Transformation of virgin timber biomass and forestry residues into bio-derived fuels, chemicals, synthetic materials and energy

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TBPF Ltd. is a UK start-up which is developing a commercial scale Advanced Conversion Technology (ACT) platform. It is designed to thermochemically transform timber biomass, co-products and forestry residues simultaneously into 5 high-quality primary products i.e. Bio-derived gas, coal (biochar), tar (biocrude), oil and acids.

The products offer many marketable applications, including gas, solid and liquid forms of energy, but they are also vital building blocks for the research and development of higher-value products biochemicals, biofuels and synthetic materials either by catalysis or secondary/tertiary refinement.

REACTT Advanced Biorefinery is designed to be carbon neutral, energy self-sustaining and capable of processing 300kg to more than 3 tonnes of dry weight timber per hour.

A 2-year final stage research development programme is planned for Scotland responding to the Scottish Government’s ambitious plan for developing the bioeconomy, biotechnology sector and increasing the value of the timber industry.
REACTT Process

Timber Biomass

Carbon

Synthetic Materials

Bio Chemicals

Biochar, Tar, Oil & Acid

Energy

Heat & Power

Continuous Process

High Volume Low Value

Low Volume High Value
Invitation for Expressions of Interest

• Our expertise extends to thermochemical engineering design and environmental process control for the delivery of the high-quality primary products

• We will require academic knowledge to understand the biochemical make-up of the outputs with particular focus on the liquid outputs, i.e. bio oil, biocrude and pyroliigneous acid. We anticipate R&D will be a major contributor to our business specifically:
  • Secondary refining processes
  • Catalysis

• We invite preliminary enquiries, but we cannot offer a specific start date of the programme as planning is still in progress

• Please contact Nick Mole. Details are given on the presentation cover