

## 2024 Current Fiscal Year Report: Fusion Energy Sciences Advisory Committee

Report Run Date: 04/16/2024 08:05:04 AM

### 1. Department or Agency

Department of Energy

### 2. Fiscal Year

2024

### 3. Committee or Subcommittee

Fusion Energy Sciences Advisory  
Committee

### 3b. GSA Committee No.

444

### 4. Is this New During Fiscal Year?

No

### 5. Current Charter

08/02/2023

### 6. Expected Renewal Date

08/02/2025

### 7. Expected Term Date

### 8a. Was Terminated During Fiscal Year?

No

### 8b. Specific Termination Authority

AGEN

### 8c. Actual Term Date

### 9. Agency

### Recommendation for Next Fiscal Year

Continue

### 10a. Legislation Req to Terminate?

No

### 10b. Legislation Pending?

Not Applicable

### 11. Establishment Authority

Agency Authority

### 12. Specific Establishment Authority

AGEN

### 13. Effective Date

02/28/1991

### 14. Committee Type

Continuing

### 14c. Presidential?

No

### 15. Description of Committee

Scientific Technical Program  
Advisory Board

### 16a. Total

### Number of Reports

No Reports for  
this Fiscal Year

### 17a.

Open

0

17b. Closed

0

17c. Partially Closed

0

Other Activities

0

17d. Total

0

### Meetings and Dates

No Meetings

Current Next  
FY FY

<b>18a(1). Personnel Pmts to Non-Federal Members</b>	\$0.00 \$0.00
<b>18a(2). Personnel Pmts to Federal Members</b>	\$0.00 \$0.00
<b>18a(3). Personnel Pmts to Federal Staff</b>	\$0.00 \$0.00
<b>18a(4). Personnel Pmts to Non-Member Consultants</b>	\$0.00 \$0.00
<b>18b(1). Travel and Per Diem to Non-Federal Members</b>	\$0.00 \$0.00
<b>18b(2). Travel and Per Diem to Federal Members</b>	\$0.00 \$0.00
<b>18b(3). Travel and Per Diem to Federal Staff</b>	\$0.00 \$0.00
<b>18b(4). Travel and Per Diem to Non-member Consultants</b>	\$0.00 \$0.00
<b>18c. Other(rents,user charges, graphics, printing, mail, etc.)</b>	\$0.00 \$0.00
<b>18d. Total</b>	\$0.00 \$0.00
<b>19. Federal Staff Support Years (FTE)</b>	0.00 0.00

**20a. How does the Committee accomplish its purpose?**

The Committee receives charges from the Director, Office of Science. It normally appoints a panel consisting of members of the full Committee and experts in the specific areas needed to address the charge. The panel meets as necessary to develop a proposed response to the charge. The full Committee meets in public session to discuss the work of the panel and to prepare its response to the charge. In most cases, the Committee's response to a charge represents a unanimous position adopted by the Committee and is provided to the Department in a letter signed by the Committee Chair. In very rare cases, the response is based on a majority vote of Committee members present at the meeting.

**20b. How does the Committee balance its membership?**

The Committee members are chosen to ensure that the membership is appropriately balanced taking into account factors such as: (1) the scientific and technical disciplines; (2) the types of institutions that employ the members; (3) diversity, equity, and inclusion; and (4) the geographic location of these institutions. Recent Departmental guidance has dictated that the members be employed as Special Government Employees during the times that they are involved in conducting FESAC business since they are functioning as technical experts.

**20c. How frequent and relevant are the Committee Meetings?**

FESAC MEETINGS ARE HELD ABOUT TWO-OR THREE-TIMES PER YEAR. In FY 2023, FESAC had one virtual meeting. The primary purpose of the meeting was to consider for approval the report of the FESAC subcommittee on international benchmarking. FESAC approved the report unanimously with minor changes. This was the first meeting for the new Associate Director for Fusion Energy Sciences, Dr. Jean Paul Allain, who presented the charge to FESAC on international benchmarking. A presentation was also given by Dr. Asmeret Asefaw Berhe, Director of the Office of Science, on the Office of Science perspective.

**20d. Why can't the advice or information this committee provides be obtained elsewhere?**

The breadth of technical issues, the variety of research institutions involved, and the long-term nature of the program preclude exclusive reliance on Federal personnel, consultants, or a single

contractor for the necessary level of advice for planning purposes. The advice that will be provided by FESAC is so diverse and technically complex that it cannot be provided or gained through the use of consultants, hearings, grants, contracts, or existing committee.

**20e. Why is it necessary to close and/or partially closed committee meetings?**

N/A

**21. Remarks**

**Designated Federal Officer**

Samuel J Barish DFO

<b>Committee Members</b>	<b>Start</b>	<b>End</b>	<b>Occupation</b>	<b>Member Designation</b>
Agonafer, Dereje	06/01/2022	06/01/2025	University of Texas at Arlington	Special Government Employee (SGE) Member
Belli, Emily	06/01/2022	06/01/2025	General Atomics	Special Government Employee (SGE) Member
Chacon, Luis	06/01/2022	06/01/2025	Los Alamos National Laboratory	Special Government Employee (SGE) Member
Delgado-Aparicio, Luis	06/01/2022	06/01/2025	Princeton Plasma Physics Laboratory	Special Government Employee (SGE) Member
Dollar, Franklin	06/01/2022	06/01/2025	University of California at Irvine	Special Government Employee (SGE) Member
Hansen, Stephanie	08/16/2021	06/02/2024	Sandia National Laboratory	Special Government Employee (SGE) Member
Humrickhouse, Paul	08/17/2021	06/02/2024	Oak Ridge National Laboratory	Special Government Employee (SGE) Member

Izzo, Ralph	10/02/2019	06/02/2025	TerraPower	Special Government Employee (SGE) Member
Kuranz, Crolyn	08/20/2020	05/31/2026	University of Michigan	Special Government Employee (SGE) Member
Lahoda, Edward	06/01/2022	06/01/2025	Westinghouse Electric Company	Special Government Employee (SGE) Member
Lasa Esquisabel, Ane	06/01/2022	06/01/2025	University of Tennessee	Representative Member
Ma, Tammy	12/06/2018	06/02/2024	Lawrence Livermore National Lab	Special Government Employee (SGE) Member
Magee, Richard	08/13/2021	06/02/2024	TAE Technologies	Special Government Employee (SGE) Member
Matthews, Lorin	10/02/2019	06/02/2025	Baylor University	Special Government Employee (SGE) Member
Paz-Soldan, Carlos	06/01/2022	06/01/2025	Columbia University	Special Government Employee (SGE) Member
Reyes, Susana	02/01/2017	06/02/2025	Excimer Energy	Special Government Employee (SGE) Member
Senor, David	06/01/2022	06/01/2025	Pacific Northwest National Laboratory	Special Government Employee (SGE) Member
Srinivasan, Bhuvana	06/01/2022	06/01/2025	Virginia Polytechnic Institute & State U	Special Government Employee (SGE) Member
Verboncoeur, John	04/26/2015	12/30/2025	Michigan State University	Ex Officio Member
Walker, Mitchell	02/01/2018	05/31/2026	Georgia Institute of Technology	Special Government Employee (SGE) Member
White, Anne	02/01/2018	06/02/2025	Massachusetts Institute of Technology	Special Government Employee (SGE) Member
Wilson, Howard	06/01/2022	06/01/2025	Oak Ridge National Laboratory	Representative Member

**Number of Committee Members Listed: 22**

**Narrative Description**

The Committee provides valuable, independent advice to the Director of the Office of Science on complex scientific and technological issues that arise in the planning, implementation and management of the fusion energy science program.

**What are the most significant program outcomes associated with this committee?**

Checked if  
Applies

- |   |                                     |
|---|-------------------------------------|
| Improvements to health or safety                  | <input type="checkbox"/>            |
| Trust in government                               | <input type="checkbox"/>            |
| Major policy changes                              | <input type="checkbox"/>            |
| Advance in scientific research                    | <input checked="" type="checkbox"/> |
| Effective grant making                            | <input type="checkbox"/>            |
| Improved service delivery                         | <input type="checkbox"/>            |
| Increased customer satisfaction                   | <input type="checkbox"/>            |
| Implementation of laws or regulatory requirements | <input type="checkbox"/>            |
| Other   | <input type="checkbox"/>            |

**Outcome Comments**

N/A

**What are the cost savings associated with this committee?**

Checked if Applies

- |                            |                                     |
|----------------------------|-------------------------------------|
| None                       | <input checked="" type="checkbox"/> |
| Unable to Determine        | <input type="checkbox"/>            |
| Under \$100,000            | <input type="checkbox"/>            |
| \$100,000 - \$500,000      | <input type="checkbox"/>            |
| \$500,001 - \$1,000,000    | <input type="checkbox"/>            |
| \$1,000,001 - \$5,000,000  | <input type="checkbox"/>            |
| \$5,000,001 - \$10,000,000 | <input type="checkbox"/>            |
| Over \$10,000,000          | <input type="checkbox"/>            |
| Cost Savings Other         | <input type="checkbox"/>            |

## **Cost Savings Comments**

N/A

**What is the approximate Number of recommendations produced by this committee for the life of the committee?**

522

## **Number of Recommendations Comments**

We do not have readily at hand the total number of recommendations this office has received from FESAC and its predecessors since it was chartered as the Fusion Energy Advisory Committee in 1991. An estimate is an average of 8-12 per year, making the total about 128-192 through FY 2008. In FY 2009, there were 14 recommendations made in the report on alternate toroidal magnetic fusion concepts and 15 recommendations in the report on HEDLP science. There were 120 recommendations made in the committee of visitors report in FY 2010, and no recommendations were made in FY 2011. In FY 2012, FESAC issued two reports, one on materials research opportunities over the next 10 to 20 years and the other on opportunities for and modes of international collaboration over the next 10 to 20 years. These reports together contained 27 recommendations. In FY 2013, FESAC issued two reports, one on magnetic fusion sciences program priorities, and the other on the prioritization of scientific user facilities during 2014 to 2024, containing a total of 10 recommendations. In FY 2014, FESAC issued a report on assessment of workforce development needs for the fusion energy sciences, which contained five recommendations. In FY 2015, FESAC issued the following three reports on: (1) strategic planning (18 recommendations), (2) a committee of visitors (44 recommendations), and (3) non-fusion applications (no recommendations). FESAC did not issue any reports in either FY 2016 or FY 2017. In FY 2018, FESAC issued a report on transformative enabling capabilities (no recommendations). In FY 2019, FESAC issued a report on a committee of visitors which contained nine recommendations. In FY 2020, there have been no additional recommendations. In FY 2021, FESAC issued a report on a long-term plan for the Fusion Energy Sciences program which contained 27 recommendations. There were no recommendations in FY 2022. In FY 2023, FESAC issued a report on international benchmarking which contained 47 recommendations. Thus, an overall total of approximately 458 to 522 recommendations have been made.

**What is the approximate Percentage of these recommendations that have been or will be Fully implemented by the agency?**

0%

### **% of Recommendations Fully Implemented Comments**

The Fusion Energy Sciences program seriously considers every recommendation made by its advisory committee, and we have tried to implement every one that was within our ability to do so. Only lack of funding, regulations, legal requirements or other such impediments have kept us from implementing every recommendation.

### **What is the approximate Percentage of these recommendations that have been or will be Partially implemented by the agency?**

25%

### **% of Recommendations Partially Implemented Comments**

The Fusion Energy Sciences program seriously considers every recommendation made by its advisory committee, and we have tried to implement every one that was within our ability to do so. Only lack of funding, regulations, legal requirements or other such impediments have kept us from implementing every recommendation.

### **Does the agency provide the committee with feedback regarding actions taken to implement recommendations or advice offered?**

Yes ☒ No ☐ Not Applicable ☐

### **Agency Feedback Comments**

Feedback is provided to the Committee in a letter from Fusion Energy Sciences (FES) to the Committee Chair within 30 days of the receipt of a letter from the Committee Chair transmitting a report to the Director, Office of Science. Feedback can be found on the FES website:

<https://www.energy.gov/science/fes/fusion-energy-sciences-advisory-committee-fesac>.

### **What other actions has the agency taken as a result of the committee's advice or recommendation?**

Checked if Applies

Reorganized Priorities	<input checked="" type="checkbox"/>
Reallocated resources	<input checked="" type="checkbox"/>
Issued new regulation	<input type="checkbox"/>
Proposed legislation	<input type="checkbox"/>
Approved grants or other payments	<input type="checkbox"/>
Other	<input checked="" type="checkbox"/>

### **Action Comments**

The office adopted a new structure for the program to use in its long-range strategic

planning efforts for the magnetic fusion energy sciences element based on the findings and recommendations of FESAC, adopted the Progress Assessment Rating Tool Long-Range performance measures, decided to move ahead with the Fusion Simulation Project, decided to terminate the National Compact Stellarator Experiment Project based partially on FESAC findings, made changes to the procedures that it uses to handle research proposals, made adjustments to the program's research priorities, made changes to various reports that were being prepared for transmittal to Congress based on FESAC reviews and comments, moved ahead with plans to implement simulation and theoretical development in the fusion materials development program based on FESAC reviews, made the case to rejoin the ITER project following a series of FESAC reviews, followed the FESAC recommendation that compact stellarators were ready to be advanced to the Proof-of-Principle development stage, adopted an integrated program plan prepared by FESAC for managing the Fusion Energy Sciences program, and adopted FESAC advice for restructuring the entire fusion program and making it a science-based program instead of an energy technology development program.

**Is the Committee engaged in the review of applications for grants?**

No

**Grant Review Comments**

N/A

**How is access provided to the information for the Committee's documentation?**

Checked if Applies

Contact DFO	<input checked="" type="checkbox"/>
Online Agency Web Site	<input checked="" type="checkbox"/>
Online Committee Web Site	<input checked="" type="checkbox"/>
Online GSA FACA Web Site	<input type="checkbox"/>
Publications	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

**Access Comments**

The charges to the Committee, the minutes of every meeting, Committee reports and the letter transmitting those reports to the Director, Office of Science, the materials presented at each meeting, and the DOE response letters are all available on the FESAC Web page that is accessed from the Fusion Energy Sciences Home Page on the Internet at <http://science.energy.gov/fes/>.