

ASX Announcement (ASX:AXE)

12 April 2018

Agreement with FlexeGRAPH to develop graphite and graphene advanced materials for thermal applications

Highlights

- Archer and FlexeGRAPH have agreed to jointly develop graphite and graphene based advanced materials for the thermal management of electric vehicle batteries, internal combustion engines, and high-performance computing systems.
 - Objective is to commercially translate products and patents in areas relating to high volume and high value graphite-to-graphene development within the reliable energy segment of the market.
 - Archer and FlexeGRAPH will prototype materials using Archer's Campoona Graphite.
 - New products developed with FlexeGRAPH to be sold through the Carbon Allotropes Marketplace.
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Archer Exploration Limited (ASX:AXE, Archer) is pleased to announce that a Collaboration Agreement (Agreement) has been signed with Flex-G Pty. Ltd. (FlexeGRAPH). The Agreement focuses on advanced materials development, processing and evaluation and characterisation, with particular emphasis on the development of thermal management applications using materials from Archer's Campoona graphite and graphene operations.

Archer CEO Dr Mohammad Choucair commented, "This strategic relationship with FlexeGRAPH provides an opportunity for us to integrate our graphite materials with a clear view downstream connecting the sourcing, processing and use of graphite and graphene in high value systems including electrified vehicles and high-power computing."

"Together with FlexeGRAPH we have an opportunity to convert our high-volume Campoona graphite to high-value graphene materials that can impact the automotive and computing industries where thermal management and reliable energy is critical to their widespread use."

Archer and FlexeGRAPH will prototype materials using Archer's graphite into components for integration in energy storage and computing systems, ranging from conventional thermodynamic systems such as internal combustion engines to advanced devices with multiple functionalities such as electric vehicle batteries and high-performance computing. Both raw materials and processed materials will be tested to verify the quality and performance parameters needed to bring these products to market.

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As part of the Agreement, Archer and FlexeGRAPH have agreed that raw and processed materials, and products developed by the FlexeGraph-Archer collaboration and/or developed independently by FlexeGraph, will be listed on the Carbon Allotropes on-line marketplace (www.market.carbonallotropes.com) in order to provide an e-commerce pathway to market.



Image: (Left) Archer CEO Dr Mohammad Choucair and (right) FlexeGRAPH Founder and CTO Dr Shannon Notley.

FlexeGRAPH have experience in developing advanced graphene-based materials with nano-enhanced products for cooling and heat transfer applications. FlexeGRAPH was founded in Australia in 2017 and produces cooling fluids enhanced with nanomaterials and technology, intended for electrified systems such as batteries as well as high performance computing and data centres. The core technology was developed at the Australian National University and has been patented and exclusively licenced to FlexeGRAPH.

FlexeGRAPH have connections to global markets in the chemicals and automotive sectors having participated in Austrade's Berlin Landing Pad and completed the Startup Autobahn accelerator program. FlexeGRAPH have two successful and on-going pilot projects with a global chemical manufacturer and a large automotive original equipment manufacturer in the areas of battery cooling. They are also working with a leading producer of direct to chip liquid cooling for computing systems.

Dr Mohammad Choucair concluded, "We are very pleased to be working with FlexeGRAPH to develop advanced materials with specific purposes where Archer's high-quality graphite and graphene can be directed to high volume applications, making use of the materials' exceptional properties."

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ABN: 64 123 993 233

For further information, please contact:

Dr Mohammad Choucair
Chief Executive Officer
Archer Exploration Limited
Tel: +61 8 8272 3288

Mr Cary Helenius
Investor Relations
Market Eye
Tel: +61 3 9591 8906

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