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Arms conversion for a low carbon economy

David Webb argues that a major industrial shift away from military technology should be a key component in building the low carbon economy.

In a speech to a 'Low Carbon Economy Summit' in London in June 2008, Gordon Brown stated that "By 2050 the overall added value of the low carbon energy sector could be as high as $3 trillion per year worldwide and it could employ more than 25 million people. So my goal is simple: I want Britain to achieve a disproportionately large share of these new global jobs".[1] The government has since put together a series of initiatives – including a Low Carbon Transition Plan (see p.8) – but given the scale of action needed there are strong arguments for the government to go much further. One course of action that has received little attention among policy-makers is the prospect of a major shift in skills and resources away from military industry.

Low carbon industry versus military industry?

The UK's record on expanding renewable energy has not been good. The latest figures show that, in relative terms, the country was third from bottom in the EU with only 2.1% of primary energy being generated from renewable sources.[2] Yet, the UK has abundant resources available to be tapped. For example, offshore wind farms will be critical in meeting the greenhouse gas targets for 2020, and wave power will need to be developed on a commercial scale to meet the 2050 targets. The UK especially benefits from having high power wave fronts that are situated relatively close to population areas.

The UK could be investing serious finance into innovation in the renewable field. Yet, according to data from the International Energy Agency, the government only spent £66m on R&D for renewable energy in 2008 – significantly less than the US, Japan or Germany.[3] It is particularly interesting to compare this limited investment with spending on military R&D. Government statistics[4] reveal that this totalled £2,598m in 2007/08 – about 40 times that for renewable energy. The UK also has the fourth largest military budget in the world,[5] and its current and planned procurement includes a replacement for its Trident nuclear weapons system, over 200 Eurofighters, two new aircraft 'super-carriers', new submarines, new battleships and other equipment totalling tens of billions of pounds in the coming years. A strong case can be made for switching at least some of this huge budget to speed up the expansion of renewable energy and energy efficiency, especially given the security threat posed by climate change.

The jobs argument

One reason often given for maintaining military/defence expenditure is the employment dependent upon it. However, government figures reveal that the low carbon environmental goods and

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services market employs 880,000 people (including indirect jobs).[6] This compares with only 300,000 jobs dependent on the military industrial sector.[7] Furthermore the future for the low carbon sector is expected to be one of expansion, unlike military industry. The government projects that over 100,000 new jobs will be created in this sector by 2015.[8] But more ambitious proposals would yield even more jobs. For example, a recent study by Impetus Consulting using case studies of programmes in other countries concluded that an annual £5 billion investment in domestic energy efficiency would create around 55,000 jobs directly and hundreds of thousands indirectly.[9] A 2007 study carried out at the University of Massachusetts Amherst is also very significant.[10] It estimated that $1 billion spent on defence would create nearly 8,600 jobs but the same amount would create about 12,800 jobs in construction and related energy efficiency measures, or nearly 19,800 jobs in public transport.

It is worth taking a look at one proposed military industrial project in more detail: Trident replacement. Let's start by looking at what happened last time around. In 1980, the Thatcher government estimated that the Trident programme would create 45,000 direct and indirect jobs. However, 1995 figures showed that the actual number of jobs created was actually only 26,500.[11] In terms of the present situation, a study by British American Security Information Council (BASIC) suggests that, although cancelling the Trident replacement programme would lead to short-term job losses, investing the money released elsewhere in the economy could lead to the creation of 60% more jobs than were lost.[12]

It should also be remembered that there has also been a general decline in military industrial employment in the UK since the end of the Cold War. According to Ministry of Defence (MoD) figures this fell from 510,000 in 1991/2 to 260,000 in 2003/4, while the Trident-associated private companies have all carried out substantial rationalisations to cut costs so that overall employment in this sub-sector fell by nearly 60% between 1990 and 2006.[13]

Arms conversion

A number of schemes for conversion from military/defence work have been proposed over the last few decades.[14] Perhaps the most famous example was in 1970s when the Lucas Aerospace Company was about to make substantial redundancies. A trade union committee put together a six-volume plan for alternatives to the existing military projects, which included development of solar cells and hydrogen fuel cells. Unfortunately the management did not feel that these projects were in line with company strategy and they were rejected.

A similar story concerns an attempt to help the shipyards in Barrow, Cumbria, reduce their dependency on military work in the late 1980s. Trade unions collaborated with Bradford University's Department of Peace Studies to identify new opportunities to use the skills base. A range of possible technologies were identified including renewable energy systems based on wave, offshore wind and tidal power. These suggestions were also rejected.

These experiences illustrate the problems that arms conversion projects face in terms of the mismatch between proposals for alternatives and the option simply to continue with specialist arms production following company practices, which have often developed from long collaboration with the MoD. The shift from the familiar methods of military-industrial production to civil work is often considered too risky, especially in times when the national economic situation is strained.

However, successful large-scale conversion of industry has occurred on a number of occasions – for example, during demobilisation following World War II, after the closure of (US) military bases and, most recently, at the end of the Cold War as discussed above. Thus arms conversion, especially at the macro-economic level, can be very fruitful.

Conclusion

In November 2006, SGR made a submission[15] to the Defence Select Committee. It included three factors that contribute to the shrinking skills base in UK science and technology:

- the extent to which the military use of science and technology resources competes with urgent civilian uses;
- the low level of employment generated per unit of investment in military programmes compared with civilian programmes;
- the extent to which military involvement with science and technology can adversely affect the public image of science and technology and so undermine recruitment and retention.

Unfortunately these continue to be highly significant factors and may even turn out to be decisive in the struggle to tackle climate change. An extensive in-depth study of the possibilities and economic advantages of arms conversion projects across a range of industries is urgently needed. We need to encourage and develop appropriate technologies for current challenges. We have the skills and the resources to do this, but the question is do we have the will?

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