EUROfusion

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EUROfusion

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Programme Management Unit

ITER

Fusion for Energy (F4E)

All EU Member States plus Switzerland have joined the EUROfusion agreement involving 29 fusion laboratories and numerous Third Parties.
Their combined effort will achieve the ultimate goal: fusion electricity by 2050

Roadmap towards fusion electricity

Power Plant

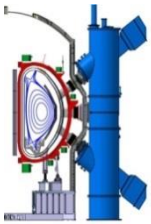
Fusion is practical, attractive

Fusion is feasible

Fusion is plausible

Fusion is commercially exploited

DEMO



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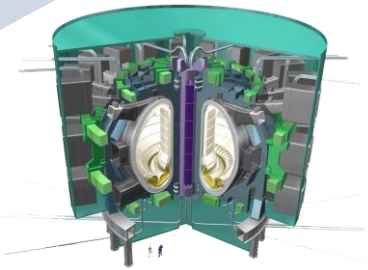

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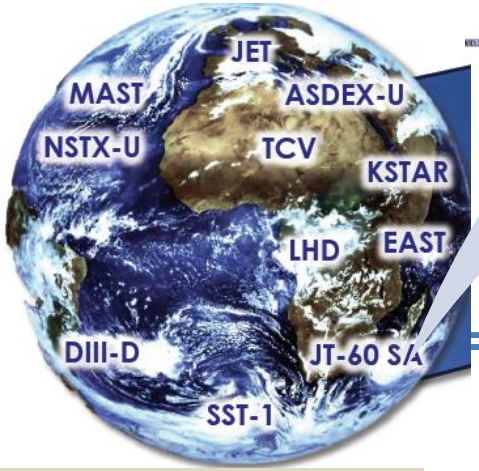


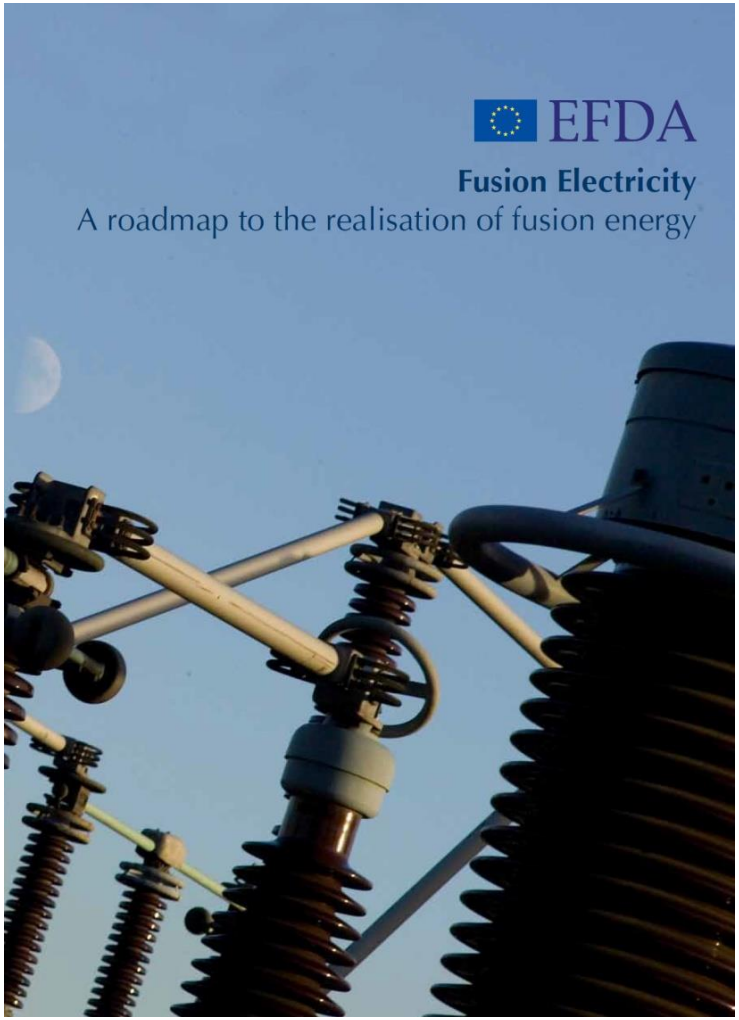
Fusion facilities around the world

~2020
Operation

~2025

~2050

Fusion Roadmap



http://www.euro-fusion.org/

Eight important missions

- For each mission:
  - overview present status
  - list of unresolved and urgent issues
  - research & development plan
  - estimation of required resources

Three periods

- 2014 – 2020
  (Building ITER & Supporting Experiments)
- 2021 – 2030
  (Exploiting ITER and Designing DEMO
- 2031 – 2050
  (Building and Exploiting DEMO)

Important to intensify the involvement of industry

Fusion Roadmap

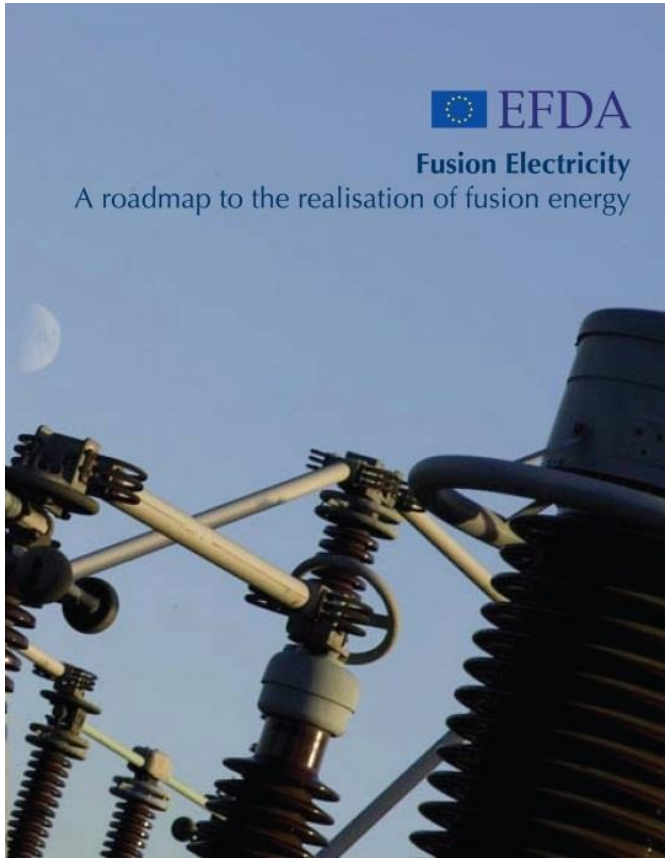
8 Strategic Missions to tackle the critical challenges for Fusion:

1. *Plasma Operation*
2. *Heat Exhaust*
3. *Neutron resistant Materials*
4. *Tritium-self sufficiency*
5. *Safety*
6. *Integrated DEMO Design*
7. *Competitive Cost of Electricity*
8. *Stellarator*

IPH

DEMO

IPH



Emphasis on:

- Central role of ITER
- DEMO as a single step to commercial fusion power plants that produce electricity and have a closed fuel cycle
- DEMO construction starting early in the 2030s
- Pragmatic Approach: It should not be perfect but good enough and must come on time to make an impact