	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
139	Exemption 4				
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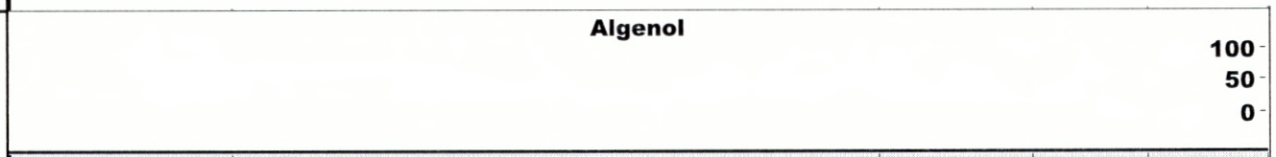

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
158	Exemption 4				
159					
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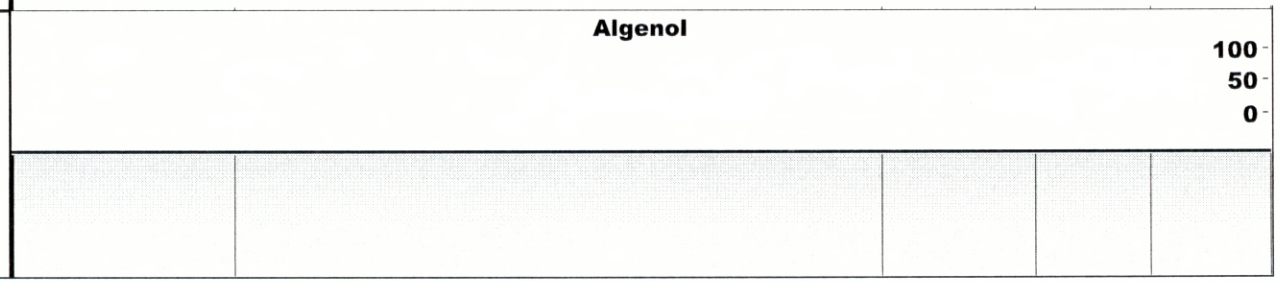

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
176	Exemption 4				
177					
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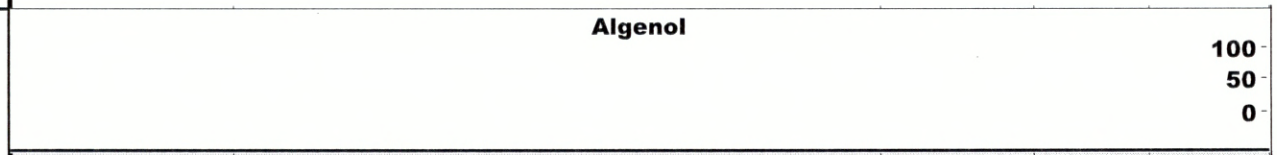

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
196	Exemption 4				
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		Algenol			100 50 0

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
216	Exemption 4				
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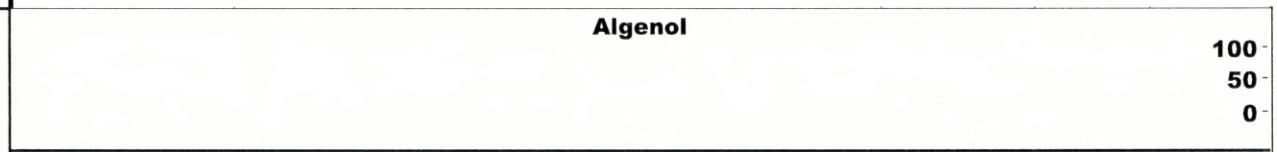

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
234	Exemption 4				
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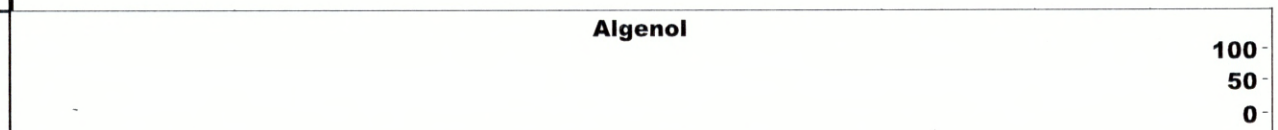

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
253	Exemption 4				
254					
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272					
		Algenol			100 50 0

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
273	Exemption 4				
274					
275	B	**Phase II: Build pilot Scale Integrated Biorefinery**	Exemption 4		
276	Exemption 4				
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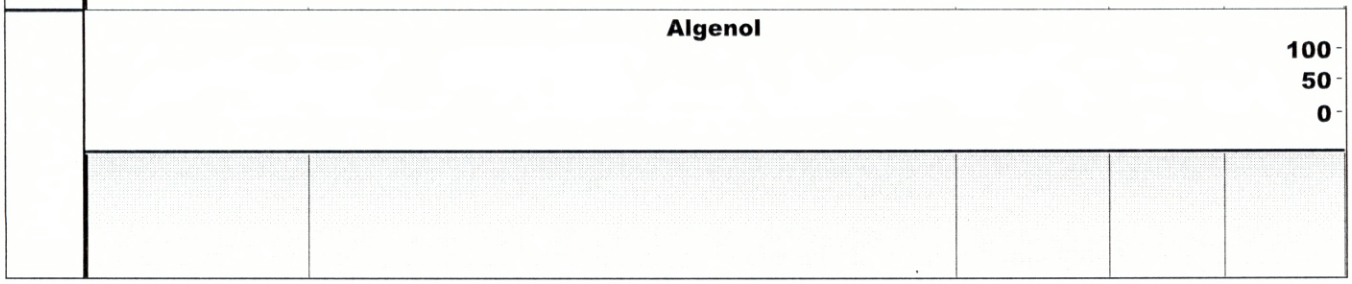

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
290	Exemption 4				
291					
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308					
		Algenol			100 50 0

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
309	Exemption 4				
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328					
		Algenol			100 50 0

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
329	Exemption 4				
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		Algenol			100 50 0

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
349	Exemption 4				
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368					
		Algenol			100 50 0

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
369	Exemption 4				
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388					
		Algenol			100 50 0

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
389	Exemption 4				
390					
391					
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399					
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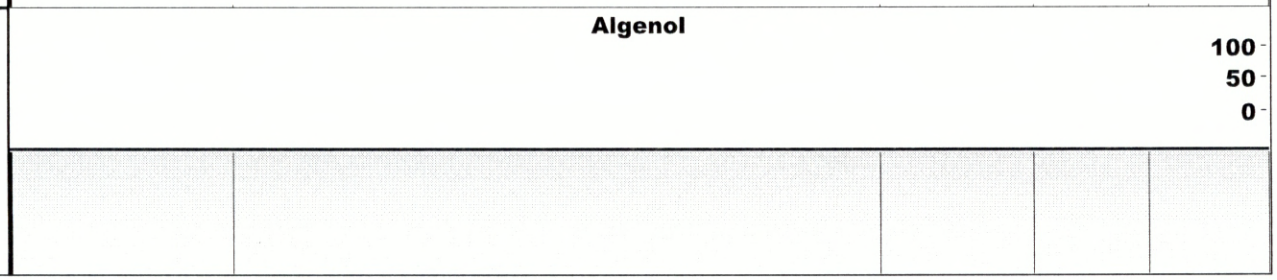
401					
402					
		Algenol			100 50 0

	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
403	Exemption 4				
404					
405					
406					
407					
408					
409					
410					
411	C	**Phase III Optimize**	Exemption 4		
412	Exemption 4				
413					
414					
415					
416					



	DOE WBS	Activity Name	Duration (Days)	Start Date	Finish Date
417	Exemption 4				
418					
419					
420					
421					
		Algenol			100 50 0

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

DOE/EA-1786

FINDING OF NO SIGNIFICANT IMPACT

ALGENOL INTEGRATED BIOREFINERY FOR PRODUCING ETHANOL FROM HYBRID ALGAE FORT MEYERS, FLORIDA

AGENCY: U.S. Department of Energy, Golden Field Office

ACTION: Finding of No Significant Impact

SUMMARY: The U.S. Department of Energy (DOE) is proposing to authorize expenditure of federal funding by Algenol Biofuels, Inc. (Algenol) to design, construct and start-up a Direct to Ethanol pilot-scale integrated biorefinery (biorefinery or proposed project). Two potential sites were analyzed in the EA for the location of the biorefinery; the Dow Chemical Company's (Dow) plastics and chemical manufacturing facility in Freeport, Brazoria County, Texas and an industrial site in the Alico Road Business Park in Fort Myers, Florida. Algenol has since selected the site in Fort Myers, Florida, in part due to the time necessary to meet wetland requirements for the Texas site. The Florida property, which is approximately 40 acres owned by Alico Road Business Park, is fairly isolated from the general public and is already zoned for heavy industrial use. The biorefinery would produce approximately 100,000 gallons of ethanol per year, distill onsite the ethanol-water mixture to fuel-grade quality, and produce the ethanol from CO_2 and saline water using hybrid algae to actively carry out photosynthesis in sealed, clear-plastic photobioreactors (that is, closed-system translucent containers).

The purpose of the proposed project is to refine systems, equipment, and processes to maximize ethanol production with minimal costs to ensure the economic and technical viability of commercialization. The ultimate goal is to develop this technology for use in a commercial biorefinery. Funding of the proposed project would be consistent with DOE's goals under the objectives outlined in The Energy Policy Act of 2005, The Energy Independence and Security Act of 2007, and the American Recovery and Reinvestment Act of 2009, and would partially satisfy DOE's need to accelerate the construction and operation of pilot biorefinery facilities as well as validate refining technologies and help lay the foundation for full commercial-scale development of the biomass industry in the U.S. and reduce U.S. dependence on foreign oil.

This FONSI supports DOE's funding of the design, permitting, and construction of the Direct to Ethanol pilot-scale integrated biorefinery. All discussion, analysis, and findings related to the potential impacts of construction and operation of the Algenol project at both locations, including the Algenol committed mitigation measures, are contained in the Final *Environmental Assessment for the Algenol Integrated Biorefinery for Producing Ethanol From Hybrid Algae Freeport, Texas or Fort Meyers, Florida* (EA). All information related to the analysis of the

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Texas site remains in the final EA to maintain the integrity of the NEPA decision-making process and the EA record. The final EA is hereby incorporated by reference.

DOE prepared this Finding of No Significant Impact (FONSI) in accordance with the *National Environmental Policy Act of 1969* (NEPA), the Council on Environmental Quality regulations for implementing NEPA, as amended, 40 CFR 1500 to 1508, and DOE NEPA regulations: 10 CFR 1021.322. **Although the EA analyzes both sites, this FONSI applies *only* to the Florida location and therefore, only discusses the analysis of the Florida site.**

ENVIRONMENTAL IMPACTS: In compliance with NEPA and DOE NEPA implementing regulations (10 CFR Part 1021) and procedures, the Final EA examined the potential impacts of DOE's proposed decision to authorize Algenol to expend federal funds for the proposed project and also examined a No-Action Alternative. Under the No-Action Alternative, DOE would not authorize expenditure of Recovery Act funds for the proposed project and Algenol would not design, construct, or start-up the proposed biorefinery.

The Final EA describes and analyzes potential impacts on the environment that could result from construction and start-up of the proposed biorefinery on the following resources: land use; visual and aesthetic resources; cultural resources; air quality; noise; geology and soils; water resources; biological resources; waste management and hazardous materials; utilities and energy; transportation and traffic; public and occupational health and safety; socioeconomics; and environmental justice, as well as any cumulative impacts of the proposed project. DOE determined that for the Florida location, there would be no adverse impacts or that the impacts would be small, temporary, or both for all resources.

Resource areas with minor impacts or that require applicant-committed measures are briefly discussed below. The EPA would regulate the hybrid algae under the *Toxic Substances Control Act* (TSCA) as microbial products of biotechnology. EPA indicated that the project would fall under EPA's "contained structure" exemption; thus, there would be no need to submit a TSCA application for the project. Algenol's development, use, transportation, and disposal of hybrid algae would take place in contained facilities or vessels, consistent with EPA's TSCA regulations.

For the Florida site, the proposed biorefinery would be considered a minor source of air emissions and would qualify for a "permit-by-rule" under Florida regulations, which is reserved for minor sources. Lee County is in attainment for all National Ambient Air Quality Standards (NAAQS). Minor impacts to the local air quality are expected as minimal amounts of emissions would be generated by the proposed biorefinery and associated vehicles.

It is expected that no impacts to state- or federally-protected species would occur due to the generally poor quality of on-site vegetative habitat, overall low diversity of wildlife observed at the site, and the recently disturbed nature of the site. If endangered species are detected prior to or during construction, Algenol would implement the appropriate measures, in consultation with state agencies, to ensure that endangered species and habitats would not be adversely impacted.

Because 96.8 percent of the site is composed of farmland of unique importance, DOE collaborated with the local Natural Resource Conservation Service (NRCS) to complete the required Farmland Conversion Impact Rating form. The NRCS assigned the site a score of 69 out of 260 points. A score of less than 160 points need not be given further consideration for protection and requires no further evaluation. Because the soils at the site are best suited for cultivating pasture grasses and are located in the center of a developing urban area, the impact to the farmland soils is negligible.

In response to the consultation letter DOE sent to the Seminole Tribe of Florida, the tribe deferred further commenting until they could review a Phase I archaeological survey to be conducted by Algenol. Algenol is committed to completing a Phase I archaeological survey and continuing consultation if necessary prior to construction.

DOE evaluated the cumulative impacts of the proposed project and other past, present, and reasonably foreseeable projects in the area. DOE concluded that Algenol's proposed project, in conjunction with other activities considered, would have no or minimal cumulative impacts on the environmental resources considered.

PUBLIC PARTICIPATION IN THE EA PROCESS: In accordance with applicable regulations and policies, DOE sent a Notice of Scoping on June 10, 2010, to federal, state, and local agencies; tribal governments; elected officials; businesses; organizations and special interest groups; and members of the general public for comments regarding the EA's scope. DOE published the Notice of Scoping online at the DOE Golden Field Office Public Reading Room. One public comment letter was received in response to the Notice of Scoping. All areas of concern contained in the letter were addressed to the extent practicable in the Final EA. These documents are provided in Appendix A of the Final EA.

For the Florida site, DOE initiated consultation with the Florida Division of Historical Resources, applicable U.S. Fish and Wildlife Service offices, and the Fish and Wildlife Conservation Commission, the Seminole Nation of Oklahoma and the Seminole Indian Tribe of Florida. The consultation letters and responses are provided in Appendix B of the Final EA.

DOE published the Draft EA online at the DOE Golden Field Office Public Reading Room for a 15-day review period ending September 7, 2010. Copies of the Notice of Availability (NOA) were mailed to stakeholders and the NOA was published online at the Golden Field Office Public Reading Room. DOE received no comments during the Draft EA comment period.

DETERMINATION: Based on the information presented in the Final EA (DOE/EA 1786), DOE determines that authorizing expenditure of federal funds by Algenol to support final design, construction, and start-up of the proposed biorefinery at the Ft. Myers, Florida location would not constitute a major federal action significantly affecting the quality of the human or natural environment as defined by NEPA. Therefore, the preparation of an Environmental Impact Statement is not required, and DOE is issuing this FONSI for the Fort Meyers, Florida location.

Alengol's commitment to obtain and comply with all appropriate federal, state, and local permits required for construction and operation of the biorefinery, and to minimize potential impacts through the implementation of best management practices and various applicant-committed measures is detailed in the Final EA, shall be incorporated and enforceable through DOE's financial assistance agreement.

The final EA is available for review at: http://www.eere.energy.gov/golden/Reading_Room.aspx.

For questions about this FONSI, contact:

Lisa Jorgensen
U.S. Department of Energy
1617 Cole Boulevard
Golden, Colorado 80401
lisa.jorgensen@go.doe.gov

For further information about the DOE NEPA process, contact:

Office of NEPA Policy and Compliance
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585
202-685-4600 or 1-800-472-2756

Issued in Golden, Colorado this 28TH day of December, 2010

Derek G. Passarelli
Acting Golden Field Office Manager

PMC 120.1
(2/08)

U.S. DEPARTMENT OF ENERGY
GOLDEN FIELD OFFICE

FINANCIAL ASSISTANCE COMBINED COST/TECHNICAL EVALUATION AND NEGOTIATION MEMORANDUM

SECTION I - GENERAL INFORMATION

This technical evaluation/negotiation memorandum will be prepared jointly by the assigned DOE/Golden OCPM AND OAFA personnel, to document the specific action being evaluated and supported. Each office is responsible for certain sections of this document. The assigned OCPM and OAFA personnel responsible for the action will both sign this document upon its completion, demonstrating their agreement on its contents.

1. Recipient: Algenol Biofuels Inc.

2. Grant/Cooperative Agreement No.: DE-EE0002867 Modification No. 005
   Requisition No: 11EE003480
   Project Title: Recovery Act: Integrated Pilot-Scale Biorefinery for Producing Ethanol from Hybrid Algae

3. Type of Action: ☐ New Award ☐ Renewal ☐ Continuation ☒ Revision
   Description of this Action: (NOTE: Indicate what is addressed by this Action only):

   The purpose of this action is to revise the scope and budget for Budget Period 1 (BP1) for Algenol Biofuels' project entitled, "Recovery Act: Pilot-Scale Integrated Biorefinery for Producing Ethanol from Hybrid Algae" (DE-EE0002867). Additional tasks and funding from BP2 are being moved to BP1. The BP1 total budget is now $Exemption 4; $15,587,035 of which is the federal portion and Exemption 4 in cost share. This task will also extend both the BP1 end date and the Total Project end date by six months, to 09/30/2011 and 06/30/2015 respectively.

4. Award type, as determined at Procurement Strategy Meeting (for new awards): ☐ Grant ☒ Cooperative Agreement
   If Cooperative Agreement, provide the specifics of the Substantial Involvement. (Note: This language will be used in the Substantial Involvement provision of the award.):

   The Substantial Involvement Provision is not changing from what is currently in the award.

5. New/Revised Project Period for this Award: From: 01/29/2010 To: 06/30/2015
   New/Revised Budget Period 1 for this Award: From: 01/29/2010 To: 09/30/2011
   New/Revised Budget Period 2 for this Award: From: 10/01/2011 To: 06/30/2015

6. Compliance Assessment (skip if new award):
   a. Deliverables
      The Recipient is current in submitting required reports: ☒ Yes ☐ No
      If no, identify the delinquent report(s), indicate what action(s) have been taken to remedy the situation, and identify what further action(s) are necessary, if any:

      N/A

   b. Financial
      The Recipient is current in meeting the cost share requirement: ☒ Yes ☐ No
      If no, indicate what action(s) have been taken to remedy the situation and validate why this new action should proceed:

      N/A

7. Check the applicable box for Funding Appropriation: ☒ Energy and Water ☐ Other _____

8. Check the applicable box for Statutory Authority:
   ☒ 109-58, Energy Policy Act 2005
   ☐ 110-140, Energy Independence and Security Act 2007
   ☒ 111-5, Recovery Act (2009)
   ☐ Other: _____

9. Per 10 CFR 600, the preferred payment method for State/Local Governments, Institutions of Higher Education, Hospitals, or Other Non-Profit Organizations is **Advance**. The preferred Payment Method for For-Profit organizations is **Reimbursement**. If the preferred payment method is not planned for a new award, provide an explanation below. Also explain below if the payment method for the award is being changed by this action.

The recipient is receiving ARRA funds and will continue to be on the ACH payment method to monitor their funds to ensure costs outside of Budget Period 1 are not charged to the award.

10. Is the proposed Recipient on the debarred or suspended list? Yes ☐ No ☒
Are any of the proposed subrecipients/subcontractors on the debarred or suspended list? Yes ☐ No ☒
Is the Project Director on the debarred or suspended list? Yes ☐ No ☒
If yes for either response above, award cannot be made without obtaining a waiver. See attached waiver.
The review was conducted on the Internet on 04/28/2011 (Include Printout in permanent STRIPES file)
(Date)

11. A risk determination has been completed on the PMC Form 460.2 Yes ☐ N/A ☒

12. Negotiation:

	Government Negotiator(s)		Recipient Negotiator(s)	
	Name	**Organization**	**Name**	**Position**
1.	Molly Hames	G&A Specialist	Dr. Craig Smith	COO
2.	Christy Sterner	Project Officer	Pat Ahlm	Assistant Project Manager
3.	Christine English	CN-JV Project Engineer	Dax Denman	Assistant Project Manager

SECTION II – NEGOTIATION SUMMARY

1. Please record any significant application or budget submissions that resulted in a revised budget in the Negotiation History Table below (including SF424A, budget justifications, e-mails, etc.):

Application/Budget Submission	Reference Document(s)	Date of Submission	Summary of Change
	123.1, SOPO, 424A	3/7/2011	BP2 costs are being moved into BP1 to cover additional BP1 activities.
Revision #1	123.1	3/28/2011	Personnel, equipment and other direct cost sections were updated.
Final	123.1	3/31/2011	The travel section was updated.

2. Complete Budget Table below (only include the original budget and final negotiated costs – the Percent of Total Negotiated Budget will calculate automatically)
Note: List proposed amounts by category even if there are no differences in the dollar amount.

Element of Cost	Original BP1 Approved Costs (002 Mod)	Final BP1 Approved Costs (005)	Percent of Total Negotiated Budget	Fringe Benefits and Indirects	
				Proposed Rate	Negotiated Rate
Personnel Fringe Benefits Travel Equipment Supplies Contractual Construction Other Total Direct Charges Indirect Charges	Exemption 4				
TOTAL					
Program Income	$0	$0	0%		
DOE Share (non-FFRDC)	$9,896,607	$15,162,555	Exemption 4		
DOE Share (FFDRC)	$424,480	$424,480			
Total DOE Share	$10,321,087	$15,587,035			
Non-Federal Cost Share	Exemption 4				

SEE ATTACHED SF 424A FOR BUDGET PERIOD BREAKDOWN

3. Total Allowable Adjustment without Concurrence from the Selection Official per the Selection Statement: 10%
Actual Total Adjustment based on Budget Table Above: 0%
Total Project Costs have not changed from Selection Statement – these are BP1 costs only.
Is the original budget the same as the negotiated budget: ☐ Yes ☒ No
If No, please check all boxes that apply:
☒ Change in the Project Scope
☐ Changes due to Time Delays
☐ Math Errors in Budget
☐ Changes in Indirect/Fringe Costs Caused Changes in Direct Costs or Total Project Costs
☐ Indirect/Fringe Rates incorrectly applied
☐ Other (explain) _____

4. Briefly describe and explain any substantial change(s) to the original Statement of Project Objectives submitted by the recipient:

Project Officer Commentary: The purpose of this action is to add tasks to BP1 that were previously slated for BP2. The addition of the six tasks is associated with corresponding changes in the budget that are detailed in the technical evaluation below. The revised scope is consistent with acceptable and previously approved BP1 activities.

Additional Task Element	Existing Related Task	Rationale for Scope Change
A.18.1, Continued Growth in Salt Water	A.12.1: On-going demo of organism performance at 4500L scale in saltwater, outdoors	The primary purpose of this element is to continue on-going demonstration of organism performance at 4500L scale in saltwater outdoors. Moving additional funding into BP1 to continue activities associated with this task will allow Algenol to demonstrate that the selected organism meets required performance metrics with respect to culture longevity and ethanol production
A.18.2, Ongoing Flexible Film Development	A.3: Flexible Film Photobioreactor Development; A.16: Continued flexible film photobioreactor evaluation	The primary purpose of this element is to continue development of commercial scale flexible film photobioreactor systems. Moving additional funding into BP1 to cover activities associated with this task will allow Algenol to continue field testing the fully integrated photobioreactor bags.
A.18.3, Biologic Process Improvement		The primary purpose of this task is to continue evaluation and implementation of improvements in the biological and engineering systems. Moving funds into BP1 to cover these activities will allow Algenol to develop proper SOPs to implement and integrate necessary Biorefinery operations.
A.18.4, On-going Program Management	A.9 Program Management of Extended DOE Phase 1 Activities; A.17: Program Management BP1	Funding for program management activities is necessary for continuing all project efforts.
A.18.5, Final Design Deliverables	A.13 Initiate architect/EPC firm associated fees	The primary purpose of this element is to further vet and utilize final design specification for the various aspects of the project in order to establish better construction plans and deliverables. Moving additional funding into BP1 to cover activities associated with this task will allow Algenol to solicit a greater number of bids from a more diverse list of vendors and service providers for several elements of the project thereby ensuring an appropriate balance of quality and value.

SECTION III – TECHNICAL EVALUATION SUMMARY

A. For each cost category, the Project Officer and the Specialist will complete his/her Technical Evaluation of the Negotiated Costs to confirm that they are all reasonable, allowable, and allocable. Additional comments should be added as necessary and as indicated below.

1. Personnel:
Total Negotiated Personnel Costs: $Exemption 4 Not Applicable, the recipient did not propose personnel costs: ☐

Project Officer:
Original budget: Exemption 4
Revised budget: $
The labor hours proposed in the negotiated budget are reasonable for the scope of work: ☒
The types of labor and labor mix proposed in the negotiated budget is reasonable: ☒
The proposed labor rates are reasonable: ☒

The personnel budget has been substantially increased for BP1 under this modification to the award. Specifically, the personnel costs have increased from $Exemption 4 (approved in the 002 modification) to $Exemption 4. The increased funding is a result of the additional tasks being incorporated into BP1 for Task A.18 as well as changes to the originally approved tasks (A.1-A.11) and changes to the tasks that were approved to be brought into BP1 that did not require additional funds (A.12-A.17).

A summary of the changes to the budget that were made to the originally approved tasks is provided here (A.1-A.11): Based on the fact that BP1 is nearing completion, the changes associated with the personnel for these tasks are most likely due to actual costs being reflected in the current budget as opposed to the projected costs that were included in the previously approved budget. Some of these rates have changed slightly from the original budget; however, the rates for each personnel type have been included and are reasonable for the scope of work being performed.

- Task A.1 (Appoint Algenol/Dow Chemical Join Project Team) was originally budgeted to require $Exemption 4 in personnel costs and is now projected to require only Exemption 4. The only personnel required to complete this task include regulatory/legal personnel, the Principle Investigator, and an Engineering/Construction Manager.
- Task A.2 (Organism Development) was originally budgeted to required $Exemption 4 in personnel costs and is now projected to require only $Exemption 4. The reduced funding for this task is due to a decrease in the costs associated with the scientists working on the task.
- Task A.3 (Flexible Film Photobioreactor Material) was originally budgeted to required $Exemption 4 in personnel costs and is now projected to require Exemption 4. The increased funding for this task is due to the addition of a lab technician as well an increase in the number of hours that the senior engineer will spend on this task.
- Task A.4 (Process Engineering) was originally budgeted to require $Exemption 4 in personnel costs and is now projected to require only $Exemption 4. The decreased funding for this task is due to a significant decrease in the number of hours that the senior engineers will spend working on this task.
- Task A.5 (Architect Search and Site Selection, Design and Construction Planning) was originally budgeted to require $Exemption 4 in personnel costs and is now projected to require only $Exemption 4. The decreased funding for this task is due to a significant decrease in the number of hours that the lab technician and the principle scientist will spend on this task.
- Task A.6 (NEPA) was originally budgeted to require Exemption 4 in personnel costs and is now projected to require Exemption 4. The increased funding is due to additional hours required by regulatory and legal personnel to complete the task.
- Task A.7 (Regulatory Submission and Approval) was originally budgeted to require Exemption 4 in personnel costs and is now projected to require Exemption 4. The decreased funding is due to a reduction in the number of hours that both the regulatory/legal personnel and the project managers will be required to work to complete the task.
- Task A.8 (Life Cycle Analysis) was not included in the original budget but has been projected to require Exemption 4 in personnel costs in the revised budget. One principle scientist will be working on this task.
- Task A.9 (Program Management) was originally budgeted to require Exemption 4 in personnel costs and is now projected to require Exemption 4. The increased funding is due to an increase in the number of hours that the project managers, principle investigator, senior program manager, engineering construction manager, and project accountant will spend on this task.
- Task A.10 (Phase I Gate Review) was originally budgeted to require Exemption 4 in personnel costs and this is now expected to cost Exemption 4. The increased funding allocated for this task is due to the incorporation of an R&D liaison into this task.
- Task A.11 (Pre-Award Look-back 12/4-1/18) was originally budgeted at Exemption 4 in personnel costs. The

revised budget now reflects that there is $0 in personnel costs associated with the pre-award look-back. However, these costs still remain at the original Exemption 4 but the recipient, in this revised budget, has broken these costs down into the various tasks that they are relevant to. For example, one of the senior project manager's times was originally captured in the Exemption 4 total lookback costs. This time is now captured under the program management task instead.

A summary of the changes to the budget that resulted from additional tasks being incorporated into BP1 (Mod 004) is provided here (A.12-A.17): The additional tasks that were brought into BP1(A.12-A.17) that are described below occurred in modification 004 and did not require additional funding from what had been originally approved in modification 002. However, to ensure that these costs are reasonable, a thorough evaluation has been provided:

- Task A.12 (Demonstrate Growth in Salt Water) is projected to require Exemption 4 in personnel costs. These costs include a principle scientist, several scientists, several research associates, a lab technician, and a senior scientist that will be working on the task. Based on the basic research nature of this task, these costs and the associated rates for each personnel type are reasonable.
- Task A.13 (Architect/Engineering) is projected to require Exemption 4 in personnel costs. These costs include one senior engineer that will spend less than half of a week on this task. As this is an extension of an original task (A.5), these low costs are reasonable.
- Task A.14 (Final Design Specs) is projected to require Exemption 4 in personnel costs. These costs will include one engineer and one senior engineer that will be working on the task. The rates and number of hours these people will spend on this task is reasonable considering this task is also an extension of an original task (A.5).
- Task A.15 (Plant Personnel Search) does not have any projected personnel costs.
- Task A.16 (On-Going Flex Film Development) is projected to require Exemption 4 in personnel costs. These costs will include one principle scientist, one engineer, one scientist, several research associates and lab technicians, one senior engineer, and one senior scientist. The rates and number of hours these people will spend on this task is reasonable considering this task is also an extension of an original task (A.3).
- Task A.17 (Program Management) is projected to require Exemption 4 in personnel costs. These costs include one regulatory/legal staffer, one engineer, several project managers, one principle investigator, one senior program manager, one engineering/construction manager, and one vice president of engineering. The rates and number of hours these people will spend on this task is reasonable considering this task is also an extension of an original task (A.9).

A summary of the changes to the budget that resulted from additional tasks being incorporated into BP1 (Mod 005) is provided here (A.18):

- Task A.18 (Extension 2): As described in the table above where the changes to the SOPO have been outlined, there are several subtasks that have been added as part of Task A.18. These include tasks relating to A.18.1 Continued Growth in Salt Water, A.18.2 Ongoing Flexible Film Development, A.18.3 Biologic Process Improvement, A.18.4 Ongoing Program Management, and A.18.5 Final Design Deliverables. A total of Exemption 4 has been budgeted for personnel that will be necessary to work on these subtasks. These tasks will require regulatory/legal personnel, several principle scientists, engineers, project managers, scientists, and research associates. These tasks will also require a lab technician, the principle investigator, a senior program manager, an engineering/construction manager, several senior engineers and scientists, and one vice president of engineering. The rates that are associated with these personnel are reasonable for the tasks that they will be working on.

The recipient has calculated their personnel costs by an average per labor category, i.e. Lab Technicians, Project Managers, etc. The difference of Exemption 4 accounted for in the recipient's budget is an adjustment to the BP1 personnel costs based upon the actual personnel costs incurred in BP1 to date. The recipient wanted to reflect this in their budget justification. The budget justification is an estimate of costs incurred during that timeframe; therefore, it is reasonable that those costs would differ from the actual costs incurred.

Specialist:
Please fill out the following table with the negotiated costs:

Task	Task Title	Budget Period 1	
		Hours	Budget
Exemption 4			Exemption 4
Rounding due to actual by employee vs. average by category			
	Total:		

Negotiated labor rates are reasonable: ☒
The personnel rates were previously deemed reasonable, due to the nature of the activities, the stature of many of the positions within the company, and also the locality. The specialist feels that the additional personnel costs are reasonable to meet the objectives of the revised SOPO for Budget Period 1. The difference of $1 is attributable to rounding error and is immaterial. For a more detailed personnel cost breakdown, please reference the Budget Justification (AWD-007) for this modification. The Exemption 4 is an adjustment the recipient would like reflected in their budget and is due to the difference between the estimated budget in the recipient's budget justification and the actual costs they've incurred; this is reasonable and acceptable.

2. Fringe Benefits:
Total Negotiated Fringe Benefit Costs: Exemption 4 Not Applicable, the recipient did not propose fringe benefit costs: ☐

Specialist:
Original budget: Exemption 4
Revised budget: $
Does the Recipient have an approved rate agreement: ☒ Yes ☐ No
If Yes, List the Date of Rate Agreement: April 19, 2010 Cite Federal Cognizant Agency: Department of Energy

Please fill out the following table with the negotiated costs:

Personnel	Total Cost	Fringe Rate	Cost
Total Personnel	Exemption 4		

The fringe benefit costs in the negotiated budget were appropriately applied and are reasonable: ☒
The recipient calculated their fringe benefit costs correctly, according to their provisional rate agreement issued by DOE on April 19, 2010. The provisional rate agreement is included in the Mod 002 supporting documents.

3. Travel:
Total Negotiated Travel Costs: $Exemption 4 Not Applicable, the recipient did not propose travel costs: ☐

Project Officer:
Original budget: Exemption 4
Revised budget: $
The number and type of trips proposed in the negotiated budget are reasonable for the scope of work: ☒
The costs per trip proposed in the negotiated budget are reasonable: ☒
Is foreign travel included in the negotiated budget: ☐ Yes ☒ No

Travel has been included in the budget for trips that have occurred during BP1. No additional travel costs are expected due to the location site change from TX to FL. Thus, the travel that has been budgeted is for actual expenses incurred. The travel includes multiple trips to multiple destinations for multiple personnel. For example, the travel includes trips between Algenol's facilities in Florida; trips to Freeport, TX to meet with the Dow Chemical Team; trips to Golden, CO, and Washington, D.C. to meet with DOE; trips to GA Tech, a project subcontractor; various intra-Florida trips to meet with regulatory agencies and to perform interviews for potential staff; and various trips between Florida and Maryland research labs. Based on the work between sites, vendors, and subcontractors and staffing and regulatory requirements within the project, the number of trips and the number of personnel participating in each trip are reasonable and appropriate for the scope performed. As the basis for the expenditures is 'actual costs', the costs are comparable to the original estimates, current internet prices, and actual invoices received to date.

☒ Specialist concurs.

4. Equipment:

Total Negotiated Equipment Costs: Exemption 4 Not Applicable, the recipient did not propose equipment costs: ☐

Project Officer:
Original budget: Exemption 4
Revised budget: $
The type(s) of equipment proposed in the negotiated budget is/are reasonable for the scope of work: ☒
The cost of equipment proposed in the negotiated budget are reasonable: ☒
Is there any proposed equipment with a total cost exceeding $50,000: ☒ Yes ☐ No (If yes, please fill out the following table with the negotiated costs and basis of cost, i.e. historical price or vendor quote)

Equipment	Total Cost	Purpose of Equipment	Basis of Cost
Exemption 4			

Equipment that has been budgeted for BP1 includes a Exemption 4
Exemption 4

☒ Specialist concurs.

5. Supplies:

Total Negotiated Supplies Costs: $0 Not Applicable, the recipient did not propose supplies costs: ☐

Project Officer:
No supply costs are proposed.

☒ Specialist concurs.

6. Contractual:

Total Negotiated Contractual Costs: Exemption 4 Not Applicable, the recipient did not propose contractual costs: ☐

Project Officer:
Original budget: Exemption 4
Revised budget: $
The subrecipients proposed in the negotiated budget are appropriate for the scope of work: ☒
The contractual costs proposed in the negotiated budget are reasonable: ☒ Yes

The total BP1 contractual costs have been reduced to Exemption 4 from the original approved budget of Exemption 4 in Mod 002. The BP1 costs associated with the subrecipients Georgia Tech, Membrane Technology and Research, and he Dow Chemical Company were previously evaluated and approved in Mod 002. The overall BP1 budgets for both Georgia Tech and the Dow Chemical Company have been reduced compared to what was previously approved in Mod 002. Because the originally approved amount in Mod 002 is greater than the amount that is currently budgeted for these subrecipients, another evaluation of these costs has not been provided.

Within the total contractual costs, the vendor costs for BP1 have been reduced from Exemption 4 in Mod 002 to $Exemption 4 because the actual budgets needed for these vendors in BP1 proved to be less than the originally estimated amount. The recipient has revised their budget to account for this difference in the estimated costs. These changes resulted from a number of revisions to the budgets for the various vendors that have been or will be utilized in BP1. For example, the costs associated with the architectural firm and survey have been removed from the BP1 budget. A summary of these changes is presented in the table below.

Vendor Name	Purpose	Originally Approved BP1 Budget (002)	Final Approved BP1 Budget (005)
Exemption 4			
	Total:	Exemption 4	

* GA Tech costs are included in both the subrecipient and vendor section. The recipient has provided the following explanation regarding the classification of these costs:
Algenol has contracted with GA Tech to provide support on the following items related to the DOE contract:

a.) Advanced separation systems for ethanol production from algae.
b.) Life cycle assessment of ethanol production from algae.

Prior to having a "Sub-award" in place, GA Tech began working on the assigned tasks and incurred expenses. Due to the internal reporting segregation at Georgia Tech, (i.e. Business grants vs. Government grants) these grants are handled by 2 different departments. Thus, the expenses incurred during this period were in the Business not Government Grant department. Due to this internal issue at Georgia Tech, Algenol recorded the expenses as "vendor" expenses vs. "sub-recipient" expenses during that time to avoid a disconnect between the reporting required under ARRA from Algenol and GA Tech.

The NEPA consultant and regulatory attorney costs were combined and the increased costs are due to the change in site as well as moving some BP2 NEPA and regulatory work into BP1. The increase is reasonable for the additional activities underway in these areas.

The new 'various – construction costs' represent the following:
The costs moved from BP2 to A.18.5 only include expenses to be incurred for the final design specifications related to the construction. The three separate designations were presented this way for Algenol's recordkeeping purposes. The estimates are based on historical experience and quotes. The costs include the completion of blueprint drawings, permitting, architectural fees, engineering fees and design costs. These items are related to tasks begun within the original