

EXHIBIT 61



United States Department of Energy
Office of Fossil Energy

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Project Fact Sheet

Project Information

Project ID: DE-FC26-00NT40978
Project Title: LNG from Coal Mine Methane for Industrial and Transportation Applications
FE Program: Gas/Oil - Gas Production R&D
Research Type: Applied Research
Funding Memorandum: Cooperative Agree't (nonCCT) - Tech R&D

Project Performer

Performer

Type: Small Business
Performer: Appalachian-Pacific Coal Mine Methane Power Co, LLC
1401 Wilson Blvd., Suite 1101

Project Team

Members:

1. Dearing Compressor & Pump Co., Youngstown, OH, 44501, OH17
2. Guild Associates, Inc., Dublin, OH, 430161234, OH12
3. Northwest Fuel Development Inc., Lake Oswego, OR, 970352406, OR01
4. PSB Industries, Inc., Erie, PA, 165121318, PA03
5. Prometheus Energy Company-Mercer Island,WA, Mercer Island, WA, 980403732, WA08
6. West Virginia University Research Corporation, Morgantown, WV, 265056845, WV01

Project Location

City: Arlington
State: Virginia
Zip Code: 22209-2501
Congressional District: 08
Responsible FE Site: NETL

Project Point of Contact

Name: Estes, Charles D.
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Fossil Energy Point of Contact

Name: Baker, Richard C.
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Project Dates

Start Date: 09/30/2000
End Date: 03/31/2013

Contract Specialist

Name: Pearse, Mary Beth J.
Telephone: (412) 386-4949

Cost & Funding Information

Total Est. Cost: \$10,997,352
DOE Share: \$4,606,844
Non DOE Share: \$6,390,508

Project Description

The primary objectives of this work are to conduct a pilot scale field demonstration of a process to capture, purify, and convert coal mine methane (CMM) into commercially significant volumes of liquefied natural gas (LNG). The work will thereby demonstrate the extent of reduction in CMM emissions and the efficiency and economics of the production of LNG from CMM thereby achieved. Specific Sub-objectives of the work include: Develop a process for gathering and utilizing waste or fugitive gases (principally methane) from coal mines and demonstrate its efficiency and economics. Demonstrate that commercial quantities of CMM, can be provided in a predictable manner from active or closed coalmines. Document the flow and composition variation of the CM Gas over the life of the project. Verify that the gas processing facility included as part of the Process Plant will operate as projected to condition coal mine (CM) Gas to the specifications required by the cryogenic refrigeration unit. Verify that nitrogen in the CM Gas can be introduced into the cryogenic refrigerator for subsequent separation from the LNG in a cost effective manner without unanticipated consequences. Develop regional markets for the sale of ca.10,000 gallons-per-day of LNG product from the project. Compile sufficient operational information, market evaluations, and commercial experience for the production of LNG from CMM throughout the United States and worldwide. Demonstrate the ability of the process to reduce greenhouse gases at the demonstration project site and the replicability of the "process" to other sites. Accomplish the objectives above in an environmentally acceptable manner.

Project Background

Coal Mine Methane Liquefaction to LNG via Refrigeration Process -- The Appalachian-Pacific Coal Mine Methane Power Co., LLC of Arlington, VA was original chosen for possible award under NETL's research for improved methods to use of methane from coal mine gas (CMG), an often wasted energy resource and a greenhouse gas. The A-P company planned to work with West Virginia University Research Corporation, and Invitation Energy to demonstrate a pilot plant process which would convert coal mine methane from a mine in Mannington, WV and other surrounding area mines into liquefied natural gas to fuel heavy trucks. The originally planned process, known as the TASHER, was a hybrid Stirling engine refrigerator technology which employees a thermo-acoustic wave action to compress a working gas and to chill conditioned coal mine methane through a series of heat exchangers. The process was to cool the gas to cryogenic temperatures (~260°F) resulting in liquified gas which would be used as a substitute for diesel fuel in modified heavy truck fleet vehicles. The originally planned pilot plant was to deliver approximately 10,000 gallons-per-day for use in the Northcentral West Virginia-Southwestern Pennsylvania corridor along Interstate Route 79. Subsequently, the Mannington site became unavailable and Chart industries sold its TASHER technology rights to Praxair. Praxair intended to complete the TASHER technology development program and apply the concept to chilling pipeline natural gas for sale as LNG to truck fleets in Southern California. However, pipeline gas prices rose sharply in 2003 - 2004, and made that business plan unfeasible. Praxair shelved further development of large-scale TASHER technology. Consequently, with DOE approval, A-P modified its project concept to encompass a two step approach employing gas conditioning equipment in Stage I for sale of conditioned CMG to a nearby natural gas pipeline and deploying non-TASHER refrigeration equipment in Stage II once Stage I earnings were adequate to support the purchase of this equipment to liquefy the purified and dehydrated stream of coal mine methane. A-P entered into purchase agreements with vendors for the gas conditioning equipment, all of which has been completed except for project compression requirements, which are particularly site specific. This Stage I equipment was originally intended for use at the Parish Shaft of the Federal No. 2 Mine under a third party agreement with Northwest Fuel, owner of CMG production rights at that site. Northwest Fuel was notified in February 2007 that it was in default under its contract with the Mine owner, Peabody Energy, and was required to vacate the site. As a result, A-P was deprived of its contracted supply of CMG from Northwest Fuel. As of November 2007, A-P is in discussions with CNX Gas for a site near Cameron, WV (Marshall Co.) and for a CMG supply and access to an interstate natural gas pipeline at this location. The Marshall County site would serve immediate Stage I requirements and subsequent Stage II plans for production of high-valued LNG and sale to transportation markets as a clean-burning substitute for diesel fuel. If a business agreement can be reached between A-P and CNX, DOE will work with A-P and CNX to complete necessary site environmental reviews based in part on the completed Environmental Assessment conducted for the previously intended Parrish Shaft site.

Project Milestones

This information is currently unavailable.

Project Accomplishments

Title: Revised Technology Plan Incorporated

Date: 11/20/2007

Description Information included here is to provide a brief summary to highlight the rationale for the continuation of this agreement although the original TASHER process for LNG conversion was withdrawn from the project and replaced with a conventional methane to LNG process. This agreement was awarded under a main DOE solicitation with the focus on reducing greenhouse gas emissions, coal mine methane being one of those gases. This agreement originally proposed and planned to use one process to convert coal mine methane gas emissions to LNG. This process, Thermo-Acoustic Stirling Heat Engine and Refrigerator (TASHER), which was under license to Praxair was withdrawn from the agreement due to licensing issues from Praxair which arose after the award was made to Appalachian Pacific. After discussions with the NETL COR and a detailed presentation given by AP on August 5, 2004, and subsequent re-proposal of project technology plans, the decision was made to continue the project using conventional methane to LNG processing while keeping the original intent of the project, which is reduction of greenhouse gas emissions intact. The new technology incorporated in the project is to be a 7,500 gpd mixed gas refrigerant liquifier system. The product is to be sold as LNG to industrial users of natural gas as well as to heavy truck fleet operators as a substitute for diesel fuel rather than exclusively to transportation markets as originally planned. As of 11-07 all equipment for the mixed gas refrigerant liquifier system have been acquired or are nearing manufacturing completion.

Title: Project Field Site Selections

Date: 11/20/2007

Description Over the course of this project the planned field location has been changed multiple times due to change in available

technology, changes in site availability and change in field site company willingness to participate in the project. The original planned field site was the Whetstone Portal site in Marion County WV. The planned site was then changed to potential locations in Colorado but those potential sites also fell through. Award amendment A009 recognized Appalachian-Pacific Coal Mine Methane Power Co., LLC's revision application dated February 15, 2005, in which AP proposed to site a 7,500 gallon per day mixed gas refrigerant liquefier at the Parrish Shaft site on the Federal No. 2 mine operated by Northwest Fuels. The expiration date of the Cooperative Agreement was extended to December 31, 2008, with no increase in DOE funds. The total estimated cost of the project increased by \$1,783,663 from \$9,213,689 to \$10,997,352; but the DOE share remained the same at \$4,606,844. In 2007 Northwest Fuels was instructed by Peabody (the owner of the land on which the mine is situated) to vacate the site due to business issues between Peabody and Northwest Fuels. AP is currently (Nov 2007) attempting to Negotiate with CNX for the potential use of the McElroy Mine (Parrish Shaft) near Moundsville, WV as a field site. As an alternative, potential field sites in Colorado are also being investigated simultaneously.

Title: Technology Acquired

Date: 04/25/2001

Description

NOTE: Historical Information contained here from time of original project award. Process / technology described herein was replaced during project. See "Revised Technology Plan Incorporated" listed as separate item. Praxair, Inc. has acquired the assets and licenses of Chart Industries, Inc. related to acoustic heat engines and acoustic refrigerators. Assets acquired by Praxair include pilot plants, commercial demonstration equipment, exclusive patent rights, licenses and development programs. Two Chart employees have joined Praxair. Terms of the transaction were not disclosed. Acoustic heat engines convert thermal energy into sound waves. The combination of an acoustic heat engine and pulse tube cooler has the potential to substantially reduce low-temperature refrigeration costs and further improve reliability. The technology formed the backbone of the Appalachian-Pacific (A-P) agreement with NETL to produce liquefied natural gas from a coal mine methane feedstock. As a preliminary research and development stage to the A-P initial demonstration effort, NETL has co-funded both thermo-acoustic technology development led by the Los Alamos National Laboratory as well as the prototype demonstration and validation previously conducted by Chart Industries. DOE's Office of Science funds fundamental thermo-acoustic research and development at Los Alamos. The purchase of the technology by Praxair clears the way for the A-P project to get underway after a six month lull since award. Working with Praxair, A-P will conduct a pilot-scale 10,000-gpd demonstration of the thermoacoustic (TASHER) process for the capture, recovery, and use of coal mine methane (CMM) in commercially significant volumes. The work will thereby demonstrate that CMM emissions can be reduced in a cost effective, efficient and useful manner without introducing new or additional environmental concerns

Title: CMM Project Selected

Date: 09/21/2000

Description

NOTE: Historical Information contained in this section from the time of original project award. Process / technology described herein was replaced during project. See "Revised Technology Plan Incorporated" listed as separate item. The Appalachian-Pacific Coal Mine Methane Power Co., LLC of Arlington, VA has been chosen for possible award under NETL's research for improved methods to use of coal mine methane. The A-P company will work with West Virginia University Research Corporation, and Invitation Energy to demonstrate a pilot plant process which will convert coal mine methane from a mine in Mannington, WV and other surrounding area mines into liquefied natural gas to fuel heavy trucks. The process, known as the TASHER, is a hybrid Stirling engine refrigerator technology which employs an thermo-acoustic wave action to compress the waste coal mine methane. The process cools the gas to cryogenic temperatures (~260oF) resulting in liquified gas which can be used as a transportation fuel in heavy truck fleet vehicles. The pilot plant will deliver 2,500 gallons-per-day for use in the Northcentral West Virginia-Southwestern Pennsylvania corridor along Interstate Route 79. The three-year project will be the Nation's first introduction of alternative fuels (LNG) from coal mine methane and help with reducing greenhouse gases, air pollutants (replacing diesel fuel), and lower oil import demands.

