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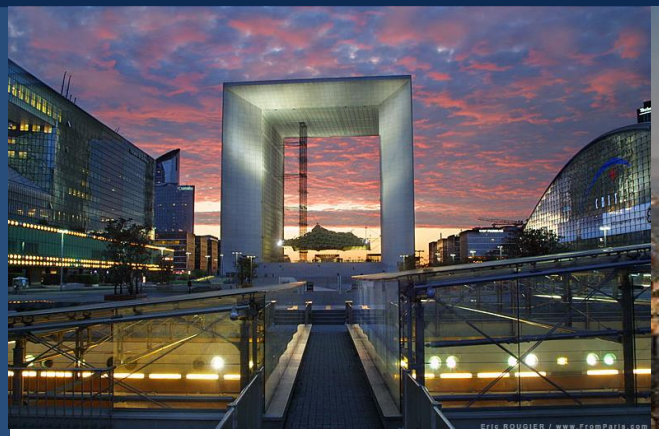

ETN AGM & WORKSHOP

2-3 April, Paris La Defense, France

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BioCHP-MGT, H2020 Proposal

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City University London

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Call details

Call identifier: H2020-LCE-2014-1

Topic: LCE-02-2014

Developing the next generation of technologies for renewable electricity and heating and cooling

Renewable heating and cooling

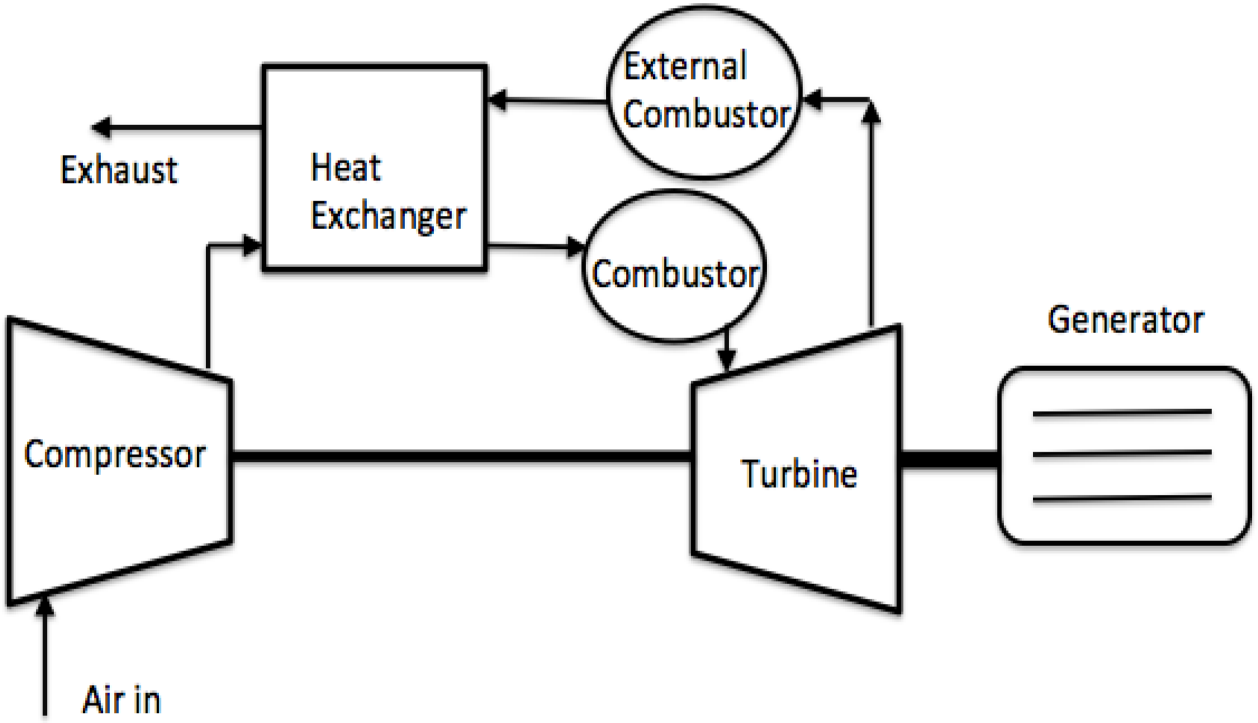
Call specifics

improving efficiency of biomass heating and CHP systems while widening the feedstock base– Micro and small-scale CHP (0.5-250 kW input power respectively) have a high potential for heat and electricity production for decentralised applications. Cost effective, robust and environmentally friendly micro and small-scale CHP with high thermal and electrical efficiency need to be developed allowing the use of solid, liquid or gaseous sustainable biomass feedstock

Project concept

- Micro gas turbine
- Opportunity fuels: Pyrolysis, Glycerol
- Fuel preparation and cleaning
- External and internal combustion
- System design and optimisation
- Turbomachinery, materials
- Heat exchangers
- Techno-economic and market analysis
- Environmental impace

Proposed Cycle



(c)Recuperated cycle with external and internal firing

Objectives

- Develop suitable combustions systems for the fuels mentioned
- Develop fuel preparation and clean up technology
- Suitable heat exchangers
- Matched turbomachinery
- Lab demonstrations
- Intelligent diagnostics and control
- Overall system optimisation
- Techno-economic optimisation and market analysis

Project structure

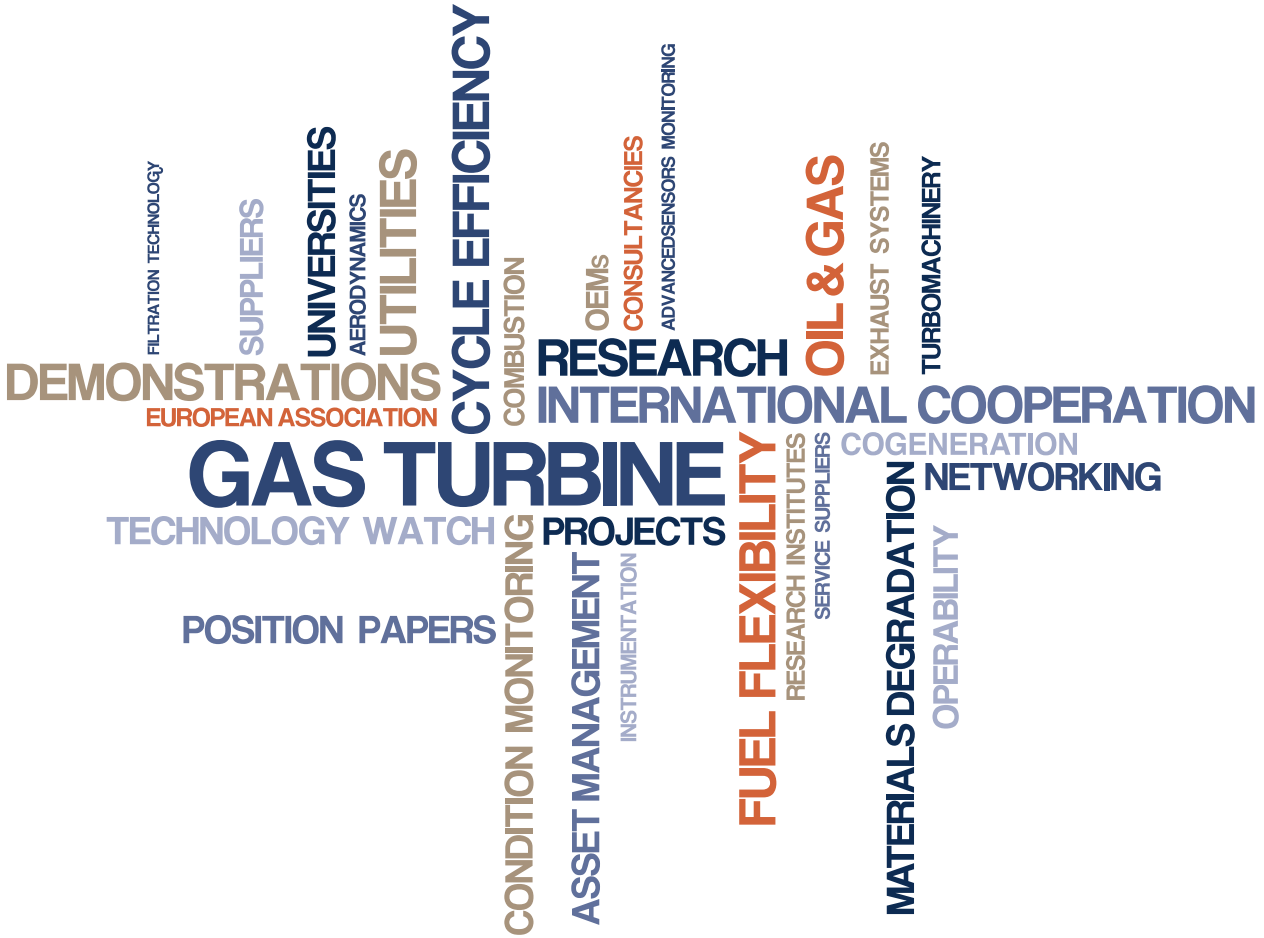
Project amangement

WP1
System optimisation, technoeconomic analysis
Market analysis
System diagnosticis and control

WP2
Combustion and fuel clean up technologies

WP3
Turbomachinery matching and optimisation
Materials
Heat exchangers
System testing

Header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