

Check against delivery!



Commissioner Janez POTOČNIK

Speech

'Fusion and the future'

Barcelona, Spain

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Ministers, Ladies and Gentlemen,

It is a pleasure to be here today. I would like to start by expressing my thanks to the Minister, the Catalan Authorities and the city of Barcelona for their unending support in hosting this new European organisation.

It seems that I am destined to be in Spain for all the important events this year. It was in Madrid on 10 April that I launched the Green Paper on the European Research Area. And it is here in Barcelona that I am at the launch of Fusion for Energy.

I am told that fusion energy is about 30 years away. I am also told that fusion energy has always been 30 years away. In 2001, a Belgium Presidency expert group examined a fast track towards fusion energy production. They concluded that, even as a fast track activity, this would take 30 years.

But now, for the first time, there is real urgency and progress in realising this energy. Energy is a vital part of our daily lives. A secure and sufficient supply is essential to maintain our standard of living.

Today fossil fuels, such as oil, coal and natural gas, account for 80% of our total energy consumption. If nothing changes, we will have consumed in two hundred years most of the fossil resources accumulated over hundreds of millions of years.

In Europe, we have seen a significant increase of dependence on energy imports.

And we have already seen oil and gas prices double over the past three years, with electricity prices following. This is not only a cost to consumers. It is a cost to planet.

Fossil energy combustion is the main factor in human-induced climate change, accounting for 80% of EU's greenhouse gas emissions.

This depletion of resources, our reliance on imported supplies and the threat of global warming call for a step change in our approach to energy production, transformation and consumption.

That is why European leaders recently endorsed an energy policy designed to ensure security of supply, maintain competitiveness and take account of environmental objectives.

Europe has committed itself to reduce greenhouse gas emissions by 20% by 2020 - and is ready to reach 30% if there is a global agreement.

The ultimate goal is to keep the planet's average temperature rise below 2°C. This requires greenhouse gas emissions reductions of 60% to 80% by 2050. And this can't be achieved without a transition to a low carbon economy.

This is where fusion energy enters the scene.

Fusion has the potential to be a large scale carbon-free source of base-load electricity. It is one of the most promising technologies for both economic growth and a sustainable environment.

Fusion, for example, can produce as much energy from half a bath of water and a notebook battery as 40 tonnes of coal.

With EU support, we have established a close knit web of fusion laboratories in Europe through "Contracts of Association" with the Community.

The European Fusion Development Agreement (EFDA) has also brought European fusion laboratories closer together.

This integrated European fusion programme is often cited as the model of the European Research Area. And the EU's new Seventh Framework R&D Programme also offers a significantly increased budget for fusion research of almost €2000 million

Together we have built the largest and most successful fusion project ever – the Joint European Torus or JET. JET has broken world records in fusion parameters and brought together researchers from all over Europe.

JET and other European experiments have paved the way for what is arguably the biggest and most exciting global research project ever – ITER.

ITER is really showing us the way – and as many of you know, ITER, in Latin, means 'the way'.

ITER is a first.

- It is first to demonstrate the scientific and technological feasibility of fusion energy for peaceful purposes.
- It is first to bring together countries representing half of the world's population — Japan, Russia, China, the United States, Korea, India and Europe — to build an immense scientific facility, based in Cadarache, France.
- And today is the first official meeting where the Governing board of Fusion for Energy will be adopting several decisions on setting up the organisation. I understand around 60 members of the Governing Board are in the audience today.

I am pleased that today we are launching the new joint venture of 'Fusion for Energy' in Europe. As we all know, ITER is not a purely European initiative. But Europe, through its specialised industries, is providing almost half of the components that make up the ITER project, under the form of "in-kind" contributions.

To provide these components, the 'Fusion for Energy' Joint Undertaking will be working together with industry and research organisations.

But 'Fusion for Energy' is much more than a procurement agency providing the parts for ITER.

Its second important mission will be to provide the European contributions to the broader Approach agreement with Japan, which includes the engineering design activities for the International Fusion Materials Irradiation Facility (IFMIF).

And thirdly, Fusion for Energy is mandated to prepare for the construction of demonstration fusion reactors (or DEMO) that can demonstrate large-scale electrical power production.

I am convinced that Europe must be at the very forefront of the DEMO effort – and we have a duty to realise the investment of European taxpayers in this venture.

Ladies and gentlemen,

Today is a very special day: The ITER project has been of great personal interest to me and I feel fortunate to have been able to be directly involved.

I was proud, as several of you who were also present, to be at the signing ceremony for ITER last November. As I did then, I want to pay tribute to every researcher, engineer and technician, who conceived, defended and developed ITER.

But the real work is just beginning. 'Fusion for Energy' could be a powerhouse of knowledge and expertise, enabling Europe to be in pole position to make electricity-generating fusion reactors.

Today's event is not just about generation – it is also about regeneration. 'Fusion for Energy's offices are located in '22@, the dynamic innovation and technology district of Barcelona. This is a district which has been regenerated and embraces the knowledge-based economy. It is, in effect, a mirror of what Europe is doing.

I would like to finish by telling the members of the Governing Board that 'Fusion for Energy' is a real joint venture for which your dedication is crucial.

When the JET celebrated its 25th Anniversary Celebrations of JET, the former Director of Research in Euratom Donato Palumbo said, *“In 1958 fusion was a dream and energy problems were important. Now fusion is a hope and energy problems are becoming critical”*.

He was right. It is time for fusion to deliver. And this is now in your hands.

Thank you.