AHU Fan Motor Upgrades

Summary of opportunity being addressed

- CGT Catapult's Stevenage Manufacturing Innovation Centre houses 12 ATMP manufacturing modules that are operational 24 hours a day, 365 days a year.
- Air handling unit (AHU) fan operations contribute significantly towards annual power consumption.
- The efficiency of these systems are critical to CGT Catapult's continued sustainability improvements and carbon reduction programmes.

Introduction to technology or solution

The replacement Fan motors selected to deliver this improvement include:

- Software driven Switched Reluctance Motors
- BMS integration capabilities with additional IOT connectivity
- No rare earth metals utilised
- Variable speed between 100 and 3600 rpm

Impact of solution

The upgrade of all AHU fan motors would deliver the following improvements:

- Electrical energy consumption reduction of **210,730 Kwh** per year
- Reduction of **44 tCO2e** per year
- Operating utility cost reduction of **£50,575** per year

Considerations during implementation

- Compatibility and integration between the new motors and existing AHU plant and fan impellers.
- Integration between fan motors and existing site BMS
- Performance of critical environments are maintained to ensure our collaborators can continue to develop safe high efficacy ATMPs.