

# Consultation on proposals for a Scottish Climate Change Bill



## A response from Friends of the Earth Scotland

23 April 2008

**Friends of  
the Earth  
Scotland**

### Preamble

Friends of the Earth Scotland is an independent member of the Friends of the Earth International network. We undertake research, advocacy and campaigning activities throughout Scotland in pursuit of positive solutions to the challenge of climate change.

Friends of the Earth Scotland welcomes the Scottish Government's intent and aspiration in introducing a climate change bill to set statutory targets for tackling climate change and to support the delivery of those targets.

We welcome the opportunity to express our views on both the specific questions posed by the consultation, and the wider issues raised. In doing so, we have sought to apply some basic principles consistently. These are values that underpin our mission to support positive and fair solutions to climate change.

We want to see solutions that are fair to affected businesses and households in Scotland, but also fair between countries and between generations. We also want to ensure the credibility of the Bill's provisions through consistency and effective accountability. In our view a high level of credibility also requires the delivery of the SNP's manifesto promises relating to the Climate Bill, including annual targets for emissions reductions.

In our view the consultation raises many important issues, but in a small number of cases, fails to pose a direct question on those issues. Before answering the questions posed directly, we wish to take the opportunity to set out our views on those issues, and we strongly encourage the Scottish Government to seek further advice on these matters.

### Key issues not directly covered by consultation questions

First we wish to highlight the **purpose of the Scottish Climate Change Bill**, and propose that the preamble of the bill should include an explicit statement to the effect that the ultimate intention of the Bill is not to hit a particular numerical target, but to contribute fairly to averting dangerous climate change. Scotland cannot do this alone, but the Bill should require Government to keep within a fair share of a global greenhouse gas emissions level that restricts temperature rise to no more than 2°C.

Second is the question of whether the Bill should establish **point targets or cumulative targets**. Friends of the Earth Scotland has no quibble with the need for one or more point targets. We lobbied the SNP strongly to propose a target of 80% by 2050 in its manifesto, and still support this measure, even though developing scientific evidence suggests that this level of emissions will need to be reached sooner than 2050.

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However we do not believe that point targets (even if an interim target is also set) are adequate to deliver a safe level of atmospheric GHG concentration, nor to deliver fairness between generations or countries. Point targets do not fix the trajectory of emissions nor, therefore, the total amount of emissions, and given the long lifespan of GHGs in the atmosphere, total emissions matter critically. A cumulative budget target is needed in addition to guarantee that Scotland follows an emissions trajectory compatible with global equity and a safe long-term concentration.

To stand even a 50% chance of staying below two degrees it will be necessary to stabilise global greenhouse gas emissions at below 450ppm (ppm CO<sub>2</sub>eq) and probably nearer 400ppm (Meinhausen 2006, see also the Stern Review and IPCC Summary for Policy Makers 2007). More recent estimates (Hansen 2008) suggest even 350ppm may have to be the stabilisation target. Current global greenhouse gas emissions are already at 430pmm and are increasing at approximately 2% per year.

Research by the Tyndall centre has identified a safe UK carbon budget of 4.6 Gt-Ceq between 2000 and 2050. Crudely divided on a population basis, this suggests a fair Scottish budget for that period is in the order of 0.46 Gt-Ceq. The Scottish Bill should take the opportunity to take genuine world leadership and set a cumulative emissions target as well as point targets for emissions reductions.

Without an overall cumulative budget the Act will not guarantee keeping within a fair contribution to a 2°C target. The consultation paper rejects the idea of only setting a cumulative target on the grounds of comparability and cost, but it fails to consider the value of an additional statutory target set on this basis. It suggests that meeting a cumulative target would cost more – but a cumulative target is only more costly and less flexible to reach insofar as a point target fails to deliver a cumulative budget and *allows greater total emissions*. In addition a cumulative target incentivises early action which has greater environmental benefits (likely to be disproportionately greater than any cost increase).

The consultation also argues that the difference between a point target and a cumulative target is immaterial because Scotland only contributes a small share of global emissions. This is as illogical as using the same excuse for setting no target at all. A cumulative target would show global leadership and is consistent with a comprehensive definition of targets in line with the outcomes the Bill aims want to influence. *We urge the Government to reconsider this point and introduce a cumulative target compatible with a safe long-term atmospheric concentration of GHGs, based on advice from the climate change committee(s).*

Third is the question of **annual targets or annual budgets**. These are rejected by the consultation, citing concerns that they increase costs by reducing flexibility, and reduce credibility because of the risk that targets will be breached as a result of uncontrollable events such as power plant outages, or cold winters, and that data is not available promptly enough. However in our view these arguments have been overstated, and the arguments in favour of annual targets understated or ignored.

Specific annual targets are needed to ensure the cumulative effect of the Bill's provisions, and make it hard for Ministers to avoid tough decisions on large new emissions sources. Shorter periods make impacts of poor decisions obvious sooner, and easier to identify in advance appraisal, therefore driving investment decisions towards cleaner technology, and ensuring effective offsets are in place for any policy decisions that might increase emissions.

So, annual targets enhance accountability – especially within a Parliamentary term and thus increase confidence in and the credibility of Government action. They also dramatically

reduce the risk of failure as a result of effort being delayed; and drive improvements in data-gathering. Moreover much data is already available on a much shorter timescale than the 18 months cited for full national emissions reports. In addition, the impacts on flexibility are not severe, as the cumulative target for Scotland is smaller than that implied by a simple straight line reduction, so the Government should be aiming to exceed 3% a year, especially in the early years of the process. Moreover the flexibility intrinsic in the process through international trading within the EUETS is greater than the flexibility needed to deal with unplanned short term increases in emissions.

The 80% greenhouse gas reduction target equates to year on year reductions of just over 3% across the basket of six greenhouse gases. Such a straight line trajectory involves a smaller cumulative emissions budget than smaller reductions in early years, followed by more intense effort later. However, Scotland's cumulative emissions budget to 2050, calculated as a fair share of the maximum global emissions compatible with avoiding dangerous climate change, is smaller still than the area under a straight line reduction curve at 3% pa. Ideally greater effort should be made in early years. Thus 3% pa should be seen as the absolute minimum reduction needed to deliver our climate change objectives, and should form a 'baseline' or 'floor' to our annual effort.

Any delay in action to reduce emissions will mean Scotland eats into its cumulative CO<sub>2e</sub> budget. At a UK level emissions since 2000 have already accounted for 25% of the UK's budget up to 2050. Research by the Tyndall Centre has suggested that the UK must make a 9% annual decarbonisation to stay within its emissions budget until 2050<sup>i</sup>. The earlier we start the easier it will be to meet the long term target, the longer we fail to cut emissions by at least 3% each year the greater the necessary annual cuts will become.

We remain convinced that the Scottish Climate Bill should commit to annual reductions of at least 3% rather than a multi year budget period for a number of reasons:

- i) The risk of inaction in early years and delays in making early progress in working towards the 80% cut.
- ii) With a Parliamentary cycle of under 4 years a multi year budget period risks avoiding accountability and simply shifting responsibility for any failure to make adequate progress into the subsequent Government.
- iii) If a 3% reduction in any one year is not reached the ability to make up this shortfall in the following years becomes more and more challenging – i.e. two years of delivering just 1.5% and 2.5% reductions will mean the third year is challenged to meet a 5% reduction. The budget approach presents a real risk that the challenge spirals out reach, in doing so undermining the long term confidence needed to deliver the Bill.
- iv) Annual reporting against targets allows for the quicker identification of ineffective policies and their prompt correction.

The opportunity to borrow from future years as part of a multi-year budget approach is based on an implicit assumption that there will be no 'exceptional circumstances' the following year. If it is not possible to anticipate them in the first year neither will it be possible to predict them for the following year.

Finally we note that for the Government to water down its manifesto commitment of 3% per year annual targets has already begun to damage its broader credibility within Parliament, and with the public. ***For all these reasons we urge the Government to adopt statutory annual targets for emissions reductions of at least 3% a year.***

Fourth is the issue of **international aviation and shipping (IAS)**. The failure to include aviation is like 'giving up alcohol, but still drinking as much whisky as you like!' Given the rapid

growth rates of emissions from the international aviation and to a lesser extent shipping, sectors, this omission undermines the credibility of the entire framework.

Aviation is the fastest-growing source of greenhouse gas emissions in the UK. Since 1990, UK CO<sub>2</sub> emissions from aviation have risen by 125 per cent; they are currently growing by between 5 and 10 per cent a year. In 2005, aviation accounted for 6.3 per cent of the UK's CO<sub>2</sub> emissions.<sup>ii</sup> Given the extra warming effects of non-CO<sub>2</sub> emissions from aviation, aviation's share of the UK's contribution to climate change is higher – probably in the region of 10-15 per cent. Globally, one-in five flights departs from or arrives at a UK airport.<sup>iii</sup>

In Scotland, the contribution of international aviation (i.e. not all aviation because domestic aviation is included in the domestic total) rises from 5% of all GHG in 1990 to 13% of all GHG in 2004. The Tyndall Centre for Climate Change has predicted that unless government policy changes, CO<sub>2</sub> emissions from UK aviation will have more than doubled by 2030 and trebled by 2050.<sup>iv</sup> By 2040, aviation would still be responsible for over 100 million tonnes of CO<sub>2</sub> a year, meaning that to deliver an 80% reduction every other sector would have to reduce emissions to zero. The exclusion of aviation thus devastates the credibility of the framework.

The Scottish Climate Change Bill consultation states that the Scottish Government is planning to exclude emissions from international aviation and shipping, because there is no international agreement on how to allocate these emissions to individual states.

Although emissions from international aviation and shipping are not included in global climate agreements, states are required under the terms of the Kyoto Protocol to report them as a 'memo item', and the Intergovernmental Panel on Climate Change (IPCC) publishes internationally-accepted guidelines on how to do this. The UK Government has for several years compiled and reported official figures for emissions from international aviation and shipping – based on fuel taken on-board at UK ports - for inclusion in our national GHG inventory. These official figures go back to 1990 and so disaggregated Scottish data could be used to include aviation emissions on the same basis as other sectors from the moment the Bill becomes law. Alternatively a more robust approach to including and reporting IAS emissions could be adopted pending an agreed international methodology. We would advocate allocating aviation emissions by country of origin of passengers: so Scotland should take a share of emissions of all flights leaving or arriving in Scotland equivalent to the share of Scottish passengers.

Finally we must note that key decisions affecting IAS are taken within Scotland, especially regarding airport planning, so it cannot be treated as Westminster's problem, nor would we expect this Government to divest itself of such responsibilities. We urge the Government to reconsider on this issue, and take an international lead by including a Scottish share of international aviation and shipping emissions in all its targets and budgets.

Fifth, we wish to highlight that the Bill should include a **sustainability duty** to ensure that measures taken in pursuit of its objectives do not lead to perverse environmental, social or economic consequences. A legislative duty to apply principles of sustainable development in measures to reduce emissions would help ensure we are not harming biodiversity, increasing hunger or creating fuel poverty in the process of meeting our targets. A Sustainable Development Duty is legally practical – indeed one has already been established in the Planning Etc. (Scotland) Act. The principles set out in the Scottish Sustainable Development Strategy provide a framework for implementing such a duty; in the same way as the Biodiversity Duty in the nature conservation act is underpinned by the Scottish Biodiversity Strategy. Given these precedents the omission of a sustainable development duty in the Climate Bill is surprising and must be rectified as a priority.

Sixth and finally, the Bill will not stand alone from the **future economic strategies** of the Scottish Government. As the consultation recognises, some sectors may well expand (eg renewables, life-sciences and other knowledge intensive sectors). Others will likely contract over the coming decades as a result of climate change measures (eg oil and gas, petrochemicals). Scotland will need to develop a transition strategy at the heart of its future economic strategies to ensure that adequate and timely investments are made; that a significant share of the benefits of current resource extraction are allocated to the future transition; and to ensure that it is a just transition, with appropriate measures to support retraining and redeployment. The Bill should therefore mandate Ministers to establish strategies for particular sectors, taking account of national targets; and require Ministers to ensure that the national economic strategy is consistent with Scotland's climate change objectives.

Now we turn to the **specific questions** posed by the consultation paper:

**Question 1: Should a Scottish Target be based on carbon dioxide only or the basket of six greenhouse gases?**

Friends of the Earth Scotland believes that the targets should be based not just on CO<sub>2</sub> but on the full basket of greenhouse gases defined by the UN Framework Convention on Climate Change, measured as CO<sub>2</sub>eq.

The consultation suggests that setting the target based on a 'basket of gases' approach would be more costly. We believe the opposite is more likely to hold: that to achieve the same reduction in global warming potential (GWP), it will be more cost effective to take the basket approach, as then emissions cuts can be prioritised according to the lowest marginal cost across gases as well as across industries or sectors.

The argument that the 'basket' approach might be more expensive only holds insofar as the 'CO<sub>2</sub> only' approach would actually deliver less benefit for the climate, as a result of leaving emissions of other greenhouse gases unaffected. In fact it could be even worse, as in the livestock sector, there is a balance between methane and carbon dioxide emissions such that effort to minimise the latter may well result in increased climate impacts from disproportionate increases in the former.

Moreover, inclusion of other gases in a 'basket' approach would demonstrate Scottish leadership within the UK, and would ensure our efforts were directly comparable with others under the international regime set by the UN Framework Convention on Climate Change.

Concerns about quality of data are insufficient to reject a 'basket' approach, which would be consistent with the precautionary approach, moving forward on the basis of the best science available.

**Question 2: Should the Bill contain provisions to alter which gases are included, for example if the reliability of data for a particular gas improves or if science changes in the future about which gases cause climate change?**

If the Government chooses not to include all gases now, then it should enable the inclusion of additional gases in future, based on scientific advice. However this is clearly a second best approach compared with adopting a 'basket' approach now. Also it should not enable the removal of gases from the framework without recourse to Parliament as a whole.

**Question 3: The Scottish Government wishes to ensure that the Bill gives sufficient incentives to invest in energy efficiency and renewable electricity. Should the targets be based on source**

**emissions; an end-user inventory; or on individual targets for energy efficiency and renewable electricity? Do you have any other suggestions?**

We support the intention to invest in emissions reductions from energy use. We see the Bill as only a step towards a clear transition plan to a zero-carbon Scotland. In that respect, the Bill is not the only source of incentives for measures such as energy efficiency and renewables, and in our view, it would be inappropriate to adjust the central targets of the Bill to address these particular sectors. However it would be entirely reasonable to mandate Ministers to set additional targets in these areas (and to establish strategies to deliver those targets) – subject to the same scrutiny and enforcement measures foreseen elsewhere in the Bill. The Bill should also mandate Ministers to establish strategies for those industries likely to contract as a result of climate change measures (eg oil and gas, petrochemicals) to ensure a just transition, with appropriate measures to support retraining and redeployment.

We recommend that the Bill provides an overarching framework, with a duty to address climate change in a sustainable manner which would ensure a sustainable approach to reducing emissions from energy use. From this legal framework we would expect new policy and strategies to support an energy hierarchy with targets for demand reduction, energy efficiency and renewables. The hierarchy would mean however that options would be sought in demand management and energy efficiency before attempting inappropriate environmental compromises in developing renewables. Equally such an approach would recognise that it is pointless from a carbon reducing perspective to pursue renewables without addressing demand increases. Similarly, a hierarchy would ensure that renewables options were exploited in preference to fossil fuelled capacity, to meet the demand remaining after demand reduction and efficiency measures.

The Climate Change Bill therefore, as a framework document, does not need to set the targets for energy efficiency and demand reduction but should provide the framework which steers subsequent energy strategies. We would support including a duty in the Bill for ministers to produce an emissions reduction plan, including targets for demand reduction, energy efficiency and renewables which have statutory weight, with advice from an independent Scottish Climate Change Commission on the levels of targets required.

The Bill could usefully specify that such an emissions reduction plan should include targets for certain measures so as to implement the energy hierarchy. In particular in the light of the importance of energy efficiency and emphasis on reducing overall energy demand noted in the consultation, (para 5.29) the Bill should require a target to be set for improved energy efficiency and a target, with reporting requirements, on energy demand reduction. As with all emissions data, net savings in emissions achieved through progress towards meeting these targets should be independently assessed and verified. This would ensure we have the confidence that both reduction in energy demand and improvements in efficiencies were making their full and unique contributions to the emissions reduction path.

However, Friends of the Earth Scotland does not support the proposed ‘end-user’ inventory as described in the consultation. We fear that it ‘cherry picks’ at the issue of consumption. It would be inappropriate to adjust the figures to consumption where the difference makes Scotland look better (eg on oil and gas, or electricity generation), and fail to do so where it makes us look worse (eg on steel or consumer goods).

Instead we would propose that the targets should be based on source emissions, but that in addition, ***Scotland should develop full consumption side accounts for GHG emissions.***

While consumption and production figures are relatively close at present, it seems plausible that this could change, especially as North Sea oil and gas activities decline. The development

of consumption side accounts would ensure that we were promptly alerted to any future increase in ‘exports’ of emissions; and would help clarify how changes such as the closure of Ravenscraig genuinely affect emissions.

This would provide a massive step towards proper accountability for GHG emissions. In economic policy, national income is calculated both by production and consumption, and the difference is a critical check on the balance of trade. This is not considered a duplication of effort but a valuable tool in economic understanding, policy making and accountability. The development of consumption side accounts also offers another opportunity for Scotland to take leadership within the UK.

**Question 4: Do you agree that the Bill should allow the means of measuring the target to be changed through secondary legislation to reflect international developments or unforeseen consequences of the Bill?**

It would not be appropriate to provide powers to change the means of measuring the primary targets under secondary legislation. Such powers would undermine the credibility of the targets by increasing the ease with which future administrations could seek to avoid sanction. It would be no more credible to allow the means of calculation to change, as to allow a future administration to reduce the overall target without amending the primary legislation.

However, it may be appropriate to take secondary powers to define additional consumption based targets where appropriate as the data becomes robust through the development of consumption side accounts (see answer to Q3 above).

**Question 5: Should the emissions reduction target take account of the abatement effort made by companies under emissions trading schemes? If so, how?**

It is essential that both the targets and the broader framework of the Bill take account of effort by companies under emissions trading schemes. However this does not simply mean counting reductions by Scottish based companies net of credits bought or sold against the Scottish target; it also requires intervention in any trading schemes to ensure that all traded credits meet the same standards, and to ensure that within any trading bubble, the more ambitious Scottish target is reflected.

In an ideal world the Scottish target would be delivered solely through domestic emissions reductions, thus maximising the benefit to Scottish business of preparing for the opportunities of a low-carbon economy. Such an approach would also reflect the moral position noted in the consultation paper, that Scotland has a duty to cut emissions because we have emitted an unfair level in the past. Finally it would ensure that devalued credits (such as ‘hot air’, or CDM credits whose additionality is questionable) were not treated as equivalent to real emissions cuts made domestically.

However we recognise that this is not the current world, and we accept the principle of using trading schemes to deliver lower cost outcomes (as long as those outcomes are fully equivalent). Therefore we suggest that:

- a) ETS credits purchased by Scottish companies count towards calculating the net emissions of Scottish companies for the purposes of the delivery of the Scottish target
- b) That the Scottish Government collaborate with the UK Government to ensure that in phase three of the ETS only the amount of credits compatible with the UK target trajectory are auctioned and that the remainder of the UK’s allocation is retired. The proportion retired can be calculated by a comparison of the UK target trajectory with the European target trajectory.

- c) That should the Scottish target and target trajectory still be higher than the UK's, the Scottish Government then purchase and retire equivalent credits to the difference between those trajectories.
- d) That the Scottish Government collaborate with the UK and other European Governments to renegotiate the Linkage Directive to reduce the permitted leakage between the ETS and CDM/JI, and to ensure high standards.

The only alternatives we can see to such an approach are:

1. To exclude the ETS sector. This is not acceptable as it would effectively mean the Scottish target could not be achieved, and would destroy the credibility of any claims to Scottish leadership.
2. To include the ETS sector at average levels of effort. This would mean that to achieve the Scottish targets other sectors – notably housing and transport – would need to achieve disproportionate reductions (in the order of 80% as early as 2020) to deliver the overall target trajectory required by the Scottish target. This does not seem practical.
3. To develop a Scottish trading scheme to nest within the ETS and wider international schemes, with a tighter bubble for Scottish companies. This may be worth exploring further, as it suggests a means to deliver higher reductions without imposing a direct financial cost on the public purse.

However, we must note that if the ETS sector were excluded, then there would be no fluctuations in emissions from that sector (including power generation) included against the Scottish target. Therefore there would be no argument that such fluctuations prevent the pursuit of at least 3% per year reductions. The inclusion of the ETS on the basis suggested above (effectively one of net emissions after trading, and additional adjustments would largely eliminate any such fluctuations, and these would be normally reflected in increased purchase of credits).

#### **Question 6: Do you agree that international credits should be counted towards Scottish targets? Should there be limits on credits counted towards Scottish targets?**

In an ideal world, the Scottish target would be delivered solely through domestic emissions reductions, thus maximising the benefit to Scottish business of preparing for the opportunities of a low-carbon economy. Such an approach would also reflect the moral position noted in the consultation paper, that Scotland has a duty to cut emissions because we have emitted an unfair level in the past. Finally it would ensure that devalued credits (such as 'hot air', or CDM credits whose additionality is questionable) were not treated as equivalent to real emissions cuts made domestically.

With specific regards to credits from the Clean Development Mechanism (CDM) there is growing concern that many so called 'non-additional' projects are being approved. These are projects which would have taken place anyway and are therefore actually allowing an increase in emissions globally when they are used to 'offset' emissions in countries which have taken on caps. Indeed, a recent report commissioned by WWF suggested that approximately 20% of the emission reductions certified under the CDM may have happened anyway<sup>v</sup>. This is the equivalent of around 34 million tonnes of CO<sub>2</sub> per year - the emissions from four Longannet coal fired power stations. Furthermore the sustainable development aim of the CDM is frequently overlooked in project design.

We believe trading schemes should not be used as a short-term fix that leaves Scotland building high-carbon infrastructure now, while credits are cheap and necessary reductions can be "bought" rather than delivered in Scotland, only to find we are locked into an expensive way of life in future, when carbon gets more expensive.

There are also real concerns over the mechanisms within such schemes that enable trading of credits between countries. For Scotland to continue to pollute, and then buy our way out of our own legal carbon reduction targets is not a strong leadership position from which to convince other countries to cut their emissions.

However we recognise that under current EU rules there is effective leakage through use of international credits as a result of the linkage between the ETS and CDM/JI. The framework only requires that the ‘majority’ of the effort be made within the EU, and thus leakage could be substantial (as a rule of thumb the ETS sector accounts for around half of emissions, so even ‘a minority’ of that effort could be equivalent to around 25% of the total emissions reduction effort). Clearly this is too high – in the long-term it could effectively halve the domestic reduction achieved from 80% to 60%. As noted above (in the answer to Q5) efforts are needed to reduce leakage and enhance the quality of internationally traded credits. In the interim, there are two measures that Scotland should establish in the Bill.

First, to prevent the counting of internationally traded credits against the Scottish target, with the exception of those within the ETS. Second to establish the application of an ‘exchange rate’ for international credits within the ETS, which would be varied with the advice of the Climate Change Committee(s), and would reflect the fact that international credits suffer a higher rate of double-counting or lack of additionality than domestic measures. So international credits would count for say, only 80% of their face value in calculating Scottish emissions. This would not only create a greater incentive to domestic action, but establish an additional market mechanism which in future could helpfully increase the liquidity of carbon markets.

If, as suggested here, Scotland would not purchase international credits directly, then this route would not be open to ministers failing to deliver on their carbon budgets. The alternative is to establish a domestic revolving Climate fund capable of investing in emissions reductions under the guidance of the climate change committee(s). Ministers would then be obliged to increase the fund by an amount adequate to deliver the additional emissions reductions domestically. Such a Climate fund would provide a strong incentive for public bodies, and potentially, the private sector to bid-in with extra emissions reductions. It would provide resources for corrective, remedial and restorative action (rather than punitive sanctions). In our view this model is highly preferable to the purchase on international credits.

**Question 7: Should the Bill allow the level of the 2050 target to be changed through secondary legislation? If so, should this only be allowed on the basis of independent, expert advice, to reflect international developments or unforeseen consequences of the Bill? Should any changes to the target be limited to an increase in the target.**

Secondary powers to change the level of the 2050 target should be limited to tightening the target in the light of independent, scientific advice. To maintain credibility and confidence in the target, to relax it should require amending the primary legislation.

**Question 8: What factors should be taken into account when setting the level of budgets?**

Fundamentally, GHG budgets have to reflect both global equity – taking account of committed population growth and past inequity - and scientific guidance on the levels of GHGs commensurate with avoiding dangerous climate change (arguably as low as 350ppmv CO<sub>2</sub>eq in the longer term). From these principles and guidance, a cumulative emissions budget can be calculated to GHG stabilisation. This cumulative budget should form the basic guide for any budgets to be set for shorter periods in the near term.

However, even with such a foundation, there are other factors which will influence the trajectory of emissions reductions (and thus the distribution of the cumulative limit over time). The first is critical importance of setting a good international example to help assure growing developing nations of the equity of their taking on future commitments to limit emissions. In the short and medium term global context, this may even be seen as the overriding imperative. The second should be the delivery of at least 3% per annum reductions in emissions. This is not only necessary to maintain the credibility of the SNP's electoral promises, but also to provide a continuing signal of commitment and a foundation for future investment. Taken together these factors suggest seeking to 'front-load' the trajectory with greater near-term emissions reductions as far as practical.

### **Question 9: How long should interim budget periods be?**

Friends of the Earth Scotland believes that multiple *annual budgets* should be set in advance, with only a tightly limited degree of flexibility around the target budget level. This would provide the maximum level of cross-compatibility with UK budget periods, parliamentary terms, financial budget periods and EU ETS budget periods, while also maximising clear accountability. The UK Bill has already moved to adopt 'indicative target ranges' for annual budgets within statutory five-year budgets, with Ministers suggesting that the degree of flexibility in these ranges will be small ('single-digit' percentages). The adoption of annual budgets would ensure that Scotland retained leadership in this respect, as well as enabling the SNP to meet its promise to deliver 3% pa year on year reductions in emissions.

We do not accept that the current 18 month lag in data availability on emissions is a fundamental argument against such an approach. As with economic data, preliminary figures can be made available much earlier, and finalised later. Good carbon trading market data is already available for the majority of the economy on a much shorter timescale (within days or weeks). In addition, the demand for better data on an annual basis would help drive improvements in reporting and analysis that could only benefit overall GHG management.

Specific annual budgets are needed to ensure the cumulative effect of the Bill's provisions, and make it hard for Ministers to avoid tough decisions on large new emissions sources. Shorter periods make impacts of poor decisions obvious sooner, and easier to identify in advance appraisal, therefore driving investment decisions towards cleaner technology, and ensuring effective offsets are in place for any policy decisions that might increase emissions.

### **Question 10: How many years in advance should emissions budget periods be set in order to provide sufficient time to develop infrastructure?**

Emissions budgets should be set in advance for a period of 10-15 years, with indicative outline budgets right out to 2050 to meet cumulative budgets. A rolling review process is needed to ensure that future budgets can be adjusted (reduced) in line with improved data and new scientific evidence. The horizon of 10-15 years will be adequate for most investment and infrastructure decisions, but some areas – such as power generation, public transport or construction – will benefit significantly from the greater certainty offered by indicative budgets up to 40 years ahead.

### **Question 11: What should be the limit (in terms of absolute quantity or as a percentage of the budget period) on the amount of emissions which the Government can borrow from a following budget period?**

The UK Bill restricts borrowing between five year budgets to just 1%. If the Scottish Government decides to adopt shorter budget periods of one year, a higher level of borrowing can be justified, perhaps even as great as 5% of the annual budget (but on non-cumulative

basis – ie once that level of borrowing had been reached, no further borrowing would be permitted until some of the debt had been repaid).

If longer budget periods are adopted FoES believes that no borrowing should be permitted above levels already banked. This would establish an incentive for early banking of emissions reductions over and above target levels. An additional way of stimulating early action would be to establish a real interest rate for emissions borrowing, such that borrowed emissions were paid back with interest (ie at a higher level to reflect the real time cost of later emissions cuts). Advice on an appropriate real interest rate could be requested from the climate change committee(s).

**Question 12: Should the Bill include an interim point target? If so, what year (or years) should it be for (2020, 2025, 2030 etc)? How should the level be chosen?**

The Bill should include an interim point target for 2020. It should also include a cumulative target for 2050.

Interim targets enable momentum to be maintained, and critically, enable a trajectory to be set which helps meet a cumulative carbon budget. Interim targets help engage and motivate businesses and citizens with messaging which is simpler, yet complementary to that around shorter-term budgets. Interim targets can also help stimulate and reward early effort. International comparability (notably with the EU) and credibility would suggest a 2020 target, and a credible level would have to reflect the cumulative budget analysis (and therefore should be in the order of a 50% reduction on 1990 levels).

Without an overall cumulative budget the Bill will not guarantee keeping within a fair contribution to a 2°C target. A cumulative target would show global leadership and is consistent with a comprehensive definition of targets in line with the outcomes we want to influence. A cumulative target would only be more costly and less flexible to reach (as argued in the consultation) insofar as a point target fails to deliver a cumulative budget and *allows greater total emissions*.

**Question 13: Should the Scottish Ministers be required to report on any other issues related to climate change in addition to the requirements already set out? If so, what and how often?**

Scottish Ministers should be required to report on a range of significant measures and indicators.

Ministers should report annually on:

- emissions by sector - this would ensure that any sector which is effectively a ‘free rider’ is publicly recognized as such;
- gross and net emissions taking account of changes in estimated carbon sinks
- any deviations from the emissions budgets, explaining the reasons for them, and the new measures to be introduced to rectify them
- forecasts of the emissions expected in the following year, and any measures needed to keep emissions within budget

Annual reporting by sector allows Ministers to be held to account fairly for those things within their sway, and separates these from the effects of external events.

Ideally Ministers should also report on the following on an annual basis, but a lower frequency of reporting (every second year) might be acceptable.

- the cumulative total emissions against a fair cumulative budget to 2050;

- longer term projections (on a 10-15 year horizon) for future emissions;
- emissions by greenhouse gas;
- consumption account figures and any implications of Scottish activities for international emissions not otherwise covered (eg from Climate fund expenditure or technology support);
- the impacts and risks of current emissions levels.

The First Minister should be required to make the annual report to Parliament.

In addition, Ministers should be under an immediate reporting duty to report the emissions implications of any significant Ministerial decisions, or new spending plans, and in particular to provide an explanation to Parliament for any decision to allow increases in emissions – or emissions incompatible with budgets and targets - identified in a strategic environmental assessment.

**Question 14: Is a process of Parliamentary scrutiny the appropriate way of holding the Scottish Government to account if targets or budgets are not met?**

Whilst parliamentary scrutiny is essential, alone it will not ensure accountability. The UK Government's draft Climate Change Bill provides for sanctions for failing to meet targets through judicial review. In addition, in the event of failure to meet targets, Ministers will be required to bring forward new policies to Parliament.

Friends of the Earth Scotland believes that alongside tough parliamentary scrutiny, there must be strong incentives and effective sanctions. We advocate simple mechanisms to enable timely, affordable and merits-based judicial review of Ministerial decisions which lead to, or could be expected to lead to a breach of climate targets or budgets. In addition we believe that a balanced regime of financial incentives and penalties for government departments and other public bodies would prove an efficient way to promote compliance.

All our proposals are based on the assumptions that it is preferable to prevent targets being breached, than to rectify a breach afterwards; but that if a breach occurs, rectifying any emissions excess should be the aim of any sanction, in preference to imposing any form of punishment. In other words we prefer the idea of 'restorative justice' to one of 'punitive justice'.

We propose two ways to improve the effectiveness of parliamentary scrutiny. First that as in Westminster, in the event of a failure to meet a target or budget the responsible minister must come forward with new policies designed to compensate for any shortfall, regardless of its cause. Second that by amendment of Strategic Environmental Assessment rules Parliament establishes a "call in" mechanism for new plans, programmes or strategies that would increase GHG emissions, so that both the Minister responsible for the plan, programme or strategy and the Climate Change Minister would have to justify approval of such a plan programme or strategy to parliament in advance of giving it the go-ahead.

However, even with such improvements, we do not believe that parliamentary scrutiny alone will suffice. We propose that, as in England and Wales, the courts be given a role. Ideally the courts should be given an effective preventative role – an opportunity to use their powers to quash Ministerial decisions on issues such as future carbon budgets, or projects or programmes that could lead to breaches of the targets. In doing so, the courts would have to consider the merits of the matter, and in particular the relevant advice of the Climate Change Committee (or Committees, if a Scottish body is established). It would also be critical that access to the court was timely and affordable. Unfortunately, these three criteria, despite being established by the Aarhus Convention, are not met in Scotland at present. Even Judicial review is less easily accessible than in England and Wales where the courts have accepted the

principle of ‘protective costs orders’ where such actions are taken in the public interest by campaign groups. These provide a guarantee that the threat of a punitive costs award cannot deter a legitimate action to seek judicial review. The Bill should establish provisions to ensure that affordable, timely and merits-based access to justice was available in cases relating to the Bill’s objectives.

This would empower public interest groups to seek a court ruling if it appeared that ministers were failing to comply with their duties under the Bill, such as setting interim budgets compatible with the Bill’s objectives and developing and implementing policies to deliver against such budgets or targets.

But legal mechanisms remain a complex and relatively blunt measure – essential as a last resort, but not a particularly dynamic incentive. For that we need to turn to financial measures. We advocate an innovative rolling ‘Climate Fund’ mechanism. The fund would be used to pay for mitigation and adaptation in Scotland and overseas, and would be open to be bid into by all Government Departments and public bodies (amongst others). It would be replenished through direct Government funding, and through fines levied against Government Departments and public bodies for failure to meet relevant climate emissions targets.

In this way it would serve multiple purposes – it would integrate climate outcomes into the spending decisions of the public sector; it would stimulate innovative and efficient means of reducing emissions; it would ensure speedy restitution of any shortfall against emissions targets; and it would establish a source of funding for international climate aid which was not simply offset by increased emissions in Scotland. Indeed it would create a morally fitting mechanism to support additional adaptation expenditure in poorer countries should Scotland fail to meet its climate targets (thus increasing the need for such adaptation). Finance for adaptation should not come from existing overseas aid budgets and so using money from penalties paid for polluting is an appropriate compensatory way of assisting developing countries.

Article 9 of a draft Belgian Climate Bill (albeit put forward by a minority party) includes provisions for a Climate Penalty Fund. Powers are provided for a designated ‘body of judges’ to judge whether Ministers of the national or regional governments have complied with their GHG budgets. If they are ruled to have failed they pay an amount relating to the shortfall, at a rate relating to the current carbon price, into a specific fund. The monies would then be managed by the National Climate Commission, and returned to the relevant Government under a legal arrangement that ensures they can only be spent on additional emissions reductions (above the budgeted amount) in future years. In this way the measure is designed to ensure that the ongoing budgets (which have a minimum annual reduction provision, and a 90% target by 2050) are delivered.

We recognise that the detailed design of such a fund is a complex exercise, and will require further research. However we are confident that the principles of such a measure are sound, and that the addition of provisions to increase international support through the fund when targets are missed offers another way for Scotland to demonstrate leadership in the climate change arena.

**Question 15: What should be the primary source of advice to the Scottish Government for setting emissions targets or budgets and why? Options include: the proposed UK Committee on Climate Change, a new Scottish Committee on Climate Change, an existing public body in Scotland, or the Scottish Government itself.**

The Scottish Government should establish a new Scottish Committee on Climate Change to advise it on emissions targets and budgets. Constitutionally, Scotland’s devolved parliament

and unique legal system make it imperative that the Scottish Government be able to seek advice from and be held to account by an independent, arms length body, separate from but working closely with the UK Committee on Climate Change. This body could be modelled on the successful Freedom of Information Commission, with the Commissioner sitting on the UK Committee.

It is essential that the specific Scottish circumstances and other variations in the impact of climate change in Scotland which have led to Scotland setting a higher 2050 target are also reflected in the advice that the Scottish Government receives. Only a separate Scottish committee with Scottish expertise and Scotland's interests at its heart will deliver this. It is not appropriate for an existing body to fulfill this task. It is already clear that the UK committee lacks the capacity to provide Scotland-specific advice and will be focused on UK emissions. Tailored advice is desirable also for the measures proposed elsewhere in this response such as an 'interest rate for borrowing', or an exchange rate for international credits. Such decisions should be at arms length from the Government. A Scottish Climate body could deliver effective advice, scrutiny and monitoring (supported by the UK climate change committee, and in specific tasks by the SDC and SEPA).

A Scottish body could also better reflect Scotland's more open and inclusive approach as reflected in the difference between our Freedom of Access and SEA regimes compared to those at UK level. Scotland also has greater recognition of the importance of our natural environment with its Biodiversity duty that is not reflected in UK legislation. We would therefore expect greater consideration of such matters by a Scottish body than can be achieved by UK committee which as currently proposed has no legal requirement for environmental expertise amongst its members, nor are they required to take into account when making their decisions, the impacts of climate change on the environment or people, at home and abroad. Again, with Scotland's important standing internationally, we would hope to see better reflection of these matters in its own delivery of climate change.

We consider it important that such a body is established at the outset and not delayed by deferring the responsibilities to the UK committee for three years as proposed by the Scottish Government.

The Bill should therefore:

- Establish a Scottish climate change body with duties to advise ministers on:
  - **the current scientific understanding of targets (including those for sectors), carbon budgeting, policy options, reporting standards, trading and borrowing limits and any interest rate to be imposed on borrowing.**
  - Advise on the proportion of emissions reductions that can be achieved outside Scotland (i.e. through trading) and any exchange rate to be imposed
- Require that the Scottish Climate Change body will include environmental and social expertise to ensure that any decisions deliver Climate change in a sustainable manner that protects people and the environment at home and abroad.
- Require appointments to the Scottish Climate Change body to be approved by the Scottish Parliament.
- Place a duty on Scottish ministers to consider and take account of both the Scottish body and UK committee's findings and advice.

**Question 16: If it were to be an existing Scottish public body, which public body is most suited to carrying out this task and why?**

Not applicable: no existing body could fulfil the remit suggested above.

**Question 17: Which organisation should be tasked with monitoring the progress of the Scottish Government on reducing emissions and why? Options include: the proposed UK Committee on Climate Change, a new Scottish Committee on Climate Change, an existing public body in Scotland, or the Scottish Government itself.**

See answer to Question 15 above.

**Question 18: If it were to be an existing Scottish public body, which public body is most suited to carrying out this task and why?**

Not applicable: no existing body could fulfil the remit suggested above.

**Question 19: Should additional independent mechanisms for scrutinising the effectiveness of the Scottish Government's policies in reducing emissions be created by the Bill (in addition to any scrutiny already provided by the Scottish Parliament)?**

Yes, see answers to Questions 14 and 15 above

**Question 20: If so, which organisation is best placed to carry out this function and why? Options include a new Scottish Committee on Climate Change or an existing public body in Scotland.**

This function should be served by a new Scottish Climate Change body (see answer to Question 15 above)

**Question 21: If it were to be an existing Scottish public body, which public body is most suited to carrying out this task and why?**

Not applicable: no existing body could fulfil the remit suggested above.

**Question 22: Are there any other functions relating to climate change, existing or new, which should be carried out at arm's length from the Scottish Government and why?**

Setting any interest rate for emissions borrowing, and exchange rates for international credits should be arms-length functions, as suggested in the answer to Question 15 above. Further, the Scottish Climate Committee should be asked to advise Government on the appropriate tools and investments to guarantee the delivery of emissions reductions in a just and fair manner, so as to ensure that Scotland is not just wealthier and greener as a result of this Bill, but also fairer.

**Question 23: Should the Bill contain enabling powers to introduce a duty in certain parts of the public sector (i.e. local authorities and large public bodies) to take specified actions on climate change or other specified environmental issues? Why?**

Friends of the Earth Scotland supports the inclusion of a range of enabling powers to establish duties, statutory guidance, and reporting requirements for public bodies. We believe all these will be required, and that voluntary action alone will not be adequate. Indeed we also advocate the development of a mechanism for financial incentives and penalties for public bodies to fairly incentivise action on the emissions they control or can influence.

Effective delivery of targets will require action by public sector as well as private. This would ensure that action is taken at all levels of government within a clear and understood framework of accountability at all levels.

These powers would provide a hierarchy of measures that could be employed as needed to ensure delivery of ever tighter emissions budgets. Formal mandatory duties and reporting requirements are desirable to ensure fairness between sectors. Where private businesses face obligations under emissions trading and carbon reduction obligations, and emissions reporting requirements under the Westminster Bill; it only seems fair to ensure that public bodies face an equivalent framework (recognising that some public bodies will already have duties under e.g. CERT).

Public duties and statutory guidance should be designed to ensure that their influence goes beyond internal practices of public bodies and regulators (ie green housekeeping) to their core functions. Such measures have good multiplier effects across the economy (for example duties on Scottish Enterprise would be reflected in support for new climate friendly businesses), ensure integration of outcomes, and in particular, considering the scope of local authority interventions - harness the significant influence of planning and transport planning measures.

All public bodies should also be subject to the incentives / sanctions regime based on a carbon fund, suggested above. This would require enabling powers also. The Bill is the opportunity to create an appropriate selection of tools for emissions cuts across the economy. Enabling measures are critical and must include positive incentives.

**Question 24: What should such a duty (or duties) include?**

The duty on public bodies should be “to pursue reductions in carbon emissions resulting directly and indirectly from the discharge of their functions, in line with national targets and in a sustainable manner” (ie compliant with the sustainability duty proposed above). This formulation would cover Scottish regulators – requiring them to consider climate change as part of their statutory duties. The duty should specifically require public bodies to produce ‘climate change action plans’ to set out the measures they intended to take in pursuit of the emissions reductions objectives. There should also be a duty on all public bodies to produce regular reports on those emissions, and the efforts they are taking to reduce them. The duty might usefully require public bodies to use the same carbon accounting procedures as the Scottish Government. It should also encompass a duty to contribute to sustainable adaptation measures.

**Question 25: Should the Bill contain enabling powers to introduce statutory guidance for certain public sector bodies (i.e. local authorities and large public bodies) on specified climate change or other environmental measures? Why? Are there gaps in existing guidance?**

Statutory guidance is necessary to take full account of the role of certain public bodies, for instance local authority planning departments. Non-statutory guidance would not have sufficient force to be effective. See also our answer to question 23 above.

**Question 26: What should this guidance include?**

The guidance ought to include a common framework for calculating and reporting the climate impacts of public bodies’ activities, including guidance on how public bodies should account for and report on the indirect greenhouse gas emissions arising from the discharge of their functions. The Guidance should also ensure public bodies keep a record of all spending decisions that result in changes in the amount of emissions they generate. Furthermore, all public bodies should be required to seek to negotiate a workplace environmental agreement with their recognised trade unions.

**Question 27: Should the Bill contain enabling powers to create a requirement for certain public**

**sector bodies (i.e. local authorities and large public bodies) to make regular reports on specific measures they are taking to tackle climate change (whether mitigation or adaptation) or other environmental issues? Why? What should be included in such reports?**

Comparable, consistent and prompt reporting is essential. At the least this should include emissions variations from year to year, reported in gross and in percentage terms. Clear guidance will be needed to calculate emissions relating to activity such as office power, travel and procurement. DEFRA provide standard conversion factors and advice that can be used where detailed data is unavailable. SEPA (for example) currently reports using these methodologies. See also our answer to questions 23 and 24 above.

**Question 28: As a potential non-legislative measure, should current Best Value guidance be amended to take specific account of climate change mitigation and adaptation? If so, how should Best Value guidance be amended?**

The basic principles of Best Value offer a useful framework, as leadership, accountability and sustainable development are already built in. However the detailed guidance requires review to ensure that Best Value decisions reflect the current carbon value (either at the upper end of the range published by DEFRA, or across the range of values published). The guidance also needs to make reference to the implications of adaptation, and to reflect an understanding of the irreversibility of climate change. This means that regardless of the apparent financial value of options that involve higher emissions, there are real risks that future tighter restrictions on emissions would reduce the useful lifespan of such choices. Thus such options should be further discounted, if not simply eliminated from Best Value considerations.

In addition, the auditing role of Audit Scotland with respect to Best Value should be explicitly extended to include the coverage and valuation of GHG emissions and abatements in Best Value reports

**Question 29: Are there any amendments to existing legislation or any enabling powers needed to allow for variable charging (for example by local authorities) to incentivise action or eliminate perverse incentives?**

Enabling powers could be taken for a number of options or desirable measures. First, as noted in the answer to question 5, a Scottish emissions trading scheme may prove the best approach to integration with the ETS. Second, personal carbon allowances or domestic tradable quotas may become necessary (and desirable for equity reasons) – powers to establish a pilot or trial scheme might be desirable at this point. Third, the Abolition of Bridge Tolls (Scotland) Act 2007 should be repealed, to enable the use of variable tolls on bridges to help cut emissions and support the economy. Fourth, the Scottish Government needs powers to establish a Scottish road user charging scheme for the trunk road network, which requires amendment to the Transport (Scotland) Act 2004. And fifth, legislation should be amended to enable the introduction of variable charging for waste collection services to promote waste reduction and recycling, and to vary local taxation in line with other environmentally beneficial behavior (such as improving home insulation and installing micro-generation).

**Question 30: Are there any provisions to help Scotland adapt to the impacts of climate change which should be included in the Scottish Climate Change Bill?**

Friends of the Earth Scotland supports the view that the Bill should include a requirement that a climate change adaptation strategy for Scotland be placed in statute and reported upon regularly, with Ministers required – amongst other things - to report on the risks, the measures being taken to adapt, and the additional measures necessary. We also support the proposal that all the provisions of the Bill – including those to support adaptation – should be subject

to a Sustainability Duty to ensure that they are carried out with due regard for their potential environmental, social and economic impacts. The first of these can be particularly significant for coastal adaptation measures which can be either very supportive of, or very damaging to, biodiversity, depending on their detailed design.

**Question 31: Should provisions within the Environmental Assessment (Scotland) Act 2005 be amended in order to provide clearer links with emissions reduction? If so, how should this be done?**

Changing SEA rules would be a minimum requirement in this respect, and also ensuring Committee or wider parliamentary scrutiny of the climate impacts of such programmes, plans and strategies would be desirable.

Within SEA, the revised rules should require quantification of GHG emissions and abatements resulting; define clearly what level of GHG emissions is ‘significant’; and most importantly, add a provision to ensure that a Minister could not clear a plan, programme or strategy leading to net emissions ‘not consistent with budgets’ (or not compliant with the rules relating to GHG emissions) without referring it to the climate change minister and the Climate Change Committee for clearance. This creates a sort of ‘call-in’ procedure in which, if such a proposal were then approved, both Ministers would have to explain why, through a statement to parliament or at a relevant committee.

Finally the SEA rules should be amended to require post implementation monitoring of the climate implications of any approved plan, programme or strategy so as to ensure a feed-back loop to help meet the objectives of the Climate Change Bill.

**Question 32: What are the equalities implications of the measures in the proposals for the Scottish Climate Change Bill?**

There are limited direct equalities implications, but it is relevant to note that the implementation of mitigation and adaptation measures in pursuit of the Bill’s objectives could have both positive and negative implications for equalities.

Fundamentally the aims of the bill would reduce inequalities between Scotland and poorer developing countries, and benefit those disadvantaged groups already suffering from the impacts of climate change and sea-level rise. However the pursuit of climate targets could have unintended international consequences, such as those being seen at present with biofuels production increasing food scarcity and human rights abuses.

Within Scotland unintended consequences could foreseeably impact disproportionately on the elderly, or those with disabilities – if for example, measures to reduce domestic energy use led to increases in fuel costs faced by the fuel poor; or measures to reduce car use (such as road user or parking charges) failed to provide exemptions for those with disabilities. The Bill may therefore need to make provision for appropriate compensation if such impacts arise, and should include a sustainability duty to ensure that the choice of measures to deliver the Bill’s objectives minimises the risk of such consequences.

**Question 33: Is there any existing legislation within the competence of the Scottish Parliament (devolved) which needs to be amended so that appropriate action on climate change can be taken by sectors in society?**

There are a wide range of potential beneficial measures that could be delivered with legislative amendments or similar provision in the Bill. We would welcome the opportunity for a more detailed discussion of the appropriate mix of such measures in the Bill. Possible measures

include:

- Legislation governing landlords, which should be amended to allow Scottish Ministers to set minimum energy efficiency standards in private rented accommodation.
- The legislation that empowers ministers to set financial budgets which should be amended to require that ministers produce parallel carbon accounts when undertaking the spending review and financial budgeting procedures.
- The Planning Etc. Scotland Act (2006), which should be amended so the sustainable development duty applies to planning decisions not just plan preparation, to give greater weight to the climate impacts of thousands of individual planning decisions. And also to clarify the scope for planning obligations on developments designed to reduce the need to travel.
- Legislation on housing sales and transfers, which should be amended to allow Ministers to impose housing improvement orders and set minimum energy efficiency standards that must be met before a sale or rental can progress.
- Local taxation legislation, which should be amended to allow local authorities to give local tax or business rates rebates for householders or businesses that take steps to reduce their climate impact.
- Legislation to enable landfill bans on (and separation of) biodegradable wastes for use in anaerobic digestion.
- Legislation to establish renewable heat obligations
- Legislation to enable the setting of minimum efficiency standards for sectors or practices (such as standards for thermal power generation efficiency which require heat recovery).

## Conclusion

In our view the credibility and effectiveness of the Bill is paramount, and will depend on three key issues:

- Setting the right targets (at least 80% reductions by 2050, with a cumulative target based in global equity; 50% by 2020; and at least 3% in any given year).
- Taking a comprehensive and inclusive approach – including all GHGs; and all sources including international aviation and shipping; and minimising leakage through international trading or inter-period borrowing for example.
- Ensuring strong incentives and sanctions to deliver accountability and compliance, including an ongoing financial driver such as a Climate Fund.

Despite many welcome elements, the consultation proposals fall short of a fully credible and effective package under all these headings, and we urge the Government to rectify these shortcomings before a Bill is introduced in Holyrood.

For further information please contact:

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<sup>i</sup> <http://tyndall.web.man.ac.uk/publications/LivingwithaCarbonBudget.pdf> This presents annual figures as decarbonisation after economic growth, rather than in absolute terms. It also fully accounts for international aviation and shipping emissions.

<sup>ii</sup> Defra. (2007). Estimated emissions of carbon dioxide by IPCC source category, type of fuel and end user: 1970 – 2005. Defra, London. February 2007.

<sup>iii</sup> Evidence to Environmental Audit Select Committee. 24 February 2004.

<sup>iv</sup> Bows, A. (2006). Produced in Cairns, S. and Newson, C. (2006). Predict and decide: Aviation, climate change and UK policy. Environmental Change Institute. University of Oxford.

<sup>v</sup> "Is the CDM fulfilling its environmental objectives? An evaluation of the CDM and options for improvement" a report for WWF by the Öko-Institut, November 2007.