Subrecipient: _BlueFire Ethanol Fuels, Inc._

EE0002877

Complete this section for each subrecipient with proposed total costs of $100,000 or more. Otherwise, delete this section.

***For awards to corporations and nonprofits**, full reviews of their individual sub-recipients will be conducted for sub-recipient work with total costs (including cost share) greater than or equal to $250,000 or greater than or equal to 50% of the total project costs, whichever is less. **For awards to Universities, States, and Local Governments**, full reviews of their individual sub-recipients will be conducted for sub-recipient work with total costs (including cost share) greater than or equal to $500,000 or greater than or equal to 25% of the total project costs, whichever is less.*

*Full reviews consist of Tech Evaluation/Negotiation Memos covering reviews of budgets, budget justifications, and scopes of work. **For all sub-recipients costs that are below these thresholds, projects must continue to be assessed for reasonableness on the basis of the explanation (cost and brief description of work) presented by the Recipient in their application.***

Subrecipient: nc. REDACTED EXEMPTION 4

Comment [CL57]:

SECTION II – NEGOTIATION SUMMARY

Project Officer/Specialist to complete:

5. 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	Date of Submission	Summary of Change
Original		3/3/10	Submission from previous amendment; however, only the BP1 amounts were evaluated. At the time, recipient indicated that the BP2 figures were ready for evaluation.
Revision 1			
Revision 2			
Revision "n"			

REDACTED EXEMPTION 5 (Deliberative Process)

Comment [c58]:

6. 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 BP 2 Budget Submission	Final Negotiated Costs (BP 2 Revision)	Percent of Total Negotiated Budget	Fringe Benefits and Indirects	
				Proposed Rate	Negotiated Rate
Personnel Fringe Benefits Travel Equipment Supplies Contractual Construction Other			REDACTED EXEMPTION 4		
Total Direct Charges Indirect Charges					
TOTAL					
Program Income					
DOE Share (non-FFRDC) DOE Share (FFRDC) Total DOE Share					
Non-Federal Cost Share					

Comment [c59]: Fill this out

SEE ATTACHED SF 424A FOR BUDGET PERIOD BREAKDOWN

3. 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) _____

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

Project Officer commentary:

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: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Personnel costs: ☐

Project Officer:

The labor hours proposed in the negotiated budget are reasonable for the scope of work: ☐

The labor mix proposed in the negotiated budget is reasonable: ☐

The personnel associated with this project are for the production of lignocellulosic biomass-based sugars for this project. There are uniquely titled positions described by the applicant, some of which may include multiple persons. The total personnel costs for this project are

Comment [CL60]:

Principal
Chief Technology Officer
Senior Project Manager
Senior Project Engineer
Financial Officer
Contract Administrator
Project Engineer
Project Contracts/Procurement
Lab Technician
Chemical Worker
Secretary
Project Accountant

REDACTED EXEMPTION 5

(Deliberative Process)

REDACTED EXEMPTION 4

Comment [c61

Specialist:

Please fill out the following table with the negotiated costs:

Labor Type	Budget Period 1			Budget Period 2		
	Hours	Rate	Total	Hours	Rate	Total
Total:						

REDACTED EXEMPTION 4

Negotiated labor rates are reasonable: ☐ (Please attach supporting documentation e.g. www.salary.com, if applicable)

2. Fringe Benefits:

Total Negotiated Fringe Benefit Costs:	Not Applicable, the recipient did not propose Fringe Benefit costs: ☐

REDACTED EXEMPTION 4

Specialist:
Does the Recipient have an approved rate agreement: ☐ Yes ☐ No

If Yes, List the Date of Rate Agreement: _____
Cite Federal Cognizant Agency: _____

If No, select one of the following:
☐ Rate proposal was reviewed by the Cost/Price Analyst and found to be reasonable, allowable, and allocable (attach Cost/Price Analyst Determination)

☐ Rate Proposal was reviewed by the Cost/Price Analyst for a previous award (attach Cost/Price Analyst Determination)
List Date of review: _____

☐ Specialist determined that rate was reasonable

☐ Other: _____

Please fill out the following table with the negotiated costs:

	Personnel	Total Cost	Fringe Rate	Cost
Example Only	*Principal Investigator*	*$100,000*	*25%*	*$25,000*
Total:				

The fringe benefit costs in the negotiated budget were appropriately applied and are reasonable: ☐

REDACTED EXEMPTION 4

3. Travel:

Total Negotiated Travel Costs:	Not Applicable, the recipient did not propose Travel costs: ☐

Project Officer:

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: ☐

REDACTED
EXEMPTION 4

Is foreign travel included in the negotiated budget: ☐ Yes ☒ No (If yes, please fill out the following table with the negotiated costs below)

Location	Total Cost	Rationale for Foreign Travel

REDACTED
EXEMPTION 5
(Deliberative Process)

If the negotiated travel budget is greater than $100,000 or greater than 15% of the total negotiated budget, please explain the costs and rationale below:

☐ Specialist concurs.

4. Equipment:

Comment [c62]:

Total Negotiated Equipment Costs: $	Not Applicable, the recipient did not propose Equipment costs: ☐

Project Officer:

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

If the negotiated equipment budget is greater than $100,000 or greater than 15% of the total negotiated budget, please explain the costs and rationale below:

☐ Specialist concurs.

5. Supplies:

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

Project Officer:

The types /quantities of supplies proposed in the negotiated budget are reasonable based on the scope of work: ☐

The costs of supplies proposed in the negotiated budget are reasonable: ☐

If the negotiated supply budget is greater than $100,000 or greater than 15% of the total negotiated budget, please explain the costs and rationale below:

REDACTED
EXEMPTION 4

Comment [c63]:

Comment [c64]:

6. Contractual:

Total Negotiated Contractual Costs: $	Not Applicable, the recipient did not propose Contractual costs: ☒

Project Officer:

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

Please fill out the following table with the negotiated costs:

Subrecipient/Vendor Name	BP 1 Cost	BP 2 Cost	Total Cost	Contribution to Project (Identify SOPO Tasks)

Did the Recipient propose any subrecipients with total costs above $100,000? ☐ Yes ☐ No (If Yes, a separate Technical Evaluation/Negotiation Memorandum is required for each subrecipient/vendor – see below)

REDACTED
EXEMPTION 5
(Deliberative Process)

☐ Specialist concurs.

7. Construction:

Comment [c65]:

Total Negotiated Construction Costs: $	Not Applicable, the recipient did not propose Construction costs: ☐
Project Officer: The type of construction proposed in the negotiated budget is appropriate for the scope of work: ☐ The construction costs proposed in the negotiated budget are reasonable: ☐	
☐ Specialist concurs.	

REDACTED
EXEMPTION 5
(Deliberative Process)

8. Other Direct Costs:

Total Negotiated Other Direct Costs: $	Not Applicable, the recipient did not propose Other Direct costs: ☒
Project Officer: The types of other direct costs proposed in the negotiated budget are reasonable for the scope of work: ☐ The costs proposed in the negotiated budget for other direct costs are reasonable for the scope of work: ☐ *If the negotiated other direct cost budget is greater than $100,000 or greater than 15% of the total negotiated budget, please explain the costs and rationale below:*	
☐ Specialist concurs.	

9. Indirect Charges:

Total Negotiated Indirect Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Indirect costs: ☐
Specialist: Does the Recipient have an approved rate agreement: ☐ Yes ☐ No If Yes, List the Date of Rate Agreement: _____ Cite Federal Cognizant Agency: _____ If No, select one of the following: ☐ Rate proposal was reviewed by the Cost/Price Analyst and found to be reasonable, allowable, and allocable (attach Cost/Price Analyst Determination) ☐ Rate Proposal was reviewed by the Cost/Price Analyst for a previous award (attach Cost/Price Analyst Determination) List Date of review: _____ ☐ Specialist determined that rate was reasonable ☐ Other: _____ Please fill out the following tables with the negotiated costs:	

Base Item	Base Cost	Rate	Indirect Cost
Example Only: Modified Total Direct Costs	*$100,000*	*25%*	*$25,000*
Total:			

The indirect costs proposed in the negotiated budget were appropriately applied and are reasonable: ☐

Complete this section for each subrecipient with proposed total costs of $100,000 or more. Otherwise, delete this section.

***For awards to corporations and nonprofits**, full reviews of their individual sub-recipients will be conducted for sub-recipient work with total costs (including cost share) greater than or equal to $250,000 or greater than or equal to 50% of the total project costs, whichever is less. **For awards to Universities, States, and Local Governments**, full reviews of their individual sub-recipients will be conducted for sub-recipient work with total costs (including cost share) greater than or equal to $500,000 or greater than or equal to 25% of the total project costs, whichever is less.*

*Full reviews consist of Tech Evaluation/Negotiation Memos covering reviews of budgets, budget justifications, and scopes of work. **For all sub-recipients costs that are below these thresholds, projects must continue to be assessed for reasonableness on the basis of the explanation (cost and brief description of work) presented by the Recipient in their application.***

Subrecipient: UOP

SECTION II – NEGOTIATION SUMMARY

Project Officer/Specialist to complete:

7. 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	Date of Submission	Summary of Change
Original	SF424a; PMC123.1	3/2/2010	Submission from previous amendment; however, only the BP1 amounts were evaluated. At the time, recipient indicated that the BP2 figures were ready for evaluation.

Comment [c66]: Fill this out

8. 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.

Comment [c67]: Fill this out

Element of Cost	Original BP 2 Budget Submission	Final Negotiated Costs (BP 2 Revision)	Percent of Total Negotiated Budget	Fringe Benefits and Indirects	
				Proposed Rate	Negotiated Rate
Personnel Fringe Benefits Travel Equipment Supplies Contractual Construction Other			REDACTED EXEMPTION 4		
Total Direct Charges Indirect Charges					
TOTAL					
Program Income					
DOE Share (non-FFRDC) DOE Share (FFRDC) Total DOE Share					
Non-Federal Cost Share					

SEE ATTACHED SF 424A FOR BUDGET PERIOD BREAKDOWN

3. 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) _____

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

Project Officer commentary:
No comments.

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: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Personnel costs: ☐

Project Officer:

The labor hours proposed in the negotiated budget are reasonable for the scope of work: ☒

The labor mix proposed in the negotiated budget is reasonable: ☒

Specialist:

Please fill out the following table with the negotiated costs:

Labor Type	Budget Period 1			Budget Period 2		
	Hours	Rate	Total	Hours	Rate	Total
Total:	0		0	0		0

Negotiated labor rates are reasonable: ☐ (Please attach supporting documentation e.g. www.salary.com, if applicable)

2. Fringe Benefits:

Total Negotiated Fringe Benefit Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Fringe Benefit costs: ☐

Specialist:

Does the Recipient have an approved rate agreement: ☐ Yes ☐ No

If Yes, List the Date of Rate Agreement: _____

Cite Federal Cognizant Agency: _____

If No, select one of the following:

☐ Rate proposal was reviewed by the Cost/Price Analyst and found to be reasonable, allowable, and allocable (attach Cost/Price Analyst Determination)

☐ Rate Proposal was reviewed by the Cost/Price Analyst for a previous award (attach Cost/Price Analyst Determination)
List Date of review: _____

☐ Specialist determined that rate was reasonable

☐ Other: _____

Please fill out the following table with the negotiated costs:

	Personnel	Total Cost	Fringe Rate	Cost
Example Only	*Principal Investigator*	*$100,000*	*25%*	*$25,000*
Total:				

The fringe benefit costs in the negotiated budget were appropriately applied and are reasonable: ☐

3. Travel:

Total Negotiated Travel Costs: $	Not Applicable, the recipient did not propose Travel costs: ☒

Project Officer:

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 (If yes, please fill out the following table with the negotiated costs below)

Location	Total Cost	Rationale for Foreign Travel

If the negotiated travel budget is greater than $100,000 or greater than 15% of the total negotiated budget, please explain the costs and rationale below:

☐ Specialist concurs.

4. Equipment:

Total Negotiated Equipment Costs: $	Not Applicable, the recipient did not propose Equipment costs: ☒

Project Officer:

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

If the negotiated equipment budget is greater than $100,000 or greater than 15% of the total negotiated budget, please explain the costs and rationale below:
☐ Specialist concurs.

5. Supplies:

Total Negotiated Supplies Costs: $	Not Applicable, the recipient did not propose Supplies costs: ☒
Project Officer: The types /quantities of supplies proposed in the negotiated budget are reasonable based on the scope of work: ☐ The costs of supplies proposed in the negotiated budget are reasonable: ☐ *If the negotiated supply budget is greater than $100,000 or greater than 15% of the total negotiated budget, please explain the costs and rationale below:*	
☐ Specialist concurs.	

6. Contractual:

Total Negotiated Contractual Costs: $	Not Applicable, the recipient did not propose Contractual costs: ☒
Project Officer: 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 Please fill out the following table with the negotiated costs:	

Subrecipient/Vendor Name	BP 1 Cost	BP 2 Cost	Total Cost	Contribution to Project (Identify SOPO Tasks)

Did the Recipient propose any subrecipients with total costs above $100,000? ☐ Yes ☐ No (If Yes, a separate Technical Evaluation/Negotiation Memorandum is required for each subrecipient/vendor – see below)
☐ Specialist concurs.

7. Construction:

Total Negotiated Construction Costs: $	Not Applicable, the recipient did not propose Construction costs: ☒
Project Officer: The type of construction proposed in the negotiated budget is appropriate for the scope of work: ☐ The construction costs proposed in the negotiated budget are reasonable: ☐	
☐ Specialist concurs.	

8. Other Direct Costs:

Total Negotiated Other Direct Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Other Direct costs: ☐

Project Officer:

The types of other direct costs proposed in the negotiated budget are reasonable for the scope of work: ☒

The costs proposed in the negotiated budget for other direct costs are reasonable for the scope of work: ☒

If the negotiated other direct cost budget is greater than $100,000 or greater than 15% of the total negotiated budget, please explain the costs and rationale below:

REDACTED EXEMPTION 4

☐ Specialist concurs.

Comment [CL68]:

Comment [c69]: Sol?

Comment [c70]: 1

9. Indirect Charges:

Total Negotiated Indirect Costs:	Not Applicable, the recipient did not propose Indirect costs: ☐

Specialist:

Does the Recipient have an approved rate agreement: ☐ Yes ☐ No

If Yes, List the Date of Rate Agreement: _____

Cite Federal Cognizant Agency: _____

If No, select one of the following:

☐ Rate proposal was reviewed by the Cost/Price Analyst and found to be reasonable, allowable, and allocable (attach Cost/Price Analyst Determination)

☐ Rate Proposal was reviewed by the Cost/Price Analyst for a previous award (attach Cost/Price Analyst Determination)
List Date of review: _____

☐ Specialist determined that rate was reasonable

☐ Other: _____

Please fill out the following tables with the negotiated costs:

REDACTED EXEMPTION 5 (Deliberative Process)

Base Item	Base Cost	Rate	Indirect Cost
Example Only: Modified Total Direct Costs	*$100,000*	*25%*	*$25,000*
Total:			

The indirect costs proposed in the negotiated budget were appropriately applied and are reasonable: ☐

SECTION IV – RECOMMENDATIONS/APPROVAL

Signatures of the Project Officer and Specialist, indicating their recommendations, as indicated below, will occur after their mutual agreement on the contents of this document, and before the review and approval process for the action. The signatures below indicate that the costs in the negotiated budget are reasonable, allowable, and allocable.

1. Technical Recommendation

The project costs are acceptable and should be considered for a financial assistance award. The resources have been reviewed relative to the Statement of Project Objectives and are found to be reasonable, except as previously noted herein.

_____ _____
Signature Date

Christy Sterner
Project Officer

2. Specialist Recommendation

In view of the above analysis, the technical evaluation, and considering all known factors, this Award is recommended.

_____ _____
Signature Date

Molly Hames
Grants and Agreements Specialist

3. Contracting Officer Approval *

☐ I concur with the above recommendation and have determined that the Recipient is responsible. I consider this Award to be in the best interest of the Government, and approve the award documents. (Select this box if the preparer is not the contracting officer)

☐ In view of the analysis, the technical evaluation, and considering all known factors, I have determined that the Recipient is responsible. This Award is considered to be in the best interest of the Government and approved. (Select this box if the preparer is also the contracting officer and indicate N/A in Block 2.)

_____ _____
Signature Date

Melissa Wise
Contracting Officer

** Contracting Officers shall not sign an award/negotiation memorandum when they are the preparer, without first obtaining a review by their Branch Chief (PF-1 form). However, the Branch Chief may designate another Branch Chief to review the documents. When the Contracting Officer is the Branch Chief, the Contracting Officer will obtain a review from another Independent Reviewer (e.g., Contracting Officer or Policy Analyst). Specialists or Contracting Officers have the discretion to request Independent Review or Legal Review of any action, whether or not required by the review policy, due to unusual circumstances, high visibility, or political sensitivity.*

***PLEASE DELETE ALL BLUE TEXT ONCE FORM IS COMPLETE*

STATEMENT OF PROJECT OBJECTIVES

Solazyme, Inc.
Solazyme Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae

A. PROJECT OBJECTIVES

Solazyme proposes to build, operate and optimize a pilot-scale "**S**ola**z**yme **I**ntegrated **Bio**refinery." SzIBR will demonstrate integrated scale-up of Solazyme's novel heterotrophic algal oil biomanufacturing process, validate the projected commercial-scale economics of producing multiple advanced biofuels, and enable Solazyme to collect the data necessary to complete design of the first commercial-scale facility.

Specific project objectives include:

- Expeditiously commence construction and operations.
- Integrate all process unit operations successfully into a unified biorefinery.
- Validate feasibility of low cost production at commercial scale.
- Demonstrate refining of the algal oil into fully-compliant liquid transportation fuels.
- Accelerate development of high-impact lignocellulosic feedstocks.
- Successfully complete the project on schedule.

B. PROJECT SCOPE

The scope of the proposed project encompasses (i) building, operating and optimizing a pilot-scale integrated biorefinery, (ii) cultivating fuel oil-producing algae, (iii) extracting and purifying oil from the algae, (iv) refining the algal oil to standard liquid transportation fuels, (v) optimizing fermentation parameters at both laboratory and pilot scale, and (vi) gathering data to assist in the design of subsequent demonstration and commercial facilities.

The project advances the goals of the DOE Biomass Program and accelerates the nation's ability to achieve the production targets mandated by the federal Renewable Fuel Standard (RFS).

C. TASKS TO BE PERFORMED

BUDGET PERIOD 1: PRELIMINARY ACTIVITIES

A BP-1 Submission (Preparation/Approval/Reporting)
A.1 Selection Kick-Off Meeting (DOE Core)
A.2 Submission of Award 1 application (DOE Core)
A.3 Acceptance of Award 1 application (DOE Core)
A.4 Release of Award 1 funds (DOE Core)

A.5 **Reporting BP-1**
Solazyme shall submit financial reports, and standard and Recovery Act status reports. Reports will be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

B **Prepare manufacturing site:**
Solazyme shall submit permit applications, finalize and sign engineering contract, procure vendor technical design information for the bulk of the process and utility equipment, complete engineering drawings and procure the longest-lead time equipment items, update the safety plan for the manufacturing site and begin demolition.

B.1.5 **EPC contract finalized and signed (DOE Core)**
B. 3 **Define commissioning criteria (DOE Core)**
C **BP-2 Application/Submission/Approval**
C.1 **Environmental Filings**
C.1.1.3 **NEPA approval to proceed (DOE CORE)**
C.3 **Update Risk Management Plan (Risk Planning)**
C.3.9 **Risk mitigation plan validation completed – Award 2 (DOE Core)**
C.4 **Update PMP (Schedule/Cost Planning)**
C.5 **Submission of Award 2 application (DOE Core)**
C.6 **CD-2 Approve Performance Baseline (DOE Core)**
C.7 **Acceptance of Award 2 application (DOE Core)**

BUDGET PERIOD 2: CONSTRUCTION AND OPERATION

D **Funding approval and release activities**
D.2 **CD-3 Approve Start of Construction (DOE Core)**
D.3 **Release of Award 2 funds (DOE Core)**
E **Feedstock sourcing**
F **Create and qualify pilot-scale SzIBR at manufacturing site:**
Solazyme shall submit purchase orders for all remaining equipment downstream of fermentation. Solazyme shall prepare space for equipment as needed, install utility connections and accept delivery of equipment. Solazyme shall install, startup, test and qualify all equipment, train operators on new equipment and conduct start-up/safety inspection.

F.4.2 **Conduct Start-up/Safety Inspection**
F.4.3 **CD-4: Start of Operation Approval – Initiate Shakedown (DOE Core)**
F.5 **Test and qualify facility:**
Solazyme shall conduct start-up of unit operations and water checks and start process flow by unit operations to complete a full integrated cycle. Solazyme shall facilitate an Independent Engineer Report.

F.5.4 **Shakedown complete (DOE Core)**
F.6 **Commissioning – Start of operation (DOE Core)**
G **Operate SzIBR to optimize and demonstrate integrated process:**

Solazyme shall conduct a series of major campaigns through the entire integrated process flow at SzIBR, collect extensive process data, and optimize the process parameters.

H **Optimize fermentation parameters at laboratory scale to support integrated pilot operations at SzIBR:**
Solazyme shall optimize the fermentation performance at laboratory scale in support of operations at SzIBR.

I **Generate concentrated sugars derived from lignocellulosic feedstocks:**
Solazyme shall obtain sugars derived from lignocellulosic feedstocks from subcontractor(s).

J **Integrated process campaign on cellulosic-derived sugars at manufacturing site**
Solazyme shall conduct at least one integrated campaign at reduced scale on cellulosic-derived sugars, collect process data and test process parameters.

K **Refine algal oil from SzIBR to standard liquid transportation fuels:**
Solazyme shall deliver purified algal oil generated in Task G to subcontractors that will refine the oil to standard liquid transportation fuels, including biodiesel and renewable diesel.

L **Project Management BP-2**
Solazyme shall submit financial reports, standard and Recovery Act status reports, annual reports and updated pro formas, as well as the Interim Final Technical Report, including property disposition and IP reports. Reports will be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

M **Complete commissioning of SzIBR**

M.1 **Facilitate Independent Engineers Performance Test**

M.2 **Completion of Commissioning Criteria (DOE Core)**

BUDGET PERIOD 3: EXTENDED OPERATION

N **Extended Operation Period**

N.1 **Project Management BP-3**
Solazyme shall submit financial reports, the final pro forma, and the Final Technical Report, including final property disposition and final IP reports. Reports will be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

REDACTED

FOIA EXEMPTION 4

REDACTED

FOIA EXEMPTION 4

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PMC 120.1
(12/09)

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: Solazyme, Inc.

2. Grant/Cooperative Agreement No.: DE-EE0002877 Modification No. 004
   Requisition No: 11EE001972
   Project Title: Recovery Act: Solazyme Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic 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 re-scope Budget Period 1 of the award for Solazyme, Inc. for the project entitled "Recovery Act: Solazyme Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae." This action includes the following: approving the reallocation of scope from Budget Period 2 into Budget Period 1; lifting conditions on the funds associated with those tasks, such that the total approved budget for Budget Period 1 is now Ex 4 ($7,363,464 Federal funds + Ex 4 Non-Federal funds); moving the demolition activities (scope and budget) from BP1 back to BP2; adding six months to the end of Budget Period 1 so that the new Budget Period 1 end date is 9/30/2011; extending the project end date to 3/31/2014; changing the Project contact from Matthew Frome to Sarah McQuaid; officially changing the address; and including Program Income terminology. The overall project scope remains unchanged.

Please note the Solazyme's address: 225 Gateway Blvd; South San Francisco, CA 94080. The Project contact is Sarah L. McQuaid, 650-416-5122.

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.):

1. Government Insight
   In order to adequately monitor project progress and provide technical direction and/or redirection to the Recipient, DOE must be provided an adequate level of insight into various Recipient activities. Government Insight activities by DOE include attendance at Recipient meetings, reviews and tests, as well as access for DOE's consultants to perform independent evaluations of Recipient's plans and processes. Recipient shall notify the DOE Project Officer of meetings, reviews, and tests in sufficient time to permit DOE participation, and provide all appropriate documentation for DOE review.

2. Specific activities to be conducted by DOE:
   a. Risk Evaluation – DOE will review the Recipient's initial Risk Mitigation Plan (RMP) for quality and completeness. DOE will also monitor updates to the RMP and actions taken by the Recipient during the performance of its award to mitigate risks and improve the probability of successful execution of the integrated Biorefinery project. At DOE's discretion, additional independent risk analyses of the project by DOE consultants may be requested.
   b. Independent Engineering Assessments – DOE will engage a private, independent engineering (IE) firm to assist in assessing the progress of the project and provide timely and accurate reports to DOE. The Recipient will ensure that the IE has access to any and all relevant documentation sufficient to allow the IE

to provide independent evaluations to DOE on the progress of the project. Such documentation includes but is not limited to the following:

- Drawings and specifications
- Construction and Execution plans
- Resource loaded schedules
- Design functions and requirements for the site final design review
- Risk management plans
- Value management and engineering studies and/or plans
- Acquisition strategies
- Project execution plans
- Project controls including earned value management systems
- Qualifications of the integrated project team.
- Financial strategy for funding the construction project
- Updated marketing and business plan
- Invoices submitted to DOE

DOE will evaluate the quality and completeness of information and documentation provided by the Recipient to DOE and its consultants in order to allow DOE to provide technical direction and/or redirection to the Recipient about how best to achieve the purposes of the award. Consultants to DOE may not provide technical direction and/or redirection to the Recipient.

5. New/Revised Project Period for this Award: From: 01/28/2010 To: 03/31/2014
   New/Revised Budget Period 1 for this Award: From: 01/28/2010 To: 09/30/2011
   New/Revised Budget Period 2 for this Award: From: 10/01/2011 To: 03/31/2014

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
   ☐ 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**. Please state the payment method that will be used for this award in the box below. 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. If the ACH or the "ASAP Approval Required" payment methods is required, include an explanation for the restriction.

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 02/03/2011 (Include Printout in permanent STRIPES file)

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	DOE – G&A Specialist	Sarah McQuaid	Project Manager
2.	Christy Sterner	DOE – Project Officer	David Brinkmann	Business Officer
3.	Chris Lindeman	CNJV – Project Engineer		

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
Original		6/15/2010	Current approved documents
Revision 1	SF 424A; PMC 123.1; SOPO	11/5/2010	Updated documents to reflect moving
Revision 2	SF 424A; PMC 123.1; SOPO	12/21/2010	REDACTED EXEMPTION 4
Revision 3	SF 424A; PMC 123.1	1/11/2010	
Revision 4	SF 424A; PMC 123.1; SOPO	2/14/2011	

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	Current Approved BP1 Budget Submission	Final Negotiated Costs (BP1 Revision)	Variance	Percent of Total Negotiated Budget	Fringe Benefits and Indirects	
					Proposed Rate	Negotiated Rate
Personnel Fringe Benefits Travel Equipment Supplies Contractual Construction Other	REDACTED EXEMPTION 4					
Total Direct Charges Indirect Charges						
TOTAL						
Program Income						
DOE Share (non-FFRDC) DOE Share (FFRDC) Total DOE Share						
Non-Federal Cost Share						

SEE ATTACHED SF 424A FOR BUDGET PERIOD BREAKDOWN

3. Total Allowable Adjustment without Concurrence from the Selection Official per the Selection Statement:
Actual Total Adjustment based on Budget Table Above: - Total Budget has not changed

REDACTED EXEMPTION 4

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:

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: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Personnel costs: ☐

Project Officer:
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 additional personnel budget included in this revision is REDACTED EXEMPTION 4

Relative to this revision, the rates and hours for all other personnel in BP1 have not changed. The rates proposed are reasonable and are based on actual salaries. Based on the scope of work proposed in the revision and Solazyme's management and engineering oversight roles, the positions and corresponding hours proposed are appropriate and reasonable.

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

Labor Type	Original Budget Period 1			Final Budget Period 1		
	Hours	Rate	Total	Hours	Rate	Total
Corporate Counsel						
Director Business Development						
Project Engineer						
Project Manager						
Project Manager						
Sr. Dir. Program Management & Logistics						
SVP Manufacturing & Process Development						
VP Manufacturing						
Total:						

REDACTED EXEMPTION 4

Negotiated labor rates are reasonable: ☒
Please detail the basis for the reasonable determination: The additional cost of the Project Engineer is reasonable and necessary for the scope of work. The other personnel rates and hours were previously justified, reviewed and approved.

2. Fringe Benefits:

Total Negotiated Fringe Benefit Costs: EX 4	plicable, the recipient did not propose Fringe Benefit ☐

Specialist:
Does the Recipient have an approved rate agreement: ☒ Yes ☐ No
If Yes, List the Date of Rate Agreement: April 2, 2010
Cite Federal Cognizant Agency: Defense Logistics Agency (DLA)

Personnel	Total Cost	Fringe Rate	Cost

REDACTED
EXEMPTION 4

The fringe benefit costs in the negotiated budget were appropriately applied and are reasonable: ☒

REDACTED
EXEMPTION 4

3. Travel:

Total Negotiated Travel Costs:	Not Applicable, the recipient did not propose Travel costs: ☐

Project Officer:
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

The travel budget was evaluated and found to be reasonable in the previous revision. No changes to the travel budget are included in the current revision.

☒ Specialist concurs.

REDACTED
EXEMPTION 4

4. Equipment:

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

Project Officer:
The types 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

Equipment	Total Cost	Purpose of Equipment	Basis of Cost

REDACTED
EXEMPTION 4

REDACTED
EXEMPTION 4

☒ Specialist concurs.

5. Supplies:

Total Negotiated Supplies Costs: REDACTED EXEMPTION 4	Not Applicable, the recipient did not propose Supplies costs: ☒
Project Officer: No supply costs were proposed for Budget Period 1.	
☒ Specialist concurs.	

6. Contractual:

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

Project Officer:
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

Please fill out the following table with the negotiated costs: (table only shows costs which are new or revised since previous revision)

Vendor Name	BP 1 Cost	Role in Project (Identify SOPO Tasks)

REDACTED
EXEMPTION 4

REDACTED
EXEMPTION 4

Did the Recipient propose any subrecipients with total costs above $250,000? ☐ Yes ☒ No

Quotes and estimation bases have been provided for the vendor costs noted above.

☒ Specialist concurs.

7. Construction:

Total Negotiated Construction Costs: REDACTED EXEMPTION 4 Not Applicable, the recipient did not propose Construction costs: ☒

Project Officer
No construction costs were proposed for Budget Period 1.

☒ Specialist concurs.

8. Other Direct Costs:

Total Negotiated Other Direct Costs: REDACTED EXEMPTION 4 Not Applicable, the recipient did not propose Other Direct costs: ☒

Project Officer:
No other direct costs were proposed for Budget Period 1.

☒ Specialist concurs.

9. Indirect Charges:

Total Negotiated Indirect Costs: REDACTED EXEMPTION 4 Not Applicable, the recipient did not propose Indirect Costs: ☐

Specialist:
Does the Recipient have an approved rate agreement: ☒ Yes ☐ No
If Yes, List the Date of Rate Agreement: April 2, 2010
Cite Federal Cognizant Agency: Defense Logistics Agency (DLA)

Please fill out the following tables with the negotiated costs:

	Base Item	Rate	BP1 Original Base	BP1 Final Base	BP1 Original Indirect Charges	BP1 Final Indirect Charges
DOE Proposed						
DLA Agreement	Total Direct Costs					

REDACTED
EXEMPTION 4

10. Cost Share:

Project Officer:
Project is a: ☒ Research ☒ Development ☐ Demonstration ☐ Other: Pilot Plant
The minimum recipient's cost share required for this award is:
The recipient proposed cost share for this award is:
Does the proposed cost share meet the minimum requirement: ☒ Yes ☐ No

Specialist:
Is the proposed cost share: ☒ Cash ☐ In-kind

Organization	Type of Cost Share	Cost Share Amount

REDACTED
EXEMPTION 4

Third Party cost share commitment letters have been obtained: ☐
Solazyme's cost share commitment changed due to the change in the budget with this modification.

B. The following Project Officer and Specialist evaluation and negotiation commentary and recommendations address their agreement on all additional considerations for this award.