PMC 112.2
(08/27/2009)

U.S. DEPARTMENT OF ENERGY
PROJECT MANAGEMENT CENTER

REQUEST FOR REVIEW

☐ Normal Review ☒ Expedited Review Date: 01/06/2010

Justification for Expedited Review ARRA Fully Conditional Award Deadline

Award Number: DE-EE0002867 FOA Number, if new award: DE-FOA-0000096

Item(s) For Review:
Fully Conditional Award

Total Project: $ REDACTED EXEMPTION 4
Federal Funds: $ 25,000,000

Specialist Listed on Award: Molly Hames Phone: 303-275-4864

Specialist Who Prepared Award: _____ Phone: _____

Note to Specialist: Send 72 Hour Congressional Notification for FOA action reviews, as required.

☐ PEER REVIEW

Comments:

Signature: _____ Date: _____

☐ CONTRACTING OFFICER REVIEW

☐ Approved ☐ Approved subject to comments below/attached ☐ Not Approved; Comments below/attached

Comments:

Signature: _____ Date: _____

☐ INDEPENDENT REVIEW

Comments:

Signature: _____ Date: _____

☐ LEGAL REVIEWS – SEE PAGE 2 (Delete page 2 if not required)

☐ OAFA BRANCH CHIEF REVIEW

☐ Approved ☐ Approved subject to comments below/attached ☐ Not Approved; Comments below/attached

Comments:

Signature: _____ Date: _____

☐ DIRECTOR FINANCIAL ASSISTANCE REVIEW – SEE PAGE 3 (Delete page 3, if not required)

☐ HEAD OF CONTRACTING ACTIVITY REVIEW – SEE PAGE 3 (Delete page 3, if not required)

IPLD REVIEW FOR FUNDING OPPORTUNITY ANNOUNCEMENTS

Comments: IPLD Review Results e-mails on: [insert date]

Signature: _____

IPLD REVIEW FOR NEW AWARDS & MAJOR MODS

Comments: IPLD Review Results e-mails on: [insert date]

LEGAL REVIEW FOR NEW AWARDS, MAJOR MODS & OTHER ACTIONS

Type of Review:
- ☐ New Award
- ☐ Mod, include short explanation:
- ☐ Novation/Name Change
- ☐ Other Action

Total Project: $
Federal Funds: $

Tailored Provisions Require Review for New Awards:
- ☐ Substantial Involvement Provision for Cooperative Agreements
- ☐ At Risk
- ☐ Conditional Availability of Funds
- ☐ NEPA
- ☐ Subcontractor Approval
- ☐ Specify other:

FOA Number: Title:

☐ Legally Sufficient ☐ Legally Sufficient subject to comments below/attached ☐ Legally Insufficient; Comments below/attached

Comments:

Signature: _____ Date: _____

☐ FINANCIAL ASSISTANCE DIRECTOR REVIEW (Required for award actions greater than $25M)

☐ Approved ☐ Approved subject to comments below/attached ☐ Not Approved; Comments below/attached

Comments:

Signature: _____ Date: _____

☐ HEAD OF CONTRACTING ACTIVITY REVIEW (Required for award actions greater than $25M)

☐ Approved ☐ Approved subject to comments below/attached ☐ Not Approved; Comments below/attached

Comments:

Signature: _____ Date: _____

PMC 128.1
06-18-2009

U.S. Department of Energy
Project Management Center

FINANCIAL ASSISTANCE AWARD
INDEX and CHECKLIST
(BUYER USE ONLY)

Award #:	**DE-EE0002867/000**		
Recipient Name:	**Algenol Biofuels, Inc.**		
FOA #:	**DE-FOA-0000096**		
Specialist:	**Molly Hames**	**Phone:**	303-275-4864
Contracting Officer:	**Michael Schledorn**	**Phone:**	303-275-4993
Project Officer:	**Christy Sterner**	**Phone:**	303-275-4720

Action Item	*Indicate Completion of Action Item by inserting a date in the applicable box below*	
1	Verify Recipient's registration with the Central Contractor Registration (CCR) (http://www.ccr.gov)	CCR Registration Valid through: 05/28/2010
2	Verify Recipient's registration with FedConnect	Registration Confirmed on: 12/22/2009
3	Add Recipient to ASAP Enrollment Matrix; if applicable	Recipient added to Enrolloment Matrix on: 12/22/2009
4	Route Award for "Review" to GO Finance Point of Contact (Debbie Reynolds) 5 business days prior to issuing award; for the purpose of confirming Supplier/Site set-up in STARS	STARS Supplier/Site set-up confirmed on: Completed in Bulk

STRIPES Index #	Supporting Document		Form #	applicable	not applicable	Supporting Document Naming Convention	pdf. required
AWD-001	Award Index and Checklist		PMC 128.1	X		**AWD-001 AWDChecklist**	
AWD-002	Selection Statement		n/a	X		**AWD-002 SelStat**	.pdf
AWD-003	Determination of Non-Competitive Financial Assistance (DNFA) Documentation (include Request for Review PMC.112.2)		PMC 109.x		X	**AWD-003 DNFADocs**	batch .pdf
AWD-004	HCA Approval (Total Project Value greater than $25M and less than $50M) (include Request for Review PMC.112.2)		n/a	X		**AWD-004 HCAApvl**	.pdf
AWD-005	HQ Business Clearance Documentation (Total Project Value greater than or equal to $50M)						
	AWD-005a	HQ Business Clearance Worksheet	PMC 107.1		X	**AWD-005 HQBusClrDocs**	batch .pdf
	AWD-005b	HQ Business Clearance Transmittal Letter(s)	PMC 107.4		X		
	AWD-005c	HQ Business Clearance; Correspondence received from HQ	n/a	X			
AWD-006	Congressional Affairs Notification		DOE F 4220.10	X		**AWD-006CongNotification**	.pdf
AWD-007	Successful Application Documentation (Prime) - Algenol Biofuels, Inc.						
	AWD-007a	Application for Federal Assistance (Final SF-424 & Project Narrative)	SF-424	X		**AWD-007a AppDocs (PRIME)**	batch .pdf
		SOPO	n/a	X			
		Resumes	n/a		X		
		SF-424A Budget Information	SF-424A	X			
		Budget Justification	PMC 123.1	X			
		Disclosure of Lobbying Activities	SF-LLL		X		
		Cost Share Commitment Ltrs from Third Parties	n/a	X			
		Environmental Questionnaire	n/a	X			
		Project Management Plan (PMP)	n/a	X			
		Historical, Current, and Planned Technical and Financial Data	n/a	X			
		Business and Commercialization Plan	n/a	X			
		Pro forma	n/a	X			
		Intellectual Property (IP) Statement and Supporting Documentation	n/a	X			
		Process Flow Diagram and Supporting Data	n/a	X			
		Life-Cycle GHG Emission Reduction Data	n/a	X			
		Petroleum Displacement Analysis	n/a	X			
		Project Execution Plan (PEP)	n/a	X			
	Successful Application Documentation (Sub #1) Georgia Institute of Technology						

STRIPES Index #	Supporting Document		Form #	applicable	not applicable	Supporting Document Naming Convention	pdf. required
	AWD-007b	SF-424A Budget Information	SF-424A	X		AWD-007b AppDocsSub [GA Tech]	batch .pdf
		Budget Justification	PMC 123.1		X		
	Successful Application Documentation (Sub #2) Membrane Technology and Research, Inc.						
	AWD-007c	SF-424A Budget Information	SF-424A	X		AWD-007c AppDocsSub [MTR]	batch .pdf
		Budget Justification	PMC 123.1		X		
	Successful Application Documentation (Sub #3) The Dow Chemical Company						
	AWD-007d	SF-424A Budget Information	SF-424A	X		AWD-007d AppDocsSub [Dow]	batch .pdf
		Budget Justification	PMC 123.1		X		
	Successful Application Documentation (Sub #4) National Renewable Energy Laboratory (NREL)						
	AWD-007e	SF-424A Budget Information	SF-424A	X		AWD-007e AppDocsSub [NREL]	batch .pdf
		Budget Justification	PMC 123.1		X		
		Authorization for non-DOE or DOE FFRDCs	n/a	X			
AWD-008	National Environmental Policy Act (NEPA) Documentation						
	AWD-008a	NEPA Checklist	EF-1		X	AWD-008 NEPADocs	batch .pdf
	AWD-008b	NEPA Review	EF-2		X		
	AWD-008c	NEPA Determination	EF-2a		X		
AWD-009	Pre-Award Information Sheet		PMC 121.1	X		AWD-009 PreAwardInfo	.pdf
AWD-010	Dun&Bradstreet Risk Assessment		PMC 460.2	X		AWD-010 D&BAssessment	.pdf
AWD-011	Combined Technical Evaluation / Negotiation Memorandum		PMC 120.2		X	AWD-011 TechEvalNegMem	.pdf
AWD-012	Intellectual Property Law Division (IPLD) Documentation						
	AWD-012a	IPLD Petition for Advance Waiver of Patent Rights	PMC 133.2		X	AWD-012 IPLDDocs	batch .pdf
	AWD-012b	IPLD Pre-Award Review Request	PMC 133.3		X		
	AWD-012c	IPLD Recommendation	e-mail		X		
	AWD-012d	IPLD Limited Rights Data and Restricted Computer Software	n/a	X			
AWD-013	Cost Share Determination Documentation						
	AWD-013a	Cost Share Determination	PMC 112.2		X	AWD-013a CostShareDet	.pdf
	AWD-013b	Cost Share Waiver	PMC 142.2		X	AWD-013b CostShareWaiver	.pdf
AWD-014	Cost / Price Documentation						
	AWD-014a	Financial Information	PMC 410.1	X		AWD-014 CostPriceDocs	batch .pdf
	AWD-014b	Indirect Rate Agreement or Rate Proposal	n/a	X			
	AWD-014c	Response from C/P Analyst regarding Indirect Rates	PMC 420.3		X		
AWD-015	Excluded Parties List System (EPLS) Query (https://www.epls.gov)		n/a	X		AWD-015 EPLS	
AWD-016	Pre-Award Cost Request and Authorization		n/a		X	AWD-016 PreAwdCostAuth	.pdf
AWD-017	Justification for Use of Conditional Availability of Funds Provision		PMC 132.2	X		AWD-017 JustificationCondAvail	.pdf
AWD-018	Correspondence to Recipients (use this section for correspondence not issued at FOA level)						
	AWD-018a	Selection Letter		X		AWD-018a SelLtr	batch .pdf
	AWD-018b	Correspondence			X	AWD-018b Correspondence	batch .pdf
AWD-019	Internal Review(s)						
	AWD-019a	Request for Review (Review of Award Package)	PMC 112.2	X		AWD-019a RvwAwdPkg	.pdf
	AWD-019b	Division Director Review	n/a	X		AWD-019b DDRvw	.pdf
AWD-020	Guidance Letter		n/a	X		AWD-020 GuideLtr	.pdf
Cover Page	Assistance Agreement Form		n/a	X			
Body	Special Terms and Conditions		n/a	X			
Attachment 1	Intellectual Property Provisions		n/a		X		
Attachment 2	Statement of Project Objectives		n/a		X		
Attachment 3	Federal Assistance Reporting Checklist and Instructions		DOE F 4600.2		X		
Attachment 4	Budget Information		n/a		X		

NEW AWARDS:

1. This is a conditional award, comprised of this Assistance Agreement and the Special Terms and Conditions. Upon successful completion of negotiations, this award will be modified to lift its conditional status, to revise the Special Terms and Conditions, and to add additional attachments, such as Attachment 1, Intellectual Property Provisions; Attachment 2, Statement of Project Objectives; Attachment 3, Federal Assistance Reporting Requirements; and Attachment 4, Budget Information - Non Construction Programs.

2. The award was prepared using the proposed budget information in the Recipient's application. The Special Terms and Conditions, Provision 1 of the award states DOE will not release the funding obligated by this award until the Awardee submits a full application and subsequently requested supplemental information, the Contracting Officer reviews and approves the Awardee's application and supplemental information, and completion of negotiations. Performance against this award is, therefore, at the Recipient's own risk, and payments for costs incurred for the Recipient's project will not be made until completion of negotiations.

3. The administrative office for this award is 03601. The administrative office (administrative contracting activity) code is needed by the recipient for reporting to FederalReporting.gov concerning awards made with funding from the American Recovery and Reinvestment Act of 2009 (ARRA or Recovery Act). Recipients must report to FederalReporting.gov by the 10th day of each quarter.

4. A representative of the DOE office will contact the Recipient to request additional and/or revised information needed to supplement and clarify the Recipient's application, to complete the negotiations of an amended award.

DOE Award Administrator: Molly Hames
E-mail: molly.hames@go.doe.gov
Phone: 303-275-4864

DOE Project Officer: Christy Sterner
E-mail: christy.sterner@go.doe.gov
Phone: 303-275-4720

Recipient Business Officer: Craig Smith
E-mail: craig.smith@algenolbiofuels.com
Phone: 239-498-2000

Recipient Principal Investigator: Craig Smith
E-mail: craig.smith@algenolbiofuels.com
Phone: 239-498-2000

PMC 460.2
(09/06)

U.S. DEPARTMENT OF ENERGY – RISK ASSESSMENT

SECTION I – To be completed by the Specialist and forwarded to D&B Coordinator

Name of Requestor:	Molly Hames	**Date of Request:**	12/16/2009
Awardee Name:	Algenol Biofuels, Inc.	**Award No.**	DE-EE0002867
Street Address:	28100 Bonita Grande Drive Suite 200	**Project Title**	Integrated Pilot-Scale Biorefinery for Producing Ethanol from Hybrid Algae
City/State/ZIP:	Bonita Springs, FL, 34135-6220	**DUNS Number:**	80-039-9904
Business Contact:	Craig Smith	**Phone Number:**	239-498-2000

☒ The Recipient has been selected for Award. Please pull a Dun & Bradstreet (D&B) Business Information Report (BIR). This report should be requested on all For Profit and Non-Profit Recipients with awards > $100K (DOE) (excluding Educational Institutions, Tribal Nations, or State and Local Governments). *This form should be used for new awards, renewals and continuations.*

☐ The Recipient is a Small Business entity and a D&B BIR report was pulled which identified a 4 rating. Please pull D&B Small Business Risk Account Scoring Report. The PMC460.3 "Authorization For Consumer Report Information" is properly signed and attached.

☐ The Recipient has requested reassessment due to changed situation. Date of initial report was: _____. A new PMC460.3 "Authorization For Consumer Report Information" is properly signed and attached. *(Note: A reassessment may be requested no sooner than 6 months after initial D&B report date)*

SECTION II -To be completed by D&B Coordinator

Type of D&B Report Pulled

☒ Business Information Report (BIR)

☐ Small Business Scoring Report (SBRASR) (PMC460.3 required)

Proper Authorization Verified Initial:_____

Report Pulled By:

Name: **Carlo DiFranco**

Date: **12/16/2009**

Electronic File Name: **PMC Shared Docs/Risk Assess/DB Reports/ALGENOL BIOFUELS INC_121619.doc**

Comments: Please view the report.

D&B SCORE: DS

SECTION III - To Be Completed by FOA/Congressional Directed Project Specialist

The Specialist will make a risk assessment recommendation based on the following criteria.

All Recipients:	Recipient is **not At Risk** if the last digit of the BIR Score is a 1, 2, or 3,
Other than Small Business:	Recipient is **At Risk** if the last digit of the BIR Score is a 4, or there is no score and instead is a letter code or --
Small Business:	If last digit of the BIR Score is 4, request a SBRASR report. If the SBRASR score is between 0 and 15, Recipient is **At Risk**. If the SBRASR score is between 16 and 30, Recipient is **At Risk**, but may not require as high of a level of monitoring. If the SBRASR score is greater than 30, Recipient is **not At Risk**. If there is an unexpected event or material item discovered which will impact the assessment, further analysis may be required. (i.e. information received in conversation with the recipient)

Awardee Risk Determination

☒ At Risk (Include the **"At Risk"** provision in the Terms and Conditions of the Award. Follow-up is required if any Action Items are checked below)

☐ Not At Risk (No Further Action Required)

Action Items/Recommendations:

☐ Awardee requires on-going monitoring: Activate D&B Customer Watch Alert Monitoring Service and forward the results to the Specialist.
☐ CP Analysis required on additional information received (i.e. Financial Statements, SBRASR Reports)*
☐ Other:_____

Comments: The Recipient will be put on ACH payment terms.

Assessment Completed by: Molly Hames, Grants and Agreements Specialist Date: 12/16/2009
[Enter Name, Title]

Specialists: Forward this form, or the results (including Recipient Name, DUNS, Award No., and Y/N At-Risk Determination), to the D&B Coordinator, who will update the Tracking Log and activate the D&B Customer Watch, if applicable. Place this form in the Award File, along with the first page of the D&B Report containing the score. *The Specialist shall initiate a PMC 420.3 form if CP analysis is required (GO only).

To save report(s) to your PC, click here for instructions. Print this Report

D&B Business Information Report: ALGENOL BIOFUELS INC.

Copyright 2009 Dun & Bradstreet - Provided under contract
for the exclusive use of subscriber 264772115L

ATTN: Carlo DiFranco Report Printed: DEC 16 2009

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* * * BUSINESS SUMMARY * * *

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ALGENOL BIOFUELS INC.
28100 Bonita Grande Dr Ste 200
Bonita Springs, FL 34135

This is a single location.		D-U-N-S® Number:	80-039-9904
Telephone:	239 498-2000	D&B Rating:	DS
Chief executive:	PAUL WOODS, PRES		
Year started:	2007	D&B PAYDEX®:	
Employs:	1	12-Month D&B PAYDEX:	73
SIC:	8731	When weighted by dollar amount, payments to suppliers average 11 days beyond terms.	
Line of business:	Commercial physical research	Based on trade collected over last 12 months.	

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* * * SUMMARY ANALYSIS * * *

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D&B Rating: DS

The DS rating indicates that the information available does not permit D&B to classify the company within our rating key.

CDSB-1003
Intellectual Property Provisions (CDSB-1003)
Cooperative Agreement - Special Data Statute
Research, Development, or Demonstration
Domestic Small Businesses

01. FAR 52.227-1	Authorization and Consent (JUL 1995)-Alternate I (APR 1984)
02. FAR 52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement (AUG 1996) *This clause is not applicable if the award is for less than $100,000, in aggregate*
03. 10 CFR 600.325 Appendix A	Rights in Data - Programs Covered Under Special Data Statutes (OCT 2003) *If the contracting officer, in consultation with DOE patent counsel and the DOE program official, determines that delivery of limited rights data or restricted computer software is necessary, Alternates I and II may be inserted into the clause after negotiations with the applicant.*
04. FAR 52.227-23	Rights to Proposal Data (Technical) (JUN 1987)
05. 10 CFR 600.325 Appendix A	Patent Rights (Small Business Firms and Nonprofit Organizations) (OCT 2003)

NOTE: In reading these provisions, any reference to “contractor” shall mean “recipient,” and any reference to “contract” or “subcontract” shall mean “award” or “subaward.”

01. FAR 52.227-1 Authorization and Consent (JUL 1995)-Alternate I (APR 1984)

(a) The Government authorizes and consents to all use and manufacture of any invention described in and covered by a United States patent in the performance of this contract or any subcontract at any tier.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for research and development expected to exceed the simplified acquisition threshold; however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.

(End of clause)

02. FAR 52.227-2 Notice and Assistance Regarding Patent and Copyright Infringement (AUG 1996)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at FAR 2.101.

(End of clause)

03. 10 CFR 600.325 Appendix A, Rights in Data - Programs Covered Under Special Data Statutes (OCT 2003)

(a) Definitions

Computer Data Bases, as used in this clause, means a collection of data in a form capable of, and for the purpose of, being stored in, processed, and operated on by a computer. The term does not include computer software.

Computer software, as used in this clause, means (i) computer programs which are data comprising a series of instructions, rules, routines, or statements, regardless of the media in which recorded, that allow or cause a computer to perform a specific operation or series of operations and (ii) data comprising source code listings, design details, algorithms, processes, flow charts, formulae and related material that would enable the computer program to be produced, created or compiled. The term does not include computer data bases.

Data, as used in this clause, means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to administration, such as financial, administrative, cost or pricing or management information.

Form, fit, and function data, as used in this clause, means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability as well as data identifying source, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements except that for computer software it means data identifying source, functional characteristics, and performance requirements but specifically excludes the source code, algorithm, process, formulae, and flow charts of the software.

Limited rights data, as used in this clause, means data (other than computer software) developed at private expense that embody trade secrets or are commercial or financial and confidential or privileged.

Restricted computer software, as used in this clause, means computer software developed at private expense and that is a trade secret; is commercial or financial and confidential or privileged; or is published copyrighted computer software; including modifications of such computer software.

Protected data, as used in this clause, means technical data or commercial or financial data first produced in the performance of the award which, if it had been obtained from and first produced by a non-federal party, would be a trade secret or commercial or financial information that is privileged or confidential under the meaning of 5 U.S.C. 552(b)(4) and which data is marked as being protected data by a party to the award.

Protected rights, as used in this clause, mean the rights in protected data set forth in the Protected Rights Notice of paragraph (g) of this clause.

Technical data, as used in this clause, means that data which are of a scientific or technical nature. Technical data does not include computer software, but does include manuals and instructional materials and technical data formatted as a computer data base.

Unlimited rights, as used in this clause, means the right of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose whatsoever, and to have or permit others to do so.

(b) Allocation of Rights

(1) Except as provided in paragraph (c) of this clause regarding copyright, the Government shall have unlimited rights in--

(i) Data specifically identified in this agreement as data to be delivered without restriction;

(ii) Form, fit, and function data delivered under this agreement;

(iii) Data delivered under this agreement (except for restricted computer software) that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this agreement; and

(iv) All other data delivered under this agreement unless provided otherwise for protected data in accordance with paragraph (g) of this clause or for limited rights data or restricted computer software in accordance with paragraph (h) of this clause.

(2) The Recipient shall have the right to--

(i) Protect rights in protected data delivered under this agreement in the manner and to the extent provided in paragraph (g) of this clause;

(ii) Withhold from delivery those data which are limited rights data or restricted computer software to the extent provided in paragraph (h) of this clause;

(iii) Substantiate use of, add, or correct protected rights or copyrights notices and to take other appropriate action, in accordance with paragraph (e) of this clause; and

(iv) Establish claim to copyright subsisting in data first produced in the performance of this agreement to the extent provided in subparagraph (c)(1) of this clause.

(c) Copyright

(1) Data first produced in the performance of this agreement. Except as otherwise specifically provided in this agreement, the Recipient may establish, without the prior approval of the Contracting Officer, claim to copyright subsisting in any data first produced in the performance of this agreement. If claim to copyright is made, the Recipient shall affix the applicable copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including agreement number) to the data when such data are delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. For such copyrighted data, including computer software, the Recipient grants to the Government, and others acting on its behalf, a paid-up nonexclusive, irrevocable, worldwide license to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government, for all such data.

(2) Data not first produced in the performance of this agreement. The Recipient shall not, without prior written permission of the Contracting Officer, incorporate in data delivered under this agreement any data that are not first produced in the performance of this agreement and that contain the copyright notice of 17 U.S.C. 401 or 402, unless the Recipient identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in subparagraph (c)(1) of this clause; provided, however, that if such data are computer software, the Government shall acquire a copyright license as set forth in subparagraph (h)(3) of this clause if included in this agreement or as otherwise may be provided in a collateral agreement incorporated or made a part of this agreement.

(3) Removal of copyright notices. The Government agrees not to remove any copyright notices placed on data pursuant to this paragraph (c), and to include such notices on all reproductions of the data.

(d) Release, Publication and Use of Data

(1) The Recipient shall have the right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Recipient in the performance of this contract, except to the extent such data may be subject to the Federal export control or national security laws or regulations, or unless otherwise provided in this paragraph of this clause or expressly set forth in this contract.

(2) The Recipient agrees that to the extent it receives or is given access to data necessary for the performance of this agreement which contain restrictive markings, the Recipient shall treat the data in accordance with such markings unless otherwise specifically authorized in writing by the Contracting Officer.

(e) Unauthorized Marking of Data

(1) Notwithstanding any other provisions of this agreement concerning inspection or acceptance, if any data delivered under this agreement bears any restrictive or limiting markings or notices not authorized by this agreement, the Contracting Officer may at any time either return the data to the Recipient or cancel or ignore the markings. However, the following procedures shall apply prior to canceling or ignoring the markings.

(i) The Contracting Officer shall make written inquiry to the Recipient affording the Recipient 30 days from receipt of the inquiry to provide written justification to substantiate the propriety of the markings;

(ii) If the Recipient fails to respond or fails to provide written justification to substantiate the propriety of the markings within the 30-day period (or a longer time not exceeding 90 days approved in writing by the Contracting Officer for good cause shown), the Government shall have the right to cancel or ignore the markings at any time after said period and the data will no longer be made subject to any disclosure prohibitions.

(iii) If the Recipient provides written justification to substantiate the propriety of the markings within the period set in subdivision (e)(1)(i) of this clause, the Contracting Officer shall consider such written justification and determine whether or not the markings are to be cancelled or ignored. If the Contracting Officer determines that the markings are authorized, the Recipient shall be so notified in writing. If the Contracting Officer determines, with concurrence of the head of the contracting activity, that the markings are not authorized, the Contracting Officer shall furnish the Recipient a written determination, which determination shall become the final agency decision regarding the appropriateness of the markings unless the Recipient files suit in a court of competent jurisdiction within 90 days of receipt of the Contracting Officer's decision. The Government shall continue to abide by the markings under this subdivision (e)(1)(iii) until final resolution of the matter either by the Contracting Officer's determination become final (in which instance the Government shall thereafter have the right to cancel or ignore the markings at any time and the data will no longer be made subject to any disclosure prohibitions), or by final disposition of the matter by court decision if suit is filed.

(2) The time limits in the procedures set forth in subparagraph (e)(1) of this clause may be modified in accordance with agency regulations implementing the Freedom of Information Act (5 U.S.C. 552) if necessary to respond to a request thereunder.

(f) Omitted or Incorrect Markings

(1) Data delivered to the Government, without any restrictive or limiting markings or notices authorized by this agreement, shall be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use, or reproduction of such data. However, to the extent the data has not been disclosed without restriction outside the Government, the Recipient may request, within 6 months (or a longer time approved by the Contracting Officer for good cause shown) after delivery of such data, permission to have notices placed on qualifying data at the Recipient's expense, and the Contracting Officer may agree to do so if the Recipient--

(i) Identifies the data to which the omitted notice is to be applied;

(ii) Demonstrates that the omission of the notice was inadvertent;

(iii) Establishes that the use of the proposed notice is authorized; and

(iv) Acknowledges that the Government has no liability with respect to the disclosure, use, or reproduction of any such data made prior to the addition of the notice or resulting from the omission of the notice.

(2) The Contracting Officer may also:

(i) Permit correction at the Recipient's expense of incorrect notices if the Recipient identifies the data on which correction of the notice is to be made, and demonstrates that the correct notice is authorized; or

(ii) Correct any incorrect notices.

(g) Rights to Protected Data:

(1) The Recipient may, with the concurrence of DOE, claim and mark as protected data, any data first produced in the performance of this award that would have been treated as a trade secret if developed at private expense. Any such claimed "Protected Data" will be clearly marked with the following Protected Rights Notice, and will be treated in accordance with such Notice, subject to the provisions of paragraphs (e) and (f) of this clause.

PROTECTED RIGHTS NOTICE
These protected data were produced under Agreement No. DE-EE0002867 with the U.S. Department of Energy and may not be published, disseminated, or disclosed to others outside the Government until, unless express written authorization is obtained from the recipient. Upon expiration of the period of protection set forth in this Notice, the Government shall have unlimited rights in this data. This Notice shall be marked on any reproduction of this data, in whole or in part.
(End of notice).

(2) Any such marked Protected Data may be disclosed under obligations of confidentiality for the following purposes:
(a) For internal DOE evaluation and planning purposes under the restriction that the Protected Data be retained in confidence and not be further disclosed; or
(b) To DOE staff members or authorized DOE contractors or subcontractors performing work under the Government's program under the restriction that the Protected Data be retained in confidence and not be further disclosed.

(3) The obligations of confidentiality and restrictions on publication and dissemination shall end for any Protected Data:
(a) At the end of the protected period;
(b) If the data become publicly known or available from other sources without a breach of the obligation of confidentiality with respect to the Protected Data;
(c) If the same data are independently developed by someone who did not have access to the Protected Data and such data are made available without obligations of confidentiality; or
(d) If the Recipient disseminates or authorizes another to disseminate such data without obligations of confidentiality.

(4) However, the Recipient agrees that the following types of data are not considered to be protected and shall be provided to the Government when required by this award without any claim that the data are Protected Data: General test results and data that demonstrate progress toward meeting DOE's technical goals to design, construct, build, and operate a demonstration- or pilot-scale integrated biorefinery employing lignocellulosic or algal feedstocks, and in certain special cases starch feedstocks, for the production of (i) liquid transportation fuels, (ii) biobased chemicals, products or co-products, or (iii) substitutes for petroleum-based feedstocks and products. These results and data will be made available to the public and included in the final project report, and in other reports and presentations, as appropriate. The parties agree that notwithstanding the data enumerated above, nothing precludes the Government from seeking delivery of additional data in accordance with this award, or from making publicly available additional nonprotected data, nor does the preceding enumerated data constitute any admission by the Government that technical data not so enumerated are Protected Data. The general data described above shall not include the following types of data, which Recipient intends, without limitation, to claim and mark as Protected Data:

a) Process Flow Diagrams
b) Mass & Energy Balances
c) Process Performance Parameters and Costs by Unit Operation, including the quality of the data used for those performance parameters, (e.g., scale, replication, degree of integration, range of values, etc.)
d) Capital Cost Estimate and Basis thereof: e.g. factored, vendor quotes, actual purchase prices, etc.
e) Pro Forma with best reproducible results to date with all assumptions listed and the basis/rationale behind all pro forma input parameters explained, including but not necessarily limited to:
    i. Production cost parameters: e.g. consumables, utilities, labor, etc.
    ii. Water consumption requirements and costs
    iii. Waste disposal requirements and costs
f) Any additional financial and technical project information necessary and sufficient to validate the current and actual conversion costs associated with the facility or system as constructed and projected to be operated for converting lignocellulosic or algal feedstocks, and in certain special cases starch feedstocks, into (i) liquid transportation fuels, or (ii) biobased chemicals, products or co-products, or (iii) substitutes for petroleum-based feedstocks and products.

g) Technical results based on data collected, to enable the analysis, assessment and evaluation of other areas of interest, including but not necessarily limited to life cycle assessments, green house gas emissions, and sustainability metrics.

(5) The Government's sole obligation with respect to any protected data shall be as set forth in this paragraph (g).

(h) Protection of Limited Rights Data

(1)When data other than that listed in subparagraphs (b)(1)(i), (ii), and (iii) of this clause are specified to be delivered under this agreement and such data qualify as either limited rights data or restricted computer software, the Recipient, if the Recipient desires to continue protection of such data, shall withhold such data and not furnish them to the Government under this agreement. As a condition to this withholding the Recipient shall identify the data being withheld and furnish form, fit, and function data in lieu thereof.

(2) Notwithstanding subparagraph (h)(1) of this clause, the agreement may identify and specify the delivery of limited rights data, or the Contracting Officer may require by written request the delivery of limited rights data that has been withheld or would otherwise be withholdable. If delivery of such data is so required, the Recipient may affix the following "Limited Rights Notice" to the data and the Government will thereafter treat the data, in accordance with such Notice:

LIMITED RIGHTS NOTICE
(a) These data are submitted with limited rights under Government Agreement No. DE-EE0002867. These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the Recipient, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, if any, provided that the Government makes such disclosure subject to prohibition against further use and disclosure:

(1) Use (except for manufacture) by Federal support services contractors within the scope of their contracts;
(2) These "limited rights data" may be disclosed for evaluation purposes under the restriction that the "limited rights data" be retained in confidence and not be further disclosed;
(3) These "limited rights data" may be disclosed to other contractors participating in the Government's program, of which this Recipient is a part, for information or use (except for manufacture) in connection with the work performed under their awards, and under the restriction that the "limited rights data" be retained in confidence and not be further disclosed;
(4) These "limited rights data" may be used by the Government or others on its behalf for emergency repair or overhaul work under the restriction that the "limited rights data" be retained in confidence and not be further disclosed; and
(5) Release to a foreign government, or instrumentality thereof, as the interests of the United States Government may require, for information or evaluation, or for emergency repair or overhaul work by such government.

(b) This Notice shall be marked on any reproduction of these data, in whole or in part.

(End of notice)

(i) Subaward/Contract

The Recipient has the responsibility to obtain from its subrecipients/contractors all data and rights therein necessary to fulfill the Recipient's obligations to the Government under this agreement. If a subrecipient/contractor refuses to accept terms affording the Government such rights, the Recipient shall promptly bring such refusal to the attention of the Contracting Officer and not proceed with subaward/contract award without further authorization.

(j) Additional Data Requirements

In addition to the data specified elsewhere in this agreement to be delivered, the Contracting Officer may, at anytime during agreement performance or within a period of 3 years after acceptance of all items to be delivered under this agreement, order any data first produced or specifically used in the performance of this agreement. This clause is applicable to all data ordered under this subparagraph. Nothing contained in this subparagraph shall require the Recipient to deliver any data the withholding of which is authorized by this clause or data which are specifically identified in this agreement as not subject to this clause. When data are to be delivered under this subparagraph, the Recipient will be compensated for converting the data into the prescribed form, for reproduction, and for delivery.

(k) The Recipient agrees, except as may be otherwise specified in this agreement for specific data items listed as not subject to this paragraph, that the Contracting Officer or an authorized representative may, up to 3 years after acceptance of all items to be delivered under this contract, inspect at the Recipient's facility any data withheld pursuant to paragraph (h) of this clause, for purposes of verifying the Recipient's assertion pertaining to the limited rights or restricted rights status of the data or for evaluating work performance. Where the Recipient whose data are to be inspected demonstrates to the Contracting Officer that there would be a possible conflict of interest if the inspection were made by a particular representative, the Contracting Officer shall designate an alternate inspector.

(End of clause)

04. FAR 52.227-23 Rights to Proposal Data (Technical) (JUN 1987)

Except for data contained on pages 6-10 of the Project Narrative, it is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have unlimited rights (as defined in the "Rights in Data--General" clause contained in this contract) in and to the technical data contained in the proposal upon which this contract is based.

05. 10 CFR 600.325 Appendix A, Patent Rights (Small Business Firms and Nonprofit Organizations) (OCT 2003)

(a) Definitions

Invention means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).

Made when used in relation to any invention means the conception or first actual reduction to practice of such invention.

Nonprofit organization means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a State nonprofit organization statute.

Practical application means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or Government regulations available to the public on reasonable terms.

Small business firm means a small business concern as defined at section 2 of Public Law 85-536 (16 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in Government procurement and subcontracting at 13 CFR 121.3 through 121.8 and 13 CFR 121.3 through 121.12, respectively, will be used.

Subject invention means any invention of the Recipient conceived or first actually reduced to practice in the performance of work under this award, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d) must also occur during the period of award performance.

(b) Allocation of Principal Rights

The Recipient may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this Patent Rights clause and 35 U.S.C. 203. With respect to any subject invention in which the Recipient retains title, the Federal Government shall have a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the U.S. the subject invention throughout the world.

(c) Invention Disclosure, Election of Title and Filing of Patent Applications by Recipient

(1) The Recipient will disclose each subject invention to DOE within two months after the inventor discloses it in writing to Recipient personnel responsible for the administration of patent matters. The disclosure to DOE shall be in the form of a written report and shall identify the award under which the invention was made and the inventor(s). It shall be

sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to DOE, the Recipient will promptly notify DOE of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Recipient.

(2) The Recipient will elect in writing whether or not to retain title to any such invention by notifying DOE within two years of disclosure to DOE. However, in any case where publication, on sale, or public use has initiated the one year statutory period wherein valid patent protection can still be obtained in the U.S., the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

(3) The Recipient will file its initial patent application on an invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the U.S. after a publication, on sale, or public use. The Recipient will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application, or six months from the date when permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications when such filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure to DOE, election, and filing under subparagraphs (c)(1), (2), and (3) of this clause may, at the discretion of DOE, be granted.

(d) Conditions When the Government May Obtain Title

The Recipient will convey to DOE, upon written request, title to any subject invention:

(1) If the Recipient fails to disclose or elect the subject invention within the times specified in paragraph (c) of this patent rights clause, or elects not to retain title; provided that DOE may only request title within 60 days after learning of the failure of the Recipient to disclose or elect within the specified times;

(2) In those countries in which the Recipient fails to file patent applications within the times specified in paragraph (c) of this Patent Rights clause; provided, however, that if the Recipient has filed a patent application in a country after the times specified in paragraph (c) of this Patent Rights clause, but prior to its receipt of the written request of DOE, the Recipient shall continue to retain title in that country; or

(3) In any country in which the Recipient decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in a reexamination or opposition proceeding on, a patent on a subject invention.

(e) Minimum Rights to Recipient and Protection of the Recipient Right to File

(1) The Recipient will retain a non-exclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Recipient fails to disclose the subject invention within the times specified in paragraph (c) of this Patent Rights clause. The Recipient's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Recipient is a party and includes the right to grant sublicenses of the same scope of the extent the Recipient was legally obligated to do so at the time the award was awarded. The license is transferable only with the approval of DOE except when transferred to the successor of that part of the Recipient's business to which the invention pertains.

(2) The Recipient's domestic license may be revoked or modified by DOE to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR part 404 and the agency's licensing regulation, if any. This license will not be revoked in that field of use or the geographical areas in which the Recipient has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at discretion of the funding Federal agency to the extent the Recipient, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the funding Federal agency will furnish the Recipient a written notice of its intention to revoke or modify the license, and the Recipient will be allowed thirty days (or such other time as may be authorized by DOE for good cause shown by the Recipient) after the notice to show cause why the license should not be revoked or modified. The Recipient has the right to appeal, in accordance with applicable regulations in 37 CFR part 404 and the agency's licensing regulations, if any, concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

(f) Recipient Action to Protect Government's Interest

(1) The Recipient agrees to execute or to have executed and promptly deliver to DOE all instruments necessary to:

(i) Establish or confirm the rights the Government has throughout the world in those subject inventions for which the Recipient retains title; and

(ii) Convey title to DOE when requested under paragraph (d) of this Patent Rights clause, and to enable the government to obtain patent protection throughout the world in that subject invention.

(2) The Recipient agrees to require, by written agreement, its employees, other than clerical and non-technical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Recipient each subject invention made under this award in order that the Recipient can comply with the disclosure provisions of paragraph (c) of this Patent Rights clause, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. The disclosure format should require, as a minimum, the information requested by paragraph (c)(1) of this Patent Rights clause. The Recipient shall instruct such employees through the employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) The Recipient will notify DOE of any decision not to continue prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.

(4) The Recipient agrees to include, within the specification of any U.S. patent application and any patent issuing thereon covering a subject invention, the following statement: ``This invention was made with Government support under (identify the award) awarded by (identify DOE). The Government has certain rights in this invention."

(g) Subaward/Contract

(1) The Recipient will include this Patent Rights clause, suitably modified to identify the parties, in all subawards/contracts, regardless of tier, for experimental, developmental or research work to be performed by a small business firm or nonprofit organization. The subrecipient/contractor will retain all rights provided for the Recipient in this Patent Rights clause, and the Recipient will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractors' subject inventions.

(2) The Recipient will include in all other subawards/contracts, regardless of tier, for experimental, developmental or research work, the patent rights clause required by 10 CFR 600.325(c).

(3) In the case of subawards/contracts at any tier, DOE, the Recipient, and the subrecipient/contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subrecipient/contractor and DOE with respect to those matters covered by the clause.

(h) Reporting on Utilization of Subject Inventions

The Recipient agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Recipient or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Recipient and such other data and information as DOE may reasonably specify. The Recipient also agrees to provide additional reports in connection with any march-in proceeding undertaken by DOE in accordance with paragraph (j) of this Patent Rights clause. As required by 35 U.S.C. 202(c)(5), DOE agrees it will not disclose such information to persons outside the Government without the permission of the Recipient.

(i) Preference for United States Industry.

Notwithstanding any other provision of this Patent Rights clause, the Recipient agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the U.S. unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the U.S. However, in individual cases, the requirement for such an agreement may be waived by DOE upon a showing by the Recipient or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the U.S. or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in-Rights

The Recipient agrees that with respect to any subject invention in which it has acquired title, DOE has the right in accordance with procedures at 37 CFR 401.6 and any supplemental regulations of the Agency to require the Recipient, an assignee or exclusive licensee of a subject invention to grant a non-exclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances and if the Recipient, assignee, or exclusive licensee refuses such a request, DOE has the right to grant such a license itself if DOE determines that:

(1) Such action is necessary because the Recipient or assignee has not taken or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;

(2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Recipient, assignee, or their licensees;

(3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Recipient, assignee, or licensee; or

(4) Such action is necessary because the agreement required by paragraph (i) of this Patent Rights clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the U.S. is in breach of such agreement.

(k) Special Provisions for Awards with Nonprofit Organizations

If the Recipient is a nonprofit organization, it agrees that:

(1) Rights to a subject invention in the U.S. may not be assigned without the approval of DOE, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the Recipient;

(2) The Recipient will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when DOE deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;

(3) The balance of any royalties or income earned by the Recipient with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific or engineering research or education; and

(4) It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms and that it will give preference to a small business firm if the Recipient determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided that the Recipient is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Recipient. However, the Recipient agrees that the Secretary of Commerce may review the Recipient's licensing program and decisions regarding small business applicants, and the Recipient will negotiate changes to its licensing policies, procedures or practices with the Secretary when the Secretary's review discloses that the Recipient could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4).

(l) Communications

All communications required by this Patent Rights clause should be sent to the DOE Patent Counsel address listed in the Award Document.

(m) Electronic Filing

Unless otherwise Specified in the award, the information identified in paragraphs (f)(2) and (f)(3) may be electronically filed.

[End of clause]

STATEMENT OF PROJECT OBJECTIVES

Algenol Biofuels Inc.

Recovery Act: Integrated Pilot-Scale Biorefinery for Producing Ethanol from Hybrid Algae

A. PROJECT OBJECTIVES

1. Demonstrate the commercial potential of DIRECT TO ETHANOL™ technology by building a pilot-scale DIRECT TO ETHANOL™ integrated biorefinery.

2. Operate a pilot-scale DIRECT TO ETHANOL™ integrated biorefinery that uses approximately 2 tonnes per day of carbon dioxide from industrial emissions as the feedstock for making ethanol.

3. Implement an integrated biorefinery project that will immediately create or save more than 300 well-paying high-tech jobs in Texas, Maryland, and Florida.

4. Assess the economic and environmental impact of a new breakthrough energy technology that could eventually create billions of dollars of economic value and thousands of new well-paying jobs while consuming large quantities of carbon dioxide from industrial emissions, displacing petroleum, and moving the U.S. toward energy independence.

5. Assemble a consortium of private industry, federal laboratories, and academic institutions that will contribute to the development, construction, operation and optimization of Algenol's pilot-scale integrated biorefinery and can contribute to future improvements in DIRECT TO ETHANOL™ technology.

B. PROJECT SCOPE

The DOE Office of Energy Efficiency and Renewable Energy (EERE) has established performance goals. Among these goals are to: 1) dramatically reduce, or even end, dependence on imported oil; and 2) spur the creation of the domestic bio-industry. To that end, the Office of the Biomass Program is offering to fund integrated biorefinery projects under this FOA entitled "Demonstration of Integrated Biorefinery Operations." The FOA lists three main criteria for selection: 1) technical merit and rationale; 2) credible economics and competitive advantages that justify an award; and 3) knowledge and experience in project management.

Algenol and its collaborators have collectively prepared a project that is responsive to the selection criteria as detailed below.

Algenol's DIRECT TO ETHANOL™ technology is based on over-expressing in blue-green algae the genes for fermentation pathway enzymes found widely in nature. The resulting metabolically enhanced hybrid algae actively carry out photosynthesis and utilize carbon dioxide to make ethanol inside each algal cell. The ethanol diffuses through the cell wall into the culture medium and then evaporates, along with water, into the headspace of an enclosed, sealed bioreactor. The ethanol-water vapor is then condensed, collected as a liquid, and distilled into fuel grade ethanol. Algenol currently has hybrid algae that produce ethanol at a rate greater than 0.6 moles/m2 per week. The productivity of these algae is currently being evaluated in 20-liter laboratory bioreactors and in 100-liter outdoor bioreactors under "field" conditions. The proposed pilot-scale bio-refinery will consist of approximately 17 acres of plastic fully enclosed 4500-liter specialized bioreactors and supporting areas for testing, distillation, and storage. The project will be divided into three Phases. In Phase I (Budget Period 1) Algenol will complete optimization of the hybrid algae and bioreactors and obtain the necessary regulatory approvals and permitting for construction. In Phase II (Budget Period 2) Algenol will construct the pilot-scale bio-refinery, establish minimum performance characteristics and test second-generation ethanol/water separation equipment. In Phase III (Budget Period 2), Algenol will demonstrate commercially viable operations, optimize operating conditions, improve efficiency, and reduce costs.

C. TASKS TO BE PERFORMED

Phase I: Development, Planning and Preparation of Integrated Biorefinery
The primary deliverable for this Work Breakdown Structure (WBS) element is to complete the planning and preparation of all aspects of the proposed Integrated Ethanol Biorefinery.

WBS Element A.1 Appoint Algenol/Dow Chemical Joint Project Team
Algenol and Dow will each assign employees to the Program Management Team (PMT). The PMT will be responsible for all final decisions related to the proposed Biorefinery project.

WBS Element A.2 Organism Development
This research and development component will involve the optimization of Algenol Biofuels 1st generation ethanogenic hybrid algae, as well as continued research on developing second-generation strains with improved ethanol production capabilities.

WBS Element A.3 Flexible Film Photobioreactor Development
Over the past three years, Algenol has conducted research and development on photobioreactor systems. The data generated during Phase I will be used to identify preliminary design specifications of the photobioreactor systems that will be used in the proposed pilot-scale biorefinery. The commercial scale photobioreactor research and development will be focused on the materials of construction and manufacturing of the photobioreactor, the materials, methods of construction and the mixing system for the photobioreactors.

WBS Element A.4 Process Engineering
Over the past three years, Algenol has conducted research and development on process engineering. The research and development to date has resulted in the design and construction of a commercial scale photobioreactor system and a process for operating these systems. Process engineering is broken down into two phases, Upstream Processes and Downstream Processes. Phase I will be used to define preliminary specifications for the various systems and develop Standard Operating Procedures (SOPs).

WBS Element A.5 Architect Search and Site Selection, Construction Planning, Employee Recruiting and SOP Development
The primary purpose of this element is to interview and hire architectural firms, and continue to evaluate the site location, all designs, preliminary blueprints, systems specifications and deliver all of this information to an architectural firm for the preparation of construction blueprints. In parallel, Algenol will identify and interview various general contractors for construction of the pilot plant and issue Request for Proposals to the top three candidate firms. Algenol will also start the recruiting process for the Plant Manager and other critical personnel to operate the Pilot Plant.

WBS Element A.6 NEPA Review and Determination
As with any federally funded project, a satisfactory NEPA determination will be required in order to proceed to Phase II of the project. Based on the favorable responses Algenol has received from APHIS and the EPA, as well as Algenol's assessment, Algenol remains optimistic that under DOE's own NEPA implementation regulations, Algenol's activities could be categorically excluded from additional NEPA environmental review. However, should the DOE determine that an environmental assessment of Phase II activities be required, Algenol is prepared to meet those requirements. The ultimate deliverable in this element will be finding of a categorical exclusion, or subsequent to an environmental assessment, a finding of no significant impact allowing the project to proceed as scheduled to Phase II.

WBS Element A.7 Regulatory Submissions and Approval
The primary purpose of this element is to prepare all regulatory submissions and approvals from all applicable regulatory agencies for the Biorefinery.

WBS Element A.8 Life Cycle Analysis (Phase I Update)
The purpose of this element is to update the life-cycle analysis of the projected Algenol commercial process in light of on-going research and development and evaluation of the carbon dioxide emission reduction in comparison to gasoline.

WBS Element A.9 Program Management of DOE Phase I Activities
The purpose of this element is to capture the activities of certain employees, the Principle Investigator, project management professionals and others, who are involved with overall management of the project as well as specific tasks. The goal of activities associated with this element is to provide effective and efficient communication, administration, and general support to advance the project successfully.

WBS Element A.10 Phase I Gate Review
The Phase I gate criteria will be finalized as part of the startup of the project. Phase I Gate Criteria will be proposed by the PMT at the initiation of the project, approved by the Internal Gatekeeper Team (IGT), and communicated to DOE. At the end of Phase I, the IGT will review the project reports prepared by the PMT. After review, the IGT will submit, with appropriate documentation, a recommendation to the DOE regarding the pass or fail or extension of the Phase.

WBS Element A.11 Pre-award Look-back
The purpose of this element is to capture pre-award costs for budget period 1 that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, but not prior to the signing of the selection statement; these costs are allowable in accordance with the applicable Federal cost principles and direction from the DOE.

Phase II: Build Pilot-Scale Integrated Biorefinery
After entering Phase II, Algenol and Dow will sign a construction contract with a general contractor and build the Pilot Plant according to the final construction blueprints prepared by the architect and approved by the local regulatory authorities. Key Pilot Plant personnel will be hired from the pool of applicants identified in Phase I. During the construction of the Pilot Plant, these personnel will be trained to run the facility at Algenol's PDU in Florida. In addition, Pilot Plant and PDU personnel will transfer and write Standard Operating Procedures (SOPs) for the Pilot Plant based on the SOPs developed and used at the PDU. Upon completion of the construction of the Pilot Plant, systems checks and shake down runs will be performed.

Phase III: Ethanol Biorefinery Project – Optimize Pilot Plant Operations, Prepare and Submit Technical and Financial Reports to the DOE, Wind Down Operations and Decommission the Biorefinery
After entering Phase III, Algenol will continue with the operations of the facility and focus on the reduction of operating, feedstock, energy and capital cost. Part of the cost reduction effort will be to evaluate the cost and operation of the ethanol purification unit. During this time, technical and financial reports will be prepared and submitted to the DOE. Upon completion of negotiated plant operation duration, the operations of the Biorefinery will be wound down and decommissioned.

DOE F 4600.2
(02/09)
All Other Editions Are Obsolete

U.S. Department of Energy
FEDERAL ASSISTANCE REPORTING CHECKLIST AND INSTRUCTIONS

1. Identification Number: DE -EE0002867.001	2. Program/Project Title: Recovery Act - Integrated Pilot-Scale Biorefinery for Producing Ethanol from Hybrid Algae
3. Recipient: Algenol Biofuels, Inc.	

4. Reporting Requirements:		Frequency	No. of Copies	Address
A. MANAGEMENT REPORTING				
☑ Progress Report		A		https://www.eere-pmc.energy.gov/SubmitReports.aspx
☑ Special Status Report (see special instructions)		A		
B. SCIENTIFIC/TECHNICAL REPORTING (Reports/Products must be submitted with appropriate DOE F 241. The forms are available at www.osti.gov/elink)				
Report/Product	Form			
☑ Final Scientific Report	DOE F 241.3	F		http://www.osti.gov/elink-2413
☑ Conference papers/proceedings*	DOE F 241.3	A		http://www.osti.gov/elink-2413
☑ Software/Manual	DOE F 241.4	A		http://www.osti.gov/estsc/241-4pre.jsp
☐ Other (see special instructions)	DOE F 241.3			
** Scientific and technical conferences only*				
C.FINANCIAL REPORTING				
☑ SF-425, Federal Financial Report		FQ		https://www.eere-pmc.energy.gov/SubmitReports.aspx
D. CLOSEOUT REPORTING				
☑ Patent Certification		F		https://www.eere-pmc.energy.gov/SubmitReports.aspx
☑ Property Certification		F		
☐ Other (see Special Instructions)				
E. OTHER REPORTING				
☑ Annual Indirect Cost Proposal		F Y		
☑ Annual Inventory of Federally Owned Property, If Any		F Y		
☑ Other (see special instructions)		A F Q		

FREQUENCY CODES AND DUE DATES:

A - Within 5 calendar days after events or as specified.

F - Final; 90 calendar days after expiration or termination of the award.

Y - Yearly; 90 days after the end of the reporting period.

S - Semiannually; within 30 days after end of the reporting period.

Q - Quarterly; within 30 days after end of the reporting period.

5. Special Instructions: The forms identified in the checklist are available at http://management.energy.gov/business_doe/business_forms.htm.

MANAGEMENT REPORTING

Special Instructions for the Progress Report: 1) The monthly progress report and financial spreadsheet templates will be forwarded to the Recipient after award. These reports are due within 30 days following the end of each month the project is active.

OTHER REPORTING

Special Instructions: 1) A Project Management Plan (PMP) is due to the Project Officer 30 days after award and should be revised on a yearly basis. An electronic template will be provided to the Recipient to complete or update as needed. 2) An Annual Technical and Financial Report must be developed and submitted to the DOE Project Officer after award and must be updated annually throughout the duration of the award. Subject to the availability of project funding, the Report will also be due annually for three (3) years after the facility is substantially completed. The schedule for submission will be established by the DOE Project Officer after award. The format of the report with instructions for completion, the electronic template for reporting data, and the schedule will be forwarded to the Recipient after award. 3) Comprehensive Annual Project Review - The Recipient will be required to present the Annual Technical and Financial Report at a Comprehensive Annual Project Review Meeting. The schedule for the Comprehensive Annual Project Review will be established by the DOE Project Officer after award. AMERICAN RECOVERY AND REINVESTMENT ACT REPORTING: See the Special Terms and Conditions for Recovery Act reporting requirements, along with the following website: http:/www.federalreporting.gov. The required reports are due no later than ten calendar days after each calendar quarter in which the recipient receives the assistance award funded in whole or in part by the Recovery Act. Recipients are to report according to ARRA reporting instructions.

A. MANAGEMENT REPORTING

Progress Report

The Progress Report must provide a concise narrative assessment of the status of work and include the following information and any other information identified under Special Instructions on the Federal Assistance Reporting Checklist:

1. The DOE award number and name of the recipient.

2. The project title and name of the project director/principal investigator.

3. Date of report and period covered by the report.

4. A comparison of the actual accomplishments with the goals and objectives established for the period and reasons why the established goals were not met.

5. A discussion of what was accomplished under these goals during this reporting period, including major activities, significant results, major findings or conclusions, key outcomes or other achievements. **This section should not contain any proprietary data or other information not subject to public release.** If such information is important to reporting progress, do not include the information, but include a note in the report advising the reader to contact the Principal Investigator or the Project Director for further information.

6. Cost Status. Show approved budget by budget period and actual costs incurred. If cost sharing is required break out by DOE share, recipient share, and total costs.

7. Schedule Status. List milestones, anticipated completion dates and actual completion dates. If you submitted a project management plan with your application, you must use this plan to report schedule and budget variance. You may use your own project management system to provide this information.

8. Any changes in approach or aims and reasons for change. Remember significant changes to the objectives and scope require prior approval by the contracting officer.

9. Actual or anticipated problems or delays and actions taken or planned to resolve them.

10. Any absence or changes of key personnel or changes in consortium/teaming arrangement.

11. A description of any product produced or technology transfer activities accomplished during this reporting period, such as:

    A. Publications (list journal name, volume, issue); conference papers; or other public releases of results.

    B. Web site or other Internet sites that reflect the results of this project.

    C. Networks or collaborations fostered.

D. Technologies/Techniques.

E. Inventions/Patent Applications.

F. Other products, such as data or databases, physical collections, audio or video, software or netware, models, educational aid or curricula, instruments or equipment.

Special Status Report

The recipient must report the following events as soon as possible after they occur:

1. Developments that have a significant favorable impact on the project.

2. Problems, delays, or adverse conditions which materially impair the recipient's ability to meet the objectives of the award or which may require DOE to respond to questions relating to such events from the public. The recipient must report any of the following incidents and include the anticipated impact and remedial action to be taken to correct or resolve the problem/condition:

   a. Any single fatality or injuries requiring hospitalization of five or more individuals.

   b. Any significant environmental permit violation.

   c. Any verbal or written Notice of Violation of any Environmental, Safety, and Health statutes or regulations.

   d. Any incident which causes a significant process or hazard control system failure.

   e. Any event which is anticipated to cause a significant schedule slippage or cost increase.

   f. Any damage to Government-owned equipment valued in excess of $50,000.

   g. Any other incident that has the potential for high visibility in the media.

B. SCIENTIFIC/TECHNICAL REPORTS

Final Scientific/Technical Report

Content. The final scientific/technical report must include the following information and any other information identified under Special Instructions on the Federal Assistance Reporting Checklist:

1. Identify the DOE award number; name of recipient; project title; name of project director/principal investigator; and consortium/teaming members.

2. Display prominently on the cover of the report any authorized distribution limitation notices, such as patentable material or protected data. Reports delivered without such notices may

be deemed to have been furnished with unlimited rights, and the Government assumes no liability for the disclosure, use or reproduction of such reports.

3. Provide an executive summary, which includes a discussion of 1) how the research adds to the understanding of the area investigated; 2) the technical effectiveness and economic feasibility of the methods or techniques investigated or demonstrated; or 3) how the project is otherwise of benefit to the public. The discussion should be a minimum of one paragraph and written in terms understandable by an educated layman.

4. Provide a comparison of the actual accomplishments with the goals and objectives of the project

5. Summarize project activities for the entire period of funding, including original hypotheses, approaches used, problems encountered and departure from planned methodology, and an assessment of their impact on the project results. Include, if applicable, facts, figures, analyses, and assumptions used during the life of the project to support the conclusions.

6. Identify products developed under the award and technology transfer activities, such as:

   a. Publications (list journal name, volume, issue), conference papers, or other public releases of results.

   b. Web site or other Internet sites that reflect the results of this project;

   c. Networks or collaborations fostered;

   d. Technologies/Techniques;

   e. Inventions/Patent Applications, licensing agreements; and

   f. Other products, such as data or databases, physical collections, audio or video, software or netware, models, educational aid or curricula, instruments or equipment.

7. For projects involving computer modeling, provide the following information with the final report:

   a. Model description, key assumptions, version, source and intended use;

   b. Performance criteria for the model related to the intended use;

   c. Test results to demonstrate the model performance criteria were met (e.g., code verification/validation, sensitivity analyses, history matching with lab or field data, as appropriate);

   d. Theory behind the model, expressed in non-mathematical terms;

   e. Mathematics to be used, including formulas and calculation methods;

   f. Whether or not the theory and mathematical algorithms were peer reviewed, and, if so, include a summary of theoretical strengths and weaknesses;

g. Hardware requirements; and

h. Documentation (e.g., users guide, model code).

Electronic Submission. The final scientific/technical report must be submitted electronically via the DOE Energy Link System (E-Link) at http://www.osti.gov/elink-2413.

Electronic Format. Reports must be submitted in the ADOBE PORTABLE DOCUMENT FORMAT (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts.

Submittal Form. The report must be accompanied by a completed electronic version of DOE Form 241.3, "U.S. Department of Energy (DOE), Announcement of Scientific and Technical Information (STI)." You can complete, upload, and submit the DOE F.241.3 online via E-Link. You are encouraged not to submit patentable material or protected data in these reports, but if there is such material or data in the report, you must: (1) clearly identify patentable or protected data on each page of the report; (2) identify such material on the cover of the report; and (3) mark the appropriate block in Section K of the DOE F 241.3. Reports must not contain any limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release. Protected data is specific technical data, first produced in the performance of the award that is protected from public release for a period of time by the terms of the award agreement.

Protected Personally Identifiable Information (PII). Management Reports or Scientific/Technical Reports must not contain any Protected PII. PII is any information about an individual which can be used to distinguish or trace an individual's identity. Some information that is considered to be PII is available in public sources such as telephone books, public websites, university listings, etc. This type of information is considered to be Public PII and includes, for example, first and last name, address, work telephone number, e-mail address, home telephone number, and general educational credentials. In contrast, Protected PII is defined as an individual's first name or first initial and last name in combination with any one or more of types of information, including, but not limited to, social security number, passport number, credit card numbers, clearances, bank numbers, biometrics, date and place of birth, mother's maiden name, criminal, medical and financial records, educational transcripts, etc.

Conference Papers/Proceedings

Content. The recipient must submit a copy of any conference papers/proceedings, with the following information: (1) Name of conference; (2) Location of conference; (3) Date of conference; and (4) Conference sponsor.

Electronic Submission. Scientific/technical conference paper/proceedings must be submitted electronically via the DOE Energy Link System (E-Link) at http://www.osti.gov/elink-2413. Non-scientific/technical conference papers/proceedings must be sent to the URL listed on the Reporting Checklist.

Electronic Format. Conference papers/proceedings must be submitted in the ADOBE PORTABLE DOCUMENT FORMAT (PDF) and be one integrated PDF file that contains all text, tables, diagrams, photographs, schematic, graphs, and charts.