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Secure energy: options for a safer world

THE RISK OF NUCLEAR TERRORISM IN THE UK

SUMMARY

1. There is a definite trend in paramilitary targeting from hard targets like security forces to softer targets like energy infrastructure, banking centres, and tourists spots. **Nuclear power stations are soft targets.**
2. Terrorists are increasingly targeting energy infrastructure, such as oil pipelines and refining plants. As dependence on nuclear power increases **the value of nuclear plants and fuel production facilities to terrorists will increase**, making nuclear terrorism more likely.
3. Given the potentially **disastrous consequences of nuclear terrorism**, even a minimal risk is too high.

INTRODUCTION

This factsheet explores the recent history of two specific strands of terrorism, **mass casualty attacks** and **economic targeting**. It examines trends over the past fifteen years and relates them to the risks likely to develop if the civil nuclear power industry is subject to rapid expansion in Britain and elsewhere.

Supporters of the expansion of nuclear power point to the rarity of attacks involving nuclear facilities in spite of the widespread use of nuclear power over the past fifty years. It is also claimed that mass casualty terrorism is actually very rare, apart from the specific example of the al-Qaida movement, and that paramilitary groups have hardly ever had any economic impact, having avoided economic targeting in favour of attacks on security forces and centres of political power.

This factsheet shows that the evidence does not support these claims and that **the risk of nuclear terrorism is real and dangerous.**

MAIN RECOMMENDATION

The Government should establish a cross-party Parliamentary Commission to enquire into the implications of a nuclear renaissance for the risk of nuclear terrorism and the international nuclear arms control regime. It should also examine the adequacy of existing measures for managing the consequences of nuclear terrorism in the UK.

The smoke plume from the Bunsfield oil depot fire.
What if it was from a nuclear power plant?

“People now understand that when we warned of the terrorist threat it wasn’t scaremongering it was real.”

Prime Minister Tony Blair, 2005

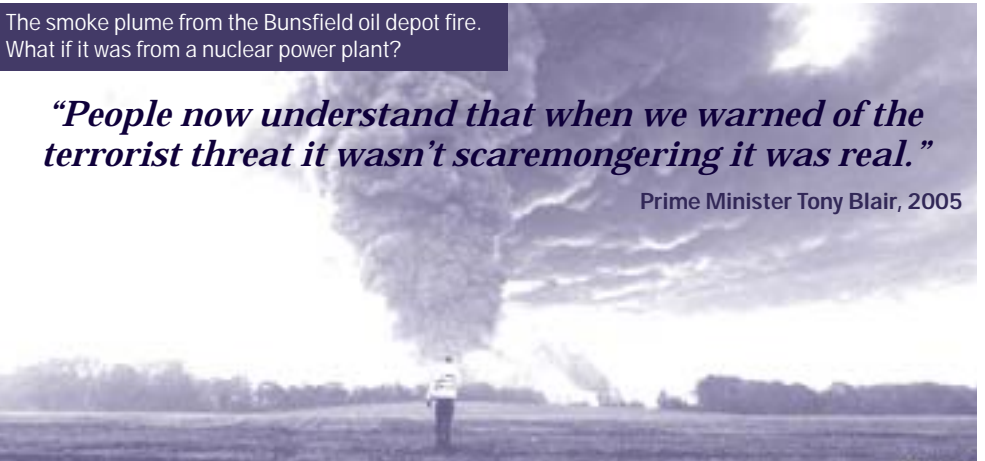


Photo: Getty Images

MASS CASUALTY ATTACKS

The best known examples of paramilitary attacks designed to cause death and injury on a large scale have been in the past five years and include the 9/11 attacks in New York and Washington, followed by many other incidents including major attacks in Bali, Madrid, Casablanca and London, with failed attempts including planned attacks in Singapore, Los Angeles, Rome and Paris. Before that, groups linked to al-Qaida had bombed US embassies in Nairobi and Dar es Salaam, with the former killing over 250 people.

While these demonstrate the capacity of the dispersed and diffuse al-Qaida movement to engage in mass casualty attacks, there have been other significant examples in recent years, none of them directly connected with the present-day al-Qaida movement.

“Between now and 2015 terrorist tactics will become increasingly sophisticated and designed to achieve mass casualties.”

*“Global Trends 2015”
National Intelligence Council,
December 2000.*

Paris, December 1994 Just before Christmas in 1974, an Air France Airbus A300 was hijacked by four members of a radical Algerian group at Algiers Airport. Over two days of negotiation, the plane, with 239 passengers and crew was allowed to fly to Marseilles where the hijackers demanded that the plane be refuelled. The aim of the hijackers was reported to be to crash the plane on the centre of Paris, killing themselves, all the passengers and crew and large numbers of people on the ground. Instead, the aircraft was stormed by a French commando unit and all the hijackers were killed. Three passengers were killed during the incident.

Tokyo, March 1995 The first major attempt to use chemical weapons to cause mass casualties was the release of Sarin nerve agent into the

Tokyo subway system on 20 March 1995 by members of an extreme religious sect, the Aum Shinrikyo. Fortunately, a combination of impure chemicals, an inadequate release system and the extent of the air circulation system on the subway meant that the attempt to kill hundreds or possibly thousands of people failed, but twelve people died and over 5,000 were made ill.

New York, February 1993 The first attempt to destroy the World Trade Center would, if it had succeeded, have killed around 30,000 people. A radical Islamist group attempted to use a massive truck bomb in the underground car park under the North Tower to bring the whole tower down over the Vista Hotel and into the South Tower, destroying that as well. Although the attack failed to achieve its aims, partly because of the nature of the structure of the Center, massive damage was done to the base of the structure, and the Vista Hotel came close to collapse. Six people died in the attack and over 1,000 were injured, mainly through smoke inhalation.

These are the most notable of the many examples of attempts to kill large numbers of civilians, stemming from religious, separatist or political motives. There are numerous other examples, including many actions by Sendero Luminoso Maoist guerrillas in Peru, Chechen rebels in Moscow, Palestinian radicals in Israel, and Zionist paramilitary groups in Palestine before partition. **They demonstrate that while paramilitary groups that are prepared to engage in mass casualty attacks are not endemic in society, there have been many more examples than is usually appreciated.**

FAILED TERRORIST ATTACKS

In addition to the numerous attacks across the world since 9/11, there have been many failed attempts. President Bush has spoken of planned attacks on the US Bank Tower in Los Angeles and on London’s Heathrow Airport, and there are reliable reports of a co-ordinated set of attacks planned for Singapore in 2002 that were prevented by security forces. These are said to have involved multiple truck bombs in Singapore’s financial district coupled with attacks on embassies. In June 2002, paramilitaries attempted to destroy the US Consulate in Karachi. They failed to do so but killed 11 people and injured 45 in the immediate neighbourhood. Five months later, a group in Kenya bombed the Paradise Hotel at Kikambala on the Kenya coast north of Mombassa, killing 11 people and injuring 50. On the same day there was an attempt to shoot down an Israeli tourist jet that had just taken off for Israel from Mombassa Airport. That failed, but would have killed hundreds of people.

ECONOMIC TARGETING

One of the major trends in paramilitary targeting is the increasing prevalence of attacks on energy infrastructure. Iraq is the best-known example but there are many others. In addition to the PIRA attempt to blow up electricity stations around London, PIRA also attacked a gas plant in Warrington and attempted to bring down high voltage power lines near Birmingham. In October 2002, suicide bombers attacked the French supertanker Limburg off the coast of Yemen and oil company offices and residential areas in Saudi Arabia have been attacked several times since 2003.

A recent failed attempt on the massive oil processing plant at Abqaiq is a clear indicator of the trend. Saudi Arabia has the world's largest oil reserves and is also the largest exporter. Most of the fields are located close to the Persian Gulf coast and two-thirds of Saudi Arabia's total crude oil production goes through a single plant at Abqaiq. Described as the jewel in the crown of the Saudi oil industry, Abqaiq processes "sour" crude into "sweet" crude mainly by removing hydrogen sulphide in a series of huge hydrogen-desulphurisation towers. The plant was attacked on 24 February 2006 by a suicide squad driving two car bombs supported by a 4x4 attack vehicle. Guards were killed by gunfire and the explosions but the company claimed that neither of the car bombs detonated within the main plant. This is disputed by local sources that claim that one car got into the main plant, missing the most important facilities but causing substantial damage. In any case, the key point is that the Abqaiq attack was the first occasion in which a heavily guarded oil plant was attacked in Saudi Arabia.

Iraq 2003-06 The termination of the Saddam Hussein regime and the subsequent occupation of the country by US forces and their coalition partners did not lead to an era of peace and security. Instead a bitter insurgency developed that, in its first three years, cost well over 40,000 lives and hundreds of billions of dollars. A specific but largely overlooked aspect of the insurgency has been the persistent and highly effective use of economic targeting by insurgent groups, especially against the Iraqi electricity supply and oil production.

By early 2006, electricity supplies to Baghdad averaged four hours a day, one quarter of the level before the war, and access to safe drinking water across the country as a whole was down by a quarter. The most substantial effect was on the supplies of oil, the cornerstone of plans to rebuild the Iraqi economy. So effective were the insurgents that oil production in early 2006 was still below the levels achieved by the Saddam Hussein regime operating under sanctions, even though huge efforts had gone into securing and rebuilding the oil infrastructure.

Britain and Northern Ireland 1992-97

By the early 1990s, there was a stalemate in the 25-year conflict in Northern Ireland and the Provisional IRA (PIRA) developed a policy of economic targeting in Britain. Immediately after the 1992 General Election, a campaign of bombing of city centre targets and major transport links started, including two highly destructive bombs in the City of London in 1992 and 1993, and the bombing of the M1/A5/North Circular Road interchange in north west London in 1992.

The campaign was directed partly at undermining London's position as financial capital of Europe and caused consternation and deep unease in city and government circles. From 1992 to 1994 the campaign continued and resumed for over a year in 1996-97 after a ceasefire. Later attacks included bombs at Canary Wharf and the centre of Manchester and there were frequent disruptive attacks on airports, railway lines and motorways. One particular attempt that was pre-empted involved a plan to blow up the key electricity switching stations around London, potentially causing huge disruption of electricity supplies to Greater London for months.

The PIRA campaign over five months was not aimed at causing great loss of life but had a major effect on government thinking, encouraging both Conservative and Labour governments to devote much more effort to resolving the conflict in Northern Ireland. It remains one of the most effective examples of economic targeting, pointing to the vulnerability of modern urban industrial states to this kind of action.

“The killing of 10 American soldiers is nothing compared to the impact of the rise in oil prices on America and the disruption that it causes in the international economy.”

A jihadist website, cited in *The Washington Times*, 5 March 2006.

“the trend towards the targeting of energy facilities point to the particular dangers of the expansion of civil nuclear power.”

IMPLICATIONS FOR NUCLEAR POWER

One of the major security developments of the last fifteen years has been the evolution of what is often termed “asymmetric warfare” in which paramilitary groups that may be relatively weak in terms of weapons and other military capabilities avoid engaging in open conflict with superior forces and seek instead to target weak points in states. Some of the examples are listed above but there are many others. It is fair to say that this is now a trend that is gathering momentum and is seen as “the weak taking up arms against the strong” as one US military analyst put it in the early 1990s.

One particular trend relates to targeting energy facilities. The overall message is that the production and distribution of oil and gas underpin modern economies to a remarkable extent and, as such, represent a particular soft target for paramilitary groups. In addition to pipeline attacks in many countries, including Nigeria, Colombia, there have been attempted attacks on oil tanker traffic, on oil companies in Saudi Arabia and Yemen and on the world’s largest oil processing plant at Abqaiq, together with the sustained disruption of oil production and distribution in Iraq. There is little doubt that this trend towards attacks on “soft” energy facilities will increase.

The United States is pursuing its global war on terror with great vigour, while devoting little or no attention on the underlying conditions that lead to support for groups such as the al-Qaida movement. It has terminated regimes in Afghanistan and Iraq, has undertaken military action in countries such as Yemen, Sudan and Pakistan, and may be building up to a confrontation with Iran. In such circumstances, and with many thousands of civilians already killed as a result of these policies and close to 100,000 detained without trial since 9/11,

an inevitable response from paramilitary groups is to play to their strengths, with these increasingly involving asymmetric warfare.

It is in this context that the proliferation of civil nuclear power programmes is so unwise. If a country such as Britain decides to build a new generation of nuclear reactors it will encourage other countries to do likewise. For the present, nuclear power expansion is limited to just a few countries such as Finland and China, but a UK decision could change all that, serving to help legitimise nuclear power at a time of public unease. With such an expansion will come the risks, many of them centred directly on the issues raised in Factsheet 1, such as fissile material being used to produce crude nuclear bombs or radiological weapons.

There is, furthermore, a particular issue with the transport of nuclear waste. In Britain, for example, radioactive waste is transported on mainline rail routes across much of the country. With nuclear power stations dispersed around the coast of Britain, the transport of waste to the Sellafield site requires the use of a network of routes that involves transit through cities such as London, Edinburgh and Bristol by trains with minimal security. Paramilitary groups have shown a particular ability to target transport systems in recent years, and even hugely expensive security measures could not be guaranteed to provide sufficient insurance against attacks.

Trends in mass casualty terrorism and economic targeting, especially the trend towards the targeting of energy facilities, point to the particular dangers of the expansion of civil nuclear power. Such a combination makes it particularly unwise for Britain to build a new generation of nuclear power plants.

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