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2007 Annual Report

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It gives me great satisfaction to introduce the first ITER Annual Report. 2007 was an historic turning point for the ITER project. After decades of planning, discussions, meetings and reports, ITER has moved from the conceptual to the real. On 24th

Foreword from the Director-General

Fusion is the process that powers the sun and stars. Fusion research aims to harness that power to help meet the challenge of providing for the future energy needs of our planet by developing a prototype fusion power plant that is safe and reliable, environmentally responsible and economically viable, with abundant and wide-spread fuel resources. Nations representing over half the world's population have come together to build an international project to demonstrate the scientifc and technical feasibility of fusion power. The project is called ITER ("the way" in Latin).

ITER will be the frst fusion experiment to produce net power and will test a number of key technologies, including the heating, control, diagnos ¥ i ,yyyyyyyonll yy m] L

Executive Summary

Organization

On 24 October 2007, the ITER Organization was formally established after ratification of the ITER Agreement (retrospective to 1 January 2007) by all Member Parties. One month later on 7 November the Headquarters Agreement with the Host Country was signed, setting out the terms of cooperation between the ITER Organization and France.

The second meeting of the Interim ITER Council was held in Tokyo 11 and 12 July, followed by the first Council meeting which was held at Cadarache in November. Sir Chris Llewellyn Smith was elected as Chairman and the Director-General was formally appointed, along with the Deputy Directors-General.

On external relations, the Council approved international coop !

Procurement Arrangements
The first Procurement Arrangements for the Toroidal Field conductors between the ITER Organization and the Domestic Agency of Japan was signed in November and the second Procurement Arrangement with the EU was signed in December.

Staffing
Over the course of the year the organization changed and grew dramatically. January saw an influx of standard /

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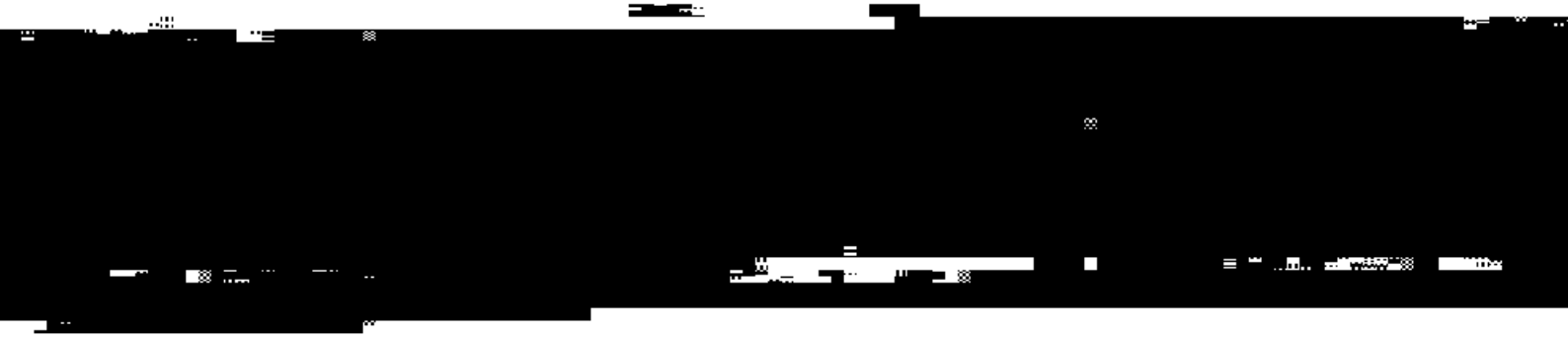
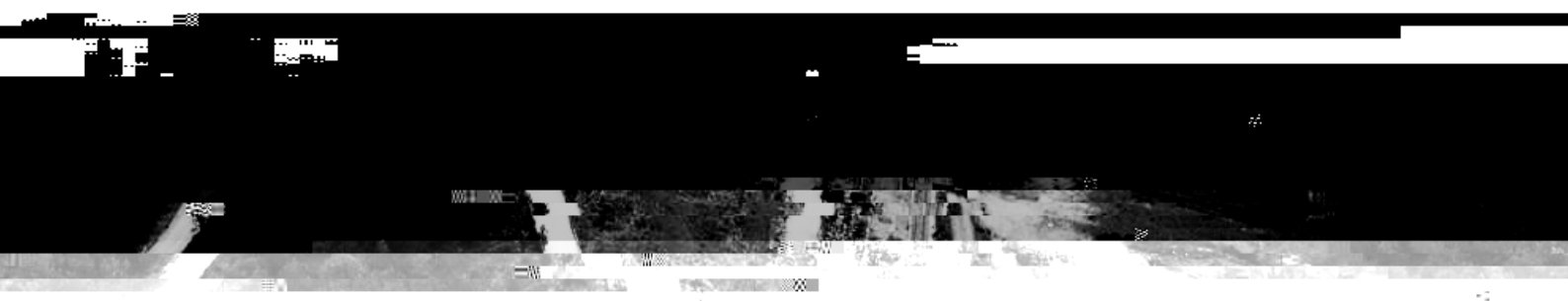
Autumn 2007





Department for Administration

The Administration Department staff worked extremely hard in 2007 to meet the challenge of setting up the organizational infrastructure of the new project.

The Administration Department consists of four divisions: Human Resources, Procurement and Contracts, Finance and Budget, Communications and one Logistics Group. Two of the four division heads were appointed in the second half of the year. The Head of the Human Resources took up her post in November and the Communications Division Head was in post part-time from September.

The Human Resources Division had to manage the recruitment of a large number of direct employees, almost doubling the number of staff. Recruitment and other Human Resources procedures have been put in place and are being implemented; covering such issues as payroll, removal arrangements, missions, travel policies, etc.

The Procurement and Contracts Division started with a small staff in 2007 and was still preparing numerous major contracts, purchase orders for the supply of goods, consultancies and other services. The Procurement and Contracts Division drafted procurement rules and regulations based on the ITER Project Resource Management Regulations.

The Budget and Finance Division, with limited staff, dealt with commitments, payments, income transactions and the accounting for all of these items. This was not made easier because of the complex accounting rules of ITER and at the same time ensuring a proper audit trail.

The Department prepared reporting on administrative matters,

The Electrical Power Supply Division completed the review of the technical documentation required by Agence ITER France to start the formal procedure for the construction of the 400 kV line and switchyard for the electricity supply of ITER. The operation of the 400 kV line is planned to start during the second half of 2012. Until then, electric power will be provided by a temporary line fed by the CEA electrical network. The revision of the Steady State electrical consumers is in progress which is one of the most important data bases required for the design of the Steady State Electrical Power Network.

The Design Office provided services to both ITER Responsible Officers and Domestic Agencies in all area of CAD systems, methodologies, data manipulation, checking and storage. In 2007, starting with eight professionals and 30 CAD designers, the Design Office quickly developed, thanks to engineering assistance contracts, to reach about 20 professionals and 50 CAD designers by December. Additionally the Design Office consolidated the development of collaboration with the Domestic agencies, who will be involved in the design effort. The protocol of design collaboration has been approved by all the CAD Working Group Members.

Civil Construction and Site Support Office

ITER site preparations started in 2007 with clearance of designated areas of forest and erection of the temporary construction site perimeter fence during the first three months of the year through Agence ITER France contracts. Archaeological surveys were also carried out at this stage, but nothing significant was found. Work progressed as planned throughout the year on temporary and permanent access roads, site levelling, annex buildings and temporary construction offices.

Work on adaptation of the generic ITER site layout continued to be a main strand of the Department's work in conjunction with changes following requirements of the Design Review, to which the Department made a strong contribution.

At the end of September 2007, the request for the Permit to Build (Permis de Construire) was formally submitted to the Mayor of Saint Paul-lez-Durance. Discussions continued with the French authorities with the result that updated drawings and design descriptions were submitted and additional documentation was requested mainly on the impact study of the

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Department for Codac and IT, Heating and CD, Diagnostics

2007 was a very productive year and a good beginning for the department. Emphasis was put on team building and finalization of the base line design for heating and current drive and diagnostics systems. The team of 19 in the beginning of the year grew to 27 by the end of 2007.

The design review was successfully concluded for the Heating and Current Drive systems. In the area of the Neutral Beam Cell, change of maintenance of the Neutral Beam injectors has been incorporated and change in the design of the power supply has modified the Neutral Beams Power Supply lay out. The Radio Frequency based ion source is now included into the baseline. Progress has been made on discussions on the Neutral Beam Test Facility. Ion Cyclotron Heating and Current Drive system design also made substantial progress. The design of the Ion Cyclotron antenna has converged and an appropriate task agreement will be generated to deliver the Build to Print design of it. In Electron Cyclotron Heating, the ITER prototype gyrotrons are now all in testing phase. ITER Gyrotron required output power of 170 GHz has been achieved by the Japanese Domestic Agency. Other Domestic Agencies have also made progress in this area. A high power Electron Cyclotron test bed has been completed at Lausanne. Many Design Change Requests are being studied to reconfigure the launcher interfaces.

The Design Review working group W6 recommended a separate Radio Frequency building to house the Radio Frequency sources and the power supplies close to the assembly hall. The same has been approved for study and the design is underway. This will also house the port plug test facilities which will be required to perform the acceptance tests at site before final integration and commissioning. New issues raised during STAC meeting are under study in a new working group. They primarily relate to installed power capability of 73 MW of the heating systems and their integration with the ITER research plan.

Work on procurement arrangements have started. Many ITER Task Agreements are in progress. The Procurement Arrangement for the Neutral Beam Power Supplies is under development; the aim is to have it signed by summer of 2008. The

Department for Fusion and Technology
Fusion Science & Technology activities during 2007 were

Project Office

Staffng Tables

by Nationality

Member	01/01/07	31/12/07
China	8	12
EU	62	121
India	1	4
Japan	13	16
Korea	8	14
Russian	13	15
USA	10	11
Total	**115**	**193**

by Department

Department	Professional	Support	Total
Department for Administration (ADM)	13	7	20
Department for Central Engineering and Plant Support (CEP)	32	14	46
Civil Construction and Site Support Office (CCS)	7	2	9
Department for Codac and IT, Heating and CD, Diagnostics (CHD)	22	4	26
Department for Fusion Science and Technology (FST)	9	–	9
Office of Audit Service (OAS)	–	–	–
Office of the Director-General (ODG)	5	2	7
Project Office (PRO)	28	2	30
Department of Safety and Security (SAS)	7	2	9
Department for Tokamak (TKM)	36	1	37
Total	**159**	**34**	**193**

2007 Summary of Commitments Account

2007	Budget	Committed		Carry forward to 2008
Title I: Direct Investment	–	–		–
Title II: R&D Expenditure	8.223	7.816		0.407
Title III: Direct Expenditure	38.269	38.269		–
Total	**46.492/**	**38.269**	**7.816**	

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Cadarache
13108 St Paul Lez Durance
France

+ 33 (0) 4 42 19 98 18
www.iter.org