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CLEAN INDUSTRIAL HEAT™

9 October 2025 ASX:14D

ACQUISITION OF EXCLUSIVE GLOBAL LICENCE FOR BREAKTHROUGH SILICON NANOPARTICLE (SiNTL) TECHNOLOGY & $1.214m PLACEMENT

Highlights

- Exclusive global licence for George Washington University's patented SiNTL aluminium-coated silicon nanoparticle technology which could enable significant advances in lithium-ion battery performance
- ~10× higher theoretical capacity than graphite anodes, may deliver greater energy density, faster charging and longer cycle life
- Low-cost, scalable synthesis process: low temperature (125 -180°C), one-pot aluminium coating, no hazardous gases (HF or SiH_4) potentially simplifying scale-up and regulatory approvals
- Commercialisation pathway established with OEM engagement expected to commence in Q4 CY2025
- Silicon anode battery market forecast to grow from USD $536.5 million in 2025 to USD $20.8 billion by 2034
- Complements 1414 Degrees' silicon expertise (SiBrick® SiBox®, SiPHyR™) and expands its platform into the silicon anode battery market
- Firm commitments received to raise $1.214 million (before costs) via a placement with significant support from existing shareholders and new sophisticated, professional and institutional investors at an issue price of $0.042 per Share. Peak Asset Management acted as sole Lead Manager

1414 Degrees Ltd (ASX: **14D**) ("**1414 Degrees**" or the "**Company**") is pleased to announce that it has executed an agreement with the George Washington University (**GW**) for an exclusive worldwide licence to a novel silicon nanoparticle technology (**SiNTL**) for use in lithium-ion battery anodes.

The acquisition of the SiNTL nanotechnology strengthens 1414 Degrees' expertise in silicon innovation and extends its portfolio into the battery materials sector. Together with the Aurora Energy Project and existing SiBox, SiBrick and SiPHyR technologies, SiNTL positions the Company to engage with industry participants seeking solutions to meet rising clean energy demand**.**

Refer to Schedule 1 for a summary of the key terms and conditions of the agreement with GW.

Transaction Overview

The acquisition provides 1414 Degrees with exclusive worldwide licence to SiNTL, a patented nanotechnology developed at GW that could directly address the main challenge of silicon anodes: volume expansion during lithiation.

SiNTL produces air- and water-stable nanoparticles with an in-situ aluminium coating that enhances conductivity and oxidation resistance. The process developed by GW is simple, scalable and compatible with existing anode manufacturing lines, potentially offering a competitive advantage over more complex, higher-cost approaches.

Commercialisation Timeline

The Company is targeting an accelerated commercialisation pathway from licence execution to sample manufacture and engagement with Original Equipment Manufacturers (OEM). Subject to successful validation and OEM engagement this pathway is intended to establish the basis for future revenue generation.

October 2025	Licence executed with GW
October 2025 to January 2026	Fabrication of SiNTL samples by GW
November 2025 to January 2026	Engagement with leading anode OEMs
Q1 2026	SiNTL samples provided to OEMs for integration testing
H2 2026	Execution of OEM agreements for supply and establishment of manufacturing facility

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Market Applications

Silicon anodes are widely recognised as a key enabler for next-generation lithium-ion batteries. SiNTL's combination of high capacity, stability, and low-cost scalability could position it for use across multiple high-growth markets:

- Electric Vehicles (EVs): Higher energy density and sub-15-minute charging could extend driving range and accelerate EV adoption
- Consumer Electronics: Smaller, lighter batteries could deliver longer run-times for mobile devices and wearables
- Grid & Renewable Energy Storage: Improved cycle life may enhance the economics of batteries used to firm intermittent solar and wind generation
- Aerospace & Defence: Lightweight, high-performance storage for aviation and strategic applications
- Industrial Equipment: Durable, high-capacity batteries for demanding environments.

The global silicon anode battery market is forecast to grow from USD $536.5 million in 2025 to USD $20.8 billion by 2034 (CAGR ~50%) which could present significant opportunities for technology providers such as 1414 Degrees[1].

In addition, the recyclable low-temperature synthesis process can support sustainable battery supply chains with its potential to avoid hazardous chemicals, lower energy intensity, and align with decarbonisation goals.

Strategic Fit and Rationale

1414 Degrees has a strong track record in silicon innovation through its thermal energy storage technologies (SiBox® and SiBrick®) and hydrogen technology (SiPHyR™). The acquisition of SiNTL extends this expertise into the battery materials sector, strengthening the Company's portfolio of technologies.

The in-situ aluminium coating developed at GW creates air- and water-stable nanoparticles with enhanced conductivity and oxidation resistance. This process has the potential to lower handling and integration costs and has been independently verified as compatible with existing anode manufacturing lines - a key differentiator from competitors reliant on more complex, higher-cost processing methods.

By securing this exclusive licence, 1414 Degrees aims to create future value for shareholders through potential commercialisation of SiNTL. The technology's low-temperature synthesis pathway may also support decarbonisation objectives across energy and manufacturing supply chains, potentially enhancing its relevance to OEMs and grant programs.

1414 Degrees' technologies, including SiBrick® for industrial heat and hydrogen production, SiBox® for long-duration energy storage, and now the SiNTL nanotechnology for high-performance batteries, collectively target improved energy efficiency, flexibility and resilience - converting and storing energy to meet industrial, grid and mobility needs.

1414 Degrees sees potential synergies between SiNTL and its Aurora Energy Project, which includes development of a grid-scale Battery Energy Storage System (BESS). Aurora could serve as a pathway to showcase next-generation battery materials in real-world conditions, strengthening the Company's positioning across both long-duration thermal storage and lithium-ion energy storage markets.

Technology Development at the George Washington University

The SiNTL technology was invented by Professor Michael Wagner and his team at the George Washington University in Washington, D.C., a leading U.S. research institution recognised for its work in materials science and advanced nanotechnology.

Professor Wagner's group specialises in the development of next-generation energy storage materials, with a focus on overcoming the limitations of silicon anodes through innovative nanostructures and composite systems. Their work has been published in leading peer-reviewed journals and supported by competitive U.S. federal research grants, underscoring the scientific credibility of the program.

Over several years of laboratory development, the team demonstrated that SiNTL's low-temperature, one-pot synthesis process consistently produces air- and water-stable aluminium-coated silicon nanoparticles with high yields (~97% conversion). The process avoids hazardous gases, reduces handling complexity, and has been independently validated as compatible with conventional anode production lines.

[1] https://www.precedenceresearch.com/silicon-anode-battery-market

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The acquisition by 1414 Degrees now provides an opportunity to progress the GW team's breakthrough research from small-scale demonstrations into OEM testing and to potential large-scale manufacturing.

Comment – Dr Kevin Moriarty, Executive Chairman

"The acquisition of exclusive global rights to the SiNTL technology aligns with 1414 Degrees' ongoing commitment to continuous development of its evolving product suite and represents an opportunity to add to shareholder value. SiNTL's novel silicon nanoparticle technology could overcome the key limitations of silicon anodes – volume expansion and instability.

With a clear pathway to OEM engagement and commercialisation in the next 12–18 months, we see SiNTL as a compelling opportunity to expand beyond thermal energy storage into the fast-growing global battery market. For shareholders, this represents not only diversification but the potential for significant value creation in line with global demand for next-generation lithium-ion batteries."

Comment – Professor Michael Wagner, George Washington University, Inventor of SiNTL Technology

"SiNTL was developed to address the long-standing challenges of silicon anodes, particularly instability caused by volume expansion. By forming an ultra-thin aluminium coating in-situ during low-temperature synthesis, the process produces stable silicon nanoparticles that are compatible with existing anode manufacturing methods. This could enable broader integration into commercial battery lines. I am delighted to see 1414 Degrees secure the exclusive global licence and now move toward OEM testing and commercialisation of this breakthrough technology."

Placement

1414 Degrees is also pleased to advise that it has received firm commitments from existing shareholders and new sophisticated, professional and institutional investors to participate in a strongly supported placement of fully paid ordinary shares in the Company ("**Shares**"), at an issue price of $0.042, together with one free attaching option for every one Share subscribed for (1:1) (exercisable at $0.05 per option, and expiring two years from the issue date) (**Attaching Options**), to raise $1.214m (before costs) ("**Placement**").

The issue price of $0.042 per new Share under the Placement represents a 23.9% discount to the volume weighted average price of Company Shares over the 15 days up to and including 6 October 2025 (being the last day that Company Shares were traded prior to the date of this announcement), of $0.0552.

Settlement of the Placement is expected to occur on Wednesday, 15 October 2025, with allotment to occur on Thursday, 16 October 2025, at which time the Company will issue 28,904,762 new Shares, pursuant to its existing placement capacity under Listing Rule 7.1 (405,787 new Shares) and 7.1A (28,498,975 new Shares). The new Shares issued under the Placement will rank equally with the Company's existing fully paid ordinary shares. The Company will offer and issue the new Shares under the Placement without disclosure to exempt investors under Chapter 6D of the Corporations Act and will apply for quotation of the new Shares on ASX.

The Issue of the 28,904,762 Attaching Options is subject to shareholder approval at the Company's upcoming annual general meeting (**AGM**) on 19 November 2025. Pursuant to the terms of the Placement, the Company is required to undertake best endeavours to apply for quotation of the Attaching Options on ASX, subject to quotation conditions being met (including lodgement of a prospectus to facilitate secondary trading of the Attaching Options). If the Attaching Options are not approved for quotation, they will be issued as unquoted options. Further details will be set out in the Company's AGM notice of meeting.

Funds raised from the Placement will be utilised primarily to bring the Aurora BESS Project to commercial close, for the development of the SiNTL technology and for working capital purposes.

Peak Asset Management (Peak) acted as sole lead manager to the Placement. The Company will pay Peak a capital raising fee of 5% of funds raised and a management fee of 1% of funds raised.

Subject to the satisfaction of the following conditions:

1. the Company executing a binding agreement with the George Washington University and
2. Peak having raised at least $1,000,000 under the Placement,

1414 Degrees will issue to Peak (and/or its nominees):

- Facilitation Shares - subject to shareholder approval, 1,500,000 fully paid ordinary shares in the Company on the same terms as the Placement.

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- Milestone Shares – subject to shareholder approval, if within 12 months of this agreement a sample of the SiNTL material is accepted for testing by a battery anode manufacturer, the Company will issue 1,000,000 additional fully paid ordinary shares to Peak (and/or its nominees).
- Broker Options – subject to shareholder approval and the satisfaction of the above conditions, within 10 business days the Company will issue to Peak (and/or its nominees):
  - 2,000,000 options exercisable at $0.05 (two-year expiry) – same terms as investor options;
  - 2,000,000 options exercisable at $0.075 (two-year expiry); and
  - 4,000,000 options exercisable at $0.10 (two-year expiry).

The Company will use its best endeavours to issue the Facilitation Shares, Investor Options and Broker Options either under existing capacity or subject to shareholder approval at the upcoming AGM.

AUTHORISED BY:

Dr Kevin Moriarty, Executive Chairman on behalf of the Board of Directors

For investor enquiries or further information, please contact:
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ABOUT 1414 DEGREES LIMITED

1414 Degrees is a leader in industrial decarbonisation with its cutting-edge silicon-based solutions, enabling the alignment of energy supply with demand, fostering the widespread adoption of renewable energy. Our key technologies include:

SiBrick®: thermal energy storage technology safely and efficiently stores renewable electricity as latent heat, available for use on demand.

SiBox®: facilitates the transition to sustainable industrial processes, SiBox delivers consistent, high-temperature heat. It can be seamlessly retrofitted into heavy industry processes, offering a viable alternative to conventional energy sources.

SiPHyR™: methane pyrolysis reactor with integrated storage. SiPHyR will produce low-emission hydrogen and solid carbon using renewable energy sources.

1414 Degrees has showcased its capabilities through successful pilot projects that highlight the reliability and effectiveness of its solutions. SiBox has proven its ability to deliver high-temperature air or steam on demand from stored heat. The development of SiPHyR underscores our commitment to innovation and sustainability.

In 2019 the Company made the strategic purchase of the Aurora Energy Project (AEP) located near Port Augusta, South Australia. The project is a long-term renewable energy initiative to deliver reliable electricity to the region and National Electricity Market. The AEP has approval for 14D to pilot and demonstrate a large commercial scale version of the SiBox technology.

For more information, please visit www.1414degrees.com.au

Forward-looking statements

This announcement includes forward-looking statements which may be identified by words such as 'anticipates', 'believes', 'expects', 'intends', 'may', 'will', 'could', or 'should' and other similar words that involve risks and uncertainties. These forward-looking statements are based on the 1414 Degrees' expectations and beliefs concerning future events as at the date of this announcement. Forward-looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of 1414 Degrees, which could cause actual results to differ materially from such statements. 1414 Degrees makes no undertaking to update or revise the forward-looking statements made in this announcement to reflect any change in circumstances or events after the date of this announcement.

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Schedule 1 – Material terms of the Patent Licence Agreement

Licensor	The George Washington University, Washington DC, USA
Licensee	SiNTL Pty Ltd (wholly owned subsidiary of 1414 Degrees Ltd)
Conditions Precedent	The agreement and all obligations under it are conditional upon the following: • 1414 Degrees Ltd raising at least A$500,000 through a placement to sophisticated investors managed by Peak Asset Management by 31 October 2025 (the Fundraising Target). • SiNTL notifying the University in writing once the Fundraising Target has been satisfied (the Effective Date). If the Fundraising Target is not achieved by that date, the agreement automatically terminates with no further obligation (other than confidentiality).
Technology and Patents	GW Tech ID 017-028-Wagner: "Low temperature, high-yield synthesis of nanomaterials and composites from Zintl phases." Protected by: US Patent No. 11,158,845 US Patent No. 12,209,023
Exclusivity and Territory	Exclusive licence. Worldwide. Field of Use: All fields
Term	Commences on the Effective Date and expires on the later of: • expiry or abandonment of the last patent right; or • ten (10) years after the first commercial sale of a Licensed Product.
Consideration and Fees	Licence Initiation Fee: US $5,000 (payable within 30 days of Effective Date) Liquidity Event Fee: 4.5 % of SiNTL's valuation at any IPO, merger, or sale of substantially all assets Annual Maintenance Fees: US $2,000 (Year 1), $3,000 (Year 2), $5,000 (Year 3), $7,500 (each year thereafter) Milestone Payment: One-time payment equal to 5 % of Net Sale value or US $25,000 (whichever is lower) upon first commercial sale Royalties: 1.5 % of Net Sales in countries with granted patents; 0.5 % in all other countries Minimum Royalties: US $700 / qtr (first 4 qtrs after first sale); $1,500 / qtr (next 4 qtrs); $4,000 / qtr (next 4 qtrs); $8,000 / qtr thereafter Sublicence Fee: 20% of all consideration received from sublicensees Past Patent Expenses: US $34,685.30 to be reimbursed within one year of Effective Date Ongoing Patent Costs: Reimbursed as incurred
Diligence Obligations	Minimum annual spend: US $50,000 (first year); US $100,000 per year thereafter Development Plan: to be submitted within two (2) years of Effective Date First commercial sale deadline: 1 October 2029
Option to Purchase Patent Rights	SiNTL may, during the term exercise an option to purchase the patent rights subject to U.S. government approval under the Bayh-Dole Act, with no future royalties post-transfer
Termination Rights	SiNTL may terminate with 60 days' notice (at its discretion) after ceasing U.S. sales and settling outstanding amounts. The University may terminate for payment default (> 30 days), other uncured breach (> 45 days), or insolvency.

Liability and Insurance	SiNTL's maximum liability capped at the greater of US $2 million or insurance proceeds received. SiNTL (to be covered under 1414 Degrees Ltd group policies) must maintain appropriate liability insurance for activities under the agreement.
Governing Law	District of Columbia, United States of America.

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