

# **Task 9: Fusion Power Plant Studies Status & Planned Activities**

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**IEA ESE Executive Committee Meeting**

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# Scope of Work

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## **Rationale:**

- Fusion Power Plant Studies necessarily need to be forward looking in both physics and engineering design.
- The extrapolations from Present data differ among the parties.
- Intercomparison of design studies will provide a wealth of information on the impact of improvements in physics and technology on attractiveness of fusion power plant and can help guide R&D.

## **Deliverable:**

- **A collaborative study reviewing existing design studies to identify:**
  1. The possible embodiments of fusion power plants and their attributes :
    - a) Economic performance, b) Safety and Environmental Features, and
    - c) Maintenance and reliability
  2. Trade-offs between technical risk (credibility and robustness) and attractiveness of the final product
  3. Identify R&D priorities.

# 2002 Activities

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- We met at last US/Japan Workshop in San Diego last March (EU, Japan, and US contact persons attending).
- Work plan was discussed and approved (attached).
- We agreed to have annual meeting as part of the US/Japan Workshop on Power plant Studies (held in US or Japan each March).
- A detailed work plan for 2002-2003 was produced. Aim is to produce a paper for publication in Nuclear Fusion or equivalent journal by end of summer 2003.

# Milestones

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- 1) Using previous and on-going power plant studies, each party will generate an "overview" paper following program elements of Table 9 as guidance for paper structure. For each area, the paper will include a description of system in a power plant as well as comparison with present database as well as relevance impact of the system on overall power plant performance.
- 2) Papers are due in early Feb. 2003.
- 3) We will have a meeting in March 2003 in coordination with Japan/US Workshop on power plant studies with EU participation. The workshop will be held in Japan. The overview papers will be reviewed and discussed in that meeting. We will try to identify areas of common agreement and to understand differences. It would be desirable if we can assemble these individual assessment papers into one paper for publication by summer of 2003.