

# **OSTP Perspective on Burning Plasma Experimental Program**

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## **Outline**

**OSTP View on Fusion Energy**

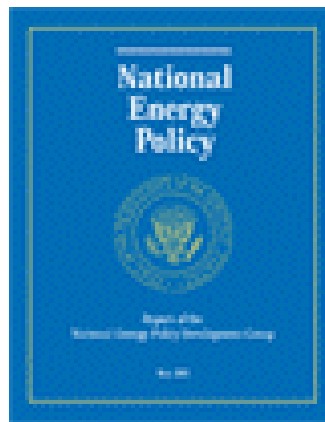
**Budget Outlook**

**What decisions need to be made?**

**Issues and Concerns**

# OSTP View on Fusion Energy

Fusion is a recommended component of the National Energy Policy.



## Recommendation:

★ The NEPD Group recommends that the President direct the Secretary of Energy to develop next-generation technology—including hydrogen and fusion.

- Develop an education campaign that communicates the benefits of alternative forms of energy, including hydrogen and fusion.
- Focus research and development efforts on integrating current programs regarding hydrogen, fuel cells, and distributed energy.

# OSTP View on Fusion Energy

*"... the President is anxious to accelerate fusion power as a realistic source of energy. We are now engaged in serious consultation here in the United States and around the world on how best to pursue a fusion program. President Bush is particularly interested in the potential of the international effort know as ITER and has asked us to seriously consider American participation"*

Remarks by Energy Secretary Abraham, Public Energy  
Forum Lunch

Conference of G8 Energy Ministers Detroit

May 2, 2002

# OSTP View on Fusion Energy

*"We will promote further expansion of contacts in such areas of cooperation as information technology, the natural and social sciences, and areas of fundamental research, such as fusion energy and high-energy physics."*

Joint Statement by President George W. Bush and  
President Vladimir V. Putin

on

U.S.-Russian People-To-People Contacts

May 2002

# OSTP View on Fusion Energy

Fusion Energy Science FY03 Request is \$257M, +10M over FY02 Appropriations.

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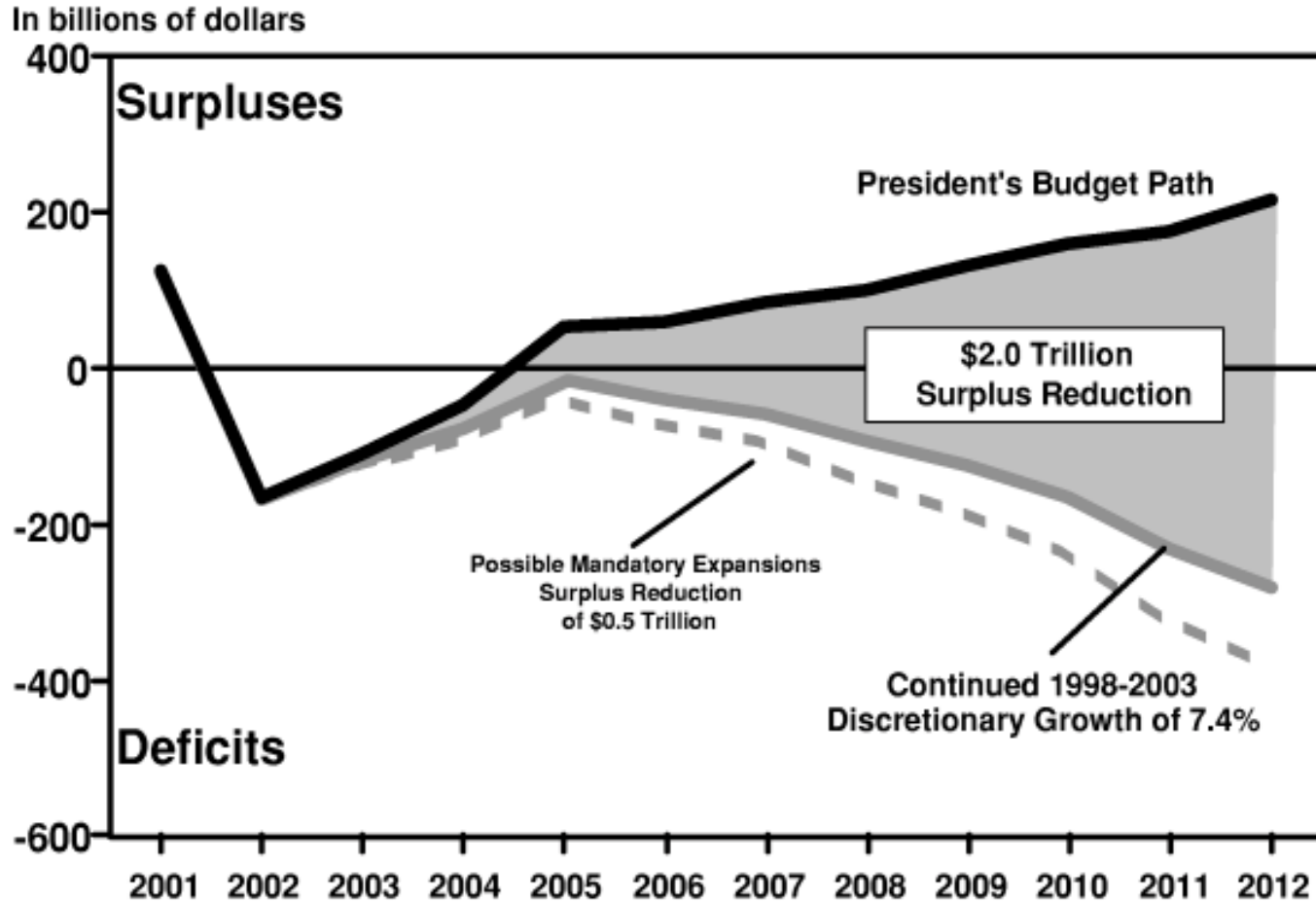
⇒ The Administration is supportive of the concept of fusion energy.

⇒ The Administration is reviewing the US position on ITER from a favorable perspective.

# Budget Outlook

from OMB Mid-Session Review

## Chart 5. Recent Spending Trends Lock In Perpetual Deficits



# OSTP Science Perspective

- The promise of Fusion Energy is too great to ignore.
  - Environmental/Energy/Energy Independence/International Diplomacy
- The technological development of Fusion Power is still far off, need to focus on more near term scientific drivers.
  - The Burning Plasma appears to be the next essential step for the US program.
  - The decision to undertake an advanced tokamak burning plasma program requires the continued emphasis on alternate configurations, associated technology developments.
  - Agreement on what the Budget path looks like is needed and critical.



# **What decisions need to be made?**

## **1. Do we enter the ITER negotiation?**

The determination needs to be made of the cost and time schedule of commitments to ITER based on the current state of Fusion Science, the current program, and the “business case” for entering ITER.

Will the ITER Program shorten the time to viable Fusion Energy production or is this unclear?

# **What decisions need to be made?**

## **2. What are the acceptable terms for US participation?**

The US is not be interested in siting the ITER machine on US soil, and is neutral about where it should be located.

The US would want to see that the ITER Project run efficiently and effectively.

The US would oppose the expansion of the ITER project beyond the current scope, especially to a materials test facility. That would need to be the subject of a separate negotiation and agreement.

## **What decisions need to be made?**

**3. What changes need to be made in the Fusion Energy Science Program within the Department of Energy if we vector in this direction?**

## **Some Issues and Concerns**

Does the investment in the technological developments of the ITER device leave us over-invested in the tokamak and leave us without a broad technological base for fusion energy?

Is the science learned from ITER readily transferable to other configurations or does the science derived from ITER narrow future technical options?

How will the orientation of the program change (science vs. applied science vs. technology development)? Are we making this change too early or too rapidly?

Could the ITER Program ultimately consume the US Fusion Energy Program?