

The Fusion-Fission Hybrid Workshop

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Welcome

The Basic Question

- DOE currently does not support hybrid research
- The rest of the world does
- The US used to be leaders in hybrid research

Should the DOE restart a program in hybrid research?

How can we help answer this question?

- Assess the current state of knowledge of fusion-fission hybrids
- Applications to assess
 - Energy production
 - Waste disposal
 - Fuel production

Assessment Issues

- When does the country need solutions to these problems?
- What are the alternates to achieve the same goals
 - Fast burners
 - Fast breeders
 - Accelerator driven hybrids
 - Repositories (interim and long term)

Key Points of Comparison

- Economics
- Technological readiness
- Proliferation resistance
- Safety

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□ Economics

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What else should we do?

□ List the research needs for hybrid development

- Fusion engineering and technology
- Fusion plasma science
- Advanced fuel cycles
- Fusion core-fission blanket interface

What should we not do?

- Make recommendations
- Gunfight at the fusion driver corral

How **might** hybrids help the US?

- Contribute to US energy security by helping the nuclear renaissance

How **might** hybrids help fusion?

- Shorter term application than pure fusion electricity

How **might** hybrids help fission?

- ❑ Contribute to waste management
- ❑ Contribute to fuel production
- ❑ Contribute to energy production

It's Here!

