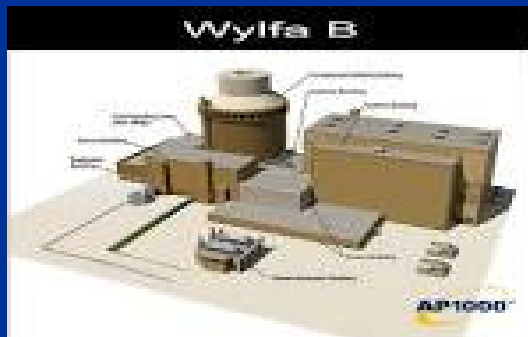


# NFLA views on 'big' and 'small' nuclear & the better alternatives



Sean Morris, NFLA Secretary  
November 2016



# What I'm going to look at:

- Brief overview of new nuclear debate
- NFLA's submission to Wylfa Newydd local consultation
- NFLA's early assessment of small modular nuclear reactors
- NFLA's report on decentralised energy best practice
- Conclusions

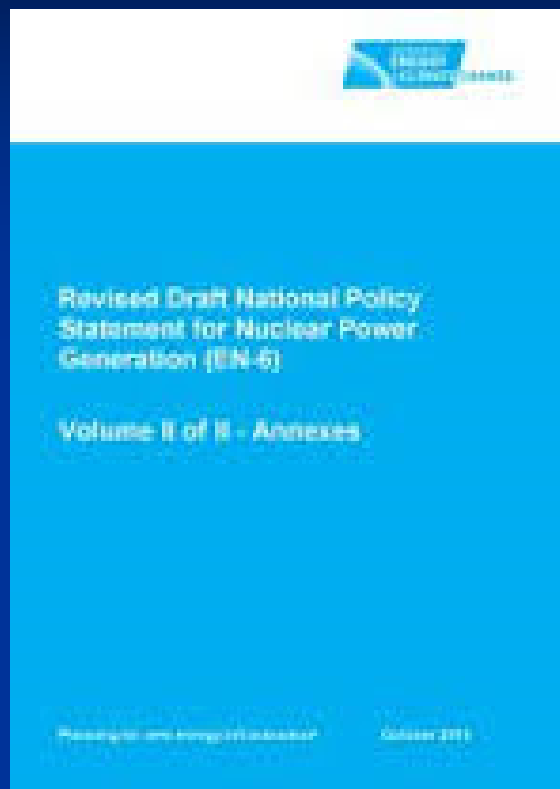


# 'Big' reactors – the new nuclear plans

- UK Government sees new nuclear & offshore wind as the primary low carbon energy future
- 8 sites nominated, 4 in active process
- Hinkley Point C – given approval in September by UK / EDF / CGN for EPR
- Design, safety and legal issues remain
- Wylfa B – Horizon (Hitachi) ABWR
- Sellafield Moorside – NuGen Toshiba / Engie AP1000
- Sizewell Stage 2 consultation Nov 23
- Others some years away
- Government wants to see these 'big 3' running between 2025 – 2030
- 18GW programme is envisaged



# Nuclear NPS not fit for purpose



- Developed by Government in 2011
- Passed by Parliament with little discussion
- Envisaged most new nuclear in place by 2025 – likely to be 3 – 5 years wrong
- Prevents local discussion of the big issues around new nuclear
- You can only concentrate on local impacts and nothing else
- Is there real meaningful discussion?
- Legal challenge from NGOs
- At the very least, needs to be updated



# NFLA Wylfa submission – Wylfa not needed

- Energy NPS said energy generation needs to double by 2050
- Yet UK is now consuming 17% less energy than it was in 1998
- At the same time GDP has risen by 18%
- Germany sees a 25% reduction in electricity demand by 2050 and this is part of its decision to phase out nuclear power
- Despite deep subsidy cuts, renewables & decentralised energy are still growing and would grow even faster with more support
- New nuclear is too expensive – even offshore wind is now cheaper than it! And all other renewables are coming down rapidly in price
- Baseload power idea is obsolete – it is too inflexible, nuclear power is not that reliable and it has to be on all the time





## Local issues of concern

- Research by the late Hugh Richards has shown that radioactive waste with a radioactive content equal to 70% of the entire existing UK nuclear legacy could remain in Wylfa till at least 2230
- A previous report by Gwynedd Council on Wylfa A in comparison to other big developments found it had a detrimental effect on jobs in the long-term
- Horizon's projections suggest 15% of Anglesey's population will be construction workers from Wylfa B with all the impacts on house prices, school places, transport infrastructure etc
- Having 8,000 new non-Welsh speakers will put a real strain on the Welsh language community



# Safety and security issues of concern

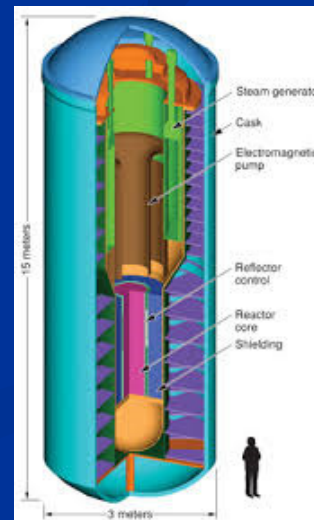
- A fire in a spent fuel pond at Wylfa (or any UK nuclear site) “could dwarf the horrific consequences of the Fukushima accident”
- Terrorist attacks are increasing, with evidence that nuclear sites are being considered (e.g. Belgium earlier )
- NFLA report has suggested nuclear security risks are increasing from insider threats, cyber attacks and drone attacks
- Preferred sites for Wylfa B’s interim long-term waste store is on the edge of the site boundary – surely vulnerable to an attack?





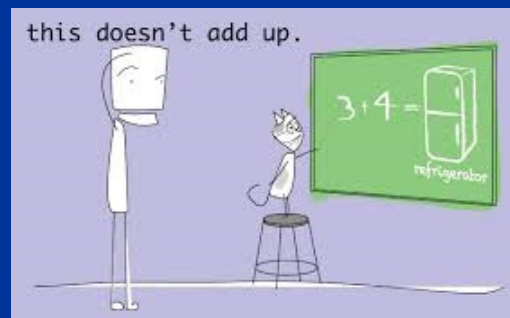
# SMRs – a new nuclear dawn?

- The growth in interest in ‘small’ nuclear may come from the problems in delivering ‘big’ nuclear
- UK Government putting lot of money into small nuclear is currently considering preferred list of developers
- A SMR would produce a maximum of 300 MW, compared to the 1,600 MW proposed for Hinkley Point
- Sounds good on paper but requires a huge and expensive supply chain to be realised to make them cost-competitive
- Would require major government financial support to realise



# SMR economic, waste & proliferation issues

- Initial NFLA study suggests real safety concerns – overheating core, rushing too quickly to get cost down
- Proponents suggests they could be put close to larger population areas – safety and security concerns of an accident?
- To date, there has been no market for them and previous attempts to develop them have largely failed
- On best projections could be 15 – 20 years away (McKerron 2050)
- Would be creating new forms of nuclear waste across the UK
- Real proliferation concerns and worry the technology could get into the wrong hands
- May require longer assessment design process as new technology
- Costs still remain unknowable - yet we know renewables are cheaper!

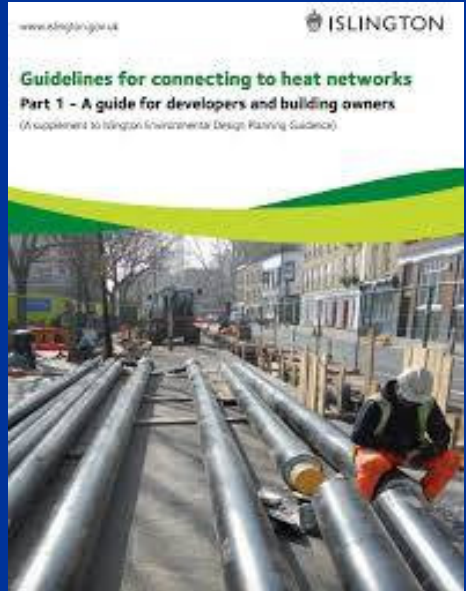
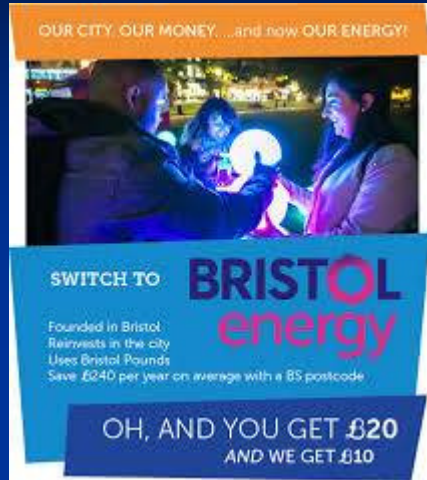


# The benefits of decentralised energy

- **NFLA & others argue there are better alternatives**
- **With energy storage and energy efficiency intermittency of renewables is no longer a real issue**
- **Many Councils are moving into low carbon energy generation**
- **The first Council energy companies for 70 years now set up**
- **Councils are best placed to tackle fuel poverty, assist climate change mitigation and drive down local carbon emissions**
- **It will generate income in a time of deep austerity!**
- **New NFLA report looks at decentralised energy in 2016**
- **Despite subsidy cuts, it is still a growing sector**



# 30 fantastic examples of best practice



# Conclusions

- In the NFLA's view, Wylfa Newydd is not now required
- There are many local, economic, waste, safety & security issues why
- Small nuclear has many difficult issues to overcome
- SMRs also post major economic, safety and proliferation issues
- NFLA will do follow-up assessment of SMRs in early 2017
- A wide renewable energy mix & energy storage remains the answer!
- Decentralised energy led by Councils can play a part in that
- Anglesey's 'Energy Island' could work – if it embraces the work done by the likes of the Western Isles, Orkney & the Shetland Isles
- Some Welsh Councils are leading the way – Ceredigion, Bridgend, Cardiff – and many more should follow
- Welsh Government should also play its part, as in Scotland



**Thank you for listening.**

**Questions can be asked in the  
panel discussion.**

**The reports can be found in the  
'publications' part of our website:**

**<http://www.nuclearpolicy.info>**

