

[The Guardian](#), Tuesday 24 February 2009

Opportunities that are too good to miss

- **Nicholas Stern and Alex Bowen**

We are facing two global crises, one economic and one planetary. We cannot afford to choose to focus on one but not the other: we can act effectively and simultaneously on both fronts. Governments can commit over the next few months to public spending plans that make sound economic sense, both by stimulating economic recovery and by laying the foundations for sustainable low-carbon growth.

These are the big growth opportunities of the next two or three decades. They are too good to miss.

The important question is how best to tackle these two crises at the same time?

Our report, *An Outline of the Case for a 'Green' Stimulus*, identifies six key criteria against which public spending plans can be judged in terms of effectiveness in countering the deterioration of the [global economy](#) and the climate.

Four of these criteria primarily assess success in promoting economic recovery. The other two measure efficacy in limiting the adverse effects of [climate change](#). The first criterion is timeliness. To have an impact on the recession, public expenditure needs to have its effect on economic activity within the next 18 months or so.

The second captures time-limitedness, the extent to which spending is temporary, brought forward or reducing a backlog of useful projects. Such spending avoids the long-term funding problem posed by permanent measures.

The other criteria rate actions in terms of their focus or targets: increased economic demand, job creation, use of resources (including the workforce) that might otherwise remain idle during a recession, effect on greenhouse gas emission and adaptation to a changing climate. Finally, there is the extent to which low-carbon technologies are "locked in" to the economy by the extra spending.

We then scored, on a three-point scale for each criterion, 23 specific proposals for public spending on buildings and industry, power generation, transport, and reducing greenhouse gas emissions from deforestation and forest degradation. Each measure receives a total out of 18, making it possible to rank each measure.

How the proposals score

Measure	Economic benefit (/12)	Climate benefit (/6)	Total
Best			
Residential home energy efficiency	12	5	17
Public building energy efficiency	12	5	17
Boiler replacement programme	12	5	17
Light and appliance replacement	12	5	17
Fuel efficient new cars	10	6	16
Renewable heat generation	10	5	15
Renewable energy development	9	6	15
Vehicle tyre pressure checks	11	4	15
Reducing deforestation	10	5	15
Least good			
Domestic renewable energy	7	5	12
Encouraging energy R and D	6	6	12
Connected urban transport	6	6	12
Advanced battery development	5	6	11
Carbon capture and storage projects	6	4	10

Note: The measures were assessed against four economic factors - speed of impact, job creation, length of funding needed and use of available resources - and two climate factors - cuts in greenhouse gases and progress toward low-carbon economy. Other measures considered that fall between the highest and lowest scores above include smart electricity grid and meters, industrial energy efficiency, nuclear power, car fleet renewal, improved railway efficiency, and mass transit schemes
Source: An outline of the case for a "green" stimulus by A Bowen, S Fankhauser, N Stern and D Zenghelis

Overall, [energy](#) efficiency measures were consistently the top performers across all sectors, capable of delivering timely boosts to the economy, opportunities targeted to sectors with more slack, and lower emissions. They also enhance energy security and help the less well-off with their fuel bills, although these benefits were not taken into account in our formal scoring.

In particular, energy efficiency measures for buildings and industry scored highly across the board, including better insulation for homes and public offices. The replacement of inefficient boilers, lights and appliances, using public money to incentivise private business, also received top marks.

However, new investments in large-scale 'green' infrastructure, such as carbon capture and storage projects (which bury the emissions from burning fossil fuels), were lower rated in terms of short-term fiscal stimulus. Although they are likely to help fight climate change, they do not provide an immediate shot in the arm for the economy. They must be part of a medium- and long-term strategy for low-carbon growth. In power generation, the promotion of renewable energy, for example through accelerated planning processes for wind farms, was top-rated, although timeliness is particularly difficult to achieve in this sector.

In transport, high scores were gained by improving the fuel efficiency of new cars, vans and heavy goods vehicles.

The expansion of forests, parklands, wetlands and rural ecosystems also received excellent marks.

The analysis makes it clear that many "green" measures also offer targeted and timely steps towards economic recovery if they are included in the fiscal stimulus packages being put together in many countries. Now is a good time to undertake useful public investment, because it is less likely to displace private spending in a recession.

The UK government is considering the composition of April's budget. We hope our criteria will help the Treasury choose those avenues of public expenditure that deal most effectively with the nation's immediate economic needs. The long-term measures that have been highlighted by the committee on climate change should also form part of the UK's strategy for low-carbon growth.

Similarly, we hope the new economic stimulus plan in the United States will also accelerate action on climate change, in line with the pledges made by President Obama and leaders in the house and Senate. We argue that public spending packages worldwide need to devote about US\$400 bn (£274.7bn) within the next couple of years to 'green' measures that address the risks of climate change.

- Nicholas Stern and Alex Bowen are at the Grantham Research Institute on Climate Change and the Environment at the London School of Economics. Lord Stern led the government's Stern Review on the Economics of Climate Change, published in 2006. The full version of An Outline of the case for a 'green' stimulus is available online.