



# Trading statement

## Q3 2022

### Performance highlights for Q3 2022

- Green Hydrogen Systems sees continued progress and has, in Q3 2022, delivered additional A-Series electrolyser units to customer sites. These electrolysers will undergo tests in a production environment as part of a full hydrogen production value chain in order to obtain a final site acceptance test and revenue recognition
- The electrolysers delivered in Q2 2022 continue to show positive initial test data and are producing hydrogen in line with our expected specifications
- Expansion of production facilities to an initial 400 MW electrolyser capacity progressing ahead of plan and according to budget. Commissioning of production facilities to commence in late 2022 and to be completed by mid-2023 which will enable scalable serial production of the A-Series and later on the X-Series
- Development of the X-Series prototype progresses as planned. Major key components such as stacks, piping and gas purification modules are assembled and mounted to the base frame. Delivery to customer test site expected in Q1 2023
- Partnership with Burmeister & Wain Scandinavian Contractor for installation and commissioning of the first X-Series prototype

### Guidance for 2022

Based on progress related to assembly and delivery as well as positive operational test data for the A-Series versions delivered for testing at customer sites the full-year guidance for 2022 (updated 25 August 2022) is maintained:

- **Revenue**  
DKK 1 to 19 million
- **Gross profit**  
DKK -20 to -15 million
- **EBITDA**  
DKK -255 to -235 million
- **EBIT**  
DKK -290 to -270 million
- **CAPEX**  
DKK 310 to 350 million, of which around DKK 125 million is allocated to the expansion of the production capacity

The revenue guidance range reflects the uncertainty of the exact timing of the initial electrolysers passing revenue recognition criteria within the 2022 calendar year.

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## continued

### **Sebastian Koks Andreassen, CEO of Green Hydrogen Systems comments:**

*"We are pleased to report that we receive positive production test data from our delivered and onsite installed electrolyser units, and we will continue to push additional electrolyser units to the customer sites for final installation stages in the coming months.*

*While we have started delivery of the first A-Series units, our production facility expansion in Kolding, Denmark, progresses on budget and ahead of plans and we expect to start commissioning from next month which will enable us to initiate scalable serial production of the A-Series and later the X-Series.*

*We see political steps related to the green energy transitions in EU with the Re-PowerEU plan and from the US Inflation Reduction Act. The Inflation Reduction Act will push green hydrogen to be the most viable and attractive alternative to fossil fuels in an intensively fossil fuel US energy market.*

*These significant political plans could spur a worldwide push for electrolyser demand and add to the current imbalance seen between electrolyser production capacity and the project developers increased appetite for electrolysers. A demand our chosen pressurised alkaline electrolyser platform is well positioned to benefit from.*

*Pressurised alkaline electrolysis holds the potential to be the preferred electrolysis technology for large scale projects as it can cater for variant power loads from renewable energy sources, lowers the physical footprint of the hydrogen production facility on site, and has no reliance on critical materials and scarce metals."*

# Business highlights

## **Delivery of A-Series electrolysers**

Delivery of the A-Series electrolysers continued in Q3 2022. The electrolysers delivered in Q3 2022 will undergo tests in production environments as part of a full hydrogen production value chain similar to the electrolysers delivered in Q2 2022. The electrolysers delivered for test at customer sites in Q2 2022 continue to show positive initial test data and are producing hydrogen in line with our expected specifications.

The delivery of the current order backlog will continue during the coming quarters. Each electrolyser will undergo a factory acceptance test (FAT) at Green Hydrogen Systems' facilities in Kolding, Denmark and a site acceptance test (SAT) at the customer site. Green Hydrogen Systems aims to deliver, and revenue recognise up to 5 MW of electrolysers in 2022 corresponding to revenue from DKK 1 – 19 million. The initial order value of the 5 MW was around DKK 34 million, however, due to penalties related to the delayed delivery schedule the recognised revenue will be reduced accordingly. The expected deliveries and revenue recognition in 2022 are dependent on factors such as supply chain disruptions causing delays in product assembly and/or delays in implementation of the full hydrogen value chain at customer sites.

## **X-Series development and EPC partnership for the first X-Series prototype**

Development of the first X-Series prototype, which is to be installed at the GreenLab facilities, Denmark, as part of the GreenHyScale project, continues to advance. Assembly is progressing and major key components such as stacks, piping and gas purification modules are being installed. Sub-suppliers are closely involved in the assembly process to secure a smooth process around the product finalisation and initial tests.

Delivery of the X-Series prototype to the customer site is targeted for Q1 2023. The targeted delivery is reliant on timely supply chains for components and materials needed in the final assembly process. When delivered, the 6 MW electrolyser unit will undergo certain tests during 2023 in order to validate the X-Series platform for the future 100 MW project, GreenHyScale. The project will also provide an opportunity for Green Hydrogen Systems to demonstrate its electrolysis technology 'pressurised alkaline electrolysis' as the most cost-efficient type of electrolysis, free of scarce metals and a technology that works efficiently with the variable load from renewable electricity sources.

For the commissioning of the X-Series prototype, Green Hydrogen Systems has engaged in a partnership with the global energy solutions provider Burmeister & Wain Scandinavian Contractor (BWSC). The partnership is delimited to the first 6 MW X-Series module with an intention to increase the scope of cooperation going forward. BWSC will handle all site installation including engineering and installation of key connections, power source and utility connections as well as general project management.

Green Hydrogen Systems is currently engaged in dialogues with a number of customers concerning the X-Series platform for application and end-use cases onshore and for application in wind turbines offshore. The current dialogues confirm interest in full integrated hydrogen production units that are standardised, footprint efficient, simple to commission and have the possibility to be further scaled by adding additional units.

## **Factory expansion to an initial 400MW production capacity**

The factory expansion is progressing according to budget and ahead of timeline. The new facilities will increase Green Hydrogen Systems' current yearly production capacity from 75 MW to initially 400 MW. Commissioning of the production facilities will commence stepwise from late 2022 and will be complete by mid-2023.

Commencement of the new facilities is a pivotal step in Green Hydrogen Systems' plans to scale the company and to deliver electrolysis solutions that lower the levelised cost of hydrogen significantly. The new facilities will enable scalable serial production of the A-Series and X-Series as well as automated electrode plating and stack assembling. Besides increasing production capacity, the expansion will secure sufficient space to grow capability and organisation from currently ~250 FTEs.

# Business highlights continued

## Market fundamentals and technology choices

The demand for green hydrogen continues to grow and is deemed to further accelerate as the green energy transition aligns with the growing concern for the security and reliability of the fossil-focused energy supply setting.

The supportive energy policies in the US and the EU strengthen the attractiveness of renewable energy projects and green technology investment cases and de-risk some of the political uncertainties for the market development trajectory for green hydrogen.

Specifically, the European RePowerEU plan for annual hydrogen production and import of green hydrogen within the European Union of a total of 20 million tons offer a tangible guidance for the estimated regional European demand and the derived need for electrolyser production and supply.

Similarly, and across the Atlantic, the implementation of the US Inflation Reduction Act will push a fossil-intensive economy towards a greener path and make green hydrogen the most viable and commercially appealing renewable alternative.

These policy pushes from both sides of the Atlantic are instrumental in ensuring the rapid development of regional and global clean and green hydrogen markets.

Project developers in the hydrogen industry will race to secure the most advanced, yet reliable, and scalable electrolyser technologies available that offer cost competitive levelised cost of hydrogen.

Green Hydrogen Systems' choice of electrolyser technology is pressurised alkaline electrolysis. Advancement of the alkaline technology, industry analysts view as holding the pole position for gaining a dominant electrolyser market share towards 2030 based on project cost and project and production certainty.

The pressurised advancement of a robust and resilient atmospheric alkaline electrolyser technology adds operational flexibility, lowers the physical footprint of the hydrogen production facility on site, and has no reliance on critical materials, e.g., iridium and platinum.

This non-reliance on critical materials lowers the supply chain risks, and increases the certainty of projected costs adding essential business case resilience for project developers and facility operators.



## Conference call

In connection with the announcement of the Trading statement for Q3 2022, Green Hydrogen Systems will host a conference call.

The conference call will be held on  
**1 November 2022 at 9:30 CET.**

Please visit [investor.greenhydrogen.dk](https://investor.greenhydrogen.dk) to access the presentation used for the meeting.

**Join now** >

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## Forward-looking statements

This announcement contains forward-looking statements. Words such as 'believe', 'expect', 'may', 'will', 'plan', 'strategy', 'prospect', 'foresee', 'estimate', 'project', 'anticipate', 'can', 'intend', 'outlook', 'guidance', 'target' and other words and terms of similar meaning in connection with any discussion of future operating or financial performance identify forward-looking statements. Statements regarding the future are subject to risks and uncertainties that may result in considerable deviations from the outlook set forth. Furthermore, some of these expectations are based on assumptions regarding future events which may prove incorrect.

Please also refer to the overview of risk factors in the Annual Report 2021 available at [greenhydrogen.dk](https://greenhydrogen.dk).

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