

These documents relate to the Home Energy Efficiency Targets (Scotland) Bill (SP Bill 70) as introduced in the Scottish Parliament on 19 September 2006

HOME ENERGY EFFICIENCY TARGETS (SCOTLAND) BILL

EXPLANATORY NOTES (AND OTHER ACCOMPANYING DOCUMENTS)

CONTENTS

1. As required under Rule 9.3 of the Parliament's Standing Orders, the following documents are published to accompany the Home Energy Efficiency Targets (Scotland) Bill introduced in the Scottish Parliament on 19 September 2006:

- Explanatory Notes;
- A Financial Memorandum;
- the Presiding Officer's statement on legislative competence.

A Policy Memorandum is printed separately as SP Bill 70-PM.

EXPLANATORY NOTES

INTRODUCTION

2. These explanatory notes have been prepared by Shiona Baird, who is the member in charge of the Bill, in order to assist the reader and to help inform debate on it. They do not form part of the Bill and have not been endorsed by the parliament.

3. The notes should be read in conjunction with the Bill. They are not, and are not meant to be, a comprehensive description of the Bill. So where a section or schedule, or a part of a section or schedule, does not seem to require any explanation or comment, none is given.

SUMMARY AND BACKGROUND TO THE BILL

4. The Bill requires Scottish Ministers to set home energy efficiency improvement targets, to produce a plan for achieving those targets and to report annually to the Scottish Parliament on progress.

COMMENTARY ON SECTIONS

Section 1: Principal duties of the Scottish Ministers

5. Subsection (1)(a) requires the Scottish Ministers to publish a home energy efficiency improvement target. The target is to represent the percentage improvement of home energy efficiency in Scotland to be achieved by 2011. The target must be not less than 20% improvement over the level of home energy efficiency of the year 2002.

6. Subsection (1)(b) requires the Scottish Ministers to publish a further target to improve the home energy efficiency in Scotland to be achieved by 2020. This target must not be less than 40% improvement over the level of home energy efficiency of the year 2002.

7. Subsection (1)(c) requires the Scottish Ministers to publish a plan setting out the measures they propose to take to achieve the targets.

8. Subsection (2) imposes a duty on the Scottish Ministers to ensure that the home energy efficiency improvement targets are promoted.

9. Subsection (3) requires the Scottish Ministers to publish an annual report on progress. The report requires to be laid before the Scottish Parliament and must include information about the progress that the Scottish ministers have made towards achieving the targets during the year to which the report relates as well as the details of expected progress over the next 12 month period.

Section 2: The plan

10. Subsection (1) provides that the Scottish Ministers must include certain information within the plan. That information is set out in the schedule to the Bill (see paragraph 18 of these Notes).

11. Subsection (2) requires the Scottish Ministers to consult before the plan is prepared. The Scottish Ministers have discretion in deciding who is to be recognised as having an interest in taking part in this consultation process.

12. Subsection (3) requires the Scottish Ministers to review the plan from time to time. A review must also be carried out within 3 months of the day of the poll for a general election to the Scottish Parliament. Following any review, the plan can be modified by the Scottish Ministers.

13. Subsection (3) also requires the Scottish Ministers to consult before modifying the plan. Again, they have discretion in deciding who is consulted (see paragraph 11 of these notes) whenever a plan is modified; the Scottish Ministers are required to lay the modified plan before the Scottish Parliament and publish a new version of the plan.

Section 3: Interpretation

14. Section 3 defines a number of terms used in the Bill.

15. “home energy efficiency” means the energy efficiency of residential accommodation, measured in terms of a methodology approved by the Scottish Ministers;

16. “residential accommodation” has the meaning given by section 1 of the Home Energy Conservation Act 1995;

17. “plan” means the plan mentioned in section 1(1)(c) (and includes a revised plan published under section 2(3)(b)).

Schedule: Matters to be included in the plan

18. The schedule sets out the information which requires to be included in the plan under section 2(1) of the Bill (see paragraph 10 of these Notes):

- a statement of interim objectives towards achievement of the targets (paragraph 1 of the schedule);
- an assessment of the resources that the Scottish Ministers intend to deploy, including financial assistance, to enable the targets to be achieved (paragraph 2).
- details of the other assistance that the Scottish Ministers intend to provide to enable the targets to be achieved, including details of the information and advice that will be made available (paragraph 3);

- details of any research that the Scottish Ministers have commissioned or propose to commission to enable the home energy efficiency targets to be achieved (paragraph 4);
- details of the proposed tasks that anybody other than the Scottish Ministers will have in relation to the targets and details of how that will be co-ordinated with the functions of the Scottish Ministers (paragraphs 5(a) and (b)).

FINANCIAL MEMORANDUM

INTRODUCTION

19. The Bill requires the Scottish Ministers to set home energy efficiency targets and to promote the meeting of those targets. The Bill leaves it up to the Scottish Ministers to decide how to achieve this and as a result it is very difficult to estimate the eventual cost of ensuring that the targets are met.

20. In estimating the costs of meeting the targets through publicly funded means there are two main sources of information. Firstly, data on costs and achievements of the Warm Deal¹ (concerned mainly with the installation and improvement of home insulation, available to households in receipt of certain benefits) and the Central Heating Programme² (available to the over 60s) and secondly, information from the Home Energy Conservation Act (HECA) Progress Reports.

21. The Warm Deal and the Central Heating Programme both report their success in terms of improvements to mean NHER³ scores of the properties treated. In contrast, the HECA reports document progress in terms of energy saved. Given that the Bill seeks to achieve improvements to the mean NHER of the Scottish housing stock, the costs of the Warm Deal and the Central Heating Programme give a better indication of the likely costs of the Bill.

22. Table 1 shows the numbers of properties improved under the Warm Deal and the Central Heating Programme, the total cost incurred⁴ and the mean cost per property. The data is for the year 2003-04.

¹ Scottish Executive, *The Warm Deal*, <http://www.scotland.gov.uk/Topics/Housing/Housing/FP/Warmdeal>

² Scottish Executive, *Central Heating Programme*, <http://www.scotland.gov.uk/Topics/Housing/Housing/FP/CHP>

³ The National Home Energy Rating is an energy rating methodology based on the total annual running costs per unit area under standard occupancy conditions. Properties are rated on a scale from 0.0 (very poor) to 10.0 (excellent).

⁴ Scottish Executive, *Benefits from Home Energy Efficiency Schemes in Scotland 2003-04*, <http://www.scotland.gov.uk/Resource/Doc/37428/0025264.pdf>

Table 1: Cost per property of improving NHER scores under the Central Heating Programme and the Warm Deal for the year 2003-04

	Central Heating	Warm Deal
Properties improved	6588	5920
Total cost	£16,052,088	£837,512
Mean cost per property	£2,437	£141
Mean improvement (in NHER points)	3.2	1.7
Mean cost per NHER point per property	£761	£83

23. Data from the Scottish Executive⁵ show that during 2003-04 improvements to insulation made under the Warm Deal resulted in an increase in the average NHER of properties of 1.7 points, while improvements made under the Central Heating Programme led to an increase in the average NHER of properties of 3.2 points. This information, along with the mean cost per property for each of the two schemes, allows us to calculate a nominal monetary cost per NHER point improvement per property. The mean cost per NHER point is £83 resulting from insulation fitted under the Warm Deal, while installing a central heating system costs £761 for each increased NHER point.

24. Improving the insulation of homes is clearly a more cost effective way of increasing NHER scores compared to installing central heating systems. However, insulation on its own (unless installed to an extremely high quality at the time of home construction⁶) is most unlikely to be enough on its own and the vast majority of homes will require an efficient central heating system as well. So the overall mean cost per NHER point per property will lie somewhere between £83 and £761. It is very difficult to determine accurately whereabouts the true overall figure will lie, but we can state with some confidence that the mean figure is unlikely to be greater than £761.

25. The mean NHER of the Scottish housing stock in 2002 was 4.5. A 20% improvement would bring this to 5.4 with a further 20% resulting in a mean NHER of 6.3. So each of these two targets would involve a rise of 0.9 NHER points.

26. In 2002 (our baseline year), there were 2,216,780 households in Scotland.⁷ Table 2 shows the overall costs involved in raising the NHER of this number of households by 0.9 and 1.8 points when the cost of each point increase is £83 and £760.

⁵ Ibid.

⁶ It is possible to construct buildings that do not require a conventional heating system. For more details, go to: http://en.wikipedia.org/wiki/Passive_house or <http://www.passivhaus.org.uk/>

⁷ General Register Office for Scotland, *Household projections for Scotland: 2002 based*, <http://www.gro-scotland.gov.uk/statistics/library/household-estimates-projections/2002-based-household-projections.html>

Table 2: Total and annual costs of improving the mean NHER of Scottish housing by 0.9 and 1.8 points using the Warm Deal and Central Heating

	Warm Deal (£83 per point)	Central Heating (£760 per point)
Total cost (0.9 NHER points per home)	£165,593,466	£1,516,277,520
Total cost (1.8 NHER points per home)	£331,186,932	£3,032,555,040
Cost per year (2006-11)	£33,118,693	£303,255,504
Cost per year (20011-20)	£18,399,274	£168,475,280

27. Table 2 shows that even if all the improvements are achieved by installing improved central heating systems, the total cost will be around £3 Billion. The total cost if the improvements were made by improved insulation would be far lower, at £331 million.

28. However, as has been pointed out above, improvements will be a combination of efficient central heating systems and enhanced insulation, so the total final cost is likely to be between £331m and £3bn.

29. But it must be borne in mind that whatever the final cost, it will not be payable all at once but spread over a number of years. Table 2 also gives details of the annual payments between 2006 and 2011 (for the first 20% improvement) and then between 2011 and 2020 (for the second phase of the targets). The calculations assume that the costs are spread evenly over the two periods evenly.

30. These costs do not include improvements already made since 2002, nor do they include energy efficiency measures that are already pledged to take place under HECA. Table 3 shows the costs and energy savings made under HECA between 1997 and 2003. The table shows that there were reductions in energy demand of 12.74% and financial costs of making these savings of just under £1.3 bn.

Table 3: reductions in home energy usage and associated costs from the first three phases of the Home Energy Conservation Act⁸

Year	Scottish housing stock energy demand (GJ)	Reduction (GJ)	Reduction (% of 1997 figure)	Cost of improvement measures (£million)
1997	234,352,493			
1999	227,627,734	6,724,759	2.87	370
2001	217,967,842	9,659,892	4.12	499
2003	204,486,710	13,481,132	5.75	428
	Total reduction	29,865,783	12.74	1,297

⁸ Ibid

31. Each percentage reduction has, therefore, cost on average slightly more than £100 m. Given that HECA has an aspirational target of reducing home energy demand by 30% over the ten to fifteen year lifespan of HECA⁹, and assuming that the mean cost per percentage energy saved remains constant, the total costs incurred under HECA will be in the region of £3 bn. This figure is likely to be exceeded, as the easiest (and cheapest) savings are likely to have been the ones made already, with later savings costing more.

32. Given that the measures that will contribute to HECA's aspirational 30% energy demand reduction target will include measures such as the Warm Deal and the Central Heating Programme, there will inevitably be an overlap between HECA and the proposed Bill. So a significant part, if not the majority, of the estimated cost of the Bill will be money already earmarked for expenditure under HECA. The *additional* cost of the Bill will therefore be considerably less than the maximum £3 bn calculated above.

33. There are further cost implications for the Scottish Ministers in preparing, publishing and reviewing the plan with is required under the Bill. However, these costs are likely to be negligible and able to be met within existing Executive budgets.

34. In addition, there will inevitably be both direct and indirect savings as a result of energy efficiency targets being met. Direct savings will obviously accrue to the residents of the homes rather than to the Scottish Executive or local authorities, but indirect savings, including those associated with improved health, will be enjoyed by the Scottish Executive and councils.

COSTS ON THE SCOTTISH ADMINISTRATION

35. There are three scenarios by which Scottish Ministers could achieve the targets set out in the Bill. Firstly, by relying on privately funded measures such as improved building standards and industry-based methods including the energy efficiency commitment. Secondly, by using publicly funded measures such as grant funded energy efficiency schemes which would cost considerably more. Thirdly, and most likely, is some combination of publicly and privately funded measures.

36. A fully publicly-funded approach would obviously carry the greatest cost on the public purse and would involve expenditure as outlined above.

37. Alternatively, Scottish Ministers could opt for a policy that would involve private funding to achieve the targets. Such an approach could include radically improving building standards, up to and including a requirement for all new residential accommodation to be so well designed and built that it requires no central heating or cooling.

38. Scottish Ministers could also seek an extension to the existing Energy Efficiency Commitment (EEC), a requirement for electricity and gas suppliers to achieve targets for the promotion of improvements in energy efficiency in GB households. Although EEC is

⁹ Scottish Executive, *Third HECA Progress Report for the Scottish Parliament*, <http://www.scotland.gov.uk/library5/development/hecar5.pdf>

administered by the UK Government, Scottish Ministers could make representations for there to be an additional requirement on fuel suppliers in Scotland.

39. Such an approach of relying upon building standards and EEC would significantly reduce the costs to the Scottish Administration. But, again, it is extremely difficult to put a price tag on it.

40. Probably the most likely outcome is an approach that combines public and private expenditure. Again, it is very difficult to estimate whereabouts on the public-private spectrum the combination is likely to be.

OTHER COSTS

41. In addition to setting the target, the main provision of the Bill is to require the Scottish Executive to prepare a plan to assist in promoting the target. The Bill stipulates certain elements that must be covered by the plan, but is otherwise non-prescriptive. The Bill allows the Scottish Ministers to decide how they wish to meet the home energy efficiency targets. In order that the process of meeting the targets can be scrutinised, the Bill also requires the Scottish Ministers to prepare a plan dealing with matters relating to the possible methods for ensuring the targets are met.

42. In particular, the Bill requires the plan to cover five matters: interim objectives, resources and financial assistance, other assistance, research, and functions of others. It will be up to the Scottish Executive to decide the resources it wishes to allocate to each of the methods with a view to ensuring that the targets are met.

COSTS ON LOCAL AUTHORITIES

43. The Home Energy Conservation Act (HECA) came into force in Scotland in 1996, and designates all Scottish local authorities as energy conservation authorities with a duty to devise strategies to achieve “significant”¹⁰ improvements in the energy efficiency of their respective housing stocks, across all tenures, over the following ten to fifteen years.

44. But the Home Energy Efficiency Targets Bill places the obligation upon Scottish Ministers to promote the achievement of percentage improvement targets in the energy ratings of Scottish residential accommodation. So the Bill as introduced should not impose any additional costs on local authorities that are not met by Scottish Ministers.

¹⁰ “Significant” has been interpreted as meaning 30% reductions:
<http://www.defra.gov.uk/ENVIRONMENT/energy/heca95/intro.htm>

COSTS ON OTHER BODIES, INDIVIDUALS AND BUSINESSES

Homeowners and tenants

45. It is widely recognised that of all the methods available to tackle climate change, improving energy efficiency is not only the most effective¹¹ but also the most cost-effective¹². The UK government's Performance and Innovation Unit estimates that at current prices, the economic potential is to reduce energy demand (and associated carbon emissions) by 40%.

46. So energy efficiency measures will save homeowners and tenants money. Table 4 shows estimated costs and payback times for a range of home energy efficiency measures.

Table 4: costs and payback times for various home energy efficiency measures¹³

Method	Cost	Payback time
Energy saving light bulbs	£5	7 months
Lag water tank and pipes	£20+	1-2 years
Lagging loft	£140+	2 years
Draught-proofing	£40+	3-4 years
Cavity wall insulation	£260-380	3-5 years
Central heating controls	£125-250	2-5 years
Floor insulation	£100 (DIY)	4-7 years

Businesses

47. There are considerable potential benefits for Scottish businesses in supplying the measures described in Table 2 above. Insulation, double glazing and energy efficient appliances can all be supplied by Scottish businesses, and they will be well-placed to capitalise in the business opportunities that will follow.

PRESIDING OFFICER'S STATEMENT ON LEGISLATIVE COMPETENCE

48. On 14 September 2006, the Presiding Officer (Right Honourable George Reid MSP) made the following statement:

¹¹ DTi, *Sectoral energy and emissions projections in the Energy White Paper*, 2003, <http://www.dti.gov.uk/energy/policy-strategy/energy-white-paper/supporting-analysis/page21345.html>

¹² PIU, *Working paper on energy efficiency strategy*, 2001, <http://www.strategy.gov.uk/downloads/files/PIUc.pdf>

¹³ Centre for Alternative Technology, *Energy efficiency in the home*, http://www.cat.org.uk/information/catinfo.tmpl?command=search&db=catinfo.db&eqSKUdatarq=InfoSheet_EnergyEfficiency

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“In my view, the provisions of the Home Energy Efficiency Targets (Scotland) Bill would be within the legislative competence of the Scottish Parliament.”

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