General Category of Supplies	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
				REDACTED EXEMPTION 4	
Budget Period 3 Total					
PROJECT TOTAL					

dditional Explanations/Comments (as necessary)

REDACTED
EXEMPTION 4

f. Contractual

PLEASE READ!!!

The entity completing this form must provide all costs related to sub-recipients, vendors, contractors, consultants and FFRDC partners in the applicable boxes below.

Sub-recipients (partners, sub-awardees):
For each sub-recipient with total project costs of $100,000 or more, a separate SF-424A budget and PMC123.1 budget justification form must be submitted. These sub-recipient forms may be completed by either the sub-recipients themselves or by the preparer of this form. The budget totals on the sub-recipient's forms must match the sub-recipeint entries below.

The preparer of this form need only provide further support of the completed sub-recipient budget forms as they deem necessary. The support to justify the budgets of sub-recipients with estimated costs less than $100,000 may be in any format, and at a minimum should provide what Statement of Project Objectives task(s) are being performed, the purpose/need for the effort, and a basis of the estimated costs that is considered sufficient for DOE evaluation.

Vendors (includes contractors and consultants):
List all vendors, contractors and consultants supplying commercial supplies or services used to support the project. The support to justify vendor costs (in any amount) should provide the purpose for the products or services and a basis of the estimated costs that is considered sufficient for DOE evaluation.

Federal Research and Development Centers (FFRDCs):
For FFRDC partners, award recipient will provide a Field Work Proposal (if not already provided with the original application), along with the FFRDC labor mix and hours, by category and FFRDC major purchases greater than $25,000, including Quantity, Unit Cost, Basis of Cost, and Justification. The award recipient may allow the FFRDC to provide this information directly to DOE.

Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

Sub-Recipient Name/Organization	Purpose/Tasks in SOPO	Budget Period 1 Costs	Budget Period 2 Costs	Budget Period 3 Costs	Project Total
EXAMPLE ONLY!!! XYZ Corp.					
	REDACTED EXEMPTION 4				

Sub-Recipient Name/Organization	Purpose/Tasks in SOPO	Budget Period 1 Costs	Budget Period 2 Costs	Budget Period 3 Costs	Project Total
	Sub-total				

Vendor Name/Organization	Product or Service, Purpose/Need and Basis of Cost (Provide additional support at bottom of page as needed)	Budget Period 1 Costs	Budget Period 2 Costs	Budget Period 3 Costs	Project Total
EXAMPLE ONLY!!! ABC Corp.					
	REDACTED EXEMPTION 4				

FFRDC Name/Organization	Purpose	Budget Period 1 Costs	Budget Period 2 Costs	Budget Period 3 Costs	Project Total
	REDACTED EXEMPTION 4				
Total Contractual					

AdditionalExplanations/Comments (as necessary)

REDACTED
EXEMPTION 4

g. Construction

PLEASE READ!!!

Construction, for the purpose of budgeting, is defined as all types of work done on a particular building, including erecting, altering, or remodeling. Construction conducted by the award recipient is entered on this page. Any construction work that is performed by a vendor or subrecipient to the award recipient should be entered under f. Contractual.

List all proposed construction below, providing a basis of cost such as engineering estimates, prior construction, etc., and briefly justify its need as it applies to the Statement of Project Objectives.

Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

verall description of construction actiivities:

xample Only!!! - Build wind turbine platform

General Description	Cost	Basis of Cost	Justification of need
Budget Period 1			
Three days of excavation for platform site EXAMPLE ONLY!!!			
		REDACTED EXEMPTION 4	
Budget Period 1 Total	$0		
Budget Period 2			

REDACTED
EXEMPTION 4

General Description	Cost	Basis of Cost	Justification of need
		REDACTED EXEMPTION 4	
Budget Period 2 Total			
Budget Period 3			
		REDACTED EXEMPTION 4	
Budget Period 3 Total			
PROJECT TOTAL			

Additional Explanations/Comments (as necessary)

g. Construction

h. Other Direct Costs

PLEASE READ!!!

Other direct costs are direct cost items required for the project which do not fit clearly into other categories, and are not included in the indirect pool for which the indirect rate is being applied to this project. Examples are meeting costs, postage, couriers or express mail, telephone/fax costs, printing costs, etc.

Basis of cost are items such as vendor quotes, prior purchases of similar or like items, published price list, etc.

Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

General description	Cost	Basis of Cost	Justification of need
		Budget Period 1	
EXAMPLE ONLY!!! Grad student tuition			
		REDACTED EXEMPTION 4	
Budget Period 1 Total			
		Budget Period 2	
		REDACTED EXEMPTION 4	
Budget Period 2 Total			
		Budget Period 3	
		REDACTED EXEMPTION 4	
Budget Period 3 Total			
PROJECT TOTAL			

Additional Explanations/Comments (as necessary)

i. Indirect Costs

	Budget Period 1	Budget Period 2	Budget Period 3	Total
Rate applied:				
Total indirect costs requested:				

REDACTED
EXEMPTION 4

A federally approved indirect rate agreement, or rate proposed supported and agreed upon by DOE for estimating purposes is required if reimbursement of fringe benfits is requested. Please check (X) one of the options below and provide the requested information if it has not already been provided as requested, or has changed. Calculate the indirect rate dollars and enter the total in the Section B., line 6.j. (Indirect Charges) of form SF 424A.

____ **There is a federally approved indirect rate agreement. A copy is provided with this application and will be provided electronically to the Contracting Officer for this project.**
(When this option is selected, a presentation of the budget that demonstrates the application of the approved rate, to arrive at the proposed indirect charges proposed should also be provided.)

X **There is no current, federally-approved indirect rate agreement.**
(When this option is checked, the entity preparing this form shall submit an indirect cost rate proposal in the format provided at the following website, or in a format that provides the same level of information and which supports the rate(s) being proposed for use in estimating the project. Go to https://www.eere-pmc.energy.gov/forms.aspx and select PMC 400.2 Sample Rate Proposal.)

Additional Explanations/Comments (as necessary)

REDACTED
EXEMPTION 4

Cost Share

PLEASE READ!!!

A detailed presentation of the cash or cash value of all cost share proposed for the project must be provided in the table below. Identify the source & amount of each item of cost share proposed by the award recipient and each sub-recipient or vendor. Letters of committment must be submitted for all third party cost share (other than award recipient).

Note that "cost-share" is not limited to cash investment. Other items that may be assigned value in a budget as incurred as part of the project budget and necessary to performance of the project, may be considered as cost share, such as: contribution of services or property; donated, purchased or existing equipment; buildings or land; donated, purchased or existing supplies; and/or unrecovered personnel, fringe benefits and indirect costs, etc. For each cost share contribution identified as other than cash, identify the item and describe how the value of the cost share contribution was calculated.

Funds from other Federal sources MAY NOT be counted as cost share. **This prohibition includes FFRDC sub-recipients. Non-Federal sources include private, state or local Government, or any source not originally derived from Federal funds. Documentation of cost sharing commitments must be provided, if not already provided with the original application and they have not changed since its submission.**

Fee or profit will not be paid to the award recipients or subrecipients of financial assistance awards. Additionally, foregone fee or profit by the applicant shall not be considered cost sharing under any resulting award. Reimbursement of actual costs will only include those costs that are allowable and allocable to the project as determined in accordance with the applicable cost principles prescribed in 10 CFR 600.127, 10 CFR 600.222 or 10 CFR 600.317. Also see 10 CFR 600.318 relative to profit or fee.

Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

Organization/Source	Type (cash or other)	Cost Share Item	Budget Period 1 Cost Share	Budget Period 2 Cost Share	Budget Period 3 Cost Share	Total Project Cost Share
ABC Company EXAMPLE ONLY!!!						
		REDACTED EXEMPTION 4				
		Totals				

Total Project Cost.

Cost Share Percent of Award:

Additional Explanations/Comments (as necessary)

Applicant Name: Solazyme, Inc. Award Number: DE-EE0002877. 001 Attachment 4

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds: Federal (c)	Estimated Unobligated Funds: Non-Federal (d)	New or Revised Budget: Federal (e)	New or Revised Budget: Non-Federal (f)	Total (g)
1. Budget Period 1	81.087			$969,689		
2. Budget Period 2	81.087			TBD		
3.						
4.						
5. Totals		$0		$969,689		

REDACTED EXEMPTION 4

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity: (1) Budget Period 1	(2) Budget Period 2	(3)	(4)	Total (5)
a. Personnel					
b. Fringe Benefits					
c. Travel					
d. Equipment					
e. Supplies					
f. Contractual					
g. Construction					
h. Other					
i. Total Direct Charges (sum of 6a-6h)					
j. Indirect Charges					
k. **Totals** (sum of 6i-6j)					
7. Program Income					

REDACTED EXEMPTION 4

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Prescribed by OMB Circular A-102

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Applicant Name: Solazyme

Award Number: DE-FOA-0000096

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds: Federal (c)	Estimated Unobligated Funds: Non-Federal (d)	New or Revised Budget: Federal (e)	New or Revised Budget: Non-Federal (f)	Total (g)
1. Demonstration of Integrated Biorefinery Operations	81.087			$21,753,505		
2.						
3.						
4.						
5. Totals		$0		$21,753,505		

REDACTED
EXEMPTION 4

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity: (1) Period 1	(2) Period 2	(3) Period 3	(4)	Total (5)
a. Personnel					
b. Fringe Benefits					
c. Travel					
d. Equipment					
e. Supplies					
f. Contractual					
g. Construction					
h. Other					
i. Total Direct Charges (sum of 6a-6h)					
j. Indirect Charges					
k. **Totals** (sum of 6i-6j)					
7. Program Income					

REDACTED
EXEMPTION 4

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Section C - Non-Federal Resources

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) **Totals**
8. Demonstration of Integrated Biorefinery Operations				
9.				
10.				
11.				
12. **Total** (sum of lines 8 - 11)				

REDACTED
EXEMPTION 4

Section D - Forecasted Cash Needs

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th quarter

13. Federal	$3,351,049	$219,988	$529,708	$219,994	$2,381,360
14. Non-Federal			REDACTED EXEMPTION 4		
15. **Total** (sum of lines 13 and 14)					

Section E - Budget Estimates of Federal Funds Needed for Balance of the Project

(a) Grant Program	Future Funding Periods (Years)			
	(b) First	(c) Second	(d) Third	(e) Fourth
16. Demonstration of Integrated Biorefinery Operations				
17.				
18.				
19.		REDACTED EXEMPTION 4		
20. **Total** (sum of lines 16-19)				

Section F - Other Budget Information

21. Direct Charges	22. Indirect Charges
23. Remarks	REDACTED EXEMPTION 4

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Prescribed by OMB Circular A-102

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Instructions for the SF-424A

Public Reporting Burden for this collection of information is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Please do not return your completed form to the Office of Management and Budget; send it to the address provided by the sponsoring agency.

General Instructions
This form is designed so that application can be made for funds from one or more grant programs. In preparing the budget, adhere to any existing Federal grantor agency guidelines which prescribe how and whether budgeted amounts should be separately shown for different functions or activities within the program. For some programs, grantor agencies may require budgets to be separately shown by function or activity. For other programs, grantor agencies may require a breakdown by function or activity. Sections A, B, C, and D should include budget estimates for the whole project except when applying for assistance which requires Federal authorization in annual or other funding period increments. In the later case, Sections A, B, C, and D should provide the budget for the first budget period (usually a year) and Section E should present the need for Federal assistance in the subsequent budget periods. All applications should contain a breakdown by the object class categories shown in Lines a-k of Section B.

Section A. Budget Summary Lines 1-4 Columns (a) and (b)
For applications pertaining to a **single** Federal grant program (Federal Domestic Assistance Catalog number) and **not requiring** a functional or activity breakdown, enter on Line 1 under Column (a) the catalog program title and the catalog number in Column (b).

For applications pertaining to a **single** program **requiring** budget amounts by multiple functions or activities, enter the name of each activity or function on each line in Column (a), and enter the catalog number in Column (b). For applications pertaining to multiple programs where none of the programs require a breakdown by function or activity, enter the catalog program title on each line in **Column** (a) and the respective catalog number on each line in Column (b).
For applications pertaining to **multiple** programs where one or more programs **require** a breakdown by function or activity, prepare a separate sheet for each program requiring the breakdown. Additional sheets should be used when one form does

For continuing grant program applications, submit these forms before the end of each funding period as required by the grantor agency. Enter in Columns (c) and (d) the estimated amounts of funds which will remain unobligated at the end of the grant funding period only if the Federal grantor agency instructions provide for this. Otherwise, leave these columns blank. Enter in columns (e) and (f) the amounts of funds needed for the upcoming period. The amount(s) in Column (g) should be the sum of amounts in Columns (e) and (f).

For supplemental grants and changes to existing grants, do not use Columns (c) and (d). Enter in Column (e) the amount of the increase or decrease of Federal funds and enter in Column (f) the amount of the increase or decrease of non-Federal funds. In Column (g) enter the new total budgeted amount (Federal and non-Federal) which includes the total previous authorized budgeted amounts plus or minus, as appropriate, the amounts shown in Columns (e) and (f). The amount(s) in Column (g) should not equal the sum of amounts in Columns (e) and (f).

Line 5—Show the totals for all columns used.

Section B. Budget Categories
In the column headings (a) through (4), enter the titles of the same programs, functions, and activities shown on Lines 1-4, Column (a), Section A. When additional sheets are prepared for Section A, provide similar column headings on each sheet. For each program, function or activity, fill in the total requirements for funds (both Federal and non-Federal) by object class categories.

Lines 6a-i—Show the totals of Lines 6a to 6h in each column.

Line 6j—Show the amount of indirect cost.

not provide adequate space for all breakdown of data required. However, when more than one sheet is used, the first page should provide the summary totals by programs.

Lines 1-4, Columns (c) through (g)

For new applications, leave Columns (c) and (d) blank. For each line entry in Columns (a) and (b), enter in Columns (e), (f), and (g) the appropriate amounts of funds needed to support the project for the first funding period (usually a year).

Line 6k—Enter the total of amounts on Lines 6i and 6j. For all applications for new grants and continuation grants the total amount in column (5), Line 6k, should be the same as the total amount shown in Section A, Column (g), Line 5. For supplemental grants and changes to grants, the total amount of the increase or decrease as shown in Columns (1)-(4), Line 6k should be the same as the sum of the amounts in Section A, Columns (e) and (f) on Line 5.

Line 7—Enter the estimated amount of income, if any, expected to be generated from this project. Do not add or subtract this amount from the total project amount. Show under the program narrative statement the nature and source of income. The estimated amount of program income may be considered by the federal grantor agency in determining the total amount of the grant.

Section C. Non-Federal Resources

Lines 8-11—Enter amounts of non-Federal resources that will be used on the grant. If in-kind contributions are included, provide a brief explanation on a separate sheet.

Column (a)—Enter the program titles identical to Column (a), Section A. A breakdown by function or activity is not necessary.

Column (b)—Enter the contribution to be made by the applicant.

Column (c)—Enter the amount of the State's cash and in-kind contribution if the applicant is not a State or State agency. Applicants which are a State or State agencies should leave this column blank.

Column (d)—Enter the amount of cash and in-kind contributions to be made from all other sources.

Column (e)—Enter totals of Columns (b), (c), and (d).

Line 12—Enter the total for each of Columns (b)-(e). The amount in Column (e) should be equal to the amount on Line 5, Column (f) Section A.

Section D. Forecasted Cash Needs

Line 13—Enter the amount of cash needed by quarter from the grantor agency during the first year.

Line 14—Enter the amount of cash from all other sources needed by quarter during the first year.

Line 15—Enter the totals of amounts on Lines 13 and 14.

Section E. Budget Estimates of Federal Funds Needed for Balance of the Project

Lines 16-19—Enter in Column (a) the same grant program titles shown in Column
(a), Section A. A breakdown by function or activity is not necessary. For new applications and continuation grant applications, enter in the proper columns amounts of Federal funds which will be needed to complete the program or project over the succeeding funding periods (usually in years). This section need not be completed for revisions (amendments, changes, or supplements) to funds for the current year of existing grants.
If more than four lines are needed to list the program titles, submit additional schedules as necessary.

Line 20—Enter the total for each of the Columns (b)-(e). When additional schedules are prepared for this Section, annotate accordingly and show the overall totals on this line.

Section F. Other Budget Information

Line 21—Use this space to explain amounts for individual direct object-class cost categories that may appear to be out of the ordinary or to explain the details as required by the Federal grantor agency.

Line 22—Enter the type of indirect rate (provisional, predetermined, final or fixed) that will be in effect during the funding period, the estimated amount of the base to which the rate is applied, and the total indirect expense.

Line 23—Provide any other explanations or comments deemed necessary.

Building 202/Solazyme Selective Demolition Project:

REDACTED
EXEMPTION 4

Demolition work will consist of : in the center bay of Building 202, first and second floors, consisting of a total of approximately square feet. The demolition will selectively preserve active data & communications conduits and utility through-connections essential for ongoing plant operations and supply to the current SzIBR project, thus requiring surgical demolition techniques.

REDACTED
EXEMPTION 4

Additional exterior demolition will that is adjoining Building 202 West Exterior. This area consists of approximately square feet, encompassing and will selectively preserve surrounding structural steel for reuse in the SzIBR project.

REDACTED
EXEMPTION 4

Demolition will include

The approach to selective demolition services will include:

- Analyze and safely prepare structures for demolition
- Careful consideration given to adjacent structures and active operations
- Closely coordinate tasks and schedule with site partner to work seamlessly with plant operations
- All projects are approached with the utmost concern for environmental compliance and employee safety

Estimated cost for services:

REDACTED
EXEMPTION 4

Bidding companies include

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 **B**io**r**efinery." 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, including standard and Recovery Act status reports, and technical progress reports. Reports will be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

B Prepare manufacturing site:

Solazyme shall finalize and sign EPC contract (DOE Core), complete engineering drawings, submit permit applications, finalize specifications of equipment with vendors and procure long-lead time equipment, 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 will clear space for equipment as needed, prepare utility connections and accept delivery of equipment. Solazyme shall also 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 will 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 subcontractors.

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

K **Refine algal oil from SzIBR to standard liquid transportation fuels:**
Solazyme will 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, including 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.

Department of Energy
Washington, DC 20585

I certify that the funds stated herein are available for obligation and the work scope is consistent with the intent of Congress.

12/23/09

David J. Smith
Lead Budget Analyst, EE-3B

FED 10-5069 DEC
ARRA FUNDS

MEMORANDUM FOR: Rita Wells, Executive Director for Field Operations
Golden Field Office (GO)

SUBJECT: FY 2010 Biomass Program Approved Funding for Golden Field Office (GO)

In accordance with the approved EERE Biomass Program FY 2010 spend plan, budget authority of $608,598,927 in operating expenses is authorized for obligation and expenditure in accordance with program guidance as indicated below. Any required changes must be approved in writing by the appropriate headquarters program manager and budget execution staff. Field transfers must be coordinated through the Corporate Planning System (CPS). Funding authorized in this letter is not approved for support service contracts; either as a prime or subcontract award. The field AFP recipient of the funds is responsible for reporting all funding obligations and costs to the Project Management Center and headquarters. The field AFP recipient must maintain obligations and cost data at the agreement level and the data must be made available to EERE.

PROGRAM GUIDANCE

Program Activity & Key Activity	B&R Code-Fund Value-Program Code	BA($)
Biomass Program Thermochemical Platform R&D	BM0101010-05794-1004170 (2009)	$33,818,814
Biomass Program Bioconversion Platform R&D for Sugars	BM0101020-05794-1004171 (2009)	$10,692,095
Biomass Program Feedstocks Infrastructure	BM0102030-05794-1004172 (2009)	$33,344,378

Carryover funding in the amount of $77,855,287 is authorized for BM0101010-05794-1004170-Thermochem (2009), BM0101020-05794-1004171-Bioconversion (2009), and BM0102030-05794-1004172-Feedstocks (2009). These funds are made available for Solicitation #20475 - *B3 (b) GFO - Algal and Advanced Fungible Biofuels Consortia (Project 2004020)*. This funding supports a Recovery Act solicitation comprised of two major topic areas. The intended purpose of this FOA is to serve three primary goals of EERE: 1) increase the viability and deployment of renewable energy technologies, thereby 2) spurring the creation of a domestic bio-industry, resulting in 3) a dramatic reduction in dependence on imported oil. Under this FOA, DOE will issue awards to Consortia that synergistically use their unique capabilities to expedite the

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development of biomass-based fuel production pathways. These teaming efforts are expected to involve specific scientific, engineering, system design, analysis, and project management disciplines that can work together effectively to accomplish the stated project objectives. Such partnerships should include an appropriate mix of U.S. industry, academia, and government and/or non-government laboratories, and could include foreign entities with the appropriate skill sets. Additionally, these partnerships will seek to utilize "best-in-class" technical approaches. DOE is not prescribing a specific number of team members, team structure, or mix of organization types. It will be up to the Consortia to determine the appropriate mix of technical partners. The two topic areas are as follows: (1) Algal Biofuel Consortia for research and development to investigate the potential for algae to commercially produce a variety of biofuels, such as renewable gasoline, diesel or jet fuel; and, (2) Advanced Infrastructure Compatible Biofuels Consortia to develop new and innovative approaches for the conversion of biomass to advanced biofuels that are infrastructure compatible, distinct from current technical pathways for producing hydrocarbons from biomass feedstocks. The headquarters technical point of contact is Leslie Pezzullo who can be reached on (202) 586-1514. The field point of contact is Kevin Craig who can be reached on (303) 275-4955.

Program Activity & Key Activity	**B&R Code-Fund Value-Program Code**	**BA($)**
Biomass Program Integration of Biorefinery Technologies	BM0102060-05794-1004173 (2009)	$81,134,686

Carryover funding in the amount of $81,134,686 is authorized for BM0102060-05794-1004173-Biorefinery (2009). These funds are made available for Solicitation #20452 - *B2 - WBS 8.5.8.3 Commercial Scale Biorefinery Projects (Project 2004010)*. This funding supports an increased federal funding ceiling for two commercial scale integrated biorefinery projects that were competitively selected and awarded within the last two years, but which have encountered delays due to the state of the economy. This Recovery Act funding will serve to reduce risk of the development and deployment and allow for increased confidence by the lending community to provide debt financing the awardees. This will in turn allow them to meet their cost-share requirements and move these projects more rapidly beyond the initial phases of development into final engineering and construction. Ultimately, this will accelerate the timeline for start up and commissioning, and support the timely meeting to the EISA 2007 RFS targets. The headquarters technical point of contact is Valri Lightner who can be reached on (202) 586-0937. The field point of contact is Kevin Craig who can be reached on (303) 275-4955.

Program Activity & Key Activity	B&R Code-Fund Value-Program Code	BA($)
Biomass Program Integration of Biorefinery Technologies	BM0102060-05794-1004173 (2009)	$449,608,954

Carryover funding in the amount of $449,608,954 is authorized for BM0102060-05794-1004173-Biorefinery (2009). These funds are made available for Solicitation #20451 - *B1 - WBS 8.5.8.1 Integrated Biorefinery Pilot and Demonstration Scale FOA (Project 2004000)*. This funding supports awards associated with a solicitation issued under the Recovery Act, DE-FOA-0000096, for integrated biorefinery projects that have the necessary technical and economic performance data that validates their readiness for the next level of scale-up. These integrated biorefineries will produce, as their primary product, a liquid transportation fuel that supports, depending on topic area, meeting the advanced, renewable or advanced biofuels portion of the Energy Independence and Security Act of 2007 (EISA) Renewable Fuel Standards (RFS) or, depending on topic area, a bioproduct that substitutes for petroleum-based feedstocks and products. The six topic areas involve the design, construction, and/or operation of the following (as generally defined, and with acceptable feedstocks, fuels, and products specified by topic in the FOA): (1) a "pilot-scale" biorefinery to produce an "acceptable biofuel" using an "acceptable feedstock"; (2) a "pilot-scale" biorefinery to produce an "acceptable bioproduct"; (3) a "demonstration-scale" biorefinery to produce an "acceptable biofuel" using an "acceptable feedstock"; (4) a "demonstration-scale" biorefinery to produce an "acceptable bioproduct" using a topic-specific "acceptable feedstock"; (5) a "pilot-scale" biorefinery using a topic-specific "acceptable feedstock" to produce an "acceptable biofuel" using an "acceptable feedstock"; or, (6) a "demonstration-scale" biorefinery to produce an "acceptable biofuel" using an "acceptable feedstock". A pilot-scale biorefinery project has been defined as a facility with a throughput of no less than one (1) dry tone of feedstock per day, and a demonstration-scale biorefinery must be designed and constructed for a throughput of at least fifty (50) dry tones of feedstock per day. The headquarters technical point of contact is Valri Lightner who can be reached on (202) 586-0937. The field point of contact is Kevin Craig who can be reached on (303) 275-4955.

Should you have any questions regarding budget matters, please contact Leshawn Sutton who can be reached on (202) 586-9258.

Cathy Zoi, Assistant Secretary
Energy Efficiency and Renewable Energy

cc: Angela Sigala (GO)
Dolores (Dee) Adams (GO)
Edward Loudin (NETL)
Jami Shepherd (GO)
Jeffrey Steich (NETL)

Jennifer Surdi (GO)
Kevin Craig
Leslie Pezzullo
Marlys Kinsey (GO)
Valri Lightner

NRE Req Review 1
(07/09)

'AVARRO RESEARCH & ENGINEERIN(

PEER REQUISITION REVIEW

Requisition Number: 10EE006175
CID/Award Number: DE-EE0002877
Name of Recipient: Solazyme, Inc
Link to File on S Drive: S:\Biomass\2010 Competitive Awards\EE0002877 - Solazyme, Inc\002 - Rescope BP1 - 10EE006175

Information	Action
Date of Request: _____ Peer Reviewer: _____ Date of Review: _____	Review PR Package, attach comments, and return to originating Project Engineer/Analyst. ☐ PR Package OK to submit to Project Officer ☐ Address Comments before submitting to Project Officer ☐ Address Comments and Re-Submit for Peer Review
Date of Request: _____ Peer Reviewer: _____ Date of Review: _____	Review PR Package, attach comments, and return to originating Project Engineer/Analyst. ☐ PR Package OK to submit to Project Officer ☐ Address Comments before submitting to Project Officer ☐ Address Comments and Re-Submit for Peer Review

REQUISITION CHECKLIST (Project Monitors: Check all items that are included in the Requisition)

Review Codes:	X – Complete	N/A – Not Applicable	MI – Missing Item	CP – Comment	CA – Comment Addressed

ITEM	CODE	COMMENT
FUNDING OPPORTUNITY ANNOUNCEMENTS		☒ **Not Applicable**
☐ Requisition (STRIPES)		
☐ Mini-Requisition (PMC)		
☐ PMC 104.1 (Procurement Requirements)		
☐ Procurement Strategy Document, PMC 105.1		
☐ PMC 110.1 (Determination of Restricted Eligibility)		
☐ PMC 113.1 (Draft Funding Opportunity Announcement)		
☐ PMC 116.1 (Draft Evaluation Plan)		
AWARD ACTIONS ☐ New Award ☐ Incremental Funding ☒ Change Scope ☒ Change Budget ☐ Cost Overrun ☐ De-obligation ☐ No Cost Time Extension ☐ Administrative Actions Only ☐ Acquisition ☐ Other: _____		☐ **Not Applicable**
☒ Requisition (STRIPES)		
☒ Mini-Requisition (PMC)		
☐ Guidance Letter ☐ SF-424 (Application) ☐ Statement of Project Objectives (SOPO) ☐ Technical Application (Project Narrative)		
☒ SF-424A (Budget Overview) ☒ PMC 123.1 (Budget Justification) ☒ PMC 120.1 (Cost/Technical Evaluation)		
☒ PMC 4600.2 (Reporting Requirements)		
☒ EF1 (Environmental Checklist) ☒ EF2 (NEPA Recommendation) ☒ EF2a (NEPA Determination)		BP2 had already received CX; so moving scope to BP1 has no NEPA impact.
SELECTION DOCUMENTATION		☐ **Not Applicable**
☐ PMC 109 (Determination of Non-Competitive Financial Assistance)		
☐ Competitive Selection Documentation		
OTHER DOCUMENTATION		☐ **Not Applicable**
☐ IDW Report (De-obligation Actions Only)		
☐ Supporting Documents		
☐ Correspondence		

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. 002
Requisition No: 10EE006175
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." It approves the reallocation of scope to Budget Period 1 from Budget Period 2. It also lifts the conditions on the funds associated with those tasks, such that the total approved budget for Budget Period 1 is now EX4 ,$4,306,723 Federal funds).

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: 03/31/2013
   New/Revised Budget Period 1 for this Award: From: 01/28/2010 To: 09/30/2010
   New/Revised Budget Period 2 for this Award: From: 10/01/2010 To: 03/31/2013

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:

      No comments.

   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:

      Unknown. Although the recipient has been allowed to submit invoices since 6/2/10 none have been submitted to date.

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
   ☒ ARRA
   ☐ 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 03/15/2010 (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 – Contract Specialist	David Brinkmann	VP Manufacturing (PI)
2.	Christy Sterner	DOE – Project Officer	Dr. Anthony Day	VP R&D
3.	Chris Lindeman	Navarro – Project Engineer	Sarah McQuaid	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
Original		3/3/2010	
Revision 1	SF 424A; PMC 123.1	6/15/2010	Updated SF-424a and PMC-123.1 to reflect moving some [redacted] om BP2 to BP1

REDACTED
EXEMPTION 4

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 Budget Submission	Final Negotiated Costs	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					
TOTAL					
Program Income					
DOE Share (non-FFRDC)					
DOE Share (FFRDC)					
Total DOE Share					
Non-Federal Cost Share					

REDACTED
EXEMPTION 4

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: _

REDACTED
EXEMPTION 4

*Total Budget has not changed other than moving scope from Budget Period 2 to Budget Period 1.

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

Some engineering and construction work (site preparation & demolition) has been moved from BP2 to BP1.

☐ 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: EX 4 have been moved from BP2 in the original SOPO to BP1.

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 proposed rates appear reasonable based on the activities being performed in BP1, the staff/positions listed as participating in the activities, and the distribution of hours assigned to each activity and position.

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

Labor Type	Budget Period 1		
	Hours	Rate	To
	REDACTED EXEMPTION 4		
Total:			

Negotiated labor rates are reasonable: ☐

Please detail the basis for the reasonable determination: The negotiated personnel costs are necessary and reasonable for the activities involved in budget period 1 of the award. The personnel are all comparable to labor rates in the area based upon www.salary.com and the department of labor rates.

2. Fringe Benefits: REDACTED EXEMPTION 4

Total Negotiated Fringe Benefit Costs:	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:

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

3. Travel:

Total Negotiated Travel Costs: REDACTED EXEMPTION 4	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:~~ ☒

Aside from for the project all of the travel in Budget Period 1 is for planning and oversight trips to the project site.

Is foreign travel included in the negotiated budget: ☐ Yes ☒ No

☐ 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 ☒ Yes ☐ No

Equipment	Total Cost	Purpose of Equipment	Basis of Cost
REDACTED EXEMPTION 4			

Comment [CL1

Comment [CL2]:

REDACTED
EXEMPTION 5
(Deliberative Process)

REDACTED
EXEMPTION 4

All of this equipment is required for the recovery of the algal biomass from the fermentation broth.

☐ Specialist concurs.

5. Supplies:

Total Negotiated Supplies Costs: REDACTED EXEMPTION 4	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: ☐

☐ 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:

Subrecipient/ Vendor Name	BP 1 Cost	BP 2 Cost	Total Cost	Role in Project (Identify SOPO Tasks)

REDACTED
EXEMPTION 4