Preparing for Deployment of a UK Small Modular Reactor by 2030

The Energy Technologies Institute (“ETI”) has published the results of its SMR Deployment Enablers Project in which it examines the feasibility of deploying a Small Modular Reactor (“SMR”) in the UK by 2030 and the potential role for SMRs to provide combined heat and power.

The study also reports on the latest phase of its Power Plant Siting Study. A summary of the report can be found on the ETI’s website at http://www.eti.co.uk/insights/preparing-for-deployment-of-a-uk-small-modular-reactor-by-2030.

Whilst the study concludes that deployment of an SMR in the UK by 2030 is feasible the study suggests that achievement of this goal depends heavily on the UK Government taking urgent action to facilitate the required investment.

The integrated programme presented in the study suggests deployment of a first of a kind SMR in the UK by 2030 requires the UK Government to publish a White Paper before the end of 2017 and for the Generic Design Assessment (“GDA”) process to commence for an SMR design by the end of 2017. The study goes on to identify that GDA is on the critical path meaning that any delay in commencement or slippage of the programme will delay the eventual commencement of commercial operation beyond the 2030 target.

From our current position awaiting publication of the Government’s Techno-Economic Assessment, which was intended to inform further development of Government policy on SMRs and subsequent stages of the Government’s SMR competition, meeting these milestones would seem to be challenging which in turn suggests deployment of a first of a kind SMR in the UK by 2030 is unlikely.
In terms of siting, the report builds on the earlier phases of the ETI’s Power Plant Siting Study which identified around 80 UK sites that were potentially suitable for deployment of SMRs. The current study develops a shortlist of 8 of these sites which are considered suitable for the early deployment of SMRs on the basis of a number of factors including their proximity to an existing nuclear site, the availability of cooling water and the potential impact on plans to build large scale nuclear power plants.

The study then undertook further analysis on these 8 sites assessing each against a number of factors, including their engineering, environmental and socio-economic suitability, and found that several sites appeared to be particularly suitable for the deployment of a first of a kind SMR. The identity of these sites is not currently in the public domain but has been passed to Government for consideration.

Over the coming months Burges Salmon will be publishing a number of articles looking in more depth at key legal issues associated with the deployment of SMRs.

For further information on small modular reactors, please contact Ian Truman at ian.truman@burges-salmon.com or on +44 (0) 117 939 2280.

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**Hinkley Point C**

Our congratulations to all involved with the Hinkley Point C project following the statement from Greg Clarke, Secretary of State for Business, Energy and Industrial Strategy, approving the project on 15 September and the subsequent execution of major project documents by EDF, China General Nuclear Power Corporation and the UK Government on 29 September.

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**The Radioactive Contaminated Land regime – a summary**

The Radioactive Contaminated Land regime (‘RCL’) is a set of statutory rules to allocate liability for radioactive contaminated land that poses an ‘unacceptable level of risk’ so that the land can be remediated. It is important to understand that an owner or occupier of land may be responsible for the costs of remediation even if they were not responsible for the presence of the contaminating substance.

The RCL is set out in Part 2A of the Environmental Protection Act 1990, read alongside the changes in the Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006 and the Radioactive Contaminated Land (Modification of Enactments) (Wales) Regulations 2006. Under the RCL, local authorities have a duty to identify contaminated land. The relevant enforcing authority (the local authority, the Environment Agency or Natural Resources Wales) will then carry out an investigation to identify the responsible organisation and take steps to ensure that the land is remediated.

We have been asked recently to set out a summary of the rules and key differences from the non-radiological contaminated land regime.

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**When is land contaminated?**

Radioactive contaminated land is defined as any land which appears (by reason of substances in, on or under the land) to cause:

- significant harm to the environment or human health or a significant possibility of such harm; or
- pollution of controlled waters.

The statutory guidance provides that the local authority should regard harm as being caused where lasting exposure gives rise to doses that exceed one or
more of the following: (a) an effective dose of 3 millisieverts per annum; (b) an equivalent dose to the lens of the eye of 15 millisieverts per annum; or (c) an equivalent dose to the skin of 50 millisieverts per annum. Dosage is to be estimated in accordance with the Basic Safety Standards Directive.

Who is responsible for remediation?

Contamination originating from a nuclear licensed site

Where the contamination has been caused by an escape of particles from a licensed nuclear site, the Secretary of State is responsible for remediation. This is expressed to be without prejudice to the potential responsibility of the operator of the site under the Nuclear Installations Act 1965 which would need careful prior consideration.

It is important to understand that an owner or occupier of land may be responsible for the costs of remediation even if they were not responsible for the presence of the contaminating substance.

Contamination which has not originated from a nuclear licensed site

Where the contamination has not originated from a licensed nuclear site, the RCL imposes liability on polluters or occupiers of the land, depending on the circumstances:

- The enforcing authority will seek to identify “Class A” persons first. “Class A” persons are those persons who caused or knowingly permitted the contaminating substances to be present in, on or under the land.

A person will have ‘knowingly permitted’ the contamination if they knew about it and had the power to do something about it. “Class A” is therefore wider than the original polluter. It could include a subsequent owner or occupier who knew of the contamination but did not take any steps to prevent it from contaminating the land.

- If no “Class A” person can be found, the enforcing authority will seek to identify the current owner or occupier of the relevant land (“Class B” persons). One scenario where a Class A individual cannot be “found” is where a company has been dissolved. This scenario can occur in instances of historic contamination.

The rules on identifying a “Class A” or “Class B” person are very complicated and depend on the particular circumstances of the land and the history of ownership. On the sale or lease of land, it is possible for liability to be transferred or allocated to a particular party even if the contract is silent.

It is important for sellers and buyers, who suspect that there may be radioactive contamination present, to understand their potential liability under the RCL and to obtain advice on how they may protect themselves.

For more information on the RCL, please contact Ella Curnow at ella.curnow@burges-salmon.com or on +44 (0) 117 307 6814.
The Nuclear Installations (Liability for Damage) Order 2016 (the “Order”) was made on 4 May 2016 and amends the Nuclear Installations Act 1965 (the “1965 Act”). The Order is part of the UK’s implementation of both the Paris and Brussels Conventions (the “Conventions”) which provide for a compensation regime for victims of nuclear incidents.

The essence of both the Conventions and consequently the Order are that more compensation will be available to a wider class of potential victims for a wider range of losses.

As part of the wider reforms under the Conventions, the UK is also revising the regime for nuclear third party liability. The Department for Business, Energy and Industrial Strategy has recently closed a consultation in relation to defining certain prescribed sites and transport activities where lower liability will apply under the amended 1965 Act. The consultation closed on 10 August 2016 (see below for further details).

The key changes made by the Order are:

- A wider range of losses are recoverable including reinstatement of damage to the environment, loss of income derived from the environment and the cost of implementing preventative measures.
- An increase in compensation amounts. The liability cap for standard installations is currently £140m per incident, which will increase to €700m in 2017 and then will increase by €100m a year over five years to reach €1200m. The liability cap for low risk installations will increase from £10m per incident to €70m and the liability cap for low risk transport will increase from £10m per incident to €80m.
- Disposal sites are now included within the definition of nuclear installations and therefore fall within the scope of compensatory provisions.
- Additional potential claimants including those suffering damage in a state where there are no nuclear installations.
- Increased limitation periods including 30 years for death and injury and 10 years for other claims – this means that claimants will be allowed more time to bring a claim.

Operators of nuclear sites and/or installations should be aware of the above changes and importantly should ensure that adequate insurance is in place to cover the new scope of liabilities.

UK nuclear operators (existing and future) should therefore consider:

- expanding nuclear insurance to cover the increased liabilities under the Order and the potential cost of doing so.
- the need to fill gaps in the provision of commercial insurance caused by the changes under the Order with re-insurance provided by the UK government and the potential cost of this.
- the scope of indemnity provisions in existing contracts for goods or services to nuclear site operators where contracts have been based on the 1965 Act liabilities – do these contracts need updating where they refer to the previous legislation?

Similarly, contractors need to ensure that their risk position has not been changed as a result of the Order, as lower liability caps in indemnity provisions could leave contractors exposed to higher liabilities.

Although the Order has now been enacted in the UK, it will not come into force until the protocols which amend the Conventions have themselves come into force (scheduled for 2017). However the provisions empowering the Secretary of State to make insurance/re-insurance arrangements under the Order are now in force.

Operators of nuclear sites and/or installations should be aware of the above changes and importantly should ensure that adequate insurance is in place to cover the new scope of liabilities when in force.

For more information about the changes and any other issues relating to nuclear third party liability, contact Cheryl Parkhouse at cheryl.parkhouse@burges-salmon.com or on +44 (0) 117 902 6640.
Analysis of EU Commission Nuclear Illustrative Programme

On 4 April 2016, the European Commission ("EC") reported on the Nuclear Illustrative Programme (the "PINC"). The PINC is a communication that the EC is required to make under Article 40 of the Euratom Treaty and provides a standardised European-wide policy overview for nuclear safety and strategy. It considers post-Fukushima safety upgrades, the safe operation of existing facilities and the estimated financing required for existing facilities, new facilities, decommissioning and management of radioactive waste.

The EC estimates that around 90% of existing nuclear reactors will be shut down by 2030, resulting in a need for significant financial investment to improve current nuclear plants or to replace large amounts of capacity. The PINC sets out the total of those investments are projected to be between €650 – 750 bn until 2050.

Since 2008, a total of 48 nuclear investment projects have been notified to the EC across the EU – 9 facilities for front-end activities, 20 for major modifications or upgrades in nuclear power plants, 7 for new commercial or research reactors and 12 for back-end installations. All projects received a non-binding EC opinion with comments or suggestions for improvements with an emphasis on safety, waste management, safeguards and security of supply issues.

The PINC aims to ensure that there is a framework for cooperation among national regulators. It provides that when licencing new reactors, regulators should co-operate with each other to (a) encourage standardisation of design for cost efficiency and (b) benefit from the experience gained in cost-saving exercises on previous nuclear projects. In addition, Member States could benefit through knowledge sharing in relation to spent fuel and radioactive waste management best practices. In particular, the PINC notes the high level of knowledge of decommissioning within the EU, particularly Germany, in comparison to the rest of the World.

The PINC highlights that the priority for nuclear energy within the EU is to support development of technology and maintain the highest levels of safety in nuclear reactors. It sets out ongoing Euratom research initiatives, which include the European Sustainable Nuclear Industrial Initiative, research on safety of SMRs and support for careers in the nuclear field. Although the Article 103 requirements have previously been deemed to be self-executing, development of the Euratom requirements have required member states to take the requirements into account when negotiating agreements in the nuclear sector to encourage positive external relations across the EU and worldwide.

For more information about the PINC contact Ian Truman at ian.truman@burges-salmon.com or on +44 (0) 117 939 2280.
Changes made by the Health & Safety and Nuclear (Fees) Regulations 2016

The Health & Safety and Nuclear (Fees) Regulations 2016 (the “Regulations”) repeal and replace the Health & Safety and Nuclear (Fees) Regulations 2015, amending different pieces of legislation to:

• increase the fees charged by the HSE and other licensing authorities by 4%; and

• make changes to allow the HSE to recover the costs of legal advice it takes in relation to disputes under the ‘Fee for Intervention’ regime.

The Regulations also set out by whom a payment should be made for certain HSE services. In short, where the HSE is preparing an assessment agreement or assessing a design proposal for a nuclear installation the fee should be paid by the person who requested the assessment. Where the HSE is providing advice to a potential applicant for a licence under the Nuclear Installations Act 1965, the payment is payable by the person who requested the advice.

The Regulations also set out by whom a payment should be made for certain HSE services.

Nuclear operators should be increasingly aware of the need to procure services from the HSE and should budget for the 4% fee increase. The various categories of fees chargeable by the HSE are provided on its website.

Nuclear operators should also be aware of the fees that are payable in the case of a dispute. If an operator contravenes one of the statutory provisions that HSE is responsible for and has been notified in writing by an inspector of that contravention, the operator will be responsible for any fees reasonably incurred.

For more information please contact Premila Patel at premila.patel@burges-salmon.com or on +44 (0) 117 902 7729.
Amendment to the Convention on the Physical Protection of Nuclear Materials

The Convention on the Physical Protection of Nuclear Materials ("CPPNM") which currently has 152 contracting parties is the only international legally binding undertaking in the area of physical protection of nuclear materials. It established measures with regard to the prevention, detection and punishment of offences relating to nuclear material, mainly focussed on the transport of nuclear material and its subsequent transfer between States.

The Amendment to the CPPNM was first adopted by the Contracting Parties in July 2005 in order to extend the scope of the convention to cover nuclear facilities and nuclear material in domestic use, storage and transport, expand on the list of punishable offences and strengthen the cooperation and information sharing provisions between States in order to locate and recover stolen nuclear material and in the event of sabotage.

In the UK it is the Civil Nuclear Security division of the Office of Nuclear Regulation which is responsible for regulating security in the civil nuclear industry.

Following the acceptance of the Amendment by Nicaragua on 8 April 2016 the number of adherences to the Amendment reached 102 countries which was the threshold required for the Amendment to come into force. As a result the Amendment came into force 30 days later on 8 May 2016.

The IAEA is now focused on securing adherence to the Amendment from the remaining 50 signatories to the original CPPNM that have not yet accepted the Amendment.

In the UK it is the Civil Nuclear Security division of the Office of Nuclear Regulation which is responsible for regulating security in the civil nuclear industry. The main UK nuclear security legislation is centred around three acts of Parliament: The Anti-terrorism Crime and Security Act 2001, the Terrorism Act 2006 and the Energy Act 2004.

For further information on nuclear security and the extent of your regulatory obligations, please contact Ian Truman at ian.truman@burges-salmon.com or on +44 (0) 117 939 2280.

Government Consultation

Proposals to revise the Nuclear Installations (Prescribed Sites) Regulations 1983, the Nuclear Installations (Insurance Certificate) Regulations 1965 and the Nuclear Installations (Excepted Matter) Regulations 1978

As stated earlier, in June this year the Government issued a consultation on proposed changes to these sets of regulations in order to support the implementation of the 2004 Protocols to the Paris Convention on nuclear third party liability and the Brussels Supplementary Convention.

The regulations proposed to replace the Nuclear Installations (Prescribed Sites) Regulations 1983 define five categories of “prescribed site” or transport activities that would attract a lower limit of operator liability under the Nuclear Installations Act 1965. These categories included the operators of low risk disposal sites for nuclear matter which would be subject to a liability limit of €70 m and the operators of certain “intermediate sites” such as uranium enrichment facilities which would be subject to a liability limit of €160 m.

For further information on this consultation and the possible impact on your business please contact Ian Truman at ian.truman@burges-salmon.com or on +44 (0) 117 939 2280.
Brexit update

There is still no real clarity over when the UK will trigger Article 50 of the Treaty of European Union or how Brexit will impact the nuclear sector, or even whether a separate notice is needed to exit the Euratom Treaty.

For a high level review of the possible impacts of Brexit on the nuclear industry please see our briefing.

One impact of Brexit that could be significant for both the UK and its global trading partners with interests in the UK nuclear industry is that the UK will no longer be able to operate under the bi-lateral agreements for the peaceful use of atomic energy which are currently in place between the Euratom Community and other nuclear nations around the world such as the USA and Japan.

The potential impact on the UK nuclear sector will vary between different trading partners. In certain states, such as the USA, a nuclear co-operation agreement is a strict legal requirement before any international nuclear co-operation can take place whilst in others such as Canada, an agreement may be required to satisfy that state's non-proliferation policy.

The UK government will therefore have to identify and prioritise those states with which nuclear co-operation could be prohibited or significantly disrupted following Brexit and seek to negotiate replacement bi-lateral nuclear co-operation agreements prior to the UK leaving the Euratom Community.

It might also be the case that the UK could fall back on historic nuclear co-operation agreements with some states although such agreements would probably have to be updated in due course.

A government team is to be assembled to deal with nuclear Brexit issues and we will continue to monitor how matters develop.

For further information on Brexit and the potential impact on your business, please contact Ian Truman at ian.truman@burges-salmon.com or on +44 (0) 117 939 2280.

IAEA

Burges Salmon were part of the UK's delegation attending the IAEA's 60th General Conference in Vienna (pictured above). Ian Salter and Ian Truman met a number of senior figures from the IAEA as well as attending a number of organised side events to the main conference.

Inter Jura 2016

Burges Salmon will also be attending the International Nuclear Law Association's Inter Jura 2016 which will be held in New Delhi in November this year.

Please contact us if you are planning to attend.

Amber Rudd visit

Amber Rudd, the then Secretary of State for Energy and Climate Change, visited our office earlier this year to discuss Brexit and Energy Policy.

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