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# **Report to Congress on Contracting Approaches to Coal Gasification**

**Director, Defense Research and Engineering  
July 2007**

## **BACKGROUND**

Senate Report 109-254, to accompany the National Defense Authorization Act for Fiscal Year 2007, requests the Secretary of Defense review the merits of specific contracting approaches to coal gasification technology projects and submit a report on the findings by March 1, 2007. The report requests:

“(1) an assessment on whether longer-term contracts would be required to effectively implement such projects;

(2) an assessment on whether energy savings performance contracts would be an appropriate contracting vehicle for such projects; and

(3) a discussion of statutory and budgetary impediments, if any, that may prevent the Department from effectively implementing coal gasification technology projects and recommendations for new authorities necessary to enable the effective implementation of such projects.”

## **LONG-TERM CONTRACTS**

Finding: A majority of responders to a Request for Information requested long-term contract authority to develop a domestic synthetic fuels market.

In May 2006, the Defense Energy Support Center (DESC), at the request of the Department of the Air Force and the Department of the Navy, issued a Request for Information (RFI) to identify potential sources of synthetic fuel. The RFI process was conducted as part of the government’s market research to determine if commercial resources are available to meet the government’s needs and on what customary terms and conditions they are sold. Market research is conducted in advance of procurement. Thus, when the government receives information from industry in response to an RFI, there are no meetings, discussions or negotiations during this phase.

The RFI was posted on the Federal Business Opportunities website and sought to identify sources of synthetic fuel for a potential purchase of 200 million gallons of aviation fuel. DESC included a draft specification for Fischer-Tropsch Iso-Paraffenic Kerosene that did not limit the feedstock to coal. DESC requested information on the ability of companies to meet the specification, the current and future production capability, and logistics and cost information. In addition to the technical information, DESC requested comments from interested parties on the nature of any incentives needed to develop and sustain long-term domestic commitments to produce aviation synthetic fuels.

# Report Documentation Page

Form Approved  
OMB No. 0704-0188

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1. REPORT DATE <b>JUL 2007</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2007 to 00-00-2007</b>	
4. TITLE AND SUBTITLE <b>Report to Congress on Contracting Approaches to Coal Gasification</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Department of Defense, Defense Research and Engineering, Washington, DC, 20301</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

DESC received responses from 28 companies with 22 expressing interest in producing the fuel. 17 of the 22 companies addressed the issue of the length of the contract. Specifically, 15 of these companies stated that they required long-term contracts. Table 1 shows the detailed responses.

	<b>Number of Responders</b>
Long term, without specifying term of years	7
8 years	1
Long term, 10 years	2
15 years	1
20 years	2
15-25 years	1
Other (use contract to obtain commercial financing)	1

**Table 1. Number of RFI Responders Requiring Contracts of Specific Terms**

Answers of the other two companies suggested that they would not require long-term contracts. One stated that it would provide fuel on a commercial supply basis, and the other required a short-term payback period.

DESC plans to issue a second Request for Information to obtain more detail about contract terms and conditions, including the length of the contract, which would be customary for the energy industry. DESC also will inquire whether companies are interested in contracting for the fuel even if the government was limited to its current contract authority of five years, plus five option years.

## **FEASIBILITY OF ENERGY SAVINGS PERFORMANCE CONTRACTS FOR COAL GASIFICATION**

Finding: Energy Saving Performance Contracts are not an appropriate contract vehicle for coal gasification technology projects.

The statutory authority for Energy Saving Performance Contracts (ESPCs) is contained in 42 U.S.C. 8287, the National Energy Conservation Policy Act. Specifically, this provision allows federal facilities to enter into contracts to install energy conservation measures to reduce utility expenditures of the federal facility. The contractor finances these energy conservation measures and is compensated by the government if the contracted for energy reduction occurs. Payments to the contractor are funded by the reduction in energy costs resulting from the lower energy consumption. The statute provides for a maximum contract term of 25 years and requires that energy conservation measures must be life cycle cost effective with projected energy savings being sufficient to reimburse the contractor within the contract performance period.

Since fuels made from coal gasification are not expected to increase energy efficiency, the use of ESPC authority is not an appropriate contract vehicle for coal gasification technology projects.

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## IMPEDIMENTS

### *Statutory impediments:*

For purposes of implementing coal gasification technology projects, contracts limited to a five year term may be viewed as an impediment to obtaining domestically-produced synthetic fuel because industry has identified the need for long-term contracts. For the purpose of 10 U.S.C. 2306b, multiyear is defined as a contract for the purchase of property for more than one, but not more than five, years. If the contract were structured as a task or delivery order contract, the contract term would be limited to five years, but could contain options for an additional five years, as per 10 U.S.C. 2304a(f). The DoD may require statutory authority to enter into contracts for longer than five years. Based on responses from industry to the initial RFI, DoD would likely require contracting authority of between 10 and 25 years to enable the development of a domestic synthetic fuels market.

### *Budgetary impediments:*

Funding. If long-term contracts for synthetic fuel were permitted by Congress, it may be necessary to include price floors and ceilings to protect the plant owner and the DoD from price fluctuations that make the domestically-produced fuel uncompetitive with imported petroleum-based fuels.

Multi-Year Procurement. Typically, multi-year contracts are funded one year at a time and include fully funded cancellation ceilings in the event the contract is cancelled. If DoD were the only market for the domestic, synthetic fuel, the cancellation ceilings could be the equivalent of the entire cost of a plant. This could amount to over \$3 billion and would need to be obligated when the contract is awarded.

Defense Working Capital Fund. DESC's fuel purchases are reimbursed through the Defense Working Capital Fund. If DoD were required to obligate funding for cancellation ceilings at contract award, it could impact working capital funds rates.

Scoring. If OMB requires the long-term contracts to be scored in one year against the DoD budget, the cost of the contracts for domestically-produced synthetic fuel may be prohibitive.

Contractual Issues. The Air Force has consistently stated a goal to acquire 50 percent of CONUS fuel from domestically produced synthetic fuel by 2016 from plants using carbon dioxide capture, compression, and reuse. Currently, the Environmental Protection Agency has not issued any regulations regarding carbon capture, sequestration or reuse (CCS/R). This contract language would place higher environmental standards upon the industry compared to the acquisition of conventional petroleum fuels. However, it will be critical to require industry to have CCS/R in order to reduce the greenhouse gas emissions generated by the production of the fuel.