ADVANCED HYDROGEN TECHNOLOGIES
GROUP

QUARTERLY SHAREHOLDER UPDATE Q4 2023

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CHIEF EXECUTIVE OFFICER OPENING STATEMENT

BEN KATTENHORN

I hope this update finds you well. To begin, I extend my heartfelt wishes for a Happy New Year. I appreciate your understanding as I slightly adjust the timing of this update in order to share some exciting news and close out 2023 on a high note.

I am pleased to announce a significant milestone – the successful installation of the R4 carbon cleaning and capture system onto the Class 08 diesel locomotive. This achievement not only signifies progress, but also aligns with the Government Grant that we were delighted to win. Winning this grant marks a pivotal moment for AHT, and leads on to further comprehensive testing that we believe will demonstrate that our ECC&C system is revolutionary technology to not only reduce carbon emissions, but also to revitalise technology from the 1950s, without imposing a substantial financial burden on owners. Moreover, the improvements in fuel efficiency will contribute to minimising any additional costs in the installation or utilisation of the ECC&C system.

We have presented the findings of the testing with the removal firm, paving the way for engaging in discussions regarding the scheduled cleaning of their entire vehicle fleet three times a year. During these cleans, we can assess how best to fit capture devices to their fleet moving forward.

To close off on ECC&C, we are pleased to announce the completion of additional testing at the renowned “Millbrook Proving Ground”, the epicentre of all automotive testing in the UK. This specific phase, known as “Laboratory Testing”, involves subjecting the vehicle to controlled conditions with preselected parameters. A detailed demonstration of this testing can be seen in the video version of this update, and I am confident that, like me, you will be very impressed, not only with the depth of testing, but also the compelling results achieved.

Chimera has also achieved a significant milestone by being successfully installed in the test house! Although this has only recently taken place, and hence the slight delay in publishing this update, it marks a monumental step in AHT’s development, and I didn’t want to wait until our Q1 2024 update to share this achievement with all of you.

As evident from this overview, Q1 2024 promises to be a very exciting and demanding period for us.

As always, I trust you will find this quarterly update an enjoyable and informative read. The video version will be available on our YouTube Channel. If you have any questions, please don’t hesitate to reach out to me or any member of our team.

Ben Kattenhorn,
Chief Executive Officer
January 2024

AHTGL PRODUCTS, TECHNOLOGY AND APPLICATIONS

BEN KATTENHORN

AHTGL: PRODUCTS, TECHNOLOGY, AND APPLICATIONS

1. CHIMERA
2. ATHENA
3. ENGINE CARBON CLEAN AND CARBON CAPTURE – H2GOGO
4. THEA POWER

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1. CHIMERA

What is Chimera?

Chimera is a miniaturised Hydrogen generator that can supply energy, on demand, to power a standard gas boiler, providing cheap energy and becoming carbon-neutral if the input is green, ensuring a sustainable supply for central heating and hot water.

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Due to the dedicated time and effort placed into Chimera by the CTO and his team in Q3, extensive testing was able to take place throughout Q4, reaching a point where the CTO was confident in its relocation to the test house. Although the Christmas break delayed this transition until the new year, the system is now successfully installed and operational, as demonstrated in the video version of this update.

Notably, the Chimera system's current configuration differs slightly from our initial expectations. Following guidance from KIWA, we were advised that for home testing, the system must be placed outdoors. Placing it indoors would entail a significantly different regulatory framework, potentially adding an additional two years to the process. Consequently, a decision was made to position Chimera, along with a new boiler and water cylinder, outdoors. This strategic choice enables the project to move forward, facilitates testing, and allows KIWA to initiate the physical testing phase, building on preliminary work conducted through flow diagrams and other technical specifications.

Over the ensuing quarters, we will continue to work closely with KIWA, with the primary objective of securing the CE marking, which will signify that Chimera has successfully met the legislative standards related to health, safety, and environmental protection, to allow its sale within the European Economic Area (EEA). Concurrently, we will also commence the construction of a second test system, aiming for installation at the end of Q2. The next pivotal phase in this journey involves data collection, providing insights into Chimera's performance in a real-world scenario, highlighting both its strengths and areas for improvement.

2. ATHENA

What is Athena and why was it created?

Athena, named after the Greek Goddess of Wisdom, is AHT's software, developed in-house, that controls Chimera and Thea, controlling how much Hydrogen is produced on demand, and controlling the flow. Athena also watches over Chimera and Thea, logs the data on how much power is used, the Hydrogen produced, and how many times it has cleaned itself; overarching knowledge and control, with all this information being available to AHTGL in a real-time data stream. Athena will manage all subscription services for both current and future AHT products.

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As Chimera has progressed, Athena also undergoes advancements, incorporating additional safety features and expanding data collection points. The growth of Athena has necessitated an expansion of internal circuit boards by Brian, resulting in a physical change in size for Athena. Consequently, we've adjusted the location of Athena to accommodate these modifications. While Athena 2.0 is slightly trailing Chimera's progress, Brian anticipates it will be ready for testing by the end of Q1, allowing both systems to operate concurrently and in sync as originally intended.

Recognising the value of collecting data, we decided to proceed with this interim data collection with Chimera in its test location, and whilst we wait for Athena 2.0 to be ready.

3. ENGINE CARBON CLEAN & CAPTURE (ECC&C) – H2GOGO

What is ECC&C – H2gogo?

ECC (the commercial side) and H2GoGo (the franchisee side) are the two entities that control and run the Carbon Cleaning and Capture side of AHTGL. H2GoGo cleans internal combustion engines on the public facing side, and is commercialised through having four franchisees. The clientele is comprised of individuals who have had an emissions failure on their MOT, or who are enthusiasts who see carbon cleaning as an integral part of the annual service for their vehicle. ECC is a wholly-owned subsidiary of AHT, and engages with commercial clients such as the removal firm, which gives a clear separation between the two similar companies that utilise the same AHT technology.

Quarterly Review

AHT Wins the Cleaner Future Catapult Government Grant

AHT is proud to announce that it has won the Cleaner Futures Catapult Government grant through a joint application with Harry Needle Railroad, an achievement that signifies the growing recognition of our technology. The judging panel emphasised that our system's "potential" to significantly reduce carbon emissions played a crucial role in our victory, aligning perfectly with the ideals of "Cleaner Futures."

The forthcoming testing, covered by the grant, and which is facilitated by Coventry University and BCIMO (Black Country Innovative Manufacturing Organisation), will provide valuable insights. AHT is confident that this grant and the testing costs it covers will validate the substantial potential of our technology, showcasing how its positive impact can benefit the entire rail industry.

For additional information about BCIMO, please visit https://bcimo.co.uk/ and scroll to the bottom of the homepage for insightful snippets.

Installation of R4 & Finalisation of Testing Schedule

The stringent timeline associated with the grant for testing has accelerated the installation of R4 into the Class 08 diesel locomotive. Having successfully completed this installation, AHT is now actively engaging in discussions with Harry Needle Railroad and BCIMO to finalise the testing schedule. The comprehensive 10-day testing phase will be similar to that undertaken by the likes of Analize and Millbrook focusing on "Carbon Emissions", but the latest round of testing will also focus on fuel efficiency, aligning with Cleaner Futures Catapult's vision for maximising commercial potential. AHT acknowledges the critical importance of fuel efficiency for the system's widespread commercial viability. We eagerly anticipate this next phase of testing, which we hope will be completed ahead of the next shareholder update.

Completion of Analize Testing, Ongoing Discussions With The Removal Firm, and Press Coverage

Following the completion of the Analize testing, a meeting was arranged between the removal firm and the AHT CEO and Chairman to delve into the results and chart the next strategic steps in this commercial partnership.

The results have significantly piqued the interest of the industry press, marking the commencement of AHT's increased PR initiatives scheduled for 2024, driven by the multiple areas of newsworthy developments within the Company. We are pleased to share the following articles with you that have been published recently:

https://essmag.co.uk/game-changing-hydrogen-cleantech-reduces-the-worst-carbon-emissions-by-91/
https://businessinthenews.co.uk/2023/12/12/hydrogen-cleantech-test-reduces-worst-carbon-emissions-by-91/
https://www.azocleantech.com/news.aspx?newsID=34409
https://illuminem.com/?post=75233

Laboratory Testing At The Millbrook Proving Ground

In discussions with a significant potential client keen on meeting their ESG (Environmental, Social, and Governance) targets, it became apparent that despite the positive Analize results, they required further assurance. To bolster the data acquired through road testing, the client emphasized the necessity for "laboratory testing" so as to substantiate the initial "road testing" results.

Following discussions between AHT's CEO and the client's board of directors, an agreement was reached whereby the potential client would fund a substantial majority of the testing costs. In addition, they committed to supplying the vehicle and accompanying components essential for the tests. The testing was conducted at the Millbrook Proving Ground (https://www.utac.com/our-sites/) and we anticipate receiving the test results in the coming weeks. Pending successful outcomes, the potential client has expressed its intention to engage further with AHT in relation to ECC&C.

4. THEA POWER

What is Thea?

Thea, or to give the product its full name – Thea Power, is the next evolution of AHT's suite of products, namely the generation of electricity. Following discussions between the team, we have been able to determine that generation should be treated in the same manner as Chimera, using the baseline technology to produce the hydrogen to power Thea.

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In tandem with the advancements made with Chimera's development, Thea has symbiotically progressed. Overcoming the challenges with Chimera has positioned us favourably for the transition of Thea from a Proof of Concept to a working prototype. Although obstacles are inevitable, the team's preferred pace of rapid progress should lend itself favourably to the evolution of Thea.

CLOSING CHAIRMAN'S STATEMENT

ALAN DITTON

The journey and achievements in 2023 are very encouraging and continue to excite me and the Board.

We are rapidly approaching the marketing phase of our technology on a number of fronts, benefitting from independent validation from market-leading and acclaimed authorities. The hard work of 2023 should start to bear fruit in 2024, progressing toward finalising contracts with several companies with whom we have been in dialogue with, and who have been actively following our progress. Our endeavours will be supported by the more market-facing articles and Public Relations approach we have started to adopt.

Cash flow, driving revenue streams and gaining market acceptance of the technology are at the forefront of our activities.

We are focusing on delivery models, resourcing and how we sustain momentum in driving the business forward. Personally, I have never experienced or witnessed a Company like AHT, and my excitement remains as strong as when I was first encouraged to get involved.

Alan Ditton, Chairman
January 2024

VIDEO OF BEN KATTENHORN'S QUARTERLY STATEMENT:

To view a video of Ben Kattenhorn giving his quarterly statement to shareholders, please click on the following link, or hit play on the embedded video below:

https://www.youtube.com/watch?v=hyE0w_89tIg