

# When the banks get billions...

The founding of the Science and Technology Facilities Council in April 2007 came with a pioneering vision. Supported by the majority of the scientific community, the merger of the Particle Physics and Astronomy Research Council (curiosity-driven science) and the Council for the Central Laboratory of the Research Councils (facilities for supporting science) could have been a beacon of UK scientific investment and determination to put scientific research at the forefront of a science-driven economy. And it would have been a prescient move.

However, this vision was not supported with adequate funds from the outset, so the result was an STFC brand name that became associated nationally and internationally with the very public cancellation of some high-profile scientific projects. Meanwhile, the frontier science that it was continuing to fund took a back seat.

Now, the same old funding difficulties are becoming apparent in the STFC's preparations for the three-yearly review of particle physics activity here in the UK, both in universities and STFC establishments. There is about to be a staggering 25 per cent cut in grant support, similar to the cut that has already been absorbed by astronomers in the past two of their yearly grants rounds.

This cut in support will happen just at the moment when our scientists are preparing to make an impact in the analysis of the data from the new Large Hadron Collider in very large and competitive international collaborations. It will relegate these efforts to far below those of the other major European collaborators.

The destructive shortfall in the Department for Innovation, Universities and Skills's allocation to the STFC is just one of the symptoms of a much bigger national problem. If the government wants the UK to be at the forefront of science, and to have its own facilities so that UK researchers can compete on the world stage, the government has to be prepared to pay for the privilege.

The merging of facilities management with grant awarding powers brings with it the obvious tensioning between fixed costs and new grants [*RF 21/1/09, p17*].

In fact, the STFC puts about 60 per cent of its total budget into fixed costs: a 10 per cent cut to science which is shared out equally across all the research councils will result in a 25 per cent cut to the STFC's science because most of the facilities' running costs, and all of the international subscriptions, are fixed. It seems that DIUS has not yet fully appreciated

the concept that fixed costs constitute such a substantial fraction of the STFC's budget.

In fact, one solution, often repeated, is that as time goes on, and the inevitable decrease in grants continues, the STFC should consider pulling out of one of its international subscriptions, thereby relegating one whole area of UK science to a level found only in the developing world and, at the same time, barring the UK from fully paid up membership of the Euro club.

Would we pull out of CERN after the UK has invested about £1 billion for the LHC just as the first data is due to deliver new insight into the workings of the universe? Should we pull out of the European Space Agency and stop competing in space science and technology, a field in which both UK science and industry lead? Or should we pull out of the European Southern Observatory and stop the world class astronomy that is well known (together with particle physics) to entice students into physics?

The continual cuts to the total funding available for university-based researchers focuses the pain exactly in the place we would hope to be making the biggest economic impact. This is where the potential exists to make the largest steps forward for the smallest investment, based on local innovation and access to large scientific facilities.

With the new economic downturn this year, the rhetoric from our own government, and from across the Atlantic, is that now is the moment for an increased investment in science to counter-balance the job losses and general decline in wealth that has occurred. Whereas the Obama administration is pushing legislation through Congress that would invest billions in basic science (both short and long term), so far, there is no evidence that there is any real new investment going into the UK's research councils (*see news, page 5*).

The STFC's total annual budget is about £600m. Compare that with the amount of money that the government has earmarked for bailing out the banks, which exceeds tens of billions of pounds. On the other hand, spending on science by our European competitors soars above ours: in a 2008 OECD report, the UK government spending on science constituted only 59 per cent of Germany's and 68 per cent of France's (normalised to US dollars, using purchasing power parities).

Now is the time for scientists, from across the entire research base, to implore the government to spend, spend, spend on science: this is the only way to compete with the rest of the world in the long term, and it is one way in which we can assist our manufacturing industry. *More to say? Email comment@ResearchResearch.com*

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