

## ***Report on the second meeting of the Nuclear Fusion APPG***

***Tuesday 29 January 2019 2-3pm***

Opening remarks from the APPG Chair – John Howell MP – welcomed attendees and proposed a name change for the group to the APPG for Fusion Energy. This was agreed.

This was followed by a presentation from Ian Taylor, former Minister for Science, Space and Technology (1994-97) and Chair of the UK Innovation and Science Seed Fund (UKI2S). Ian noted that fusion energy is a growth area and private sector investment is needed in addition to Government funding. This is clearly happening – UKAEA is supporting industry to win contracts on ITER and develop spin-out technologies and the growth of private companies, such as Tokamak Energy UK and First Light Fusion shows an appetite for private investment. Ian Taylor stressed that is important for Government support and funding to help leverage and enable private investment, rather than hinder it.

Lord Willetts, former Minister of State for Universities and Science (2010 – 2014) then made a short presentation. He stressed how the UK needs to commit to support fusion research – then explored how the fusion community can unlock more funding from Government and leverage more private investment as well. Lord Willetts made a number of observations that could help with advancing the case for fusion:

- Influence MPs through the wider fusion supply chain.
- Develop an overall (public and private) fusion technology roadmap – which can identify technology gaps and apply for funding in these areas.
- Develop Culham Science Centre as an incubator for private fusion companies and start-ups
- Take advantage of the UKs leadership in fusion / wider nuclear standards and regulation – to help shape the future fusion economy.
- Capitalise on spin-outs in related technology areas – robotics being a good example.
- Ensure training keeps up with growth – recognising that over-training for other science research areas is a good thing.

John Howell then opened up a wider debate - focussing on what the APPG can realistically do to help fusion develop and exploring how skills and apprenticeships might play in to growth aspirations. Particular points from the discussion included:

- Recognising that MPs pay particular attention to their constituencies, widen the reach of the group by contacting MPs with key parts of the nuclear supply chain within their local area.
- Fusion needs to break away from the '30 years away' label and promote itself as a viable technology in the wider Clean Growth / Climate Change debate (both within Government and the wider public consciousness). The growth of the UK space industry is a good example of what can be done.
- A recognition that publicly funded programmes (such as UKAEA) and private companies (such as Tokamak Energy UK and First Light Fusion) are winning investment and making progress in very different ways. There needs to be sensitivity in messaging by both sectors to ensure the whole field can collaborate on common challenges and thrive.

- The fusion technology roadmap was considered an excellent idea and should be used to celebrate milestones and successes, without being burdened by past issues or difficulties.
- It was agreed that apprenticeships give a great opportunity for fusion organisations to engage with schools and young people to build up the skills base.
- It was agreed that Government can help the fusion sector by investing in the Science (at UKAEA, universities, private companies); Sites (with the infrastructure to build more advanced experiments); Standards (building on the UKs expertise in this area) and Skills.
- The value of a 'Fusion Cluster' at Culham – as home to private companies as well as the overall public UKAEA programme
- Communicating the overall case for fusion as part of the future portfolio of clean energy needs to be improved – and could be undertaken in a collaborative way. The present Science Museum exhibition on fusion research is a good example of how this can be achieved.

The meeting was thought provoking and came up with some constructive ideas for how all fusion organisations can work more closely to communicate and advance the development of this transformative energy technology.