
Aston University
Engineering & Applied Science
investing
in your future
European Regional Development Fund
European Union
EBRI
European Bioenergy Research Institute

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Engineering & Applied Science

EBRI
European Bioenergy Research Institute

European Bioenergy Research Institute

- Combustible waste to charcoal
- Produces Heat, Power and (Bio)char
- Very low emissions
- Produces soil conditioner
- Carbon negative power generation
- Economical green hydrogen

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Benefits of technology

- Reduced landfill volume and cost
- Domestic, industry and agriculture waste
- Low cost power output
- Improved crop yields
- Localised power production
- Hydrogen fuels and transport

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Level of development

- Technology lab tested
- Successful trials in Germany, India
- Industry scale demonstration in UK now
- Aston University campus early 2013
- Patents for key novel technologies
- Power output up to 5 – 10 megawatts

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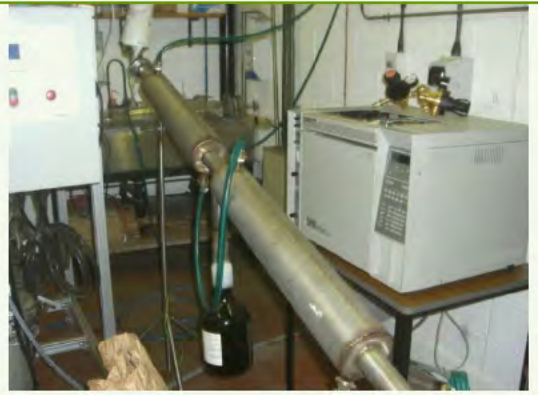
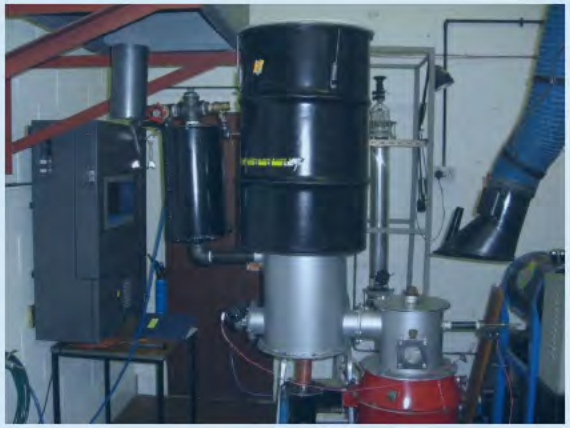
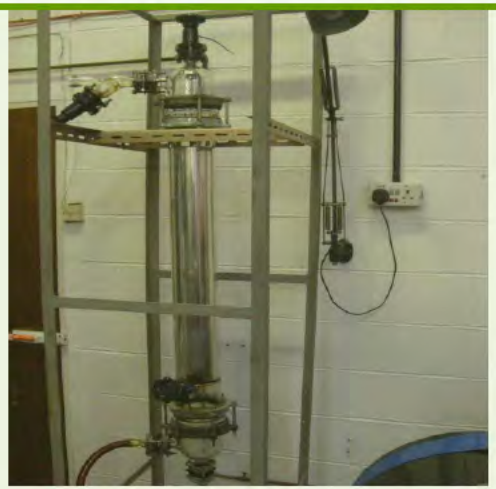
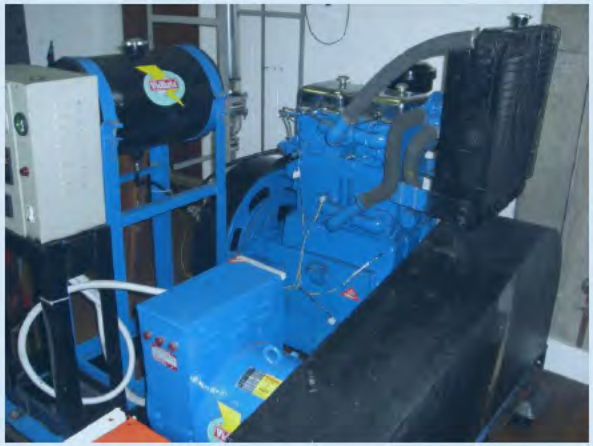
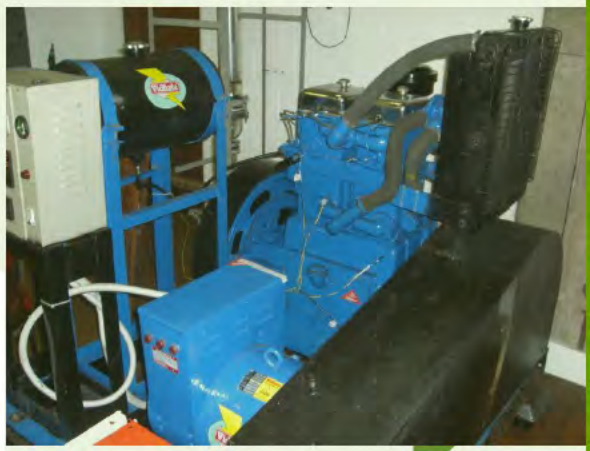




Heat and Power and Biochar Application







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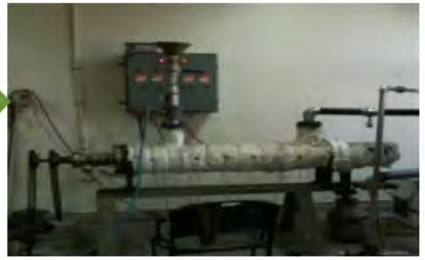
Aston- IIT Ropar "Energy for rural districts"

Wheat Straw

Pelletiser

Straw Pellets

Pyroformer



Heat

Combustion Unit

Bio char

Condenser

Non condensable gas

Bio-oil

CHP
Heat +Power

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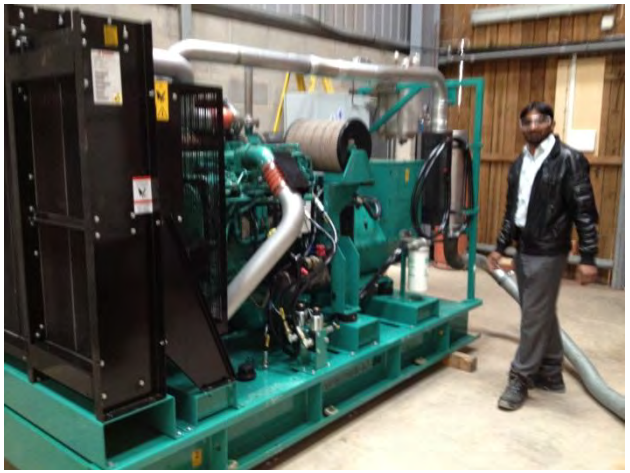
100 kg/hr demonstration plant with CHP



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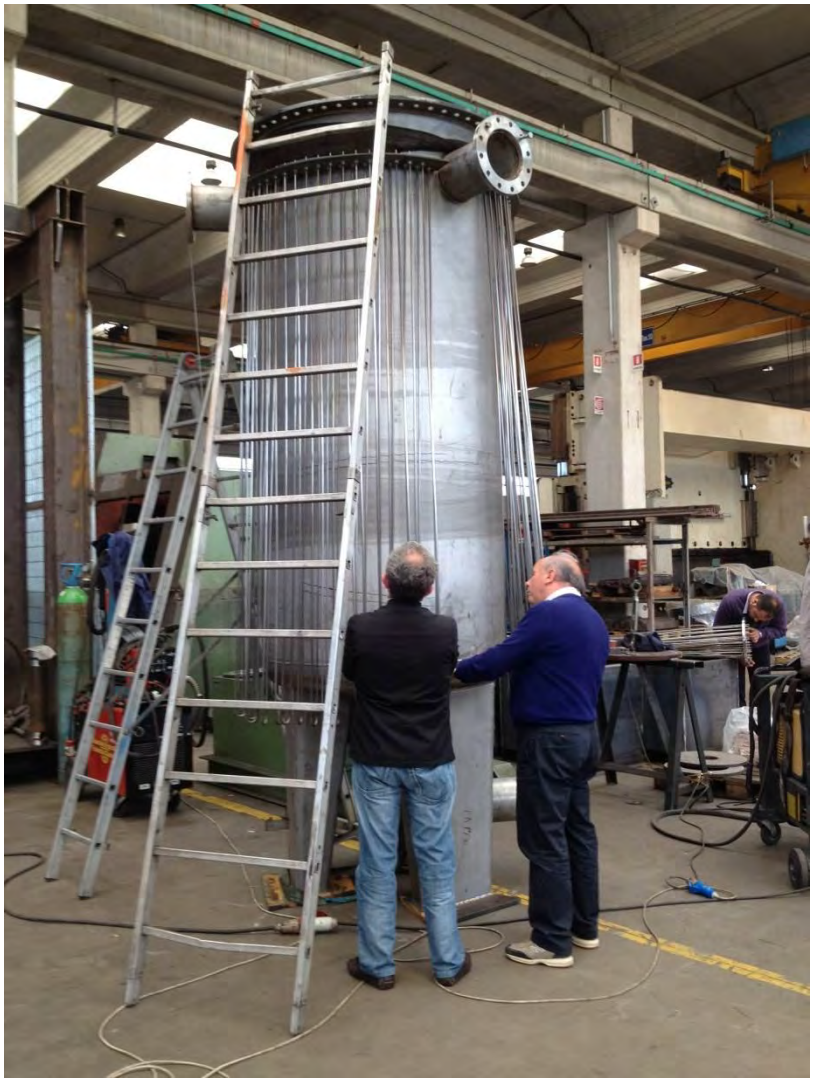
Bio Activated Fuels Plastics Recycling

- New demonstrator
- Oil from plastics
- Fuel for engines
- Integrated with Bioenergy system



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Demonstrator plant in EBRI building to be ready in 02/2013

Pyroformer

0.4 MW_{el} Gasifier

Greenhouse

Labs for Industry

Knowledge and Skills
to be transferred from EBRI staff to Industry

Biochar application – Brazil (11 tons per ha).
Embrapa Research Station, Manaus, Brazil, Photo C. Steiner

The classical way is biochar from wood – we are looking for alternatives

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Knowledge Transfer and Business Growth

- Opportunities for regional business/ organisations
- Workshops
- Collaborative projects
  - Technical assessment of opportunities
  - Testing
  - Case evaluation for sites

- Workshop 14th June

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