



ATBEST Meeting November 2014

Welcome

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Contents

- Welcome
- Industry / University Partnerships
- What does success look like?

Driving innovation or battling conflicting goals ?:

MANAGING INDUSTRY / UNIVERSITY PARTNERSHIPS TO DELIVER SUCCESS IN SUSTAINABLE ENERGY PROJECTS

Criteria

- **Strategic Partnerships**
- **University Management / Leadership**
- **Shared vision —→ develop a strategy**
- **Right people in charge & work together**
- **Don't get hung up on IP!**
- **Multi-disciplinary approach**
- **Engage with stakeholders and communicate**



Benefits

- Increased capability
- Publications
- Shared knowledge / know how
- Networking & building partnerships
- Access to funding
- New products / services
- Potential spin outs
- Supply chain opportunities
- Growth of local economy
 - jobs, export potential

QUESTOR CENTRE

- ATWARM
 - 2009 €3.5m FP7 (water resources)
- RENEW
 - 2012 €4.86m Interreg (waste to resources)
- REMEDIATE
 - 2014 €3.8m grant agreement stage (remediation)

Competence Centres: CASE



- **£5m** funding from Regional Development Agency
- 75% funded
 - 25% in-kind + cash
- **INDUSTRY LED** Collaborative Research
- All 3 institutes in Northern Ireland
- £3.5m+ of external leveraged funding
- Benefit of the Regional Economy



Funded by
the European Union

1st R&D Project – Triple T!

- 1/10th scale testing
- Array – tidal turbines
- Montgomery Lake & Strangford Lough
- RPS, Pure Marine Gen, Sengenica, Creative Composites & Oceanflow Energy
- QUB – Professor Trevor Whittaker, Dr. Bjoern Elsaesser
- £170,000 Grant for R&D – Invest NI
- WORLD FIRST happening in Northern Ireland!



Pelletisation Project - READ

- **Value: £761,757**
- **36 months (March 2014 – March 2017)**
- **Project Partners:**
 - Fuel Pod Systems, B9 Organic Energy Ltd, Agri AD, MPS Ltd, Enrich Environmental, QUB, UU, AFBI
- **CASE funding: £570,883.83**
- **Development of pellets from anaerobic digestate**
 - Gasification / pyrolysis
 - Slow release fertiliser



Waste Heat Recovery Project

- **Value: £392,973**
- **Duration: 36 months**
- **Project Partners:**
 - B9 Organic Energy, Belfast City Council, Thermtech, AgriAD, NI Water, McCulla Transport, QUB
- **CASE funding : £294,730**
- **Enhancements to the recovery of waste heat from mobile and static engines – Organic Rankine Cycle**



Dual Fuel Vehicle Modelling

- Value: £349,717
- Duration: 36 months
- Project Partners:
 - TBA (LoO subject to confirmation), QUB
- CASE funding: £262,288
- Modelling a range of engines and scenario's to increase engine efficiency and reduce carbon & ghg emissions



Tension Pile Foundations

- **Value: £140,000**
- **Duration: 12 months**
- **Project Partners:**
 - **McLaughlin & Harvey, Aquamarine Power, Sound & Sea, QUB**
- **CASE Funding : £104,000**
- **Extension of early McL&H research. Detailed data analysis and further testing of scaled version of the prototype.**



Triple T 2

- **Single Schottel turbine**
- **Applied Renewables Research, McLaughlin & Harvey, Oceanflow, Joules Energy**
- **Four Work Packages**
 1. **Guidelines for data analysis**
 2. **Effect of turbulence on turbine performance**
 3. **Facilitate comparative analysis – lake, tank & real sea tests**
 4. **Dissemination**
- **12 months**
- **£100,000**





We think

SO.....

YES!





Thanks for listening



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Project coordinated by the QUESTOR Centre
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