

# Report on the annual accounts of the European Joint Undertaking for ITER and the Development of Fusion Energy for the financial year 2017

Together with the Joint Undertaking's reply

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# INTRODUCTION

#### Establishment of the F4E Joint Undertaking

1. The European Joint Undertaking for ITER<sup>1</sup> and the Development of Fusion Energy ('F4E Joint Undertaking') was set up in March 2007<sup>2</sup> for a period of 35 years. While the main fusion facilities were to be developed at Cadarache in France, the Joint Undertaking is located in Barcelona.

2. The founding members of the Joint Undertaking are Euratom, represented by the Commission, the Euratom Member States and Switzerland (which has concluded a cooperation agreement with Euratom).

#### Governance

3. The governance structure of the F4E Joint Undertaking includes the Governing Board, Director and other bodies. The Governing Board is responsible for the supervision of the Joint Undertaking in the pursuit of its objectives. The Director is responsible for the day-today management of the Joint Undertaking.

4. The other governance bodies of the Joint Undertaking are the Bureau, the Technical Advisory Panel, the Procurement and Contracts Committee, the Administration and Management Committee, the Audit Committee and the Internal Review Panel.

<sup>&</sup>lt;sup>1</sup> International Thermonuclear Experimental Reactor.

<sup>&</sup>lt;sup>2</sup> Council Decision 2007/198/Euratom of 27 March 2007 establishing the European Joint Undertaking for ITER and the Development of Fusion Energy and conferring advantages upon it (OJ L 90, 30.3.2007, p. 58), amended by Council Decision 2013/791/Euratom of 13 December 2013 (OJ L 349, 21.12.2013, p. 100) and Council Decision 2015/224 of 10 February 2015 (OJ L37, 13.02.2015, p. 8).

# Objectives

- 5. The objectives of the F4E Joint Undertaking are<sup>3</sup>:
- (a) to provide the contribution of the European Atomic Energy Community (Euratom) to the ITER International Fusion Energy Organisation (ITER IO);
- (b) to provide the contribution of Euratom to Broader Approach activities with Japan for the rapid realisation of fusion energy;
- (c) to prepare and coordinate a programme of activities in preparation for the construction of a demonstration fusion reactor and related facilities, including the International Fusion Materials Irradiation Facility.

# Resources

 In 2017, the final budget for the F4E Joint Undertaking was 865 million euro (2016: 720 million euro) in payment appropriations and the 589 million euro in commitment appropriations (2016: 459 million euro)<sup>4</sup>. At 31 December 2017, the Joint Undertaking employed 447 staff (2016: 415).

### **OPINION**

- 7. We have audited:
- (a) the accounts of the Joint Undertaking which comprise the financial statements<sup>5</sup> and the reports on the implementation of the budget<sup>6</sup> for the financial year ended 31 December 2017, and

<sup>&</sup>lt;sup>3</sup> Further information about the F4E Joint Undertaking and its activities are available at its website: <u>http://www.fusionforenergy.europa.eu</u>.

<sup>&</sup>lt;sup>4</sup> Third amendment to the Budget approved by the Governing Board in December 2017.

<sup>&</sup>lt;sup>5</sup> The financial statements comprise the balance sheet, the statement of financial performance, the cash flow statement, the statement of changes in net assets and a summary of significant accounting policies and other explanatory notes.

<sup>&</sup>lt;sup>6</sup> The reports on implementation of the budget comprise the reports which aggregate all budgetary operations and the explanatory notes.

(b) the legality and regularity of the transactions underlying those accounts, as required by Article 287 of the Treaty on the Functioning of the European Union (TFEU).

# Opinion on the reliability of the accounts

8. In our opinion, the accounts of the Joint Undertaking for the year ended 31 December 2017 present fairly, in all material respects, the financial position of the Joint Undertaking at 31 December 2017, the results of its operations, its cash flows, and the changes in net assets for the year then ended, in accordance with its Financial Regulation and with accounting rules adopted by the Commission's accounting officer. These are based on internationally-accepted accounting standards for the public sector.

#### Opinion on the legality and regularity of revenue underlying the accounts

9. In our opinion, revenue underlying the accounts for the year ended 31 December 2017 is legal and regular in all material respects.

### Opinion on the legality and regularity of payments underlying the accounts

10. In our opinion, payments underlying the accounts for the year ended 31 December 2017 are legal and regular in all material respects.

# Emphasis of matter

11. Without calling into question the opinions expressed above, we wish to draw attention to the following. The EU Council conclusions adopted on 7 July 2010<sup>7</sup> approved 6,6 billion euro (in 2008 values) for the Joint Undertaking's contribution to the ITER construction phase of the project, with completion initially planned for 2020. This figure did not include the 663 million euro proposed by the European Commission in 2010 to cover potential contingencies<sup>8</sup>.

<sup>&</sup>lt;sup>7</sup> Council conclusions on ITER status of 7 July 2010 (Ref. 11902/10).

<sup>&</sup>lt;sup>8</sup> Communication from the Commission to the European Parliament and the Council of 4 May 2010 on ITER status and a possible way forward (COM(2010) 226 final).

12. In November 2016, the ITER Council<sup>9</sup> approved a new ITER project baseline (scope, schedule and cost). The overall project schedule<sup>10</sup> was approved by all ITER Members<sup>11</sup>, and the overall project cost was approved ad referendum, meaning that each Member had to seek approval for project costs through their respective government budget process.

13. The new schedule endorsed by the ITER Council set out a four-stage approach, making December 2025 the deadline for achieving the first strategic milestone of the project construction phase ('First Plasma') and December 2035 the estimated completion date for the whole construction phase, a delay of 15 years compared to the original baseline. The aim of the new staged approach is to better align the project implementation with the priorities and constraints of all ITER IO Members.

14. Following the approval of the new ITER project baseline, the F4E Joint Undertaking set the new timetable and recalculated the related cost at completion ('EAC') of the Joint Undertaking's contribution to the project construction phase.

15. The results, which were presented to the Joint Undertaking's Governing Board in December 2016, indicated an expected funding requirement for the construction phase after 2020 of 5,4 billion euro (in 2008 values) which represents 82 % increase in relation to the approved budget of 6,6 billion euro (in 2008 values). The amount of 6,6 billion euro (in 2008 values) adopted by the Council of the EU in 2010 now serves as a ceiling for the Joint Undertaking's spending up to 2020.

16. It must be noted that, in addition to the construction phase, the Joint Undertaking will have to contribute to the ITER operational phase after 2035<sup>12</sup> and to the subsequent ITER deactivation and decommissioning phases. The contribution to the operational phase after 2035 is not yet estimated. The contributions of the F4E Joint Undertaking to the deactivation and the decommissioning phases

<sup>12</sup> The operational phase of the ITER project is expected to last until 2037.

<sup>&</sup>lt;sup>9</sup> 19<sup>th</sup> ITER Council on 16-17 November 2016. The ITER Council is the governing body of the ITER IO.

<sup>&</sup>lt;sup>10</sup> The ITER Council reviewed the complete updated project construction schedule through First Plasma (2025) and up to Deuterium-Tritium operation (2035) as proposed by ITER IO.

<sup>&</sup>lt;sup>11</sup> The People's Republic of China, Republic of India, Japan, Republic of Korea, Russian Federation, United States of America and European Union.

have been estimated by ITER IO in 95,54 million euro (in 2001 value) and in 180,2million euro (in 2001 value)<sup>13</sup> respectively.

17. While the F4E Joint Undertaking's forecasts for First Plasma are compatible with the ITER IO timetable for the project, the schedule is considered to be the earliest possible technically-achievable date<sup>14</sup>.

18. In June 2017, the Commission issued a communication on the EU contribution to a reformed ITER project<sup>15</sup>, seeking the support of the European Parliament and a mandate from the Council of the EU for the Commission to approve the new baseline<sup>16</sup> on behalf of Euratom.

19. Even though the new baseline does not include a contingency, in its communication the Commission suggested that a contingency of up to 24 months in terms of schedule and 10-20 % in terms of budget would be appropriate<sup>17</sup>. In addition, the measures taken to respect the 6,6 billion euro capped budget included postponing the procurement and installation of all components not essential to First Plasma. While positive steps have been taken to improve the management and control of the ITER project construction phase, there remains a risk of further cost increases and delays in project implementation compared to the new proposed baseline.

20. On 29 March 2017, the United Kingdom notified the European Council of its decision to withdraw from the EU and Euratom. An agreement setting out the arrangements for its withdrawal will be negotiated. This may have a significant effect on the future activities of the F4E Joint Undertaking and the ITER project.

<sup>&</sup>lt;sup>13</sup> IC-19/07.2.1 Proposal for the Updated Overall Project Cost (OPC) from the Director General of the ITER IO to the 19th meeting of the ITER Council on 16-17 November 2016.

<sup>&</sup>lt;sup>14</sup> As stated in the fifth annual assessment by an independent Review Group (31 October 2016) and in the report by the F4E Joint Undertaking's Head of Project Management to the Governing Board in December 2016.

<sup>&</sup>lt;sup>15</sup> COM(2017)319 final of 14.6.2017 (accompanied by Commission Staff Working Document SWD(2017) 232 final of 14.6.2017).

<sup>&</sup>lt;sup>16</sup> The Euratom contribution is without prejudice to the proposals of the Commission, the outcome of the negotiations on the withdrawal of the United Kingdom from Euratom and the Multiannual Financial Framework after 2020.

<sup>&</sup>lt;sup>17</sup> COM(2017)319 final of 14.6.2017 (accompanied by Commission Staff Working Document SWD(2017) 232 final of 14.6.2017), chapter V "ITER: the way forward".

#### Responsibilities of management and those in charge of governance

21. In accordance with Articles 310 to 325 of the TFEU and the Joint Undertaking's Financial Regulation, management is responsible for the preparation and presentation of the accounts on the basis of internationally-accepted accounting standards for the public sector and for the legality and regularity of the transactions underlying them. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation and presentation of financial statements that are free from material misstatement, whether due to fraud or error. Management is also responsible for ensuring that the activities, financial transactions and information reflected in the financial statements are in compliance with the authorities which govern them. The Joint Undertaking's management bears the ultimate responsibility for the legality and regularity of the transactions underlying the accounts.

22. In preparing the accounts, management is responsible for assessing the Joint Undertaking's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting.

23. Those in charge of governance are responsible for overseeing the entity's financial reporting process.

# Auditor's responsibilities for the audit of the accounts and underlying transactions

24. Our objectives are to obtain reasonable assurance about whether the accounts of the Joint Undertaking are free from material misstatement and the transactions underlying them are legal and regular and, on the basis of our audit, to provide the European Parliament and the Council or other respective discharge authorities with a statement of assurance as to the reliability of the accounts and the legality and regularity of the transactions underlying them. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit will always detect a material misstatement or non-compliance when it exists. These can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these accounts.

25. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the accounts and the legality and the regularity of the transactions underlying them. The procedures selected depend on the auditor's judgment, including an assessment of the risks of material misstatement of the accounts and of material non-compliance of the underlying transactions with the requirements of the legal framework of the European Union, whether due to

fraud or error. In making those risk assessments, internal control relevant to the preparation and fair presentation of the accounts and legality and regularity of underlying transactions is considered in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of internal control. An audit also includes evaluating the appropriateness of accounting policies used, the reasonableness of accounting estimates made by the management and the overall presentation of the accounts.

26. For revenue, we verify the subsidy received from the Commission and other stakeholders and assess the Joint Undertaking's procedures for collecting fees and other income.

27. For expenditure, we examine payment transactions when expenditure has been incurred, recorded and accepted. This examination covers all categories of payments (including those made for the purchase of assets) other than advances at the point they are made. Advance payments are examined when the recipient of funds provides justification for their proper use and the Joint Undertaking accepts the justification by clearing the advance payment, whether in the same year or later.

28. In preparing this report and Opinion, we considered the audit work of the independent external auditor performed on the Joint Undertaking's accounts as stipulated in Article 208(4) of the EU Financial Regulation<sup>18</sup>.

29. The comments which follow do not call the ECA's opinions into question.

# **BUDGETARY AND FINANCIAL MANAGEMENT**

# Implementation of the 2017 budget

30. The final 2017 budget available for implementation included commitment appropriations of 589 million euro and payment appropriations of 865 million euro. The utilisation rates for commitment and payment appropriations were 99,9 % and 96,3 % respectively.

<sup>&</sup>lt;sup>18</sup> Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council (OJ L 298, 26.10.2012, p. 1).

31. Due to serious shortcomings in the budget planning process, the payment appropriations finally needed in 2017 significantly exceeded the payment appropriations of the initial 2017 budget. While the initial operational payment appropriations approved by the GB in February 2017 amounted to 548,6 million euro, the final payment appropriations needed for 2017 amounted to 832,6 million euro, which is a 51,8 % increase. In addition, the Joint Undertaking has estimated a lack of payment appropriations of about 150 million euro potentially affecting the 2018 budget.

# **INTERNAL CONTROLS**

32. The F4E Joint Undertaking has not consistently followed up on the Declarations of Interest from Senior Management<sup>19</sup>.

33. Significant shortcomings were found in the internal control and monitoring procedures<sup>20</sup> related to the recruitment of a key management staff.

34. In 2018 the General Court of the European Court of Justice annulled two 2015 employment decisions of the F4E JU due to irregularities in the recruitment process<sup>21</sup>. The JU has appealed the decision in April 2018.

35. Significant shortcomings in the internal communication strategies<sup>22</sup> did not ensure the dissemination of appropriate information on the estimated costs of the decommissioning phase within the organisation. Consequently, the Joint Undertaking disclosed no provision for such liability in the accounts of the previous years<sup>23</sup>.

<sup>&</sup>lt;sup>19</sup> Management Standard 3 (Ethical and Organisational Values).

<sup>&</sup>lt;sup>20</sup> Management Standard 3 (Ethical and Organisational Values) and Management Standard 4 (Human Resources).

<sup>&</sup>lt;sup>21</sup> Decision dated 25 January 2018 of the General Court of the European Court of Justice on Court Case T-561/16: Selection procedure F4E/CA/ST/FGIV/2015/001.

<sup>&</sup>lt;sup>22</sup> Management Standard 15 (Information and Communication).

<sup>&</sup>lt;sup>23</sup> The amount of the provision has been estimated in 85,2 million euro at 31 December 2017.

This Report was adopted by Chamber IV, headed by Mr Neven MATES, Member of the Court of Auditors, in Luxembourg at its meeting of 2 October 2018.

For the Court of Auditors

Klaus-Heiner LEHNE President

### <u>Annex</u>

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# Follow-up of previous years' comments

| Year | Court's comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Status of corrective action<br>(Completed / Ongoing /<br>Outstanding) |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
|      | COMMENTS ON BUDGETARY AND FINANCIAL MANAGEMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                       |
|      | Presentation of the accounts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                       |
| 2015 | In the notes to the financial statements, the table and the information included under<br>heading 4.3.1.1. 'ITER Procurement Arrangement (ITER IO)', reflect the procurement<br>arrangements signed (column 3) and those credited so far (column 4). However, the table<br>does not show the actual degree of advancement of the works in progress. In the 2015<br>annual accounts, F4E has supplemented this information with an estimate of the work in<br>progress taking into account the total value of spending on contracts linked to PAs, and a<br>chart showing the achievement of milestones for each procurement arrangement signed<br>with ITER IO. Despite the estimate presented in the 2015 accounts, further work is needed<br>to present more accurate information on the status and value of the activities carried out<br>so far by the Joint Undertaking. | Ongoing                                                               |
|      | COMMENTS ON KEY CONTROLS IN THE JOINT UNDERTAKING'S SUPERVISORY AND CONTROL SYSTEMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                       |
| 2015 | F4E is further developing a central and uniform system for the integration of all the operational, financial and budgeting data, which will allow regular monitoring and control of estimates, costs and deviations. At its meeting of 8-9 June 2015, the Governing Board endorsed a proposal by the Director to implement an Enterprise Resources Planning (ERP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Completed                                                             |

|      | system within two years.                                                                                                                                                                                                                                                                                                                                                                                                                        |           |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 2015 | The system to provide information on the value of the degree of the implementation of activities (Earned Value Management) is under discussion with ITER IO with a view to improving the distribution of credit milestones during the life of a procurement arrangement.                                                                                                                                                                        | Ongoing   |
|      | Operational procurements and grants                                                                                                                                                                                                                                                                                                                                                                                                             |           |
|      | Negotiated procedures constituted 45 % of the 84 operational tendering procedures<br>launched in 2015 (58 % in 2014). Although the Joint Undertaking reduced the percentage<br>of negotiated procedures in 2015, efforts are needed to increase the competitiveness of<br>its operational procurement procedures. For grants, the average number of proposals<br>received was 1,4 per call.                                                     |           |
| 2015 | Review result: In 2017, negotiated procedures still constituted 47 % of the 47 operational tendering procedures launched in 2017 (2016: 45 %). In 2017, the Joint Undertaking has undertaken initiatives to reduce the percentage of negotiated procedures; however efforts are needed to increase the competitiveness of its operational procurement procedures. For grants, the average number of proposals received was 1 per call.          | Ongoing   |
|      | OTHER MATTERS                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |
|      | Legal framework                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |
| 2015 | On 2 December 2015, the F4E Governing Board finally amended its Financial Regulation<br>and Implementing Rules to align them with the new EU Financial Framework. In<br>February 2016, the European Commission issued a positive opinion on the amendments<br>introduced by F4E in its financial rules, but requested the Joint Undertaking to consider<br>further developing certain provisions in its Implementing Rules relating to specific | Completed |

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|      | derogations from the EU Financial Regulation and from the framework financial regulation applicable to the Article 208 bodies.                                                                                                                                                                                                                                                                                                                        |           |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|      | Intellectual property rights and industrial policy                                                                                                                                                                                                                                                                                                                                                                                                    |           |
|      | The Decision on the implementation of the Fusion for Energy Industrial Policy and the policy on intellectual property rights and dissemination of information were adopted by the Joint Undertaking's Governing Board on 27 June 2013.                                                                                                                                                                                                                | Completed |
| 2015 | The Joint Undertaking has developed a procurement strategy document for each procurement action. A checklist for monitoring the implementation of the procurement strategy as regards the ownership of the foreground for each procurement action has been drawn up.                                                                                                                                                                                  |           |
|      | An impact assessment on the implementation of these policies is being carried out.                                                                                                                                                                                                                                                                                                                                                                    | Ongoing   |
|      | INTERNAL CONTROLS                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |
|      | Anti-fraud strategy                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |
| 2016 | In June 2015, the F4E Joint Undertaking's Governing Board adopted an anti-fraud strategy<br>and corresponding action plan. Most of the actions were implemented in 2016. However,<br>the Joint Undertaking has not set up a specific tool to facilitate the monitoring of its<br>actions in relation to procurement procedures, in particular those related to risk<br>assessment and the evaluation, negotiation and award phases of the procedures. | Ongoing   |

# THE JU'S REPLY

**31**. F4E agrees with the finding. It should be noted that thanks to the support of Euratom, which provided the additional budget, this lack of payment appropriations in 2017 had no impact on the fulfilment of F4E obligations toward suppliers.

Internally, the payment forecasting system has been totally redesigned and integrated in the new financial management tool, ECOSYS, and the interaction between the Project Teams and the Procurement Unit managing the contracts has been enhanced.

Due to the advanced preparation of the forecasts, F4E confirms that the 2018 budget is also impacted with a lack of payment appropriations of about EUR 150 million. A request for a transfer is ongoing in the 2018 general EU budget, in order to increase the Euratom contribution to F4E, covering these additional needs.

The request for the draft budget 2019 and the forecasts for the following budgets have already been re-evaluated, based on the advanced forecasting methodology and with the new planning and reporting tool ECOSYS.

**32**. F4E will improve its current internal procedure to follow up on the Declarations of Interest from Senior Management. This improvement will imply that the updates of General Declarations of Interest (GDoIs) or any other declarations of conflicts of interest will be formally reviewed by the respective Reporting Officers, including the Chair of the Governing Board in the case of the F4E Director.

**33.** F4E is enhancing the process and selection procedures through an improvement project that is being implemented. In that context, F4E will reinforce its procedural aspects to take into account the Court's observations, with the objective of enhancing the internal control and the quality of the recruitment process.

**34**. As for the 2018 court ruling annulling one F4E selection procedure, F4E should like to make clear that while it has needed to implement the ruling, it also filed an appeal against it. It is to be noted that this case also involved an action before the European Ombudsman, who determined the complaint was unfounded and ruled in F4Es favor.

**35.** In agreement with the Court of Auditors, F4E has recognized the provision for the decommissioning costs in its 2017 Final accounts.

In relation to the shortcomings in the internal communication, F4E will tackle this through the following actions:

 The F4E internal process "Annual accounts – opening/closure of financial year" will be updated in view to clarify the information needed for the accounts in relation to provisions and contingent liabilities. In particular, a yearly update will be requested to the Project Management Department and to the Budget group regarding the status of the decommissioning and deactivation costs and any other event or information that may have an impact on the accounts.  Senior Management (and mainly the Head of the Commercial Department) will transmit to the F4E Accounting Officer any relevant information and more particularly the MAC (Management Advisory Committee) and ITER Council decisions.

# Follow-up of previous years' comments

# 2015 – Presentation of the accounts

F4E is currently using the ITER credit as its Earned Value Management (EVM) system and it is one of the methods, together with milestones monitoring and trend analysis, to monitor the progress in its activities.

At the end of 2017, the Governing Board appointed a Working Group (WG) with the task of defining an improved way of reporting from F4E, including the task of defining a suitable EVM system. Work is ongoing and the WG Chair is due to report the progress at the July 2018 GB meeting.

# <u>2015 – Comments on key controls in the Joint Undertaking's supervisory and control systems</u>

<u>Second paraghaph</u>: An update of the credit profile along the procurement was launched with the ITER Organization so that it could be closer to the value of the real work done through the various project phases (i.e. design, manufacturing, delivery, installation). Some delays have affected this work and the new forecast completion date for this action is the end of December 2018.

# 2015 – Operational procurement and grants

In spite of renewed communication and dissemination efforts, notably in the context of integrating the new Financial Regulation, the figures for negotiated procedures remained during 2017 similar to previous years (47% of total in 2017, versus 49% in 2016, 45% in 2015 and 58% in 2014).

Nevertheless, it has to be noted that the majority of these procedures were for low value negotiated procedures performed below the Directive's publication threshold and fully in line with the F4E Financial Regulations. These low value negotiated procedures represent a long term average of around 40% of F4E's yearly number of contracts but only correspond to less than 1% of the annual commitment budget.

Using negotiated procedures in these cases (within the limits imposed by F4E's Financial Regulations) responds to a concern of sound financial management, as this allows F4E to reduce time-to-contract, reacting more swiftly to the project needs and more effectively focusing use of internal resources on high value procurements. Therefore, F4E considers that no action is needed to further reduce low value negotiated procedures, which remain in compliance with the Financial Regulations principles and provisions.

The remaining negotiated procedures, typically higher value contracts (about 5% of the total number of procedures as long term average), are an expression of the complex and innovative context in which F4E operates. The characteristics of the fusion technology market are such that in many cases very limited capacity is present in Member States or worldwide. This often results in low competition levels, duopolies/monopolies or even lack of participation to calls for tender.

Since 2012, F4E increased its dissemination efforts but participation to its operational calls remained in average lower than desirable. In F4E's opinion, the main root cause is not lack of visibility but rather the sporadic and specific nature of F4E purchases. Through discussion

with other large science infrastructure buyers in Europe F4E came to the conclusion that the nature of the activities related to the scope of large science and technology projects is such that limited competition is regrettably a matter of fact, on which a single contracting authority can have only a modest impact. This conclusion is shared by other contracting authorities managing similar projects in Europe.

As a consequence, during 2016 F4E initiated a forum comprising most similar, first of a kind high-tech frontier projects in Europe. Through this forum different organizations with similar project challenges (in particular in relation to low industrial engagement and participation) began working together to address them in a more coordinated and effective way. Among the key ideas generated through this forum is to foster a single market for large scientific projects, which is more stable and larger and therefore more capable of attracting companies' interest.

The forum's first event targeting industry took place in Denmark at the end of February 2018, with participation of 1037 delegates representing 530 companies and public organisations from 29 countries. The feedback from industry and public participants after the event was very positive, and in June 2018 the forum participants (F4E, ESA, ESO, CERN, EMBL, ESRF, ESS, XFEL, ILL) voted unanimously to accept candidatures for the organization of a second large event in 2020 and to extend forum membership to other organizations of European interest with similar large scale, high-technology projects.

# 2015 – Intellectual property rights and industrial policy

<u>Second paragraph:</u> F4E has actively cooperated with Trinomics and Cambridge Econometrics, an independent economic policy consultancy, which has produced a study for the European Commission on the "Impact of ITER activities in the EU". The study was completed in April 2018. Its main results are summarized below.

 As concerns the effectiveness of F4E's Industrial Policy, results from econometric modelling show that spending on ITER has generated around 34 000 job years between 2008 and 2017. The positive effect will continue in the future, until end of the ITER construction.

Comparing the ITER economic return and job creation to an alternative EU spending scenario (with a neutral expenditure distribution to all economic sectors) it is estimated that ITER will generate between 2008 and 2030 a total net gain to EU Member States of  $\in$  586 million.

- For what concerns intellectual property and dissemination of information, the study concludes that the above referred net benefits may be significantly increased by spin-offs and further innovation stimulated by firms working on ITER and developing new technologies and products. Whilst the modelling results are indicative, they suggest that the economic impact increases by a further 25-60% or more due to these effects.

In order to receive the maximum benefit from these additional effects, the study suggests that technology transfer activities should be reinforced around the ITER project. Experience from both CERN and ESA demonstrates that setting up an effective technology transfer system takes time but is crucial to enhance the impact of the public investment.

F4E had already initiated during 2017 the preliminary activities to set-up a technology transfer programme in cooperation with EUROfusion, taking inspiration from the ESA model. During 2018 the first phase of this programme is planned to start.

# 2016 – Antifraud Strategy

Following Recommendation 3.5 of its Anti-Fraud Strategy, in February 2018, F4E has adopted its own set of procurement fraud risk indicators: Red Flags. The purpose of the Red flags list is to define the indicators specific to F4E procurement activities, based on the characteristics for tenders, market analysis and procurement systems in order to raise awareness among staff involved in procurement of key points to be verified through the procurement process.

The list of indicators was considered a prerequisite to the development of the Anti-Fraud IT tool that was envisaged to facilitate the monitoring of F4E's actions in relation to procurement procedures. However, in January 2018, an assessment of the complexity to develop a tool providing all the required functionalities revealed that it would be too heavy for F4E as a single EU agency.

Consequently, other, simpler and quicker solutions, still providing sufficient level of assurance were considered and F4E decided to design its internal Anti-Fraud checklist on the basis of its list of Procurement Fraud Risk Indicators - Red Flags. The Anti-Fraud Checklist has just been adopted in May 2018 and becomes effective as of 1 July 2018. When applicable, the checklist will be filled and signed at least twice in the life cycle of the procurement (at award and at contract closure stage) by two different actors, independently, both the Technical Project Officer and the Contracts and Procurement Officer, in order to provide full transparency. If necessary, the checklist may also be used by any F4E staff to raise a red flag at any stage of procurement lifecycle. The use of the checklist is now being introduced in F4E's internal processes, in parallel with all other changes related to the Improvement Procurement Project.