



FUSION FOR ENERGY

The European Joint Undertaking for ITER and the Development of Fusion Energy

THE GOVERNING BOARD

DECISION OF THE GOVERNING BOARD ADOPTING THE 2013 EDITION OF THE RESOURCE ESTIMATES PLAN OF FUSION FOR ENERGY

Having regard to the Statutes annexed to the Council Decision (Euratom) No 198/2007 of 27 March 2007 establishing the European Joint Undertaking for ITER and the Development of Fusion Energy (hereinafter "Fusion for Energy") and conferring advantages upon it¹ (hereinafter "the Statutes"), and in particular Article 6(3)(d) and Article 11 thereof,

Having regard to the Financial Regulation of Fusion for Energy² adopted by the Governing Board on 22 October 2007, last amended on 25 November 2011³ (hereinafter "the Financial Regulation"), and in particular Article 30 thereof;

Having regard to the Implementing Rules of the Financial Regulation⁴ adopted by the Governing Board on 22 October 2007, last amended on 11 December 2013⁵ (hereinafter "the Implementing Rules"), and in particular Title III thereof,

Having regard to the comments and recommendations of the Administration and Finance Committee, Executive Committee and the Bureau,

Whereas:

- (1) The Director should, in accordance with Article 8(4)(e) of the Statutes, draw up the resource estimates plan for a period of five years;
- (2) The Administration and Finance Committee (AFC) should, in accordance with its mandate laid down in its Rules of Procedure⁶, comment on and make recommendations to the Governing Board on the proposal for the resource estimates plan drawn up by the Director;
- (3) The Executive Committee should, in accordance with Article 7(3)(b) of the Statutes, comment on and make recommendations to the Governing Board on the proposal for the resource estimates plan drawn up by the Director;
- (4) The Governing Board should adopt the resource estimates plan.

Has adopted this decision:

Article 1

The 2013 Edition of the Resource Estimates Plan of Fusion for Energy annexed to this Decision is hereby adopted.

Article 2

This Decision shall have immediate effect.

¹ O.J. L 90 , 30.03.2007, p. 58.

² F4E(07)-GB03-11 Adopted 22/10/2007

³ F4E(11)-GB21-10c Adopted 25/11/2011

⁴ F4E(07)-GB03-12 Adopted 22/10/2007

⁵ F4E(13)-GB28-14.2 Adopted 11/12/2013

⁶ F4E(11)-GB20-07f Adopted 01/06/2011

Done at Barcelona, 11 December 2013

For the Governing Board

A handwritten signature in black ink, appearing to read 'Stuart Ward', with a stylized flourish at the end.

Stuart Ward

Chair of the Governing Board

For the Secretariat

Raymond Monk

Secretary of the Governing Board

ANNEX

2013 EDITION OF THE RESOURCE ESTIMATES PLAN OF FUSION FOR ENERGY

1. INTRODUCTION

In accordance with Article 30 of the F4E Financial Regulation, the Resource Estimates Plan (REP) sets out the indicative resources deemed necessary for the implementation of the Project Plan and shall include:

- Overall cost estimates for the entire duration of the projects of the Joint Undertaking (Point 4.1);
- Forecast of annual expenditure of the Joint Undertaking for the following five financial years. Nevertheless, this five year expenditure forecast has been completed with the forecast of revenue and extended to the entire reference period of the ITER construction in order to ensure continuity with the first part of the ITER project (Point 4.2 , tables 1,2 and 3);
- Estimates of income, expenditure and staffing of the Joint Undertaking for the following two financial years (2014-2015) (point 4.3, tables 5 and 6).

2. ASSUMPTIONS

The information presented in this 2013 Edition of the REP is based upon the assumptions and descriptions detailed in the 2013 Edition of the Project Plan⁷ for both ITER and Broader Approach Activities.

3. DEFINITIONS

3.1. The Budget

The budget is the sole instrument establishing the annual revenue and expenditure considered necessary for F4E, including staffing.

Each annual budget is based on the multi -annual program developed in the present REP and the Project Plan.

3.2. The Revenue

F4E revenue is made up of the Euratom contribution, the ITER Host State contribution, the annual membership contributions from members other than Euratom, and miscellaneous revenue.

3.2.1. The Euratom contribution (European Union)

The contribution from Euratom constitutes the main source of revenue for F4E. This contribution, previously part of the Euratom Research Framework Programme, is now a specific item in the EU Multiannual Financial Framework (MFF).

This contribution is detailed in the Commission proposal⁸ for a Council decision amending the Decision 2007/198/Euratom establishing Fusion for Energy (F4E).

Both adoption processes are ongoing at the time of submission of the present document..

The annual contribution is determined in the European Union General Budget in Commitment and in Payment appropriation.

The distinction between the revenue earmarked for the operational expenditure and the revenue foreseen for administrative expenditure (running costs) disappears from 2014 onward in the EU general budget but remains identified in the F4E budgets to ensure a transparent allocation of resources.

3.2.2. The ITER Host State Contribution (France)

The contribution from the ITER Host State constitutes the second source of revenue for F4E. It corresponds globally to the commitment from the Host State to cover 9.09% of the total costs of the ITER construction phase, excluding expenditure related to Transportation and Test Blanket Modules.

The precise scope, the conditions and the global amount of the contribution for the ITER construction phase have been established in a formal exchange of letters between France and the European Commission⁹.

⁷ F4E(13)-GB28-12.1.2 Adopted 11/12/2013

⁸ COM (2013) 607 final dated 28/08/2013

⁹ Contribution financière française à la construction d'ITER - Letter from Mr Bigot to Ms Goeghegan-Quinn and Mr Oettinger on 08/09/11 and reply on 17/11/11

3.2.3. *The Membership Contributions (F4E Members except Euratom)*

The Annual Membership Contributions are established and adopted annually within the budget.

The Annual Membership Contribution is equivalent to 10% of the administrative budget calculated at the time of the preparation of the draft budget.

The individual contribution of each member is composed of:

- (a) A minimum contribution of 0.1% of the total amount of annual membership contributions and,
- (b) An additional contribution calculated in proportion to the Euratom financial participation (excluding JET) in the Member's expenditure in the framework of the Community Fusion research programme in the year before last.

Membership contributions are not earmarked and may be used for any type of expenditure.

3.3. **The Expenditure**

The F4E expenditure is divided in operational and administrative expenditure.

3.3.1. *The Operational Expenditure*

The operational expenditure corresponds to F4E obligations, determined by:

- The Agreement on the Establishment of the ITER International Fusion Energy Organisation for the Joint Implementation of the ITER Project;
- The bilateral Agreement for the Joint Implementation of the Broader Approach Activities;
- As regards DEMO, the current research and training programmes adopted pursuant to Article 7 of the Euratom Treaty.

F4E's activities are grouped under two headings:

The ITER Project represents the core activity of F4E and consists of:

- The tasks related to the ITER construction phase according to the Procurement Arrangements and Task Agreement signed with ITER Organisation
- The ITER site support activities
- The Technology project groups the R&D activities necessary for ITER, BA and IFMIF
- Technology for ITER and DEMO: Means were foreseen in the Constituent Instrument and its financial statement to allow extra R&D activities in particular the completion of specification by ITER and the preparation of DEMO.
- Technology for Broader Approach: As described under indirect revenue, this corresponds to the Euratom contribution managed by F4E for IFMIF-EVEDA, the IFERC at Rokkasho and the JT60 Tokamak.
- Technology for IFMIF construction: p.m.

3.3.2. *The Administrative Expenditure*

Administrative expenditure relating to the functioning and operating costs of F4E is mainly made up of the Euratom contribution.

4. **BUDGET FORECASTS AND CEILING**

4.1. **Overall Estimates of Revenue and Expenditure (2007-2041)**

The total resources (2007-2041) necessary for F4E to carry out its tasks are divided into two periods:

- (1) The ITER construction phase and implementation of the BA activities;

In its July 2010 conclusion the Council of the European Union fixed the overall budget to EUR 6.6 billion in 2008 value for the ITER construction period, until end of 2020 (including DEMO and Broader Approach).

- (2) The operation and decommissioning of ITER, the possible construction and operation of IFMIF and a programme of activities in preparation for DEMO.

The estimates based on the 2001 final design are 1278.4 kIUA¹⁰ for the ITER operation phase and EUR 298.6 million (value 2005) for the decommissioning and de-activation phase.

4.2. Estimates of Revenue and Expenditure for the Period 2007-2020

The estimates of revenue and expenditure are detailed in the 3 tables below:

- Table 1: Expenditure in commitment appropriations. This table provides the correspondence between the fixed 2008 value as adopted by the Council and the successive annual budgets. It reflects the amount of contracts placed or to be placed each year.
- Table 2: Expenditure in payment appropriations reflects the actual implementation of the projects through the execution or forecasts of payments to third parties. This table is provided in current values only.
- Table 3: Revenue in commitment and payment appropriations. Provided in current values only, this table details the yearly contributions from Euratom, France and the F4E Members.

4.2.1. *The estimate of revenue*

Euratom contribution:

As mentioned above, the European Council has fixed the global amount deemed necessary for all F4E activities during the ITER construction phase to EUR 6.6 billion, expressed in 2008 value.

This envelope was defined in commitment appropriation and the yearly resources needed have been calculated in current value using a fixed annual escalation rate of 2%, applied to the estimate of actual cost of the contracts (payments), as defined in the previous occurrence of the REP.

The yearly breakdown of the Euratom contribution until 2020 is taken from the Financial annex of the Commission proposal for the Council Decision amending the Decision 2007/198/Euratom establishing the European Joint Undertaking for ITER and the Development of Fusion Energy and conferring advantages upon it^[1].

All figures beyond 2014 are proposals only; still to be adopted by the EU Budgetary Authority.

ITER Host State Contribution:

Based on the Council conclusions mentioned above, the ITER Host State contribution is strictly earmarked to ITER Construction and represents EUR 1 168.0 million or 17.7% of the EUR 6.6 billion (2008 constant value).

The French budgetary procedure is multi annual and the payment appropriation figures have been fixed for the period 2013-2015. Nevertheless those figures are subject to annual approval by the French budgetary authorities.

The F4E proposals are:

- The yearly breakdown in commitment and payment appropriation;
- The total amount for the French contribution in current value, which strictly respects the ratio of the agreed French contribution on the total (17.7%).

This amount will be adjusted with the actual cost for the domain of participation of the ITER Host State.

Membership Contribution:

The annual calculation of this contribution remains based on 10% of the Administrative expenditure, as defined in the Draft budget in order to avoid important changes along the budgetary procedure.

¹⁰ IUA (ITER Unit of Account with 1 IUA= 1.2889 kEUR (2001 Conversion rate)
^[1] COM(2013) 607 final date 28/08/2013

4.2.2. *The Estimate of expenditure*

The operational expenditure:

The yearly breakdown is established according to the Project Plan.

The administrative expenditure:

This expenditure is recurrent and mainly based on the establishment plan (salaries).

4.2.3. *The Indirect revenue and expenditure for Broader Approach*

Under the Broader Approach Agreement, Euratom contributes a total of 500 kBAUA¹¹ of which 440 kBAUA are provided in kind by Voluntary Contributors as shown in the following figures. These revenue and expenditure are dealt with by each EU member state participating to this programme.

The remainder is provided by Euratom through F4E as Implementing Agency in the BA Agreement and foreseen in the direct revenue.

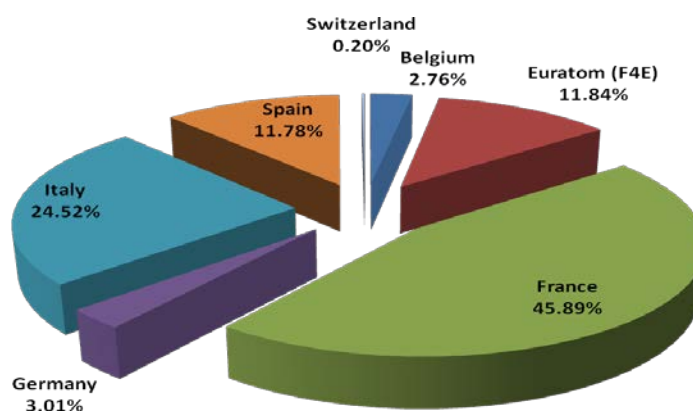


Chart 1: BA contribution by Members

The expenditure is detailed in the BA work programme adopted by the BA Steering Committee.

¹¹ BAUA (Broader Approach Units of Account with 1 BAUA = 678 € 2005 values)

Table 1: F4E Detailed Expenditure in Commitment Appropriation for the ITER construction phase

Table 1: Expenditure in commitment appropriation

F4E - Expenditure Commitment appropriation	< 2007 Preparation	2007-2011 FP VII	2012-2013 FP VII +2	2014-2020	TOTAL
Constant Value - MEUR ₍₂₀₀₈₎	44.472	1 353.200	2 091.096	3 111.233	6 600.000
Current Value - MEUR	42.129	1 410.036	2 341.401	3 806.485	7 600.051

Constant Value MEUR ₍₂₀₀₈₎		< 2007 Executed	2007 Executed	2008 Executed	2009 Executed	2010 Executed	2011 Executed	2012 Executed	2013 Available Budget	2014 Original Budget	2015 Indicative Forecast	2016 Indicative Forecast	2017 Indicative Forecast	2018 Indicative Forecast	2019 Indicative Forecast	2020 Indicative Forecast	>2020 Indicative Forecast	TOTAL
Commitment Appropriations	ITER Construction	44.472	76.702	157.732	272.138	364.446	341.831	1 134.138	865.379	703.043	778.933	304.185	295.102	262.461	224.920	49.098	-	5 874.579
	Technology	-	-	3.996	16.262	8.188	6.776	2.012	11.934	25.625	24.314	20.441	30.559	32.569	40.764	23.884	-	247.324
	Technology for ITER	-	-	3.884	6.387	2.334	6.157	0.943	8.309	15.450	15.040	15.066	27.066	29.397	29.407	23.884	-	183.324
	Technology for BA, DEMO & IFMIF	-	-	0.112	9.875	5.854	0.619	1.068	3.626	10.176	9.275	5.375	3.492	3.172	11.357	-	-	64.000
	Other Expenditure	-	-	0.452	0.431	0.714	1.782	1.344	2.382	3.729	4.353	4.267	4.184	4.102	4.021	3.942	-	35.704
	F4E Administration	-	1.939	13.884	23.783	28.285	33.859	35.345	38.561	38.183	38.218	38.151	38.072	38.064	38.042	38.005	-	442.392
	F4E Total Budget	44.472	78.641	176.064	312.614	401.633	384.248	1 172.839	918.256	770.581	845.817	367.045	367.917	337.197	307.746	114.931	-	6 600.000

Current Value MEUR		< 2007 Executed	2007 Executed	2008 Executed	2009 Executed	2010 Executed	2011 Executed	2012 Executed	2013 Available Budget	2014 Original Budget	2015 Indicative Forecast	2016 Indicative Forecast	2017 Indicative Forecast	2018 Indicative Forecast	2019 Indicative Forecast	2020 Indicative Forecast	>2020 Indicative Forecast	TOTAL
Commitment Appropriations	ITER Construction	42.129	74.708	157.732	279.213	383.643	369.193	1 256.802	983.882	820.098	932.248	373.523	371.791	339.265	298.297	66.809	-	6 749.333
	Technology	-	-	3.996	16.685	8.619	7.318	2.229	13.569	29.892	29.100	25.100	38.500	42.100	54.062	32.500	-	303.670
	Technology for ITER	-	-	3.884	6.553	2.457	6.649	1.045	9.446	18.022	18.000	18.500	34.100	38.000	39.000	32.500	-	228.158
	Technology for BA, DEMO & IFMIF	-	-	0.112	10.132	6.162	0.669	1.184	4.122	11.870	11.100	6.600	4.400	4.100	15.062	-	-	75.512
	Other Expenditure	-	-	0.452	0.440	0.743	1.891	1.455	2.630	4.200	5.000	5.000	5.000	5.000	5.000	5.000	-	41.811
	F4E Administration	-	1.900	13.884	24.258	29.428	35.932	38.259	42.575	43.000	43.900	44.700	45.500	46.400	47.300	48.200	-	505.236
	F4E Total Commitment	42.129	76.608	176.064	320.597	422.434	414.334	1 298.745	1 042.655	897.190	1 010.248	448.323	460.791	432.765	404.659	152.509	-	7 600.051

(12)

¹² Escalation for current/2008 values: A 2.6% escalation rate is applied to operational contracts, the standard 2% rate is kept for administrative expenditure and Other operational expenditure

Table 2: F4E Detailed Expenditure in Payment Appropriation for the ITER construction phase

F4E - Expenditure Payment appropriation	<2007	2007-2011 FP VII	2012-2013 FP VII +2	2014-2020	>2020	TOTAL
Current Value - MEUR	42.129	684.769	792.477	5 242.047	838.629	7 600.051

Current Value - MEUR		< 2007 Executed	2007 Executed	2008 Executed	2009 Executed	2010 Executed	2011 Executed	2012 Executed	2013 Available Budget	2014 Original Budget	2015 Indicative Forecast	2016 Indicative Forecast	2017 Indicative Forecast	2018 Indicative Forecast	2019 Indicative Forecast	2020 Indicative Forecast	>2020 Indicative Forecast	TOTAL
Payment Appropriation	ITER Construction	42.129	2.658	83.822	109.138	157.077	209.784	314.272	366.654	629.487	647.310	717.100	801.440	676.110	601.430	565.777	825.147	6 749.333
	Technology	-	-	0.112	1.361	4.293	9.207	6.469	20.030	22.760	28.280	26.670	32.510	37.030	59.800	44.443	10.705	303.670
	Technology for ITER	-	-	-	1.229	4.027	4.282	3.415	10.500	12.000	16.000	20.000	28.000	33.000	45.000	40.000	10.705	228.158
	Technology for BA, DEMO & IFMIF	-	-	0.112	0.132	0.266	4.925	3.054	9.530	10.760	12.280	6.670	4.510	4.030	14.800	4.443	-	75.512
	Other Expenditure	-	-	0.085	0.539	0.645	0.647	1.118	3.100	2.900	5.000	5.000	5.000	5.000	5.000	5.000	2.777	41.811
	F4E Administration	-	1.900	13.884	24.258	29.428	35.932	38.259	42.575	43.000	43.900	44.700	45.500	46.400	47.300	48.200	-	505.236
	F4E Total Payment	42.129	4.558	97.903	135.296	191.443	255.570	360.118	432.359	698.147	724.490	793.470	884.450	764.540	713.530	663.420	838.629	7 600.051

Table 3: F4E Detailed Revenue in Commitment and Payment Appropriation for the ITER construction phase

F4E - Revenue - MEUR		<2007	2007-2011 FP VII		2012-2013 FP VII +2		2014-2020		>2020		TOTAL	
Commitment appropriation		42.129	1 474.835		2 276.602		3 806.485		0.000		7 600.051	
Payment appropriation		42.129	719.878		759.904		5 242.047		836.093		7 600.051	

Current Value MEUR		< 2007 Executed	2007 Executed	2008 Executed	2009 Executed	2010 Executed	2011 Executed	2012 Executed	2013 Available Budget	2014 Original Budget	2015 Indicative Forecast	2016 Indicative Forecast	2017 Indicative Forecast	2018 Indicative Forecast	2019 Indicative Forecast	2020 Indicative Forecast	>2020 Indicative Forecast	TOTAL
Commitment Appropriation	Euratom Contribution	40.645	73.950	132.978	280.000	360.406	342.884	1 114.658	907.358	722.790	881.858	319.853	332.241	304.125	275.929	131.352	-	6 221.031
	France Contribution	1.484	2.658	48.945	61.200	66.500	90.700	141.200	105.000	170.000	124.000	124.000	124.000	124.000	124.000	16.336	-	1 324.023
	F4E Members contribution	-	-	2.683	2.890	3.400	3.835	3.900	4.300	4.400	4.390	4.470	4.550	4.640	4.730	4.820	-	53.008
	Internal revenue	-	-	1.126	0.310	0.141	0.229	0.099	0.087	-	-	-	-	-	-	-	-	1.992
	F4E Total Budget	42.129	76.608	185.732	344.401	430.446	437.648	1 259.856	1 016.745	897.190	1 010.248	448.323	460.791	432.765	404.659	152.509	-	7 600.051
Payment Appropriation	Euratom Contribution	40.645	1.900	98.095	139.758	194.752	223.237	240.103	297.136	570.747	595.100	649.000	746.900	647.900	597.800	547.600	630.356	6 221.028
	France Contribution	1.484	2.658	25.145	-	8.000	12.000	84.000	130.000	123.000	125.000	140.000	133.000	112.000	111.000	111.000	205.736	1 324.023
	F4E Members contribution	-	-	2.298	2.797	2.946	4.487	4.179	4.300	4.400	4.390	4.470	4.550	4.640	4.730	4.820	-	53.008
	Internal Revenue	-	-	1.014	0.423	0.141	0.229	0.099	0.087	-	-	-	-	-	-	-	-	1.992
	F4E Total Budget	42.129	4.558	126.551	142.978	205.838	239.953	328.381	431.523	698.147	724.490	793.470	884.450	764.540	713.530	663.420	836.093	7 600.051

4.3 Estimates of revenue, expenditure and staffing for 2014 and 2015 budgets

4.3.1 The Revenue and Expenditure

The statements of revenue and expenditure for the 2014 and 2015 budgets:

Table 4: statement of revenue and expenditure for the 2014 and 2015 budgets

(EUR)		2014 Budget		2015 Budget	
		Commitment Appropriations	Payment Appropriations	Commitment Appropriations	Payment Appropriations
Revenue	Euratom operational contribution	679 790 382.68	527 738 253.68	836 758 000.00	550 000 000.00
	Euratom administrative contribution	41 127 422.32	41 127 422.32	45 100 000.00	45 100 000.00
	ITER Host State contribution	170 000 000.00	123 000 000.00	124 000 000.00	125 000 000.00
	Membership contribution	4 400 000.00	4 400 000.00	4 390 000.00	4 390 000.00
	Sub Total Yearly Contribution	895 317 805.00	696 265 676.00	1 010 248 000.00	724 490 000.00
	Euratom operational contribution recovered from previous years	0.00	8 439.33	0.00	0.00
	Euratom administrative contribution recovered from previous years	1 872 577.68	1 872 577.68	0.00	0.00
	Other revenue	0.00	0.00	0.00	0.00
	Total Revenue	897 190 382.68	698 146 693.01	1 010 248 000.00	724 490 000.00
Expenditure	Administrative Expenditure Title 1, Staff	35 884 000.00	35 884 000.00	36 600 000.00	36 600 000.00
	Administrative Expenditure Title 2, Other	7 116 000.00	7 116 000.00	7 300 000.00	7 300 000.00
	ITER Construction	820 098 382.68	629 486 693.01	932 248 000.00	647 310 000.00
	Technology for ITER	18 022 000.00	12 000 000.00	18 000 000.00	16 000 000.00
	Technology for BA and DEMO	11 870 000.00	10 760 000.00	11 100 000.00	12 280 000.00
	Other Expenditure	4 200 000.00	2 900 000.00	5 000 000.00	5 000 000.00
	Total Expenditure	897 190 382.68	698 146 693.01	1 010 248 000.00	724 490 000.00

Notes:

- The annual budgets do not take into consideration the appropriations carried over from the previous year, already adopted with the previous budgets.
- The detailed expenditure is set out in the corresponding work programme.

4.3.2 *The Establishment Plan*

According to the financial annex of the Commission proposal for the Council Decision amending the Decision 2007/198/Euratom already mentioned, F4E staffing is the following:

Table 5: F4E Human Resources

	2013	2014	2015
AD Officials	44	44	44
AD Temporary	174	174	199
AST Officials	18	18	18
AST Temporary	26	26	26
Sub Total Establishment Plan	262	262	287
Contractual Agents (CA)	165	153	186
Seconded National Experts (SNE)	7	7	7
Total	434	422	480