



# **Fusion for Energy**

## **The European Domestic Agency for ITER**

**Beyond procurements,  
an industrial policy for Fusion**

**ITER for Swiss industry, 28<sup>th</sup> September 2009, Berne - CH**  
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Benjamin Perier – Head of Business Intelligence group

1. From ITER to F4E (reminder)
2. What is F4E
3. F4E Contracts & Finance overview
4. F4E Work Programme
5. F4E industrial policy

# 1. From ITER to F4E

## The project & the participants



- As already mentioned, ITER is the world's biggest fusion energy research project & world's largest S&T cooperation endeavor.
- Objective: to demonstrate the scientific and technological feasibility of fusion power.
- To be built in Europe in Cadarache, France.



# 1. From ITER to F4E

## Task repartition and players around ITER



- **ITER Organization (IO)**, Cadarache, undertakes reactor assembly & operational start of ITER device.
- **ITER France** agency, Cadarache, is in charge of ground preparation, safety related questions on behalf of IO, & on-site staff welcoming.
- **7 Domestic Agencies** manage the operational procurements and budget relative to their contribution. The DAs deliver in-kind contribution to IO in the form of components, works & services.



**Fusion for Energy (F4E) is the European Domestic Agency**

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## 2. What is F4E Contributions and European decision



For the construction of ITER, Parties agreed that

- 90% of contributions are in-kind
- 10% are in-cash.

European Commission has **created** a specific legal entity in order to meet its obligation as a Party, including the participation of Switzerland

Under Euratom Treaty, a Joint Undertaking was the most appropriate legal basis based on the experience of the Joint European Torus in the UK (1971-1999, EFDA thereafter).

So Fusion for Energy is:

- empowered to make decisions on behalf of the European Union.
- responsible of the EU budget.

## 2. What is F4E

### Main facts and figures



- Established in April 2007 for a period of 35 years
- F4E is an industrial & procurement agency
- F4E members: 27 European Union states + Switzerland
- Headcount will be roughly 300 people in 2010
- F4E is based in Barcelona - Spain  
but has also an antenna in Garsching (D)  
and Cadarache (F).



**F4E 2009 annual procurement budget of approximately 400M€ of which more than 80% are dedicated to operational procurements.**

## 2. What is F4E Our objectives



The objectives of Fusion for Energy are threefold:

1. Provide Europe's contribution to the ITER international fusion energy project
2. Implement the Broader Approach agreement between Euratom and Japan.
3. Prepare for the construction of demonstration fusion reactors (DEMO).

All three objectives form part of the “Fast Track” approach to fusion.



## 2. What is F4E

### Scope of our mission for ITER



F4E has to provide on behalf of the European Union and Switzerland

- 45 % of ITER construction,
- 34 % of operation, deactivation and decommissioning costs,



F4E manages 5B€ budget

Europe + CH (Euratom) are engaged in almost all of the Procurement Packages shared with the six other Parties.

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## 3. Contracts & Finance

### Our rationale & scope



#### Rationale:

- Efficiency and reactivity, now for ITER then for DEMO
- Transparency, equal treatment and non-discrimination
- Ethical obligation vs. the tax payers
- Sustainable development obligation arising
- Best value for money is the core of our procurement activity.

#### Scope:

- Our natural supplier market is Europe including Switzerland... but we go worldwide as often as needed
- We share with other Domestic Agencies, and steer potential partnership within the ITER world.

### 3. Contracts & Finance

#### Contracting models



F4E contracts with organizations via:

- Grants through Calls for proposals
- Procurement contracts through calls for tender.

Grants support R&D at 40% through specific contracts or framework partnership agreements.

Procurement contracts will provide goods, works or services through:

- Open procedure
- Restricted procedure
- Competitive dialogue
- Negotiated procedure

Emphasis on restricted procedure and competitive dialogue due to technical complexity

## 3. The Contracts & Finance Department

### The Joint Team principles



#### Organization

- Each procedure is **managed by a Technical Responsible Officer and a Procurement Responsible Officer**
- Actions and information are shared between Contracts & Finance Procurement and ITER Departments.

#### Objectives

- **Reach excellence** in procurement thanks to an expert-oriented approach
- Perform relevant and effective procurement procedures
- Ensure the **implementation of the Work Program**
- Identify and better manage F4E priorities, costs.

**Joint Team is supported by experts (QA, Finance, Business Intelligence, Legal ...)**

## 3. The Contracts & Finance Department

### Our procedures 1/3



#### Open procedure

- ✓ all interested economic operators may submit a full tender

#### Restricted procedure

- ✓ Procedure carried out in two phases:
  - 1: Pre-selection following a Call for Expression of Interest
  - 2: Call for Tender: only pre-selected companies may submit a tender.

#### Competitive dialogue

- ✓ For particularly complex contracts, collaboration with industry to clarify technical specifications

#### Negotiated procedure

- ✓ only for contracts below 250.000 Euro and in exceptional cases (justification required)

## 3. The Contracts & Finance Department

### Our procedures 2/3



In case of Open or Restricted Procedure

- The contractor must comply with the instructions contained in the Tender
- First offer is the Best And Final Offer
- Any deviation to the process may lead to automatic exclusion of the bidder.

## 3. The Contracts & Finance Department

### Our procedures 3/3



## Evaluation of Tender is made on three levels:

### EXCLUSION CRITERIA

- The tenderer must meet all **legal obligation** to participate *Ref. Art. 45(2) of Directive 2004/18/EC, see [http://ec.europa.eu/internal\\_market/publicprocurement/2004\\_18/index\\_en](http://ec.europa.eu/internal_market/publicprocurement/2004_18/index_en)*

### SELECTION CRITERIA

- The tenderer must have the **capacities** to carry out the work: technically, financially, in terms of resources, of tools, past experience...

### AWARD CRITERIA

- **Qualitative assessment and price comparison of the offers.**
  - F4E defines for each procedure the distribution of different criteria (*technical offer quality, price, industrial policy compliance etc.*)



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## 4. Work Programme 2009

### Some facts and figures



Operational budget 2009 is roughly M€ 290 (for procurements)

Since beginning of 2009:

96 procedures have been initiated (incl. 40 grants)

58 calls have been launched

31 contracts have been awarded (incl. 10 grants), among which

- supply of Nb<sub>3</sub>Sn strand: M€ 40 already signed, 24 M€ pending signature
- supply of Chromium plated copper strand: M€ 3.6

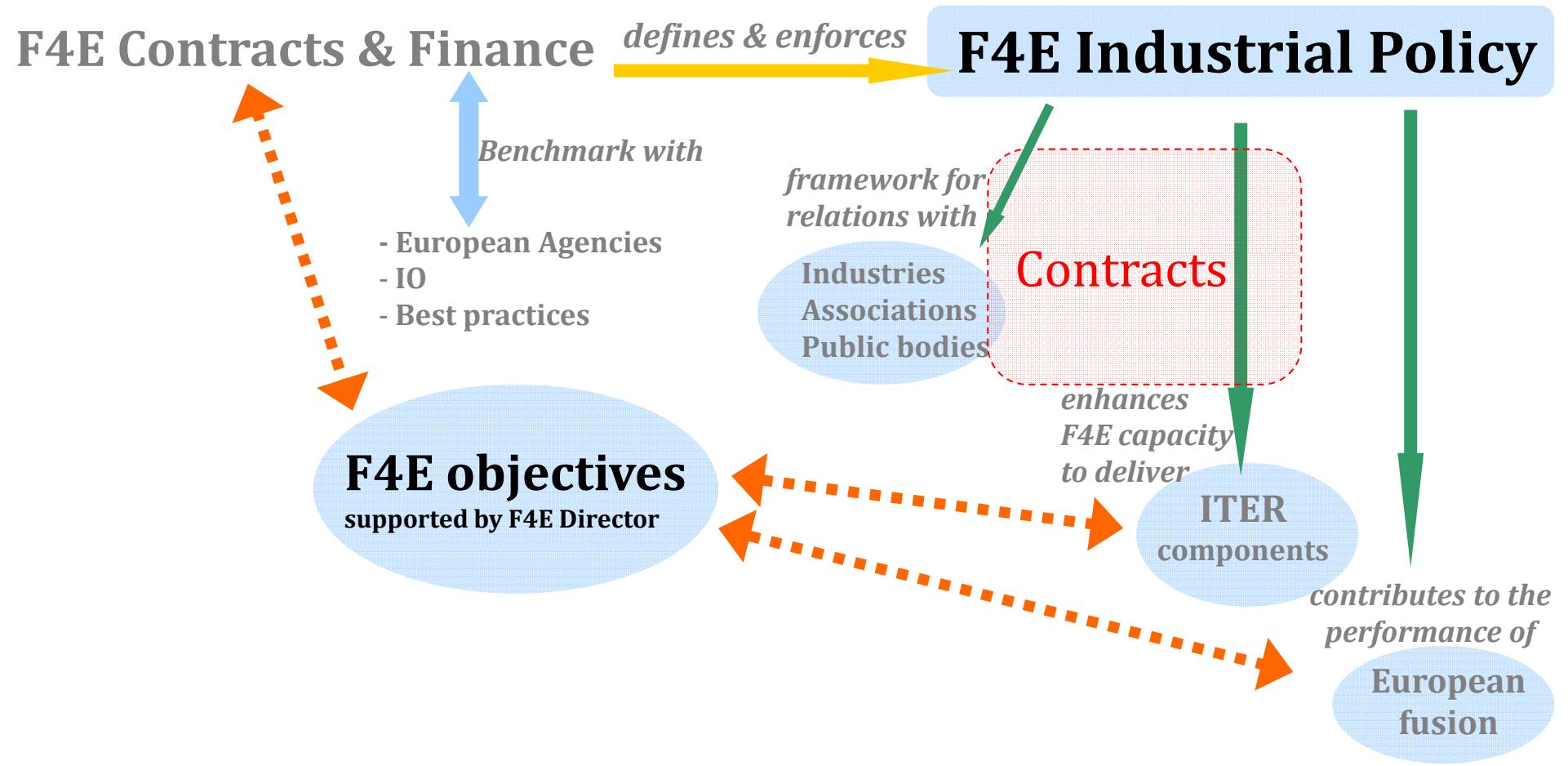
Until end of 2009:

Approximately 40 calls will be launched, worth 38 M€, among which

- PF coils – tooling and fabrication
- Ion source test facility (power supplies–ISEPS, Ion source)
- Infrastructures of the neutral beam test facility
- Magnetic diagnostic (design of in-vessel diagnostics to conceptual design review level)
- Excavation and drainage of Tokamak complex foundations (Phase 1 - design)
- Tokamak complex seismic isolators fabrication
- Mandatory and complementary building insurance

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# F4E industrial policy rationale 1/2



## F4E industrial policy rationale

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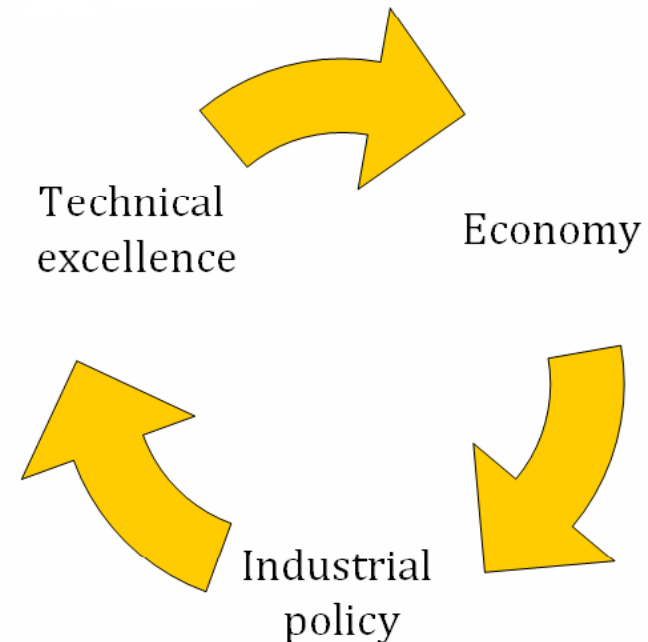
- knowledge sharing
  - knowledge transfer
- between associations and industry



Involve small, medium and big players.  
Bring opportunities and create value  
for industries and for ITER



Pave the way for a competitive industry  
for fusion in Europe



# F4E suppliers' relationship

## Principles and tools



Industry is more than a supplier and may be a partner

Industrial Liaison Officer [Jean-René Leidner for Switzerland] is a preferred communication channel for Swiss industry for information on calls, prime contractors (depending in the procedure)

F4E provides as much information as needed for a mutual understanding.

- Publication of Work Programme on web site
  - Including the identification of required competences for the coming WP 2010 (November 2009)
- Publication of the list of companies selected to tender
  - possibility for Swiss industries to contact prime contractors for subcontracting or grouping
- Implementation of a rule to invite 1/3 of SMEs for calls < 250 k€.

F4E takes Industry into consideration for possible inflexions on 'touchy' questions :

- Terms of payment,
- Insurance, Liabilities (nuclear and conventional and consequential), Conflicts of Interest,
- Intellectual Property Rights.

F4E develop an Industrial Portal

- will include Supplier pre-qualification and assessment (partly shared among industries)
- will include full electronic Call For Tender management

# Focus on Pre-qualification principles



The F4E suppliers Pre-qualification assesses the following domains

- General information, Financial, Quality and Delivery records

*Swiss industry have a chance to provide info on their experience with JET  
=> will be taken into consideration*

For each criteria, traffic lights are used:

- **Green** for A and B, (A means outstanding and B means Good)
- **Amber** for C, (C means the delivered information are not accepted)
- **Red** for D, (D means information are not delivered)

A supplier will be considered as not pre-qualified if one of the domain is either **Amber** or **Red**.

A supplier not pre-qualified can still answer to a procurement or grant Procedure.

A pre-qualified supplier will not automatically be selected for a grant or Procurement procedure.

Pre-qualification data will be shared F4E-wide (ITER department) but also with other ITER Domestic Agencies.

# Conclusion




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## FUSION FOR ENERGY





THE EUROPEAN JOINT UNDERTAKING FOR ITER AND THE DEVELOPMENT OF FUSION ENERGY

Bringing the power of the sun to earth

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**The European Joint Undertaking for ITER and the Development of Fusion Energy or 'Fusion for Energy' helps to realise fusion as a future source of energy.**

'Fusion for Energy' was established in March 2007 and its offices are located in Barcelona, Spain.

**News**

**03 August 2009**  
F4E Call for Experts in new areas of expertise  
F4E has updated its Call for Experts to allow applications within the following new areas of activity.  
[Read more >>](#)

**16 July 2009**  
New Job Opportunities at F4E  
New vacancy notices for recruitment at Fusion for Energy have been published.  
[Read more >>](#)

**9 June 2009**  
President of Catalonia visits F4E  
The President of Catalonia, Mr José Montilla, made an official visit to the F4E offices on 4th June. The visit, which lasted two hours, saw the presence of 25 press, radio and TV journalists as well as VIPs from Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT), the EU representation in Barcelona and the Catalonia Institute for Energy Research (IREC).  
[Read more >>](#)

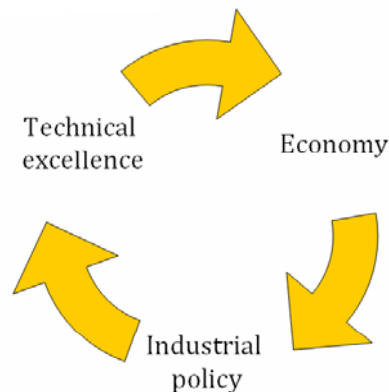
**Events**

**27 May 2009**  
Information Day – Additional Heating Power Supplies for ITER  
What are the F4E procurement rules? What will be the procurement process for ITER's Heating and Current Drive Power Supplies? How does the process work?  
These questions and others were discussed during F4E's first thematic meeting presenting the European procurement packages for ITER Heating and Current Drive Power Supplies and their associated procurement strategy.  
[Read more >>](#)

**4-5 March 2009**  
F4E 1st Meeting on Buildings for ITER  
The first thematic meeting to present the seven procurement packages during 2009-2011 for the construction of the ITER buildings was held on 4-5 March at the Chteau de Cadarache, France.  
All PowerPoint presentations are available online >>



- F4E – Fusion For Energy is a new and growing entity aimed to become a center of excellence for the development of Fusion (and associated technologies)



- F4E defines the relevant industrial policy (adapted to strategic issues) for European enterprises wishing to participate to ITER project.



**Thank you!**

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