



# Environmental Innovation: Taking the agenda forward

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Away day workshop for EIAG and  
invited guests

Wednesday 2 June to Thursday 3 June 2004, The Swan at Streatley Hotel.

# Agenda

- Introductions
  - Defining a realistic ambition for EIAG
- Review and consideration of work programmes
  - Identifying key issues arising for EIAG
  - Taking the key issues forward from today

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## Participants on the Day

- John Alty, Director of Business Relations DTi
- Ged Barlow, Managing Director, C-Tech Innovation
- Vernal Beckford, Secretariat, Environmental Industries Unit Dti/Defra
- Richard Bird, Water Directorate, DEFRA
- Peter Blenkinsop, Programme Manager, (Technology)
- Piers Clark, Managing Director, Atkins Water
- Stephen de Souza, Director, Environmental Industries Unit, DTi
- Jack Frost, Director, Johnson Matthey Fuel Cells
- Adrian Hallett, Asst. Director, Environmental Industries Unit, DTi
- Chris Hewett, Policy Development, Environment Agency
- Steve Hill, Secretariat, Environmental Industries Unit, DTi
- Paul Jefferiss, Head Environmental Policy, Non-Exec. Director, Carbon Trust
- Peter Jones, Director, Biffa Waste Services Limited
- Alistair Keddie, Former Director General Innovation, DTi
- Stephen Loader, Knowledge Transfer, Nat. Environment Research Council
- Jonathan Lonsdale, Programme Manager (Skills)
- Barbara Morton, Programme Manager (Procurement)
- Noah Myers, Programme Manager (Regulatory)
- William Pope, Chairman, Society for the Environment (SocEnv)
- Jennie Price, CEO, WRAP
- Tony Rachwal, Innovation & Development Director, Thames Water plc
- Jonathan Startup, Director Sustainable Development, DTi
- David Willcox, Managing Director, Nuaire Holdings
- Richard Williams, Advisor, 3i plc
- Rob Wylie, Director, WHEB Ventures

## Introduction to the day

The delegates were welcomed by Jack Frost, Director of Johnson Matthey Fuel Cells as Chair of the Environmental Innovation Advisory Group (EIAG). He reported on the progress made to date and outlined what he considered to be a realistic ambition for the Group day. He said;

- The working groups have now been established and work is underway within each.
- There is a need to prioritise the work within each group and he is keen to empower the chairs to make progress and develop ideas as much as possible.
- The work of all groups needs to be linked – identifying exactly what and how needs to be linked is partly the aim of the workshop today.
- The vision needs to be shared with stakeholders, especially Government and Government departments.
- The aim will be to take back the Group's ideas and research to Ministers in order to promote all aspects of Environmental Industries and help make things happen by the end of 2004.

Jack Frost's personal aspiration for the group is that;

- The worked up proposals from the working groups will make a real difference
- During the process of today, there will be analysis of what the gaps and links are, and that some clear actions will be brought back to the next EIAG meeting for ratification and a timetable that can be agreed.
- We will end up with new, sustainable businesses.
- We need to articulate this exciting vision effectively.

## EIAG working Groups

The participants split into four groups to address the working group issues of the EIAG. Each set of delegates progressed to all the issue groups and were given an opportunity to comment, add ideas and critically assess the work already underway and planned, as presented by the Chair and Programme Manager of each of the working groups. The following notes are the results of those discussions. They are transcribed here as captured on the flipcharts on the day. They may need some interpretation if presented to people not present at the workshop. At the end of the afternoon session, working group chairs summarised their proposed work plans to July and October. These have also been captured within these Working Group tables.

Issue 1	Procurement Working Group
Gaps, needs, linkages	
<ul style="list-style-type: none"> <li>• Managing Risk** - Politicians comfortable with managing risk                             <ul style="list-style-type: none"> <li>○ Quantifying, understanding and proportionate to benefit</li> <li>○ Customer must be prepared to wait</li> <li>○ Regulators must be on your side</li> <li>○ Strength of political commitment/required</li> <li>○ Resources for development of tests/certification processes</li> <li>○ Buy-in from National Audit Office/Audit Commission</li> </ul> </li> <li>• Time frames and milestones – linkages with other groups/ external decision-makers</li> <li>• Align with general trend of Government Policy</li> <li>• Forward commitment link to Technology Group</li> <li>• Link to skills work – CIPS/procurement and sustainable development</li> <li>• Ensuring alignment with Gershon agenda – link to wider public benefits? Influence.</li> <li>• Technology Group- examples/ demos?</li> <li>• Regulation can provide a strong pull for procurement</li> <li>• Wider issues - Gershon.....accounting for externalities/whole life costing/valuing</li> </ul>	
Suggestions for WG Programme	
<ul style="list-style-type: none"> <li>▪ Good examples from the private sector - forward commitment</li> <li>▪ Testing and certification must have been achieved</li> <li>▪ Customer must be willing to wait for product to be developed</li> <li>▪ Better value for money - economic benefits/better commercial value demonstrated e.g. building developers</li> <li>▪ Forward commitment is <u>Key</u> - market pull</li> </ul>	

<ul style="list-style-type: none"> <li>▪ Check with banks that this works for them</li> <li>▪ Overarching framework is vital- strong commitment or regulatory structure/regulatory underpinning e.g. renewables</li> <li>▪ Might be subject of positive regulations</li> <li>▪ Achieving wider objectives and factoring in externalities- local benefits explored</li> <li>▪ Technologies more acceptable e.g. wind farms</li> <li>▪ Recognition systems for purchasers. Reward for taking risk.</li> <li>▪ Procurement- geographical location: overcoming planning obstacles.</li> <li>▪ Forward commitment- we need a demo from technology group</li> <li>▪ Evidence of sub-optimal performance (look back as well as forward)</li> <li>▪ Cost and consequences of not having done it</li> <li>▪ Use existing evidence to demonstrate benefits and costs.</li> <li>▪ Selection criteria for choice of projects.</li> </ul>	
Plenary discussion and agreement on way forward	
By July	<ul style="list-style-type: none"> <li>▪ Forward commitment project- focus on this</li> <li>▪ Make a decision about being technology or buyer driven</li> <li>▪ Who do we need to talk to?</li> <li>▪ Formulate selection criteria</li> </ul>
By October	<ul style="list-style-type: none"> <li>▪ Shortlist of potential buyers</li> <li>▪ Market soundings (helped by technology Group)</li> <li>▪ Funder soundings</li> <li>▪ Identify project specific risks</li> <li>▪ Shortlist potential technologies</li> </ul>

Issue 2	Skills Working Group
Gaps, needs, linkages	
LAAL	<ol style="list-style-type: none"> <li>1. What do current legislation and technologies and future technologies require?</li> <li>2. What is the "Gap" seen out of this?</li> <li>3. List of key skill issues</li> <li>4. Can we have some key issues for which other groups think provision "thin"</li> <li>5. Identified reach/toxicologists as an exemplar - soil scientists</li> <li>6. Help with a "train the procurer" initiative</li> <li>7. Can we "showcase" the skills and training which lead to exemplar projects i.e. people who have done the same before</li> </ol>
	<ul style="list-style-type: none"> <li>▪ What are the key future regulations coming through? E.g. reach – toxicologists; also soil scientists. And what are technologies to achieve? - What are the skills gaps from this (technology/commercial/business included)?</li> <li>▪ Can EIAG identify critical skill issues which they're already aware of?</li> <li>▪ Can we 'showcase' the skills which are needed to successfully bring/pull technologies to market (link to demonstration)</li> </ul>

	<ul style="list-style-type: none"> <li>▪ 'Train the procurer' needed – other professional areas also?</li> </ul>
<p>Suggestions for WG Programme</p>	
<ol style="list-style-type: none"> <li>1. Industry labour pool/ can it be “used” across different economic sectors?</li> <li>2. Professional body pool</li> <li>3. National curriculum link- “culture change” at what level</li> <li>4. List what is being done by training providers</li> <li>5. Look at what Environment agencies (EA, SEPA) doing on skills</li> <li>6. Time frames applicable by e.g. 3-5 key regulations and by associated technology</li> <li>7. Multiply JL’s efforts through RDA’s etc.</li> <li>8. Look at what Environmental Research Funders Forum (ERFF) doing with respect to skills</li> <li>9. Examine “training to innovate” programmes – how generic are these?</li> <li>10. Add value to examples already active (showcase)</li> <li>11. Research “Envision” – a not for profit organisation which is promoting Sustainable development to children</li> <li>12. How do we “sex up” the environment industry to stimulate school leavers/graduates/engineers etc</li> <li>13. Clarify post experience opportunities for training</li> <li>14. Exemplars of innovation and training (showcase)</li> <li>15. Exemplars of managing innovation</li> <li>16. How to introduce “commercial training and Business” into u/g training</li> <li>17. Engineering initiatives sector profile</li> <li>18. Shortage of process engineering (e.g. waste and IPPC) – 3000 sites = 10,000 engineers required!</li> <li>19. Promote industry to articulate what it wants.</li> </ol>	
<p>Plenary discussion and agreement on way forward</p>	
By July	<ul style="list-style-type: none"> <li>▪ Work with Procurement Group to map out skills needed by Procurement professionals</li> <li>▪ Work with Technology Group to manage exemplar process to ensure skills and training are built in</li> </ul>
By October	<ul style="list-style-type: none"> <li>▪ Have a full time employee in the Sector Skills Council to start mapping skills needed across sectors</li> <li>▪ On-going work to address skills</li> </ul>

Issue 3	<p>Technology Working Group</p>
<p>Gaps, needs, linkages</p>	
<ul style="list-style-type: none"> <li>▪ Regulatory WG - innovation remit for regulators e.g. temporary license for new technology</li> <li>▪ Fast tracking regulative approval for new technologies- focus on output based regulation</li> <li>▪ Regulatory WG- fiscal incentives should be part of their approach- but can fiscal incentives (which can change at short notice) encourage long-term innovation?</li> <li>▪ Skills WG – how to help SME’s with skills to project manage innovation</li> <li>▪ Use public procurement to start “first demonstrations”</li> </ul>	

<ul style="list-style-type: none"> <li>▪ Develop new regulations that allow the UK to exploit unique technologies that it has developed e.g. Scandinavia /Germany on refrigerator recycling - EU legislation</li> <li>▪ Identification of areas where regulation in place but not being enforced as no effective regulation available.</li> <li>▪ Broadening ECA</li> </ul>
<p>Suggestions for WG Programme</p>
<ul style="list-style-type: none"> <li>▪ How much is this about environmental industries, us, users/customers?</li> <li>▪ Need someone for the group with more of a technology overview</li> <li>▪ Group to develop into a group then we can advise RCs on technology needs- helping then to engage with “environmental industries”</li> <li>▪ Tighten criteria on sustainability for DTi Technology Programme (and others)</li> <li>▪ Access public funding for demonstration (RDA, WIP, CT..)</li> <li>▪ Focus on a few key problems in 3 key areas to solve and identify technologies to address these and mechanisms to overcome barriers</li> <li>▪ Selection criteria for which market needs to address- <ul style="list-style-type: none"> <li>○ Identification of technologies current- future (links RCs)</li> <li>○ Links regulatory barriers - proof concept</li> </ul> </li> <li>▪ Need to look at integrated technologies programme e.g. IPPC approach not single technologies on their own</li> <li>▪ Need variety of options to enable demonstration projects</li> </ul>
<p>Plenary discussion and agreement on way forward</p>
<ul style="list-style-type: none"> <li>▪ Lot to do to identify technologies</li> <li>▪ Need to know what works. Hope ideas will emerge via RDA level</li> <li>▪ Repeat process with European technologies accepted elsewhere- look at regulations drivers</li> <li>▪ Expect a list of UK technologies by July and key European technologies</li> <li>▪ Need a new co-optee as soon as possible</li> <li>▪ Work on demonstration models- get financed and in the market place. Using ETAP but need to look at other funds and report on this.</li> <li>▪ Develop a variety of funding options</li> <li>▪ Link into State Aid work on funding for exemplars</li> <li>▪ EIU to pull together a session to brain demonstration funding</li> </ul>

Issue 4	Regulatory Working Group
Gaps, needs, linkages	
<ul style="list-style-type: none"> <li>▪ Does regulation include planning?</li> <li>▪ Risk management strategies- for regulators, financiers, innovators</li> <li>▪ The extent to which we steer VRS, track, improve</li> <li>▪ Upper level innovation remits</li> <li>▪ EIAG Goals /Vision to ministers <ul style="list-style-type: none"> <li>○ Sustainable economy</li> <li>○ Lower costs</li> <li>○ Jobs</li> <li>○ Export potential</li> </ul> </li> </ul>	

- Major environmental issues through examples
- We need examples especially outside the UK!!
- ETAP involvement

#### Suggestions for WG Programme

- International examples – early announcement of targets
- EA/DEFRA stakeholder groups don't often include innovative technology remit
- Early regulative targets
- What impact can legislation have on procurement?
- Generic recommendations to regulators and interactions- what regulations need to do to stimulate innovation
- Fast tracking innovation through regulations
- Risk management!
- Planning
- Extend remit to secretaries etc.
- Integrate "prospects" for lower costs etc.
- Managing - where should demand go, rather than will go
- When to prescribe fixed requirements versus flexibility
- Mechanisms in regulations for new technology that doesn't match the regulations
- Tax- non- environmental tax
- Fiscal incentives
- Stay focussed especially initially - work with technical innovation.

#### Plenary discussion and agreement on way forward

- Capture points from today
- Revise aims and task list
- Play back revised work plan for July 1
- Big 5 areas (big picture)
- List of regulators to start dialogue with - risk sharing, view gathering.
- Feedback in October
- Gather exemplar projects - need feedback from other groups. Note - Barbara is a focal point for examples.
- Need good examples from other countries that have worked. We would like to test the receptiveness of regulators.
- Find out if blockages are due to the legislative framework or something else.

## Session

# 3

### Issues for the Environmental Industries Advisory Group as a whole

From the working groups during the first session, the following key issues that are relevant to the whole group emerged. These were not dealt with in depth during the workshop but it was agreed they need to be addressed as soon as possible and brought back to the next EIAG meeting for discussion.

- Overarching / coherent expression of benefits. We need a case for why stakeholders should listen. Means/ ends? Costs?
- Risk- regulatory, technical, procurement. How can we reduce it? Encouraging others to be prepared to share it.
- Need to agree what the key issues will be that technologies will need to address – focus on exemplar projects
- How do we keep focussed on all the elements that drive innovation not just hardware technology?
- Activity that focuses on the UK- we agreed this was already being addressed.
- Identification of key partners (noting their roles and interests) we need to engage with. Who do we need to talk to?
- Identify and appraise the degree of political difficulty of each group issue
- Whole-life costing tools and valuing externalities- we don't have any
- EIAG skills gap? Financial skills for example.
- Identify measures of success (for the next 2 years) for EIAG
- Rethink/review working group activities- are they necessary? Deliverable?

Needs and linkages

- Regulation for market pull (procurement)
- Demonstration technologies- need processes that help form the basis of procurement commitment
- Can the extra cost of technologies be compensated for by regulation? Related to the issue of tools lacking. The Regulation Group to come up with timetables.
- Regulatory Group need exemplars of good regulation projects (including from Europe)
- Project management training for SME's and bigger companies.
- Fast tracking regulatory approval.

### Solutions and Next Steps

1. We have a powerful message to get over i.e. this will employ thousands/millions. This message needs to be worked up with exemplar projects as an evidential base. Making the case for environment and innovation together to make step change. Doing nothing is not an option.

Comparison between business as usual and innovation approach. Need a 'trailer' quickly and need to explain we are working towards exemplars. We should be trying to demonstrate cost reductions through innovation and that UK can capture a bigger market share. Regions could collate information on jobs created.

From here..... EIU Unit to spearhead this (with input from Water/Carbon Trust/ Waste input) but EIAG will ratify at the July meeting.

2. Need links into exemplar projects This was a common barrier identified by all the Working Groups but is an issue that needs to be tackled within each group. However, we should develop a common process to assess the risks in all areas.

From here.....DTi Unit to do some work on this and share with the whole EIAG.

3. Regulatory lead Need to define the 5 "Big Picture" areas and discuss at the meeting in July. Priorities should be opportunity driven. Need some assessment of environmental impact- this should influence priorities. Environmental impact should be a criterion in the selection of exemplars. Debate this issue after the baseline areas have been identified.
4. Including key processes for example, the planning system, in our thinking about innovation. Both new technologies and improvement of existing technologies need to be considered.
5. Workgroup plan development work groups to consider their work areas and do
  - Stakeholder mapping exercise
  - An influencing strategy – key points that need to be communicated to whom, how and when?

This to be pulled together by the DTi Unit.

6. Testing the strategy EIAG to 'test' work programmes with political advisers before launching more widely. Who needs to be convinced and are they likely to be? Consider all this at the July meeting. Link with the stakeholder mapping exercise (5).
7. There are tools available Find a way of making existing tools work at Local Authority level and lead in from exemplar models. We need to factor in the reasons for potential resistance. This is a critical part of the evidence.

From here... Arrange a session on this- get someone in to lead it.

8. DTi Unit to produce a proposal for the July meeting.

## Concluding Comments

- Some strong themes are emerging- bring these together. We need clarity and simplicity in an overarching message- this needs to be powerful.
- Science base in the UK can help to underpin innovation- this should be included in the overarching message. It would add to the political message.
- The European dimension is important. We need liaison with Europe. The DTi Unit is linking into this network. We need to exercise UK leadership but observe European developments. We should seek opportunities to influence the EU agenda- for example, we need to rethink what is happening on environmental regulations. There is a big opportunity to influence.
- With regard to influencing in UK, EU and our stakeholders, we should be seeking not just to communicate but for full engagement with others.

QA 10/6/04