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Pure Battery Technologies secures Europe's biggest cleantech investor for eco-friendly battery materials production in Germany

- *EIT InnoEnergy is investing a seven-figure amount and connecting PBT to potential customers and investors*
- *PBT has developed innovative processing technology for the commercial refining of precursor cathode active material (pCAM) that reduce both emissions and costs*
- *The first commercial refinery in Hagen, Germany is to ramp up production to as much as 10,000 tonnes of pCAM by the end of 2023*
- *PBT aims to be producing 250,000 tonnes of pCAM globally by 2027*

Pure Battery Technologies (PBT), the pioneering Australian company with an environmentally superior processing technology for the production of EV battery cathode materials, has secured the support of Europe's biggest cleantech investor [1] EIT InnoEnergy* to ramp up commercial mass production operations in Germany. PBT's first commercial refinery in Hagen is already in operation. By the end of 2023 it will be producing 10,000t of pCAM with nickel, manganese and cobalt (NMC) chemistry, which is the volume required to make batteries for around 120,000 VW ID.3-type electric vehicles. PBT is aiming for global production of 250,000 tonnes by 2027 and needs investments in the range of EUR 600 to 900 million to achieve that aim. In addition to its seven-figure investment, EIT InnoEnergy is supporting PBT by creating connections with potential bulk purchasers and investors in its partner network. EIT InnoEnergy is a driving force behind the European Battery Alliance (EBA), as well as an early investor in Swedish battery maker Northvolt and Australian green lithium producer Vulcan Energy Resources.

"We're incredibly proud to have this strategic partnership with EIT InnoEnergy and it's a real seal of approval for us," said Björn Zikarsky, CEO of the PBT Group, adding: "Our common aim is to manufacture the most sustainable and powerful batteries in Europe from our own resources and PBT is a key contributor to achieving that objective. Our technology closes the gap and creates a cyclical material supply chain in the battery sector. Our focus markets are Europe in General and Germany in particular."

PBT's patented and commercially-proven processing technology makes it possible to produce pCAM cost efficiently with a low level of emissions. The Selective Acid Leaching (SAL) process is used for the production of NMC cathode material (a mix of naturally occurring nickel, manganese and cobalt). The Combined Leaching (CL) process is used for the production of new pCAM and for industrial battery waste (black mass) recycling.

The main difference between these and conventional processes is their simplicity. They use chemical filtering rather than vast amounts of chemicals, heat and pressure to separate the materials and then combine them again in the required mix ratio. In fact, there are just two process steps that use very low quantities of oxidation and reduction agents. As a result, carbon emissions in the pCAM production process are around 70% lower, which means around 750kg less CO_2 per EV[2].

[1] According to the Global Start-Up Ecosystem Report Cleantech Edition by Start-Up Genome.

[2] VW ID3 with a 62kWh NMC622 battery.

Christian Müller, CEO of EIT InnoEnergy Deutschland, commented: “Only a few years ago Europe’s battery manufacturers were lagging way behind other world regions and it seemed unlikely they would ever be able to close that gap. Now the tide has turned. Well over 30 cell factories operated by various battery manufacturers are either being built, in the pipeline or have been announced. An annual commercial potential of EUR 250 billion by 2025 is within reach. However, dependency on other regions of the world for critical precursors such as cathode materials is still a major challenge. With its resource-friendly filter technology and refinery in Germany PBT is ideally positioned to be a key player in this growth market.”

Current forecasts predict that demand for EV batteries will skyrocket to nine times its present level, and that is likely to cause a major pCAM supply bottleneck. A study by BASF in 2021 forecasts five-fold growth in global requirements of pCAM for batteries – an additional four million tonnes – by 2030. Europe is a special focus market for PBT as the home base of the world’s leading automotive and mobility groups.

**Since its establishment in 2010 EIT InnoEnergy has been supported by the European Institute of Innovation and Technology (EIT) The European Institute of Innovation & Technology (EIT) is an independent body of the European Union set up in 2008 to drive innovation and entrepreneurship throughout Europe.*

About PBT

Pure Battery Technologies (PBT), headquartered in Brisbane, Australia, with a German subsidiary in Ettlingen, produces the precursor for nickel-based active cathode material (CAM), which is used in lithium-ion batteries required for electric cars. The company offers two environmentally friendly, cost-effective processes for the production of active precursor cathode material (pCAM). The processes developed together with the University of Queensland produce high-quality battery materials with a much lower environmental impact and are much more cost-effective than the processes currently in use. Together with cooperation partners, the company aims to establish a closed material cycle for cathode material in the EU in recycling. For 2023/2024, the company plans to generate sales of EUR 150 million in Germany, and more than EUR 1 billion globally from 2025. More at https://purebatterytech.com

About EIT InnoEnergy

EIT InnoEnergy is one of the leading innovation drivers for the energy transition. By bringing together breakthrough technologies and the necessary skills, EIT InnoEnergy is making an important contribution to the implementation of the European Green Deal and the achievement of European decarbonisation goals. Recognized in 2020 as the world's most active energy investor and one of the largest investors in climate-friendly technologies (Climate Tech) and renewable energy technologies , EIT InnoEnergy supports innovation in a variety of areas – including energy storage, transportation and mobility, renewable energy, and sustainable buildings and cities. It can draw on a unique "ecosystem" of over 500 partners and 29 shareholders.
EIT InnoEnergy was founded in 2010 and is supported by the European Institute of Innovation and Technology (EIT). It is represented with offices throughout Europe and in Boston/USA.
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