Ninth Annual Japan-UK Nuclear Dialogue
(Summary of Discussions)

Date: 8 December 2020
Venue: Virtual meeting

Co-Chairs:

Mr Stephen Speed (Director, Nuclear, Department for Business, Energy and Industrial Strategy, UK)
Mr Ikematsu Hidehiro (Deputy Director General, Ministry of Foreign Affairs of Japan)

Background

The 'Japan-UK Framework on Civil Nuclear Energy Cooperation', which was annexed to the joint statement at the Japan-UK summit meeting in April 2012, states that Japan and the UK decided to launch an annual dialogue at senior level to strengthen bilateral cooperation across the full range of civil nuclear activities.

The ninth annual meeting was hosted virtually by the Ministry of Foreign Affairs of Japan, on the 8th December 2020.

Session One: Nuclear Energy Policy

The UK and Japan provided an update on their policies with respect to nuclear energy. Both sides noted their net zero by 2050 commitments and emphasised the importance of nuclear energy in achieving these goals. The UK and Japan look to collaborate on the development of innovative nuclear technology, especially in the field of Small and Advanced Modular reactors, and the potential to work together on the development of High Temperature Gas-Cooled Reactors (HTGRs) was discussed.

Both Japan and the UK are due to publish details of their plans for reaching net zero – Japan will release an action plan that will outline targets, development of regulatory standards and measures to support implementation and the UK said it will publish its Energy White Paper following on from the UK Prime Minister's announcement of the 10-Point Plan for a Green Industrial Revolution. Both sides noted that many of their goals on the way to reaching net zero were shared between both countries.

Japan updated the UK on its progress in restarting its nuclear reactor fleet and outlined an initiative in Japan that aims to accelerate innovation in nuclear, including in Small and Advanced modular reactors where there is scope for international collaboration. In addition, Japan Atomic Energy Commission introduced outline of White Paper on Nuclear Energy 2019 and pointed out the importance of human resource development in its special report. The UK reported on the recent 10-Point Plan announcement which demonstrated the UK Government's commitment to both large-scale and advanced nuclear reactors as part of the UK energy mix and also updated Japan on the progress of the Hinkley Point C nuclear power plant.

Session Two: Decommissioning and Environmental Remediation

METI (Japan's Ministry of Economy, Trade & Industry) and the UK's NDA (Nuclear Decommissioning Authority) provided an update on decommissioning in their respective countries and highlighted the considerable number of decommissioning activities that Japan and the UK work together on. The benefit of linking up of decommissioning sites with similar challenges and

experiences in the UK and Japan was highlighted as important progress in bilateral cooperation in this area.

A wide range of collaborative activities between the UK and Japan were highlighted, including the exchange of technical information and best practice, secondment of technical and expert staff and work on specific projects in Japan such as at Monju and Fugen. The NDA and METI noted that both countries are examining improvements to integrated waste management and that this presents opportunities for collaboration. Japan also updated the UK on the Government of Japan's efforts on off-site Environmental Remediation in Fukushima Daiichi, presented by the Ministry of the Environment (MOE).

Both sides recognised the importance of the project currently underway between Veolia Nuclear Solutions (UK) and Mitsubishi Heavy Industries (MHI) to develop a robotic arm for fuel debris sampling at Fukushima Daiichi. Japan explained the process by which a decision will be made about how to deal with the treated water at the Fukushima Daiichi and site, which meets international regulatory standards, noting that the Government of Japan will make a decision on this in a transparent way.

The UK recognised that the ongoing management of the treated water was impeding on progress cleaning up the site. While a decision on the discharge of the treated water is for the Government of Japan to make, the UK respects and agrees with the science behind such a step and the UK outlined that it sees no reason that why the treated water should not be discharged, provided consideration is given to appropriate dilution and rate of discharge.

Session Three: Nuclear Research and Development

Both sides welcomed the success of the continuing UK-Japan joint research fund, which had resulted in several successful projects, primarily in the areas of advanced technologies and decommissioning, since its inception in 2014.

The Ministry of Education, Culture, Sports, Science and Technology (MEXT) provided an update on Japan's nuclear R&D activities. Japan will be focusing their research in four main areas: fuel cycle and high-level waste; decommissioning of Fukushima Daiichi; nuclear safety, and; nuclear science and engineering. Japan introduced their plans for a new research reactor at Monju with a secondary goal to develop the sector's workforce which is facing challenges due to a lack of new entrants and aging of current skilled workers.

MEXT also touched on development of advanced reactors such as: the fast reactor competition which Japan is looking to collaborate on with international partners; the Joyo reactor for which an application has been submitted to Japan Atomic Energy Agency (JAEA) to request permission to restart; and the collaborative efforts being made to develop an HTGR including an industry-academia-government forum to develop overseas strategies for the HTGR and the collaboration on R&D between regulators and research institutions in Japan and the UK.

Like Japan, the UK recognises the need for R&D into decommissioning due to the uniqueness of several facilities in the UK. The UK's NDA highlighted their aim to carry out cheaper, faster, and safer decommissioning, and set out the NDA's Grand Challenges for Technical Innovation. Examples of existing UK-Japan R&D collaborations include LongOps (long reach robotic systems) and JUNO (academic collaboration).

Session Four: Public Communication

Both sides recognised the importance of transparency and clarity with the public on nuclear energy. BEIS provided an update on the Public Attitudes Tracker which showed a generally positive attitude to civil nuclear, particularly amongst younger people. METI outlined the channels Japan has used to communicate nuclear-related topics including providing updates to international communities at various fora and engaging with local stakeholders via meetings and public dialogues.

Session Five: Nuclear Regulation and Safety

Regulators from the UK and Japan summarised the latest developments on nuclear regulation in their respective countries. The dialogue welcomed the upcoming secondment of a further regulator from the Japanese Nuclear Regulation Authority (NRA) to the UK Office for Nuclear Regulation (ONR).

The UK's ONR updated the attendees on the UK's new safeguards regime to be implemented from 1 January 2021. The ONR also introduced its modernised approach to the Generic Design Assessment for new nuclear reactor technology to make the process more flexible and efficient. The ONR also drew attention to its recent *Approach to Regulating Innovation* report which examines new approaches to regulation, while ONR also builds up expertise in cutting-edge reactor technology such as SMRs and AMRs to enable effective future regulation. The ONR also updated Japan on its work to enable a future geological disposal facility.

Both sides reflected on the impact and challenge of COVID-19 in the area of nuclear regulation, including inspection regimes. Japan outlined the steps it took to effectively manage the situation. Japan also reflected on the lessons learned for future regulation following the accident at the Fukushima Daiichi nuclear power plant.

Concluding Remarks

The co-chairs, Mr Stephen Speed and Mr Ikematsu Hidehiro, expressed that the Ninth Annual UK-Japan Nuclear Dialogue had again seen an increase in the number of successful collaboration activities between the UK and Japan, most prominently in the areas of nuclear regulation, research and development, decommissioning and advanced nuclear technology development. Mr Ikematsu highlighted the importance of public communication on the decommissioning of the Fukushima Daiichi nuclear power plant including handling of the ALPS treated water, and also noted the signing of the Amending Protocol to the UK-Japan Nuclear Cooperation Agreement being underway and this underpinning our bilateral nuclear energy cooperation.

The delegations reaffirmed that the UK and Japan share common values and see each other as natural partners to pursue further opportunities and deepen what is a historic relationship for the long term. The delegations hoped they would be able to hold the Dialogue in London in fiscal year 2021 and to continue to promote the positive relationship.

Appendix: List of Acronyms

AMR – Advanced Modular Reactor
BEIS – Department for Business, Energy and Industrial Strategy (UK)
HTGR – High Temperature Gas-Cooled Reactors
JAEA – Japan Atomic Energy Agency
METI – Ministry of Economy, Trade and Industry (Japan)
MEXT – Ministry of Education, Culture, Sports, Science and Technology (Japan)
NDA – Nuclear Decommissioning Authority (UK)
NRA – Nuclear Regulation Authority (Japan)
ONR – Office for Nuclear Regulation (UK)
R&D – research and development
SMR – Small Modular Reactor