GREENPEACE

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The future of the UK offshore industry: decommissioning and marine renewable energy

The UK has a long and proud history of maritime engineering, from centuries of ship-building to offshore oil and gas engineering. But the decline in activity and investment in the North Sea over recent years means that facilities and skills are being lost.

The bigger picture is that fossil fuels have to be phased out in favour of renewable energies in order to prevent disastrous climate change. The recently published UK Climate Change Programme says of developed countries' emissions that "reductions of as much as 90% may be required"[i].

Amongst the types of renewable energy that take over from fossil fuels, marine renewable energy will be at the forefront, and UK waters are as richly endowed with these as they were with fossil fuels. Marine renewable energy sources like offshore wind power require exactly the world-leading maritime engineering skills which the UK has acquired for its North Sea fossil fuel resources.

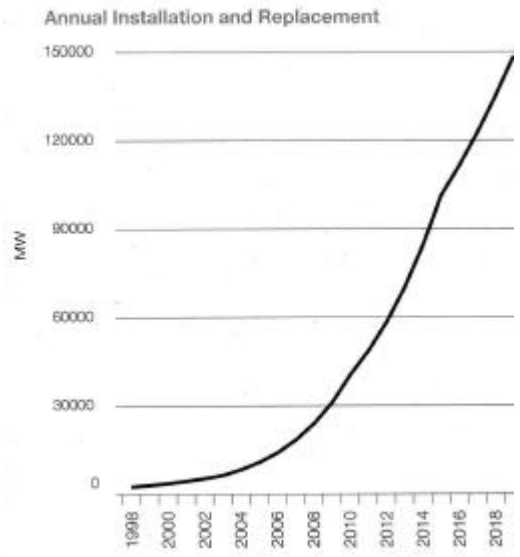
The UK is losing its offshore fabrication capabilities fast, and may lose out on the benefits from its abundant marine renewable energy resources unless rapid Government action is taken to fast-track offshore wind development and encourage the offshore industry to diversify into this field.

The future of UK offshore jobs and facilities can also be secured by generating a steady flow of contracts through a strategic decommissioning programme for North Sea installations that have become redundant and must be removed to shore as a result of the international OSPAR decision.

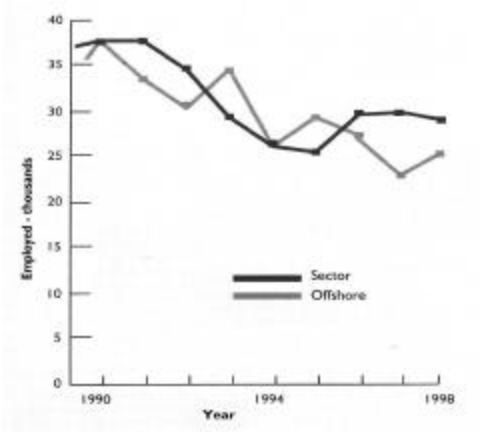
Offshore renewable energy needs oil industry skills

- "Synergies between renewable and conventional marine energy industries" are one of two main themes identified by The Marine Foresight Panel of the Office of Science and Technology. Their recent report[ii] highlights 10 priority technical areas where "the vast experience of the offshore hydrocarbon industry should be extremely useful to the emerging marine renewable energy industry". It notes that "Offshore wind…is expected to become a significant contributor to the Government target of UK electricity consumption of 10% renewable energy by 2010".
- According to Energy Minister, Helen Liddell, "Offshore wind promises to contribute significantly to the expansion of renewable energy generation in the coming years and should present many opportunities for our offshore industry".[iii]
- Wind power around the world is already a $2.5 billion industry, which every year for the past 5 years has grown by 40%, a growth rate set to continue. Denmark has captured the largest share of the world onshore wind market, and is now pushing offshore.
- The UK's offshore engineering firms and fabrication yards are actively investigating opportunities in offshore wind power and wave power. AMEC say they "offer to the offshore wind market a complete development and construction package. This encompasses all stages of offshore wind projects from site search, monitoring, site investigation and advanced engineering design, to construction, operation and maintenance.[iv]" Harland and Wolff decided recently that they "have a role and an opportunity in getting actively involved in offshore renewable energy…this is going to be very big business."[v]

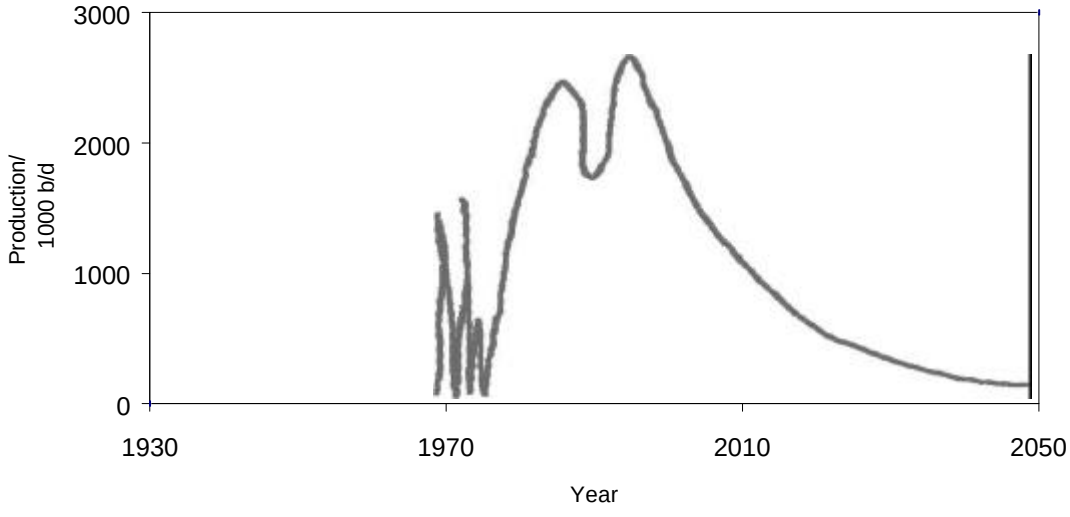
Global growth in annual installations of wind turbines
(modelling results from Wind Force 10, European Wind Energy Association, Forum for Energy and Development, Greenpeace International, 1999, 52pp)



Employment in the oil and gas sector, and employment offshore
(data from Development of the Oil and Gas Resources of the UK, 'the Brown Book', UK Department of Trade and Industry, 1999, 206pp)



UK Oil Depletion Profile
(after Campbell, 1997, Oil and Gas Journal 95:52, 29 December 1997)



- The UK has the largest offshore wind resource in Europe, from which the UK could obtain its entire electricity supply three times over, but in the UK firms are holding back because the Government has totally failed to provide any support for offshore wind power which would justify their investment. The Government must kick-start large-scale development of the UK's vast offshore wind and wave power resources, both to protect the climate and to capture a share of the vast world markets these energies will represent.

- If the UK were to aim to get just 10% of its electricity from offshore wind by 2010 36,000 jobs could be created[vi]. These would be sustainable jobs for the long-term, not the boom and bust jobs of oil. Oil-related jobs in NE Scotland have fallen from 54,000 in 1991 to 40,000 today, with a further10,000 expected to go in the next 10 years[vii]. Mackay consultants calculate that North Sea oil production will peak at 331.5 million tonnes in 2000 then decline[viii]

- The UK renewable energy review process failed to deliver a specific form of support for offshore renewable energy. This is needed both for the struggling UK wind industry and for UK engineering firms that may benefit. Even modest levels of Government support would make offshore wind projects bankable. Government support sufficient to trigger development of several offshore wind farms of 50-100MW each would trigger hundreds of millions of pounds of private investment. Offshore engineering firms are in pole position to win the resulting contracts.

Strategic decommissioning programme to save money, jobs and skills

- In July 1998 at Sintra, Portugal, North Sea Ministers signed the legally-binding OSPAR decision which requires that decommissioned oil and gas structures must be brought on shore. This was the result of years of campaigning by Greenpeace to stop dumping of disused oil installations in the oceans, which culminated in the decision not to dump the Brent Spar in the Atlantic ocean.

- Decommissioning of North Sea hydrocarbon production facilities will generate billions of pounds of contracts. Hyperion Energy Consultants, in calculations for the Financial Times estimate that the total cost will be £9.2bn[ix]. This work could provide a potential lifeline for offshore construction yards.

Location map showing
125 North Sea oil and gas installations
that will require decommissioning
(from The Turning of the Spar, Greenpeace, 1998, 221pp)

- Unless the UK government launches a strategic decommissioning plan, the oil companies will put off the costs of decommissioning as long as possible, by which time many UK offshore construction facilities may have been forced to close. UK Offshore Operators Association have stated that "Unless there is a pressing need to decommission because of deterioration of a platform, we have the option to defer to the end of the licence period, which could be 40-50 years in some cases" [x]

- Hyperion note that in this case "There are two scenarios…either the work will have to be awarded to companies outside the UK, or British yards and contractors will have to remobilise and retrain staff at great cost". The estimated difference between a laisser faire decommissioning policy and a pro-active strategy is estimated by Hyperion at £3.6bn. A large portion of this cost will be borne by the taxpayer, and if as Hyperion warn, the UK decommissioning capacity has been largely lost by then, the extra expenditure would effectively form a subsidy from British taxpayers to pay for jobs outside the UK.

- UK Energy Minister, Helen Liddell has said that to alleviate the difficulties faced by the offshore fabrication yards, "we have to make sure that the options such as for decommissioning work and so on, are available to them."[xi] However, warning bells are sounded by another recent statement when she said of decommissioning that "The timing and the size of the market is difficult to predict"[xii], which would certainly not be the case if the had Government the intention to implement a strategic decommissioning plan.

Recommendations

- A rescue effort should be mounted to save offshore fabrication yards and offshore engineering skills for decommissioning and offshore wind power.

- Government must support offshore renewable energy and encourage offshore industries to transfer their skills and equipment from oil and gas into renewable energy.

- Decommissioning should be speeded up and offshore fabrication yards included in a strategic decommissioning programme.

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[i] Climate Change Draft UK Programme, Department of the Environment, Transport and the Regions, 211pp, product code 99EP0850
[ii] The Marine Foresight Panel of the Office of Science and Technology, *Energies from the Sea*, April 1999, 29pp
[iii] Speech to the Northern Offshore Federation annual dinner, reported in Hart's European Offshore Petroleum Newsletter v.24, no.47, 1 December 1999
[iv] AMEC powerpoint presentation supplied to Greenpeace
[v] Paper to DTI/IMechE seminar on wave power at the Institute of Mechanical Engineering, *Wave Power, Moving Towards Commercial Viability*, 30 November 1999
[vi] *Offshore Wind Energy, Building a New Industry for Britain*, report by Border Wind for Greenpeace, 25pp, 1998
[vii] reported in *Ebb Tide for North Sea Oilmen*, Scotland on Sunday, 6th Feb 2000
[viii] reported in *Britain's North Sea oil reserves to last 60 Years*, Evening Standard, 8th February 2000
[ix] Calculations carried out for the Financial Times, in *Billions may be lost as North Sea fields close*, Financial Times, 14 February 2000
[x] Geoff Tilling, Chairman of the UK Offshore Operators Association, in *Billions may be lost as North Sea fields close*, Financial Times, 14 February 2000
[xi] In answer to a question posed during a tour of Conoco's new refinery plant in Humberside by Hart's European Offshore Petroleum Newsletter, reported in v.24, no. 47, 1 December 1999.
[xii] Speech to the Northern Offshore Federation annual dinner, reported in Hart's European Offshore Petroleum Newsletter v.24, no.47, 1 December 1999