



ENWORKS Environmental Business Support Programme – Independent Evaluation

Northwest Regional Development Agency & ENWORKS

15 April 2011

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A report submitted by GHK

Date: 15 April 2011

Job Number J5199

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Document control

| | |
|-----------------------|-------------------------------------|
| Document Title | ENWORKS Business Support Evaluation |
| Job number | J5199 |
| Prepared by | James Medhurst and Richard Smith |
| Checked by | Richard Smith |
| Date | 15 April 2011 |

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1 Introduction

1.1 Purpose of this report

GHK Consulting (GHK) were commissioned by the Northwest Regional Development Agency (NWDA) in summer 2008 to undertake a long term evaluation of the ENWORKS Environmental Business Support (EBS) programme covering the period 2007-2010.

1.2 The ENWORKS Organisation

ENWORKS was set up in 2001 after research into the provision of environmental support to businesses in the North West revealed that over 180 different organisations were delivering environmental advice, the quality of which was inconsistent and the un-coordinated structure was leading to a major duplication of effort. Projects were being funded on a local basis, leading to patchy, disjointed geographical coverage, creating huge variations across the North West and turning environmental support into a postcode lottery. It was also not a learning environment, which led to local projects continually reinventing the wheel.

The flaws in this delivery mechanism were recognised by key stakeholders from across the region, as was the need to create a co-ordinated and coherent service that could be quality assured and made available to all North West businesses, regardless of their size, sector or location. This recognition led to the formation of a cross-sector, independent partnership who defined a new approach to delivering environmental business support. The vision and approach for the ENWORKS partnership was set out by this Board and has remained consistent from the initial outset:

- To provide environmental support to companies in the North West
- To provide a consistently high quality service that meets business needs
- To avoid duplication of effort and maximise effectiveness
- To rigorously monitor and measure the impact of our services
- To improve the region's skills and knowledge on environmental management
- To decouple environmental degradation from economic growth
- To make environmental practice profitable

The ENWORKS partnership consists of three core elements:

- **Governance – the independent partnership Board:** The role of the ENWORKS Board is to provide leadership, to set goals for the partnership, to scrutinise all activity and to influence the environmental business agenda in the North West. The independence of the Board is crucial as it enables ENWORKS to put the interests of the North West region as a whole, rather than those of any one organisation, to the forefront of the agenda.¹
- **Management and Co-ordination – the central team:** The role of the central team is to translate the Board's vision and the region's priorities into a workable, practical model of business support. This includes establishing and maintaining a partnership of delivery organisations; securing funding from a range of regional, national and European sources; managing the funding and continually driving up performance to maximise effectiveness and value for money; specifying and quality assuring the support provided to ensure it meets both business need and policy objectives; and providing a range of resources that support the activities of delivery partners.²

¹ Further information can be found at: <http://www.enworks.com/about-us/enworks-partnership/board>

² Further information can be found at: <http://www.enworks.com/about-us/enworks-partnership/central-management-team>

- **Delivery to Business – the delivery partnership:** the ENWORKS delivery model provides support through a network of organisations in order to ensure that wherever a business is based, or whatever sector the business operates in, there will always be a support provider nearby that understands and can respond to business need and is locally accountable. This diverse network of delivery partners gives ENWORKS local knowledge, accountability and credibility, plus a wide range of skills and experience; it also enables the partnership to respond easily to policy and funding changes at both local and national levels.³

1.3 The Evaluation – Aims and Objectives

The purpose of the EBS programme evaluation has been to:

- provide continuing feedback on the programme operation over the life of the EBS programme, commencing in 2007;
- offer independent advice on the performance and impact of the EBS project, over the period to 2010; and,
- advise ENWORKS of actions to improve the cost-effectiveness of future programmes through to 2013, with some reflections on how the type of programmes might operate post 2013, when the funding context will be substantially changed.

The specific objectives for the evaluation were to:

- Review and provide additional evidence of the market failure(s) giving rise to under-investment by business in resource efficiency and providing a rationale for the intervention;
- Provide evidence of the strategic added value (SAV) of the EBS programme, taking into account alternative ways of providing the services offered, such as a reliance on national partners (Carbon Trust, WRAP, and NISP), single regional delivery or local level of delivery;
- Establish the regional economic impact and subsequent value for money of the EBS programme, based in part on (quality checked) information provided by the ENWORKS Online Resource Efficiency Toolkit (“the Toolkit”) on cost and resource savings plus surveys of a sample business cohort; and,
- Inform the continuous improvement of ENWORKS activities by reference to established benchmarks for the EBS programme; lessons from across the sub-regional partners and national partners; and comparisons with similar interventions in other regions;
- Advise on the forward strategy for ENWORKS post 2010.

1.4 Structure of the Report

This report continues in the following sections:

- Section 2 – provides an introduction to the EBS programme, considering the intervention logic, and significance of market failure, before outlining programme resources and delivery structure;
- Section 3 – discusses programme outputs, beneficiary experience and the ENWORKS Toolkit;
- Section 4 – calculates the economic impact and SAV of the programme, and provides stakeholder views on future strategy;

³ Further information can be found at: <http://www.enworks.com/about-us/enworks-partnership/delivery-partnership>

- Section 5 – utilises the assessment of beneficiary experience, the findings of the impact assessment and the SAV analysis as the basis for benchmarking the EBS programme against other similar initiatives; and,
- Section 6 – presents the study conclusions and Recommendations for future delivery of environmental business support by ENWORKS.
- Annexes provide further supporting material.

2 The EBS Programme

2.1 Introduction to the ENWORKS Environmental Business Support Programme

ENWORKS has received project funding from the NWDA since 2001 to deliver environmental advice and support to businesses across the region to help increase their competitiveness through improvements in the management of environmental risks and performance. In 2003, ENWORKS began delivery of the first fully regional resource efficiency support project in the UK; this activity has been funded through multiple funding streams, including NWDA Single Programme, Business Resource Efficiency and Waste (BREW) monies and European Regional Development Funds (ERDF) and has, as such, been delivered through a number of discretely managed projects, whilst providing a continuous timeline of support to businesses in the region.

The ENWORKS EBS programme commenced in October 2007 and, though formally a separate project to the preceding activity, it has capitalised and built on the previous activity. The programme was designed to:

- improve the market penetration, quality, consistency and impact of resource efficiency and waste minimisation support to business in the region;
- increase awareness and understanding of the business benefits of improved resource efficiency; and,
- by working hand-in-hand with businesses, to help maximise the potential for improved productivity, cost savings, raw materials savings, pollution reduction and increased sales.

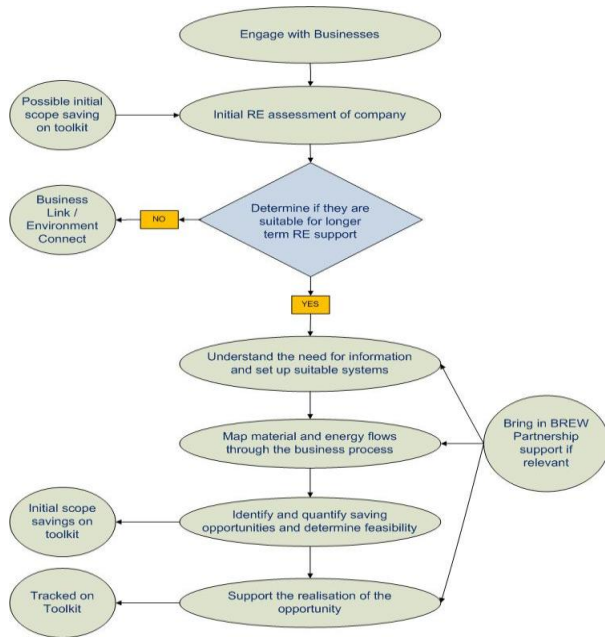
The programme was to work directly with businesses to meet their needs by putting in place realistic resource efficient measures and turning these into actual savings. By reducing their exposure to environmental risk and improving their resource use efficiency (using less utilities, raw materials, packaging, labour and production time per unit output / service provisions) companies will increase their productivity. This was intended to help in creating a more robust trading position, increasing both profit and value added, and aiding the retention and creation of new markets. Specific individuals within companies were also to be trained to embed sustainability within the business and to further disseminate the impact of the support.

The programme was also to provide the capacity for the NWDA to meet the Chancellor's commitments of 1000 resource efficiency audits (in 07/08) and to provide a step-change in the effectiveness of the provision of resource efficiency and energy efficiency advice to businesses. The programme was to work closely with the NWDA's sub-regional partnerships (SRPs), cluster organisations and minority business forums and to leverage appropriate support and funding from ERDF and national programmes such as Envirowise and the Carbon Trust. The programme was to be linked into Business Link Northwest and so increase the productivity of businesses in the Northwest whilst reducing their impact on the environment.

The programmes aims were:

- Improve the competitiveness and productivity of Northwest companies by their reducing exposure to environmental risk and improving their resource efficiency
- Reduce CO₂ emissions, water and material usage and divert waste from landfill

The support process



The programme provided companies with a range of on and off-site support on environmental, resource and environmental risk management, including Climate Change.

The support was available across the whole region to all sectors and sizes of business.

The support focused on, but was not limited to, CO₂ savings more than the previous programmes as a reflection of the increased profile and importance placed on Climate Change.

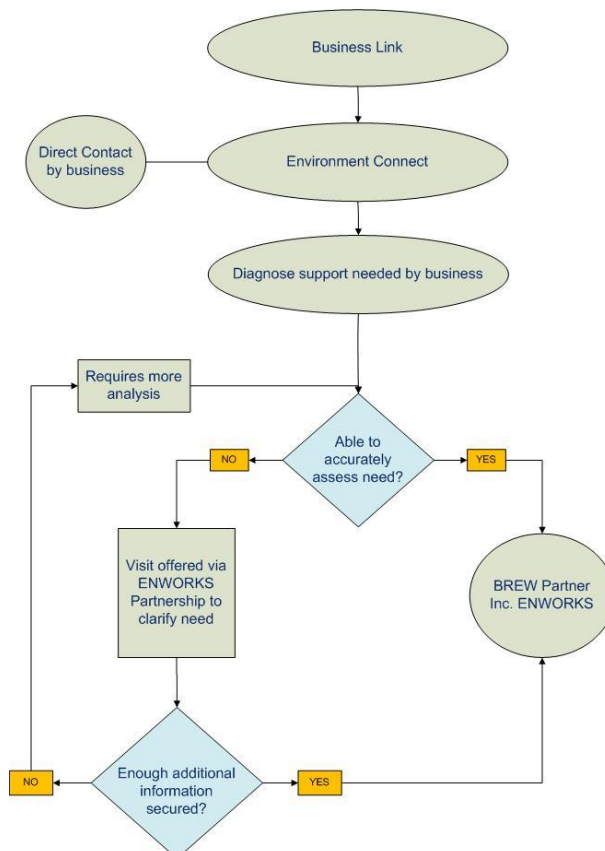
This included looking beyond the obvious area of energy use to consider the embedded energy in the materials that are consumed.

The programme was to be integrated into the Business Support Simplification Programme creating formal links with Business Link NW. Business Simplification was a new process and did not impact on the previous programmes, although it should be noted that ENWORKS was set up to provide a simple access route to avoid local proliferation of small-scale projects.

Key to the integration with Business Link was the mainstreaming of Environment Connect³. Environment Connect will be integrated and branded with Business Link and will be embedded with the Business Link advice line “knowledge platform”, to integrate it with the National BREW⁴ delivery offer through Environment Connects’ specialist brokerage.

This is linked both to Business Simplification and to a recognition that environmental support needs to be integrated into the Business Link offer. To support this, Business Link and other networks were to be trained in resource efficiency and how they can signpost companies to the most appropriate provider. Business Link staff were to be trained to deliver resource efficiency diagnostics.

Link to Business Link NW



As an overview, the ENWORKS EBS programme comprised the following elements:

- **Sub-regionally delivered business support:** A network of local organisations form the core of the ENWORKS delivery partnership; these organisations have a track record of delivering high-quality and effective environmental advice to businesses and have in-house teams of qualified environmental auditors. These organisations collectively provide fully regional coverage for the programme (ensuring there is no postcode lottery of support for beneficiaries) and deliver advice and support direct to businesses in their area. Each organisation is allocated a slice of the overall programme budget and output/outcome targets (commensurate with the number of target businesses in their area) which they are responsible for delivering and which is formalised in a Service Level Agreement with ENWORKS. Delivery partners are responsible for engaging businesses into the programme, for delivering appropriate advice and support to them and for recording and reporting the impacts of that support to ENWORKS. They are also responsible for ensuring the programme is well embedded within their local policy, government and business landscape.
- **Specialist consultants:** A bank of consultants was procured by ENWORKS to provide sub-regional delivery partners with additional capacity when needed and with specialist skills that are not cost effective to embed permanently in each organisation. The arrangements were formalised in a Service Level Agreement with ENWORKS and services were commissioned and managed by the sub-regional delivery partners.
- **Innovation projects:** Seven 'one-off' projects were procured by ENWORKS to explore alternative models and types of provision of resource efficiency information, advice and support to businesses in the Northwest (e.g. support through supply chains, sector-specific activity, the link between resource efficiency and lean manufacturing, the uptake of micro-renewables, one-to-one versus one-to many support). The arrangements for each project were formalised in a Service Level Agreement with ENWORKS. The projects have been independently evaluated separate to this report⁴; an overview of findings is detailed in Annex 1 of this report.
- **Environment Connect:** A separate project delivered for the NWDA to provide a one-stop contact point for any Northwest business with a query about environmental issues and business performance. The service provided information and brokerage / signposting to all environmental projects in the Northwest, and to national BREW projects, that could assist the business with its query. It also covered marketing of the service direct to businesses. Environment Connect was established prior to the EBS programme and was included within the EBS programme to ensure its continuation and to enable it to be embedded with Business Link Northwest as part of the national Business Support Simplification Programme (BSSP) and the new remit of Business Link to provide an 'information, diagnostics and brokerage' (IDB) service. Environment Connect was managed by the central ENWORKS team and delivered through one of the sub-regional delivery partners (Groundwork Pennine Lancashire) until October 2009; this arrangement was formalised in a Service Level Agreement with ENWORKS. Although delivered externally to Business Link during this time, the recording of referrals was integrated within the Business Link client management system and calls were transferred directly between the two organisations to provide a seamless customer service. Delivery and marketing of the service began by Business Link Northwest in October 2009, slightly later than originally envisaged, and was formalised through a Service Level Agreement with ENWORKS; reporting continued to be through ENWORKS to the NWDA. After March 2010 the service was fully transferred to Business Link Northwest.
- **ENWORKS Central Team:** The central team is responsible for overall programme management including securing funding and reporting expenditure and results to funders. Alongside this, the central team manages the delivery partnership and all its

⁴ The Innovation Projects Evaluation report is available at www.enworksinbox.com

activities and provides a number of services to partners both to help realise economies of scale and to ensure quality and consistency of service to business. These include:

- Information Services – information updates on, for example, environmental legislation and regulations, best practice, business case studies, policy developments, etc are generated centrally to avoid duplication of effort within each partner organisation. This service evolved throughout the EBS programme, being delivered by one of the sub-regional partners at first (the Environmental Resource Information Centre at Groundwork Pennine Lancashire) and being delivered to partners only, to being embedded within the ENWORKS central team and delivered via a weekly e-bulletin direct to both business and partners by the programme closure.⁵
- ENWORKS Online Resource Efficiency Toolkit – a bespoke piece of software developed and managed by the central team that allows individuals in delivery partners and the businesses they support to access a secure account on which to log the opportunities for resource efficiency improvements that are identified and then to prioritise, track and report on the economic and environmental savings generated as changes are implemented.⁶
- Environment Connect / Business Link – managing the service as described above, alongside delivering training to Business Link advisors on resource efficiency and wider environmental business issues to ensure their capacity to deliver the service once embedded within their mainstream activities.
- Marketing & Communications – raising awareness of the environmental business agenda and marketing the programme to external stakeholders at a regional and national level through, for example, the ENWORKS conference, presence on relevant steering groups and committees and the ENWORKS website, to ensure the programme is embedded in relevant policy and strategy and that business referrals are generated into the programme; plus supporting delivering partners with their marketing to business beneficiaries through, for example, video case studies, and ensuring that communications are compliant with funder requirements.
- Triage & standardisation – the central team developed a system by which to target programme resources at those businesses with greatest potential to save at the programme outset (the ‘triage’), this was then tested and refined throughout the EBS programme in partnership with the delivery organisations. Work was also carried out to standardise the service across the region and to develop templates (e.g. business diagnostics) to formalise this and share best practice. Customer satisfaction protocols were also developed for partners to gain feedback in a consistent manner from businesses engaged in the programme.
- Consultancy bank – to procure and manage a bank of environmental consultants to support delivery, as described above.
- Independent evaluation – to set out the terms of reference for the evaluation, aligned with the requirements of the Independent Evaluation Framework (IEF), to procure consultants to carry out the evaluation and to manage the delivery of the evaluation, paying particular attention to gaining proof of market failure on this issue.
- Innovation projects – to procure and manage delivery of a suite of projects designed to test alternative models and types of environmental business support to inform the effectiveness of existing and future projects, as described above.
- Additional activities – a wide variety of additional activities were tasked to the central team including, but not limited to: developing pilot projects on carbon management, transport and biodiversity and integrating them into the core service, adopting

⁵ The service is called Green Intelligence and can be accessed via www.greenintelligence.org.uk

⁶ The Toolkit is accessed via secure log-in at www.encyclopedia.net

lessons from previous project evaluations, engaging with Cluster organisations and NWDA SRPs, and developing links with other NWDA projects.

The main focus of this evaluation is to establish the Economic Impact and Strategic Added Value of the ENWORKS EBS programme; therefore, it concentrates on the activities of sub-regional delivery partners and specialist consultants, as managed and supported by the activities of the central team, in the provision of advice to businesses and the subsequent economic outcomes and impacts achieved.

Following recent agreement of a successor programme, provision of support to companies in the region through ENWORKS will operate until March 2013, providing support on resource efficiency and corporate responsibility to businesses across the Northwest. Some elements of the new programme began delivery in October 2009 with full implementation in April 2010, coinciding with completion of business support through this EBS programme in March 2010, thus providing seamless access to assistance for the region’s businesses.

2.2 Logic Model

A logic model for the EBS programme is shown in Figure 2.1; it presents an overview of the programme from its rationale to expected impacts, providing the basis against which actual programme achievements can be tested. The rationale, inputs and activities are reviewed below; outputs and impacts are analysed in Section 3.

Figure 2.1 ENWORKS EBS Logic Model

| RATIONALE | INPUTS | EXPENDITURE ON ACTIVITIES | OUTPUTS | OUTCOMES | IMPACTS |
|--|--|---|---|--|---|
| <p>Market Failure in relation to lack of awareness of the benefits of resource efficiency in investment; lack of knowledge regarding implementation of opportunities; and lack of knowledge regarding where to access support</p> <p>Public policy goals in relation to:</p> <ul style="list-style-type: none"> • Business competitiveness • Reduced resource use • Social Responsibility | <p>NWDA Single Programme & ERDF Funding</p> | <p>Advisor and specialist consultant time</p> | <p>Businesses Assisted</p> | <p>Jobs created and safeguarded in beneficiary companies</p> | <p>Increased regional productivity and GVA</p> |
| | <p>ENWORKS Board and Central Management activity</p> | <p>Direct Marketing EBS offer to companies</p> | <p>Identified and quantified resource efficiency savings</p> | <p>Improved profitability of beneficiary companies</p> | <p>Increased corporate responsibility</p> |
| | <p>Private sector contributions to support delivery costs</p> | <p>Awareness raising and capacity building activity</p> | <p>Beneficiary company employees undertaking work-based training</p> | <p>Reduced resource use for beneficiary companies</p> | <p>Reduced Environmental Impacts (e.g. reduced use of natural resources)</p> |
| | <p>Additional business investment to implement advice (time and capital)</p> | <p>Development & maintenance of virtual tools (website, toolkit, alert service)</p> | <p>Businesses taking part in supply chain projects</p> | <p>Attitudinal changes in beneficiaries: increased understanding and ability to quantify RE returns</p> | <p>Increased sustainable economic activity</p> |
| | | <p>ENWORKS Innovation Projects</p> | | <p>Improved delivery capacity</p> | <p>Growth in demand for Resource Efficiency specialist support</p> |

The fundamental rationale for the EBS programme, which underpins the public policy goals outlined above, is the persistence of market failure in resource efficiency investment. This is discussed in more detail in the following sub sections of this report.

2.3 Market Failure and the EBS Programme

2.3.1 Scale of Market Failure

The costs of market failure can be understood in terms of the value of resource cost savings and related economic impacts that fail to be secured.

The Stern Review highlights that inaction related to climate change will ultimately lead to a ‘dampening’ of the global economic output by between 5 and 20 per cent for each year this century⁷ and consequently is seen as one of the largest market failures in human history.

The latest research from the EEF estimates that over 90% of raw materials from manufacturing processes still do not find their way into the final product, with up to 5% of turnover spent on waste, reflecting lost opportunities for higher returns⁸. Inefficient use of resources has an economic impact both in additional costs and the failure to develop new environmental technologies or processes.⁹ It is estimated that inefficient use of resources costs UK industry £15 billion per year, equating to over £4 million per day¹⁰.

Carbon Trust estimates that UK industry wastes £7 million per day on poor energy efficiency¹¹. Moreover, the £7 million wasted each day on energy inefficiency could be tackled through simple actions which produce quick returns, saving between 10 and 20% of energy costs. The Environment Agency estimates that through simple and inexpensive water minimisation measures, companies in the UK could reduce their water costs by up to 50 per cent¹².

Recent research indicates that businesses in the North West could save £713 million per annum through no cost and low-cost resource efficiency improvements¹³. It has been forecast that the cost of inaction could amount to £72 billion to the North West economy between 2008 and 2020¹⁴. However economic uncertainty makes companies less focused on resource efficiency due to the prevalence of more pressing day-to-day operational concerns. As a result there is tendency for businesses to ignore environmental pressures rather than seeing them as a potential source of competitive advantage.

The lack of action by businesses might be justified if the returns to investment in resource efficiency were lower than for alternative investment choices, or if it had been demonstrated that significant savings could not be generated by resource efficiency without any capital investment. The research undertaken in this study provides further evidence, however, that investment in resource efficiency is cost-effective.

Research by BIS shows that the cost savings that have been realised through resource efficiency investment have yielded paybacks of typically 1-2 years; and this in a period when real resource costs have fallen compared to previous periods. This return is as at least as

⁷ Stern Review on the Economics of Climate Change (2006)
http://webarchive.nationalarchives.gov.uk/20100407010852/http://www.hm-treasury.gov.uk/stern_review_report.htm

⁸ EEF. 2009 *Resource efficiency – op cit.* p8.

⁹ Juned, S. (2008) Building Resource Efficiency into a Regional Spatial Strategy. Prepared by International Synergies Ltd for the BREW centre for Local Authorities

¹⁰ Envirowise “Beat the Credit Crunch through Resource Efficiency, says Envirowise”
<http://envirowise.wrap.org.uk/uk/Press-Office/Press-Releases/UK-Press-Releases/Beat-the-credit-crunch-through-resource-efficiency-says-Envirowise.html>

¹¹ The Carbon Trust (2008) “Credit crunch fails to derail green agenda - UK business puts energy efficiency at top of cost-cutting priorities” http://www.carbontrust.co.uk/news/news/archive/2008/Pages/220708_UK-energy-efficiency-waste.aspx

¹² Environment Agency <http://www.environment-agency.gov.uk/business/topics/water/38947.aspx>

¹³ Defra (2007) “Quantification of the business benefits of resource efficiency”

http://www.oakdenehollins.co.uk/pdf/Defra_Business_Benefits_of_Resource_Efficiency.pdf

¹⁴ Deloitte (2008) “‘Mini-Stern’ for Manchester: Assessing the economic impact of EU and UK Climate Change legislation on Manchester City Region and the North West.” http://www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/UK_GPS_MiniStern.pdf

high as for other forms of investment. Table 2.1 outlines payback periods for resource efficiency returns by sector.

Table 2.1 Payback periods of business investments by type

| Business Investment | Average Payback (years) |
|---------------------------------------|-------------------------|
| Quality Management ¹⁵ | 1-2 |
| Resource Reduction Investment average | 0.88 |
| • <i>Environmental Technologies</i> | 0.13 |
| • <i>Food and Drink</i> | 0.83 |
| • <i>Textiles</i> | 0.33 |
| • <i>Construction</i> | 0.50 |
| • <i>Chemicals</i> | 0.36 |
| • <i>Aerospace</i> | 0.06 |
| • <i>Automotive</i> | 1.41 |
| • <i>Energy, Power and Utilities</i> | 3.45 |

Source: BIS “Potential for Resource Efficiency Savings for Businesses” (2010)

2.3.2 What is ‘Market Failure’

The lack of investment¹⁶ in resource efficiency by firms when it would be rational to make investment indicates the presence of market failure. A ‘market failure’ is said to exist when the market, if left to its own devices, does not lead to an economically efficient outcome.¹⁷ The nature and scale of market failure provides the rationale for policy intervention; to provide the information, signals and incentives necessary for an efficient market to operate. It is in such circumstances that policy intervention, including state aid, has the potential to improve the market outcome in terms of prices, output and use of resources.

A range of market failures lead to under-investment in resource efficiency and which provide the rationale for intervention:

- **information failure:** Information failure prevents businesses and individuals from understanding the long-term cost of their production and consumption choices and the cost savings of opting for resource-efficient solutions. Difficulties in processing information to make rational decisions are stronger when there are long-term horizons involved, very small probabilities and complex information.
- **negative externalities:** Key externalities reflect the way in which resources are used and they mean that prices often do not reflect total costs.¹⁸ This in turn distorts resource allocation. For example, human-induced climate change is therefore an externality that is not corrected through any institution or market unless policy intervenes.
- **unrewarded positive externalities:** Aspects of resource efficiency measures relate to the creation and reward of positive externalities linked to taking action. For instance, the results of businesses and individuals adopting a more responsible approach towards the consumption of water would benefit everyone with water shortages being reduced.
- **co-ordination or collective action problem:** Public intervention under this goal can also be justified by coordination problems. There is a case for public intervention to encourage or enable cooperation when there is a large and heterogeneous group of beneficiaries and risks are prohibitive for individual agents and where free-riders are likely to be present.

¹⁵ “Support for Quality- Evaluation Report 5” http://www.bis.gov.uk/policies/science/science-innovation-analysis/evaluation-reports/evaluation_reports_1_to_23/report_5

¹⁶ Investment in this case is defined as both the capital and revenue costs of improved resource efficiency

¹⁷ *DG Competition, European Commission.*

¹⁸ HM Treasury (2006) “Stern Review on the economics of climate change “ 183 HM Treasury

It should be noted that there is also a growing literature (see Prendergrast et al., 2008), known as behavioural economics, that suggests that even where there is not an information failure, 'rational' behaviour does not necessarily occur; or where rational behaviour by individual businesses is not in their best interests. This has potentially important implications for ENWORKS activities and their ability to promote resource efficiency.

In summary, market failure relating to resource efficiency results in companies that do not act rationally and fail to make investments which would benefit their business (information failure, behavioural characteristics).

Even if they did act rationally then because resource prices do not fully reflect their social costs and benefits, investment in resource efficiency would still be too low (externality failure).

The focus in the remainder of this Section is on information failure given the objectives of the EBS programme. We also consider the implications of the co-ordination problem and lessons from behavioural economics. Wider international and UK policy is intended, in part at least, to address the externality failure.

2.3.3 Information Failures and Resource Efficiency

There are a number of discrete information failures and reduced levels of awareness that effect business decisions to invest in resource efficiency. Figure 2.2 illustrates a basic model comprising different levels of awareness and investment behaviour; with each level having an increased level of awareness and more sophisticated investment behaviour. Moving from one level to the next implies a journey for individual businesses, and where the type of information failures are slightly different and the measures to provide information and advice change, in order to get a business from one level to the next.

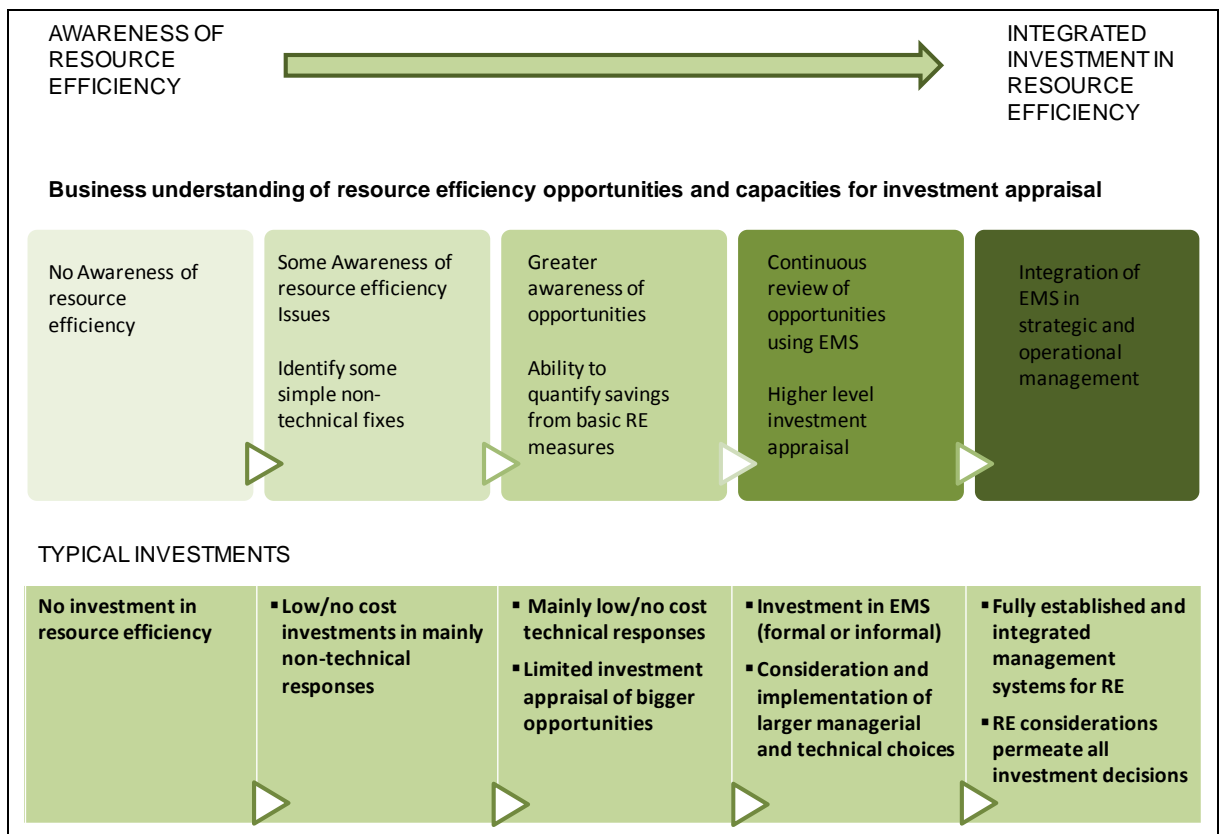
In summary there are five levels to the model:

- **Lack of awareness:** At the first level the business has an almost complete lack of awareness of resource efficiency options and related costs and benefits;
- **Limited awareness of some options:** At the second level the business gains some awareness of resource efficiency options (e.g. from interaction with a publicly funded business support organisation providing resource efficiency advice; a private consultancy; or interaction with other businesses). The business might now spot very obvious (largely non-technical) opportunities for investment return (especially where investment costs are near zero and there is limited need to quantify benefits);
- **Improved awareness of options and limited ability to appraise them:** At the third level the business increases its awareness of some resource efficiency issues (although these are likely still be focused on non-technical problems) and is better able to quantify at least some of the benefits from investment as the basis of investment choices. However, examining options that are not close to zero-cost options requires choices in allocating investment resources between resource efficiency and say, increased marketing/sales drives or in recruitment. Lack of knowledge of investment appraisal methods applied to alternative investment choices, and the probability of factoring in borrowing costs, limit the investments made in resource efficiency;
- **Advanced identification and appraisal of options:** At the fourth level the business has a more advanced understanding of resource efficiency and its impact on both saving the company money and driving product and process innovation as well as some awareness of investment appraisal. This situation is perhaps characterised by continuous review, identifying opportunities through use of (formal or informal) Environmental Management Systems. Investment decisions are taken on a regular basis, but are essentially framed by a step-wise, project by project approach that focuses on responding to resource efficiency opportunities as they arise, but taking account of other investment opportunities; and,

- **Integration of resource efficiency into investment and business planning:** At the final level the business evolves an advanced knowledge of the role of resource efficiency and its strategic importance in broader corporate planning. This knowledge is distributed throughout the company and investment decisions relating to resource efficiency are framed by strategic planning as well as by a case by case assessment.

We consider each of these levels in turn.

Figure 2.2 Improving businesses investment in resource efficiency: From awareness raising to mainstreaming



2.3.3.1 Level 1: Lack of awareness of resource efficiency

The failure of companies to invest in resource efficiency is well recognised, with a range of national and regionally administered business support programmes. Research into the specific barriers to Resource Efficiency in the North West in 2009¹⁹ outlined a range of barriers to resource efficiency investment. Of those companies who took part in the survey 465 mentioned barriers to resource efficiency changes for their companies. These are outlined in Table 2.2.

Table 2.2 Barriers to Resource Efficiency Investment in the North West

| Barrier | % |
|--------------------------------|----|
| A lack of capital | 15 |
| Making changes is expensive | 14 |
| A lack of time to make changes | 4 |

¹⁹ BMG for ENWORKS & NWDA (2009) "Resource Efficiency Survey: North West Businesses" p.26. 2001 NW businesses surveyed, representative by size, sector, geographic location, statistically accurate to +/-2%

| | |
|---|---|
| A lack of knowledge of what could be changed / how to do it | 2 |
| A lack of knowledge of where to get external advice and support | 2 |
| A lack of appropriate external advice and support | 2 |
| Landlord restrictions / rented premises | 2 |
| Legislation / red tape / planning permission | 2 |
| Other barriers | 7 |

Source: BMG, for NWDA and ENWORKS, (2009)

The most significant barriers outlined can be broken down into three basic categories:

- 1 Lack of recognition of the problem
- 2 Lack of knowledge regarding the support available;
- 3 Lack of managerial and technical capacity to take action; and,
- 4 Lack of financial resource to take any action.

2.3.3.2 Level 2: Limited Awareness of Resource Efficiency

The lack of awareness of benefits and risks, especially among SMEs²⁰, has prompted a wide range of continuing interventions, combining general awareness campaigns ('one to many') and more direct advice ('one to one'), to alert businesses to the missed opportunities to save money by addressing the management of resources (energy, raw materials, water).

As a result general business awareness of the benefits of resource efficiency investment has risen. Of course higher awareness does not necessarily lead to action and awareness remains a significant barrier, the North West Business Survey found that only 26% of companies had heard of the term "resource efficiency"²¹; although the majority of businesses are aware of the value of 'Good Housekeeping' (no-cost or low-cost measures which can be implemented quickly, with short payback periods)²².

In general, the relevant literature suggests that there is a significant information failure regarding the benefits and risks of investing in resource efficiency. For instance, the true cost of waste is frequently underestimated but significantly affects the bottom line and business competitiveness. There is also evidence of significant potential savings from resource efficiency, with the North West having the second highest potential of all regions – see Table 2.3.

Table 2.3: Potential Resource Efficiency Savings by Region 2007

| Region | Waste (£M) | Energy (£M) | Water (£M) | Total (£M) |
|-------------------|------------|-------------|------------|------------|
| South East | 336 | 488 | 47 | 871 |
| North West | 299 | 373 | 41 | 713 |
| London | 272 | 318 | 40 | 630 |
| East | 247 | 334 | 34 | 615 |
| South West | 248 | 298 | 36 | 582 |
| West Midlands | 213 | 315 | 33 | 561 |

²⁰ Small and micro business attitudes to RE are different to those of larger companies, with only half of smaller companies rating RE as "Very Important", compared with three quarters of large companies, ENWORKS & NWDA (2009) *Resource Efficiency Survey: North West Businesses*. p.25

²¹ BMG for ENWORKS & NWDA (2009) "Resource Efficiency Survey: North West Businesses" p.26. 2001 NW businesses surveyed, representative by size, sector, geographic location, statistically accurate to +/-2%

²² EEF. (2009) "Resource Efficiency" p.10

| | | | | |
|------------------------|--------|-----|-------|-------|
| Scotland | 245 | 273 | 43 | 561 |
| Yorkshire & the Humber | 234 | 285 | 34 | 553 |
| East Midlands | 191 | 267 | 32 | 490 |
| Wales | 132 | 163 | 23 | 318 |
| Northern Ireland | 104 | 114 | 15 | 233 |
| North East | 92 | 120 | 15 | 227 |
| UK Average | 217.75 | 279 | 32.75 | 529.5 |

Source: Oakdene Hollins and Grant Thornton, for DEFRA, 2007

A study of information failure was conducted in the North West for the NWDA (BMG Research, 2006). This found clear evidence of information failure as a lack of knowledge of who to contact for advice and support, and of the underlying issues. This was cited as the key barrier to improving resource efficiency. This is also consistent with a recent survey for EEF (2008) where 54% of companies surveyed said that government should provide better guidance and information. In the same survey, 70% said that government should provide better funding. This in itself is evidence of information failure, since companies seem unaware that many resource efficiency investments are no-cost or very low cost with very short payback periods.

2.3.3.3 Level 3: Improved awareness and ability to appraise and implement RE improvements

An Envirowise survey carried out by Ipsos MORI in 2006 revealed that more than two-thirds of the businesses surveyed (72%) understood waste reduction to be an important issue. However, 41% highlighted the need for practical help to introduce environmental practices with 17% saying they don't know where to turn for information.²³ This suggests a different information failure – how to access specific technical advice on identifying opportunities and information on methods of implementation.

Analysis suggests that businesses in the North West could save £713 million per annum through implementation of no or low-cost resource efficiency improvements, with the potential for energy cost reductions of 10-20% through simple actions.²⁴ Providing technical advice addresses this information failure, even where solutions tend to be no /low cost and where one might expect firms to act without assistance. Two-thirds of the savings generated by business implementing advice received through ENWORKS relates to simple, low or no-cost actions or changes. Furthermore 90% of businesses say they will implement some, or all, of the advice they have received, with 85% saying they expect the impact of implementation to be greater than anything they would have done in the absence of the advice received.²⁵ This suggests that this type of information failure persists, with business support provided in this area being valued highly by beneficiary companies.

2.3.3.4 Level 4: Advanced identification and appraisal of RE improvements (cost/benefit)

In order to progress beyond a reliance on external assistance with technical auditing of the production process and to generate a pipeline of resource efficiency investment possibilities, businesses need to consider the use of more formal environmental management systems. BIS (2010) estimates indicate that it takes longer than two hours of management time to find out how to save £90 on annual energy bills and implement the required action²⁶. This provides some explanation for low levels of resource efficiency implementation in micro and small businesses, where there are significant and competing demands for management

²³ <http://www.onenortheast.co.uk/page/envirowise.cfm> Envirowise survey conducted by Ipsos MORI during April and May 2006. A total of 751 interviews were undertaken with SMEs across Great Britain, from ten different industry sectors.

²⁴ Oakdene Hollis, DEFRA, 2007 (using ENWORKS data)

²⁵ ENWORKS 2010

²⁶ BIS, (2010) *Green Light? A review of regulatory barriers to small businesses' resource and energy efficiency*, Department for Business Innovation and Skills

time. Assistance to implement modest but automated resource monitoring systems as the basis for identifying future cost saving options would help to address this lack of capacity.

Despite the scale of potential identified savings from resource efficiency investment, the actual investments made by companies are still relatively small (only 10% of businesses in the North West have made a Resource Efficiency investment of over £10,000²⁷). This suggests that businesses do not have enough quantitative information regarding the scale of benefits and risks when large investment choices are considered.

To make more complex investment decisions about resource efficiency, especially where comparison of alternatives including non-resource efficiency options are required, businesses need considerably more information about the possible cost saving options. They may also require information and advice on the methods of choosing between options competing for the same investment resource (beyond simple rules of thumb based on payback periods). Considered against a global economic downturn and scarcity of investment capital, it is reasonable to assume that businesses choosing to make investments will select those options with the shortest payback periods, but based on those options for which they have a full appreciation of costs, risks and returns.

Assuming the business has access to potential investment resources, there may be real transaction costs of applying and negotiating loans to finance larger investments. This cost may be significant for smaller companies who may find it difficult to demonstrate likely future earnings and cost savings, and to obtain credit to fund non-essential investment opportunities. The lack of information on investment appraisal as the basis not just of management decisions but also as the basis of accessing finance is therefore critical.

The North West Business Survey identified a lack of capital as the largest barrier to implementing resource efficiency advice²⁸. It is also notable that 'financial reasons' are cited as an important issue in the BMG Research Survey (2006), in the EEF (2008) survey and by businesses in the NE in the evaluation of MIDAS (GHK, 2008).

2.3.3.5 Level 5: Integration of Resource Efficiency into investment and business planning; examining Resource Efficiency implications of every investment decision

EEF estimates that 80% of all product-related environmental impacts are determined during the product design phase²⁹, suggesting that the greatest return from resource efficiency considerations will be realised through embedding resource efficiency considerations throughout the product life cycle. Businesses that have a well developed understanding of resource efficiency but have not yet aligned this with other business investment decisions, and treat it as a discrete area for investment, are not necessarily realising the full benefits of resource efficiency investment. In these cases, improved corporate planning would generate benefits from integrating resource efficiency into product development choices and wider business planning decisions. Addressing information failure on methods for the integration of resource efficiency into strategic business planning might therefore afford further returns.

2.3.4 Co-ordination and Collective Action Problems

The problems of information failure essentially deal with businesses as single entities. Market failures also arise when considering the business community as a whole, and realising that business investment decisions are partly informed by assumptions about what competitors are doing. In this context what appears to be a rational decision taken by individual firms in isolation, actually leads to a worse outcome, than if firms had collaborated. The rational choice for the individual business is often to assume that their interests are best served through a 'free-rider' policy – let other firms deliver environmental benefits whilst continuing with business as usual. The problem is that if all firms behave the same way there

²⁷ BMG (2009) *Resource Efficiency Survey 2009: North West Businesses*. p.34

²⁸ BMG (2009) *Resource Efficiency Survey 2009: North West Businesses*. p.56

²⁹ EEF. (2009) *Resource efficiency – Business benefits from sustainable resource management Business opportunities from resource efficiency*. p18

is no environmental improvement and the associated costs could be greater than if the firm had taken some action.

This problem is similar to the classic ‘prisoner’s dilemma, where the rational choice for a prisoner acting in isolation delivers a worse outcome than would have been possible had the prisoners been allowed to collaborate, this is explained below in Evidence Box 1: Prisoner’s Dilemma

Evidence 1: Prisoner’s Dilemma

In 2007, the Economist published an article entitled “Playing Games with the Planet”,³⁰ which looked at a version of the “prisoner’s dilemma” as a way to overcome the Kyoto impasse and ensure countries signed up to the climate change challenge.

The “prisoner’s dilemma” sees two prisoners who have been accused of the same crime and are being held in separate cells, with no means to communicate with one another. The jailers attempt to persuade both prisoners to incriminate one another. If neither implicates the other, they are both sentenced to one year. If one implicates the other and the other stays quiet, the “traitor” is let free and the other sentenced to ten years, however if they both choose to implicate the other, they are each sentenced to five years in prison.

If one prisoner plans to keep quiet, the second has an incentive to incriminate him and thereby avoid prison (rather than spend one year in prison). If the first prisoner, however, is planning on betraying the second, it would be better for the second to also betray the other prisoner as they would both receive a shorter prison sentence (i.e. five years, rather than ten). The view is that a rational person would always betray the other prisoner. However, this would lead to both prisoners receiving a 5 year prison sentence rather than being set free if neither prisoner betrayed the other. On the other hand if they were allowed to co-operate neither would go to jail.

The Economist states that “*pessimistic souls assume the international response to climate change will go the way of the prisoner’s dilemma. Rational leaders will...neglect the problem, on the grounds that others will either solve it, allowing their country to become a free-rider, or let it fester, making it a doomed cause anyway*”. However, if everyone cooperated, the issue could be averted.

To put this into context of businesses engaging with resource efficiency measures, the management of Company X may feel that there is no need to reduce their company’s environmental impact because:

- other companies with, for example, higher energy consumption will take action, reducing greenhouse gas emissions, without Company X having to take costly actions to reduce their resource use; or,
- no companies are taking action and, therefore, Company X sees no reason to make investments because the reductions they could make would not make a big enough difference to the environment to warrant action.

A policy response is to improve collaboration between businesses such that they understand the shared benefits of individual actions. A second response is to use subsidies and penalties to change the incentive structure. In practice, penalties are more difficult because of the legal requirements. Subsidies might be used for example to encourage collaboration, such as shared access to better information. There are examples of this approach yielding very positive results in, for example, the aerospace industry through using collaborative agreements to support innovation / R&D projects.

Promoting collaboration also holds the possibility of improved resource efficiency by demonstrating among at least some businesses that the returns to investment are greater than the costs saved in taking no action, even if the majority of businesses do not take action. This suggests that policy responses should be designed to identify and promote businesses that have recouped their investment costs in resource efficiency. Both of these responses are arguments for ‘resource efficiency clubs’ for businesses.

³⁰ The Economist (September 27th 2007) “Playing games with the planet”

Further evidence is provided in Evidence Box 2: Resource Efficiency Clubs (RECs).

Evidence 2: Resource Efficiency Clubs (RECs)

Resource Efficiency Clubs were developed in the mid-1990s (when they were known as Waste Minimisation Clubs), involving small groups of companies in a specific geographical area. Companies were encouraged to develop programmes to improve resource efficiency, primarily through training, often utilising an external expert over a one to two year period.

Between 1992 and 2004, approximately 150 clubs were in operation, supporting 5,222 companies with savings of circa. £56m³¹. Between 2005 and 2008, Defra provided £5 million funding to support the establishment of a number of innovative Resource Efficiency Clubs (RECs), with finance channelled through Envirowise. In 2008, Government funding for the programme ceased.

Over the course of the 2005-08 programme, applications were made across all English regions, reviewed by Envirowise Regional Managers and a regional development agency representative so that important geographical or sectoral elements within regions could be addressed. Generally clubs targeted either a geographical location with a central meeting point, or a specific sector within a larger geographical area. Each company member would receive resource efficiency advice through club meetings, networking opportunities and events, in addition to more tailored, one-to-one advice with the club's leader or technical advisor.

Critical Review

A critical review in 2010³² of the UK REC programme between 2005 and 2008 identified 70 funded RECs with 1,330 business involved. The review identified a total of £50 million potential savings identified, with £25 million achieved by the end of 2008. For every £1 of grant budget allocated, £5.80 of cost savings were realised.

Following the end of funding post 2008 there were approximately 30 RECs still in operation in 2010, despite the lack of funding, financed by business club members.

2.3.5 Lessons from Behavioural Economics

The increasing application of behavioural economics in economic policy also challenges the conventional analysis based on a business-by-business perspective. In the case of resource efficiency, two key lessons are:

- Emphasise the costs of resource inefficiency rather than the potential gains from resource efficiency. People are loss averse and take potential losses more seriously than potential gains. If resource efficiency investment is presented to companies as a potential gain rather than avoided loss, action may be less likely.
- Generate formal commitment from companies to implement resource efficiency advice. There is ample evidence that people are much more likely to take action when they have made a commitment to do so.

2.4 Policy Rationale

Supporting companies to reduce their exposure to environmental risk, reduce energy and material use and manage their carbon footprint fits strongly with the major regional and national strategies, particularly:

The programme directly contributes to the *UK Sustainable Development Strategy: Securing the Future*. The strategy identifies sustainable consumption and production, energy efficiency and climate change as key priority actions; with resource efficiency, waste management and energy efficiency as a key activity. Through improved resource efficiency and reduced environmental risk this programme will directly contribute to these objectives.

³¹ Mattson et al. Op Cit.

³² Mattson et al. Op Cit.

Through its coordination and central management team activity (outlined in 2.1) and its direct support to businesses, the programme contributes to *Rising to the Challenge – A Climate Change Action Plan for England’s Northwest 2007- 09* which states that there is a need to ‘Realise a ‘step change’ in the effectiveness of regional and national business support organisations to deliver clear, co-ordinated advice and support to business on resource efficiency, sustainable transport planning and climate change risk & opportunities’. Additionally, the programme was recognised as a contributor to the work of the North West Climate Change Action Plan Board, which ENWORKS sits on, and reports progress against this objective.

Supporting companies to be more resource efficient meets the *Region’s Sustainable Development Framework Action for Sustainability* which identifies the “*prudent use of resources as a key objective for the region.*” There is also a clear link to the *Regional Waste Strategy 2004* – which has an aim “*to reduce waste generation, lessen the environmental impacts of waste production, improve resource efficiency, stimulate investment and maximise the economic opportunities arising from waste.*” Further, the programme links to the *NWDA Innovation Strategy*. The strategy highlights the need “*to focus both on specialist activity which pushes the region forward in a new and dynamic way and on linking innovation into all the other economic drivers which support the competitiveness of the region.*” *In addition it looks to “improve productivity and reduce costs, promote networking”.*

Further, the NW Competitiveness Strategy also identifies the link between environmental impact and competitiveness and looks to focus on interventions, which will improve efficiency, decrease costs, and ensure improvements in growth and employability capacity. This programme will both reinforce and quantify these linkages through practical action.

All NWDA Sub-Regional Action Plans also make reference to the need to promote sustainable consumption and production. Some of the NWDA’s Sub-regional Partnerships (SRPs) specifically reference the previous Northwest Waste Minimisation Initiative (delivered by ENWORKS) as their main delivery vehicle. The programme was also recognised as a mechanism for engaging with SRPs regarding energy efficiency and climate change to ensure effective and efficient delivery with a consistent and coherent message to businesses across the region.

In addition, the programme supported a number of North West Regional Economic Strategy Actions, specifically:

- *Action 1: Transforming Business Link* to become a key enabler of high productivity and enterprise in the region. The programme was intended to undertake systematic skills and knowledge transfer activity with Business Link Northwest (as part of the process by which Business Link took responsibility for Environment Connect) in order to improve the Business Link offer to companies in the region, and increase signposting between ENWORKS and Business Link. The programme directly supported the simplification agenda, reducing the reported confusion arising from perceived duplication of environmental services (national and regional). The programme was also intended to provide a coordinated single entry point, which is integrated with Business Link NW and the RDA’s other business support structures.
- *Actions 4; 8 and 27: Cluster support programmes in priority sectors:* by focussing on priority sectors and working with cluster organisations to provide support and skills development. Whilst not exclusively targeted at priority clusters. Support was provided through the programme’s Environment Connect service to enable cluster organisations to promote the suite of resource efficiency support through a conduit which is linked directly to Business Link.
- *Action 24: Implementation of the Regional Climate Change Action Plan:* by improving energy efficiency and reducing the total carbon emissions through material and utility efficiency, due to the embedded carbon contained. The programme was intended as a major contributor to reducing green house gases through resource efficiency in the region.

- *Action 25: Develop world class management/leadership, corporate social responsibility and environment management skills:* through supporting companies with environmental CSR issues. The programme aimed to move companies beyond legal compliance, enabling them to identify, realise and achieve the benefits of looking at their environmental aspects in broader terms. The programme was therefore seen as a contributor to increasing the skill base in environmental management and increasing the level of CSR in the region.
- *Action 35: Develop and implement the North West energy programme* – the programme aimed to promote energy efficiency and improve the energy efficiency of businesses in the North West. The impact of behavioural change in companies and individuals brought about through the programme was recognised as a contributor to the action 3 of the Climate Change Action Plan (CCAP).regional energy programme.

2.5 Programme Expenditure

2.5.1 Total Programme Spending

The programme was funded primarily through two separate sources of funding: Single Programme provided by the NWDA and European funding through the European Regional Development Fund. Provision of ERDF funding for the programme was contingent upon match funding from the public or private sector (i.e. the NWDA Single Programme funds). In addition to these two core funding streams, the programme attracted a small amount of income, for example from the private sector through contributions to the support provided; taken together with in-kind and other sub-regional funding, this totalled £262,299. Table 2.3 provides a full funding breakdown.

Table 2.3 Programme Funding Sources and Spending , 2007-2010

| Funding Source | Total Target Spend | Total Actual Spend |
|------------------------------------|--------------------|--------------------|
| NWDA Single Programme | £6.129,192 | £6,102,263 |
| ERDF Funding | £2,483,872 | £2,441,506 |
| Private, In Kind and Other Funding | £287,714 | £262,299 |
| Total | £8,900,777 | £8,806,067 |

The programme deployed this funding by effectively delivering two projects: one Co-financed by ERDF and NWDA funds (50% intervention rate from each) supporting ERDF-eligible SMEs; and one funded by NWDA, with a small amount of private / in kind / other funding, supporting ERDF-ineligible companies.

Table 2.4 Funding deployment 2007-2010

| Programme element | Total Target Spend | Total Actual Spend |
|---------------------------------|--------------------|--------------------|
| NWDA / ERDF Co-financed project | £4,967,744 | £4,883,012 |
| NWDA-only project | £3,933,033 | £3,923,055 |
| Total | £8,900,777 | £8,806,067 |

Source: ENWORKS Monitoring Data

As mentioned above, under the NWDA-only project, ENWORKS sub regional delivery partners were encouraged to seek contributions from ERDF-ineligible companies (mainly non-SMEs) where they judged the companies had the ability to pay and where seeking a contribution was not likely to result in the company disengaging from the project. On the whole, attraction of private sector revenue into the project was problematic, with most companies unwilling to contribute to the cost of support provided or failing to make payments as agreed thus requiring additional resources from delivery partners in order to recover these costs, often cancelling out the income generated. Most sub-regions, therefore, did not pursue this option to any significant level. Furthermore, the willingness of SMEs to contribute



to the cost of support could not be tested as the application of regulations governing the use of European funding prohibited the possibility of ENWORKS attracting contributions from SME beneficiary companies without reducing grant.

2.5.2 Programme Spending Analysis

The following section presents a breakdown of how programme funding was used to administer and deliver the programme through a central management team and a range of sub-regional providers. Overall, programme actual spend very closely followed the programme target spend.

Table 2.5 presents a breakdown of programme spending.

Table 2.5 Breakdown of Total Programme Spending

| Programme function | Total Actual Spend | % of Total Spend |
|--|---------------------------|-------------------------|
| Central Management and Coordination Team | £1,043,301 | 12 |
| Centrally Managed Projects (Supporting Delivery) | £592,452 | 7 |
| Centrally Managed Projects (Separate Activity) | £892,088 | 10 |
| Sub-Regional Delivery | £6,278,226 | 71 |
| Total | £8,806,067 | 100 |

Source: ENWORKS Monitoring Data

Central Management Team costs accounted for 12% of the overall programme spend, an additional £582,453 was spent centrally in order to support sub-regional delivery partners. This activity includes: Efficiency Toolkit; Pilot projects – e.g. Smart meters; Regional Capacity Building; Video case studies; Toolkit data analysis; Marketing to Stakeholders; Technical Seminar; and Green Intelligence.

3 EBS Programme Outputs and Beneficiary Experience

3.1 Programme Outputs

The following section considers EBS programme performance in terms of the outputs and outcomes achieved against those required by NWDA & ERDF. Table 3.1 presents an overview of final reported outputs for the EBS Programme.

Table 3.1 Final Reported Programme Level Outputs

| Output | Target | Actual | % Achieved |
|--|-----------|-----------|------------|
| Businesses assisted with resource efficiency | 3139 | 3507 | 112% |
| Businesses assisted with corporate responsibility | 705 | 979 | 115% |
| Number of businesses assisted | 3329 | 3,655 | 110% |
| <i>Business Assists (Universal)</i> | 2881 | 3142 | 109% |
| <i>Business Assists (Intermediate)</i> | 448 | 513 | 115% |
| Number of applications of low carbon technologies | 160 | 243 | 152% |
| Number of businesses involved in supply chain projects | 10 | 8 | 80% |
| Number of adults undertaking work based training | 583 | 838 | 145% |
| Planned and actual cost savings per annum (£m) | 60 | 77 | 129% |
| Material savings (tonnes) | 170,000 | 219,800 | 129% |
| CO ₂ Savings (tonnes) | 250,221 | 475,570 | 190% |
| Water Savings (m ³) | 2,759,800 | 3,953,530 | 143% |
| Waste Diverted from Landfill (tonnes) | 130,490 | 282,810 | 217% |
| Jobs created | 163 | 158 | 97% |
| Jobs safeguarded | 338 | 529 | 157% |
| Sales increased (£m) | 28 | 35 | 123% |
| Sales safeguarded (£m) | 57 | 68 | 120% |

Source: ENWORKS Monitoring Data

A summary of the wide range of changes to the terms of delivery and outside influences on delivery of the programme is contained in Annex 2.

Note that the main output which is the subject of this evaluation is the 3,507 businesses that have been assisted with resource efficiency. The 979 companies who received advice but did not receive sufficient resource efficiency advice to quantify resource efficiency opportunities are not part of this study's impact assessment.

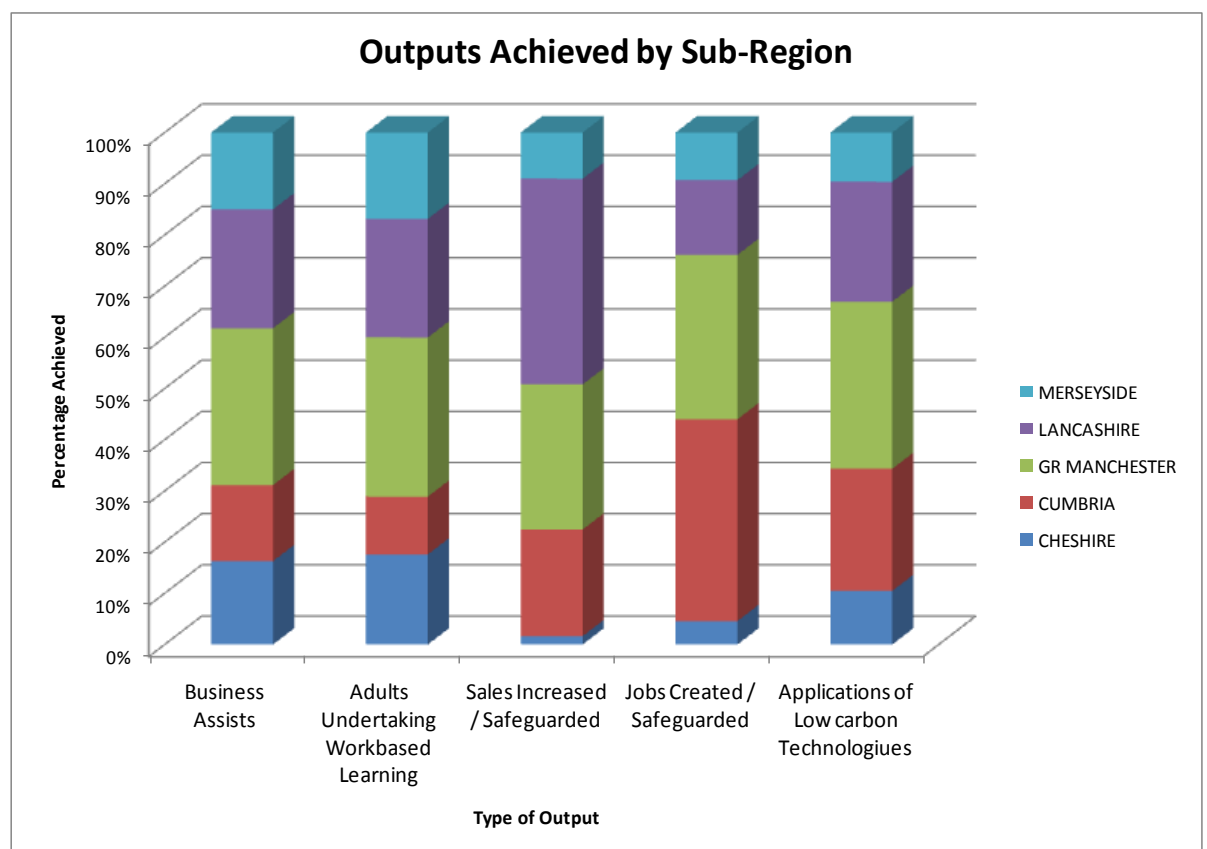
Table 3.1 illustrates that the programme has been highly successful in achieving virtually all agreed outputs, with particular success in achieving levels of resource savings:

- The programme has improved the performance of a large number of companies in the region and has also been highly successful in providing assistance to companies, both in terms of improving their resource efficiency and corporate responsibility;

- The programme did not meet the target relating to the number of businesses entering new supply chains, though this target was a relatively minor one in the context of the overall programme;
- The programme fell marginally short of meeting the target for jobs created, but over delivered by 57% on the target for jobs safeguarded. This is perhaps indicative of the fact that the 2007-10 EBS Programme has been delivered during a period of recession, with job losses and many companies increasingly risk averse, seeking to consolidate their market position rather than expand into new areas. Furthermore, this is reflected in the fact that the result for increased sales was above target, whereas that for sales safeguarded was significantly higher than target;
- The environmental outputs from the programme have been significant, and have been far greater than the target outputs; and,
- **Outputs illustrate, in aggregate, a set of assisted companies that have maintained or increased their economic activity whilst reducing their environmental output.**

Figure 3.2 outlines the percentage of programme outputs achieved by each sub region; in the main, the profile and balance of activities across all sub-regions can be seen to be similar.

Figure 3.2 Outputs Achieved by Sub-region



Source: ENWORKS Monitoring Data

3.1.2 Output Data by Sub Regional Delivery Partner

Table 3.2 outlines final targets and outputs achieved for each of the sub-regional partners. Where actual performance is on plan or greater the actual figure is highlighted green, where it is less than 10% below target it is highlighted amber. Figures highlighted red are more than 10% below target.

Table 3.2 Output Breakdown by Sub-Region

| | Cheshire | | Cumbria | | Greater Manchester | | Lancashire | | Merseyside | | Innovation Projects |
|--|----------|--------|---------|--------|--------------------|--------|------------|--------|------------|--------|---------------------|
| | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Target | Actual | Actual |
| Number of businesses assisted (universal) | 311 | 533 | 233 | 574 | 792 | 1,119 | 532 | 776 | 380 | 581 | 120 |
| Number of business assisted (intermediate) | 70 | 151 | 36 | 49 | 159 | 167 | 90 | 199 | 95 | 49 | 13 |
| Number of businesses involved in supply chain projects | 4 | 0 | 4 | 1 | 12 | 4 | 40 | 3 | 4 | 0 | 0 |
| Number of adults undertaking workplace training | 104 | 120 | 65 | 77 | 177 | 212 | 130 | 158 | 115 | 115 | 191 |
| Sales increased (£m) | 4.43 | 0.85 | 2.65 | 4.77 | 7.41 | 9.60 | 5.49 | 10.63 | 4.89 | 4.20 | 7.4 |
| Sales safeguarded (£m) | 9.91 | 0.71 | 5.94 | 15.11 | 16.55 | 17.46 | 12.27 | 27.75 | 11.06 | 4.42 | 0 |
| Jobs created | 32 | 0 | 26 | 55 | 56 | 50 | 32 | 29 | 35 | 24 | 0 |
| Jobs safeguarded | 64 | 30 | 55 | 204 | 109 | 161 | 76 | 67 | 70 | 37 | 30 |
| Number of applications of low carbon technologies | 29 | 25 | 12 | 57 | 58 | 78 | 35 | 56 | 33 | 23 | 4 |

Source: ENWORKS Monitoring Data (NB. The figures shown in the Innovation Projects column represent the full activity carried out by the projects. Any duplication of activity, e.g. businesses also assisted by sub-regions, have not been removed here)

Overall, Table 3.2 and Figure 3.2, illustrate the following:

- Business support outputs were, on the whole, successfully achieved. As reflected in the target set, Greater Manchester and Lancashire achieved the greatest number of business assists. Only Merseyside failed to reach the target set for Business Assists (intermediate);
- Table 3.2 highlights that all sub-regions did not reach the target for businesses involved in supply chain projects; this highlights the fact that the inclusion of this output target in the EBS Programme was not a main focus of delivery activity;
- In terms of sales increased and safeguarded, performance in Cheshire and Merseyside has been below target, in other sub-regions performance is strong, with considerable over performance in Cumbria and Lancashire; and,
- Similarly, Cheshire and Merseyside have underperformed in relation to jobs created and safeguarded – although in Cheshire’s case this is despite substantial over-performance on business assists, which suggests a substantially lower than average economic outcome achieved by resource efficiency support to individual companies in this sub-region.

However, it should be noted that the central management and coordination function of this programme was set up to accept variance in the nature of achieved outputs across sub-regions, based on local circumstances (industrial structure; geography; previous knowledge/exposure to resource efficiency information; project delivery capacity; etc.). The emphasis was on ensuring that sub-regional delivery partners were harnessed to deliver an overall aggregate output performance which met the regional output targets. This was done through identifying best practice in delivery and promoting it to raise the effectiveness and efficiency of support across the partnership.

3.2 Beneficiary Experience and Impacts

The evaluation has used two different approaches to gauge beneficiary experience and impacts of the EBS programme:

- A longitudinal survey of 50 companies with savings identified in the ENWORKS Toolkit: to measure their understanding of resource efficiency, experience of the ENWORKS service, and the behavioural impact of the advice provided on business behaviour and performance. This group included companies who may have gone on to access only ‘light touch’ support and those who went on to access ‘intensive’ support; and,
- Analysis of the ENWORKS Toolkit: completed between 2007- 2010, this real time tracking online software calculates potential and realised economic and environmental impacts of the advice provided for individual companies by ENWORKS.

The following section provides analysis and findings for each approach in turn before, where possible and where overlaps exist, triangulating the findings of both to further verify and validate results.

3.2.1 Purpose and Approach of the Beneficiary Surveys

The survey of beneficiaries was undertaken twice. This enabled a longitudinal analysis of the beneficiary experience and economic impact of the programme to be undertaken. In addition, this approach enabled comparison to be carried out between a range of issues which would not have been possible through a single survey approach.

Between March and April 2009 GHK carried out beneficiary interviews with a cohort of 50 companies recently engaged with the ENWORKS EBS programme through a sub-regional delivery partner. Analysis of beneficiary data provided by sub-regional providers enabled a cohort of companies to be identified that had received an initial scoping visit through the EBS programme and had been offered further support to implement savings. This process, therefore, filtered out those companies who had only received light-touch support (see Figure 2.5) and ensured that the cohort was a sample of companies which the EBS

programme was set up to assist and would be expected to have targeted a sustained relationship with due to the significance of identified savings.

The main aim of the survey was to:

- Examine the cohort's attitudes to, and understanding of, resource efficiency;
- Understand their reasons and expectations for contacting ENWORKS;
- Assess their views regarding the quality of assistance they had received; and,
- Gain an overview of their intentions to make resource efficiency improvements and/or make investments based on the assistance they had received to date.

A Second Beneficiary Survey was carried out with the same cohort between June and July 2010. The purpose of the second survey was to:

- Reassess the cohort's attitudes and understanding of resource efficiency, noting any changes and implications for the programme;
- Understand whether beneficiary perceptions relating to quality of advice received from ENWORKS had changed;
- Examine what resource efficiency action and investment had been undertaken, and to what extent this could be attributed to ENWORKS advice; and,
- Collect data from beneficiaries in order to enable an assessment of the net economic impact of the programme to be calculated.

Of the original cohort of 50 companies, interviews were completed in the second survey with 21. The reduction in the total number of companies taking part results from a number of reasons:

- staff changes resulting in no suitable individual able to comment on the issues raised in the questionnaire;
- some companies were unable to spare time to complete the survey;
- a small number had not received intensive support from ENWORKS advisors; therefore they had not had enough interaction with ENWORKS advisors to complete the survey;; and,
- some companies did not accept further support offered to them through the EBS programme beyond the identification of opportunities, and did not want to share data regarding implementation of identified savings where they felt ENWORKS had not played a key role in implementation. Interestingly some of these companies stated that they had implemented or partially implemented advice.

A copy of the first and second beneficiary surveys is contained in Annex 6.

3.2.2 Cohort Profile

Table 3.3 compares the cohort profile for the first and second Beneficiary Surveys. As the table illustrates, the number of businesses in the cohort willing to take part in the survey reduced between the first and second surveys but the breakdown of companies by size band remained roughly proportionate to the first survey.

Table 3.3 Cohort Profile by Firm Size

| Size | No. in Survey Cohort | | % of Total Cohort Surveyed | |
|--------|----------------------|----------------------|----------------------------|----------------------|
| | <i>First Survey</i> | <i>Second Survey</i> | <i>First Survey</i> | <i>Second Survey</i> |
| Micro | 6 | 2 | 12 | 10 |
| Small | 13 | 5 | 26 | 24 |
| Medium | 28 | 12 | 56 | 57 |

| | | | | |
|-------|----|----|-----|-----|
| Large | 3 | 2 | 6 | 10 |
| TOTAL | 50 | 21 | 100 | 100 |

Source: First and Second Beneficiary Surveys, GHK

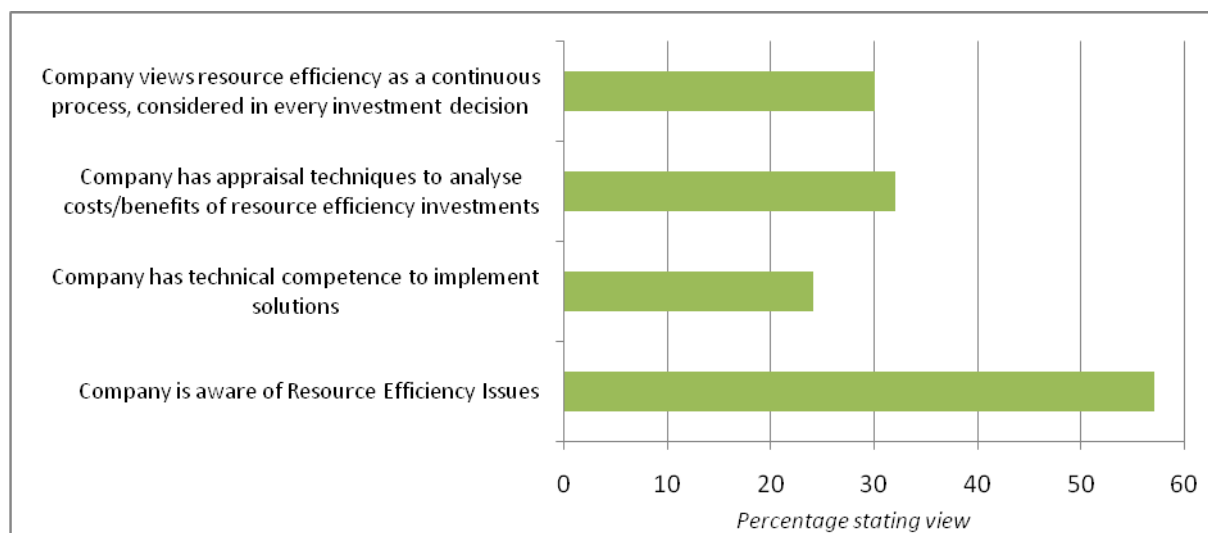
When considered against the overall business population that have received support through the ENWORKS programme (companies with savings identified and entered in to the Toolkit) the following further observations can be made regarding the first and second survey:

- The share of businesses in the sample cohort is fairly close to the proportion of companies in the Small and Medium size bands. Taken together, these size bands account for 73% of the total population, and 82% and 81% of the total cohort surveyed in the first and second surveys respectively;
- The share of Micro sized companies who are part of the survey cohort is about 10% smaller than the proportion of the total population. This reflects the fact that there are relatively few micro sized companies where substantial resource efficiency savings have been identified; and,
- Conversely, the share of large companies in the survey cohorts is larger than the proportion in the total population, reflecting the larger identified savings in that business category.

3.2.3 Awareness and Attitudes towards Resource Efficiency

As part of the analysis of the programme rationale, the survey tested the extent to which companies understood the issues relating to resource efficiency; to what extent their company had technical competency to identify and implement solutions; how effectively resource efficiency decisions could be appraised; and to what extent resource efficiency had become embedded, or integrated, in their companies' operations. Figure 3.3 illustrates the share of companies interviewed that stated they strongly agreed with statements testing these issues.

Figure 3.3 Beneficiary Judgements Regarding Quality of Advice Received



Source: Second Beneficiary Survey

The evidence in Figure 3.3 is interesting when one considers it in terms of market failure, it suggests that a large share of companies who have received assistance for a sustained period through the programme have a well developed level of knowledge of resource efficiency issues (although over 40% indicated a lack of awareness). Therefore these companies do not suffer from basic information failure any more, but rather require technical assistance to understand how to implement resource efficiency improvements and investments in their company. Interestingly, though several beneficiaries interviewed

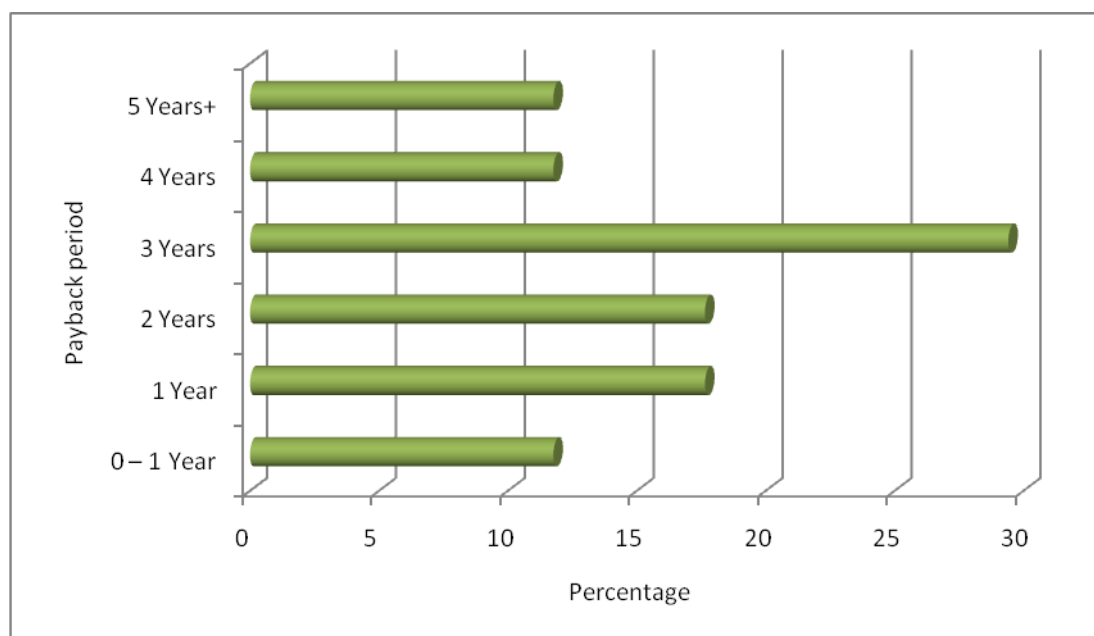
suggested that the issue of implementing resource efficiency improvement is just as much one of capacity as it is technical competency.

Moreover, the business survey suggests that only a minority of businesses have effective investment appraisal techniques to undertake cost-benefit analysis and have embedded resource efficiency in wider business planning. This is consistent with a business survey conducted in the North West by NWDA³³ which examined the nature of information failure. The study indicated that general awareness of resource efficiency issues was rising, but companies still required more specific information relating to how to make effective resource efficiency investments and how to accurately appraise the benefits. Furthermore the study indicated that companies undervalued the potential impact of resource efficiency improvements.

For the vast majority of companies surveyed, the expected optimum payback period for resource efficiency investments (i.e. the period required before the investment costs are recovered through additional income) does not change compared with other types of investment the business makes. Optimum payback periods expressed through the business survey are illustrated in Figure 3.4. It is also worthy of note that, when asked to consider the most important drivers which trigger changes in the operation of business practices, most companies highlighted legislative requirements and the importance of maintaining standards demanded by clients. This suggests that whilst companies may not see resource efficiency as an issue embedded in every investment decision considered by the company, it competes with other investment opportunities on the same criteria.

In addition, although respondents state that they recognise the importance of resource efficiency, few have plans to implement opportunities, and where plans do exist they are heavily concentrated in low and no-cost improvements, with small environmental and economic impact, highlighting the importance of support to assist with the development of more significant opportunities.

Figure 3.4 Optimum Payback Period for Resource Efficiency Investment

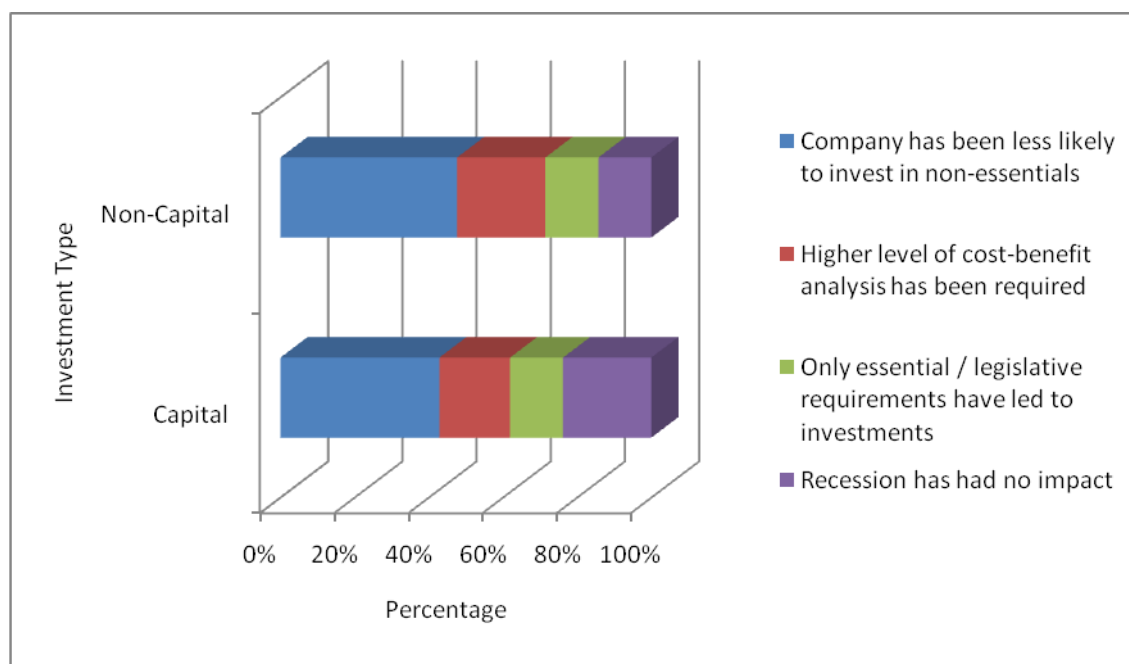


Source: Second Beneficiary Survey

In addition to assessing the way in which resource efficiency investment is perceived by beneficiaries, the business survey also sought to determine what impact, if any, the recession had had on investment decisions. The results are illustrated in Figure 3.5.

³³ BMG Research . (2006). Resource Efficiency Support in the North West. North West Development Agency

Figure 3.5 The Recession and Investment Decisions



Source: Second Beneficiary Survey

This analysis indicates that there is little difference for companies between investment decisions which relate to capital investment and those which involve non-capital investment. In general, the most significant impact appears to have been a reduction in general spending on non-essentials. Clearly, the prospects for further investment in resource efficiency for these companies will be determined by whether resource efficiency is seen as non-essential expenditure, and at what point companies determine that the commercial environment is such that non-essential investment can be considered.

3.2.4 Business Motivations for Engagement

Both the first and second surveys sought to ascertain beneficiary perceptions regarding the quality of service received through the programme. Additionally, the first survey provided an overview of business aspirations prior to engagement with the programme. Table 3.4 outlines the percentage of companies in the first survey who engaged with ENWORKS hoping to receive support to identify resource efficiency opportunities, and those who were seeking advice on implementation of opportunities that they were already aware of.

Table 3.4 Business Objectives when engaging with ENWORKS

| Size | % Seeking Assistance to <u>Identify</u> Opportunities | % Seeking Assistance to <u>Implement</u> Opportunities |
|--------|---|--|
| Micro | 84 | 33 |
| Small | 77 | 15 |
| Medium | 58 | 18 |
| Large | 100 | 0 |

Source: First Beneficiary Survey

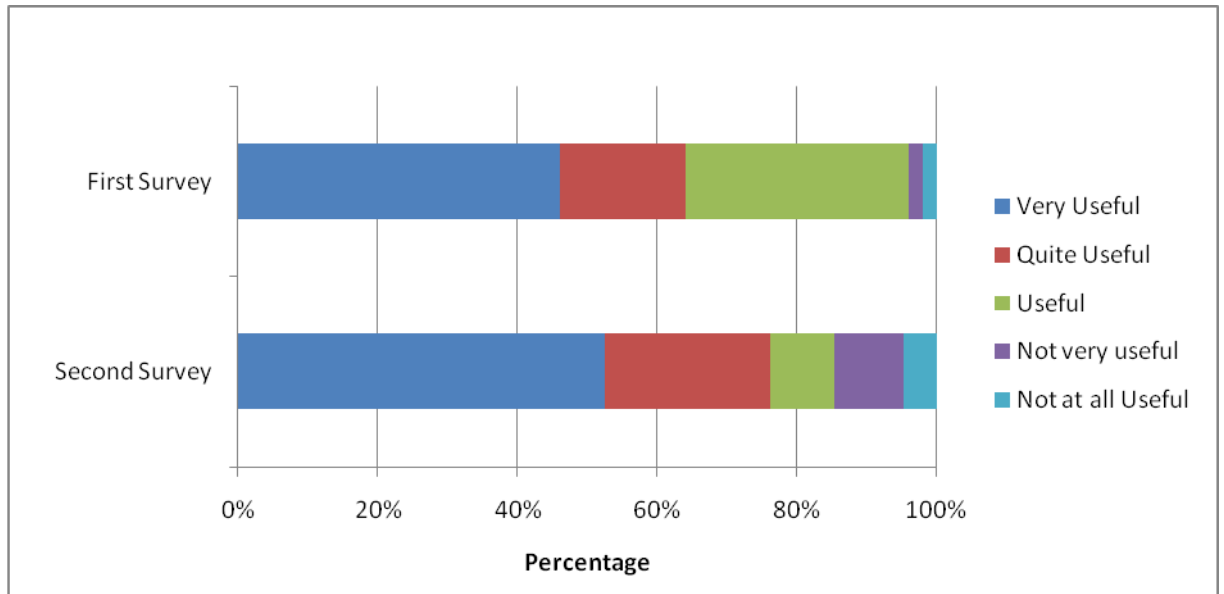
Table 3.4 clearly shows that the overwhelming number of companies, regardless of size and who received support through ENWORKS, did so in order to identify opportunities that they were unaware of, rather than implement opportunities that they had previously identified (and required technical support to implement). **This adds further evidence regarding the nature of the information failure related to resource efficiency, suggesting that companies may recognise that they need to develop greater knowledge of resource**

efficiency but that they do not have the capacity or expertise to effectively engage with resource efficiency issues.

3.2.5 Quality of Service provided

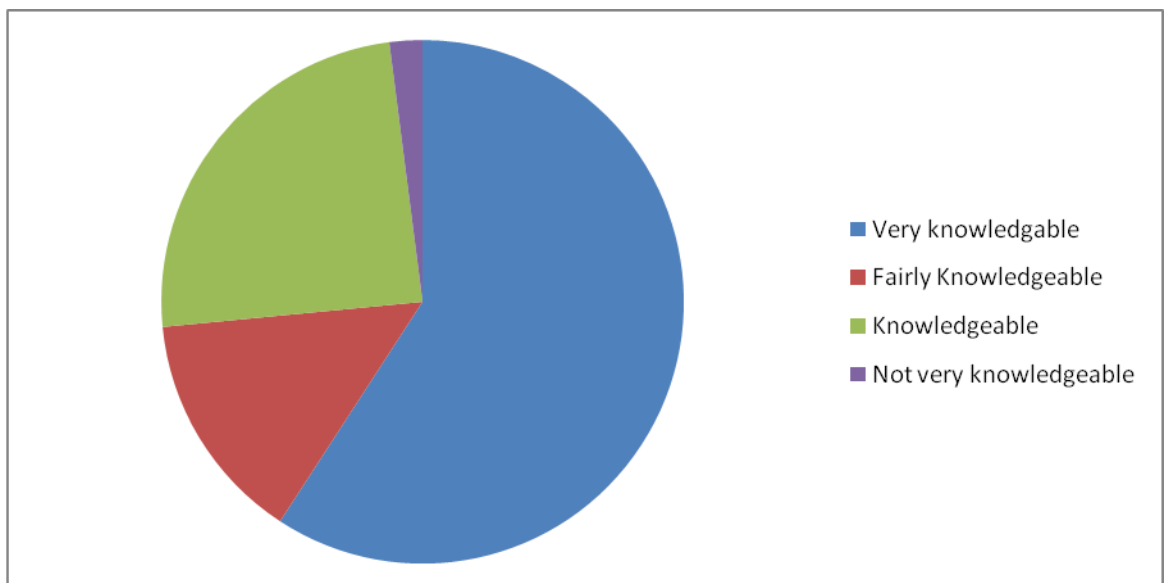
Figure 3.6 illustrates the initial opinions expressed by the cohort of businesses at the first interview stage, compared to those expressed during the second interviews. As is clear the overwhelming majority of those surveyed found the advice to be *very useful* or *quite useful*, whilst there was a slight drop in this figure between the two surveys, it is clear that the advice received has proven to be of a high standard maintained over time.

Figure 3.6 Beneficiary Opinions Regarding Quality of Advice Received



Source: First & Second Beneficiary Surveys

Figure 3.7 Level of ENWORKS Advisor Knowledge



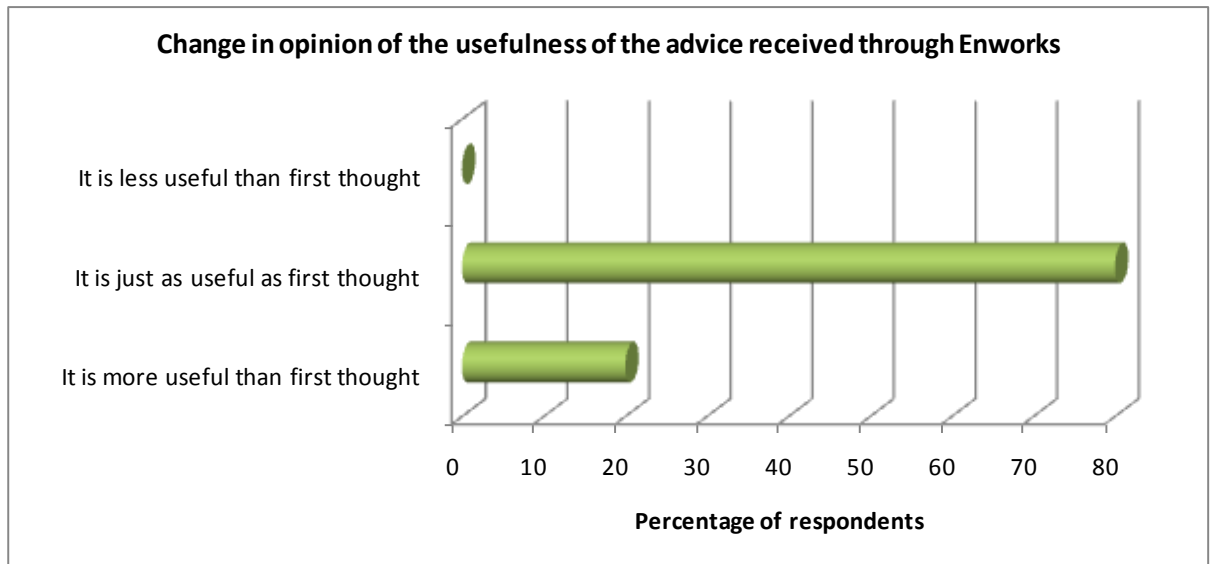
Source: First Beneficiary Survey

From Figure 3.7, it is clear that the quality of the service provided by ENWORKS has been due, in no small part, to the level of knowledge that the individual advisors have been able to bring to the beneficiary companies. Only two of the companies interviewed believed that the

advisors were *not very knowledgeable*. This provides clear evidence that companies have found the service very useful.

As part of the second survey beneficiaries were asked whether they thought the service received through ENWORKS was as useful as they first thought. Figure 3.8 provides an illustration of beneficiary responses.

Figure 3.8 Reconsideration of the Quality of Advice Received



Source: Second Beneficiary Survey

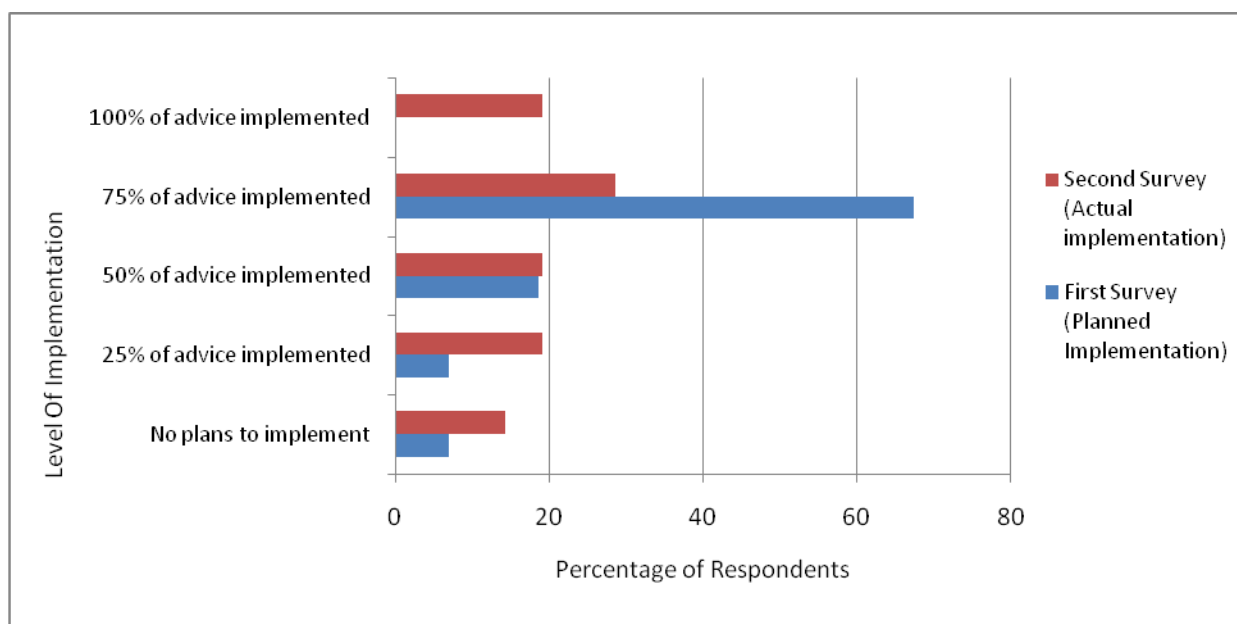
As Figure 3.7 illustrates, the large majority, nearly 80%, of beneficiaries rated the advice received as *just as useful as first thought*; this clearly indicates that the advice has been both relevant and accurate. Accompanying comments from beneficiaries in relation to the advice received indicate that, even where actual investments in resource efficiency improvements have not been made, that the advice received from ENWORKS advisors will continue to be considered. This issue is dealt with in more detail in the following sub-section of this paper.

3.2.6 Implementation of Advice

Figure 3.8 clearly shows that the majority of companies receiving advice through the programme have taken action and implemented some of the suggested improvements. For most companies surveyed, this involved a mixture of capital and revenue expenditure. As the focus of initial contact with beneficiaries is to identify no/low cost solutions, which involve only a small investment of staff time, this was to be expected. The few companies that did not implement the advice, and have no plans to do so, all stated that the recession was the critical factor which forced them to reappraise their investment priorities.

What is also of significance is the fact that only 19% of those interviewed had implemented 100% of the advice received through ENWORKS, suggesting that further assistance may be required to assist companies with technical and/or capacity issues regarding implementation of more complex improvements which go beyond low/no cost improvements. Indeed, the focus of support from this programme is to provide assistance over a long period, encouraging implementation of a rolling programme of improvement at a pace with which the company is comfortable. It should be noted, however, that this finding contrasts with the first survey, during which no company stated that they planned to implement all of the advice received, therefore the practical reality has been more positive than planned.

Figure 3.9 Proportion of Advice Implemented



Source: First and Second Beneficiary Surveys

3.2.7 Main Behavioural Impacts

Implementation of ENWORKS advice resulted in a range of impacts for beneficiary companies. As part of the Second Beneficiary Survey respondents were asked to describe the main impacts of advice received on their company. The answers are summarised in Table 3.5.

Table 3.5 Main Impacts of Advice Received

| Main Impact | Number | % of respondents |
|---|--------|------------------|
| Resource Savings | 17 | 68 |
| Changes in operating processes and technology | 2 | 8 |
| Changes in product design, quality and price | 3 | 12 |
| Changes in sales / marketing | 2 | 8 |
| Changes in strategic management and decision making | 1 | 4 |

Source: Second Beneficiary Survey

This evidence suggests that beneficiaries recognise only limited organisational impacts, beyond financial savings from reduced resource use, following assistance through the programme. Toolkit analysis below (see Table 3.7) will illustrate the identified and achieved physical savings generated through the programme, but the longer term implications of the evidence presented above suggests that ENWORKS may need to engage in different ways, or communicate the benefits of resource efficiency improvements in different ways, in order to influence wider organisational changes in relation to resource efficiency which are required to embed the issue within wider investment decisions.

In addition, a range of unexpected impacts of the advice received were stated, indicating that contact with ENWORKS had developed capacity in relation to resource efficiency issues for some companies. These impacts included:

- Increased awareness inside the company of resource efficiency issues;
- Increased knowledge of how to implement resource efficiency improvements; and,
- Improved ability to appraise the impact of resource efficiency opportunities.

3.2.8 Implementation of Opportunities

The majority of companies implementing advice which required capital investment did so using existing reserves and savings, with two of the beneficiaries interviewed accessing a funding grant.

When asked about the expected payback period for the investment made to date, more than half of respondents indicated that the investment payback period was less than one year, with 80% of respondents stating that they expect to recoup their investment within 2 years. Considered alongside the fact that most beneficiaries stated that they expect the benefits from interaction with ENWORKS advisors to last 10 or more years this presents a compelling case for investment. Indeed, WRAP and Carbon Trust calculate persistence rates at up to 40 years for resource efficiency investments.

Standard economic impact assessment measures for business support programmes under the IEF methodology are: change in turnover, (less change in cost of sales) and increased employment attributable to the intervention. These issues were discussed with beneficiaries as part of the survey, resulting in the following findings and interim conclusions:

- Of those surveyed only three companies stated that their turnover was higher as a result of contact with ENWORKS;
- Similarly the impact on cost of sales has been low, with no beneficiaries reporting that this had changed as a result of the advice received; and,
- Of those surveyed, no companies reported increased employment as a result of any investment made / action taken.

These results are perhaps indicative of the nature of the action taken by most companies; this has been restricted to taking low/no cost opportunities to reduce costs, increasing profit rather than sales or employment and/or indicative of market failures or failures of internal business info management, i.e. cost savings have not been factored through? Not all of the advice has so far been implemented; and, where it has, this has only been completed recently preventing any immediate impacts from being reflected in economic performance. Reflecting on evidence presented in previous sections of this chapter the following issues should be considered:

- Most companies noted that the recession had halted investment in non-essentials, presenting the possibility that, whilst most had implemented some of the advice received through ENWORKS, they had concentrated on no/low cost opportunities;
- The impact of implementing the advice received through ENWORKS has not yet been fully realised by companies. Given how highly businesses regard the advice received they may be likely to implement further advice in the post-recession period, resulting in clearer, demonstrable economic impact.

3.3 Toolkit Analysis

At the time of this analysis, the ENWORKS Toolkit does not store the date at which the designated 'status' of individual resource efficiency opportunities changes; it does, however, capture the date opportunities are created, the date they were last updated and the date they were achieved. For example, a company may have identified some opportunities during the previous projects, and then accessed further support during this programme - the Toolkit would recognise the business as being registered in the previous project, with changes to the status of opportunities logged as they occur in the prevailing programme. Therefore it is readily possible to allow extrapolated analysis of an exact population of beneficiaries provided with assistance during the 2007-10 programme. Understanding aggregate change during the 2007-10 EBS programme is therefore problematic.

Furthermore, there was a period of overlap between the previous 2003-2007 ENWORKS resource efficiency projects and the 2007-2010 EBS Programme, this further complicates analysis of distinct projects directly and solely from the Toolkit, data must be analysed from

other project management systems concurrently to answer certain questions. This should be taken into account when considering the following analysis.

The following sub-sections of this chapter consider and compare Toolkit analysis for these two periods. This has been prepared in collaboration with the ENWORKS Central Management Team in order to ensure that analysis of each project period is as accurate as possible.

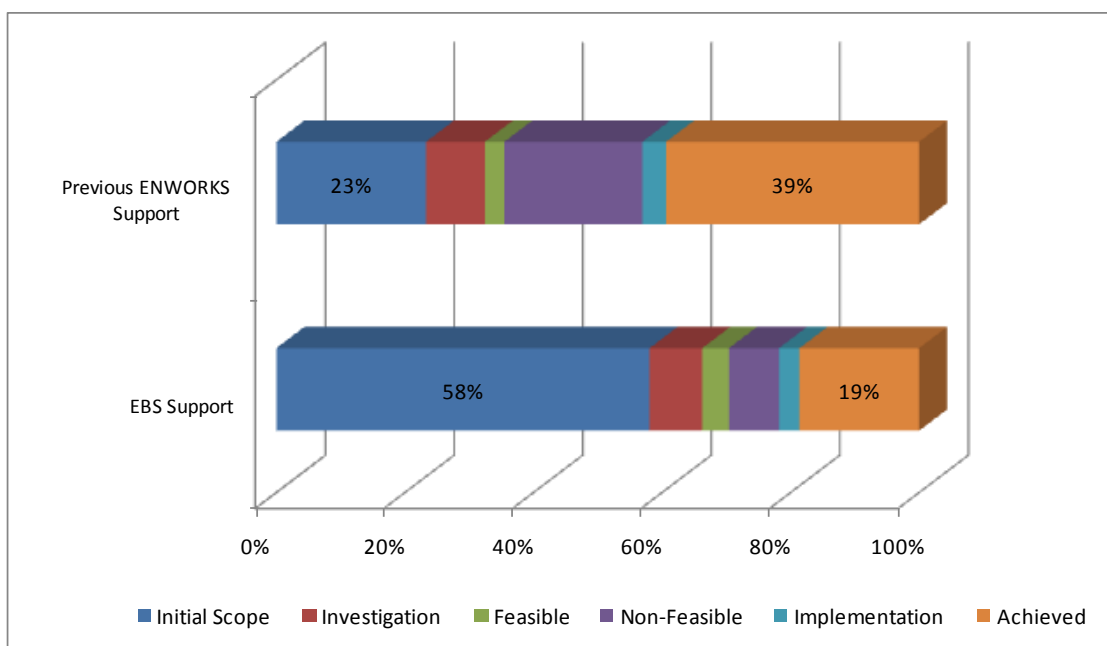
3.3.1 Status of Opportunities Identified

All identified opportunities are logged in the Toolkit at ‘initial scope’ status and, as they progress, their status is changed in the Toolkit. The following baseline analysis of Toolkit data should be considered:

- During the 2008-10 EBS programme a total of 19,201 opportunities were identified in 3,750 companies, approximately 5 opportunities per company.
- By comparison between 2003 and 2008 a total of 4,173 opportunities were identified among 1,231 companies, approximately 3 opportunities per company.

Figure 3.10 presents an overview of the status of the opportunities identified during the two periods.

Figure 3.10 Toolkit Status of All Companies



Source: ENWORKS Toolkit Analysis

This analysis illustrates the success of each period in converting identified opportunities to achieved improvements. For the 2003-07 support delivered through ENWORKS, 39% of opportunities were realised by beneficiary companies, with 19% achieved in the 2007-10 EBS Programme. There are a large number (just less than 11,000) opportunities identified in the 2007-10 EBS Programme which have not yet progressed past the initial scoping stage.

Comparison of the two periods illustrates that the projects delivered between 2003-07 were more successful than the 2007-10 EBS programme in terms of converting identified opportunities into achieved improvements. Whilst this analysis illustrates some initial success for the 2007-10 EBS Programme, it is more interesting in terms of the potential impact of remaining opportunities identified through the programme. For example, whilst 3,542 opportunities were progressed to achieved following the assistance received, there are still around 3,000 additional identified opportunities being investigated and/or implemented by companies in the region.

Given the period of financial turbulence within which the EBS Programme has operated it is highly likely that the share of opportunities identified through the EBS Programme that are implemented will increase. However without ongoing support it is unlikely that the full potential of the savings identified will be realised.

3.3.2 Type of Opportunities Identified

Table 3.6 outlines the type of resource efficiency savings made by the EBS Programme and previous ENWORKS support.

Table 3.6 Resource Savings by Type

| | Previous ENWORKS Support | EBS Programme |
|----------------------------------|--------------------------|---------------|
| CO ₂ Savings (tonnes) | 97,852 | 491,077 |
| Water (m ³) | 1,226,728 | 4,015,701 |
| Materials (tonnes) | 2,848,554 | 225,901 |
| Waste Diverted | 34,265 | 323,283 |

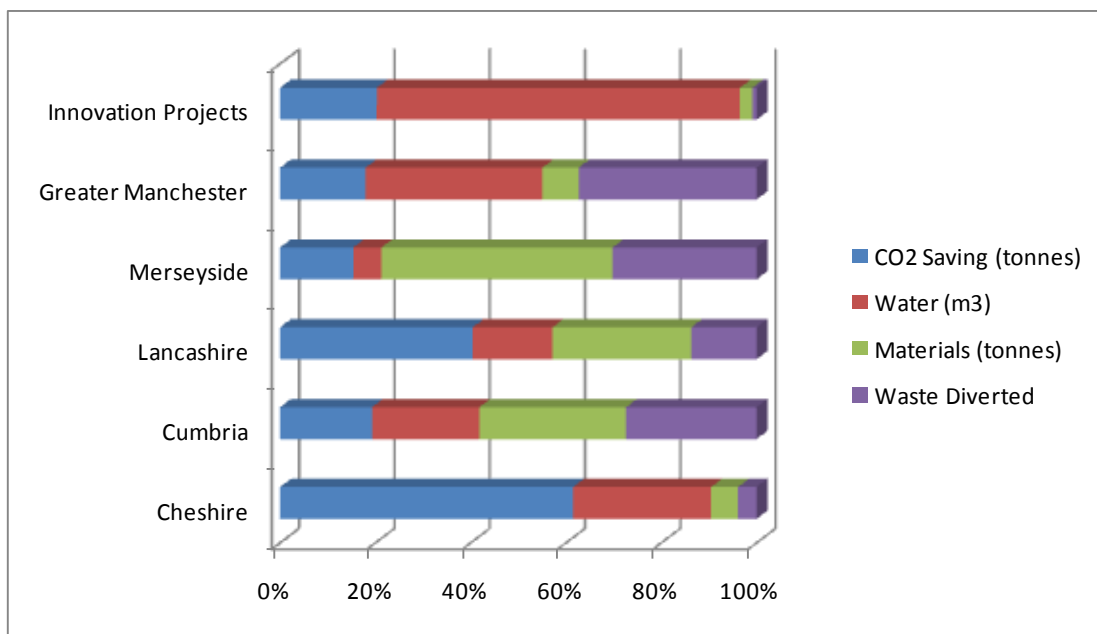
Source: ENWORKS Toolkit Analysis

This Toolkit analysis highlights that there has been a significant change in both the scale and the nature of resource efficiency savings made by beneficiary companies between the two periods. The scale of CO₂; water; and waste diverted from landfill savings achieved has risen dramatically during the EBS Programme, whilst there has been a reduction in the amount of material savings achieved by beneficiaries.

Figure 3.11 illustrates the proportion of total savings for each sub-region broken down by resource type for the EBS Programme. This analysis is useful because it illustrates the diverse nature of the provision available through the programme. This is a key strength of the programme which has allowed it to maintain a relevant and compelling offer to a range of beneficiary companies in the region.

Within the overall performance management framework established by the regional management structure (central management team), sub-regional delivery partners have the flexibility to identify and develop resource efficiency opportunities regardless of the resource type involved. This enables providers to react to changes in demand from businesses for the service without becoming too concerned with resource type quotas. Furthermore, it highlights the varying industrial structures and geographies of the sub-regions and recognises that sub-regional delivery partners are best placed to determine specific delivery arrangements. As noted in the SAV section (Section 4.2) of this report, the Central Management team play a significant role in delivering complementary support to businesses and sub-regional providers which has been integral to enabling them to deliver this activity.

Figure 3.11 EBS Programme Resource Savings by Type and Sub-Region



Source: ENWORKS Toolkit Analysis

3.3.3 Value of Opportunities Identified

Table 3.7 contains the status of all cost savings identified under both the EBS programme and previously delivered ENWORKS business support activity.

Table 3.7 Cost Savings

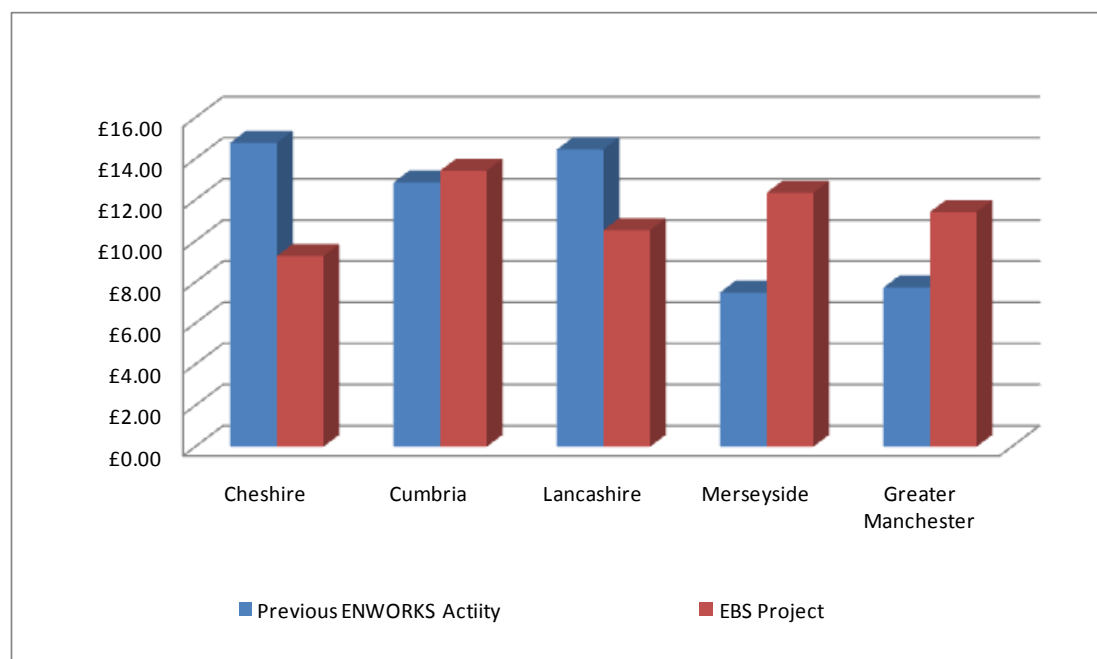
| | Previous ENWORKS Support | EBS Programme |
|-----------------|--------------------------|---------------|
| Pipeline | £14,980,545 | £64,382,433 |
| Achieved | £15,248,842 | £12,873,546 |

Source: ENWORKS Toolkit Analysis

This analysis illustrates that there is still a significant level of identified savings from the EBS Programme which may be realised by beneficiary companies, either over a longer time period, possibly as a more favourable economic climate emerges, or which will be realised through further technical support. However, this aggregate project analysis provides a limited view of the performance of the EBS Programme, savings achieved are inevitably closely linked to the investment made, both in terms of programme expenditure (the amount of technical assistance available) and the investment made by the beneficiary companies (the amount of time and/or capital invested in implementing advice).

The Toolkit provides evidence which allows analysis of the relative gearing ratios for the two periods and for each sub-region, providing a more fine grained analysis of the relative delivery partners and periods through comparing the savings identified as a share of total delivery expenditure. Gearing ratios for the two periods are illustrated in Figure 3.12.

Figure 3.12 Sub Regional Delivery Gearing Ratios



Source: ENWORKS Toolkit Analysis

3.3.4 Investment Returns Payback Periods

Table 3.8 illustrates average annual savings identified at the initial scoping stage of advice, compared to the average annual savings achieved by businesses following implementation of advice.

Table 3.8 Comparison of Investment Returns (Predicted and Realised)

| Capital Cost of Investment (£) | 2003 - 2007 | | 2007 -2010 | |
|--------------------------------|--|----------------------|--|----------------------|
| | Predicted Returns at Initial Scoping Stage (£) | Achieved Returns (£) | Predicted Returns at Initial Scoping Stage (£) | Achieved Returns (£) |
| 1-100 | 231 | 2,616 | 658 | 1,631 |
| 101-500 | 1,683 | 2,749 | 1,513 | 3,264 |
| 501-1,000 | 2,313 | 4,489 | 2,509 | 3,264 |
| 1,001-5,000 | 5,702 | 7,779 | 4,123 | 10,562 |
| 5,001-10,000 | 8,724 | 15,031 | 8,046 | 10,562 |
| 10,001-50,000 | 27,807 | 31,922 | 27,160 | 29,030 |
| 50,001-100,000 | 16,205 | 52,907 | 84,604 | 44,468 |
| 100,000+ | 186,493 | 238,955 | 109,816 | 180,564 |
| Average per Business | 12,421 | 24,837 | 7,325 | 15,067 |

Source: ENWORKS Toolkit Analysis

For almost all capital cost bands, the initial scoping estimate of annual return on investment was lower than the actual return realised by companies who implemented advice. The only exception was within the 2007-10 EBS programme for capital costs valued between £50,001 and £100,000. For this investment band, the value of identified savings at the initial scoping stage (£84,604) has not been achieved by companies who have implemented advice and

achieved savings (£44,468). However, this is likely to be an anomaly given the general picture of conservative projected returns presented by this data.

Generally, across all capital investments made by businesses, the predicted average annual return on investment was lower for the 2007-10 EBS programme (£7,325) than it was for the 2003-07 activity (£12,421). However, for both periods, actual returns realised were double those expected (£24,837 and £15,067 respectively).

Table 3.9 compares the average payback of capital investment predicted at the initial scoping stage to the actual payback period achieved by companies who have implemented opportunities.

Table 3.9 Average Payback Periods

| Value of Capital Investment (£) | 2003 - 2007 | | 2007 -2010 | |
|---------------------------------|---|-------------------------------|---|-------------------------------|
| | Average Predicted Payback Period at Scoping Stage (Years) | Actual Payback Period (Years) | Average Predicted Payback Period at Scoping Stage (Years) | Actual Payback Period (Years) |
| 1-100 | 0.3 | 0.0 | 0.1 | 0.0 |
| 101-500 | 0.2 | 0.1 | 0.3 | 0.1 |
| 501-1,000 | 0.5 | 0.2 | 0.4 | 0.2 |
| 1,001-5,000 | 0.8 | 0.4 | 1.0 | 0.4 |
| 5,001-10,000 | 1.2 | 0.6 | 1.2 | 0.7 |
| 10,001-50,000 | 1.5 | 1.0 | 1.2 | 1.1 |
| 50,001-100,000 | 4.5 | 1.6 | 1.0 | 1.7 |
| 100,000+ | 3.1 | 1.9 | 3.8 | 2.6 |

Source: ENWORKS Toolkit Analysis

As one would expect, the average payback periods for both the 03-07 and 07-10 periods vary depending upon the value of investment made. Generally the achieved payback periods are shorter than predicted at Scoping Stage. For example, where the capital cost was between £1,001 and £5,000, advisors predicted that investment cost would be returned in about 1 year; however, in reality, businesses achieved payback in 0.4 years (5 months). Similarly, for investments of over £100,000, payback is anticipated to be just less than 4 years but, on average, businesses have achieved payback in less than two and a half years, although this period was considerably lower, just less than two years, for the 03-07 activity.

The only exception to this general trend was for the 07-10 EBS programme for investments of between £50,001 and £100,000, where it was predicted that payback would be achieved in 1 year, but instead businesses had taken 1.7 years (1 year, 8 months) to payback investment made. Taken together with the data presented in Table 3.8, it can probably be assumed that one or two entries have distorted the returns for this investment category.

3.4 Main Findings

- The Toolkit illustrates that the EBS programme has resulted in a greater number of opportunities being identified per beneficiary company than previous ENWORKS delivered activity. This reflects the increased expertise developed by the advisors. Evidence from interviews with ENWORKS Board Members and sub-regional delivery partners suggests that this is a product of the learning environment created and facilitated by the Central Management Team in addition to an increased willingness among some companies to investigate resource efficiency opportunities.

- The share of opportunities identified that have been converted into achieved is lower for the EBS Programme than during the period 2003-07. This is understandable considering the economic climate that the programme operated in. However, it highlights that there are significant opportunities which companies require assistance to develop and implement.

The key findings of the longitudinal business survey and Toolkit analysis are summarised below:

- Some two-thirds of companies surveyed indicated that their company currently has knowledge of resource efficiency issues in relation to their businesses (of these, the majority have improved knowledge as a result of the EBS programme intervention). A substantial minority (over 40%) still feel their knowledge to be limited. The evidence also indicates that they do not have the technical skill or capacity to implement improvements and that resource efficiency is not effectively mainstreamed into wider investment decisions;
- The evidence gathered from the cohort survey indicates that the most significant impact of the recession on most companies has been to cut back on non-emergency expenditure. This suggests that in order to encourage businesses to implement resource efficiency improvements, additional emphasis could be given to explaining the *costs* to businesses of inaction (rather than the potential *savings* from implementing advice);
- In terms of primary motivation, the majority of the surveyed cohort appears to enter into the programme looking to identify investment opportunities, rather than receive advice on a specific opportunity that they have already identified. This indicates that they recognise resource efficiency as a potential source of benefit to their company, but they have not yet highlighted specific opportunities, or are perhaps using the advice because it is provided at no cost;
- The programme is very highly regarded by beneficiary companies surveyed, the vast majority of whom have found the advisors very knowledgeable and the advice and assistance provided to them useful; this appreciation grows with time. The quality of EBS advisor support is highlighted through Toolkit analysis: only a small number of identified opportunities are eventually evaluated as non-feasible, forecast returns and payback periods are conservative, most often underestimating the business benefits from investment;
- The programme clearly demonstrates that it has turned the identification of investment opportunities into action, with only a small number of companies surveyed not implementing any of the advice received. The Toolkit suggests that the conversion rate from opportunities being identified through to implemented is currently just over one-third; however, the number of opportunities which have been investigated further and concluded to be non-feasible is very small. The full economic impact of the programme is likely to be realised over a longer time frame than is available through this study;
- Toolkit analysis indicates that, on average, return on investment is much higher than predicted at initial scoping stage, with predicted payback periods also lower than forecast by EBS advisors;
- Most surveyed companies identified physical resource savings as the key outcome from ENWORKS advice, which is consistent with much of the research on market failure in relation to resource efficiency which illustrates that companies don't tend to mainstream resource efficiency with other investment decisions (see Section 2.3.3);
- Additional benefits highlighted during the cohort survey included organisational and cultural changes towards the issue of resource efficiency;
- Toolkit data presents a picture of varying geographic and sectoral impact across the region:

- The achieved annual cost savings and pipeline annual cost savings vary by sub-region. The majority of achieved annual cost savings have been achieved by companies in Greater Manchester and Lancashire, together they account for over 70% of annual cost savings achieved through the programme;
 - The conversion rates from total identified annual cost savings to total achieved cost savings also vary between sub-regions, with Lancashire demonstrating the highest conversion rate of 74%. Cumbria and Greater Manchester demonstrate similar conversion rates of 43% and 45% respectively. Merseyside and Cheshire have lower conversion rates but do have significant identified opportunities; and,
 - Sectoral outcomes also vary, with highest pipeline and achieved savings in the food and drink; construction; and chemicals sectors.
- The average annual cost saving reported by the survey cohort was £16,610, with payback usually expected in less than a year; Toolkit analysis indicates that the average return on investment is £15,067, with average payback also less than one year;
 - In terms of persistence, beneficiary companies indicated that expected benefits are predicted to be sustained for 10 or more years; and will provide some future proofing against rising real energy prices.

4 EBS Programme Impacts

4.1 Economic Impact Assessment

The economic impact assessment of the EBS Programme 2007-10 has been based on a review of the reported outputs from the Programme (see Section 3.1), specifically the numbers of businesses supported with advice on the identification and implementation of resource efficiency savings.

A sample of these businesses have been interviewed to establish the progress achieved in the implementation of identified opportunities for resource savings and the value of resource savings achieved to-date. Businesses were also asked a series of standard questions to establish the extent to which these cost savings can be attributed to the advice from the Programme, and to estimate the additional regional Gross Value Added, as a result of the EBS Programme.

4.1.1 Our Approach to the Assessment of Additionality

The approach adopted for the estimate of regional additional impact is based on the methodology developed under the Impact Evaluation Framework and adopted by RDAs.

This approach stresses the importance of basing the additionality estimates on information obtained from project beneficiaries to calculate the relevant additionality factors. To this end a sample of beneficiaries selected as part of the longitudinal research were interviewed in the spring of 2010. Comparison of the sample with Toolkit data indicates that the sample is broadly representative of the population of beneficiaries.

The results of this analysis are outlined in Table 4.10.

Table 4.10 Results of the Additionality Assessment of the EBS Programme 2007-10

| Variable | Definition | Number |
|--|--|-----------------------|
| All Businesses Assisted | Gross output of EBS (includes all business assisted) | 3,509 |
| Businesses Assisted with Resource Efficiency | Gross output of EBS (only includes Businesses assisted specifically assisted with resource efficiency) | 2,807 ³⁴ |
| Average Cost Saving | Estimated average ANNUAL resource cost savings per business assisted, achieved to-date | £15,490 ³⁵ |
| Gross GVA generated | Gross ANNUAL economic value generated from the programme through business cost savings ³⁶ | £43.5m |
| Deadweight | The benefits associated with an intervention which might have occurred in any event | 44% ³⁷ |

³⁴ NOTE: this relates to businesses assisted with RE to depth where quantified savings captured

³⁵ NOTES: Cost saving will continue into the future for at least ten years, according to the businesses interviewed. Cost savings per business from the business cohort/sample were compared to the data obtained from all businesses supported with advice on the identification and implementation of resource efficiency savings held in the Toolkit, these were very similar

³⁶ No beneficiaries identified additional jobs and sales as benefits from ENWORKS assistance. Additional indicative analysis relating to the possible scale of benefits derived from sales and jobs is included in SECTION 4.1.7

³⁷ Calculation of deadweight is based on beneficiaries responses as to whether they would have invested time and resources in Resource Efficiency in absence of ENWORKS assistance, whether any action taken would have been delayed or whether they would have taken no action. The resulting 44% deadweight is higher than previous research would have predicted it would be. This rate is calculated based on 21 responses.

| | | |
|---------------------------------------|---|---------------|
| Gross additional impact | Gross ANNUAL economic value through business cost savings minus deadweight | £24.2m |
| Displacement (by assumption) | The extent to which the impact of the EBS Programme has been offset by a reduction of activity elsewhere in the region | 0% |
| Leakage | The share of impact which has benefited companies outside of the region. | 0% |
| Net direct additional regional impact | Gross ANNUAL economic impact adjusted for displacement and leakage. | £24.2m |
| Multiplier (by assumption) | The extent to which assisted businesses increased purchases of goods and services from regional producers as a result of the assistance received. | 1 |
| Net regional impact | Net ANNUAL regional economic impact resulting from business cost savings achieved through Resource Efficiency support | £24.2m |

The results of the assessment of additionality are broken down for SMEs and Large firms in Table 4.11, and explained below.

Table 4.11 Results of the Additionality Assessment of the EBS Programme 2007-10

| Variable | Unit | SMEs | Large Firms | All Firms |
|---|------|-------|-------------|-----------|
| Gross output of EBS (businesses assisted) | No. | 2,667 | 842 | 3,509 |
| Share of businesses specifically advised on resource efficiency savings | % | | | 77% |
| Gross output of EBS (Businesses assisted with resource efficiency) | No. | 2,133 | 674 | 2,807 |
| Estimated average resource cost savings per business assisted, achieved to-date | £ | 9,635 | 34,029 | 15,490 |
| Value of gross output (GVA) | £m | 20.6 | 22.9 | 43.5 |
| Deadweight | % | 44% | 44% | 44% |
| Gross additional impact | £m | 11.4 | 12.7 | 24.2 |
| Displacement (by assumption) | % | 0 | 0 | 0 |
| Leakage | % | 0 | 0 | 0 |
| Net direct additional regional impact | £m | 11.4 | 12.7 | 24.2 |
| Multiplier (by assumption) | No | 1 | 1 | 1 |
| Net regional impact | £m | 11.4 | 12.7 | 24.2 |

Sources: Gross output (businesses assisted) from ENWORKS monitoring adjusted specifically for the share of businesses receiving advice on resource efficiency savings identified in the ENWORKS Toolkit. Additionality factors obtained from the beneficiary survey are detailed in Annex 3. The sample size was not large enough to calculate deadweight separately for SMEs and Large (>250 employees) firms

Note: A comparison of additionality factors identified in this and previous studies is provided in Annex 3.

4.1.2 Gross Outputs

The gross outputs of the EBS Programme over the period 2007 to 2010 are 3,507 businesses advised, as identified from the ENWORKS Programme monitoring. The main impact from the advice received from the Programme is on resource efficiency savings,

identified by 77% of businesses recording impacts on the Toolkit. The gross output as the basis of the impact assessment is therefore the 80% of businesses assisted with specific impacts on resource efficiency savings (2,807 businesses). To the extent that the other businesses also generated economic benefits as a result of the advice received, then the impact assessment will understate the overall impact achieved by the Programme.

The beneficiary survey asked businesses to identify the cost savings achieved to-date as a result of the actions they have taken on resource efficiency. The average realised cost saving identified to-date, is £15,125 (this compares with the data extracted from the Toolkit of £15,490, presented in Table 3.8). This cost saving will continue into the future for at least ten years, according to the businesses interviewed. The value of the gross output is represented by the average business savings achieved across the 2,807 businesses, a value of £43.5m per year. As cost savings are effectively a straight addition to the profitability of a business, these cost savings represent an addition to the gross value added of the regional economy.

In addition businesses were also asked to provide an indication of how far they had implemented planned activities to achieve resource savings. This indicates that on average only 55% of planned implementation has been completed. Assuming that the remaining activities are implemented with similar effect on savings, then the average total cost savings per business achieved would be nearly £28,000 per business.

4.1.3 Gross Additional Impact

The gross additional impact is the gross output adjusted for deadweight, allowing for the fact that even though firms received advice they may have been intending to achieve these resource savings in any event. Based on the beneficiary survey, 44%³⁸ of the gross outputs would have been achieved in the absence of the Programme, a gross additional impact of £24.2m per year.

4.1.4 Net Direct Regional Impact

The impact achieved may however be at the expense of other non-assisted businesses in the region (market displacement) because the improved business performance allows it to compete and take market share from other regional businesses, depending on their reliance on regional customers and the extent to which competitors are located in the region. However, in the first instance there is no market displacement since assisted businesses are simply making cost savings. The cost saving (and improved 'green' credentials) may however lead to their subsequent expansion (and further increase in GVA) with subsequent displacement effects, but this should not be reflected in the displacement factor used in this assessment.

A further argument might be that the cost savings arise as a result of the reduced use of certain resources. Were these to be supplied from regional producers there would be a corresponding loss of regional revenue. However, since the resources in question are largely supplied by national / international producers such an effect is negligible.

The beneficiary survey in this study identified a potential displacement of 21% of gross impact, based on the location of customers and competitors were the assisted firm to increase or safeguard sales. However the absence of any change in sales means that the factor should not be applied.

The regional impact also needs to take account of the leakage of business activity out of the North West. However, none of the assisted businesses, as reported in the beneficiary survey, are intending to relocate any business activity outside the region. The leakage factor is therefore zero. The net direct regional impact is therefore the same as the gross additional impact, of £24.2m.

³⁸ This figure may contain a certain degree of optimism bias and is higher than previous evaluations of ENWORKS support.

4.1.5 Net Additional Regional Impact

The final calculation of the additionality assessment is the estimation of the related multiplier impact, based on the propensity of assisted businesses to purchase from regional producers. However, since the reported GVA increases from the beneficiary survey does not derive from any expansion of business activity and any related increase in purchasing there is no indirect impact on other producers, and therefore no supply-side multiplier (although a multiplier of 1.45 has been estimated based on the purchasing patterns of the assisted businesses).

To the extent that the cost savings are used to increase wages there could be an income multiplier from the subsequent spending of the higher wages. However, none of the businesses when asked intended to use the cost savings to increase wages.

The net additional regional impact is therefore the same as the gross additional impact of £24.2m per annum, representing 56% of the gross output.

4.1.6 Future Regional Impact

Consideration of future regional economic impact has been undertaken using two assumptions:

- **Decline in impact:** A conservative estimate is to assume that the attribution of these benefits declines over time, however in some cases, as oil prices rise, the value of savings will increase. We have assumed that the impact decays at a rate of 20% per year³⁹.
- **Increase in impact:** On average, for those businesses surveyed, only 55% of actions identified by ENWORKS have been completed at the time of the survey. Assuming that the remaining activities are implemented with similar effect on savings, then the average total annual cost savings achieved per business would increase additional net GVA by almost £5.0m each year.

The table below outlines these two possible scenarios, and presents an estimate of future economic impact through combining the assumptions. This indicates a total net GVA impact over the five year period (2010-2014) of £95m, present value.

Table 4.12 The Future Regional Economic Impact (£m GVA) of the EBS Programme

| Year | Decline in Impact | Increase in Impact | Estimated Future Regional Impact |
|----------------------|-------------------|--------------------|----------------------------------|
| 2010 | 24.1 | 24.1 | 24.1 |
| 2011 | 19.3 | 29.1 | 24.3 |
| 2012 | 15.5 | 34.1 | 20.4 |
| 2013 | 12.4 | 39.1 | 17.4 |
| 2014 | 9.9 | 44.1 | 14.9 |
| Present Value (2010) | £77.0 | £157.8 | £95.3 |

Notes:

Decline in impact is based on an assumed decay of 20% per year

Increase in impact is based on an increase of £5.0m a year

Future impact is based on the assumed rate of decay and increase

Present value of income streams based on the Treasury discount rate of 3.5%

³⁹ A rate of 20% is used as this is consistent with rates applied in national reports, for example see: "National Industrial Symbiosis Programme Economic Valuation Report" (2009).

In addition to the impacts on GVA of cost savings through resource efficiency, the resource savings themselves have a further impact because the market prices (reflected in cost savings) do not fully reflect the social costs of the use of these resources. For example, energy cost savings do not fully reflect the benefits of reducing related CO₂ emissions. These social costs that are not reflected in market prices are called externalities.

Using available estimates of the value of these externalities,⁴⁰ and the Toolkit estimates of physical resource savings, an estimate of the total value of the externality saving can be calculated (Table 4.3). This is the saving achieved to date on the current level of implementation, unadjusted for deadweight. Adjusting for deadweight and for the level of implementation, the present value of current and future externality savings is £56.6m.

Table 4.3: Estimated Value of Externality Savings from EBS

| Resources | Resource Saving | Unit Value (£/t) | Externality Savings (£m) |
|---------------------------------------|-----------------|------------------|--------------------------|
| Material savings (tonnes) | 219,800 | 2.0 | 0.4 |
| CO ₂ Savings (tonnes) | 475,570 | 51.0 | 24.3 |
| Water Savings (m ³) | 3,953,530 | 0.1 | 0.4 |
| Waste Diverted from Landfill (tonnes) | 282,810 | 1.86 | 0.5 |
| Total Externality Saving | | | 25.6 |

Sources: Resource savings – ENWORKS Toolkit.

Table 4.13 estimates the future value of resource savings. As with the estimates of future value of cost savings outlined above we have considered the potential of a decline in impact and an increase in impact using a lower assumption of a 20% decay in impact, and an increase based on full implementation. The table below outlines these two possible scenarios, and presents an estimate of future economic impact through combining the assumptions.

Table 4.13 Future Value of Externality benefits

| Year | Decline in Impact (£m) | Increase in Impact (£m) | Estimated Regional Impact (£) |
|----------------------|------------------------|-------------------------|-------------------------------|
| 2010 | 14.3 | 14.3 | 14.3 |
| 2011 | 11.4 | 17.3 | 14.4 |
| 2012 | 9.2 | 20.2 | 12.1 |
| 2013 | 7.3 | 23.2 | 10.3 |
| 2014 | 5.9 | 26.1 | 8.8 |
| Present Value (2010) | £45.6 | £93.5 | £56.6 |

⁴⁰ Externality estimates: Carbon prices:

http://www.ofwat.gov.uk/pricereview/pr09phase3/pr09phase3letters/ltr_pr0933_carbonprice

Landfill costs:

http://www.defra.gov.uk/environment/waste/strategy/legislation/landfill/documents/landfill_disamenity.pdf

Water savings costs:

<http://www.defra.gov.uk/environment/quality/water/industry/walkerreview/documents/walker-call-for-evidence.pdf>

4.1.7 Additional Impacts from Jobs and Sales

Whilst not identified by beneficiaries during the business survey and therefore not quantified under the IEF methodology, there have been significant jobs and sales outcomes recognised by businesses and evidenced through Programme documentation. This results in the identification of the following returns to the Treasury:

- A total of 687 jobs (158 new jobs created and 529 safeguarded). Applying average regional salaries to these jobs (£26,000) and considering the associated income tax and national insurance rates, the gross return to the exchequer is estimated at £6.8m (£1.57m from new jobs and £5.26m from safeguarded employment)
- A total of £103m in additional sales (£35m of increased sales and £68m in safeguarded sales) Application of VAT at 17.5% and Corporation Tax at 28%, the return to the exchequer is estimated at £20.9m (£7.1m from increased sales and £13.8 from safeguarded sales)

Taken together, the impact of additional jobs and sales generated by the Programme is some £28m, of which £8.7m is generated from new sales and jobs.

4.1.8 Cost-Benefit Ratios

The cost of achieving this impact is the cost of the delivery of the advice on business resource efficiency. The cost of this activity, as delivered through the sub-regional delivery partners and the central management team, is £7.9m⁴¹. The impact is therefore 12 times the cost (excluding the externality benefit) or 19 times (if it is included). These figures exclude some Programme expenditure not related to delivering impact, including: this independent evaluation and a Business Link brokerage service.

The cost-benefit ratios for SMEs and Non-SMES are as follows:

- The delivery cost for SMEs was £5.0m. The impact for SMEs is therefore 9 times the cost (excluding the externality benefit) or 20 times (if it is included)
- The delivery cost for large firms was £2.9m, programme impact for large firms is 17 times the cost (excluding the externality benefit) or 37 times (if it is included)

The cost of the whole EBS Programme is £8.8m. On this basis the overall impact is 11 times the cost (excluding the externality impact) or 17 times (if it is included). However this is an under-estimate because it excludes the impacts of the advice given to businesses where it generated impacts other than on the resource saving activity, e.g. through management changes to improve corporate social responsibility, and includes the cost of activity unrelated to business support, e.g. this evaluation.

Based on the share of UK taxpayer funding in the Programme, and assuming a 26% rate of corporation tax applied to the additional GVA, the additional tax receipts cover the taxpayer cost within 4 to 6 months. This will be very slightly offset by a fall in tax revenue from any reductions in profits of the suppliers of resources as a result.

The cost-benefit ratio would be reduced to the extent that there is evidence that the public funding of advice provided by the Programme was responsible for crowding-out market services to advise businesses on resource efficiency. There is little evidence that such crowding out has occurred. This is based on the views of stakeholders (see below), and the apparent unwillingness of businesses to pay for the advice received.

⁴¹ This represents a high estimate of the proportion of ENWORKS operational expenditure which was used to deliver Resource Efficiency advice to businesses as it includes the resource used to deliver Corporate Responsibility advice as well.

4.2 Strategic Added Value (SAV)

Improving a region's economy requires the actions of many projects, agencies and partners. The concept of Strategic Added Value (SAV) has been developed in recognition of the need to take into account the catalytic and influencing role of project investments which may not be captured in the quantified economic outputs and impacts of direct project support.

SAV may be encapsulated in three broad dimensions (see Figure 4.1):

- **Strategic leadership:** the strategic and catalytic role of the project in engaging and involving partners and stakeholders to commit to a shared vision, strategic objectives and priorities;
- **Coordination, alignment and partnership:** using organisational capacity and expertise to co-ordinate partners and stakeholders to gain synergy and achieve leverage; and,
- **Intelligence sharing and awareness raising:** undertaking or stimulating activity that will inform, define and improve what needs to be done (evidence, 'what works' and best practice).

Figure 4.13 The Potential SAV of a Project



To assess the SAV of the ENWORKS EBS programme, two sets of interviews were undertaken with stakeholders - between February and March 2009, and a second round in July 2010. Where possible, interviewees were the same for both rounds of interviews; where this was not possible, due to staff leaving posts or changing roles, a suitable alternative was identified in discussion with ENWORKS. As a result, not all stakeholders were fully informed regarding the ways in which ENWORKS had operated throughout the EBS programme. A full list of interviewees is contained in Annex 4.

4.2.2 Strategic leadership

Strategic leadership relates to the ability of the programme or project to deliver a shared vision and set of objectives that relevant partners and stakeholders can recognise and commit to. It presupposes, therefore, that the project rationale is recognised and shared and that the design and planned delivery of the project is seen to be 'fit for purpose'.

To start, the overwhelming view of partners during both rounds of interviews was that the market failure rationale for intervention was, and is, compelling and that the **ENWORKS**

programme correctly identified areas where the programme could be used to address market failure, given the lack of understanding that companies have regarding resource efficiency, and the need to help them to understand the value and technical requirements of implementation.

Stakeholders went on to suggest that, if anything, the rationale for a specialist resource efficiency service has grown since 2007:

- Companies seem to understand the benefits of resource efficiency, but capacity and specialist knowledge to appraise and implement is low;
- Management level capacity still seems to be focussed on ensuring that day-to-day, month-to-month production targets are met. During production down-time emergency repairs and maintenance take priority; resource efficiency is seen as important, not vital;
- The recession has seen a reduction in management capacity to engage with resource efficiency; and,
- Increasing levels of environmental legislation in the future, uncertainties over long term energy provision and advances in technological capabilities were also seen as driving a requirement for support such as that provided by ENWORKS.

Relatedly, no stakeholder consulted believed that ENWORKS was crowding out private sector provision. Indeed, some stated that the work being done by the sub-regional providers was actually stimulating the market - through their one-to-one assistance, and the successful return on investment they were delivering, more companies would be likely to invest in resource efficiency in the future and, in turn, potentially provide market opportunities for other providers.

Given agreement on market failure, **ENWORKS was also identified as core activity in the context of the Regional Economic Strategy, and national and European strategy more widely**, being able to deliver both economic and environmental outcomes as part of the drive for sustainable economic growth.

ENWORKS success in translating its rationale into leadership was evidenced by the strong agreement of stakeholders that ENWORKS had become **recognised as the main reference point for resource efficiency in the region**. The programme is widely recognised as the most effective mechanism through which resource efficiency support is delivered to companies in the North West, partially related to its size and scale (in terms of resource available and geographic coverage of provision) and long term presence. Indeed, stakeholders highlighted that the programme is now recognised as a reference point on a national scale given its longstanding record of performance.

4.2.3 Co-ordination, alignment and partnership

The avoidance of duplication and delivery of a consistent, high quality service is part of the core aim of the ENWORKS partnership. This is just one expected outcome of the SAV gained from the ability to use organisational capacity and expertise to co-ordinate partnerships of stakeholders and achieve synergy and leverage.

A starting point, recognised by interviewees, is that the **ENWORKS programme has provided alignment of regional and sub-regional strategy**, principally through its delivery of agreed RES actions. This has been reinforced by the delivery structure of the programme, combining a central intelligence and management function with sub-regional delivery partners across the region. Partners frequently commented on the capacity of the central team to coordinate and achieve the greatest possible value for money from the regional investment in the programme. Nevertheless, delivery partners also highlighted the freedom afforded to try innovative delivery methods within agreements on outputs and outcomes.

Specific **alignment and synergies with the NWDA priority sectors** was seen as beginning to develop as the funding period came to an end, with expectation of its emphasis as a key feature of the latest funding round. Nevertheless, in the first round of interviewing, partners were unconvinced that a sectoral focus was, or should be, a consistent feature of the

programme across all sub-regions and this view had only softened slightly in the final interview round. These views recognise that the new programme has a focus on sectors with high energy usage, and therefore the greatest scope for significant savings, but most stakeholders commented that it remained important to leave the programme open to other sectors where significant savings could be achieved.

Views on the extent to which the programme has **reduced duplication between partners** varied. The inclusion of national resource efficiency organisations such as the Environment Agency on the ENWORKS Board was seen as a sound strategy in order to develop stronger relationships and greater understanding of each other's operations. Nevertheless, reference was made by a number of interviewees to the potential for greater collaboration with other providers. For example, referrals to ENWORKS from Envirowise, NISP and the Carbon Trust have been very low during the programme period and it was noted how the programme had engaged frequently with companies who it was then discovered had had contact with national providers.

As an example, reports were provided by Carbon Trust advisors when value could have been added if such reports had been prepared in collaboration with the programme. Thus, interviewees reported that **linkage with other business support programmes** – and most especially Business Link – had been limited. Whilst the period covered the Business Support Simplification Process and regional re-organisation of Business Link, relationships were still reported as fairly weak and fragmented.

The success of the ENWORKS programme in **levering in funding and investment to the region** was identified by most interviewees. A number of dimensions were noted:

- The ability of the programme to successfully attract ERDF funding through match funding, increasing the scale of activity substantially;
- Specific, if overall limited, cases of ENWORKS levering in private sector contributions to contribute to the cost of ENWORKS provision where eligible to the funders; and,
- The wider influence that ENWORKS has, and continues to have, on private sector spending in the region through demonstration of the benefits of resource efficiency.

In terms of **influencing the activities of partner organisations**, one example given was how the Programme had aided the Environment Agency. ENWORKS penetration into, and awareness raising amongst, the regional SME base had allowed the Agency to concentrate resources on enforcement of environmental regulations on large firms. Nevertheless, reflecting earlier comments reported, some stakeholders felt that the whilst the programme had made considerable efforts, influence on national resource efficiency programmes such as Carbon Trust and WRAP (now including Envirowise) had been limited – and such that national and regional provision was not yet regarded as integrated to provide optimum efficiency of delivery of resource efficiency business support.

Due to the fact that neither organisation has a regional delivery function in the North West this is perhaps an unfair criticism. The fact that it featured during the SAV discussions is noted here, however, as it provides an illustration of an issue reported by partners through the process.

4.2.4 Promoting Intelligence Sharing and Awareness Raising

This element of SAV seeks to capture how project activity supports, essentially, better policy development and implementation through stronger evidence, understanding of 'what works' and the spread of good practice.

Whilst a key outcome for companies from the ENWORKS programme is **increased knowledge and awareness of resource efficiency**, here we are more concerned with the programme influence on partners, stakeholders and the policy community. In this regard, interviewees referenced the lead role which ENWORKS has taken in raising the level of awareness among stakeholders and delivery agents in the region through: participation in networking activities; production of high quality resource materials (made available through the ENWORKS website); and, most recently, through the ENWORKS conference which

brought together institutions from both inside and outside the region to discuss resource efficiency and the ways in which support can be delivered most effectively.

This awareness raising, moreover, has been founded upon the **development of the evidence base and delivery of regional intelligence on resource efficiency**. For example, a significant strength of the programme noted by many interviewees was the clarity of identification of key resource issues for companies in the region. This, in turn, can partly be traced to the commissioning of the North West Business Survey on resource efficiency. A further example has been the use of real time evidence from the current Toolkit to illustrate achieved resource efficiency outcomes in the region, and most particularly savings identified and delivered to companies.

In terms of programme delivery, stakeholders and partners identified a number of areas of good practice which, in turn, have been evidenced by the adoption by resource efficiency activities in other regions. Commitment to learning and good practice aspects identified include:

- Delivery partners highlighting the freedom afforded to try innovative delivery methods within agreements on outputs and outcomes, utilising the open environment to discuss delivery issues with other providers and share lessons learned and implications for future delivery;
- The commissioning, management and, ultimately, dissemination of findings from the Innovation Projects;
- The development and piloting of new models, products and services, such as the Climate Change Risk Assessment and Carbon Footprinting when asked for by funder;
- Contributing knowledge and experience to regional and national forums and decision making groups regarding business support, for example the Business Link Theme Board on Environment and Efficiency and the regional Sustainable Consumption and Production Forum. ENWORKS was flagged on several occasions as recognised nationally as a high performing programme;
- Use of the ENWORKS Toolkit as a beneficiary tracking system which engages directly with the business journey from engagement to implementation, and in a manner which supports analysis pertinent to programme improvement; and,
- The adoption of the Toolkit by South East England Development Agency, the Welsh Assembly and the London Development Agency, and its use by the Department for Business Innovation and Skills to identify the scale of resource saving opportunities in commercial and industrial waste streams and use of data by Defra in the Quantification of Business Benefits of Resource Efficiency report.

4.2.5 Lessons for Effectiveness

Whilst not strictly contained under SAV analysis, there were also a number of emergent and succinct lessons identified by interviewees as to why the added value of ENWORKS has been achieved. These included:

- The independent position of ENWORKS: provider's independence supports companies to prioritise and use quality providers with the knowledge that they do not have any partial interests leading them to recommend certain solutions or technical consultants;
- The ability of sub-regional providers to develop and maintain long term relationships with companies: this personal relationship of trust is seen as key to achieving a level of confidence between business and advisor; and
- Those sub-regions who have had the most significant delivery capacity for longest have been able to achieve greatest implemented savings: a critical factor in this respect is the capacity to react to opportunities particularly through minimising the length of time between referral and engagement.

4.3 Stakeholder and Partner Perspectives on Future Strategy

As part of the second set of stakeholder interviews, specific questions were asked regarding future strategy for ENWORKS. The main issues raised during these discussions are outlined below.

There was broad support for the new ENWORKS Programme with a remit to challenge the model and incorporate sector representative organisations into the delivery capacity to see if this embeds resource efficiency behaviours/savings into these key sectors more than previously achieved through the sub-regional model, and as experimented with through the innovation projects. Most stakeholders, however, also noted that the flexibility of eligibility is essential. Indeed, examples of wider sectoral coverage were argued to be useful to provide case studies highlighting possibilities / benefits of resource efficiency for all companies.

Interviews suggested a number of principles as vital for the future success of the programme:

- *One-to-one support is essential for the effective delivery of this type of business support.* The experience of delivery suggests that using one-to-many is useful to raise awareness but it doesn't prompt action in companies. This is only done on a consistent basis through a one-to-one close relationship which builds up trust with the management team;
- *One-to-many works when focussed on a very specific issues:* it brings people up to speed on issues that are important, particularly legislative issues – but beyond that it won't trigger businesses to take action;
- *Post recession it is vital to re-engage with companies in the Toolkit that may have "mothballed" investment.* Some companies have gone into administration during the recession, or have relocated to other locations, other regions/nations, so some have been lost but post-recession may still offer further opportunities;
- *Integration of resource efficiency in wider business change is important:* ENWORKS can most effectively engage with wider impacts if it engages with senior management level, and must continue to do so;
- *ENWORKS commitment to broad regional coverage should continue:* this ensures that economic impacts are widely distributed (otherwise output chasing may concentrate on Liverpool and Manchester). Changes to governance structures, such as RDA abolition and the establishment of LEPs may pose challenges in this respect; and,
- As national resource efficiency provision is being reduced, the rationale and value of ENWORKS as a world class support provider needs to be communicated strongly and insistently.

4.3.1 'Paying for ENWORKS'

The interviews also explored the arguments for introducing a payment for the advice provided. In summary, the following views were expressed:

- *ENWORKS is likely to have to consider a move towards a charging model:* given the Government's reluctance to sponsor business support, and set against a backdrop of reduced public spending, however, this is not possible for the new programme due to ERDF regulations;
- *Companies value what they pay for:* getting companies to pay for ENWORKS advice would ensure that the issue of resource efficiency is taken seriously by management at a senior level, the impact of the recession illustrates that companies will not finance non-essential investment (i.e. investment that is not business-critical and does not impact on immediate production capacity);
- *For those who have "repeat business" in the Toolkit the case for charging is stronger,* but still must be evaluated on a case-by-case basis as the financial position changes. There

is also the case whereby large companies with autonomous cost bases, but low levels of discretionary investment funds, may have no ability to pay;

- *Charging for ENWORKS support or services would change the relationship with companies:* currently businesses trust that ENWORKS is an independent service. Charging would remove this perceived independence. Charging could lead to perverse incentives if linked to implementation and reported savings, where businesses underplay levels to avoid charges and advisors overplay their role to increase charges.

Two basic charging mechanisms were put forward by partners during the course of the interviews. These were:

- 1 *Charging a flat fee based on the number of hours of advisor time.* The majority of interviewees felt that this was the option most likely to discourage companies from engaging with ENWORKS. This option is not possible, however, under ERDF funding guidelines and is therefore problematic for the new programme.
- 2 *Charging a percentage fee based on the savings achieved following implementation of advice received.* This option had the most support from partners; however, as highlighted above, there are clearly a number of issues with this option and it is unlikely to be possible for the new programme.

5 Benchmarking EBS Effectiveness and Value for Money

5.1 Approach to Benchmarking

In order to understand the effectiveness and value for money of the programme it is important to compare the programme resources and impacts with relevant benchmarks. This section considers the varying nature of resource efficiency provision at a regional level before outlining output costs per unit with benchmarking for resource efficiency specific and generic business support initiatives.

5.2 Overview of Resource Efficiency Support Provision

Table 1.1 overleaf provides an “at a glance” summary of selected resource efficiency support provision. The table provides an indicative overview of national and regional resource efficiency provision, which has been used to benchmark the performance of the EBS programme, using a scale (High-Medium-Low) to demonstrate the concentration of delivery activity for each. This list is not exhaustive but rather represents a sample of resource efficiency projects for which data is available.

The following observations can be made:

- There is a wide range of resource efficiency provision available to companies; with national provision supporting, to varying degrees depending on geography and sector specialism, regionally funded providers;
- There is wide regional variation in targeting of support from high energy users or specific sectors with high usage of materials, for example, to programmes with no specific sector focus;
- Generally support is not targeted at a specific business or sector; but tends to be focused on diagnostic services, followed, or complemented by *either* one-to-one or one-to-many support;
- Few schemes provide technical consultancy aimed at assisting companies to implement opportunities identified at diagnostic stage, a market failure issue highlighted earlier in this report;
- Few schemes offer capital grants. Interest free loans and subsidised consultancy are on offer, primarily to major energy users (where access to finance issues may be less acute, but economic and environmental benefits more significant). Capital grants (or loans) are primarily available from national providers, with the exception of BREIG in Yorkshire, a sector specific grant programme. Additionally there was a previous capital grant scheme provided by NWDA;
- At first glance the Carbon Trust appears to have the broadest support offer to companies (although it’s advice is restricted solely to energy), but elements of support are targeted specifically to high energy users and the public sector and therefore not accessible to all, with one-to-one support only available to high energy users;
- In comparison to the EBS programme, the intensity of one-to-one support (characterised by a long term relationship between advisor and company) does not appear as strong in other regions. Generally where there are strong relationships with beneficiaries the projects have tighter eligibility criteria.
- It must also be noted that data held by the EBS programme is far more comprehensive than for other business support projects. In addition the data has a robust audit trail, does not include estimates or ‘bands’ of impacts, therefore, even when benchmarking shows parity between projects there’s an underlying uncertainty of data from other projects. Through the beneficiary surveys undertaken for this evaluation the Toolkit data has been verified as an accurate indication of the benefits for companies.

Table 1.1: Characteristics of Major National & Regional Resource Efficiency Advice Providers

| | | |
|------|--------|-----|
| High | Medium | Low |
| √√√ | √√ | √ |

| Programme | Area of Concentration | Target / Geographies | Total Resource Available (£) | Eligible Sectors | One to One | One to Many | Main Delivery Activities | | |
|--------------------|------------------------------------|---|------------------------------|---|------------|-------------|--------------------------|-----------------------|--------------------------------|
| | | | | | | | Diagnostic | Technical Consultancy | Implementation Grant |
| ENWORKS EBS (NW) | All Resource Efficiency issues | Companies in the NW (predominantly SMEs) | £8.8m | All Sectors | √√√ | √ | √√√ | √ | None |
| RE Programme (Y&H) | Energy Use Reduction | All business sectors in Y&H (with specific projects targeting high energy users, SMES, supply chains) | £3.6m | All Sectors | √ | √√√ | √√ | None | None |
| BREIG (Y&H) | Energy; Waste; and Water | SMEs in Y&H | £0.4m | Well established companies in the manufacturing sector, or companies with Productive Capability | None | None | None | √ | √√√ |
| MIDAS (NE) | Energy; Waste; and Water reduction | Companies in the NE (predominantly SMEs) | £1.6m | All sectors | √√√ | None | √√ | None | Subsidised consultancy support |
| Envision (SW) | Energy; Waste; and Water reduction | SMEs in the SW | £3.8m | All Sectors | √√ | √ | √√√ | None | None |
| Carbon Trust (UK) | Energy | Support targeted to companies with large energy bills, virtual support to SMEs; nationwide | £100m | All Sectors | √√ | √√ | √ | √ | Interest free loans |
| WRAP (UK) | Waste Management and Reduction | All companies nationwide | -- | Particular focus on the construction, recycling, manufacturing, retail and agriculture sectors | √ | √√ | None | None | √ |

5.3 Summary of Lessons from the Comparative Review

5.3.1 Nature of the Support

The nature of the support for resource efficiency appears fairly similar across regions. Most regions provide a range of services which can include information provision, one-to-one support, advice targeted at efficiency savings, some consultancy or training and network development. However the intensity of one-to-one assistance offered through the EBS Programme in the North West appears far more significant than in other regions.

Evidence from previously evaluated projects and programmes confirms the lack of understanding relating to technical implementation capability as a key feature. One to one support is recognised in the evaluations as key to ensuring that businesses go on and implement advice.

Support in other regions recognises the value of a range of approaches to ensure that a greater number and a greater range of business types can gain access to relevant support, tailored to their needs. This can take a range of forms, for example: targeted and timely information provision, staff development support and on-site support. The EBS programme is perhaps the most successful in combining this range of services in a project which is relevant to all companies in the region.

5.3.2 Eligibility

Although there are some sector specific programmes, the majority of programmes including the EBS programme have fairly broad eligibility criteria and in general aim to target small and medium sized enterprises. A common eligibility issue in all regions is the exclusion of larger companies (non-SMEs), which are assumed to be able to tap wider company resources or to use national providers. However, larger firms often have an autonomous cost base which makes it difficult to access internal company funds. Whilst they are directed to national providers this provision is not always the most suitable. Given the scope for significant resource savings there are lessons for both funders and providers: for providers, greater sophistication is required in engaging with larger businesses, with more flexible funding and output targets put in place from main funding providers.

5.4 Comparison of Gross Cost per Unit Output

This section of the report identifies the gross cost per unit, focussing on the key project outputs. Table 1.2 presents the cost per gross output, considering output data alongside service delivery spending on the programme of £7.9m.

Table 1.2: Gross Cost per EBS Output

| Output | Total | Cost per unit (£) |
|--|-----------|-------------------|
| Businesses assisted with resource efficiency | 3,507 | 2,257 |
| Number of adults undertaking work based training | 838 | 9,444 |
| Sales Increased (£m) | 35 | 0.2 |
| Sales Safeguarded (£m) | 68 | 0.1 |
| Cost Savings (£m) | 77 | 0.1 |
| Material savings (1000 tonnes) | 219,800 | 0.04 |
| CO ₂ Savings (1000 tonnes) | 475,500 | 0.02 |
| Water Savings (1000 m ³) | 3,953,530 | 0.002 |
| Waste Diverted from Landfill (1000 tonnes) | 282,810 | 0.03 |

Source: Analysis of ENWORKS Monitoring Data

Table 1.3 provides an overview of recent regional resource efficiency interventions for which evaluations have been completed and benchmarking data is available for key indicators. Further consideration of regional resource efficiency projects is provided in Annex 5.

Table 1.3: Comparison of Unit Costs for Environmental Business Support (£)

| | Cost per Businesses Assisted | Cost per £ Sales Increased | Cost per £ of Cost Savings | Cost per CO2 Savings (tonnes) | Cost per Water Savings (m3) |
|-----------------------------|------------------------------------|----------------------------------|----------------------------------|--|--------------------------------------|
| EBS | 2,257 | 0.2 | 0.1 | 0.02 | 0.002 |
| Y&H RE Programme | 4,651 | 3 | 1 | 0.02 | 0.002 |
| BREIG (Y&H) | 2,400 | 2 | 3 | 0.01 | 0.04 |
| Midas (North East) | 5,310 | -- | -- | 0.02 | -- |
| Envision (South West) | 12,325 | 5 | -- | 0.01 | 0.004 |
| BREW Aggregate | -- | 2 | 6 | 0.02 | 0.2 |
| Generic Business Support | 9,705 | | -- | -- | -- |
| Average | 6,100 | 2.4 | 2.5 | 0.02 | 0.04 |

Source: See Annex 5

Benchmarking Generic Business Support

A range of wider evaluation activity relating to business support should also be considered in order to provide additional benchmarking data. A number of relevant benchmarks were included in PwC's Regional Development Agency Impact Report in 2009. Within the evaluations considered by the report an average cost of £8,502 per business assisted was reported. The study also highlights an exercise carried out by AWM in 2003, which estimated a much higher cost of £12,000 per business assisted⁴².

The cost per business varies within the strands of business development and competitiveness interventions considered (as shown in Table 6.31). Targeted business support for sector or clusters had the lowest cost per business assisted (£3,901) compared to science, R&D and innovation (£24,640) which was around 6 times more expensive due to the technical nature of support delivered. Overall within business support evaluations, the cost per business assisted was £9,705.

Individual enterprise support offers the highest immediate return on investment (£4.90 GVA per £ spent). Support for science, R&D and innovation covers its costs, however, there is likely to be higher long term returns through job creation. Across business support interventions more generally an annual return of £2.80 per £1 spent is expected.

⁴² 'Identification of benchmarks' report to AWM, AWM, 2003. DBERR (2009) "Impact of RDA spending – National report – Volume 1 – Main Report"

Table 3.4 Benchmarking metrics for Generic Business Support

| | Type of Business support | | | | Overall Business Support |
|---|-------------------------------|-------------------------|-----------------------------|-------------------|--------------------------|
| | Individual Enterprise Support | Sector/ Cluster Support | Science, R&D and innovation | Inward Investment | |
| Cost per business assisted (£) | 8,502 | 3,901 | 24,640 | N/A | 9,705 |
| Cost per business created (£) | 74,196 | 163,676 | 1,564,603 | -- | 187,771 |
| Cost per job created/ safeguarded (£) | 8,301 | 12,135 | 37,938 | 11,563 | 14,221 |
| Achieved GVA: cost (annual) (£) | 4.9 | 3.2 | 1.1 | 3.7 | 2.8 |
| Achieved and Future GVA potential: cost (£) | 14.1 | 8.7 | 8.3 | 20.5 | 11.6 |

Source: Analysis of DBERR (2009) "Impact of RDA spending – National report – Volume 1 – Main Report"⁴³

5.4.1 Quantitative Benchmarking: Summary Findings

- Analysis of comparable resource efficiency support indicates that, in terms of value for money, the EBS programme represents a very efficient use of funding compared to other projects funded through BREW and RDA Single Pot funding.
- The programme demonstrates the lowest cost per business assisted, for the selected resource efficiency initiatives, and substantially lower than the average unit cost for generic business support initiatives.
- The cost of company benefits generated, measured through increased sales and cost savings, is the lowest in the EBS programme.
- The cost per sales increased and cost per cost saving recorded by the EBS programme are a fraction of those delivered through other business support projects.
- When comparing EBS Programme data with the benchmarking data from wider business support initiatives it is evident that the cost per business assist is much lower for the EBS Programme (£2,257) than for any of the other various strands of business support and much lower than the overall figure of £9,705 per business assisted.

5.4.2 What Works?

In terms of transferable lessons, the comparison to projects in other regions emphasises that one-to-one assistance is essential in order to transform awareness into tangible action and/or investment. Indeed evidence from the review of resource efficiency evaluations suggests that the combination of diagnostics and further assistance/brokerage is essential, including strong relationships with other providers in the region.

In addition, research on other regions indicates that capital grants are useful in encouraging investment. In particular, the evaluation of Yorkshire Forward's Investment in Resource Efficiency suggested that the interventions receiving monetary input from the RDA were diverse in their nature and therefore enabled the engagement of a range of business types

⁴³ "Total achieved and future potential GVA which differs from the cumulative achieved GVA in that it also includes the estimated NPV of the flow of benefits expected to accrue from the future potential jobs which are expected to result from the RDAs' interventions"

from SME's through to multinationals to make resource efficiency investments that they would not otherwise have made.

However, it is not clear, given the rate of implementation of identified opportunities under the EBS programme that a substantial acceleration in the rate would follow the provision of grants. To the extent that the underlying problem is access to finance, a loan system would be a preferred approach, with loan repayment linked to the resource savings achieved. However, we recognise that an element of the market failure associated with resource efficiency improvement relates to the fact that companies consider it to be expensive and requiring capital investment, when in fact considerable returns are evidenced from no and low cost improvements.

6 Conclusions and Recommendations

6.1 Conclusions

6.1.1 Programme Rationale

- The intervention logic of the Programme, as a response to market failures that lead to a lack of business investment in resource efficiency, is rational and well developed;
- Evidence from the business survey suggests that the nature of the market failure is perhaps reducing in terms of basic information failure, with market failure more orientated towards the lack of knowledge of specific opportunities and of technical capabilities to implement resource efficiency opportunities;
- The underlying evidence of the nature and scale of the market failure is compelling and confirms that the programme rationale remains clear and valid. The strong evidence that market failures persist in relation to a lack of awareness of investment opportunities (rather than some general awareness of the issues) and the lack of technical capacity to address such opportunities correctly underpins the focus and design of programme delivery;
- There remain other forms of related market failure linked to the lack of strategic management and integration of resource use in overall business planning and appraisal which could serve as rationale for the further development of the programme in future years. In addition, the co-ordination / collective action problem requires further initiatives to improve communication of benefits, and to share best practice, between businesses;
- At a more strategic level the growing importance and urgency that will be attached to improving resource efficiency in the light of growing concerns over dangerous climate change and resource scarcity, exemplified for example in the latest European Union Strategy (Europe 2020), combined with the difficulties of fully internalising the social costs of resource use in market prices, makes the programme increasingly relevant. This increasing relevance may conflict with the diminished funding for business support.

6.1.2 Programme Delivery

- The central management team have provided a strong co-ordination function which has supported sub-regional delivery through a range of activities, reflected in the use of a clear management structure, the provision of continuing learning and development of the service and application of the Toolkit. This has resulted in excellent financial progress with all resources committed and spent;
- Sub-regional delivery involved delegated budgets to the sub-regions. This has allowed flexibility to use allocated funding in different ways (e.g. the balance of spending across marketing, advisor training, etc) depending on local delivery requirements;
- The sub-regional providers have been responsible for delivering the required outputs for the programme, focusing on providing intensive assistance to companies with the most significant identified savings. This has, in aggregate, resulted in excellent physical progress, with all output targets (with one small exception) met or exceeded;
- Sub-regional performance, measured by contribution to their respective output targets has varied, although all sub-regions have met targets for the numbers of businesses assisted. This may reflect sub-regional variations in the nature of businesses and the relative importance of different sectors;
- Sub-regional providers indicate that where they have been able to cultivate long term relationships, sometimes using existing business networks to initially provide one-to-many information, this has been important in converting identified opportunities into improvements;

- Comparison of performance between the current EBS programme and the programme in the previous period suggests that the identification of resource saving opportunities per business has increased. This suggests that even though the triage approach targets those businesses with the greatest set of opportunities, there remains large numbers of companies with the scope to secure substantial returns from investment in resource savings. However, the take-up and implementation of these opportunities is proving slower than in the previous period, explained in the main by the economic recession.

6.1.3 Beneficiary Experience

- The primary use of the advice is to identify specific resource saving opportunities. Both the first and second business surveys demonstrate that the quality of EBS Programme advice is very high. Advisors are considered to be knowledgeable (with some two-thirds considered to be very knowledgeable). Over 50% of businesses consider the advice to be very useful and over 80% consider it be useful. Furthermore, the advice given to beneficiaries stands the test of time, with nearly 80% of companies interviewed stating that the advice was just as useful as they had initially thought it to be, and the other 20% considered it was more useful than first thought.

6.1.4 Programme Impacts

- The business survey confirms that the recession has undoubtedly impacted on the ability of beneficiaries to implement identified opportunities. The impact of the programme is therefore more significant when one considers that it has been delivered against a background of reduced access to finance and global recession;
- The Programme advised 3,655 businesses, of which 3,142 were advised in relation to resource efficiency. Of these 68% (2,137 businesses) considered the main impact of the advice to be on resource savings;
- On average the companies receiving resource efficiency advice and which have reported resource efficiency savings as the largest impact, have implemented some 55% of the opportunities identified, with an achieved average cost saving per business of £15,125. Full implementation of all identified opportunities would yield, if savings accrue at the same rate, £27,600 per business.
- The Toolkit reports that the resource efficiency improvements have been identified and achieved creating savings of 475,000 tonnes of CO₂, 220,00 tonnes of materials and 4m³ of water, plus 283,000 tonnes of waste diverted from landfill.
- Data held by the EBS programme is far more comprehensive than for other business support projects. In addition, the data has a robust audit trail, does not include estimates or 'bands' of impacts. Through the beneficiary surveys undertaken for this evaluation the Toolkit data has been verified as an accurate indication of the benefits for companies.

6.1.5 Economic Impacts of the Programme

- The Programme has resulted in an annual net additional increase in GVA in the North West region of £24m. Over a five year period, taking a conservative view on the persistence of impacts, but assuming remaining opportunities are implemented over the next four years, the net additional increase is estimated to be £95m. This excludes impacts from businesses advised for which resource efficiency impacts were not the main impact;
- The cost of the advice that has realised these benefits is £7.9m, depending on the attribution of costs to the set of businesses for which resource efficiency was the main impact. The impact is therefore 12 times the cost (excluding the externality benefit) or 19 times (if it is included).
- Based on the share of UK taxpayer funding in the Programme, and assuming a 26% rate of corporation tax applied to the additional GVA, the additional tax receipts cover the

taxpayer cost within 6 to 8 months. This will be very slightly offset by a fall in tax revenue from any reductions in profits of the suppliers of resources as a result;

- The total economic impact also includes the externality value of the physical resource savings, since these are not reflected fully in market prices. The most significant impact is the saving of CO₂ emissions, valued at £51/tonne. The current saving (deadweight adjusted) is £13.6m. If planned cost savings yield similar levels of CO₂ savings the economic benefit would be £25m. If this planned saving accrues equally over the next four years, and there is an assumed 20% annual decay in the current benefits, the five year present value would be £56.6m. If this impact is included, the additional benefits over the five years is nineteen times the cost.
- The cost-benefit ratio would be reduced to the extent that there is evidence that the public funding of advice provided by the Programme was responsible for crowding-out market services to advise businesses on resource efficiency. There is little evidence that such crowding out has occurred. This is based on the views of stakeholders, and the apparent unwillingness of businesses to pay for the advice received.

6.1.6 Strategic Added Value

- ENWORKS provides an important strategic leadership role in the region which goes further and deeper than its function in the EBS Programme. Not only is ENWORKS recognised as the main reference point for resource efficiency in a regional context but it is recognised for its contribution to thought leadership regarding environmental and economic outcomes from resource efficiency improvement at national level. This has obviously been of significant benefit to delivery of the EBS Programme goals;
- The EBS Programme has functioned as a co-ordinated, well-aligned delivery partnership for the region, exhibiting strong synergies with the RES approach to assisting priority sectors;
- The quality of EBS advisor advice has also enabled national partners to operate more effectively in the region by allowing them to concentrate resources on other policy areas. EBS advisors have benefitted from company diagnostic analyses undertaken by The Carbon Trust and vice versa;
- A key feature of the EBS Programme has been intelligence sharing and awareness raising. This has taken place within the region, through capacity building and awareness raising events at sub-regional level. It has also taken place outside the region through the roll-out of the Toolkit to other regions and by providing invited analysis to central government. The Central Management Team has been integral in this aspect of the programme's impact.

6.1.7 Lessons from the Benchmarking of the Programme with Similar Projects

In summary, the comparative analysis of the unit costs per output of the EBS Programme with other similar projects suggests that the EBS Programme has been both highly efficient and effective in the way it has used available resources to deliver benefits to beneficiary companies and the economy. It is by some way the most effective (in terms of the cost per business assisted) and the most efficient in terms of the costs of achieving cost savings.

The comparative review of projects confirms that the strategy of the EBS Programme an effective and efficient one, and comprises:

- the emphasis on intensive, and continuing, support on a one-to-one basis to maximise both the identification of opportunities and to support implementation;
- the allocation of funding to this activity (rather than funding actual implementation);
- the use of local advisors, familiar with local companies and sectors, and local economic conditions;
- the avoidance of spending on one-to-many initiatives except where clearly justified;

- the avoidance of a too strict sectoral focus, whilst recognising through the triage system a need to focus on the businesses with the greatest opportunities;
- the avoidance of charging for advice, maintaining independence and avoiding perverse incentives;
- ensuring effective relationships with other regional and national providers;
- establishing and maintaining a reputation for independence and quality of advice over time, reflected in the awareness that it is the 'go to' organisation for resource efficiency in the region.

6.2 Recommendations

The evaluation has demonstrated that the Programme has been successful, both in its own terms and in comparison with similar projects elsewhere in the UK. The recommendations are therefore framed by the search for ways to make the Programme even better; and by the increasing strategic emphasis on business resource efficiency in the light of future resource scarcity and dangerous climate change.

The evaluation has identified two main issues that need to be considered:

- The need to recognise the range of market failures, especially of strategic management failure to integrate resource efficiency in business decisions, and of the co-ordination and collective action problem (see Section 2.3.4). This suggests the need:
 - to consider the feasibility of either revising or expanding the advice provided, to better target the different levels of information failure; and,
 - to continue to use, and consider ways in which to expand, the model of the Resource Efficiency Clubs to address the coordination and collective action problem. This model has been shown to be a successful mechanism for delivering cost effective support (as outlined in Evidence Box 3 below)
- The need to respond to:
 - likely future public funding cuts (although the ERDF funding and related match is understood to be secured until the end of the current Competitiveness Programme); and
 - the continuing financial pressures on businesses, limiting their scope to fund resource efficiency opportunities.
- In addition there is a third issue relating to the scope to continue a regionally managed intervention in the context of the new regional and local government arrangements.

These issues are potentially in conflict – broadening the service offer when resources are limited or uncertain is difficult. Moreover, maintaining the current management arrangement and service offer may be a challenge in itself following the abolition of RDAs and the introduction of Local Enterprise Partnerships (LEPs). This suggests that future operation is likely to require some form of income generation and/or a move to a loan rather than grant based approach.

The options for charging for advice, as discussed, have significant disadvantages that could undermine the current performance of the Programme; although new advisory services aimed carefully at the senior strategic management level in businesses could be chargeable.

Another option was identified in the context of supporting implementation – the provision of capital loans to fund implementation, using a rolling loan fund. This option might allow the Programme to address the problems businesses have in accessing funds (including larger companies) that is inhibiting implementation.

At the same time as the interest charge, a fee would need to be charged to cover the transaction costs of setting up the loan. This fee might be set with respect to both a flat rate and some small proportion of achieved (and monitored) physical resource savings, internalising the externality benefit under the polluter pays principle.

6.3 Future Operation

Whilst ENWORKS is an exemplar in many ways, there are a number of ways through which its operation could be improved looking forward which may improve its performance.

These considerations can be divided into the strategic need to consider options for moving from grant based approaches, post 2013; and more operational options to enhance impacts and cost-effectiveness in the short-term.

6.3.1 Moving from grant based support

The evaluation has indicated that the introduction of charges is likely to be counter-productive in terms of the level of take-up of advice. However, in the absence of public grant subsidised support to businesses, the introduction of charges to businesses will be required, to cover the costs of advice. Two models suggest themselves (which might be used together):

- A consultancy model – where advice is charged for the time provided to cover staff and overhead costs;
- A loan based model – where the costs of advice are covered in the charges for loans, provided by ENWORKS, and where advice is confined to businesses applying for loan support.

Under a consultancy model, different charging schemes can be considered:

- By service – especially for those targeting more strategic management issues
- By firm size – especially the larger firms where the cost savings in absolute terms are higher and might support willingness to pay
- By sector – especially those where reputational value is important, or where the benefits in terms of improved competitiveness might be used to justify charges.

Under a revolving loan based model where charges for advice are covered in the costs of loan provision, the issue is more the ability to offer finance at less than market rates to attract prospective borrowers. This in turn depends on accessing capital where lenders are prepared to take into account the economic and environmental benefits, such as the Regional Growth Fund, the Green Investment Bank or the European Investment Bank.

Under both models, the possibility of establishing ENWORKS as a social enterprise might be considered.

6.3.2 Operational options

A number of shorter-term options have been identified that could improve the range and cost-effectiveness of ENWORKS business support and which could also complement the move from the grant based approach in the longer-term.

- On-line advice: The provision of on-line tutorials and advisory resources could provide a cost effective means of extending or replacing existing services. WRAP are currently running a number of on-line pilot schemes which provide tutorials to guide businesses through elements of resource efficiency, including RippleEffect⁴⁴ (a free water efficiency initiative) and Rethink Waste⁴⁵. See the end of Annex 5 for details.
- Greater use of the Toolkit: ENWORKS currently promotes the savings made by companies who have undertaken resource efficiency action through the Online Toolkit. The data in the Toolkit could be used to highlight the cost of inaction. For example, WRAP promote their water efficiency programme on the fact that flush control urinals

⁴⁴ WRAP RippleEffect Initiative

http://www.wrap.org.uk/business/sme/rippleeffect/more_about_the_rippleeffect/index.html

⁴⁵ WRAP Rethink Waste http://www.wrap.org.uk/business/sme/rethink_waste/index.html

cost a company an additional £3,800 per annum, but a £350 installation of PIR sensors could negate this cost.

As well as providing information, the Toolkit could provide firms with benchmarks for different activities geared to different sectors and businesses. Businesses identifying cost saving opportunities on-line would have an incentive to ask for advice. The service would complement the development of the longer-term options and provide ENWORKS with a strong 'USP'.

- Use of Resource Efficiency Clubs: Sector and/or geographic specific Resource Efficiency Clubs have been proven to provide an opportunity to engage with businesses to promote the agenda and to encourage the use of one-to-one, tailored support. This approach has been established through activity supported by ENWORKS and will continue to play an important part in delivery of resource efficiency support in the future.

Evidence 3: Resource efficiency clubs

RECs enable local businesses to trade, access information, improve operations and share knowledge of issues. They also provide networking opportunities over the long-term and a sense of shared interests. Of the RECs supported under the national Programme (2005-08) 9% were located in the North West (approximately 6 RECs).

Barriers to success

The Programme Review identified barriers to the success of the RECs. The most important was the identification, recording and sharing of resource savings. RECs also found difficulties in encouraging business members to attend workshops and events. More specifically, one quarter of RECs stated that the time commitment of member businesses had been a barrier to the club's success.

As with all projects a key factor in achieving success is the quality of the animation by Club leaders. Communication between the club leader and company contacts, especially when companies lack time to attend, and facilitating networking and the sharing of best practice and ideas is critical. The most important element of RECs is that they provide local companies with proof that resource efficiency is cost effective.

Funding Uncertainty

In the absence of public funding (of £45k per year) many businesses were hoping to continue their REC activity in some form. Larger clubs would reduce management costs per business, but might reduce the benefits derived from engaging with local members. Some charging on a subscription / service basis would seem inevitable, unless local authorities or national organisations such as WRAP contribute.

- Working with Supply Chains: Targeted supply chain activity seeks to improve the resource efficiency of smaller companies by supporting larger companies to mentor and engage their supply chain on a collective basis through a focus on existing relationships within the supply chain. A good example of this approach is the Supply Chain Network Programme facilitated by Resource Efficiency East (REE)⁴⁶, which is funded by EEDA and ERDF and supports eight supply chain networks in the East of England.

Applications from the public and private sector are made to be a 'network host'; where the host, working as a delivery partner, seeks to improve relations with their supply chain and make internal procurement procedures more sustainable by improving the understanding of resource efficiency opportunities among their suppliers, distributors and wholesalers. The network is supported by funded support to assist and to encourage innovative solutions to problems identified within the supply chain.

⁴⁶ Resource Efficiency East "Supply Chain Network" <http://www.resourceefficiencyeast.org.uk/supply-chain-network.asp>



ANNEXES

Annex 1 Overview of the Innovation Projects

A core aim of the ENWORKS EBS Programme was to develop new ways to support businesses (i.e. by evolving the delivery model through, for example, through the creation of a Consultants Bank) and to develop new forms of support (i.e. by developing new products such as climate change adaptation).

The ENWORKS Innovation Projects were designed to support both strands of this aim, enabling ENWORKS to investigate and understand the most effective forms of achieving real resource efficiency improvements in business.

The remit that projects were given in the open procurement process was: “ENWORKS is looking for expressions of interest from organisations that can provide a discrete project which will achieve auditable financial and resource savings over its lifetime. As such, awareness raising and research & development projects are unlikely to be eligible for funding.”

This was a relatively open set of criteria for potential project designers to work around without being restrictively prescriptive.

The appraisal criteria were again relatively open and generic in style:

- Overall value for money;
- Technical and operational track record in providing resource efficiency services to companies;
- Previous work and experience in the area;
- The strategic fit of the proposed project against existing ENWORKS provision; and
- Familiarity with the publicly funded environmental business support landscape (e.g. Carbon Trust, Envirowise, Envirolink, NISP, WRAP etc)

The role played by these Innovation Projects in setting future business priorities for ENWORKS is a fundamental issue addressed by the Arup evaluation. A key issue within this is the method by which ENWORKS “understand the most effective forms of achieving real resource efficiency improvements in business” arising from the results achieved by individual projects. Table 6.14 outlines the outputs achieved by the Innovation Projects.

Table 6.14 Outputs Achieved by Innovation Projects

| Outputs | Target | Actual | Variance | % of Target |
|--|------------|------------|-------------|-------------|
| Jobs Created | 23 | 0 | -23 | 0% |
| Jobs Safeguarded | 179 | 30 | -149 | 17% |
| Number of businesses involved in Supply Chain Projects | 11 | 0 | -11 | 0% |
| Businesses assisted with Resource Efficiency | 143 | 120 | -23 | 84% |
| Number of businesses with Improved Performance | 76 | 14 | -62 | 18% |
| Number of applications of Low Carbon Technologies | 60 | 4 | -56 | 7% |
| Adults Undertaking Work Based Training | 339 | 191 | -148 | 56% |
| Sales Increased | £4,180,000 | £7,480,000 | £3,300,000 | 179% |
| Sales Safeguarded | £8,175,000 | £0 | £-8,175,000 | 0% |

Annex 2 Delivery Issues and Changes to Programme Output Targets

| <i>Outputs and Outcomes Targets in original Contract</i> | | <i>Outputs and Outcomes Targets at END of Programme</i> | | | <i>Actual Achieved</i> |
|--|-------------|---|-------------|------------|------------------------|
| | Target | | Target | % change | |
| Business Support | | | | | |
| Number of businesses assisted with resource efficiency ¹ | 2,500 | Businesses assisted with resource efficiency ¹ | 3139 | 26% | 3507 |
| 2. Businesses assisted with corporate and social responsibility ² | 800 | Businesses assisted with corporate responsibility ² | 705 | -12% | 979 |
| | | Number of businesses assisted ³ | 3329 | new target | 3655 |
| | | <i>Business Assists (Universal)</i> ⁴ | 2881 | new target | 3142 |
| | | <i>Business Assists (Intermediate)</i> ⁵ | 448 | new target | 513 |
| | | Number of applications of low carbon technologies ⁶ | 160 | new target | 243 |
| Number of businesses involved in supply chain projects | 10 | Number of businesses involved in supply chain projects ⁷ | 10 | 0% | 8 |
| Skills | | | | | |
| Number of adults undertaking work based training | 600 | Number of adults undertaking work based training | 583 | -3% | 838 |
| Efficiency Toolkit - Economic & Environmental Outcomes | | | | | |
| Cost Savings (£) | £50,000,000 | Cost Savings (£) ⁸ | £60,000,000 | 20% | £77,220,000 |
| Material Savings (tonnes) | 800,000 | Material Savings (tonnes) ⁹ | 170,000 | -79% | 219,800 |
| CO2 Savings (tonnes) | 200,000 | CO2 Savings (tonnes) ¹⁰ | 250,000 | 25% | 475,570 |
| Water Savings (m3) | 1,300,000 | Water Savings (m3) ¹¹ | 2,759,800 | 112% | 3,953,530 |
| | | Waste Diverted from Landfill (tonnes) ¹² | 130,490 | new target | 282,810 |
| Jobs and Sales | | | | | |
| Jobs created | 454 | Jobs created ¹³ | 163 | -64% | 158 |
| Jobs safeguarded | 699 | Jobs safeguarded ¹⁴ | 338 | -52% | 529 |
| Sales Increased (£m) | £25,000,000 | Sales Increased (£m) ¹⁵ | £28,000,000 | 12% | £34,560,000 |
| Sales Safeguarded (£m) | £55,000,000 | Sales Safeguarded (£m) ¹⁶ | £57,000,000 | 4% | £68,420,000 |

Notes:

1. The 'assist with RE & CR' targets were dropped by NWDA when national metrics changed to 'assist with performance'.
2. ENWORKS maintained capture of these metrics to enable analysis across full programme lifetime with consistent metrics
3. These metrics and definitions were changed during programme delivery
4. Universal assist = no minimum thresholds
5. Intermediate assist = £1000 or 12 hours support
6. New metric introduced mid programme
7. The output title is misleading - support must result in a business winning new contract in a supply chain that is entirely new to it with a new end customer
8. Target increased to reflect positive performance at time of other changes to metrics plus to balance reductions driven by recession
9. Target reduced due to a misinterpretation of data
10. Target increased to reflect positive performance at time of other changes to metrics plus to balance reductions driven by recession
11. Target increased to reflect positive performance at time of other changes to metrics plus to balance reductions driven by recession
12. New target introduced mid programme - Toolkit functionality had been developed to capture
13. Target reduced due to recession
14. Target reduced due to recession
15. Target increased to reflect positive performance at time of other changes to metrics plus to balance reductions driven by recession
16. Target increased to reflect positive performance at time of other changes to metrics plus to balance reductions driven by recession.

Annex 3 Additionality Factors

Deadweight

Table 3.5 If your company had not received advice from Enworks what would you have done with the invested time and resources utilised?

| | No. Of responses | Proxy Value | Weighted Value |
|---|------------------|-------------|----------------|
| Would not looked further for this type of support and would have left the issue of resource efficiency | 7 | 0 | 0 |
| Would not looked further for this type of advice but would have gone ahead and taken action / invested in the action taken | 5 | 1 | 5 |
| Would have eventually accessed resource efficiency advice but it would have been significantly delayed – by more than a year | 3 | 0.25 | 0.75 |
| Would have eventually accessed resource efficiency advice but it would have been significantly delayed – by less than a year | 3 | 0.75 | 2.25 |
| No answer | 1 | | |
| | 18 | | 0.44 |

Deadweight Factor = 0.44 = 44%

Displacement

Table 3.6 In the last complete financial year what percentage of your customers were based in the North West?

| % of customers in NW | No. of responses | Proxy Value | Weighted Value |
|--------------------------------|------------------|-------------|----------------|
| 0-<20% | 4 | 0.105 | 0.4 |
| 20-<40% | 2 | 0.300 | 0.6 |
| 40-<60% | 2 | 0.500 | 1 |
| 60-<80% | 0 | 0.700 | 0 |
| 80-<100% | 5 | 0.900 | 4.5 |
| Don't know / Refused to answer | 8 | | |
| | 13 | | 0.5 |



Table 3.7 In the last complete financial year what percentage of your competitors were based in the North West?

| % of competitors in NW | No. of responses | Proxy Value | Weighted Value |
|--------------------------------|-------------------------|--------------------|-----------------------|
| 0-<20% | 4 | 0.1 | 0.420 |
| 20-<40% | 2 | 0.300 | 0.600 |
| 40-<60% | 2 | 0.500 | 1.000 |
| 60-<80% | 0 | 0.700 | 0.000 |
| 80-<100% | 3 | 0.900 | 2.700 |
| Don't know / Refused to answer | 10 | | |
| | 11 | | 0.4 |

Displacement Factor: $0.4 \times 0.427 = 0.2136 = 21\%$

Leakage

Table 3.8 Is your company planning to relocate outside of the region in the next three years?

| | No. of responses | Proxy Value | Weighted Value |
|-----------|-------------------------|--------------------|-----------------------|
| Yes | 0 | 1 | 0 |
| No | 20 | 0 | 0 |
| No answer | 1 | | |
| | 20 | | 0 |

Leakage Factor = 0 = 0%

Multiplier

Table 3.9 In the last financial year what percentage of your purchases was from suppliers based in the North West

| | No. of responses | Proxy Value | Weighted Value |
|--------------------------------|------------------|-------------|----------------|
| 0-<20% | 7 | 1.100 | 7.700 |
| 20-<40% | 2 | 1.300 | 2.600 |
| 40-<60% | 1 | 1.500 | 1.500 |
| 60-<80% | 0 | 1.700 | 0.000 |
| 80-<100% | 6 | 1.900 | 11.400 |
| Don't know / Refused to answer | 4 | | |
| No answer | 1 | | |
| | 16 | | 1.45 |

Multiplier Factor = 1.45 = 145%

Table 3.10 Comparison of Gross to Net Additionality Calculations for Individual Enterprise Support Programmes

| | Deadweight | Displacement | Leakage | Multiplier | Gross to Net Ratio |
|----------------------------|------------|--------------|---------|------------|--------------------|
| EBS - GHK | 0.44 | 0 [0.21] | 0 | 1 [1.45] | 0.56 |
| EBS - SQW | 0.10 | 0.13 | 0.05 | 1.25 | 0.92 |
| Ent Support - Median (CEA) | 0.50 | 0.29 | 0.05 | 1.45 | 0.49 |
| Ent Support - Mean (CEA) | 0.47 | 0.31 | 0.13 | 1.44 | 0.43 |

Note: Because the intervention has increased GVA through cost savings, market displacement is considered not to occur. However, an estimate of the displacement factor has been made. By the same argument there is also no supply-side multiplier effect since the GVA does not derive from any increased purchasing activity, although the multiplier has been estimated.

Sources:

GHK (2010): Table x, This Report

SQW (2007): Final Report to ENWORKS

CEA (Cambridge Economic Associates) for DBIS (2009) "Research to improve the assessment of additionality" BIS Occasional Paper No. 1: Median and Mean Coefficients of regional additionality for individual enterprise support:

<http://www.berr.gov.uk/files/file53196.pdf>

Annex 4 Interviewees

| Name | Organisation | Title |
|----------------------|----------------------------------|--|
| Mark Atherton | NWDA | Head of Sustainable Development |
| Vicki O'Kelly | DECC | Policy Advisor |
| Pritum Shah | BIS | Senior Policy Adviser, Waste Policy, Services Policy Unit |
| Professor Paul Ekins | UCL / NISP | Professor of Energy and Environmental Policy (UCL) Chairman, NISP |
| Tony Dean | Environment Agency | Regional Director and ENWORKS Board member |
| Paul Stowers | Government Office NW | Climate Change & Energy manager and ENWORKS Board member. |
| Anne Selby | NW Sustainable Development Group | NWDA Board member & Chair of NW regional Sustainable Development Group . |
| Kevin Lambert | Carbon Trust | NW Regional Manager |
| Paul Bromley | NISP NW | Regional Coordinator |
| Lindsay Harris | Defra | Deputy Director, Sustainable Business and Resource |
| Paul Henly | Federation of Small Businesses | North West Policy Manager |
| Mick Smith | Groundwork Blackburn | Director of Business Programmes |
| Greville Kelly | Groundwork Cheshire | Development Director |

Annex 5 Regional & National Resource Efficiency Support Information

Regional Resource Efficiency Programmes

South West

At the regional level the South West RDA used Defra Business Resource Efficiency and Waste Programme (BREW) funds and their Single Programme to fund the Envision business support programme and a number of sector specific initiatives. The funding also enabled the “mainstreaming” of BREW as part of the regional approach to business support through brokering in the most effective provision (administered by Business Link. The “information, diagnostic and brokerage” approach).

The Envision project provided one to one intensive support to SMEs, on a subsidised basis, until the end of 2008/9. However from April 2010 regional support was provided on a subsidised commercial basis, accessed through the Business Link South West gateway. The project took place over five phases targeting different areas and over its course expenditure equated to £3.82m. This included £1.49m from SWRDA, £191k SME income, £1.55m EU Structural funds and £0.6m other contributions.

A total of 2,206 businesses received an initial session providing advice and guidance across the 5 phases, with 766 businesses gaining substantive support. The following tables outline the results of the Envision Project evaluation, for some indicators the evaluators were able to calculate exact numbers, for others ranges are provided.

| Envision Project: Outputs and Outcomes | | |
|---|----------------------------------|-------|
| Table 6.15 Envision Project: Gross Outputs | | |
| Output | Total | |
| Businesses Supported | 766 | |
| New Sales | £81.82m | |
| New Jobs | 605 | |
| Reduction in Water (m3) | 474,686 to 701,219 ⁴⁷ | |
| Waste diverted from landfill (tonnes) | 1,972 to 3,471 | |
| Reduction in Energy (kWh) | 24,978,107 to 42,686,644 | |
| Reduction in Vehicle Fuels (litres) | 566,717 to 773,904 | |
| Table 6.16 Net Project Outcomes (per £) | | |
| Outcome | Envision Project | |
| | Low | High |
| Project Funding (£) | 3,820,658 | |
| Increased sales (£) | 2.46 | 7.35 |
| Greenhouse gas (t) | 0.74 | 1.11 |
| Waste diverted (t) | 0.001 | 0.018 |
| Cost per business assisted (£) | 12,325 | |

⁴⁷ Adjusted evaluation estimates

| | | |
|-------------------------------|--------|--------|
| Water savings (m3) | 0.003 | 0.004 |
| Reduction in vehicle fuel use | 0.009 | 0.0012 |
| Energy use reduction (KWh) | 0.0071 | 0.0122 |

Source: EKOS (2010) "An Economic, Environmental and Strategic Evaluation of Envision"

Table 6.17 illustrates a summary of the Envision project in the South West, illustrating its broad, wide-reaching nature.

Table 6.17 Summary of Envision in the South West

| | | | | | | High | Medium | Low | |
|-----------------------|------------------------------------|------------------------------|------------------|--------------------------|-------------|------------|-----------------------|---------------|------|
| | | | | | | √√√ | √√ | √ | |
| Area of Concentration | Target / Geographies | Total Resource Available (£) | Eligible Sectors | Main Delivery Activities | | | | | |
| | | | | One to One | One to Many | Diagnostic | Technical Consultancy | Capital Grant | |
| Envision | Energy; Waste; and Water reduction | SMEs in the SW | 3,820,000 | All Sectors | √√√ | √ | √√√ | None | None |

Yorkshire and Humber

The purpose of the current Business Resource Efficiency Improvement Grant (BREIG) programme is to help businesses in the Yorkshire and Humber region to improve their resource efficiency; providing grants and access to third party expertise to target reductions in waste, energy and water whilst at the same time boosting profits⁴⁸. As part of the CO₂ Sense Yorkshire programme, BREIG helps support the cost of capital investment, consultancy or training which works towards a greater use of recycled or environmentally friendly processes and materials, reduced energy, fuel or water consumption, reduced landfill waste and improved production efficiencies.

The programme is delivered by CO₂Sense, a not-for-profit subsidiary of Yorkshire Forward, created to help Yorkshire businesses and organisations prosper in a low carbon economy

Businesses eligible included:

- Businesses looking to apply for **capital grant** to purchase equipment or machinery that will reduce the company's waste output, energy and fuel consumption and/ or water usage.
- Businesses looking to apply for a **consultancy grant** for a third party environmental specialist to help you identify and implement changes within your business that would effectively reduce your company's waste output, energy and fuel consumption and/or water usage.
- Businesses looking to apply for a **training grant** for training course where the focus of learning is on efficiency/environmental matters which may then lead to resource efficiency improvements being made within the business.

The programme initially began as a Small Scale Capital Grants pilot between November 2006 and March 2007, offering 25% funding (maximum £8,000) towards purchases to achieve resource efficiencies, delivering £225,000 funding to 55 companies. Following the success of the pilot BREIG developed, running between November 2007 and March 2008 with a £365,000 budget and a target of 150 businesses for consultancy or capital projects. Due to

⁴⁸ EKOS (2008) "Evaluation of Yorkshire Forward's Yorkshire and Humber Business Resource Efficiency Improvement Grant 2007-08"

the low uptake in consultancy however, it was expanded to include a capital grant for training.

Table 6.18 outlines the Gross Outputs achieved by the project; Table 6.19 outlines Net Outcomes.

| YF BREIG Programme: Outputs and Outcomes | |
|---|----------------------|
| Table 6.18 Yorkshire BREIG Gross Outputs | |
| Output | Total |
| Jobs created | 39 |
| Jobs safeguarded | 25.5 |
| Increase in business sales (£ pa): | £2.45m |
| Investments | £2.83m |
| Reduction in costs (pa) | £2.67m |
| Reduction in GH gas (Co2pa) | 8,285 |
| Materials diverted from landfill (tonnes pa) | 14,926 |
| Hazardous materials (tonnes pa) | 3,845 |
| Virgin materials (tonnes pa) | 6,861 |
| Water saved (tonnes pa) | 29,843 |
| Table 6.19 Net Project Outcomes (per £) | |
| Outcome | BREIG Project |
| YF Funding | 365,000 |
| Increased sales (£ pa) | 2.16 |
| Cost savings (£ pa) | 3.16 |
| Greenhouse gas (t) | 0.012 |
| Waste diverted (t) | 0.022 |
| Cost per business assisted (£) | 2,433 |
| Water savings (m3) | 0.044 |
| Raw Materials (t) | 0.004 |
| Hazardous waste (t) | 0.002 |

Source: EKOS (2008) "Evaluation of Yorkshire Forward's Yorkshire and Humber Business Resource Efficiency Improvement Grant 2007-08"

Table 6.20 summarises BREIG resource efficiency. In contrast to the programmes included under the Yorkshire Resource Efficiency Programme, BRIEG provided capital grants to businesses, targeted specifically to companies with a productive capability.

Table 6.20 Summary of BREIG Resource Efficiency

| | | High | | | Medium | | Low | | |
|-----------------------|--------------------------|------------------------------|------------------|---|-------------|------------|-----------------------|---------------|-----|
| | | √√√ | | | √√ | | √ | | |
| Area of Concentration | Target / Geographies | Total Resource Available (£) | Eligible Sectors | Main Delivery Activities | | | | | |
| | | | | One to One | One to Many | Diagnostic | Technical Consultancy | Capital Grant | |
| BREIG | Energy; Waste; and Water | Companies in Y&H | 365,000 | Well established companies in the manufacturing sector, or companies with productive capability | None | None | None | √ | √√√ |

In the period 2002/03 to 2006/07, Yorkshire Forward contributed £4m towards resource efficiency interventions. Five “business facing” interventions were targeted through investment of £3.6m⁴⁹. These interventions comprised the following:

- **Carbon Management Clubs (CMC’s):** CMCs were 2 pilots which aimed to reduce CO₂ emissions through improved carbon management practices. One club targeted the food and drink supply chain and the second was made up of SMEs within the Objective 2 areas in West Yorkshire; all companies had energy bills of at least £50k per year. Support included half-day workshops and training as well as individual assistance to develop a company-specific Carbon Management Programme. The majority of funding came from Yorkshire Forward (£216k), but additional funding also came from the Carbon Trust (£133k) and the club members (£90k).
- **Green Business Support Organisation (GBSO):** GBSO aimed to build the capacity of environmental support organisations in the Yorkshire and Humber region and to assist SME’s with environmental support through a network of support. Business in the Community developed agreements with 25 environmental support organisations to engage and deliver environmental advice to SMEs. Network members had the opportunity to attend bi-monthly meetings with information and updates provided on funding opportunity, public sector and environmental developments and regional environmental support programmes and networking opportunities in the region. Yorkshire Forward contributed £659k, with additional funding from ERDF Objective 2 (£337k) and ERDF Objective 1 (£87k).
- **Recycling Action Yorkshire (RAY):** RAY was established to develop the recycling markets within the region and maintains a focus on waste management, as the umbrella programme for greenhouse gas emissions. RAY worked across the supply chain to improve resource efficiency and improve business planning, marketing, staff training etc. Yorkshire Forward contributed £1.9m funding whilst the remainder was a combination of ERDF funding (£285k) and in kind support from the private sector (£439k).
- **National Industrial Symbiosis Programme (NISP):** NISP brings together companies from all business sectors with the aim of improving cross industry resource efficiency through the commercial trading of materials, energy and water and sharing assets, logistics and expertise. It engages traditionally separate industries and organisations in a collective approach to competitive advantage through the physical exchange of materials, energy, water etc and shared use of assets, logistics and expertise. Funding of £790k was put forward by Yorkshire Forward with an additional £370k received through ERDF.

⁴⁹ EKOS (2008) “Evaluation of YF’s Investment in Resource Efficiency”

- **Why Waste:** Why Waste sought to decrease the amount of waste SMEs sent to landfill through provision of a free online information service where individuals may view and place information about redundant stock and surplus raw materials. The resource exchange compliments NISP as it targets hard to reach SMEs who have less flexibility to get involved with Resource Efficiency programmes through an online information service which businesses and individuals can access to view and place information online regarding redundant stock or excess raw materials. Yorkshire Funding of £53,354 was provided for the project.

The main gross outputs from the programme are summarised in below outlines the net outcomes per £ of RDA investment.

YF Resource Efficiency Programme: Outputs and Outcomes

Table 6.21 Yorkshire Resource Efficiency Programme Gross Outputs

| Output | Total |
|------------------------------------|---------|
| Jobs Created | 174 |
| Jobs Safeguarded | 285 |
| Increase in business sales (£ pa): | £16.1m |
| Expected business investments | £20.34m |
| Expected reduction in costs | £4.98m |

Table 6.22 Net Project Outcomes per £

| Outcome | CMCs | GBSO | RAY | NISP | Why Waste? |
|------------------------------|---------|---------|-----------|---------|------------|
| YF Contribution | 216,388 | 659,000 | 1,891,248 | 790,000 | 53,354 |
| Increased Sales (£) | - | - | 0.54 | 7.99 | 0.58 |
| Cost Savings (£) | 2.29 | 1.29 | 0.18 | 0.34 | 2.10 |
| Greenhouse Gas (t) | 0.026 | 0.01 | 0.007 | 0.076 | 0.001 |
| Waste Diverted (t) | -- | -- | 0.013 | 0.226 | 0.003 |
| Cost per Business Assist (£) | 10,819 | 2,594 | -- | -- | 539 |
| Water Savings (m3) | -- | -- | -- | -- | 0.002 |

Source: EKOS (2008) "Evaluation of YF's Investment in Resource Efficiency"

The table below summarises the five resource efficiency programmes in the Yorkshire and Humber region, illustrating that no capital grants or technical consultancy were available through these activities. Activity was primarily one-to-many with additional one-to-one support. Three of the five programmes did not have a sectoral target although there was an element of targeting at SMEs.

Table 6.23 Summary of Resource Efficiency Activity in Yorkshire

| Area of Concentration | Target / Geogs | Total Resource Available (£) | Eligible Sectors | One to One | Main Delivery Activities | | | |
|-----------------------|----------------|------------------------------|------------------|------------|--------------------------|------------|-----------------------|---------------|
| | | | | | One to Many | Diagnostic | Technical Consultancy | Capital Grant |
| | | | | | | | | |

| High | Medium | Low |
|------|--------|-----|
| √√√ | √√ | √ |

| | | | | | | | | | |
|------------------|---|--|-----------|--|------|------|------|------|------|
| CMCs | Energy Use Reduction | High Energy Users / SMES in target areas | 440,000 | Food and Drink; SMEs within the Objective 2 areas and energy bills of at least £50,000 | √√ | √√√ | √√ | None | None |
| GBSO | Energy; Waste; and Water | Support for organisations who provide resource efficiency support | 1,000,000 | Environmental support organisations | None | √√√ | None | None | None |
| RAY | Waste Management and Recycling | Companies across the supply chain and LAs | 2,600,000 | All Sectors | √ | None | √ | None | None |
| NISP | Energy, water and material use reduction | All business sectors in Y&H | 1,200,000 | All Sectors | √√ | √√ | None | None | None |
| Why Waste | Waste Management and Recycling of materials | SMEs in Y&H, particularly where large quantities of waste are sent to landfill | 53,000 | All sectors | √ | √√√ | √√ | None | None |

The North East

Midas was a business support programme aimed at improving productivity in the North East through assisting companies reduce operating costs and increase competitiveness. The project sought to assist regional businesses to make cost savings through specific advice targeted at efficiency savings involving materials, energy, water and waste management.

Midas was funded from the regional allocation of the national BREW (Business Resource Efficiency & Waste) Programme. At the time of its inception the project formed part of a range of services available to businesses in the North East to improve productivity, including the North East Productivity Alliance, Energy Resource Efficiency and the Manufacturing Advisory Service. These services lay within a wider set of Business Support Services that One North East is responsible for coordinating. The BREW programme has now ceased funding of regional activities and Midas has now been closed with services incorporated in the wider business support services.

Midas Project: Outputs and Outcomes

Table 6.24 Midas Project Gross Outputs

| Output | Total |
|------------------------------|-----------------------------|
| Reduction in CO2 Emissions | 41,000 tonnes |
| Energy use reduction | 22,300,000 KW ⁵⁰ |
| Return on investment between | £1.6 and £2.3 per £ spent |

⁵⁰ Based on an average electricity price for 2008 of £0.09 for non-domestic users (published by the Department for Business, Enterprise and Regulatory Reform) this reduction would equate to a reported energy saving of £20m. This is inconsistent with the reported overall gross resource cost savings of £3.25m. We suspect a reporting error.

Table 6.25 Net Project Outcomes (per £)

| Outcome | BREIG Project |
|--------------------------------|---------------|
| ONE Funding | 1,646,000 |
| Increased sales (£ pa) | -- |
| Cost savings (£ pa) | -- |
| Greenhouse gas (t) | 0.0249 |
| Cost per business assisted (£) | 5,310 |

Source: GHK (2009) "Final Evaluation of the MIDAS Project"

Table 6.26 summarises the MIDAS project in the North East illustrating that focus was one-to-one diagnostic support.

Table 6.26 Summary of the MIDAS Project in the North East

| Area of Concentration | Target / Geographies | Total Resource Available (£) | Eligible Sectors | Main Delivery Activities | | | | |
|--|----------------------|------------------------------|------------------|--------------------------|-------------|------------|-----------------------|--------------------------------|
| | | | | One to One | One to Many | Diagnostic | Technical Consultancy | Capital Grant |
| MIDAS Energy; Waste; and Water reduction | Companies in the NE | 1,640,000 | All sectors | √√√ | None | √√ | None | Subsidised consultancy support |

National Resource Efficiency Programmes

The Carbon Trust

The Carbon Trust is a not-for-profit organisation, providing business support to help businesses and the public sector to cut their carbon emissions and save energy, providing funding and also accreditation. The Carbon Trust targets various businesses through its support, although generally all companies are eligible for some element of their support package. The main forms of support provided are:

- Free on-site carbon surveys are offered to eligible companies to help reduce energy bills, if bills are over £50,000 per annum. On site analysis and tailored advice;
- 0% interest loans of £3,000 to £100,000 for energy saving projects;
- Carbon Management for businesses with high energy use;
- Enhanced capital allowances through investment in energy-saving plant machinery; and,
- Consultancy to new low carbon businesses and grants to research projects.

Carbon Trust: Outputs and Outcomes

Table 6.27 Carbon Trust: Gross Outputs 2008/09

| Output | Total |
|----------------------|--------|
| Businesses Supported | 30,000 |

| | |
|-------------------------------|-----|
| Cost savings (£m) | 227 |
| Reduction in CO2 (m tonnes): | 2 |
| Private Sector Leverage (£ m) | 300 |

Table 6.28 Results Delivered by Carbon Trust activity for 2007/08 and 2008/09

| | Annualised CO2 savings (MtCO2) | Annual cost effectiveness (£/tCO2) | Lifetime cost effectiveness (£/tCO2) | Average cost/(benefit) £/tCO2 |
|---|--------------------------------|------------------------------------|--------------------------------------|-------------------------------|
| Directly delivered advice: on-site carbon surveys | | | | |
| 2008/09 | 0.4 | 36 | 10 | -68 |
| 2007/08 | 0.4 | 43 | 11 | -45 |
| Directly delivered advice: Carbon Management | | | | |
| 2008/09 | 0.9 | 11 | 3 | -78 |
| 2007/08 | 0.8 | 11 | 3 | -63 |
| Interest free energy efficient loans | | | | |
| 2008/09 – (completed basis) | 0.05 | 102 | 13 | -49 |
| 2007/08 – (completed basis) | 0.05 | 83 | 11 | -45 |

Source: Carbon Trust (2009) "Driving Action, now and in the future"

Table 6.29 provides a summary of the Carbon Trust's programme activity.

Table 6.29 Summary of the Carbon Trust's programme activity

| Area of Concentration | Target / Geographies | Total Resource Available (£) | Eligible Sectors | Main Delivery Activities | | | | |
|-----------------------|------------------------------------|------------------------------|--|--------------------------|-------------|------------|-----------------------|---------------------|
| | | | | One to One | One to Many | Diagnostic | Technical Consultancy | Capital Grant |
| Carbon Trust | Energy; Waste; and Water reduction | 2006-07 £100m | Varying scales of support. e.g. carbon management for companies with large energy use (over £3m pa) and for public bodies such as LAs/NHS Trusts; Carbon Surveys for those with energy bills over £50k; general advice to all. | √√ | √√ | √ | √ | Interest free loans |

WRAP

Waste and Resources Action Programme (WRAP) works across the UK to help businesses and individuals to reap the benefits of reducing waste, developing sustainable productions

and using resources efficiently. It is the delivery body for UK waste strategies and focuses on packaging, food waste, collection systems and the quality of materials and works in sectors including construction, manufacturing, retailing, recycling and composting.

As well as working with businesses, WRAP signposts other resource efficiency activity that could benefit business and/or individuals. Over the last business plan period, WRAP activity saved £58m in costs and diverted 3.1 million tonnes of waste from landfill⁵¹, with income of £150m. Between 2008 and 2011 it hopes to achieve 8 million tonnes of waste materials saved from landfill, 5 million tonnes of CO2 equivalent emissions and the generation of £1.1b economic benefits to consumers, local authorities and businesses.

Table 3.16 provides a summary of the WRAP programme’s support.

Table 6.30 Summary of WRAP Programme

| | | High | | | Medium | | Low | |
|-----------------------|--------------------------------|--------------------------|--|-------------|------------|-----------------------|---------------|---|
| | | √√√ | √√ | √ | | | | |
| Area of Concentration | Target / Geographies | Eligible Sectors | Main Delivery Activities | | | | | |
| | | | One to One | One to Many | Diagnostic | Technical Consultancy | Capital Grant | |
| WRAP | Waste Management and reduction | All companies nationwide | Public and private organisations who use and recover waste, particular focus on the construction, recycling, manufacturing, retail and agriculture sectors | √ | √√ | None | None | √ |

Benchmarking Generic Business Support

A range of evaluations have been completed in order to attempt to provide consistent benchmarking data with which to understand the efficiency of business support initiatives, most recently a number of generic and resource efficiency specific benchmarks were included in PwC’s Impact Report in 2009, the report considers some of the specific resource efficiency initiatives outlined in more detail below.

The study considers a range of IEF compliant evaluations of business support for the English RDAs. Within these evaluations an average cost of £8,502 per business assisted was achieved. The report also highlights an exercise carried out by AWM in 2003, which estimated a much higher cost of £12,000 per business assisted⁵².

The cost per business varies within the strands of business development and competitiveness interventions as shown in Table 6.31. Targeted business support for sector or clusters had the lowest cost per business assisted (£3,901) compared to science, R&D and innovation (£24,640) which was around 6 times more expensive due to the technical nature of support delivered. Overall within business support evaluations, the cost per business assisted was £9,705.

Individual enterprise support offers the highest immediate return on investment (£4.90 GVA per £ spent). Support for science, R&D and innovation covers its costs, however, there is

⁵¹ WRAP “WRAP Business Plan Impact Review 2006-2008: Creating a World of Difference”

⁵² ‘Identification of benchmarks’ report to AWM, AWM, 2003. *DBERR (2009) “Impact of RDA spending – National report – Volume 1 – Main Report”*

likely to be higher long term returns through job creation. Across business support interventions more generally an annual return of £2.80 per £1 spent is expected.

Table 6.31 Benchmarking metrics for Generic Business Support

| | Type of Business support | | | | Overall Business Support |
|---|-------------------------------|-------------------------|-----------------------------|-------------------|--------------------------|
| | Individual Enterprise Support | Sector/ Cluster Support | Science, R&D and innovation | Inward Investment | |
| Cost per business assisted (£) | 8,502 | 3,901 | 24,640 | N/A | 9,705 |
| Cost per business created (£) | 74,196 | 163,676 | 1,564,603 | -- | 187,771 |
| Cost per job created/ safeguarded (£) | 8,301 | 12,135 | 37,938 | 11,563 | 14,221 |
| Achieved GVA: cost (annual) (£) | 4.9 | 3.2 | 1.1 | 3.7 | 2.8 |
| Achieved and Future GVA potential: cost (£) | 14.1 | 8.7 | 8.3 | 20.5 | 11.6 |

Source: Analysis of DBERR (2009) “Impact of RDA spending – National report – Volume 1 – Main Report”⁵³

When comparing EBS benchmarking data with the above metrics it is evident that the cost per business assist is much lower for EBS (£2,720) than for any of the various strands of business support, and much lower than the overall figure of £9,705 per business assisted.

New National On-line Advisory Services

RippleEffect Initiative

RippleEffect is a free water efficiency initiative run by WRAP which seeks to benefit businesses of any size. The first programme launched in October 2010 with 700 businesses registering an interest. The programme aims to:

- Understand how much water a business uses
- Identify ways that a business can save water and money
- Measure the water and costs savings made by a company
- Illustrate ‘quick win’ water savings devices that businesses can implement and instantly save money.

The initiative targets businesses through promoting the savings that can be made through a relatively small change to their business operation. For example, in businesses where urinals use flush control, £3,800 can be saved in water and sewerage costs through installing passive infrared (PIR) sensors costing £350, a payback of just 5 weeks.

The second launch of the programme starts in 2011 and businesses are currently able to register their interest online.

Rethink Waste

Rethink Waste is a free online training programme run by WRAP and with the support of

⁵³ “Total achieved and future potential GVA which differs from the cumulative achieved GVA in that it also includes the estimated NPV of the flow of benefits expected to accrue from the future potential jobs which are expected to result from the RDAs’ interventions”

EEF. It focuses on manufacturers and aims to help them to reduce waste, improve their resource efficiency and save money.

The first programme began in September 2010, engaging 680 businesses. The programme includes:

- Ready-made step-by-step waste reduction advice which can be implemented by businesses;
- High quality training materials with comprehensive support, including a free advice line and in-depth publications;
- Video case studies illustrating businesses who have taken action and made waste and cost savings;
- Practical information and advice including templates and report.

Over three modules, businesses will learn to understand how much waste they produce and the cost to their business (Module 1: Data Collection), identify ways to reduce waste and save money (Module 2: Developing an Action Plan) and measure waste and cost savings (Module 3: Implementing the action plan and identifying savings).

Annex 6 Beneficiary Surveys

First Survey

Purpose of Questionnaire 1:

- To build additional information on beneficiaries
- Understand the motivations for using ENWORKS support (and knowledge/experience of alternative support available)
- Understand the nature of the support received to date and to be delivered in the future.
- Understand the ability and willingness of the businesses to pay for the support
- Assessment of the quality of service received so far
- Understand the expected outcomes

BACKGROUND INFORMATION
To be provided by ENWORKS as far as possible

Q1: What is your company's name?

Q2: What sub-region are you located within? (Or maybe what post-code?)

Q3: What sector does the business operate in?

| | |
|--|---|
| <ul style="list-style-type: none"> ▪ Food and Drink ▪ Textiles Clothing/Leather ▪ Wood ▪ Paper/Printing ▪ Chemicals/Pharmaceuticals ▪ Non-Metals ▪ Metals ▪ Computers ▪ Motor Vehicles ▪ Agriculture | <ul style="list-style-type: none"> ▪ Mining ▪ Electricity/Gas/Water Supply ▪ Construction ▪ Accommodation/Food Services ▪ Transport ▪ Finance/Insurance Services ▪ Public Administration ▪ Education ▪ Health Services |
|--|---|

Q4: What are the main services/products that the business supplies?

| |
|--|
| |
|--|

Q5: Is the Company part of a larger Company/Group

| | |
|-----|----|
| Yes | No |
|-----|----|

Q6: How many staff do you currently employ?

| On Site: | Company total: |
|-----------------------|-----------------------|
| 49 employees or less | 49 employees or less |
| 50-249 employees | 50-249 employees |
| 250 employees or more | 250 employees or more |

Q7: How many years has the company been trading?

| |
|--|
| |
|--|

Q8: What % of your businesses **sales** are generated:

| | |
|------------------------|--|
| Within the North West: | |
| Within the UK: | |
| Outside of the UK | |

Q9: What % of your **purchases** are made:

| | |
|------------------------|--|
| Within the North West: | |
| Within the UK: | |
| Outside of the UK | |

Q10: How did you first hear about the assistance available through ENWORKS? (Tick Appropriate)

| | |
|--|--|
| Environment Connect / Business Link | |
| Direct Approach (The ENWORKS Sub-Regional Delivery Body) | |

| | |
|---|--|
| Environmental Consultants | |
| Recommendation from another company | |
| Other National / Regional Resource Efficiency provider (NISP, Envirowise etc) | |
| From an Environmental regulator (Environment Agency or Local Authority) | |
| Through the Trade Press | |
| Through the General Press | |
| Promotional Material from a network / member organisation | |
| Internet Search | |
| Other (please specify) | |

QUALITY OF ADVICE

Q11: How knowledgeable were the advisors that you used through the ENWORKS Project? (circle as appropriate)

| | | | |
|--------------------------|----------------------|---------------|--------------------|
| Not at all Knowledgeable | Fairly Knowledgeable | Knowledgeable | Very Knowledgeable |
| Please add any Comments: | | | |

Q12: How useful was the advice that you received through the ENWORKS Project? (circle as appropriate)

| | | | |
|--------------------------|-----------------|--------|-------------|
| Not at all Useful | Slightly Useful | Useful | Very Useful |
| Please add any Comments: | | | |

Q13: Would you recommend the service to other companies? (tick as appropriate)

| | |
|------|-----|
| Yes: | No: |
|------|-----|

MOTIVATION AND EXPECTATIONS

Q14: Have you received government supported advice from another business support organisation in the past? (tick as appropriate)

| | |
|------|-----|
| Yes: | No: |
|------|-----|

IF NO - PROCEED TO QUESTION 17

Q15: If Yes, Who provided the support, what sort of advice was it and how useful was it? (circle as appropriate)

| | |
|---------------------|-------|
| Provider(s): | |
| Type of advice: | |
| Resource efficiency | Other |

Q16: Was this support more useful than that provided to you through ENWORKS? (circle as appropriate). Did you take action as a result of this support?

| | | |
|--|-------------|-----|
| More Useful | Less Useful | N/A |
| Please Give Reasons: | | |
| Actions taken as a result of the advice: | | |

Q17: What was the purpose of your contact with ENWORKS? (circle as appropriate)

| | |
|--|--|
| Assistance in identifying resource saving opportunities | Advise on general environmental Issues |
| Assistance in implementing resource saving opportunities | Specialist support to address technical environmental issues |
| Other: | |

Q18: What support were you offered by ENWORKS? (circle as appropriate)

| | |
|---|---|
| <i>Resource Use Diagnostic</i> | <i>Provide the company with more detail on Environmental Issues</i> |
| <ul style="list-style-type: none"> ▪ Minimum Support Package | |
| <ul style="list-style-type: none"> ▪ Tailored Support | |

Q19: What support did you agree to receive from ENWORKS? (circle as appropriate)

| | |
|---|---|
| <i>Resource Use Diagnostic</i> | <i>Provide the company with more detail on Environmental Issues</i> |
| <ul style="list-style-type: none"> ▪ Minimum Support Package | |
| <ul style="list-style-type: none"> ▪ Tailored Support | |

Q20: If you were offered tailored support by ENWORKS and didn't accept it, can you explain why?

Q21: When and why did the company become interested in the issue of Resource Efficiency?

| | |
|---|--|
| <p>In particular, were the main drivers:</p> | |
| Financial savings from resource efficiency | |
| Improved environmental credentials with customers | |
| Improved environmental credentials with employees | |
| Other: | |

Q22: If you had not sought Resource Efficiency advice through ENWORKS where would you have gone for this advice?

Q23: Which other organisations offer Resource Efficiency advice to companies in the region?

Q24: Prior to contact with ENWORKS was your company planning to invest in resource efficiency? (tick as appropriate)

| | |
|-------------------------------|------------------------------|
| Yes: <input type="checkbox"/> | No: <input type="checkbox"/> |
|-------------------------------|------------------------------|

Q25: If yes, has the planned investment changed? How?

Q26: Are you expecting to implement the recommendations that you received through the ENWORKS advice?

| | | | |
|------------------------------|-------------------------------|-------------------------------|-------------------------------|
| All <input type="checkbox"/> | Most <input type="checkbox"/> | Some <input type="checkbox"/> | None <input type="checkbox"/> |
|------------------------------|-------------------------------|-------------------------------|-------------------------------|

Q27: What is the nature and size of the actual expected resource savings? *(This information is available from the Toolkit. It should be filled out prior to interview and confirmed at interview)*

Q28: What are the expected financial savings? *(This information is available from the Toolkit. It should be filled out prior to interview and confirmed at interview)*

Q29: Do you have any other comments to make about the ENWORKS service?

CLOSE AND THANK INTERVIEWEE FOR THEIR TIME

Second Survey

Purpose of Questionnaire 2:

- To follow up the first questionnaire carried out in March / April 2009 in order to understand the extent to which Enworks advice has been implemented;
- To examine the key factors in deciding whether to make resource efficiency investments;
- To examine the extent to which companies understand the importance of resource efficiency and their expertise in implementing investment solutions;
- To assess whether, and to what extent, planned savings / investments have been made;
- To assess the Gross and Net regional economic impact of companies making resource efficiency investments;
- To understand the overall beneficiary perception of the quality of the advice received through the ENWORKS project
- To examine whether perceptions of the quality of advice received have changed since the first survey (one year ago); and
- To give beneficiaries the opportunity to feedback any advice for the future delivery of the ENWORKS project and/or resource efficiency support to businesses in the region.

BACKGROUND INFORMATION

Read: During this survey we define Resource Efficiency as “using resources such as energy, water and raw materials more efficiently, and minimising waste” This can involve capital or revenue spending or low/no-cost actions.

Q1. Interviewee Name:

Q2. Company Name:

Q3. Is your workplace...? [Circle as appropriate]

| | | | |
|--|--|---|---|
| Single site independent workplace (Go to question 7) | Sole UK workplace of a foreign business (Go to question 7) | One of a number of different workplaces in the UK belonging to the same business (Go to question 4) | Don't Know / Refuse to say (Go to question 4) |
|--|--|---|---|



Q4. How many workplaces, including this one, does your business have in the UK and North West?

[Tick or insert number]

| | <i>Number</i> | <i>Don't Know</i> |
|------------|---------------|-------------------|
| North West | | |
| UK | | |

Q5. When answering the following questions we would like you to respond only about your business operations in the North West. Is it possible for you to accurately report information relating to sites in the North West only? [circle as appropriate]

| | | |
|--------------------------------|-------------------------------|---------------------------------------|
| Yes Go to Question 7 | No Go to Question 6 | Don't know Go to Question 6 |
|--------------------------------|-------------------------------|---------------------------------------|

Q6. At which of the following levels are you able to most accurately provide information regarding the operations of your business [circle as appropriate]

| | | |
|------------------|--------------------------|------------|
| Single workplace | Whole business in the UK | Don't know |
|------------------|--------------------------|------------|

RESOURCE EFFICIENCY AWARENESS

Read: The next set of questions focus on your company's attitude to, and awareness of, Resource Efficiency issues

Q7. On a scale of 1-10, where 1 is very important and 10 is of no importance how important is maximising use of resources to your company?

| |
|--|
| |
|--|

Q8. To what level do you agree with the following statements? [Circle as appropriate]

My company is aware of the importance of resource efficiency.....

| | | | |
|----------------|-------|----------|-------------------|
| Strongly Agree | Agree | Disagree | Strongly Disagree |
|----------------|-------|----------|-------------------|

My company has a high level of knowledge regarding implementing resource efficiency improvements.....

| | | | |
|----------------|-------|----------|-------------------|
| Strongly Agree | Agree | Disagree | Strongly Disagree |
|----------------|-------|----------|-------------------|

My company has effective appraisal techniques to analyse the costs and benefits of resource efficiency investments.....

| | | | |
|----------------|-------|----------|-------------------|
| Strongly Agree | Agree | Disagree | Strongly Disagree |
|----------------|-------|----------|-------------------|

My company views resource efficiency as a continuous process, and considers resource efficiency in every investment decision.....

| | | | |
|----------------|-------|----------|-------------------|
| Strongly Agree | Agree | Disagree | Strongly Disagree |
|----------------|-------|----------|-------------------|

Q9 (a): Have you previously implemented specific measures to improve resource efficiency? [tick as appropriate]

| | |
|------|-----|
| Yes: | No: |
|------|-----|

If NO please proceed to question 10

| |
|-------------------------------|
| If yes, please give examples: |
|-------------------------------|

Q.9 (b): Have these measures had a material, and positive, impact on: [Read and tick as appropriate]

| | |
|-----------------|--|
| Product type | |
| Product quality | |
| Price | |
| Sales | |

Q10. What are the most important factors for your company when choosing to make changes in the operation of business practices? [Read and tick as many as appropriate]

| | |
|---|--|
| To increase profit and sales | |
| To improve resource efficiency | |
| Comply with legislative requirements | |
| Promote the company's image with customers | |
| Promote the company's image with staff | |
| Meet the standards required of us as a supplier | |

Q11: When making investment decisions, what type of payback period would the company consider optimum? [Read and tick as appropriate]

| | |
|------------|--|
| 0 – 1 Year | |
| 1 Year | |
| 2 Years | |
| 3 Years | |
| 4 Years | |
| 5 Years | |
| 5 Years+ | |

If resource efficiency improvements require would the expected payback differ? [Circle as appropriate and prompt for comments]

| | |
|--------------|-----|
| Yes: | No: |
| If yes, how? | |

Q12: What impact has the recession had on your company’s willingness to make CAPITAL investments? [Read and tick as appropriate]

| | |
|---|--|
| Company has been less likely to invest in non-essentials | |
| Higher level of cost-benefit analysis has been required | |
| Only essential / legislative requirements have led to investments | |
| No investment has been made | |
| Recession has had no impact | |

Q12 (a) Has this differed for Resource Efficiency investments?

| | |
|--------------|-----|
| Yes: | No: |
| If yes, how? | |



Q13: What impact has the recession had on your company’s willingness to make NON CAPITAL investments? [Read and tick as appropriate]

| | |
|---|--|
| Company has been less likely to invest in non-essentials | |
| Higher level of cost-benefit analysis has been required | |
| Only essential / legislative requirements have led to investments | |
| No investment has been made | |
| Recession has had no impact | |

Q13 (a) Has this differed for Resource Efficiency investments?

| | |
|--------------|-----|
| Yes: | No: |
| If yes, how? | |

OVERALL OPINIONS OF SERVICE RECEIVED

Read: The next few questions focus on your overall opinion of the service received and ways in which you believe it can be improved.....

Q14. How useful has the advice that you received through Enworks proved to be? [Circle as appropriate and prompt for comments]

| | | | |
|--------------------------|---------------|--------|-------------|
| Not at all useful | Fairly useful | Useful | Very useful |
| Please add any Comments: | | | |

Q15. Has your opinion of the advice you received changed since you first received it? [Circle as appropriate and prompt for comments]

| | | |
|---------------------------------------|---|--------------------------------------|
| Yes, it is more useful than I thought | No: it is just as useful as first thought | No: it is less useful than I thought |
| Why? | | |

Q16. Based on your experience of the quality of the advice you have received, should businesses pay for resource efficiency advice from Enworks in the future?

If yes, what percentage of costs would be appropriate?

| | |
|---------|-----|
| Yes: | No: |
| ALL | |
| 75-100% | |
| 50-74% | |
| 25-49% | |
| 0-24% | |



Q17. Would you recommend the service to other companies? (Tick as appropriate)

| | |
|------|-----|
| Yes: | No: |
|------|-----|

Q18. What were the 3 most positive aspects of the service you received?

| |
|----|
| 1. |
| 2. |
| 3. |

Q19. What were the 3 most negative aspects of the service you received?

| |
|----|
| 1. |
| 2. |
| 3. |

Q20. Would you use the Enworks service again? (Tick as appropriate)

| | |
|------|-----|
| Yes: | No: |
|------|-----|

Q21. What would you have done differently if you were going through this process again? What have been the main things you have learnt from this process?

| |
|--|
| |
|--|

IMPLEMENTATION & GROSS IMPACTS OF ENWORKS ADVICE

Q22. Over what period did contact with Enworks take place?

| | |
|--------------------|---------------------------------|
| <i>Start Date:</i> | <i>End / Last Contact Date:</i> |
|--------------------|---------------------------------|

Q23. What was the original purpose of contact with Enworks and what advice did you receive? [Circle as appropriate and enter further comments – To be verified using Enworks Toolkit]

| | |
|--|---|
| Overall review of company operations | Focus on particular operations (please specify) |
| Any further comments: | |
| Overall review of resource use / waste | Focus on particular resources (please specify) |
| Any further comments: | |

Q24. How many specific improvement opportunities did Enworks identify?

Q24(b) Were they all related to Resource Efficiency?

| | |
|---------|-----|
| Yes: | No: |
| Details | |

Q24(c) Are they all logged on the toolkit

| | |
|-----|----|
| Yes | No |
|-----|----|

Q25. Did the advice recommend capital; revenue; or mixed investment? [Tick as appropriate]

| Revenue | Capital | Mixture | No Investment |
|---------|---------|---------|---------------|
| | | | |

Q26. Are you planning to implement, or have you implemented, the improvement actions identified through Enworks? [Circle as appropriate]

| | |
|-----------------------------------|---|
| Yes [Go to Question 28] | 100% Implemented |
| | 75% Implemented |
| | 50 % Implemented |
| | 25% Implemented |
| Maybe | Decision not yet made / May Implement in future |
| No | No plans to implement |

Q27. If you have no plans to implement the improvements why not? [Tick as appropriate]

| | |
|--|--|
| The recession made us change investment plans | |
| The advice is no longer appropriate | |
| Implementation would involve large capital costs | |
| Implementation would involve too much staff time | |
| Requires further analysis | |
| Technically too difficult for us to do | |
| The potential returns are too low / unconvinced of the business case | |
| Other Investment options are more attractive | |
| Disagree with advisor recommendations | |
| Other (please state) | |

Q28. Please describe the Resource Efficiency improvements you have made / plan to make: [Enter Number - can be verified from Enworks toolkit]

| Improvement(s) Made: | Planned Improvement(s): |
|----------------------|-------------------------|
| | |

Q29. In relation to the following areas, what has been the main impact on your business of the advice and support received?

| |
|---|
| <p>Resource Savings [Prompt for changes in <u>type of resources used</u> / <u>scale of physical savings</u> / <u>cost savings</u>]</p> |
| <p>Changes in Operating Processes and Technology:</p> |
| <p>Changes in Product Design; Quality and Price:</p> |
| <p>Changes in Sales / Marketing:</p> |



| |
|--|
| |
| <p>Changes in Strategic Management / Decision Making:</p> |

Q30 Were there any barriers that you had to overcome to achieve these impacts?

| |
|--|
| <p>(For Example: Management decisions; funding decisions; technical / clarification / specification)</p> |
|--|

Q31 Were there any unexpected impacts? [Tick as appropriate]

| | |
|---|--|
| None | |
| Increased awareness of resource efficiency issues | |
| Increased knowledge of HOW resource efficiency improvements can be implemented | |
| An improved ability in our company to appraise the impact of resource efficiency activities and investments | |
| Resource efficiency has become embedded along with other investment/action criteria | |
| Others / Further Comments: | |

| | |
|--|--|
| | |
|--|--|

Q32. Have the identified physical and cost savings from the initial RE assessment proved to be an accurate forecast of the actual economic returns? [Tick as appropriate and explain]

| | | |
|-------|-----|--|
| Yes: | No: | |
| Why?: | | |

Q33: What was the total expected and actual cost of the activity undertaken?

[Prompt for capital and revenue breakdown]

| | <i>Expected</i> | <i>Actual</i> |
|---------------|-----------------|---------------|
| Capital costs | £ | £ |
| Revenue costs | £ | £ |

Q34. How did your company fund the implementation of the advice you received?

[Tick as appropriate]

| | |
|---|--|
| Funded costs from existing reserves / savings | |
| Took a Bank loan | |
| Accessed External Funding / Grant | |
| Used shareholder investment | |
| Increased staff capacity (training / jobs) | |

Q35: What is the actual cost saving per annum attributable to the resource efficiency improvements made? [Verify from Toolkit]

| Expected | Actual |
|----------|--------|
| £ | £ |



Q36: What was the total expected and actual physical resource saving from the investment per annum? [Insert detail – INCLUDE UNITS]

| Type | Expected | Actual |
|------|----------|--------|
| | Units: | Units: |
| | Units: | Units: |
| | Units: | Units: |

Q37. Over what period do you expect the total savings made from the investment to be greater than the total invested? [Tick as appropriate]

| | |
|------------|--|
| 0 – 1 Year | |
| 1 Year | |
| 2 Years | |
| 3 Years | |
| 4 Years | |
| 5 Years | |
| 5 Years+ | |

Q38. How does the company plan to use future financial savings from the improvements once the cost has been met? [Read and tick as appropriate]

| | |
|--|--|
| Further investment in the business | |
| Additional jobs [record as number of FTEs] | |
| Safeguarding of existing jobs [record as FTEs] | |
| Higher wages for existing staff | |
| Taken out as profit / Dividend payment | |
| Other | |

GROSS ECONOMIC IMPACTS

The next set of questions seek to establish the economic impact of Enworks business support through a gross – net economic impact method used by regional development agencies. Where you cannot give exact figures please provide estimates.

Q39. What was the turnover at the site in March 2009 (prior to engagement with Enworks advice)?
[Insert number] £'000

| |
|--|
| |
|--|

Q40. Please estimate the turnover of your business following your Resource Efficiency improvements?
[Circle as appropriate]

| | | | |
|---------------------|---------------------|----------------------------|---------------------|
| £0 – 24,999 | £25,000 – 49,999 | £50,000 – 99,999 | £100,000 - £149,999 |
| £150,000 – 199,999 | £200,000 – 249,000 | £250,000 – 299,999 | £300,000 – 349,999 |
| £350,000 - £399,999 | £400,000 - £449,999 | £450,000 - £499,999 | £500,000 – 999,999 |
| £1m - £1.9m | £2m – 4.9m | £5m – 9.9m | £10m - 24.9m |
| £25m – 49.9m | £50m + | Don't Know / refuse to say | |

Q41. If no support had been received through the Enworks programme, how much higher / lower would turnover have been - Would it have been between: [Read and tick as appropriate]

| | <i>Lower</i> | <i>Higher</i> |
|--------------------------------|--------------|---------------|
| 1-<20% | | |
| 20-<40% | | |
| 40-<60% | | |
| 60-,80% | | |
| 80-,100% | | |
| Over 100% | | |
| Don't know / Refused to answer | | |

Q42. Please estimate your cost of sales prior to your Resource Efficiency improvements? (by costs of sales we refer to the cost of materials and overheads – but excluding wages)?

| |
|--|
| |
|--|

Q43. Please estimate your cost of sales following your Resource Efficiency improvements? (by costs of sales we refer to the cost of materials and overheads – but excluding wages)?

| |
|--|
| |
|--|

Q44. If no support had been received through the Enworks programme, how much higher / lower would cost of sales have been - Would it have been between: [Read and tick as appropriate]

| | <i>Lower</i> | <i>Higher</i> |
|--------------------------------|--------------|---------------|
| 1-<20% | | |
| 20-<40% | | |
| 40-<60% | | |
| 60-,80% | | |
| 80-,100% | | |
| Over 100% | | |
| Don't know / Refused to answer | | |

Q45. How many employees were employed on site in March 2009 (or prior to implementation of Enworks advice)? [Insert number]

| | <i>Part - time</i> | <i>Full - time</i> |
|--------|--------------------|--------------------|
| Number | | |

Q46. How many employees were employed on site in March 2010 (or following implementation of Enworks advice)? [Insert number]

| | <i>Part - time</i> | <i>Full - time</i> |
|--------|--------------------|--------------------|
| Number | | |

Q47. If no support had been received through the Enworks programme, how much higher / lower would employment levels have been: [Enter number of jobs]



| | <i>Lower</i> | <i>Higher</i> |
|-----------------------|--------------|---------------|
| Number of Jobs [FTEs] | | |

DEADWEIGHT

Q48. If your company had not received advice from Enworks what would you have done with the invested time and resources utilised? [Read and Tick as appropriate]

| | |
|--|--|
| Would not looked further for this type of support and would have left the issue of resource efficiency | |
| Would not looked further for this type of advice but would have gone ahead and taken action / invested in the action taken | |
| Would not looked further for this type of advice but would have gone ahead and taken action / invested in the action taken – at the same private sector investment level | |
| Would not looked further for this type of advice but would have gone ahead and taken action / invested in the action taken – at half of the private sector investment level | |
| Would not looked further for this type of advice but would have gone ahead and taken action / invested in the action taken – at 10% of the private sector investment level | |
| Would have eventually accessed resource efficiency advice but it would have been significantly delayed – by more than a year | |
| Would have eventually accessed resource efficiency advice but it would have been significantly delayed – by less than a year | |
| Other Comments: | |

Q49. If there had been no free advice from Enworks would you have been willing to pay for advice from, for example, environmental consultants? [Tick as appropriate]

| | |
|------|-----|
| Yes: | No: |
|------|-----|

Q50. If yes, can you estimate how much your company would have been willing to pay for such advice? (or what percentage of consultancy time you would pay for ...)

| | |
|---|--|
| £ | |
| % | |

Q51. If yes, where / to whom would you have gone for such advice?



| |
|--|
| |
|--|

Q52. Having received the advice from Enworks, have you changed your opinion regarding the amount that you would be willing to pay? If yes, how much more would you be willing to pay now [note amount or percentage]

| Yes: | No: |
|------|-----|
| £ | |
| % | |

DISPLACEMENT

Q53. In the last complete financial year what percentage of your customers were based in the North West? [Read and tick as appropriate]

| | |
|--------------------------------|--|
| 1-<20% | |
| 20-<40% | |
| 40-<60% | |
| 60-,80% | |
| 80-,100% | |
| Don't know / Refused to answer | |

Q54. In the last complete financial year what percentage of your competitors were based in the North West? [Read and tick as appropriate]

| | |
|--------------------------------|--|
| 1-<20% | |
| 20-<40% | |
| 40-<60% | |
| 60-,80% | |
| 80-,100% | |
| Don't know / Refused to answer | |

LEAKAGE

Q55. Is your company planning to relocate outside of the region in the next three years?

[Tick as appropriate]

| | |
|------|-----|
| Yes: | No: |
|------|-----|

Q56. As a result of the Resource Efficiency improvements that you have made, are you planning to employ more people from outside of the North West? [Tick as appropriate]

| | |
|------|-----|
| Yes: | No: |
|------|-----|

MULTIPLIERS

Q57. In the last financial year what percentage of your purchases was from suppliers based in the North West [Tick as appropriate]

| | |
|--------------------------------|--|
| 1-<20% | |
| 20-<40% | |
| 40-<60% | |
| 60-,80% | |
| 80-,100% | |
| Don't know / Refused to answer | |

Q58. Do you expect to increase purchases of goods and/or services from other companies in the North West as a result of the advice that you have received from [Insert Service Provider Name]? [Tick as appropriate]

| | |
|---|-----|
| Yes: | No: |
| By what % (as a percentage of total purchases)? | |

PERSISTENCE AND DECAY

Q59. Over what period of time do you expect the benefits derived from Enworks support to be sustained? [if this differs for various benefits, note persistence for each benefit on separate sheet] – [circle as appropriate]

| | | | |
|------------------------|-------------|------------------|--------------------|
| THERE WERE NO BENEFITS | < 3 months | 3-<6 months | 6 months - <1 year |
| 1-<2 years | 2-<3 years | 3-<4 years | 4-<5 years |
| 5-<years | 6-<10 years | 10 or more years | Don't Know |

Notes:

Q60. How much do you expect the benefits derived from Enworks support to decay on an annual basis (decay is defined as: the rate at which benefits decline on an annual basis)

[if this differs for various benefits, note persistence for each benefit] – [tick as appropriate]

| | |
|--------------------------------|--|
| 1-<20% | |
| 20-<40% | |
| 40-<60% | |
| 60-,80% | |
| 80-,100% | |
| Don't know / Refused to answer | |

Notes:

FUTURE OF ENWORKS

The last few questions are specifically targeted at understanding ways in which Enworks could be designed to better assist companies in the future [We will only take 1 more minute of your time]

Q61. What impact would a 50% rise in energy costs have on your company? [tick as appropriate]

| | |
|--|--|
| We would close | |
| Would require substantial Resource Efficiency Investment | |
| Would require some Resource Efficiency Investment | |
| Would not impact on our company | |

Q62. Without the investment that you made in Resource Efficiency would you have survived the economic recession? [circle as appropriate]

| | | |
|-----------|----|-------|
| Yes | No | Maybe |
| Comments: | | |

Q63. In light of a general trend rise in the cost of energy, do you consider that the improvements you have made in Resource Efficiency has made you more competitive?

| | | |
|-----------|----|-------|
| Yes | No | Maybe |
| Comments: | | |

Q64. Are you aware of your competitors making similar improvements in Resource Efficiency?

| | |
|-----|----|
| Yes | No |
|-----|----|

Q65. How long do the investments that you have recently made in Resource Efficiency “future proof” your company against expected future energy price rises? [circle as appropriate]

| | | | | |
|------------|----------|---------|---------|---------|
| 0 – 1 Year | 1 Year | 2 Years | 3 Years | 4 Years |
| 5 Years | 5 Years+ | | | |

Q66. Do you have any other comments to make about the advice that you received?

CLOSE AND THANK INTERVIEWEE FOR THEIR TIME

