

SPEECH

Vice-president, distinguished guests, ladies and gentlemen, it is a great privilege for me to participate in the inauguration of the new 'Swiss Plasma Center'. Switzerland is an important partner of the European Union in many respects, not least of which research & innovation, and EPFL is a world-renowned centre for higher education and learning. Therefore, as a representative of the European Commission with specific responsibilities for research & innovation, it is a particular honour for me to be present here today.

The European Commission is the executive EU institution under the Euratom Treaty and has responsibilities for the Euratom research programme in particular. In my short address I will therefore present the view from the Directorate-General for Research & Innovation, which is the Commission service responsible for managing the Euratom research programme.

Of course, the Euratom programme covers actions in both fission and fusion research. In both these fields, Switzerland has been a long-standing and valued partner. Indeed, the Swiss participation in Euratom projects, whether fission or fusion-related, is typified by a high level of competence and professionalism.

Looking first to the past, Switzerland had a formal cooperation agreement with Euratom in the field of fusion research as early as 1978. This provided the framework for all subsequent joint activities, including both bilateral support via a 'Contract of Association', as well as the multilateral cooperation on JET – the Joint European Torus near Oxford in the UK – and under the 'European Fusion Development Agreement'. It also provided the basis for the Swiss involvement, through Euratom, in the ITER project.

Switzerland has therefore been present in the Euratom fusion programme longer than most current EU Member States, and has been an important partner in the global endeavour to develop magnetic-confinement fusion as a safe, clean, sustainable and competitive energy source.

This cooperation became even more firmly established through the formal association of Switzerland to the Euratom Framework Programmes. I'm sure I speak for fusion research laboratories throughout Europe when I say that the benefits of this association have been appreciated by all those participating in the Euratom fusion programme. This programme is widely recognised as the best example of the 'European Research Area' – by which I mean the sharing of key research facilities, the free movement and mobility of researchers, joint research activities, shared and common goals – and Switzerland has been an integral part of this process and can also be justifiably proud of the success achieved.

I would like to mention just a few highlights of this cooperation. Professor Tran of EPFL, as the leader appointed under the European Fusion Development Agreement, sat in the driving seat of European multilateral collaboration in fusion research for several years. The unique SULTAN facility at Villigen has been the backbone of magnet development for ITER. TCV was recognised by Euratom's international 'Facility Review' panel in 2008 as one of the three most important plasma devices in Europe, complementing 'ASDEX-upgrade' in Germany and JET in the UK. The development of 'electron-cyclotron heating' has contributed significantly to the 'Wendelstein 7-X' project in Germany as well as, of course, ITER.

Moving forward to the present, the establishing of the Swiss Plasma Center is therefore the latest in a long line of developments and contributions, and reaffirms the continuing role and importance of Switzerland in the fusion programme.

We are now more than 18 months into the Horizon 2020 programme. Energy research in general is a crucial part of this programme, and energy is now at the top of the political

agenda in the EU. The creation of the Energy Union is one of President Juncker's 10 key political objectives, and research & innovation are one of the five key pillars of this Energy Union. In this process, the potential contribution of nuclear research, including fusion, has been recognised.

Only last week, the Commission formally adopted a Communication entitled 'Towards an Integrated Strategic Energy Technology (SET) Plan: *Accelerating the European Energy System Transformation*'. Though the focus of this Communication is research & innovation in the area of renewables, there are nonetheless important references to nuclear research and fusion, including the ITER project, EUROfusion and the fusion roadmap. The Commission believes that fusion has the potential to become an important low-carbon energy source, and that the ITER project must play a crucial role in this process. For this reason I was particularly interested to hear the latest news from the newly-appointed Director-General of the ITER International Organisation.

Regarding the research effort that must go hand in hand with ITER construction, the Euratom Commission has championed the establishing of a more focused and goal-oriented approach that builds on the solid foundation already established through past Euratom programmes. The agreement by all European laboratories on a comprehensive European roadmap to fusion electricity, together with the establishing of the EUROfusion consortium to implement a joint programme in line with this roadmap, have been absolutely vital in this transformation. I am also grateful to the two previous speakers for their presentation of these important developments.

As with all transformations, this has required the close cooperation of key stakeholders, a common vision on the way forward, a pro-active approach and a clear willingness to evolve. Here as well, the Commission is grateful to the Swiss partner for its constructive contribution and leadership as one of the larger European labs. The Commission views the establishing of the SPC as a clear sign that the Swiss programme is evolving in order to adapt to the new landscape in Europe, in particular by consolidating around areas of recognised competence. With the new upgrades to TCV and the deeper integration and coordination of its physics programme under EUROfusion, this Swiss contribution will become even more visible and important.

Thanks to the Association Agreement signed last year, Switzerland remains a full and active partner in EUROfusion, and the benefits are clear for all parties ... the upgraded TCV will be one of the most important research infrastructures in EUROfusion's Joint Programme, and Swiss researchers continue to enjoy unbridled access to other key facilities and research activities across Europe.

Looking to the future, it is clear that the ITER project is on the critical path to fusion as a commercial energy source, and the physics and technology programme of the Swiss Plasma Center, as well as the contribution by Swiss industry, will be important elements in delivering this success. Fusion is a long-term and risky endeavour, but countries representing more than half the world's population consider that these risks are worth taking in view of the enormous potential benefits. Already, progress along the European fusion roadmap is real and demonstrable, and the success of ITER in the next decade will be a wake-up call for all those who may have doubted the ingenuity and dedication of scientists and engineers in this field. In this endeavour, Switzerland has firmly planted its flag with that of the EU, and I look forward to many more years of close cooperation between all fusion researchers in Europe.

I wish you all possible success in your research.

Thank you.