Written evidence submitted by the Welsh Government

Welsh Government response to the Welsh Affairs Committee's inquiry into Nuclear Energy in Wales

Nuclear energy policy

1. ***The Welsh Government recently announced its ambition of 100% of Wales's electricity needs coming from renewable energy by 2025. How does new nuclear, including a gigawatt scale reactor, fit into this policy aim?***

    a. Our renewable electricity targets were set in 2017 and re-evaluated in 2020. We recognised the need to re-evaluate our renewable targets again in the context of net zero, and committed to do so in our emissions reduction plan, Net Zero Wales: Carbon Budget 2 (2021-2026)[1]. The plan also included a commitment to hold a Ministerial led deep dive to explore how we can further maximise the local and community benefits of renewable energy generation in Wales.

    b. The deep dive resulted in a vision "*for Wales to generate renewable energy to at least fully meet our energy needs and utilise surplus generation to tackle the nature and climate emergencies. We will accelerate actions to reduce energy demand and maximise local ownership retaining economic and social benefits in Wales*". The proposals contained in the consultation on our review of renewable energy targets are designed to support this vision.

    c. Nuclear energy generation is outside the scope of the consultation; however we recognise that there may be potential economic benefit from nuclear energy developments in Wales and the proposals in the consultation do not conflict with or preclude any new nuclear development. It would simply result in Wales being a net exporter of electricity, as we are currently through a combination of gas- fired power generators and renewables.

2. ***How do Welsh Government targets on locally owned energy production apply to new nuclear developments?***

    a. Our consultation on revising our energy targets proposes 1.5GW of renewable energy capacity in Wales to be locally owned by 2035, excluding heat pumps. The scope of this target is renewable electricity and heat. The definition for 'locally owned' is set out in our policy statement[2] on local ownership of energy generation in Wales.

    b. In addition to this target, we have an expectation for all new energy developments to have at least an element of local ownership from 2020, and our guidance on local and shared ownership is designed to assist in delivering on this ambition. The purpose of this target is to encourage

Welsh ownership in order to retain benefits in Wales, whether that be through local community ownership or large institutional investment. We recognise that different projects will have varying degrees of risk and rewards, and consequently different levels of attractiveness to potential Welsh investors. However, our expectation is that the option is explored for all developments.

3. What role will the Welsh Government play to facilitate new nuclear construction, for example, within related areas such as the planning and permitting, housing, skills and employment needs of large construction sites?

a. Welsh Government potentially has a myriad of roles in dealing with large infrastructure projects in Wales ranging from socio-economic champion to planning authority and environmental regulator, sometimes directly and at other times through its agencies (e.g. Natural Resources Wales).

b. From a policy perspective, our national development framework Future Wales, Policy 17, strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs. In determining planning applications for renewable and low carbon energy development, decision makers must give significant weight to the need to meet Wales' international commitments and our existing target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency.

c. Future Wales Policy 24 supports North West Wales as a location for new energy development and investment. Proposed developments associated with the Isle of Anglesey Energy Island Programme (including any future interest in Wylfa Newydd) and Trawsfynydd will be supported in principle to create significant economic benefits for the area as well as generating renewable or low carbon energy. New energy related development in the region should support local and regional communities; provide jobs and investment in training and skills; and work with universities and businesses across the region and the North West of England to coordinate and maximise new investment to support the wider region. In determining any applications for nuclear energy generating stations in this region, consideration should be given to the need for further low carbon energy generation, their contribution towards the UK's energy mix and security, the economic benefits they would bring to the region and their impacts on the natural and historic environment.

d. Future Wales recognises the potential of Small or Advanced Modular (nuclear) Reactors and that this could provide future low carbon energy generation in the North West Wales region. Future Wales identifies Trawsfynydd as a potential site for a Small Modular Reactor, building on the existing sector-specific technical capacity and expertise available locally. Due to Trawsfynydd's sensitive location, any potential development would require careful consideration of design and impact upon the environment and landscape of the National Park including potential mitigation. The planning principles of major development in National Parks in Wales are set out in Planning Policy Wales.

e. Furthermore, in accordance with the First Minister's Legislative Statement of 5 July 2022, the Welsh Government plans to bring forward an Infrastructure Consenting Bill during Year 2 of this Senedd which introduces more efficient and effective unified consenting arrangements both on and offshore to determine applications for infrastructure development, which includes energy generation

f. projects up to 350MW, in Wales. Associated planning consents relating to nuclear energy plants, such as roads and housing, will be determined by the local planning authority.

g. Welsh Government has previously shown leadership in this area, for example by seeking to facilitate and co-ordinate such consents in relation to the proposed Wylfa Newydd scheme. Should realistic plans re-emerge for a large-scale nuclear project at Wylfa, Welsh Government would likely adopt a similar approach to the one previously taken and would consider establishing a team to address the issues for which Welsh Government has the remit and competence.

h. Welsh Government would aim to be proactive and constructive, seeking to optimise postive outcomes for the Welsh economy and communities.

4. What discussions has the Welsh Government had with the UK Government on the Welsh nuclear sites of Wylfa and Trawsfynydd? Has the Government sought to promote the use of these sites?

a. Direct discussions have been sporadic between UK and Welsh Governments about the future of the Wylfa and Trawsfynydd sites. It has historically been difficult to establish sustained and meaningful relationships with BEIS (partly due to the significant and regular changes within the UK government recently) and Welsh Government regularly finds itself having to chase for sector updates and seek the latest UK Government position on arising issues.

b. Nevertheless, with respect to Wylfa, Welsh Government is aware of Bechtel and Westinghouse's expressed interest in the site for large scale nuclear and that high level discussions also took place last year between BEIS and the Korean technology vendor KEPCO. We know little of any progress with respect to KEPCO but understand that Bechtel and Westinghouse remain interested in the Wylfa site if funding can be found to support the project development stage.

c. They describe it as an ideal option for large-scale nuclear and are confident that they can deliver a new power plant project utilising Westinghouse AP1000 technology, Bechtel delivery expertise and knowledge transfer from the Vogtle 3 & 4 project in the USA. The partners had hoped that the Future Nuclear Enabling Fund would be made available to assist the initial development phase but were disappointed to be deemed ineligible for support when the Fund's guidelines were announced last summer.

d. Within the uncertain development and funding context post the demise of the Wylfa Newydd project, the Welsh Government has not sought to proactively promote the Wylfa site. We regard the site's promotion to be primarily an issue for BEIS (and Great British Nuclear once established) given that the policy and funding levers for large scale nuclear primarily lie with the UK Government.

e. Should a new Wylfa project be forthcoming, Welsh Government will as outlined in Q3 above, mobilise to both support and challenge the project ensuring that benefits are optimised and disbenefits mitigated wherever possible.

f. With respect to Trawsfynydd, Welsh Government has been more proactive in promoting the site given that Trawsfynydd was not selected as a site for large scale nuclear under National Policy Statement for Nuclear Power Generation (EN-6) and in the early 2010s, the site's future looked highly uncertain. The Snowdonia Enterprise Zone was established in 2013 to promote new development at Trawsfynydd and the conclusion of a number of optioneering and feasibility studies was that the site, while unsuitable for large nuclear, was nevertheless ideal for smaller nuclear deployment i.e. SMRs.

g. The establishment of Cwmni Egino is the culmination of our efforts to date to see Trawsfynydd selected as the site for first-of- kind deployment of SMR technology. We have been calling on the UK Government for support for our approach over a number of years and since the establishment of Cwmni Egino they have helped to broker a meaningful dialogue with the NDA/Magnox on future land lease arrangements for site development at Trawsfynydd.

5. What is the Welsh Government's view on what should be the next steps at the Wylfa and Trawsfynydd sites?

a. We believe that at Wylfa, the next steps should be for the UK Government to provide clarity on its requirements of the site and how it sees the site progressing from its current stasis. A number of issues/questions need to be addressed to provide potential developers and technology vendors with sufficient confidence to commit to taking such complex projects forward, including:-

   i. Is Wylfa earmarked for large scale nuclear development only, or can SMRs also be considered, either alternatively or in addition to large scale? While the site has often been identified as being the best in the UK and indeed Europe for the deployment of large scale new nuclear, there has been an increase in interest over the past 12-18 months from SMR vendors that Wylfa is also of interest for smaller scale deployment (e.g. Rolls Royce[3], GE Hitachi).
   ii. The majority of the site is still owned by Hitachi – what steps does the UK Government intend to take to ensure that the site is made available to a new project?
   iii. While the 2022 Nuclear Energy (Finance) Act provides a form of Regulated Asset Base funding that should help finance the construction phase of large nuclear projects in future, there is less clarity as to whether the project development phase, almost £2bn in the Wylfa Newydd example, can be included in the RAB model. The UK Government needs to provide clarity on how it sees project development costs being funded.

b. At Trawsfynydd, Cwmni Egino has made excellent progress over the past 12 months, focused on establishing the company as a credible entity pursuing low carbon projects. The company is almost at the end of Phase 1 of a three-phase programme to reach FID and have defined their vision for Trawsfynydd by 2027

to be the site of the first SMR/AMR under construction in the UK with North Wales recognised as a centre of excellence for low carbon energy.

c. The establishment of the Great British Nuclear delivery vehicle is the essential next step in supporting progress at both Wylfa and Trawsfynydd. The nuclear sector has for a number of years been calling for the creation of a government owned development entity, is fully supportive of the plans to create GBN[4] and indeed is urging government to get on with the task and not delay any further[5]. Their expectation is that GBN should be able to address many of the issues that impede progress, if given sufficient remit and funding, and we concur with this view and expect the UK Government to support in full.

6. What was the motivation behind establishing Cwmni Egino and what are the long-term objectives for the company? How much seed funding has been provided to Cwmni Egino and what long-term financial commitments have been made?

a. The motivation behind creating Cwmni Egino was the belief that there are significant economic development opportunities for Wales from the small modular nuclear reactor (SMR) agenda, particularly if we can secure a first-of-a-kind deployment with associated R&D investment and manufacturing.
b. Trawsfynydd has the potential to be the focal point around which much of the critical cluster activity can be based.

c. Cwmni Egino has defined its vision to achieve both aims and aim by 2027 for Trawsfynydd to be the site of the first SMR/AMR under construction in the UK with North Wales recognised as a centre of excellence for low carbon energy. An Economic impact Assessment undertaken by Arup estimated that under a High Impact Scenario - i.e. one which assumes the delivery of at least one SMR or AMR at Trawsfynydd, along with additional academic or industrial research facilities within the region, that the following impacts are possible:

i. a total of 2,600 construction workers on site at peak;
ii. 450 employed in the 60 yea plus operational phase;
iii. At peak, a High Impact scenario could contribute up to £158.4 million in GVA for
    a. North Wales;
iv. Pan Wales, overall GVA is forecast at £213.4 million at peak construction.

d. The potential market for SMRs however is international. In the UK, the market could potentially be for around 7GW of power from SMRs by 2035, based on a demand for low-carbon generation and site availability[6]. In announcing their SMR programme in 2017, Rolls Royce estimated a potential global market of 85GW (equivalent to 193 of their SMR stations), with the major overseas markets being in the Middle East and North America[7]. Another vendor, NuScale, estimates the world SMR market to be worth £400bn by 2035[8]. Welsh supply

e. chain companies involved in a first-of-a-kind project at Trawsfynydd would then have the opportunity and experience to work on subsequent projects worldwide.

f. Welsh Government committed to provide £2.5m in seed funding for the company's first two full years of operation (to the end of March 2024). A further
g. £20m has been earmarked under the North Wales Growth Deal's Low Carbon Programme subject to the approval of a future business case submission.

7. Was the Welsh Government consulted on the creation of Great British Nuclear (GBN)? If not, what conversations have you had with the UK Government regarding GBN? Do you communicate largely with the Department of Business, Energy and Industrial Strategy and if so, would you expect these talks to be held directly with GBN once it is established?

a. No. Welsh Government first became aware of the intention to establish a new nuclear development entity when it was announced in the British Energy Security Strategy published in April 2022.

b. Two direct conversations have subsequently been held with relevant civil servants within BEIS with responsibility for the establishment of GBN.

c. Once created however, we and Cwmni Egino would aim to establish a relationship directly with GBN in the expectation that long term relationships can be nurtured within an organisation that should be less prone to changes in inter and intra departmental priorities. It is becoming clear that the support of a sufficiently resourced GBN will be essential in helping Cwmni Egino navigate the complex and costly pre FID development phase of a SMR project.

Planning policy

8. Some Small Modular Reactor (SMR) technology will produce less than 350MW, meaning that an application for Developments of National Significance (DNS) would be considered by Planning and Environment Decisions Wales (PEDW). Is the Welsh Government confident that there is sufficient capacity within PEDW, in terms of staff numbers and expertise, to manage such applications?

a. Planning and Environment Decisions Wales (PEDW) has a number of Planning Inspectors with sufficient expertise to manage such applications, and provision in place to procure additional expertise on a case-by-case basis if needed. In terms of staff capacity within PEDW, this is kept under regular review having regard to changing workload pressures and action taken as necessary to ensure we have sufficient resource in place to manage changing demands. For example, we have recently established an Infrastructure Consenting Team and recruited new Planning Inspectors, partially in recognition of the increase in the number of DNS applications being submitted and also to provide the expertise needed to service the consenting process within the proposed Infrastructure Consenting Bill, which is intended to ultimately replace DNS.

Skills policy

9. What is the Welsh Government's response to calls for a nuclear programme to give confidence to the skills sector to invest early in providing training courses to develop is a skilled local workforce for new nuclear projects?

a. The nuclear sector is facing several skills challenges. As referenced in our Written Evidence in August 2022, the workforce is an ageing one that is driving replacement demand for critical skills and in Wales there has been a shift in requirements from operations to decommissioning as well as a burgeoning demand for skills to build and operate a new fleet of nuclear power stations.

b. We recognise that re-skilling and up-skilling existing workers to meet nuclear new build requirements must be a priority in terms of training and is a key impact that would need to be addressed as part of any approach to a new Wylfa or Trawsfynydd project. However, with significant pressures in place on government budgets, it is difficult to prioritise skills expenditure on a sector that is struggling to clarify future projects with any degree of certainty and thus its future workforce requirements. That clarity is urgently needed from the UK Government.

c. From an apprenticeship perspective, Welsh Government hasn't received any explicit calls for certain skills set in Wales but continues to have conversations with the sector (e.g. National College for Nuclear) on what the future demand may be.

d. Nonetheless, we currently offer an array of programmes that would support the sector and supply chain which include programmes in:
   i. advanced manufacturing;
   ii. engineering; and
   iii. digital/ICT.

e. In each off these areas, degree apprenticeships are offered along with specific framework/pathways in Nuclear Working (Level 2) for young people and adults wishing to enter the nuclear sector. Apprentices would undertake skills and knowledge training in either nuclear decommissioning or radiation protection.

REFERENCES

[1] Net Zero Wales Carbon Budget 2 (2021 to 2025) | GOV.WALES

[2] Local ownership of energy generation in Wales: policy statement | GOV.WALES

[3] Wylfa among four sites prioritised by Rolls-Royce for small nuclear reactors | New Civil Engineer

[4] Sizing up the opportunity: How Great British Nuclear can enable the critical infrastructure we need (politicshome.com)

[5] Call for prompt launch of Great British Nuclear : Nuclear Policies - World Nuclear News (world-nuclear-news.org)

[6] House of Lords Science and Technology Committee, 2017, *Nuclear research and technology: Breaking the cycle of indecision*

[7] Rolls Royce, 2017, *Small Modular Reactors – a once in a lifetime opportunity for the UK*

[8] NuScale Power, 2018, https://www.nuscalepower.com/about-us/nuscale-in-uk

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