



Assessing new nuclear power station designs

Information for communities

Issue 1, 2021

New nuclear power stations

Government is responsible for the UK's energy policy and set out its current position in the December 2020 white paper, "Powering our Net Zero Future". In the white paper government highlights the need to address climate change urgently and sets out its strategy for wider energy systems so as to achieve the UK's target of net zero greenhouse gas emissions by 2050. New nuclear power stations are an important part of the government's strategy to help ensure that we have secure supplies of low carbon electricity in the future.

As it encourages the development of new nuclear power stations, it has asked regulators to begin assessing the safety, security and environment protection features of new designs early in the development of any proposals.

Regulating new nuclear power stations

As regulators of the nuclear industry, we, the Office for Nuclear Regulation (ONR), the Environment Agency (EA) and Natural Resources Wales (NRW), are working together to make sure that any new nuclear power stations built in the UK meet high standards of safety, security, environmental protection and waste management.

ONR and the Environment Agency have developed an assessment process - 'Generic Design Assessment' (GDA) - which allows us to begin scrutinising new nuclear power station designs well in advance of construction starting. This means that we can identify any potential design issues at an early stage and ask the reactor design company to address them. This will help to avoid potential costly and time consuming design changes for regulatory reasons during construction.



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GDA's technical assessments are primarily carried out by ONR and EA. The EA and NRW work as partners on environmental aspects of GDA.

Any company that wants to operate a nuclear power station has to show that it can build, operate and decommission it safely, properly protect the environment and manage and dispose of radioactive waste.

Site specific permissions

The company needs a number of site specific permissions from regulators and government.

These include a nuclear site licence and relevant consents from ONR and environmental permits from the Environment Agency or NRW. The company must also obtain planning consent and other approvals from the Department for Business, Energy & Industrial Strategy's Secretary of State.

If we, ONR and EA or NRW, receive applications for development of new nuclear power stations at specific sites we will carefully consider those proposals and take into account the work we have done on GDA when making decisions about whether the proposals are acceptable. We won't issue a site licence or environmental permits unless we are satisfied that site specific proposals and the proposed operating company meet our high standards.

About GDA

- A GDA of a nuclear power station will take around four years to complete.
- GDA is carried out in a number of steps of increasingly detailed scrutiny.
- After the assessment we'll say if a design should be acceptable or not. Where applicable, this can include identifying a number of matters, 'GDA Issues', to be resolved to our satisfaction before we would say a design is acceptable.
- We issue e-bulletins throughout GDA to keep people informed on progress and the issues we're raising.

GDA - progress

We are currently assessing **General Nuclear System Limited's UK HPR1000** design which is proposed for Bradwell, Essex.

We started this GDA in January 2017 and completed an initial assessment in November 2018. We are now doing a more detailed design assessment.

You can make a comment or ask a question about this design on General Nuclear System's website.



In December 2012 we completed a GDA of **EDF/Areva's UK EPR™** nuclear power station design. We concluded that the design should be acceptable if built in the UK.

EDF's company NNB GenCo (HPC) is building this design at Hinkley Point, Somerset. NNB GenCo (SZC) propose to build this design at Sizewell, Suffolk.

In March 2017 we completed a GDA of **Westinghouse Electric Company's AP1000®** design and concluded it should be acceptable if built in the UK.

In December 2017 we completed a GDA of **Hitachi-GE's UK ABWR** design and concluded it should be acceptable if built in the UK.



Getting involved

Our GDA process is open and transparent and there are a number of ways you can get involved.

The comments process

Any nuclear power station design company going through GDA is required to set up a website, publish information about the design and invite comments and questions about it. You can make a comment or ask a question and the design company will respond to you. As regulators, we will see the comments and questions submitted and the responses provided and can use these to help inform our work. Comments can also be made to our Joint Programme Office. The comments process stays open throughout GDA until about four months before we make our decisions.

Consultation

The Environment Agency in England and Natural Resources Wales in Wales will consult on their preliminary findings from detailed assessment during the GDA process. All of the comments made will be carefully considered and can help inform assessments and decisions about the nuclear power station designs.

Meetings and events

Talk to us at Site Stakeholder Groups, Local Community Liaison Councils and public events.

More information

- Read our joint website: <http://www.onr.org.uk/new-reactors/index.htm>
- Email us to sign up for e-bulletins: contact@onr.gov.uk and nuclear@environment-agency.gov.uk
- Information about the Environment Agency's GDA work is on GOV.UK <https://www.gov.uk/guidance/new-nuclear-power-stations-assessing-reactor-designs>