UKAEA and Commonwealth Fusion Systems sign agreement to advance fusion energy

UK Atomic Energy Authority (UKAEA) and Commonwealth Fusion Systems (CFS) have announced a new trans-Atlantic agreement to advance commercial fusion energy.

The new five-year Collaboration Framework Agreement establishes the terms under which a series of work projects between US-based CFS, from Massachusetts, and UKAEA will support the development of fusion energy and related technologies.

This agreement is the result of a shared mission of both organisations to leverage innovative research and the speed of the private sector to support the fastest path to low carbon commercial fusion energy – based on the same processes that power the sun and stars.

Prof. Ian Chapman, UKAEA CEO, said: “Achieving our shared missions to deliver low carbon and sustainable fusion energy involves working at the forefront of science, engineering, and technology. This new collaboration agreement with CFS will help push these developments and capabilities, drive innovation and accelerate progress.

“Fusion presents an exciting opportunity for the UK and we’re proud our ground-breaking work here continues to support economic growth and attracts such leading international partners.”

Bob Mumgaard, CFS CEO, added: “CFS and UKAEA have a mutual interest and strong belief that public-private collaborations such as this represent a way to accelerate advances in commercial fusion energy technology and support CFS’ plans to deliver commercial fusion as quickly as possible.

“UKAEA is a leader in fusion energy research and CFS plans to establish a UK presence as we leverage the combined skills and talents of both organisations to develop the fastest path to commercial fusion power on the grid.”

The scope of the collaboration could include:

- Operations teams sharing and learning best practices from fusion experiments
- Access to fusion-adjacent technology facilities, including robotics
- Collaboration on fuel cycle technologies, neutronics modelling, systems integration models, advanced manufacturing, diagnostics, remote handling and remote maintenance
- Collaborative work to identify and answer emerging plasma physics questions

Last month, the UK government confirmed that future fusion energy facilities will be regulated by the Environment Agency (EA) and Health & Safety

Executive (HSE). This provides clarity to developers of prototype and demonstration fusion facilities currently being planned, including the Spherical Tokamak for Energy Production (STEP), UKAEA’s ambitious plan to accelerate the delivery of sustainable fusion energy.