

CONNECTING FOR **INNOVATION**: A View from North East Business

CASE STUDY: TECHNOLOGY INNOVATION

DRD POWER LTD

Summary:

- DRD Power has developed technology that generates electricity from low grade waste heat
- The work is novel because of its application to low grade (i.e. 90-130°C) heat sources
- This technology generates valuable electricity from waste heat without generating carbon dioxide

DRD Power has developed a process for recovering the vast quantities of low grade (i.e. low temperature) heat that would otherwise be lost from the process industries. This has been achieved by use of an Organic Rankine Cycle (ORC). Our project has researched the best and most cost effective way to produce an ORC unit capable of producing electricity from waste heat streams in the temperature range of 90-130°C. This temperature range is significant because the process industries discharge large amounts of heat at these temperatures, and conventional ORC units generally require heat sources at above 130°C. The first unit has been installed and is successfully operating on Teesside. The technology is now ready to provide major financial and environmental benefits both for the traditional process industries and renewable energy sectors.

Benefits to customers:

- CO₂ free electric power
- Payback within 3 years
- Works at low temperature (90°C)
- Closed cycle - zero emissions
- Fully automatic
- No toxic or flammable substances
- No process risk
- Easy installation
- Remote start-up and monitoring

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