HYDROGEN SOLUTIONS
UPDATE / OCTOBER 2023

Welcome,

We will be sending out regular updates to all investors (and interested parties), so we can keep you informed of our activities and achievements in bringing truly inspiring innovation to the hydrogen sector. Your interest and commitment are what fuels it all, contributing to next generation products designed to deliver real change to the energy sector globally.

DIRECT ENERGY

We have established a UK company called Hydrogen Solutions. This company will be used to raise money and finish the development of the Solid Oxide Electrolyser and, in the future, the development of the phase change material energy storage technology.

Ensuring a seamless asset transition between our legacy partner Direct Energy and Hydrogen Solutions Ltd has been our goal. I'm glad to report that we are completing an agreement to acquire the assets of Direct Energy Pty which contains over a decade's investment in the fuel cell industry producing ground-breaking IP. Details of this structure will be forthcoming in the future when they are formalized.

Our international technology exchange agreement will allow Hydrogen Solutions Ltd to develop the final phase of R&D testing with the UK companies and universities required for it to be commercialised around the globe. Hydrogen Solutions Ltd will acquire the Direct Energy project work done to date. We are launching the UK R&D program to develop the HOT BOX product under the sub-brand name *Electrocel*.

The Australian team origins date back to the original Ceramic Fuel Cell Company being the base of IP contained now in this project. They had established relations, research history and lab infrastructure with both the University of Queensland and the Australian Government over the last decade of consistent R&D in Solid Oxide Fuel Cell (SOFC) and Solid Oxide Electrolysis Cell (SOEC) technologies.

Their IP has been verified by Independent Industry Expert Professor Nigel Brandon (Founder of Ceres Power and Dean of the Faculty of Engineering Imperial College London) as "Real and Credible" within a select Global Group where there are few available investor entry points.

Based on strong recommendations from Professor Brandon, our team has chosen to focus technology development on a SOEC in the next 2 - 3 years (for the purpose of producing green hydrogen), to be followed by SOFC development later.

Green hydrogen ("e-Hydrogen") is produced when renewable energy powers the electrolysis of water. Green hydrogen looks poised to become a once-in-a-generation opportunity: Goldman Sachs* estimates it could give rise to a $10trn addressable market globally by 2050 for the Utilities industry alone.

As a SOEC, Electrocel represents a breakthrough in electrolyser design for industrial applications, with the potential to make hydrogen's density cost comparison equivalent to that of diesel – a total game-changer. This anode-supported solid oxide electrolyser can deliver >90% efficiency and overcomes cost and durability challenges through innovative proprietary design and materials. Existing alternative electrolyser technologies are currently reaching 55% (Alkaline) and 65% (PEM) respectively.

The stats* on the necessary uplift in electrolyser development and manufacture required to meet international net-zero targets are sobering and urgent:

>650x Increase in the European electrolyser market by 2030 (vs today), based on the EU Hydrogen Strategy

>8,000x Increase in the European electrolyser market by 2050 (vs today), based on the EU Hydrogen Strategy

This is why *Electrocel*'s development is so critical and your support so vital and timely.

*Goldman Sachs, G*reen Hydrogen, The next transformational driver of the Utilities industry*, Equity Research, September 2022

NATIONAL COMPOSITES CENTRE

Solid research underpins *Electrocel*'s ground-breaking proposition, and the role of our research partners in guiding and assuring our project development

is seminal. These include the University of Queensland in Australia, and in the UK – the National Composites Centre (NCC) at the University of Bristol, the University of Nottingham, the University of Lincoln, and others in the hydrogen catapult cluster of UK leading research centres.

Our team recently undertook a research enquiry mission to the outstanding NCC, where we studied their leading work on seals and valves in particular, understanding these components' critical role in achieving the efficiency outputs we seek. We intend to sign a collaboration agreement with them to use their facilities and expertise in the final phase of the SOEC development.

ENTERPRISE INVESTMENT SCHEME

Our team has been exploring the suitability of the Enterprise Investment Scheme (EIS) as an attractive proposition for existing and new investors. The EIS offers significant tax reliefs to encourage individuals to invest money in qualifying shares issued by qualifying unquoted companies.

EIS offers UK income tax relief and capital gains tax (CGT) relief to individual investors who subscribe to new shares in such companies.

A subscription for eligible shares of a qualifying EIS company is therefore a tax efficient investment for the individual. The investor can benefit from the following tax reliefs:

- ❑ EIS income tax relief
- ❑ CGT exemption
- ❑ Loss relief against CGT or income tax
- ❑ CGT deferral relief

We anticipate filing for HMRC (UK taxing authority) approval this month.

RAISING FUNDS

In addition to funds raised via the EIS program, we are pursuing investment from other investors that have interest in the hydrogen economy. With these funds and the EIS raise, we will have adequate funding to complete the development and align with channel partners. Direct Energy shareholder and loan note holders will become shareholders of Hydrogen Solutions or paid out per the terms of their agreement with Direct Energy. Details forthcoming in coming months.

Please direct any questions to james.busche@dephl.com.

We look forward to updating you all with further news in the near future,