e. Supplies

PLEASE READ!!!

Supplies are generally defined as an item with an acquisition cost of $5,000 or less and a useful life expectancy of less than one year. Supplies are generally consumed during the project performance. Further definitions can be found at 10 CFR 600 found on the PMC Recipient Resources Forms page at https://www.eere-pmc.energy.gov/Forms.aspx#regs.

List all proposed supplies below, providing a bases of cost such as vendor quotes, catalog prices, prior invoices, etc., and briefly justifying the need for the Supplies as they apply to the Statement of Project Objectives. Note that Supply items must be direct costs to the project at this budget category, and not duplicative of supply costs included in the indirect pool that is the basis of the indirect rate applied for this project.

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

General Category of Supplies	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Budget Period 1					
EXAMPLE ONLY!!! Wireless DAS components	10	$360.00	$3,600	Catalog price	For Alpha prototype - Task 2.4
Exemption 4					
	0		$0		
	0		$0		
	0		$0		
Budget Period 1 Total	Exemption 4				
Budget Period 2					
	0		$0		
Exemption 4					
	0		$0		
	0		$0		
	0		$0		
Budget Period 2 Total	Exemption 4				
Budget Period 3					
	0		$0		

General Category of Supplies	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Exemption 4					
	0		$0		
	0		$0		
	0		$0		
	0		$0		
	0		$0		
Budget Period 3 Total	Exemption 4				
PROJECT TOTAL					

Additional Explanations/Comments (as necessary)

The above was based on our historic usage and cost rates. These supplies are required in the normal course of running a biorefinery and for lab analysis and monitoring.

f. Contractual

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.	Partner to develop optimal fresnel lens for Gen 2 product - Task 2.4	$48,000	$32,000	$16,000	$96,000
Georgia Tech	Exemption 4				
MTR - Membrane Technology and Research, Inc.					
The Dow Chemical Company					
	Sub-total	Exemption 4			

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.	Vendor for developing custom robotics to perform lens inspection, alignment, and placement (Task 4.) - Required for expanding CPV	$32,900	$86,500		$119,400
					$0

Exemption 4

Sub-Recipient Name/Organization	Purpose/Tasks in SOPO	Budget Period 1 Costs	Budget Period 2 Costs	Budget Period 3 Costs	Project Total
Exemption 4					

Sub-Recipient Name/Organization	Purpose/Tasks in SOPO	Budget Period 1 Costs	Budget Period 2 Costs	Budget Period 3 Costs	Project Total
Exemption 4					

FFRDC Name/Organization	Purpose	Budget Period 1 Costs	Budget Period 2 Costs	Budget Period 3 Costs	Project Total
					$0
NREL- National Renewable Energy Laboratory	Exemption 4				
Total Contractual		Exemption 4			

f. Contractual

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.

Overall description of construction actiivities:

Example 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!!!	$28,000	Engineering estimate	Site must be prepared for construction of platform.
Budget Period 1 Total	**$0**		
Budget Period 2			
Budget Period 2 Total	$0		

General Description	Cost	Basis of Cost	Justification of need
Budget Period 3			
Budget Period 3 Total	$0		
PROJECT TOTAL	**$0**		

Additional Explanations/Comments (as necessary)

Construction will be sub-contracted, one of our sub-recipient partners, The Dow Chemical Company, will provide ground clearing/ land prep work while the actual construction contractor is TBD. These amounts have been included on the Contractual tab. At the end of the this file there is a tab, Construct Recon, which summarizes the the capitalized costs.

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	$16,000	Established UCD costs	Support of graduate students working on project
Exemption 4	Exemption 4		
Budget Period 1 Total			
Budget Period 2			
Exemption 4	Exemption 4		
Exemption 4			
Budget Period 3			
	$0		

General description	Cost	Basis of Cost	Justification of need
Exemption 4			

i. Indirect Costs

	Budget Period 1	Budget Period 2	Budget Period 3	Total
Rate applied:	Exemption 4			
Total indirect costs requested:				

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)

Please see the Indirect Proposal tab at the end of this file for indirects calculation. The allowable rate per the calculation is Exemption % and we request this rate during Phase II since we anticipate during the construction period this would require maximum overhead effort. Please note the overhead rate was not applied to Fringe, Travel nor construction costs.

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!!!	Cash	Project partner ABC Company will provide 40 PV modules for product development at 50% off the of the retail price of $680	$13,600			$13,600
Algenol Biofuels Inc	Exemption 4					
The Dow Chemical Company						
The Dow Chemical Company						
Membrabe Technology and Research, Inc.						
						$0
						$0

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
						$0
						$0
						$0
						$0
		Totals	Exemption 4			

Total Project Cost: $Exemption 4

Cost Share Percent of Award: Exemption 4

Additional Explanations/Comments (as necessary)

Redacted

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Project Management Plan

Pilot-Scale Integrated Biorefinery Operations for Producing Ethanol From Algae

Algenol Biofuels Inc.

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I. Introduction

II. Management Organization and Responsibilities

III. Work Breakdown Structure

IV. Project Schedule and Budget Management

V. Risk Management Plan Summary

VI. Summary of Acquisition, Procurement and Contracting Strategy

VII. Plans to Accomplish Post-Mechanical Completion if Pilot-Scale Identifies the Need for Substantial Fix-ups, Debottlenecking, etc.

VIII. Process Hazard Analysis / Environmental Health and Safety

IX. Resource Loaded Project Plan

Proprietary Information: All information in this document is proprietary. Algenol Biofuels requests all information in this document not be released to persons outside the Government, except for the purposes of review and evaluation.

I. Introduction:

Exemption 4

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Attachment A: Resource Loaded Project Plan

ID	WBS	Task Name	Cost ($)	FTE Hours	Duration	Start	Finish	20

Attachment A: Resource Loaded Project Plan

ID	WBS	Task Name	Cost ($)	FTE Hours	Duration	Start	Finish	20 Qt
Examplous 4								

Attachment A: Resource Loaded Project Plan

ID	WBS	Task Name	Cost ($)	FTE Hours	Duration	Start	Finish	20

Exemption 4

Attachment A: Resource Loaded Project Plan

ID	WBS	Task Name	Cost ($)	FTE Hours	Duration	Start	Finish	20 Qt
Exemplar 4								

Attachment A: Resource Loaded Project Plan

ID	WBS	Task Name	Cost ($)	FTE Hours	Duration	Start	Finish	20 Qt
Example 4								

Attachment A: Resource Loaded Project Plan

ID	WBS	Task Name	Cost ($)	FTE Hours	Duration	Start	Finish	20 Qt

Attachment A: Resource Loaded Project Plan

ID	WBS	Task Name	Cost ($)	FTE Hours	Duration	Start	Finish	20

Attachment A: Resource Loaded Project Plan

ID	WBS	Task Name	Cost ($)	FTE Hours	Duration	Start	Finish	20

U.S. Department of Energy **Generic Pro-Forma** **Form Revision 1**	**Name of Applicant** **Name of Facility** **Completion of Independent** **Engineer Performance Test** **Facility Capitalized Const Cost**	Company Name Here Facility Name Here **6/1/2009** $ Exemption 4

Projected Operating Results

Exemption 4

Year Ending December 31,		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
PERFORMANCE											
Plant Operating Days											
Plant Availability Factor											
Production	*Units* [1]										
#1 Product Number One Name Here	XX/year										
#2 Product Number Two Name Here	XX/year										
#3 Product Number Three Name Here	XX/year										
#4 Product Number Four Name Here	XX/year										
Feedstock Consumption	*Units* [1]										
A Feedstock Number One Name Here	XX/year										
B Feedstock Number Two Name Here	XX/year										
C Feedstock Number Three Name Here	XX/year										
D Feedstock Number Four Name Here	XX/year										
E Feedstock Number Five Name Here	XX/year										
Utility Consumption											
Natural Gas Consumed	MMBTU										
Net Electricity Consumed	MWh										
Water Consumed	kGal										
Other Consumed	XX										
Facility Emissions & Wastes											
SO_2	tons/yr										
NO_x	tons/yr										
Other Wastes	tons/yr										
COMMODITY PRICES											
General Inflation											
Product Pricing	*Units* [1]										
#1 Product Number One Name Here	$/XX										
#2 Product Number Two Name Here	$/XX										
#3 Product Number Three Name Here	$/XX										
#4 Product Number Four Name Here	$/XX										
Feedstock Pricing	*Units* [1]										
A Feedstock Number One Name Here	$/XX										
B Feedstock Number Two Name Here	$/XX										
C Feedstock Number Three Name Here	$/XX										
D Feedstock Number Four Name Here	$/XX										
E Feedstock Number Five Name Here	$/XX										
Utility Consumption											
Natural Gas Consumed	$/MMBTU										
Net Electricity Consumed	$/MWh										
Water Consumed	$/kGal										
Other Consumed	$/XX										
Emmissions & Waste Allowances											
SO_2	$/ton										
NO_x	$/ton										
Other Wastes	$/ton										
OPERATING REVENUES											
Product Revenues											
#1 Product Number One Name Here											
#2 Product Number Two Name Here											
#3 Product Number Three Name Here											
#4 Product Number Four Name Here											
TOTAL OPERATING REVENUES											

U.S. Department of Energy Generic Pro-Forma Form Revision 1	Name of Applicant Name of Facility Completion of Independent Engineer Performance Test Facility Capitalized Const Cost	Company Name Here Facility Name Here 6/1/2009 $Exemption 4

Projected Operating Results

Year Ending December 31,	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
OPERATING EXPENSES										
Variable Operating Costs										
Feedstock Costs	Exemption 4									
A - Feedstock Number One Name Here										
B - Feedstock Number Two Name Here										
C - Feedstock Number Three Name Here										
D - Feedstock Number Four Name Here										
E - Feedstock Number Five Name Here										
Total Feedstock Costs										
Utility Costs										
Natural Gas Consumed										
Net Electricity Consumed										
Water Consumed										
Other Consumed										
Total Utility Costs										
Emissions & Waste Allowance Costs										
SO_2										
NOx										
Other Wastes										
Total Emissions Allowance Costs										
Product Transportation Pricing										
#1 - Product Number One Name S/XX										
#2 - Product Number Two Name S/XX										
#3 - Product Number Three Name S/XX										
#4 - Product Number Four Name S/XX										
Product Transportation Cost										
#1 - Product Number One Name										
#2 - Product Number Two Name										
#3 - Product Number Three Name										
#4 - Product Number Four Name										
Total Product Transportation Cost										
Feedstock Transportation Pricing										
A - Feedstock Number One Name S/XX										
B - Feedstock Number Two Name S/XX										
C - Feedstock Number Three Name S/XX										
D - Feedstock Number Four Name S/XX										
E - Feedstock Number Five Name S/XX										
Feedstock Transportation Cost										
A - Feedstock Number One Name										
B - Feedstock Number Two Name										
C - Feedstock Number Three Name										
D - Feedstock Number Four Name										
E - Feedstock Number Five Name										
Total Feedstock Transportation Cost										
Product Marketing Pricing										
#1 - Product Number One Name % of Revenue										
#2 - Product Number Two Name % of Revenue										
#3 - Product Number Three Name % of Revenue										
#4 - Product Number Four Name % of Revenue										
Product Marketing Cost										
#1 - Product Number One Name										
#2 - Product Number Two Name										
#3 - Product Number Three Name										
#4 - Product Number Four Name										
Total Product Marketing Cost										
Miscellaneous Process Supplies										
Z - Misc Number One Name										
Y - Misc Number Two Name										
X - Misc Number Three Name										
W - Misc Number Four Name										
V - Misc Number Five Name										
Total Miscellaneous Supplies Cost										
Total Variable Operating Costs										

U.S. Department of Energy Generic Pro-Forma Form Revision 1	Name of Applicant Name of Facility Completion of Independent Engineer Performance Test Facility Capitalized Const Cost	Company Name Here Facility Name Here 6/1/2009 $ Exemption 4

Projected Operating Results

Year Ending December 31,		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fixed Operating Costs											
Payroll & Benefits	% of Revenue										
Fixed Operating Expenses	% of Revenue										
Annual Maintenance	% of Capex										
Total Fixed Operating Costs											
General & Administrative											
Corporate Overhead	% of Revenue										
Insurance	% of Capex										
Property Tax	% of Capex										
Management Fees	% of Revenue										
IP Fees	% of X										
Total G&A Expenses											
Contingency											
Contingency	% of O&M, G&A										
Total Contingency											
TOTAL OPERATING EXPENSES											
NET OPERATING REVENUES											
DEBT SERVICE											
Capitalized Construction Cost (from top of sheet)											
Equity Contribution											
Total Debt Financing											
Interest Rate on Debt	**Annual %**										
Term of Loan	**Years**										
Monthly Payment on Loan											
ANNUAL DEBT SERVICE											
NET REVENUES											

Exemption 4

Notes:

(1) Units should be converted to match between Performance and Pricing sections
(2) Cells in Green should be manipulated per applicants pricing or other assumption information
(3) Text in Blue should be modified to match applicants names, units, etc.
(4) Grouped rows, for example product transportation pricing, may be rolled up after data entry to simplify pro-forma output
(5) Applicant may manipulate spreadsheet to incorporate pertinent information not included in standard form

U.S. Department of Energy Generic Pro-Forma Form Revision 1	Name of Applicant Name of Facility Commercial Operation Date Facility Capitalized Const Cost	Algenol Biofuels, Inc/ Commercial Scale Biorefinery 12/31/2013 $ Exemption 4

Projected Operating Results

Year Ending December 31,		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
PERFORMANCE											
Plant Operating Days											
Plant Availability Factor											
Production	*Units* [1]										
#1 Fuel Grade Ethanol	Gallons/year										
#2	XX/year										
#3	XX/year										
#4	XX/year										
Feedstock Consumption	*Units* [1]										
A CO2	Tons/year										
B Nitrogen	Tons/year										
C Phosphorus	Tons/year										
D	XX/year										
E	XX/year										
Utility Consumption											
Natural Gas Consumed	MMBTU										
Net Electricity Consumed	MWh										
Water Consumed	kGal										
Other Consumed	XX										
Facility Emissions & Wastes											
Biomass	tons/yr										
	tons/yr										
	tons/yr										
COMMODITY PRICES											
General Inflation											
Product Pricing	*Units* [1]										
#1 Fuel Grade Ethanol	$/Gallon										
#2	$/XX										
#3	$/XX										
#4	$/XX										
Feedstock Pricing	*Units* [1]										
A CO2	$/Ton										
B Nitrogen	$/Ton										
C Phosphorus	$/Ton										
D	$/Ton										
E	$/Ton										
Utility Consumption											
Natural Gas Consumed	$/MMBTU										
Net Electricity Consumed	$/MWh										
Water Consumed	$/kGal										
Other Consumed	$/XX										
Emmissions & Waste Allowances											
Biomass	$/ton										
NO_x	$/ton										
Other Wastes	$/ton										
OPERATING REVENUES											
Product Revenues											
#1 Fuel Grade Ethanol											
#2											
#3											
#4											
TOTAL OPERATING REVENUES											

Exemption 4

U.S. Department of Energy Generic Pro-Forma Form Revision 1	Name of Applicant Name of Facility Commercial Operation Date Facility Capitalized Const Cost	Algenol Biofuels, Inc/ Commercial Scale Biorefinery 12/31/2013 $Exemption 4

Projected Operating Results

Year Ending December 31,	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
OPERATING EXPENSES										
Variable Operating Costs										
Feedstock Costs										
A - CO2										
B - Nitrogen										
C - Phosphorus										
D - Feedstock Number Four Name Here										
E - Feedstock Number Five Name Here										
Total Feedstock Costs										
Utility Costs										
Natural Gas Consumed										
Net Electricity Consumed										
Water Consumed										
Other Consumed										
Total Utility Costs										
Emissions & Waste Allowance Costs										
Biomass										
NOx										
Other Wastes										
Total Emissions Allowance Costs										
Product Transportation Pricing										
#1 - Ethanol $/Gal										
#2 - Product Number Two Name $/XX										
#3 - Product Number Three Name $/XX										
#4 - Product Number Four Name $/XX										
Product Transportation Cost										
#1 - Ethanol										
#2 - Product Number Two Name										
#3 - Product Number Three Name										
#4 - Product Number Four Name										
Total Product Transportation Cost										
Feedstock Transportation Pricing										
A - CO2 $/Ton										
B - Feedstock Number Two Name $/XX										
C - Feedstock Number Three Name $/XX										
D - Feedstock Number Four Name $/XX										
E - Feedstock Number Five Name $/XX										
Feedstock Transportation Cost										
A - CO2										
B - Feedstock Number Two Name										
C - Feedstock Number Three Name										
D - Feedstock Number Four Name										
E - Feedstock Number Five Name										
Total Feedstock Transportation Cost										
Product Marketing Pricing										
#1 - Ethanol % of Revenue										
#2 - Product Number Two Name % of Revenue										
#3 - Product Number Three Name % of Revenue										
#4 - Product Number Four Name % of Revenue										
Product Marketing Cost										
#1 - Ethanol										
#2 - Product Number Two Name										
#3 - Product Number Three Name										
#4 - Product Number Four Name										
Total Product Marketing Cost										
Miscellaneous Process Supplies										
Z - Chlorine										
Y - Sulfure Dioxide Gas										
X - Photobioreactor Replacement										
W - Misc Number Four Name										
V - Misc Number Five Name										
Total Miscellaneous Supplies Cost										
Total Variable Operating Costs										

Exemption 4

U.S. Department of Energy **Generic Pro-Forma** **Form Revision 1**	**Name of Applicant** **Name of Facility** **Commercial Operation Date** **Facility Capitalized Const Cost**	**Algenol Biofuels, Inc/** **Commercial Scale Biorefinery** **12/31/2013** **$** Exemption 4

Projected Operating Results

Year Ending December 31,		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fixed Operating Costs											
Payroll & Benefits	% of Reve	Exemption 4									
Fixed Operating Expenses	% of Reve										
Annual Maintenance	% of Cap										
Total Fixed Operating Costs											
General & Administrative											
Corporate Overhead	% of Reve										
Insurance	% of Cap										
Property Tax	% of Cap										
Management Fees	% of Reve										
IP Fees	% of X										
Total G&A Expenses											
Contingency											
Contingency	% of O&M, G										
Total Contingency											
TOTAL OPERATING EXPENSES											
NET OPERATING REVENUES											
DEBT SERVICE											
Capitalized Construction Cost (from top of sheet)											
Equity Contribution											
Total Debt Financing											
Interest Rate on Debt	**Annual**										
Term of Loan	**Years**										
Monthly Payment on Loan											
ANNUAL DEBT SERVICE											
NET REVENUES											

Notes:

(1) Units should be converted to match between Performance and Pricing sections
(2) Cells in Green should be manipulated per applicants pricing or other assumption information
(3) Text in Blue should be modified to match applicants names, units, etc.
(4) Grouped rows, for example product transportation pricing, may be rolled up after data entry to simplify pro-forma output
(5) Applicant may manipulate spreadsheet to incorporate pertinent information not included in standard form

Instructions for Use:

Applicants should enter data in cells shaded green and provide descriptions in place of the text formatted in blue. The numbers that are currently entered in these cells are simply illustrative and should not be used as is. Applicant may manipulate spreadsheet to incorporate pertinent information not included in standard form. If additional lines are inserted, make sure the totals include the inserted cells.

For each facility, similar information is gathered throughout the application package. Take care to provide the same information in each location as to aid the Merit Review Committee in evaluating the application.

Assumptions:

Inflation Rate:	Fixed at 2.4% (Line 41)
Interest Rate on Debt:	Fixed at 8% (Line 197)
Term of Loan:	15 years (Line 198)
Product Pricing:	2.5 cents per 1000 BTU, low heating value, 2009 dollars (Lines 44-47)

Clarifications:

Line 32 - "Other Consumed"

Include any other sources of energy in the plant, this should also include any coal, biomass, lignin, or syngas slipstreams. Insert additional lines for each source as necessary. To assign a value, if biomass feedstock is used in a direct fire boiler, use the same price/unit that is shown in "Feedstock Pricing." If lignin (or another potential waste product) is used, this could be shown as a credit equal to the cost that would be incurred to dispose of the waste. For syngas or other slipstreams, base the value on the foregone income that would be realized if the stream were directed to the final product.

Line 37 - "Other Wastes"

Include any ash, wastewater sludge, or any other waste streams that will need to be disposed of. In this section, report in tons/year.

Line 60 - "Other Consumed"

Include costs for all sources that were added in Line 32 - "Other Consumed." In this section, report in $/unit.

Feedstock Costs

This should include any expenses incurred in processing (chipping, grinding) the feedstock into a form that can be fed into the reactor. For MSW, do not include the cost of transportation of the bulk material or separation/segration costs. Processing costs for MSW are restricted to post-sorted materials.

Miscellaneous Process Supplies

Examples of expenses to include in this section are (but not limited to): chemicals such as wastewater treatment consumables, catalyst and catalyst regeneration expenses, and fermenting organisms

IP Fees

Account for any IP fees or royalties related to the project. State the basis for calculating the expense, for example, annual flat-rate, as a percentage of revenue or other.

PROJECT NARRATIVE COVER SHEET
Recovery Act – Demonstration of Integrated Biorefinery Operations
Funding Opportunity Announcement Number: DE-FOA-0000096
CFDA Number: 81.087 Renewable Energy Research and Development

Applicant Information	
Applicant Name:	Algenol Biofuels Inc.
Project Title:	Pilot-Scale Integrated Biorefinery for Producing Ethanol from Hybrid Algae
Major Project Subcontractors:	The Dow Chemical Company, Georgia Institute of Technology, NREL, MTR Inc.
Major Project Vendors:	Exemption 4
Key Individuals:	Craig Smith, Ed Legere, Steve Gluck, John Coleman, Ron Chance

Topic Area (Select ONLY one)

Each applicant is allowed to submit only one application to this FOA. Applicants that submit to none or more than one topic area will be excluded from further review. Select one and only one topic area below.

☒ Topic Area 1 ☐ Topic Area 3 ☐ Topic Area 5
☐ Topic Area 2 ☐ Topic Area 4 ☐ Topic Area 6

Life-cycle Greenhouse Gas Emissions Reduction (mandatory for Topic Areas 5 and 6. Important – See Note):

Technical Description		
Feedstock(s):	Carbon Dioxide	
Primary Product:	Ethanol	
Co-Products:	None	
Location of Proposed Facility:	Freeport, Texas	
Throughput of Proposed Facility (dry tonnes of feedstock per day):	Two (2) dry tonnes of carbon dioxide per day	
Conversion Technology:	☐ Biochemical	☐ Thermochemical
	☒ Algae	☐ Other (Describe)

Short Description: The proposed biorefinery will make ethanol directly from CO_2 and seawater using hybrid algae in sealed, clear plastic 4,500L proprietary flexible film photobioreactors through its patented Direct to Ethanol™ technology – all powered by the sun, with approximately 17 acres of photobioreactors and additional supporting areas for testing, distillation, and product storage in Freeport, Texas.

Project Financing Description

Exemption 4

This form is required. It must be completely filled in and be included as the cover page for the "Project Narrative" (FOA, Subpart IV.C. b.). This form may contain confidential /business proprietary information IF it properly marked, but it must not contain any Personally Identifiable Information (PII). This form will count toward the page limit stated in the FOA, Subpart IV.C.b. Non-compliant applications will not be reviewed and will not be eligible for selection.

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Proprietary Information: The data contained on pages 6-10 of the Project Narrative; pages 3-6 and 12-13 of Environmental Questionnaire; pages 1-10, 16-18 and 20 of the Business and Commercialization Plan; and pages 2-4 of the IP Statement and all information contained the files named Lifecycle Energy and Greenhouse Gas Emissions, SF424A, Budget, Subaward Budget Files, Process Flow Diagram, Project Management Plant and Project Executive Plan have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award.

Paragraphs in this application's respective files that are preceded by an asterisk (*) contain proprietary information that Algenol Biofuels requests not be released to persons outside the Government, except for the purposes of review and evaluation.