

Accessing finance

# Developing a business case for your resource efficiency projects



Growth that doesn't cost the earth

A programme from



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## 1 Planning a resource efficiency project?

Accessing finance is often a major barrier to the successful implementation of resource efficiency projects and, ultimately, the business benefits that these projects can deliver. This is particularly true for small and medium-sized enterprises (SMEs).

If you are planning a resource efficiency project in your organisation and need to access finance, this guide will help you. It will show you how to prepare a robust business case to support your proposed investment decision and how to present a strong case for investment to your senior management or external lenders.

A supporting guide 'Sources of finance – How to fund your resource efficiency projects' provides a comprehensive overview of the different sources of finance available to Scottish organisations. It is available to [download](#) from the Resource Efficient Scotland website.

## 2 Before you start

This guide assumes you have prepared a profit and loss statement (P&L) and cash flow projections for your business (or business unit). These should be suitable for scrutiny by external finance providers and detail the benefits of the proposed investment in the projections.

If you need any support presenting this financial information, a draft model to help you can be [downloaded](#) from the Resource Efficient Scotland website.

## 3 What is a business case?

A business case is a document that provides justification for a change being proposed in an organisation. It details the allocation of funds and resources to make the change work, and will ultimately be used to obtain management commitment and approval for the project to go ahead.

A good business case will answer all the questions that decision makers may ask. It provides clear evidence of the economic, environmental and/or social reasons why the investment is needed and that the solution being proposed is an attractive proposition. It also provides sufficient information to allow the reader to assess the proposal as a standalone document and includes an analysis of the project costs, benefits, risks and implementation timetable.

In addition, a good business case presents a concise proposal culminating in a single recommendation or request.

## 4 Your business case – know your audience

Understanding your audience is important at the initial stages of development of your business case. This will ensure the specific needs of the decision maker are considered from the outset, and will determine the level of detail and research required for the document.

For example, if the Managing Director and Financial Director need to assess the investment proposal, they are likely to be primarily interested in increased income or cost reduction, in addition to improved environmental performance and corporate reputation. Their key considerations are likely to include:

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- the overall cost of the project and how it is financed;
- the timescale required to gain a return on investment;
- the project timescales and potential disruption to the business;
- potential loss of productivity during implementation;
- the impact on internal resources;
- opportunities for staff training; and
- potential benefits related to customer perception and reputation.

However, if your audience is a commercial lender then the key considerations are likely to be affordability and impact on your organisation's finances. In this instance, it is likely that your whole organisation will be assessed to understand the need for finance and its ability pay it back, including a demonstration of strong earnings before interest, taxes, depreciation and amortisation (EBITDA) and/or cash flow available for debt servicing. Furthermore, commercial lenders will more often than not look to cover their fall-back position, so the question of collateral would be discussed in the early stages of the application process.

A bank manager may also require additional market information about the need for the project or wider research on the alternative solutions that may be available.

If funding is being sought from a public sector organisation or other funding route - such as a European funding programme, then there will be different considerations. The environmental benefits may be a key part of the decision-making process for a resource efficiency grant, and will need to be assessed carefully during the process.

Some funding bodies may also focus on social and community benefits, and opportunities for job creation. Again, these benefits would need to be demonstrated clearly in the business case.

## **5 What to include in your business case**

Every resource efficiency project will be different, but there are a number of key elements that need to be considered and demonstrated in any business case to secure the investment. These elements are described below.

### **5.1 Rationale for the project**

You will need to describe the reason for undertaking the project. For example, is it:

- in response to new regulations affecting the industry;
- to keep up with competitors;
- to address a specific problem in the organisation;
- to increase efficiencies;
- to reduce costs; or
- to take advantage of an opportunity.

You will also need to demonstrate that the rationale fits with your company's strategy. The rationale for your project should be clearly set out so that the rest of the business case demonstrably aligns with your business strategy.

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## 5.2 Identifying the solution

The proposed solution should be presented in a way that your reader can easily understand how it addresses your project rationale. The scale of the solution should also be described as well as potential alternatives that were considered as part of the process. If a number of options are being put forward, then the relative pros and cons of each should be discussed.

Your business case should also describe the way in which the project team has come up with the solution such as:

- What has the team done to carefully research options to identify the best solution?
- Have there been internal meetings to identify the solution and an implementation plan?
- Have the relevant departments within the organisation been consulted?
- Has a third party independently reviewed the proposal?

## 5.3 Project plan

A helpful way of presenting the requirements of the project is in the form of a project plan. This will highlight the key steps that need to be taken, when they will be done, who will be responsible, how much each element will cost and any additional support that will be required.

This project plan should also clearly define the project timescale – covering all activities from setting up the project team to installing, testing and evaluating new equipment

An example of how this could be developed is shown in Figure 1.

**Figure 1: Example project plan**

Activity	Month								Person resp.	Time	Internal cost (£)	External cost (£)	Additional Requirements
	1	2	3	4	5	6	7	8					
Set up a project team									AB	2	400		Support from MD
Develop specification									AB	2.5	500	2,000	Specialist support
Workshop to gain buy-in from staff									CD	3	600	1,500	External facilitator
Develop process improvement map									CD	5	1,000		Support from department heads
Purchase equipment													
Develop new procedures and policies													
Review on-site energy and water use													
Installation													
Staff training													
Project management													
Totals													



A good project plan will give confidence to decision makers and show that you have considered the whole process and the implications in terms of financial and human resources.

Each of the key activities identified in the project plan should be described in detail. The complexity and value of the project will determine how much detail is required. It may simply be a few lines about the type of equipment to be used and the proposed supplier.

The additional requirements of specific activities is a consideration that should not be ignored as often the support of senior management in the achievement of key tasks or buy-in from key personnel is imperative to the successful implementation of the plan.

## 5.4 Financial analysis

With regards to the financial costs of the project, additional information will be required to allow decision makers to assess the benefits that will be gained from the investment.

When presenting the financial case, you should seek to detail total project costs, allocated by the following cost categories:

- personnel costs;
- capital investment;
- materials and consumables;
- external subcontractor costs (it is essential that you obtain quotes from suppliers to support your business case); and
- any support that is available for a project of this type (for example, the existence of other grants or low-interest loans that could be accessed to support the project).

Quantification of the financial benefits that will accrue from completing the project, including:

- new business opportunities and increased turnover;
- lower raw materials costs;
- lower manufacturing cost;
- lower utility costs; and
- renewable energy income (such as through the Feed-in Tariff (FIT) or Renewable Heat Incentive (RHI)).

Return on investment, including:

- the 'payback period' of the project<sup>1</sup>. How long will it take to gain additional income or reduce costs to the level of the initial investment? For example, if the project costs £10,000 and the annual cash saving from the new equipment is £2,000, then the payback period for the investment is five years; and

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<sup>1</sup> Payback period is a method of evaluating investment opportunities and product development projects on the basis of the time taken to recoup the investment. This period is compared to the required payback period to determine the acceptability of the investment proposal. Other, more complex, metrics can also be used (such as, net present value and internal rate of return), which take account of the time value of money and specific desired returns. However, payback period is considered here as a suitable metric for SMEs investing in small and medium-sized projects.

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- the additional benefits to be gained beyond the payback period (for example, will the equipment continue to accrue £2,000 cost savings per year in the longer term?).

Payback period and additional financial benefits could be simply presented in a cash flow projections spreadsheet, as shown in Figure 2.

In this example, the investment begins to generate income and cost savings in year 1 and achieves 'payback' in year 5.

**Figure 2: Cash flow projections**

	Year 1	Year 2	Year 3	Year 4	Year 5
Cost	50,000	0	0	0	0
Income – FIT/RHI	5,000	8,000	8,000	8,000	8,000
Savings	3,000	5,000	5,000	5,000	5,000
Cash flow	-42,000	13,000	13,000	13,000	13,000
Cumulative cash flow	-42,000	-29,000	-16,000	-3,000	10,000

The environmental and social benefits of the project such as:

- what are the enhancements in environmental performance as a result of the project, for example:
  - a 20% reduction in annual energy costs;
  - cleaner water emissions and lower water treatment costs;
  - a 10% reduction in transport fuel bills; and
  - reduced waste going to landfill?
- what are the social benefits, for example:
  - increased employment; and
  - improved working environment and staff retention?

Any additional opportunities that could be harnessed:

- enhanced reputation and new marketing opportunities;
- reduced maintenance costs;
- reduced emissions coupled to helping meet major customers' supply chain requirements; and
- improved comfort and staff turnover resulting from better working conditions (such as reduced noise in ventilation systems after converting fans to variable speed operation).

Further benefits from energy saving projects will often provide additional savings opportunities:

- control systems that reduce the running of idle equipment will also extend the operational life of equipment; and
- for a site operating near the limits of its supply connections, reducing peak demand could reduce the need for capital expenditure on supply reinforcement should the business output grow.

A simple way of presenting this type of information is shown in Figure 3. Again, the level of detail will be determined by the complexity and scale of the project.

**Figure 3: Description of costs and benefits**

Internal investment	Loan/financing (to be repaid)	Grant support	Projected benefits	Project payback period	Ongoing cost savings/benefits or increased efficiency (during or following payback period)
			20% reduction in energy costs - estimated £1,000 per year	3 years to cover cost of the loan	Additional savings of £5,000 in following 5 years
			Increase in output - estimated 15% per year	2 years to cover costs of materials and equipment and internal cost of implementation	Achievement of zero waste to landfill in 2-year period and recognition for green credentials
			60% reduction in waste disposal costs - estimated £2,500 per year		Sale of waste materials that were previously a cost - estimated at £3,000 income per year
			30% reduction in water use - estimated £2,000 per year		

As noted in Figure 3, all relevant assumptions should be set out. For example, for any cost savings that are defined, the source of the information must be clear (that is, was the information provided by the supplier or are the savings calculated internally?). Consider if these figures can be independently validated.

Where estimates have been provided by a third party, especially equipment suppliers, it is reasonable to expect that their figures are optimistic. Therefore, it is important to understand how the figures were calculated and what assumptions were made. Check the assumptions and amend if you have any doubts. If you are able to provide evidence of the estimated savings or examples of other organisations that have gone through a similar process, then this may provide further support to the business case.

In addition, when your project relates to an energy or water technology, it is worthwhile checking whether the equipment appears on the Government's Energy Technology List ([www.etl.decc.gov.uk/etl/site.html](http://www.etl.decc.gov.uk/etl/site.html)) or Water Technology List (<http://wtl.defra.gov.uk>).

In large and important cases, consider appointing an independent assessment to conduct an appropriate level of due diligence.



## 5.5 Cost-benefit analysis

If a number of solutions are being considered, then it can be useful to carry out a **cost-benefit analysis** to provide a comparison of the different elements of each solution. An example of how this can be presented is shown in Figure 4.

A cost-benefit analysis is a way that clearly communicates the different costs and benefits that will be achieved by the different solutions identified. It also allows for the 'do nothing' option to be analysed as this may actually create further inefficiencies in the longer term leading to increased costs.

**Figure 4: Cost-benefit options analysis**

	Option 1	Option 2	Option 3	Business as usual
<b>Costs:</b>				
Internal resource	x man days			
Equipment	£xxx			
Installation	£xxx downtime			
Maintenance	ongoing per year			
<b>Total costs:</b>				
<b>Benefits:</b>				
Reduced energy consumption	£xxx cost saving			
Reduced water use	CO <sub>2</sub> e saving			
Increased process efficiency	£xxx cost saving			
Increased output	£xxx increased sales			
Reputation with customers				
Access to additional contracts	£xxx new business			
<b>Total benefits (over 5 years):</b>				
<b>Difference:</b>				

## 5.6 Sensitivity analysis

In carrying out this type of analysis, it is important to understand the sensitivities in the financial assumptions that have been made. There is always an element of uncertainty when creating a model based on a number of assumptions, but if the assumptions are relatively robust then they will be less sensitive to changes that may occur.

For example, if the cost saving turns out to be 10% less than originally anticipated, what impact would this have on the payback period? Or, if the anticipated efficiencies to be achieved are 15% less than anticipated, would this impact on the overall investment decision.

By applying sensitivities to the analysis, you are able to understand how different the outcomes will be when compared to the original prediction. If even small changes in the predicted outcomes make the investment more risky, then it may be a more difficult case to sell to management.

However, if the investment remains attractive when a sensitivity analysis has been carried out, you will be able to present a more robust business case for the investment.

## 5.7 Risk analysis

The chances are that the reviewer of your business case will not be familiar with resource efficiency projects. As such, it is likely to be viewed with a high level of scepticism and with a high level of perceived risk.

Therefore, it is important that your business case addresses fully the associated risks to demonstrate to the decision-maker that you have considered all the possible risks and their importance, and identified mitigation factors. The following framework is a useful way to list and analyse key risks.

**Figure 5: Example risk analysis**

Risk	Impact (high/medium/low)	Likelihood (high/medium/low)	Mitigation
Project delays	<i>High</i>	<i>Medium</i>	Keep a close overview of timelines and regularly engage with installers
Poor integration of the new equipment with existing plant	<i>Medium</i>	<i>Low</i>	Conduct due diligence and specifically request a report from the installer

## 6 Additional advice and support

Resource Efficient Scotland's experienced advisors have helped hundreds of organisations across Scotland to take action to improve their resource efficiency. We understand that accessing finance can often seem like a barrier to the successful implementation of resource efficiency projects. We hope that this document has provided a useful reference as to how to develop and present a business case. Please also refer to the document 'Sources of finance: How to fund your resource efficiency projects'.

If you need further support on any of your resource efficiency projects, please contact the Resource Efficient Scotland team on 0808 808 2268, by email [enquiries@resourceefficientscotland.com](mailto:enquiries@resourceefficientscotland.com) or visit the website [www.resourceefficientscotland.com](http://www.resourceefficientscotland.com).



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