

# **MEMORANDUM OF UNDERSTANDING BETWEEN THE STATE ATOMIC ENERGY CORPORATION “ROSATOM” AND THE DEPARTMENT OF ENERGY AND CLIMATE CHANGE OF THE UNITED KINGDOM ESTABLISHING A PROGRAMME OF COMMERCIAL COOPERATION IN CIVIL NUCLEAR ENERGY**

## **Introduction**

The Department of Energy and Climate Change of the United Kingdom and State Atomic Energy Corporation “Rosatom” (hereinafter – Rosatom), recognising the significant ongoing cooperation between the two countries in the energy sector, and building on the long-standing agreement between the two countries on Co-operation in the Peaceful uses of Nuclear Energy, wish to work together more closely to develop a mutually beneficial relationship in the commercial civil nuclear sphere.

Both countries acknowledge the part nuclear energy can play in an environmentally sustainable, safe, secure and cost-effective energy mix.

Russian and British companies already play a significant part in the global nuclear industry and are, therefore, well placed to cooperate in civil nuclear programmes around the world to mutual commercial benefit. These relationships have been initiated but need to be consolidated and taken forward in concrete terms in order to realise the benefits to all parties.

Market based and mutually profitable commercial relationships between Russian and British companies in third markets could form the basis in the longer term of commercial cooperation in the United Kingdom. Both countries consider this to be a realistic longer-term ambition but emphasise the need for it to be taken forward in an incremental, step-by-step approach.

To this end, a systematic programme of guidance and advice to guide the next stage of civil nuclear commercial cooperation is needed. A key element of this plan will be to build understanding for the Russian Federation of the independent nuclear safety regulatory regime in the United Kingdom.

Both countries also intend to facilitate further practical cooperation between industry and the non-industrial expert community in the field of civil nuclear energy, to build an understanding of Russian technology, establish firmer relationships of trust and build public confidence.

Successful implementation of this step-by-step plan will bring the Russian and the British nuclear industries closer together and deliver real economic benefit to both countries.

In addition to developing closer links between their nuclear industries, the Participants share a commitment to ensuring the non-proliferation of nuclear material and expertise. Both countries remain committed to driving forward this global effort under the consecutive G8 Presidencies and Chairing of the Global Partnership against the Spread of Weapons and Materials of Mass Destruction.

## **ANGLO-RUSSIAN CIVIL NUCLEAR ENERGY PARTNERSHIP**

The Government of the United Kingdom will continue to work with Rosatom to help it gain a fuller understanding of the United Kingdom's regulatory and planning regimes. To that end, the Government of the United Kingdom would like to offer Rosatom a systematic programme of guidance and advice. This is in two phases. First, a preparatory phase aims to enable Rosatom and partners to plan ahead and put in place the resources and organisation needed to engage in the United Kingdom market, including, most significantly, engagement with the British regulatory system. Second, if it is decided to go ahead, Rosatom and its commercial partners would need to go through the formal and commercial steps that are needed to build and operate a civil nuclear generating facility in the United Kingdom.

The Participants acknowledge that in order to implement successfully the above mentioned systematic programme the respective skilled human resources allocation and creation of local project development team are needed. For successful project implementation and technological consistency it is indispensable that the core of the project team on the ground should be Rosatom technical and other experts and in this regard the Government of the United Kingdom should provide support for the smooth and continuous work of Rosatom employees in UK in compliance with existing legislation and particularly immigration rules.

The Participants agreed to cooperate on issues related to export control to enable and facilitate the smooth operation of this Memorandum, and any commercial agreements related to it, in compliance with the rights and obligations governing their respective export control policies.

In welcoming Rosatom's interest in the United Kingdom civil nuclear market, the Participants look forward to expanding commercial links between British companies and Rosatom, and see that as an integral part of this programme. Such links already exist in the case of Rolls-Royce, and the Participants hope that this relationship will lead to joint projects in the United Kingdom and overseas. The Participants also hope that other parts of the United Kingdom professional services and manufacturing will have the opportunity to work in partnership with Rosatom, and forge a competitive, successful and reputable international supply chain for civil nuclear energy, based on commercial agreement between the parties concerned.

The Government of the United Kingdom would like to ensure that the proposed programme of guidance and advice is designed to be the most effective means of enabling Rosatom to prepare for entry into the United Kingdom civil nuclear market, and therefore looks forward to further discussions with Rosatom, including future commercial links between British and Russian companies.

## **Systematic programme of guidance and advice:**

### **Summary**

There are a number of stages in the United Kingdom's regime that a nuclear energy company looking to build and operate a generating facility must comply with. The regime applies equally to all companies wishing to enter the United Kingdom nuclear generating market.

It is advisable for any new company seeking to enter the United Kingdom market to undertake preparatory work which, based on previous experience, is likely to take several years to complete. Therefore, the Government of the United Kingdom would like to offer guidance and advice to Rosatom to prepare for these processes.

The second, the more formal phase, will require Rosatom to commit its technical and other resources to the work that needs to be undertaken in the United Kingdom and to deepen its commercial engagement with British Companies. The second phase focusses on four areas:

- The design: (approval of the technology ultimately to be deployed on a specific site from a safety and security perspective);
- The site: (approval to use the site for the purposes of building, operating and decommissioning a civil nuclear generating facility);
- Clean up and decommissioning: (ensuring financial provision is made during operation to decommission the facility and dispose of waste);
- Commercial aspects.

It must, however, be emphasised that in the second formal phase many final decisions are the ultimate responsibility of regulators acting independently of Government or the DECC Secretary of State acting in an objective manner, such as in a planning decision.

## **Phase 1 – 2013-14:**

### **Preparation, capacity and confidence building, understanding United Kingdom rules and regulations**

- ***The culture and approach of United Kingdom nuclear regulators***

United Kingdom regulatory authorities will familiarise Rosatom with the distinctive culture and approach they take to nuclear regulation. That will include the Generic Design Assessment.

**The United Kingdom** (Department of Energy and Climate Change (DECC)) will arrange a seminar involving the Office of Nuclear Regulation (ONR) and the Environment Agency (EA) to begin the familiarisation process and achieve the necessary level of understanding.

**Rosatom** will present to the seminar an overview of its technology, an overview of its experience of building and operating a facility and an overview of how it believes its likely organisational structure will fulfil United Kingdom regulatory requirements. Rosatom will also take definitive actions to address any specific points raised by the Regulators. Rosatom will brief the Government of the United Kingdom on such actions.

- ***Regulatory Justification***

The Government of the United Kingdom, led by DECC, will provide information and engage in the process of Regulatory Justification, which is quite distinct from the process undertaken by the Regulators. The DECC Secretary of State is responsible for making the decision on Regulatory Justification.

**The United Kingdom** (DECC) will arrange a seminar on the Regulatory Justification processes to explain the requirement, how decisions are reached and the requirement for Parliamentary approval.

**Rosatom** will take definitive actions to build capacity in its organisation that would enable it to secure Regulatory Justification of its intended design. Rosatom will brief the Government of the United Kingdom on such actions.

- ***The UK planning regime***

The UK Government Department for Communities and Local Government (DCLG) is responsible for the planning regimes. However decisions on strategic infrastructure, such as civil nuclear generating facility, are taken by the DECC Secretary of State on advice from the Planning Inspectorate.

**The United Kingdom** (DECC) will arrange a seminar on the planning process (including the need for engagement with the general public and local communities), the role of the Planning Inspectorate and the role of the DECC Secretary of State.

**Rosatom** will take definitive actions to build capacity in its organisation that would enable it to undertake a planning process. Rosatom will brief Government of the United Kingdom on such actions.

- ***The implications of electricity market reforms***

Proposed reforms of the electricity market in the United Kingdom are currently the subject of new legislation undergoing Parliamentary scrutiny. That includes a new regime for contracts for difference which is the price that will be paid for electricity supplied over agreed periods of time.

**The United Kingdom** (DECC) will provide an explanation of the electricity market regime in the United Kingdom, including mechanisms such as the investment contract, insofar as policy has been developed under the current reforms in order that Rosatom understands the commercial context in which they might be making long-term investment decisions.

- ***The UK environmental protection regime***

The United Kingdom Environment Agency has a general role for the environmental protection regime, which is largely based on EU statutory requirements.

**The United Kingdom** (the Environment Agency) will provide Rosatom with guidance and advice about the work that would need to be undertaken to provide the level of environmental protection for a new development in the UK, including the most effective approaches to carrying out an environmental impact assessment.

**Rosatom** will take definitive actions to build capacity in its organisation and other related Russian governmental bodies that would enable it to ensure environmental protection in case of the project implementation. Rosatom will brief the Government of the United Kingdom on such actions.

- ***Opportunities to develop commercial partnerships with UK-based industry***

The recent joint United Kingdom Government-industry long-term strategy for the nuclear sector set out a number of future challenges and opportunities for the United Kingdom, involving all parts of the nuclear supply chain. That strategy lays the foundations for the greater exploitation of nuclear energy to meet United Kingdom's needs, as well as generating economic growth and jobs. A key part of that includes working with overseas companies concerning investment in the United Kingdom's nuclear market, and identifying opportunities for British companies to work with commercial partners in overseas markets.

**The United Kingdom** (Department for Business, Innovation and Skills (BIS) and UK Trade and Investment (UKTI)) will work with Rosatom to help identify further

mutually beneficial links with British companies for investment in the domestic market and opportunities for developing partnerships for overseas markets.

**The United Kingdom** (BIS and UKTI) will have detailed discussions with Rosatom to facilitate commercial links with United Kingdom's industry.

**Rosatom** will engage proactively with the United Kingdom's nuclear industry in order to further develop commercial relationships for deployment in third country markets and potentially the United Kingdom. Rosatom will brief the Government of the United Kingdom on such actions.

- ***Establishing links with the UK academic and research community***

Within the United Kingdom, the existing links between academia and the research community more generally will be strengthened by the creation of the Nuclear Innovation Research Advisory Board, which will be supported by the Nuclear Innovation Research Office (NIRO). Both of these are new approaches to be established during 2013 that will play a role in linking up research activity with potential industrial developments and spin-offs with British companies. This could include collaborations with commercial partners which may include Rosatom to the extent that that company has an industrial presence in the United Kingdom and a commitment to working with the British nuclear industry and wish to participate in international programmes.

**The United Kingdom** (BIS and UKTI) will have discussions with Rosatom to facilitate links with the United Kingdom's academic and research community concentrating on the areas where there are strong areas for cooperation in order to build a strong knowledge base in the United Kingdom of Rosatom technology.

**Rosatom** will take definitive actions to build such links and brief the Government of the United Kingdom on the progress of such links.

- ***Understanding United Kingdom's legislative requirements for waste and decommissioning finance***

The United Kingdom (DECC) will provide information and guidance about the requirements to submit a Funded Decommissioning Programme to the DECC Secretary of State for approval and to enter into a Waste Transfer Contract.

**The United Kingdom** (DECC) will arrange a seminar on waste and decommissioning finance arrangements, the requirements of the Energy Act 2008, and the requirement for clear, realistic and achievable plans for decommissioning and waste management.

**Rosatom** will take definitive actions to build capacity in its organisation that would enable it to meet waste and decommissioning financing arrangements. Rosatom will brief the Government of the United Kingdom on such actions.

- ***The importance of full and open public engagement about proposed civil nuclear developments***

New nuclear facilities such as a power station are highly dependent on public acceptability. This requires all of those involved in nuclear energy – United Kingdom's industry, inward investors, academia, research organisations, and government – to play an active part in communicating openly with the public, and responding constructively to requests for further information and debate. This will be particularly important for companies like Rosatom that have ambitions for investing in the United Kingdom's new build market and are new to this market. Working with British firms on engaging with the public and local communities will be important.

**Rosatom** will ensure that DECC and BIS are aware of its public communication activity in the United Kingdom and take all reasonable efforts to build a successful record in the United Kingdom and globally and ahead of the new build opportunity. Through its activities with British companies and academic institutions, Rosatom will build support for the new nuclear programme in general and the commercial opportunities that it affords.

## **Phase 2 – 2015 and beyond: a more formal phase involving various applications for approval**

Progress with Phase 1 is a prerequisite to proceeding to Phase 2, so it will be useful to review the situation at the end of 2014. If necessary, further preparatory work may be required before proceeding to Phase 2. Timelines are in any case approximate, and can be reviewed periodically to ensure that they are realistic. In order for Phase 2 to be progressed, firm contracts and relationships would need to be in place with British companies, and progress made for collaboration in third markets in order to show a successful track record in joint working.

One of the key characteristics of Phase 2 is the longer-term nature of the challenges and opportunities that it provides. This relates to the design of the nuclear power station; the site; financial provision for waste management and decommissioning; and the commercial robustness of any investment proposals. These are outlined below.

- ***The Design***

A very significant step towards construction relates to design. As a first step, a formal engagement with the nuclear regulators for the recovery of costs incurred during the GDA process will need to be signed prior to the submission of the design itself for assessment. During the assessment, which will proceed in phases, the regulators will raise 'Regulatory Issues' (the most serious) and 'Regulatory Concerns' (less serious but still significant) which must be addressed in a constructive and evidence-based way, and in a timely manner if the process is to proceed smoothly and to schedule. In parallel to the GDA process, a process of Regulatory Justification will also need to be undertaken. A site licence (see below) cannot be issued without the design in question having been Justified. Regulatory Justification is an assessment undertaken by the DECC Secretary of State into whether a design is justified by its economic, social and other benefits in relation to the health detriments it may cause. The GDA assessment of a design can take 3-4 years (or more dependent on progress) which, like the other themes in Phase 2, underlines the need for Rosatom to commit resources to the United Kingdom project for many years.

- ***The Site***

Another very significant aspect relates to the site. First, access to a site designated in the Nuclear National Policy Statement is required. Once this is gained, the site will need to undergo technical characterisation. Affected communities will also need to be consulted in accordance with statutory requirements. A formal planning application will then need to be made to the Planning Inspectorate who, within a set period of time, will make a formal recommendation to the DECC Secretary of State. The DECC Secretary of State's decision on the proposal is a quasi-judicial one. Once GDA is nearing completion, a site licence must also be applied for from the ONR: this is approval to deploy a specific design at a specific site (unlike GDA which is a generic design independent of site); the Environment Agency will need to be applied to for various environmental permits. This description is not exhaustive and it might be,

depending on the site and design, that other organisations need to be applied to for permits, for example the Marine Management Authority, in respect of costal impacts.

The Participants identified the special need to address and further work on the development of the interface between national and site specific security provisions and its relation to foreign operators in the United Kingdom taking into account that the solution for this matter would require a support from the Government of the United Kingdom.

- ***Financial provision for clean up***

The final broad aspect of the process towards construction relates to financial provision for waste and decommissioning. In order to satisfy the DECC Secretary of State that prudent provision is being made for clean-up (decommissioning, waste management and waste disposal) the operator must submit a Funded Decommissioning Programme (FDP) for approval by the DECC Secretary of State; the operator must also enter a Waste Transfer Contract with the DECC Secretary of State for the disposal of spent fuel and intermediate-level waste.

- ***Commercial aspects***

In parallel to all these activities the operator will need to progress the commercial aspects of the project. Most obvious is the strike price to be received in the GB electricity market. It should be noted, that although this is currently the subject of bilateral negotiation between the operator and the DECC Secretary of State, this is not necessarily the long-term model for determining the strike price, which may in future be determined by auction or some other competitive process. The operator will also need to progress the commercial aspects of the supply of goods and services, including nuclear related goods and services, to the project itself.

Once all necessary regulatory and statutory approvals have been received and the commercial aspects agreed, the conventional approach is for the operator to take an investment decision to commence construction.

An electricity generator will need to understand the system of transmission charging, and ultimately obtain and comply with the licence conditions to use the UK electricity transmission network operated by National Grid. As a regulated entity, National Grid is required to publish information on transmission charging but engagement is necessary and a seminar with the National Grid can be arranged by DECC at the appropriate time ahead of a final investment decision being made. This will ensure that the operating company understands the licence conditions that they will need to sign up to and the general electricity market arrangements.

The Participants acknowledge that this Memorandum shall not be deemed as an international agreement and shall not create legal obligations governed by international law.

Signed on \_\_\_\_\_, 2013 at \_\_\_\_\_ in English and Russian languages, both variants of equal legal power.

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Change

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