,887	5,882,897	**3,775,250**	5,882,897

18. Trade and other payables: amounts falling due within one year

	Group		Company	
	2023	2022	**2023**	2022
	£	£	**£**	£
Trade payables	**110,673**	116,560	**79,308**	116,560

Lease liability	**32,921**	-	**32,921**	-
Other creditors and accruals	**341,202**	148,563	**922,582**	148,563
Other taxes	**19,774**	10,677	**19,684**	10,677
Pensions payable	**1,688**	3,506	**1,688**	3,506
	506,258	279,306	**1,056,183**	279,306

19. Trade and other payables: amounts falling due more than one year

	Group		Company	
	2023	2022	**2023**	2022
	£	£	**£**	£
Lease liability	**122,475**	-	**122,475**	-
	122,475	-	**122,475**	-

20. Financial assets and financial liabilities

Financial assets	Group		Company	
	2023	2022	**2023**	2022
	£	£	**£**	£
Financial assets at amortised cost:				
- Trade receivables	**79,078**	-	**79,078**	-
- Other Debtors	**157,094**	342,021	**375,864**	342,021
- Cash and cash equivalents	**4,348,887**	5,882,897	**3,775,250**	5,882,897
	4,585,059	5,882,897	**4,230,192**	5,882,897

Financial liabilities	**Group**		Company	
	2023	**2022**	2023	2022
	£	**£**	£	£
Liabilities at amortised cost:				
- Trade payables	**110,673**	116,560	79,308	116,560
-Other creditors	**341,172**	148,563	922,582	148,563
-Taxes - VAT & payroll	**19,744**	10,677	19,684	10,677
- Pensions payable	**1,688**	3,506	1,688	3,506
-Lease liabilities	**32,981**	-	32,921	-
	506,258	279,306	1,056,183	279,306

21. Leases

The Group has leased offices at the location of its research facility for a duration less than one year. The lease is reflected in the accounts as an expense on the income statement.

21.1 Amounts recognised in the balance sheet

Right of use assets relate to leased properties that do not meet the definition of investment property and are presented within tangible fixed assets per Note 12.

	2023	2022
	£	£
Right of use assets		
Balance at 1 January	**-**	22,573
Additions to right of use assets	**180,919**	-
Depreciation charge for the year	**(30,153)**	(22,573)
Balance at 31 December	**150,766**	-

	2023	2022
Future minimum rentals payable are as follows:	**£**	£
Amounts payable:		
Within one year	**46,000**	-
Later than one year and not later than five years	**135,570**	-
Total gross payments	**181,570**	-
Impact of finance expenses	**(26,174)**	-
Carrying value of liability	**155,396**	-

21.2 Amounts recognised in income statement

	2023	2022
	£	£
Depreciation charge	**30,153**	22,573
Interest on lease liabilities	**10,867**	855
Expenses relating to short term leases	**3,844**	120
	44,864	23,548

21.3 Amounts recognised in statement of cashflows

	2023	2022
	£	£
Interest on lease liabilities	**10,867**	855

Interest on lease liabilities	**10,867**	855
Repayment of lease principal	**30,153**	23,455
Total cash outflow for leases	**41,020**	24,310

22. Share capital

Group and Company

(i) Number of shares

	0.5 p Ordinary shares	**0.5 p Deferred shares**	**4.5 p Deferred shares**	**4.0 p Deferred shares**
Shares at 1 January 2022	**3,957,414,135**	**388,496,747**	**17,373,523**	**9,737,353**
Issue of shares	-	-	-	-
Shares at 31 December 2022	**3,957,414,135**	**388,496,747**	**17,373,523**	**9,737,353**
Issue of shares	208,000,000	-	-	-
Shares at 31 December 2023	**4,165,414,135**	**388,496,747**	**17,373,523**	**9,737,353**

(ii) Value in £

	0.5 p Ordinary shares	**0.5 p Deferred shares**	**4.5 p Deferred shares**	**4.0 p Deferred shares**	**Share Capital**
	£	**£**	**£**	**£**	**£**
At 1 January 2022	**19,787,071**	**1,942,483**	**781,808**	**389,494**	**22,900,856**
Issue of shares	-	-	-	-	-
At 31 December 2022	**19,787,071**	**1,942,483**	**781,808**	**389,494**	**22,900,856**
Issue of shares	1,040,000	-	-	-	1,040,000
At 31 December 2023	**20,827,071**	**1,942,483**	**781,808**	**389,494**	**23,940,856**

All ordinary shares of the Company rank pari-passu in all respects.

The deferred shares do not carry any voting rights or any entitlement to attend general meetings of the Company. They carry only a right to participate in any return of capital once an amount of £100 has been paid in respect of each ordinary share.

On 22 August 2023, the Company issued 200,000,000 new ordinary shares of 0.5p each ("Ordinary shares") in the Company at a price of 0.5p each amounting to £1,000,000 before issue costs. The Company also paid its Broker, Turner Pope Investments Limited, 8,000,000 new ordinary shares ("Broker Fee Shares") at the issue price 0.5p each amounting to £40,000 instead of cash in respect of certain professional fees.

23. Other reserves

Group

	Merger relief reserve £	**Share premium account £**
As at 1 January 2022	36,117,711	61,291,710
Reserve transfer - goodwill impairment	(36,117,711)	-
At 31 December 2022	-	61,291,710
Share based payments	-	(70,901)
Share issue costs	-	-
Reserve transfer - goodwill impairment	-	-
At 31 December 2023	-	61,220,809

Company

	Merger relief reserve £	**Share premium account £**
As at 1 January 2022	36,117,711	61,291,710
Reserve transfer - goodwill impairment	(36,117,711)	-
At 31 December 2022	-	61,291,710
Share based payments	-	(70,901)
Share issue costs	-	-
Reserve transfer - goodwill impairment	-	-
At 31 December 2023	-	61,220,809

24. Accumulated deficit

Group

Group

	2023	2022
	£	£
As at 1 January	**(75,323,903)**	(65,224,306)
Loss for the year	**(1,427,647)**	(46,198,679)
Share based payments	**70,901**	(18,629)
Reserve transfer - goodwill impairment	**-**	36,117,711
At 31 December	**(76,680,649)**	(75,323,903)

Company

	2023	2022
	£	£
As at 1 January	**(75,323,903)**	(65,224,306)
Loss for the year	**(2,229,942)**	(46,198,679)
Share based payments	**70,901**	(18,629)
Reserve transfer - goodwill impairment	**-**	36,117,711
At 31 December	**(77,482,944)**	(75,323,903)

25. Share based payments

The expense recognized for share-based payments during the year is shown in the following table:

	2023	2022
	£	£
Share based payment charge recognised in Income Statement		
Expense arising from equity-settled share-based payment transactions:		
- Share options for Directors and employees	**-**	-
- Shares issued for third party services	**40,000**	-
Total share-based payment charge in Income Statement	**40,000**	-
Share based payment charge recognised in Share Premium Account		
Warrants for third party services in Sep 23	**78,735**	-
Warrants lapsed in Sep 23	**(7,834)**	
Total share-based payment charge in Share Premium Account	**70,901**	-
Total share-based payment charges recognised	**-**	-
Other share-based payment movement		
Exercise of share options by Directors and employees	**-**	-
Exercise of warrants for third party services	**-**	-
Shares option lapsed in Jan 22	**-**	(18,629)
Total share-based payment	**-**	(18,629)

There were no liabilities recognised in relation to share based payment transactions.

25.1 Share options for Directors and employees

The Group has put in place various options schemes for Directors and employees as follows:

On 8 December 2014, the Group granted 11,000,000 options over ordinary shares to the Board. The options may be exercised between the grant date and the tenth anniversary of the grant date and will lapse if not exercised during that period.

On 6 March 2018, the Group granted 32,100,000 options over ordinary shares to employees, including a Board member, under the Powerhouse Energy Group PLC 2018 EMI Option Scheme. The options vest to the employees over a period of 24 months and are exercisable between the relevant vesting dates and the tenth anniversary of the grant date and will lapse if not exercised during that period. These options had all been exercised or forfeited by 31 December 2019.

On 6 March 2018, the Group granted 60,000,000 options over ordinary shares to Board members under the Powerhouse Energy Group PLC 2018 non-employee Share Option Plan. The options vest to the Board members over a period of 24 months and are exercisable between the relevant vesting dates and the tenth anniversary of the grant date and will lapse if not exercised during that period.

On 23 April 2021, the Group granted 1,773,239 share options in ordinary shares of 0.5p each in the Group to two Directors of the Group in lieu of part or all of their fees to which they are entitled. The options have an exercise price of 6.3p each and lapse 3 years from the date of grant.

The movement of share options in the year are as follows:

	2023	2023	2022	2022
	Number	**WAEP (pence)**	Number	WAEP (pence)
Outstanding at 1 January	**15,581,355**	**1.13**	16,062,692	1.33
Granted during the year	**-**	**-**	-	-
Forfeited during the year			(481,337)	6.3
Exercised during the year	**-**	**-**	-	-
Outstanding at 31 December	**15,581,355**	**1.13**	15,581,355	1.13
Exercisable at 31 December	**15,581,355**	**1.13**	15,581,355	1.13

The weighted average remaining contractual life for the share options outstanding as at 31 December 2023 was 0.9 years (2022: 1.9 years).

No share options were granted during the year (2022: nil). The range of exercise prices for options outstanding at the year-end was 0.6p to 6.3p (2022: 0.6p to 6.3p). The number of options outstanding at 31 December 2023 and the movements in the year are as follows:

Date of grant	Granted	Share price on grant	Exercised	Forfeited	At 31 Dec 2023	Exercise price	Exercise period
8 Dec 2014	6,000,000	1.875p	-	(3,000,000)	3,000,000	2.5p	9 Dec 2014 until 8 Dec 2024
6 Mar 2018	60,000,000	0.57p	(48,000,000)	-	12,000,000	0.6p	7 Mar 2018 until 8 Dec 24*
22 Apr 2021	1,773,239	5.58p	-	(1,191,884)	581,355	6.3p	23 Apr 2021 until 22 Apr 2024
Total	67,773,239		(48,000,000)	(4,191,884)	15,581,355		

*The expiry date of the option granted on 6 March 2018 was adjusted by the board due to a director leaving the Group in June 2022. On 29 September 2022 the board agreed to align the termination/expiry dates for both sets of options for James Greenstreet to 8 December 2024.

The estimated fair value of the options issued was calculated by applying the Black-Scholes option pricing model. The assumptions used in the calculation were as follows:

	8 December 2014	**6 March 2018**	**22 April 2021**
Options in issue 31 December 2023	3,000,000	12,000,000	581,355
Exercise price	2.5p	0.6p	6.3p
Expected volatility	127.56%	70.00%**	214.8%**
Contractual life	10 years	10 years	3 years
Risk free rate	2%	1.49%	0.15%
Estimated fair value of each option	1.79p	0.32p*	3.87p*

* the calculation applies a 25% discount for small companies
** expected volatility based on historic volatility at the point of grant.

25.2 Warrants for third party services

The Group has issued warrants in respect of services provided by consultants as part of their service arrangements. It has also issued warrants to participating shareholders in respect of certain fund raises. No share-based payment charge is recognised for warrants issued to participating shareholders as they are outside of the scope of IFRS 2.

Details of warrants which have been issued are as follows:

On 15 September 2020, the Group granted 5,395,260 warrants to the Group's broker as part of its service arrangement in relation to the fund raise arising on that date. The options may be exercised between the grant date and the third anniversary of the grant date and will lapse of not exercised during that period. At the date of grant the share price was 3.3p and the warrants have an exercise price of 2.5p per share.

On 21 January 2021, the Group granted 9,090,910 warrants to the Group's broker as part of its service arrangement in relation to the fund raise arising on that date. The options may be exercised between the grant date and the third anniversary of the grant date and will lapse of not exercised during that period. At the date of grant the share price was 8.6p and the warrants have an exercise price of 5.5p per share.

On 1 September 2023, the Group granted 16,000,000 warrants to the Group's broker as part of its service arrangement in relation to the fund raise arising on that date. The options may be exercised between the grant date and the third anniversary of the grant date and will lapse of not exercised during that period. At the date of grant the share price was 0.55p and the warrants have an exercise price of 0.5p per share.

Please see note 32 Events after the reporting period in relation to issuing warrants to Strand Hanson Limited.

Warrants in respect of services provided:

The movement of warrants issued for share-based payments in the year are as follows:

	2023 Number	**2023 WAEP (pence)**	2022 Number	2022 WAEP (pence)
Outstanding at 1 January	**9,590,910**	**5.3**	9,590,910	5.3
Granted during the year	**16,000,000**	**0.5**		-
Forfeited during the year	**(500,000)**	**2.5**	-	-
Exercised during the year	**-**	**-**		-
Outstanding at 31 December	**25,090,910**	**2.3**	9,590,910	5.3
Exercisable at 31 December	**25,090,910**	**2.3**	9,590,910	5.3

The weighted average remaining contractual life for the share warrants outstanding as at 31 December 2023 was 1.7 years (2022: 1.0 years)

The range of exercise prices for warrants outstanding at the year-end was 0.5p to 5.5p (2022: 2.5p to 5.5p).

The number of warrants, which have been included for share-based payment purposes, outstanding at 31 December 2023 and the movements in the year are as follows:

Date of grant	Granted	Share price on grant	Exercised	Forfeited	At 31 Dec 2023	Exercise Price	Exercise period
15 Sep 2020	5,395,260	3.3p		(5,395,260)	-	2.5p	16 Sep 2020 until 15 Sep 2023
21 Jan 2021	9,090,910	8.6p	-	-	9,090,910	5.5p	22 Jan 2021 until 21 Jan 2024
01 Sep 2023	16,000,000	0.6p	-	-	16,000,000	0.5p	02 Sep 2023 until 01 Sep 2026

Total	**30,486,170**	**-**	**-**	**(5,395,260)**	**25,090,910**

The Group is required to assess the fair value of instruments issued in respect of services received, with such value charged to the Income Statement. The estimated fair value of the warrants issued during the year was calculated by applying the Black-Scholes option pricing model. The assumptions used in the calculation were as follows:

Warrants issued for services	**21 Jan 2021**	**01 Sep 2023**
In issue 31 December 2023	9,090,910	16,000,000
Exercise price	5.5p	0.5p
Expected volatility*	161.6%	275.58%
Contractual life	3 years	3 years
Risk free rate	(0.07%)	4.82%
Estimated fair value of each option	4.6p	0.49p

* expected volatility based on historic volatility at the point of grant.

Warrants issued to participating shareholders

Warrants issued to participating shareholders are outside the scope of IFRS 2 and no share-based payment charges have been recognised on them. On initial recognition the warrants' cost was deducted from equity as it represents the cost of shares issued to investors. As the agreements had a fixed-for-fixed requirement, they are also recognised as equity at the same time. As such, there is £nil net impact on equity and has not been included in the statement of changes in equity.

The number of warrants issued to participating shareholders, which have not been included for share-based payment purposes, outstanding at 31 December 2023 and the movements in the year are as follows:

Date of grant	**Granted**	**Share price on grant**	**Exercised**	**Forfeited**	**At 31 Dec 2023**	**Exercise price**	**Exercise period**
15 Sep 2020	371,510,069	3.3p	-	(371,510,069)	-	2.75p	16 Sep 2020 until 30 April 2023
Total	**371,510,069**		**-**	**(371,510,069)**	**-**		

The estimated fair value of the warrants issued was calculated by applying the Black-Scholes option pricing model. The assumptions used in the calculation were as follows:

All warrants

The number of all warrants outstanding at 31 December 2023 and the movements in the year are as follows:

Date of grant	**Granted**	**Share price on grant**	**As at 1 Jan 2023**	**Exercised**	**Forfeited**	**At 31 Dec 2023**	**Exercise price**	**Exercise period**
15 Sep 2020	5,395,260	3.3p	500,000	-	(500,000)	-	2.5p	16 Sep 2020 until 15 Sep 2023
15 Sep 2020	371,510,069	3.3p	371,510,069	-	(371,510,069)	-	2.75p	16 Sep 2020 until29 Apr 2023
21 Jan 2021	9,090,910	8.6p	9,090,910	-	-	9,090,910	5.5p	22 Jan 2021 until 21 Jan 2024
01 Sep 2023	16,000,000	0.6p	-	-	-	16,000,000	0.5p	01 Sep 2023 until 01 Sep 2026
Total	**401,996,239**		**381,100,979**	**-**	**(372,010,069)**	**25,090,910**		

*Please see the Post Balance Sheet Event note on Strand Hanson Limited warrants and Turner Pope warrants.

26. Material risks

The Group is subject to various risks relating to political, economic, legal, social, industry, business and financial conditions. Risk assessment and evaluation is an essential part of the Group's planning and an important aspect of the Group's internal control system. The Group's approach to these risks is detailed in the Strategic Report.

27. Business Combinations

In April 2023 the Group acquired Protos Plastics to Hydrogen No.1 Limited for £1 and on 20 June 2023 the Group acquired Engsolve Limited for a total consideration of £572,896 as set out in the notes below:

Acquisition of Protos Plastics to Hydrogen No.1 Limited

Recognised amounts of identifiable assets acquired and liabilities assumed:

	Book Value £	**Adjustment £**	**Fair Value £**
Fixed Assets			
Tangible	**2,362,649**	(2,362,649)	-
Asset under Construction	**330,000**		330,000
Current Assets			
Debtors	**615,709**	(209,015)	406,694
Cash at bank and in hand	**5,787**	-	5,787
Total Assets	**3,314,145**	(2,571,664)	742,481
Creditors			
Due within one year	**(3,361,853)**	3,332,124	(29,729)

Total dentifiable net assets	**(47,708)**	760,460	712,752

Goodwill	(712,751)
Total Purchase Consideration	1
Cash (Outflow)/Inflow on Acquisition	5,786

As part of the Fair Value adjustments it was identified that Fixed Assets held were impaired and had no sales value. In addition to this the Group took the decision that the loan between Powerhouse Energy Group PLC and Protos Plastics to Hydrogen No 1 Limited is not expected to be recovered and due to there being control the loan owed in the books of Protos Plastics to Hydrogen No 1 Limited was impaired to £nil.

The goodwill arising on acquisition is attributable to the acquisition of Protos Plastics to Hydrogen No.1 Limited. The goodwill generated from the Acquisition of Protos Plastice to Hydrogen No.1 Limited is included in the Group profit and loss account.The results of Protos Plastics to Hydrogen No.1 Limited since acquisition are as follows.

	Current Period since acquisition £
Turnover	-
Profit for the period since acquisition	35,639

Acquisition of Engsolve Limited

Recognised amounts of identifiable assets acquired and liabilities assumed:

	Book Value £	Fair Value £
Fixed Assets		
Tangible	**11,694**	11,694
Current Assets		
Debtors	**150,492**	150,492
Cash at bank and in hand	**466,793**	466,793
Total Assets	**628,979**	628,979
Creditors		
Due within one year	**(106,419)**	(106,419)
Total identifiable net assets	**522,560**	522,560

Goodwill (See note 11)	(573,581)
Total Purchase Consideration	1,109,986
Cash (Outflow)/Inflow on Acquisition	(108,967)

The goodwill arising on acquisition is attributable to the acquisition of Engsolve Limited. The results of Engsolve Limited since acquisition are as follows:

	Current Period since acquisition £
Turnover	180,559
Profit for the period since acquisition	53,904

Cash Acquired on Aquisition	Cash acquired £	Cash Paid £	Cash (Outflow)/Inflow on Acquisition £
Protos Plastics to Hydrogen No.1 Limited	5,787	(1)	5,786
Engsolve Limited	466,793	(575,760)	(108,967)
Total	472,580	(575,761)	(103,181)

28. Pension Costs

	***Group £**	Company £
Pension Creditor Year end 2022	**-**	-
Pension liability in the year	**71,655**	23,207
Pension paid out in the year	**67,496**	21,520
Pension Creditor Year end 2023	**4,159**	1,687

*Please note the Group pension scheme figures includes Engsolve pension scheme after full acquisition on 21 June 2023

29. Directors' remuneration and share interests

The Directors who held office at 31 December 2023 had the following interests, including any interests of a connected party in the ordinary shares of the Group:

	Number of ordinary shares of 0.5p each	**Percentage of voting rights**
Paul Emmitt	3,574,901	0.09
Ben Brier	6,533,007	0.15

The remuneration of the Directors of the Group paid or payable for the year or since date of appointment, if later, to 31 December 2023 is:

	2023 £ Salary/Fee	2023 £ Pension	2023 £ Share based payments	2023 £ Other	2023 £ Total	2022 £ Total
Antony Royston Gardner-Hillman	82,500	-	-	-	82,500	
Anthony Clive Gale	30,000	-	-	-	30,000	-
Paul Emmitt	106,250	4,000	-	-	110,250	66,906
James John Pryn Greenstreet		-	-	-		15,000
Hugh McAlister	30,000	-	-	-	30,000	27,232
Paul Drennan-Durose			-	-		259,740
Gillian Weeks		-	-	-		24,296
Russell Ward		-	-	-		18,899
Myles Howard Kitcher		-	-	-		25,667
Allan Vlah		-	-	-		7,500
David John Hitchcock	32,500	-	-	-	32,500	-
Karol Kacprzak	26,518	-	-	-	26,518	-
Keith Riley	157,528	-	-	-	157,528	92,546
Ben Brier	9,375	750	-	-	10,125	
Total	474,671	4,750	-		479,421	537,786

Total remuneration includes share-based payments arising from the issue of options amounting to nil in 2023 (2022: nil). There have been no awards of shares to Directors under long term incentive plans during the year.

The Directors' social security costs for the year amounted to £25,192 (2022: £54,026) resulting in a total remuneration expense of £504,613 (2022: £651,312).

Prior to their resignations from the Board, Tim Yeo, James John Pryn Greenstreet, Allan Vlah, Antony Royston Gardner-Hillman and Keith Riley had service contracts that could be terminated by the provision of three months' notice.

There are no share options for directors who served during the year.

Highest Paid Director
Keith Riley was the highest paid Director in the year. There were no shares received or receivable by him in respect of qualifying services under long term incentive schemes.

30. Related parties

Engsolve Limited, an engineering solutions company, was a related party until 30 June 2021 due to a Paul Emmitt's family member being part of its key management personnel and Paul Emmitt being a controlling shareholder, and from 12 August 2021 when the Group acquired 48.39% of its share capital. On the 21 June 2023 the Group acquired the remaining 51.61% of shares of Engsolve Limited for a consideration of £572,896, the majority of the shares of which, came from Paul Emmitt who was COO of Powerhouse at the time. Engsolve provided engineering services to the Group during the year amounting to £666,739 (2022: £596,172). Amounts outstanding at year end for services provided and included in these accounts amounted to £51,269 (2022: £31,778). All amounts post acquisition have been eliminated in accordance with the accounting policies in the Consolidated Financial Statements

Keith Riley was appointed as a non-executive director of the Group on 27 September 2021. Mr Riley was Interim Chairman and acting Chief Executive Officer of the Group in 2023 and resigned on 5 September 2023. Mr Riley was also an active director in Engsolve Limited from 8 March 2023 to 5 September 2023. Keith Riley joined Hydrogen Utopia International PLC as Technical Director on 6 January 2022 and resigned on 26 May 2023. Keith Riley was also a director of HU2021 International UK Ltd from 18 January 2022 until 31 May 2023.

Howard White is a shareholder in the Group and also a strategic Consultant to the Group, having received £40,000 for his services in 2023. Howard White is also a Board Member and shareholder of Hydrogen Utopia International.

Hugh McAlister was a Non-Executive Director of the Group during 2023 and also owned shares in Hydrogen Utopia International.

31. Events after the reporting period

On 21 January 2024 9,090,910 warrants held by Turner Pope at an exercise price of 5.5 pence expired.

On 31 January 2024 the Group announced the appointment of Strand Hanson Limited as the Group's Nominated and Financial Adviser.

On 31 January 2024 the Group entered into a warrant agreement with Strand Hanson Limited. The warrant agreement included 31,240,606 warrants over ordinary shares of 0.5 pence at a subscription price of 0.29 pence. The warrant agreement was signed on 31 January 2024 with a final exercise date of 31 January 2029.

On 22 February 2024 the Group announced the signing of an initial five year framework agreement with Australian based, National Hydrogen Ltd ("NH2"). The Agreement sets out the terms on which the Group's technology and engineering expertise would be provided, on a project-by-project exclusivity basis, to NH2 for its intended roll out of multiple hydrogen-based projects across Australia, Italy, Switzerland, and Hong Kong. Powerhouse will not be required to contribute any capital for these projects. Instead, the collaboration will be based on a license fee and royalties model.

On 11 March 2024 the Group announced the signing of the Longford Joint Venture with Hydrogen Utopia International. The Group had previously announced on 30 October 2023 the delaying of the signing. Initial financing is being provided by AFT and Powerhouse International by way of shareholder loans (for a maximum of €200,000 each) under separate loan agreements. Any future financing will be raised in accordance with the Subscription and Shareholder Agreement through further loans or (with the consent of the shareholders only) subscription for shares. Signing of the Subscription and Shareholder Agreement requires Powerhouse to make an immediate payment of £100,000 to HUI. This is in addition to the £100,000 already paid to HUI, as noted in the Group's announcement on 21 March 2023. A further payment of £100,000 in cash will also be made to HUI once planning permission has been granted for the Longford Project.

On 22 April 2024 581,355 of share options granted on 22 April 2021 to a Director lapsed.

On 21 May 2024 the Group's GB Patent Application No GB1910309.2 "Treatment of waste producing recirculated combustible" was granted.

32. Ultimate controlling party

There is no single controlling party of the Group.