2024 Current Fiscal Year Report: Methane Hydrate Advisory Committee

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1. Department or Agency	2. Fiscal Year
Department of Energy	2024

3. Committee or Subcommittee	3b. GSA Committee No.
Methane Hydrate Advisory Committee	10671

4. Is this New During Fiscal Year?	5. Current Charter	6. Expected Renewal Date	7. Expected Term Date
No	10/18/2019	10/18/2021	

8a. Was Terminated During FiscalYear?	8b. Specific Termination Authority	8c. Actual Term Date
No		

9. Agency Recommendation for Next FiscalYear	10a. Legislation Req to Terminate?	10b. Legislation Pending?
Continue	No	Not Applicable

11. Establishment Authority Statutory (Congress Created)

12. Specific Establishment Authority	13. Effective Date	14. Commitee Type	14c. Presidential?
P.L. 106-193 and 109-58	05/02/2000	Continuing	No

15. Description of Committee Scientific Technical Program Advisory Board

16a. Total Number of Reports	No Reports for this FiscalYear

17a. Open	17b. Closed	17c. Partially Closed	Other Activities	17d. Total
0	0	0	0	0

Meetings and Dates

No Meetings

	Current FY	Next FY

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

20a. How does the Committee accomplish its purpose?

The committee meets at least every two years to review the Department of Energy program and the state of the art in hydrates research, and to make recommendations for future research directions. In June 2007, the Committee issued “Report of the Methane Hydrate Advisory Committee on An Assessment of the Methane Hydrate Research Program and An Assessment of the 5-Year Research Plan of the Department of Energy”. This report had the following findings: 1. The goals of the Methane Hydrate R&D Act are important to the Nation and should be pursued; 2. Meeting these goals will require vigorous support from the Federal government; 3. An integrated interagency methane hydrate research plan has been

developed for both the near- and long-term that the Committee fully endorses the plan and believes it to be achievable, if sufficient funding is provided; 4. Program planning and management has actively addressed the assessment concerns of the National Research Council and others; and, most importantly, 5. Current funding levels for the program are not sufficient to achieve the stated goals. The January 2010 meeting included review of the NRC Report on Realizing the Energy Potential of Methane Hydrate for the United States, and review of major active projects. The July 2012 meeting resulted in the re-prioritization of the goals of the Program. Committee recommendations were provided to the Secretary in 2013, 2014, and 2017. Committee representatives met with the Under Secretary in April 2015. The Committee met three times in FY 2017 and once in FY 2018. In addition committee representatives met with the Assistant Secretary for Fossil Energy in January 2018. The Committee The Committee met two times in FY 2019 and once in FY 2020 to finalize a Gas Hydrates R&D Roadmap and begin discussions for long-term research recommendations to the Secretary. In FY 2021 developed a Gas Hydrates Science Plan and submitted to the Secretary.

20b. How does the Committee balance its membership?

Recommendations for new panel members are invited from the methane hydrate research community in industry, academia and other government agencies. Recommendations are proposed by DOE based on expertise and geographic, institutional and gender/ethnic diversity. The Secretary of Energy appoints the new panel. The current committee membership continues to be geographically distributed and

represents industrial enterprises, institutions of higher education, oceanographic institutions, and state agencies as required by P.L. 109-58. Representatives of other government agencies are not included in the methane hydrate advisory committee because a separate interagency coordinating committee assures that DOE receives information and advice from other government agencies that are involved in hydrate research.

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

The committee is required by P.L. 109-58 to meet biennially. The committee primarily advises DOE on long-term research directions on a future energy resource,a subject that does not change rapidly. Therefore biennial review is appropriate but meetings may occur as frequently as needed and approved by the DFO. Input from the committee is important in guiding future research directions for this novel energy resource. The committee did not meet in FY 2011 due to the funding constraints of the Continuing Resolution. The committee met twice in FY 2012, FY 2013, and FY 2014; and met once in FY 2015 in addition to its meeting with the Under Secretary. The Committee did not meet in FY 2016, but met on three occasions in FY 2017 and once in FY 2018 in addition to its meeting with the Assistant Secretary. The Committee met twice in FY 2019 and in addition meet with the Assistant Secretary. The Committee met once in FY 2020 and due to COVIDs postponed the second meeting to a virtual meeting for December 2020. In FY 2021 held one virtual meeting. Committee was inactive in FY 2023.

20d. Why can't the advice or information this

committee provides be obtained elsewhere?
Methane Hydrates are methane-bearing, ice-like materials that occur in abundance in marine and Arctic sediments and store immense amounts of methane natural gas. The U.S. Geological Survey estimates that the volume of methane contained in hydrates is several hundred times the estimated conventional natural gas resource in the U.S. Methane from hydrates offers the potential for clean, abundant energy after 2030, when conventional natural gas resources are expected to be declining. However, much multi-disciplinary research and development is necessary to turn this potential resource into gas reserves. Hydrates also merit study because of their occurrence in areas of conventional oil and gas production and transport, where sediment mass movement and methane release could be a hazard. Because of the large volume of carbon resident in hydrates and the complex interactions of methanogenic processes and hydrocarbon seepage to hydrates, their study is also significant to global carbon cycle modeling.Because this program, initiated in 1997, is investigating a novel, little understood resource, it is difficult to focus limited funds on only the most important topics to achieve the DOE goals. Outside advice is valuable in delimiting the critical research paths. Furthermore, The Methane Hydrate Research and Development Act of 2000 (P.L. 106-193) stipulated that the Methane Hydrate Advisory Committee be formed to advise the Secretary of Energy on potential applications of methane hydrate; assist in developing recommendations and priorities for the methane hydrate research and development program defined in the Act; and submit to Congress one or more reports on the anticipated impact on global climate change from methane hydrate formation. The committee has consistenly advised that DOE

expand its research effort and funding. However, budget contraints have not allowed this.

20e. Why is it necessary to close and/or partially closed committee meetings?
This committee has not had and does not anticipate any closed meetings.

21. Remarks
Annual appropriations continue to be provided to the Methane Hydrate research program that this committee advises. Committee was inactive in FY 2023.

Designated Federal Officer
Ryan Peay Deputy Assistant Secretary for Resource Sustainability

Narrative Description
The committee, by strengthening the quality of methane hydrate research, increases the probability of success of development of this new energy resource. This supports DOE's strategic goal to catalyze the timely, material, and efficient transformation of the nation’senergy system and secure U.S. leadership in clean energy technologies.

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

	Checked if Applies
Improvements to health or safety	✓
Trust in government	
Major policy changes	
Advance in scientific research	✓
Effective grant making	
Improved service delivery	
Increased customer satisfaction	

Implementation of laws or regulatory requirements	☐
Other	☐

Outcome Comments

NA

What are the cost savings associated with this committee?

	Checked if Applies
None	☐
Unable to Determine	☑
Under $100,000	☐
$100,000 - $500,000	☐
$500,001 - $1,000,000	☐
$1,000,001 - $5,000,000	☐
$5,000,001 - $10,000,000	☐
Over $10,000,000	☐
Cost Savings Other	☐

Cost Savings Comments

The committee advises on future R&D directions, which will not have direct economic benefits for approximately 15 years.

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

70

Number of Recommendations Comments

The committee has recommended areas for increased focus and has regularly recommended changes in the DOE multi-year and other implementation plans. There were numerous recommendations made in the 2007 committee report to Congress, An Assessment of the Methane Hydrate Research Program and An Assessment of the 5-Year Research Plan of the Department of Energy. In the January 2010 meeting, the committee endorsed the key recommendations of the 2010 NRC Report on Realizing the Energy Potential of Methane Hydrate for the United States. In March 2010, the committee agreed to send a letter to the Secretary of Energy opposing the transfer of the DOE Methane Hydrate Program to the Office of Science. In August 2012, the committee sent a letter to the Secretary containing four recommendations as to the activities the hydrate

research should pursue. In May 2014, the committee sent a letter to the Secretary containing four recommendations as to the activities the hydrate research should pursue. In April 2015 several members of the Committee met with the Under Secretary to discuss the four 2014 recommendations. This meeting did not result in any changes to the number of recommendations that had been fully or partially implemented at the end of FY 2014. No new recommendations were made by the Committee during FY 2015 or FY 2016. In April 2017, the committee sent a letter to the Secretary containing five recommendations as to the activities the hydrate research should pursue; all of which are being pursued to some extent. In Fy18 the committee provided recommendations to the Secretary regarding regulatory reform; those recommendations are being considered. In FY19 the Committee provided a Gas Hydrates R&D Roadmap from 2020 to 2035 to the Secretary. In FY2020 the Committee proposed stimulus funding, if any was appropriated, to fund gas hydrates research and GOM expedition.

What is the approximate Percentage of these recommendations that have been or will be Fully implemented by the agency?
75%

% of Recommendations Fully Implemented Comments
Congressional funding is below authorized levels. Therefore recomemndations to increase funding can not be implemented. DOE supports all the recommendations of the 2010 NRC Report if adequate funding is provided by Congress. Two recommendations made in the August 2012 letter to the Secretary were implemented through projects funded by the 2012 FOA for the Methane Hydrate Program. The four Committee recommendations made in FY 2014 were partially implemented as funding was insufficient to fully implement. The Administration requested zero funding for the Methane Hydrate Program in FY 2016; however, Congress provided an $19.8 million appropriation. Congress also provided $19.8 million in FY17 and FY18. Of the five Committee recommendations made in FY 2017, three remain partially implemented as funding is either insufficient to fully implement or pertain to long-term projects that require multi-year implantation. Continue to implement the Gas Hydrates R&D Roadmap into the program planning and implementation of the two major projects.

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
Congress has provided some funding, although less than recommended and authorized

levels; therefore all of the recommendations cannot be implemented simultaneously. In addition, many recommendations are for longer term work that cannot be fully implemented immediately even if the Program received the amount of funding that the Committee recommends necessary to carry-out the Program.

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

Yes ☑ No ☐ Not Applicable ☐

Agency Feedback Comments

Information regarding the MHAC can be found on the website, last updated during the last meeting held on December 1-2, 2020.
https://www.energy.gov/fecm/articles/methane-hydrate-advisory-committee-meetings

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

	Checked if Applies
Reorganized Priorities	☑
Reallocated resources	☑
Issued new regulation	☐
Proposed legislation	☐
Approved grants or other payments	☐
Other	☐

Action Comments

Not Applicable

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	☑
Online Agency Web Site	☑
Online Committee Web Site	☑

Online GSA FACA Web Site	☑
Publications	☐
Other	☐

Access Comments

N/A