

COMPANY ANNOUNCEMENT 3 OCTOBER 2024

- 1. H2EX feasibility study confirms compelling economic returns for its natural hydrogen project**
- 2. Design and cost estimates for exploration wells and production facilities have been completed**
- 3. Hydrogen drilling targets are being derisked for a planned Q4 2025 drilling campaign**

H2EX, an Australian renewable natural hydrogen and helium technology company, is pleased to announce the completion of a feasibility study into natural hydrogen drilling, extraction and production planned for South Australia; named Project Zenith.

Project Zenith is a natural hydrogen pilot project producing up to 40 tonnes per day. The target start date is late 2027 with the facilities designed to rapidly commercialise clean energy use in the Eyre Peninsula. Commercialisation options include piped or trucked hydrogen for electricity generation, blended with natural gas or co-mingled with manufactured hydrogen supplies.

The study concluded the project economics are superior to other renewable energy projects, such as wind, solar and manmade hydrogen. Natural hydrogen economic returns are comparable to other natural resource projects, which are driven by the size of the discovered resource and production rate outcomes. Furthermore, an independent assessment of Project Zenith's economics concluded that a levelized cost of natural hydrogen is calculated at US\$2.40 kg (US\$5.70/mcf), and this was well below other green hydrogen projects with cost ranges of US\$4.50 to US\$12.00 kg.

"For decades our team at H2EX have worked on developing and launching new energy supply projects for Australian and international markets. The study has confirmed that Project Zenith's key value drivers and risks are similar to other types of resource projects we have worked on during our careers. Australia's competitive advantage is derived from projects such as this. The potential returns and benefits to the community, customers and shareholders are superior to capital intensive renewable energy projects," said Mark Hanna, H2EX CEO.

Black & Veatch delivered two reports to H2EX in July 2024. The first report provided concept designs and cost estimates for exploration wells, including production testing, for depths of between 1,250 to 2,500 metres. The design for the wells were developed specifically for exploration targets identified by H2EX on our 100% operated license; PEL 691. The well costs are estimated at A\$3-5 million.

The second report detailed a design and cost estimate for a hydrogen and helium gas processing facilities at different flow rate scenarios. The design and cost building blocks developed can be tailored to the size and flow rates of the natural resources found and harvested.

Other feasibility study inputs are from joint work undertaken with H2EX's research partners and contractors including, Fleet Space Technologies, CSIRO, The University of Adelaide and Australian National University. The data gathered from various geological modelling, seismic and geophysical workstreams have enabled H2EX to define a portfolio of exploration targets and resource estimates (for hydrogen and helium).

"It is rewarding to see the culmination of two years hard work with a concept design and cost estimate for Project Zenith. The feasibility study identifies a highly economic natural hydrogen project with the potential of helium and carbon credits supplementing the project economics. Project Zenith confirms a cost of supply for hydrogen of US\$2.40 kg, which is up to 75% cheaper than manmade hydrogen. We will continue to derisk our drilling targets with further data acquisition and position ourselves to drill the exploration wells in late 2025." said Ms Greschen Brecker, H2EX CFO.

"Natural hydrogen will help decarbonise the region, which predominantly uses liquid fuels for energy and transport. The hydrogen can be co-mingled with green hydrogen producing facilities earmarked for Whyalla and Cape Hardy in the Eyre Peninsula. Helium is also a high-value and scarce commodity which will further improve project economics." added Hanna.

H2EX's ongoing work is partly funded by the Australian Government's Department of Industry, Science and Resources through the Cooperative Research Council Projects (CRC-P) Round-14 initiative.

Project Zenith is subject to stakeholder, regulatory and H2EX board approval.

About Natural Hydrogen

In South Australia, two historical oil bores drilled 100 years ago discovered hydrogen between 50-85% purity¹. In late 2023, Australian ASX Listed company Gold Hydrogen Limited (ASX:GHY) drilled 2 exploration wells (Ramsay 1 and 2) confirming the historical results. GHY also encountered elevated levels of helium of up to 25%².

Global interest in natural hydrogen is gaining momentum. In August 2024 HyTerra (HYT), an ASX listed natural hydrogen company, announced that Fortescue Future Industries Technologies, will invest A\$21.9M to acquire a 39.8% interest in HYT³. In July 2023, Bill Gates' VC fund, Breakthrough Energy Ventures, was announced as a significant backer of Koloma, a US-based natural hydrogen company⁴. In Feb 2024, a further US\$245 million was raised for Koloma, adding additional backing from VS funds Khosla Ventures, Amazon and United Airlines⁵.

About H2EX

H2EX Ltd is a natural hydrogen and helium exploration company with a 100% owned and operated exploration license; PEL 691 (~6,000 km²) in South Australia. H2EX is developing a blueprint for natural hydrogen exploration through pioneering research and field activities.

In June 2023, a H2EX-led research consortium was awarded an Australian Government grant via the Cooperative Research Council Projects (CRC-P) Round 14 initiative, announced by The Hon Ed Husic Minister for Industry and Science⁶. As part of the CRC-P, H2EX completed several Ambient Noise Tomography surveys (passive seismic) in December 2023, utilising Fleet Space Technologies geodes⁷. The 3D velocity models generated by Fleet Space Technologies have been interpreted in-house to develop a portfolio of 20 exploration leads. Each lead has been ranked with estimated volumes.

In the first half of 2024, H2EX undertook additional data acquisition with Australia National University (passive seismic) and University of Adelaide (magnetotelluric). These larger regional surveys are currently being interpreted. H2EX and the universities will conduct additional infill data collection commencing 1 October 2024. This information will be used to continue to derisk the top ranked exploration targets.

Project Zenith has utilised deterministic and conservative estimates of hydrogen and helium resources and production flow rates from H2EX's top ranked exploration lead portfolio. Black & Veatch has detailed CAPEX and OPEX estimates for a pilot development concept producing up to 40 tonnes a day of hydrogen. Alternative scenarios for helium have also been developed. Depending on the ultimate use of the hydrogen additional benefits could be generated from carbon credits given hydrocarbons are likely to be displaced.

The South Australian Government amended the petroleum legislation in February 2021 to allow for natural hydrogen exploration. Subsequently, H2EX secured an exploration license in June 2022 (PEL 691) and six 1st ranked applications (52,000 km²). The combined acreage is approximately the size of Croatia. Applications are the precursor to a license and require agreement with Native Title groups prior to license award.

H2EX has secured four Special Prospecting Authorities with Acreage Options (SPA/AO) in Western Australia. The acreage spans ~109,000km², which is approximately the size of Cuba. The SPA/AO enables the study of hydrogen and helium prospectivity in Western Australia. If successful and subject to government approval, H2EX could convert 50% of the SPA/AO to an exploration license.

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¹ <https://www.energymining.sa.gov.au/industry/energy-resources/geology-and-prospectivity/natural-hydrogen>

² <https://www.goldhydrogen.com.au/asx-releases/project-and-commercial-update-interim-well-testing-results/>

³ <https://wcsecure.weblink.com.au/pdf/HYT/02845517.pdf>

⁴ <https://hydrogen-central.com/forbes-bill-gates-backing-secret-startup-drilling-limitless-clean-energy-koloma-has-quietly-raised-91-million-to-drill-for-carbon-free-hydrogen-thats-continuously-generated-unde/>

⁵ <https://www.forbes.com/news/energy/clean-fuel-startup-raises-246-million-to-aid-plans-to-drill-for-hydrogen/>

⁶ <https://business.gov.au/grants-and-programs/cooperative-research-centres-projects-crcp-grants/crc-projects-selection-round-outcomes>

⁷ <https://www.pv-magazine-australia.com/2023/09/21/natural-hydrogen-hopeful-looks-to-space-to-accelerate-ambitions/>