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QUITE A DAY

Tuesday 21 November 2006 was a great day for fusion research as Ministers from the seven ITER Parties gathered in the morning, at the invitation of President Jacques Chirac, in the sumptuous Salle des Fêtes of the Elysée Palace in Paris to sign the Agreement setting up the ITER International Fusion Energy Organization.

The signing of the Agreement took place in the presence of President Jacques Chirac and the President of the European Commission José Manuel Durão Barroso and some 400 invited guests including high level representatives of the ITER Parties and European Member States, leading figures from the International ITER Team and European Fusion Research programme and representatives of local, regional and national authorities. A large press presence meant that the event received extensive media coverage right around the world, as befits a venture in which over half of the world's population is now represented.



The signatories of the ITER Agreement, together with French President Jacques Chirac and the President of the European Commission José Manuel Durão Barroso. From left to right: Vladimir Travin (Deputy Head of the Federal Atomic Energy Agency (Rosatom), Russian Federation), Takeshi Iwaya (Vice-Minister for Foreign Affairs, Japan), Xu Guanhua (Minister of Science and Technology, People's Republic of China), José Manuel Barroso (President of the European Commission), Jacques Chirac (President of the French Republic), Woo Sik Kim (Vice Prime-Minister, Ministry of Science and Technology, Korea), Anil Kakodhar (Secretary to the Government of India, Department of Atomic Energy), Raymond Orbach (Under Secretary for Science, U.S. Department of Energy), and Janez Potočnik (European Commissioner for Science and Research).

In addition to the main Agreement on ITER joint implementation, Ministers also signed an Agreement on Privileges and Immunities to be accorded to the ITER Organization and an "Arrangement on Provisional Application" of the Agreements which will allow the co-operation to proceed immediately to the fullest extent possible, pending the official entry into force of the Agreements.

In their address to the assembly, Presidents Chirac and Barroso welcomed the guests in the names, respectively, of the Host State and of the Host Party to ITER and referred to the historic importance of the step that was being taken in terms of both the development of a major new sustainable source of energy for humanity and of international scientific collaboration – themes that were echoed by the Parties' Ministers in their public statements.

Speech by Mr. Jacques Chirac, President of the French Republic

Mr President of the European Commission, Ministers, Ambassadors, Elected Representatives, Ladies and Gentlemen,

It gives me great pleasure to welcome you today for the signing of the international ITER Agreement on controlled nuclear fusion, a new step on an adventure exceptional in every way.

Exceptional for its scientific ambition: to harness the sun's power to take up the challenge of ecological energy.

Exceptional for its international scale: the unprecedented association of seven major partners from the North to the South, whose representatives I warmly welcome.

Europe and France particularly appreciate the honour you have bestowed on us by choosing Cadarache to host the facility. Our hearts will be set on fully assuming this responsibility.

We are duty bound by the stakes. If nothing changes, humanity will have consumed in two hundred years most of the fossil resources accumulated over hundreds of millions of years, triggering at the same time a climatic upheaval. The depletion of these resources and action to combat global warming call for a revolution in our methods of production and consumption.

It is our duty to undertake the research that will prepare energy solutions for our descendents. The major scientific project that is ITER is one of the most innovative programmes to steer this tremendous change. It is the hand held out to future generations, in the name of solidarity and responsibility.

The ambition is huge! To control nuclear fusion. To control the tremendous amount of energy generated at one hundred million degrees and to design sufficiently resistant materials for the purpose. To produce as much energy from a litre of seawater as a litre of oil or a kilo of coal.

A great deal of progress has been made since the first Russian Tokamak. Yet ITER marks a milestone, and three decades of research lay ahead for our nations with the hope of a solution of use to all mankind.

On behalf of us all, it is my pleasure to pay tribute to every one of those, researchers, engineers and technicians, who conceived and have passionately defended and developed ITER.

This major scientific project is also the fruit of over twenty years of exemplary international co-operation under the aegis of the International Atomic Energy Agency.

For the first time ever, seven major partners — Japan, Russia, China, the United States, Korea, India and Europe — representing half the humanity, have joined forces to build an immense scientific facility.

With information exchanges and sharing among scientists from the world over, international partnership, and the pooling of contributions and skills, ITER is first and foremost a victory over the strategies of supremacy that so marked the last century. The victory of humanity's interest as a whole.

The choice of the Cadarache site owes a great deal to Europe's commitment, which has supported fusion programmes for the last thirty years. I would like to thank all the Europeans who have taken part in these programmes, and especially President Barroso, without whom none of this would have been possible. This all-important Europe to whom France owes the hosting of ITER!

Not to mention the all-important local authorities. The urban district community, general councils and regional council are all supporting the project through their financial assistance and by hosting the scientists and their families. Since they are all aware of the economic ramifications of ITER: nearly 3,000 direct and indirect jobs in the region and many others in each partner country.

ITER will also open up new prospects for many sectors in the high-tech industries, public works and engineering. All the firms will have their opportunity in the European and international invitations to tender that are starting to be launched. Their mobilisation is vital to the project's success.

Last but not least, ITER, this scientific jewel, will have tremendous knock-on effects in terms of scientific, academic and industrial image, attractiveness and activity. France is proud and pleased that the international community has chosen this country, bearing witness to the quality and competitiveness of our teams and our environment.

Ladies and Gentlemen, France will be ever vigilant and committed to the success of ITER, to the success of this emblematic response to the challenges of our time: the response of humanity united, putting science, industry and progress to work for economic development respectful of the environment. Thank you.

Speech by Mr. José Manuel Barroso, President, European Commission

Mr. President, Excellencies, Ladies and Gentlemen,

The ITER Agreement is signed! It only remains for us now to remit the document to the Director General of the International Atomic Energy Agency who has kindly accepted to be its depositary. I believe that we have all just participated in a very great event today in Paris, one that will stay etched in our memories.

May I, first of all, thank President Chirac for honouring us with his hospitality in receiving us in the Elysée Palace. But I want also and above all to thank him for having brought to bear his unfailing support to the ITER project, the outcome of which we are celebrating today. Mr President, this great project owes a great deal to you. I should like to bear witness of this on behalf of the European Commission and of the international community gathered here.

I should like also to salute the extraordinary work and commitment of the Scientists and Engineers who have made possible the promise of ITER.

Let me tell you that I am proud of the role that the Commission has played right throughout the negotiation process and that brings us today to an historic act of signature.

We, the seven parties to the ITER Project who represent more than half of the world's population have just made an investment in the future of generations to come in uniting our efforts to demonstrate the scientific and technological feasibility of producing energy from atomic fusion. We have from now on the structure that will allow us to address one of the most urgent challenges for humanity: the invention of clean and sustainable energy sources for tomorrow. Right now, with energy demand growing remorselessly and climate change accelerating dangerously, the stakes are considerable – not to say vital for our planet.

For the European Union, ITER is sited squarely in a vast logical framework to assure its prosperity and the quality of its environment over the long term perspective.

ITER is the fruit of a joint mobilisation to face up together to this issue which crosses all frontiers. But its official birth today demonstrates also the strength of a united Europe. That is why I can assure you that Europe is fully determined to assume its responsibilities in this project.

Europe is at the forefront of the struggle against climate change. It has taken initiatives in energy, committing itself to reduce emissions of greenhouse gases. It should now hold to this commitment, significantly intensifying its efforts, just like its international partners.

As concerns energy, Europe is on the move. Energy has always been at the heart of European integration ever since the birth of the Coal and Steel Community in 1952 and of the EURATOM Treaty of 1957. The European Union, as the world's leading importer and second largest consumer of energy depends today on 50% from external sources to cover its needs.

That is why European leaders have recognised the need for an integrated energy policy to ensure security of supply, to maintain competitiveness and to take account of environmental objectives. We are making big strides in this direction. The European Commission will propose this coming January a genuine energy strategy together with a complete series of ambitious measures.

The action to which Europe is committing itself, however cannot stand apart from that of the world around it. It is in the framework of international co-operative partnerships that we shall find the means to resolve the dual threat, now universal, of climate change and security of energy supply.

In developing together the generation of energy from fusion, we are looking together towards the future. I want to see ITER succeed in bringing to our societies progress and benefits currently beyond measure: the possibility of exploiting a new source of energy respecting of the environment and virtually inexhaustible. I am convinced that the future will show us right to have believed in the dream of the physicists; to harness the energy of the stars.

Thank you

**Statement by H.E. Woo Sik KIM,
Deputy Prime Minister and Minister of Science and Technology, Republic of Korea**

Your Excellency President Jacques Chirac,
Your Excellency European Commission President Mr. José Manuel Barroso,
EU Commissioner for Science and Research Dr. Potočnik,
and delegates from around the world!

I am both honored and delighted to be participating in today's signature ceremony of the ITER agreement on behalf of the government of Korea.

Please allow me to take this opportunity to extend my deepest gratitude to His Excellency President Chirac for opening the doors of the beautiful Elysée Palace with such generous and warm hospitality on this occasion and to EU Commissioner for Science and Research Dr. Potočnik for sparing no effort to prepare the signing ceremony.

On behalf of the Korean government, I would also like to thank and congratulate all of the negotiating delegates from participating nations for facing the challenges of the negotiations of the past five years with such wisdom, skill and mutual understanding and thereby bringing to fruition today's momentous event.

Distinguished delegates! We are living in a heavily industrialized society that relentlessly requires massive amounts of energy to maintain its economic health. This burdensome demand for energy continues to increase concurrently with the ever-growing world population and rising standard of living.

Scientists and experts have warned us time and again that our mass consumption of fossil fuels to meet our energy demand could lead to global warming and have disastrous effects on the earth's life systems.

Therefore, securing next generation energy sources is not only an urgent domestic issue but a matter of the utmost importance for the entire international community.

The Korean government considers fusion energy, with its almost limitless fuel supply and safety, to be the most viable alternative energy solution. Hence, the government has pursued the development of fusion energy vigorously as a core science and technology policy.

Last December, the government finalized the "National Basic Plan for Fusion Energy Development" and the government is further seeking the enactment of the "Fusion Energy Development Promotion Act" by the end of this year.

The Korean government pledges to continue to provide committed support and full cooperation for the success of the ITER Project under the auspices of Director General Nominee Mr. Ikeda.

Distinguished delegates! We are gathered here today in the conviction that the ITER Project will provide a long-term solution to the looming energy crisis and with a sense of duty to ensure the future of humanity. I am confident that, with dedication and determination, we will be able to address and overcome the technical issues that remain and realize the timely commercialization of fusion energy in the near future. I have been informed that ITER auspiciously means 'the way' or 'the path' in Latin. It is my heartfelt hope that today's signature ceremony will truly serve as 'the way' towards the sustainable development of the global community and the prosperity of mankind.

Thank you.

Remarks by Mr. V.V. Travin, Deputy-Director of Rosatom, Russian Federation

Mr. President,
Mr. Chairman,
Dear participants,

I would like to express my content about the successful completion of negotiations on joint implementation of the ITER project and signing the Agreement. Today we are summarizing the results of long and fruitful work that has been done in the course of negotiations. On behalf of the Russian delegation I would like to express our gratitude and appreciation to the European Union Delegation and France for this important meeting and to all delegations for participating in it.

I would like to point out that the implementation of this project paves way to mastering a new source of energy that will benefit the entire human race. This source is highly attractive for being a virtually inexhaustible fuel resource, its environmental friendliness and safety. Academician Artsimovich, under whose supervision the "tokamak" type magnetic plasma containment systems were developed, and now constitute the basis for the ITER project, said 40 years ago that "fusion will be mastered when human race is in need of it". Judging by the number of the ITER participants, half of the world population, the time has come.

Greeting us some minutes ago, President Chirac said that the Host country prepared all necessary for signing ceremony, including sunny morning. I believe that ITER will provide sunny days for all mankind.

Thank you very much for your attention.

**Speech by Mr.T. Iwaya,
Senior Vice-Minister of Foreign Affairs of Japan**

Let me begin by expressing my gratitude to S.E.M. Chirac for kindly offering the Palais de l'Elysee for the historical ITER Agreement signature ceremony.

I also thank H.E. Mr. Barroso, President of the European Commission, and Mr. Potocnik, Commissioner for Science and Research for hosting today's ceremony as the ITER project Host Party.

Owing to your efforts, we can have such an excellent ceremony which is suitable for an important step in the history of the ITER project. It is my great pleasure that the seven Parties meet here at the venerable Palais de l'Elysee today and hold the ITER Agreement signature ceremony, which is a great step toward the realization of fusion energy.

Japan has been actively participating in the ITER Project and playing a vital role in the project in collaboration with other parties ever since its implementation was agreed upon in 1985. However, the way so far has not always been easy. As you know, Japan decided to concede the ITER site to the EU at the ITER Ministerial Meeting in Moscow last year from the perspective of early initiation of the Project and maintaining the international collaboration framework. Although this was really a very significant and difficult decision for Japan, we continued demonstrating strong commitment to the ITER Project after the ITER site was settled in the EU.

As an example of our commitment toward the future, I can point out that Japan will take charge of producing some of the most difficult ITER components, such as central solenoid coils. I think you can understand that Japan makes a point of this project and how we have been promoting it and how we attach serious importance to today's signature. Here I would like to convey again our sincerest tribute to the fruitful cooperation among the parties concerned on the occasion of the signature ceremony of the ITER Agreement and its related agreements.

The ITER project is an unprecedented, unique global-scale project in the sense that this international organization is established for implementing the international scientific project. I was informed that each party has overcome many difficulties which arose in preparing the ITER agreement through the spirit of collaboration and compromise with the common purpose of solving the global energy problem. I pay homage to all the people devoted to the negotiations for the ITER Agreement.

The successful promotion of the ITER project would not be possible without the cooperation of EURATOM as Host Party and France as Host State. I hear both EURATOM and France have already been making various efforts to launch the ITER Project smoothly. I am convinced that they will fulfill their responsibilities as Host Party and Host State in implementing the ITER Project. I realize this project has great importance not only in the relations between Japan and the EU, but also between Japan and France, as well as among the seven-party international collaboration.

The Government of Japan is proud to be starting the ITER Project with six partners assembled here today under the direction of Mr. Ikeda, the Director General Nominee, and is confident the ITER Project will succeed with the cooperation of all the people concerned. We realize that it is our responsibility to the next generation to develop a new energy source for mankind to attain sustainable growth. Based on this viewpoint, Japan will dedicate itself to the realization of fusion energy by the ITER Project and also by the Broader Approach Activities conducted concurrently with the ITER Project under the collaboration of Japan and EURATOM.

**Speech by Prof. Xu Guanhua,
Minister of Science and Technology of the People's Republic of China**

Your Excellency President Chirac,
Your Excellency President Barroso,
Your Excellency Ministers and Commissioner,
Ladies and Gentlemen,

This is a historical moment for human beings in the endeavor of exploring fusion energy, a new milestone for addressing such issues as energy, environment and sustainable development challenging all of us. I am very proud to witness the historical event.

China is very pleased to see that ITER agreement has been finally reached through the active efforts made by all the negotiation parties. It is a significant achievement of the negotiations, which opens a new chapter for ITER project.

I would like to take this opportunity to express my gratitude to all the state leaders who have made contributions to the development of ITER project, to scientists, experts and engineers who have made hard efforts in ITER research and design in the past 20 years, to the negotiation teams who have been working hard and finally reached agreement in the past 5 years.

The Chinese Government firmly supports China's participation in the ITER project and President Hu Jintao has made several supporting remarks in this regard. Since joined ITER negotiations from February 2003, China has made unremitting efforts to push forward negotiation process and to speed up the startup of the project.

Chinese Government attaches great importance to sustainable development. In the 2006-2000 Guidelines to National Middle and Long Term Science and Technology Development Plan published early this year, we put energy, water resources and environment related science and technology as top priorities. Arrangements for China joining ITER

Project and conducting nuclear fusion research activities are also included in the Guidelines. The Chinese Government strongly supports international science and technology cooperation. China will take active steps to be involved in international mega science programs and projects, in international cooperation efforts in new energy development and global climate change research activities. Not long ago, the Experimental Advanced Superconducting Tokamak (EAST) designed and constructed by China has produced its first plasma. Because of their similar configurations, the operation of EAST will make contributions to ITER research activities.

In the future, China will continue joining hands with other parties of ITER to smoothly move forward the project and to make substantial efforts to realize fusion energy on the earth.

Speech by Dr. Raymond Orbach, Under Secretary for Science, U.S. Department of Energy

Thank you, Mr. President, Mr. Chairman, fellow heads of delegations, party representatives, distinguished guests, and observers. The signing of the ITER Agreement is an historic event. I am proud to represent the United States on this occasion.

This signing ceremony represents both a conclusion and a beginning. It is the final closure of the negotiations. And, it is the beginning of the ITER International Organization and the construction phase of the ITER Project. It is also the beginning of a commitment to solve the world's energy problem by scientists representing more than half of the world's population.

I want to thank President Chirac for graciously hosting this signing ceremony. Signing an agreement to pursue 21st century science in this historic and beautiful 18th century building is a metaphor for how far we have come, and how far we have to go.

ITER is a central component of President Bush's Advanced Energy Initiative to develop abundant, environmentally benign, and cost effective energy sources. President Bush announced that the U.S. was joining the ITER negotiations on January 30, 2003. The President's initiative in joining ITER allows the United States to share, as well as to contribute to, the combined experience and knowledge that will result from the design, construction and operation of this vital project. Signing this agreement brings us one step closer to a viable source of fusion power.

ITER also is the first stand alone, truly international, large-scale scientific research effort in the history of the world. It will serve as a model for future collaborative large scale science projects.

Following the initialing of the Agreement in Brussels on May 24, 2006, the Department of Energy transmitted to Congress the final initialed text to begin the 120-day review required by the Energy Policy Act of 2005. I am pleased to say that on September 29, 2006, U.S. House of Representatives Science Committee Chairman Sherwood Boehlert wrote to Secretary of Energy Samuel W. Bodman, "I am satisfied that the Agreement on the Establishment of the ITER International Fusion Energy Organization for the Joint Implementation of the ITER Project has been negotiated in accordance with the requirements listed in paragraph 972(c)(3)" (of the Energy Policy Act of 2005). I would also like to note, rather modestly, but especially for my dedicated staff, that Chairman Boehlert added, "Under Secretary Orbach and his staff are to be congratulated for their hard work over the past several years in securing this agreement."

As we move forward to implement this Agreement, let us all keep in mind the enormous responsibility we all share. The world is counting on us to make ITER a success. The United States Department of Energy will work with you to achieve that success, to provide to succeeding generations a source of unlimited, environmentally benign energy. There is no greater contribution to world security and prosperity. To this end, I pledge my personal commitment, and that of the United States.

Thank you.

Speech by Dr. Anil Kakodkar, Chairman, Atomic Energy Commission, India

President Chirac, European Commission President Barroso, Excellencies, Ladies and Gentlemen,

I would like to begin with a Shloka from Rig Veda, one of our ancient scriptures.

सप्त त्वा हरितो रथे वहन्ति देव सूर्य । शोचिष्केशं विचक्षण

Translated it means "Seven Bay Steeds harnessed to thy carriage bear thee, O though farseeing One, God, Surya, with the radiant hair".

Our ancestors intuitively grasped the importance of the Sun as the Ultimate Provider and Sustainer of Life on Earth! What they perhaps did not foresee is that one day their progeny would imitate the sun right here on earth to cater to vastly increased energy needs! India is proud to be a partner in the enterprise of getting the man made star – ITER – of the ground with our shoulders to the wheel....like on of the seven mythological steeds pulling on the carriage of the Lord Surya – the Sun!

Today, we take a momentous step towards realization of our common goal to seek a clean source of energy of a magnitude capable of supporting a decent quality of life for the entire humanity. Fusion has the potential to provide abundant and clean energy based on resources available everywhere without significant ecological issues associated with mining of earth's resources. It is in this context that the Indian delegation is very happy to be a part of this historic human scientific endeavour. At this point, allow me to record our appreciation of the hard and sustained efforts on part of all those who have contributed to ITER project development and progress made to date.

Most current estimates suggest that the world's population would reach around 8 billion over the next 25 years with another billion in the following 20 years. Virtually all increase will be in the developing countries. Thus the core challenge for development is to provide access to energy for all at affordable prices based on a technology that is acceptable from the point of resource and environmental sustainability.

Speaking specifically about India, in spite of being one of the top 5 electricity producing countries, we still have very low per capita electricity consumption. The objective of electrification of all villages is yet to be realized. Studies indicate that even to reach a modest target of per capita generation of about 5000 kWh, total annual electricity generation has to be about 11 to 12 times the generation at present. While immediate increase would inevitably come from fossil fuels, nuclear energy has to play a significant role in the coming decades. We have an ambitious programme to tap fission energy based on close fuel cycle approach. However, considering the size of our country and rapid growth in economy, even that is not likely to be sufficient in the long term. There is thus a need to look at new technologies such as fusion that provides even larger energy potential. We have been pursuing fusion science and technology programme at our Institute for Plasma Research, Gandhinagar. Our scientists have already designed and fabricated two tokamak devices Aditya and the steady state superconducting tokamak SST 1. Many technologies of relevance to the forefront of fusion research have been developed by our scientists and engineers in collaboration with our industries. We thus bring to the table a combination of strong commitment from the government and special scientific and technological skills, which are of relevance to ITER and to fusion research.

Ladies and gentlemen, we have gathered here today for an historic occasion. We have just signed the ITER agreement which is a unique step in the history of mankind. It is the first time that more than half of the world is standing together shoulder to shoulder and looking at a technological challenge in the eye and telling it with confidence "Thou shalt be conquered!" It is perhaps a harbinger of the future telling humanity how it must face up to its problems and solve them. A model to be followed again and again.

I am happy that all issues related to cooperation have been resolved, the Director-General, Principal Deputy-Director-General and the Deputy Director Generals have joined the ITER team in Cadarache. Now the next step is to strengthen the technical team at Cadarache with an appropriate balance of experienced and young engineers and scientists and to provide them with an environment which rapidly promotes the task of implementation of the project. We must do this ensuring that the critical human resource from original ITER teams is fully utilized and that long term and viable management tools for ITER are immediately put into place. Ladies and gentlemen, on behalf of the Government of the Republic of India and on my own behalf, I wish this cooperative venture a grand success.

Thank you.

**Speech by Mr. Janez Potočnik,
European Commissioner for Science and Research, European Commission**

Presidents, your excellencies, ladies and gentlemen,

I would like to first thank all of you, and especially both presidents for being here today. Your presence signifies the importance of this event for all parties; for France as a host state; and for the European Union as the host party.

The ITER Project has been of great personal interest to me and I must say that I feel fortunate to have been able to be involved directly.

It is a beacon of scientific and technological excellence. I applaud the scientists and engineers whose brilliance and sustained commitment over the two decades have brought the project to its present state of maturity.

ITER has also been a truly demanding exercise in diplomacy and patience on the part of all those involved in the bringing the negotiations to completion. These intensive efforts should not go unremarked.

For one, I wish to express my sincere gratitude to all those who have worked hard in past years, be they in this room today or in their offices or homes.

Yes, there has been hard work and we have experienced some difficult times; But as was mentioned at our meeting in Moscow last year “hard winds grow strong trees”. And in the process I believe that we have managed to build an invaluable fund of mutual confidence in our capacities to address together the big issues that affect us all.

After the pleasure of this ceremony, it is now time to get down to the daily work necessary for delivering this Project. I look forward to starting our joint endeavours for ITER at the first meeting of the interim ITER Council this afternoon.

And I truly hope that we can use the experience that we are gaining in working together on ITER to extend our boundaries in other domains.

Thank you.

The final act of the occasion was the handing over of the signed documents to Dr. Werner Burkart, Deputy Director General, Nuclear Sciences and Applications, of the International Atomic Energy Agency, to be deposited with the Director General of the IAEA. Dr. Burkart commented: “It was an honour to receive the Agreements into the Agency’s safekeeping on behalf of Director General Mohamed ElBaradei. The role of Depositary is symbolic of the trust that the Agency has enjoyed with the ITER Parties as the project has progressed, and guarantees our continuing close collaboration.

The ITER Parties represent more than half of the world’s population, but the project represents a major hope for the whole planet for future, clean and safe energy supplies. The Agency stands ready to serve its Member States in the field of fusion energy, both those inside and the many aspiring ones outside of the ITER Agreements, and we look forward to many more years of successful collaboration with the project as ITER and fusion energy become a reality.”

FIRST MEETING OF THE ITER INTERIM COUNCIL

After the pleasure of the signature ceremony, the representatives of the seven ITER Parties set to work in the afternoon of 21 November 2006. Acting now in their new capacities as fellow Members of the provisional ITER Organization, the Ministers and their associates met for the first time as the Interim ITER Council under the chairmanship of Janez Potočnik, European Commissioner for Science and Research.

This constituted the first act of the newly established ITER Organization. The main results of the meeting were: to provide the framework for implementation of the ITER Agreement on a provisional basis, to endow the ITER Organization with the necessary capacities and access to resources, and to empower the ITER Nominee Director-General, Kaname Ikeda, to bring the ITER Organization into operation, and to pursue its purpose under the provisional application of the Agreement.

“I would like to express my sincere thanks to the Members for their efforts in bringing the project to this stage. With the accomplishment of today’s meeting, the ITER Organization is able to embark on its mission, as a worldwide international cooperation, to help create a new source of energy for humankind”, said Dr. Kaname Ikeda.



Ministers and Heads of Delegation at the first meeting of the Interim ITER Council: from left, Mr. J.M. Silva Rodríguez (EU), Mr. R. Grover (IN), Mr. Mizuochi (JA), Mr. I. Borovkov (RF), Mr. V. Travin (RF), Mr. J. Potočnik (EU) , Mr. Kim Woo Sik (KO), Mr. Xu Guanhua.(CN), Mr. R. Orbach (US).

BROADER APPROACH AGREEMENT INITIALLED

On 22 November in Brussels, Europe and Japan confirmed their agreement on a so-called “Broader Approach” to fusion energy, when Commissioner Potočnik and Vice Minister Mizuochi initialed an agreement which will commit the EU and Japan to work together on projects to be pursued in Japan, in particular the design of a high-tech materials testing facility, which will complement research in ITER and set the basis for the construction of a future demonstration fusion power plant (DEMO). The agreement lasts ten years, and represents about €340m of European investment in the activities.

The development of the Broader Approach activities supported by the EU in Japan, is an aspect of the privileged partnership being forged between the two parties’ fusion programme, which was instrumental in resolving the ITER siting question. The participation in projects of the Broader Approach activities is open to other ITER Parties.

The first project will complete the detailed and fully integrated engineering design of the **International Fusion Materials Irradiation Facility (IFMIF)**. Fusion as a major energy source will require materials which maintain their essential physical properties and which do not remain highly radioactive for extended periods of time after exposure to the harsh thermal and irradiation conditions inside a fusion reactor. IFMIF will allow testing and qualification of advanced materials in an environment similar to that of a future fusion power plant.

The second project is the **Japan-EU "Satellite" Tokamak Programme**. During ITER construction, major experimental facilities will be required to develop operating scenarios and address key physics issues for an efficient start up of ITER experimentation and for research towards DEMO. The JT-60U tokamak in Japan has been identified as a device which could fulfil these objectives. It will therefore be upgraded to an advanced superconducting tokamak and used by Europe and Japan as a "satellite" facility to ITER.



Commissioner Potočnik and Vice Minister Mizouchi exchange initialled copies of the EU/Japan Agreement on a Broader Approach to Fusion.

The third project is the **International Fusion Energy Research Centre**. The missions of the centre include the co-ordination of DEMO Design and R&D activities, large scale simulation activities of fusion plasmas by super-computer and remote experimentation activities to facilitate a broad participation of scientists into ITER experiments.

The resources for the implementation of the broader approach will mainly consist of contributions in kind and financial contributions from the parties to the Agreement. The European contributions will be largely provided on a voluntary basis by EU Member States (and possibly associated states), and channelled through the Joint Undertaking for ITER and the Development of Fusion Energy which is being established in Barcelona.

"This agreement is the result of extensive technical and political discussions between the EU and Japan", said Commissioner Potočnik. "There is a need to carry out supporting R&D and to develop more advanced technologies for future fusion power plants to complement ITER. This "Broader Approach" will be pursued alongside ITER, and will bring together research strengths and interests, making the most of our investment in R&D to make fusion energy a reality".

The signature of the Broader Approach Agreement is planned for early 2007.