

SCIENCE POLICY RESEARCH UNIT

The hidden military implications of 'building back' with civil nuclear and the industrial and environmental opportunities of alternative trajectories

Phil Johnstone

Transition Now, Scientists for Global Responsibility, 7th November 2020.

contacts:

p.johnstone@sussex.ac.uk

@p.johnstone@sussex.ac.uk

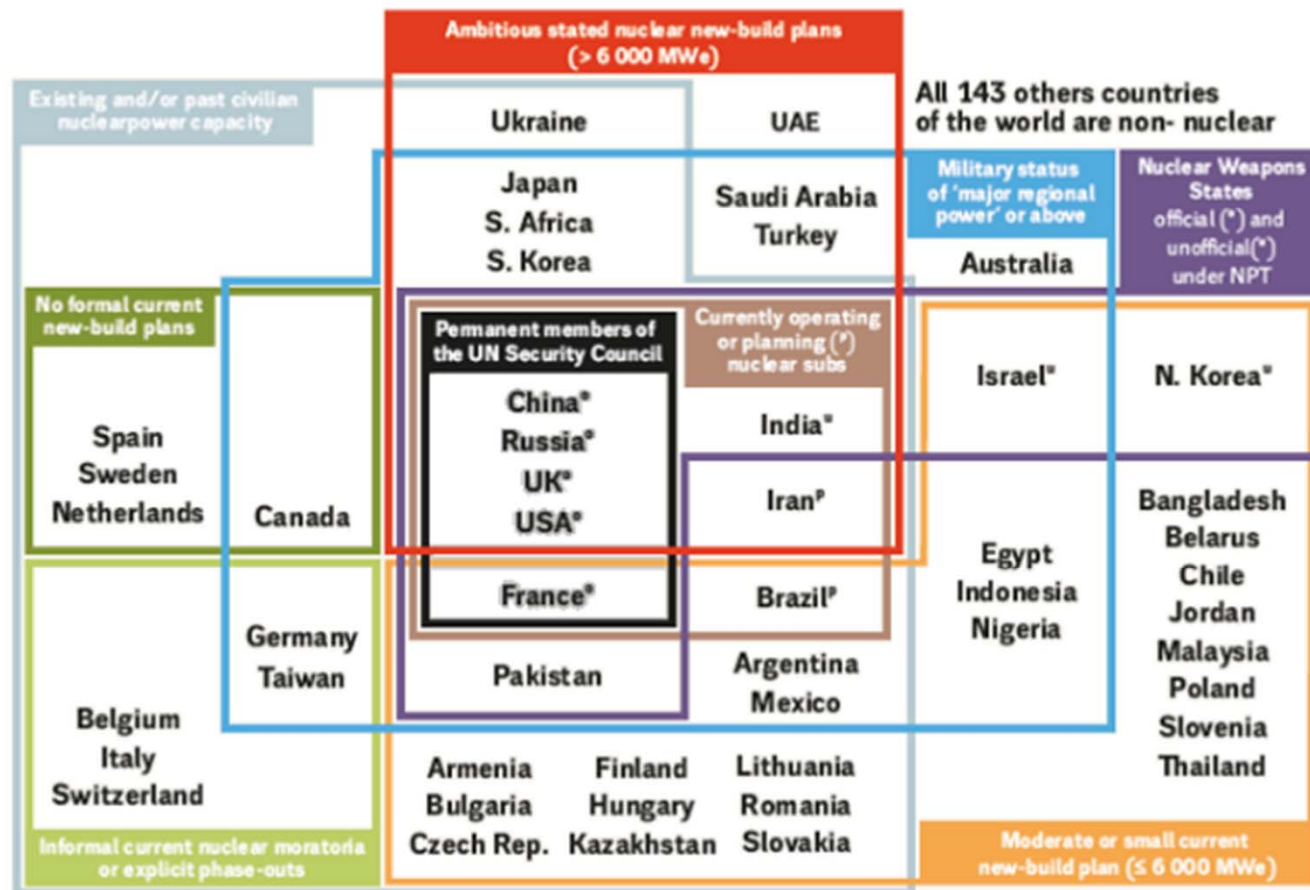


US
UNIVERSITY
OF SUSSEX

BUSINESS
SCHOOL

Broad global patterns are consistent with civil-military nuclear links

Circumstantial Relationships Between WNA-Reported Civil Nuclear Ambitions and Different Categories of International Military and Geopolitical Status



© ANDY STYRLING, PHIL JOHNSTONE; WNIIR

- The leading global **military** powers are the **most committed** to large scale new nuclear build
- There is no global or regional **military power** that does not hold an active history of very **strong pressures** for civil nuclear power
- No country either with or planning nuclear weapons or submarines is currently pursuing either a nuclear moratorium or a phase-out

UK case study:

clarity in military policy / silence in energy policy

- Military debates show UK **nuclear submarine capabilities** heavily depend on civil nuclear programme
- Industry says UK without “*financial or personnel resources to develop both programmes in isolation*”
- Redacted MoD report: capabilities “*are at the bare minimum necessary to deliver the programme*”
- UK submarine industry openly states aims to “*mask*” **military costs** behind civil nuclear programme
- But UK energy policy documents (and wider debates) leave these pressures **almost entirely hidden**
- NAO audits: civil non-energy “*strategic factors*”; assume **non-defence support** for “*submarine base*”
- NAO in 2016 shows nuclear “*top-up payments*” amount at least to **many tens of billions of pounds**
- Defence chief (lead in EDF talks) tells PAC **civil-military links need “concerted Government action”**
- Energy Minister: need to involve MoD in energy policy - **time “artificial distinction ... came to an end”**

The submarine issue emerges...

A UK SMR programme would increase the security, size and scope of opportunities for the UK supply chain significantly, enabling long-term sustainable investment in people, technology and capability



Advantages to the UK's nuclear deterrent programme

One particular application for deployment of the talent developed through the UK SMR programme would be in the ongoing maintenance of the UK's independent nuclear deterrent. Currently, the UK Government is required to invest funding to sustain the skills and capability necessary for the maintenance of the Royal Navy's nuclear submarine programme. Recent decisions in Parliament have committed the UK to continue with independent deterrence for another generation, and therefore the need to maintain the relevant skills and capability remains paramount.

The indigenous UK supply chain that supports defence nuclear programmes requires significant ongoing support to retain talent and develop and maintain capability between major programmes. Opportunities for the supply chain to invest in new capability are restricted by the limited size and scope of the defence nuclear programme. A UK SMR programme would increase the security, size and scope of opportunities for the UK supply chain significantly, enabling long-term sustainable investment in people, technology and capability.

Expanding the talent pool from which defence nuclear programmes can draw from would bring a double benefit. First, additional talent means more competition for senior technical and managerial positions, driving excellence and performance. Second, the expansion of a nuclear-capable skilled workforce through a civil nuclear UK SMR programme would relieve the Ministry of Defence of the burden of developing and retaining skills and capability. This would free up valuable resources for other investments.

BBC Your account News Sport Weather iPlayer Sounds

NEWS

Home | UK | World | Business | Politics | Tech | **Science** | Health | Family & Education

Science & Environment

Nuclear: Energy bills 'used to subsidise submarines'

By Roger Harrabin
BBC environment analyst

5 June 2019

Share

Motion S5M-17597: Bill Kidd, Glasgow Anniesland, Scottish National Party, Date Lodged: 06/06/2019 **Link Between Civil and Military Nuclear Use**

That the Parliament notes analysis by the University of Sussex, which suggests that energy bills are inflated to partly subsidise the UK's nuclear weapons arsenal; highlights that the university's Science Policy Research Unit has published evidence brought to light by Professor Andy Stirling and Dr Phil Johnstone identifying "that the need to maintain submarine nuclear capabilities in the military sector has played an influential role in the UK's decisions to champion nuclear power" and the finding that suggests that this provides "a compelling explanation for the UK's resolute commitment to nuclear energy projects... despite the widespread criticism of its economic and technical feasibility"; believes that the UK Government spends £2.2 billion per year on nuclear weapons and that a single nuclear weapons system could cost from £74 billion to £140.5 billion over its lifetime; recognises calls on the UK to adopt the 2017 UN Treaty on the Prohibition of Nuclear Weapons, and encourages investment into green energy to facilitate the transition towards a sustainable future.

Supported by: John Finnie, John Mason, Alison Johnstone, Fulton MacGregor, Richard Lyle, Kenneth Gibson, Gillian Martin, Mark McDonald, Stuart McMillan, Sandra White, Colin Beattie, David Torrance, Jenny Gilruth

The UK discussion: democratic challenges

OFFICIAL SENSITIVE NNPP1

Royal Navy Nuclear Reactor Test Facility Review

2.1.13

[REDACTED]

2.1.14 We were grateful to the captain and crew of [REDACTED] for hosting us on-board and providing us with an opportunity to observe nuclear plant operation and maintenance. [REDACTED]

2.1.15

[REDACTED]

Source: Grimes et al (2014) *Royal Navy Nuclear Reactor Test Review*

THE TIMES

Today's sections

Past six days

Times Radio

Mini-nuclear reactors to power the north

David Collins, Northern
Correspondent

Sunday August 11 2019, 12.01am,
The Sunday Times



Jobs! Jobs! Jobs!

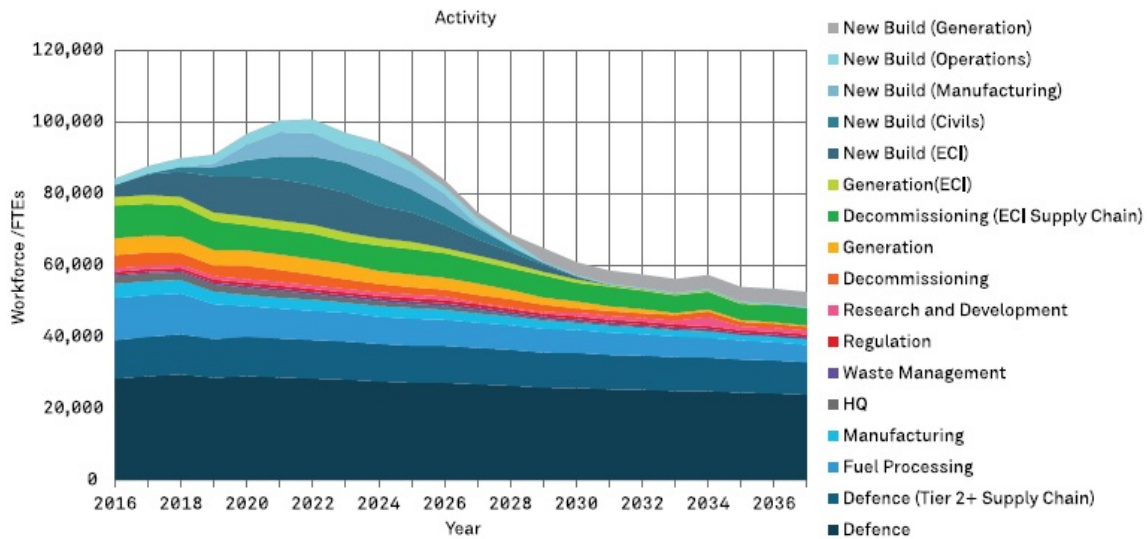


Figure 6a: Cost resource curve for onshore wind in European countries

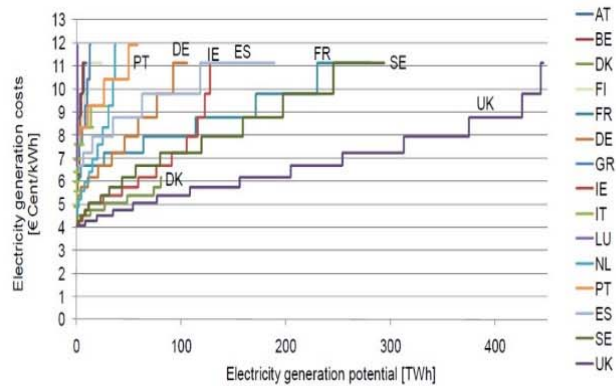
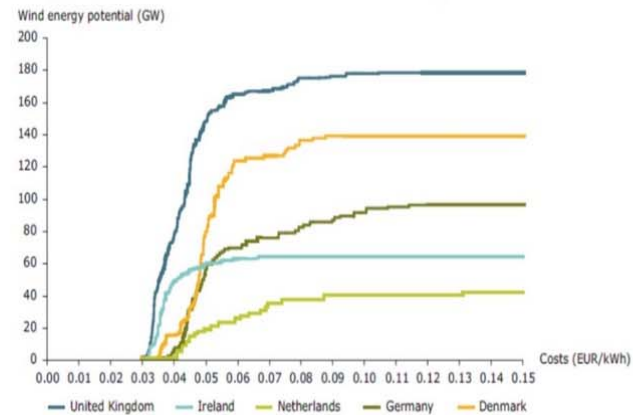
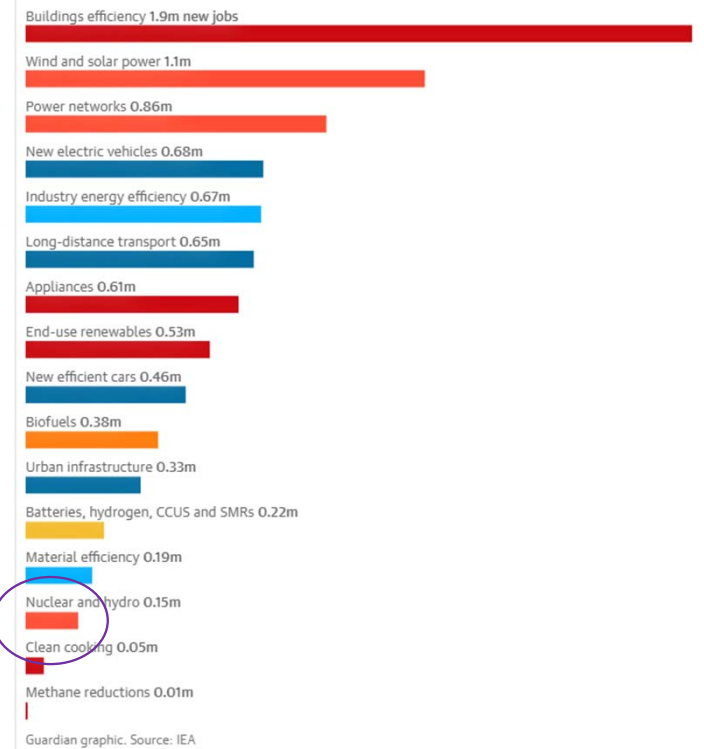


Figure 6b: Cost resource curve for offshore wind in European countries



The sustainable recovery plan could create nearly 9m new green jobs each year

Buildings Power Transport Industry Fuels Innovation

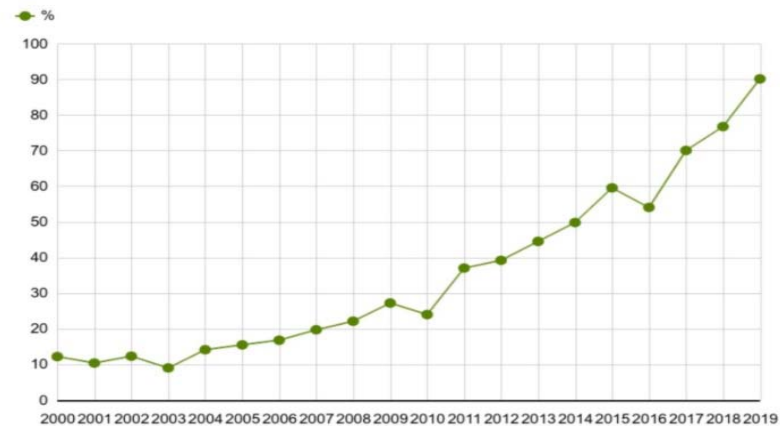


Decarbonising, democratising, and demilitarising zero carbon futures.

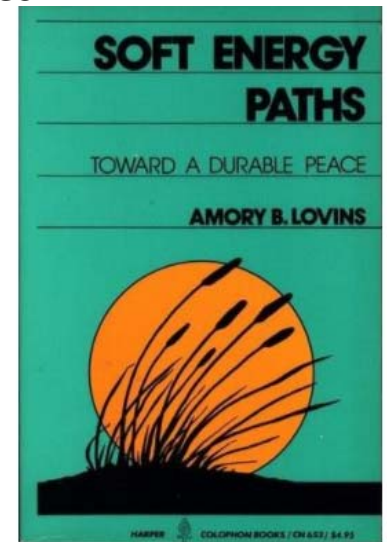
- No valid technological argument that remains that 100% renewables cannot be achieved.
- Renewables are a more rapid and cost effective means of decarbonising.
- Renewables pathways offer a greater number and more geographically distributed employment opportunities.
- We have a **choice**.
- We have responsibilities to address the military implications of certain energy trajectories.
- In a functioning democracy, we need to discuss and scrutinise these.



Share of renewable electricity



Scottish energy statistics hub



Amory B. Lovins. Soft Energy Paths. Cover (1979)

SCIENCE POLICY RESEARCH UNIT

Thanks for listening!
P.johnstone@sussex.ac.uk
Twitter: @pjohnstone1

