# 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:** Exempt %

**Additional Explanations/Comments (as necessary)**

Redacted

Exemption 4

Redacted

Exemption 4

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Exemption 4

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Exemption 4

Applicant Name: Algenol Biofuels Inc. Award Number: Total Project

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. DE-FOA-0000096 | 81.087 | | | $25,000,000 | Exemption 4 | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $25,000,000 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity | | | | Total (5) |
|---|---|---|---|---|---|
| | (1) DE-FOA-0000096 | (2) | (3) | (4) | |
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |



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**Section C - Non-Federal Resources**

| (a) Grant Program | (b) Applicant | (c ) State | (d) Other Sources | (e) **Totals** |
|---|---|---|---|---|
| 8. DE-FOA-0000096 | $37,476,235 | Exemption 4 | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. **Total** (sum of lines 8 - 11) | $37,476,235 | | | |

**Section D - Forecasted Cash Needs**

| | Total Budget Period 1 | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th quarter |
|---|---|---|---|---|---|
| 13. Federal | $11,093,382 | | $3,697,794 | $3,697,794 | $3,697,794 |
| 14. Non-Federal | Exemption 4 | | | | |
| 15. **Total** (sum of lines 13 and 14) | | | | | |

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

| | **Future Funding Periods (Years)** | | | |
|---|---|---|---|---|
| (a) Grant Program | (b) First - Phase !! | (c ) Second | (d) Third | (e) Fourth |
| 16. DE-FOA-0000096 | $13,906,618 | $0 | $0 | $0 |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. **Total** (sum of lines 16-19) | $13,906,618 | $0 | $0 | $0 |

**Section F - Other Budget Information**

| 21. Direct Charges | 22. Indirect Charges |
|---|---|
| | |

Applicant Name: Algenol Biofuels Inc. Award Number: _____ Phase I

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. DE-FOA-0000096 | 81.087 | | | $11,093,382 | Exemption 4 | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $11,093,382 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity | | | | Total (5) |
|---|---|---|---|---|---|
| | (1) DE-FOA-0000096 | (2) | (3) | (4) | |
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |



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**Section C - Non-Federal Resources**

| (a) Grant Program | (b) Applicant | (c ) State | (d) Other Sources | (e) **Totals** |
|---|---|---|---|---|
| 8. DE-FOA-0000096 | $2,198,630 | Exemption 4 | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. **Total** (sum of lines 8 - 11) | $2,198,630 | | | |

**Section D - Forecasted Cash Needs**

| | Total Budget Period 1 | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th quarter |
|---|---|---|---|---|---|
| 13. Federal | $11,093,382 | | $3,697,794 | $3,697,794 | $3,697,794 |
| 14. Non-Federal | Exemption 4 | | | | |
| 15. **Total** (sum of lines 13 and 14) | | | | | |

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

| | **Future Funding Periods (Years)** | | | |
|---|---|---|---|---|
| (a) Grant Program | (b) First - Phase II | (c ) Second | (d) Third | (e) Fourth |
| 16. DE-FOA-0000096 | $13,906,618 | $0 | $0 | $0 |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. **Total** (sum of lines 16-19) | $13,906,618 | $0 | $0 | $0 |

**Section F - Other Budget Information**

| 21. Direct Charges | 22. Indirect Charges |
|---|---|

23. Remarks

The Quarters are based on DOE fiscal year, thus Q1 = Oct-Dec '09; Q2 = Jan-Mar '10

Applicant Name: Algenol Biofuels Inc. Award Number: Total Project

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. DE-FOA-0000096 | 81.087 | | | $25,000,000 | Exemption 4 | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $25,000,000 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity | | | | Total (5) |
|---|---|---|---|---|---|
| | (1) DE-FOA-0000096 | (2) | (3) | (4) | |
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |



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**Section C - Non-Federal Resources**

| (a) Grant Program | (b) Applicant | (c ) State | (d) Other Sources | (e) **Totals** |
|---|---|---|---|---|
| 8. DE-FOA-0000096 | $37,476,235 | Exemption 4 | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. **Total** (sum of lines 8 - 11) | $37,476,235 | | | |

**Section D - Forecasted Cash Needs**

| | Total Budget Period 1 | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th quarter |
|---|---|---|---|---|---|
| 13. Federal | $11,093,382 | | $3,697,794 | $3,697,794 | $3,697,794 |
| 14. Non-Federal | Exemption 4 | | | | |
| 15. **Total** (sum of lines 13 and 14) | | | | | |

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

| | **Future Funding Periods (Years)** | | | |
|---|---|---|---|---|
| (a) Grant Program | (b) First - Phase !! | (c ) Second | (d) Third | (e) Fourth |
| 16. DE-FOA-0000096 | $13,906,618 | $0 | $0 | $0 |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. **Total** (sum of lines 16-19) | $13,906,618 | $0 | $0 | $0 |

**Section F - Other Budget Information**

| 21. Direct Charges | 22. Indirect Charges |
|---|---|
| | |

Applicant Name: Algenol Biofuels Inc. Award Number: Phase I

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. DE-FOA-0000096 | 81.087 | | | $11,093,382 | Exemption 4 | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $11,093,382 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity | | | | Total (5) |
|---|---|---|---|---|---|
| | (1) DE-FOA-0000096 | (2) | (3) | (4) | |
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |



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**Section C - Non-Federal Resources**

| (a) Grant Program | (b) Applicant | (c ) State | (d) Other Sources | (e) **Totals** |
|---|---|---|---|---|
| 8. DE-FOA-0000096 | $2,198,630 | Exemption 4 | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. **Total** (sum of lines 8 - 11) | $2,198,630 | | | |

**Section D - Forecasted Cash Needs**

| | Total Budget Period 1 | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th quarter |
|---|---|---|---|---|---|
| 13. Federal | $11,093,382 | | $3,697,794 | $3,697,794 | $3,697,794 |
| 14. Non-Federal | Exemption 4 | | | | |
| 15. **Total** (sum of lines 13 and 14) | | | | | |

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

| | **Future Funding Periods (Years)** | | | |
|---|---|---|---|---|
| (a) Grant Program | (b) First - Phase II | (c ) Second | (d) Third | (e) Fourth |
| 16. DE-FOA-0000096 | $13,906,618 | $0 | $0 | $0 |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. **Total** (sum of lines 16-19) | $13,906,618 | $0 | $0 | $0 |

**Section F - Other Budget Information**

| 21. Direct Charges | 22. Indirect Charges |
|---|---|

23. Remarks

The Quarters are based on DOE fiscal year, thus Q1 = Oct-Dec '09; Q2 = Jan-Mar '10

Applicant Name: Algenol Biofuels Inc. Award Number: DE-EE0002867.001 Attachment 4

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. Budget Period 1 | 81.087 | | | $10,668,902 | Exemption 4 | |
| 2. Budget Period 2 | 81.087 | | | TBD | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $10,668,902 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity | | | | Total (5) |
|---|---|---|---|---|---|
| | (1) Budget Period 1 | (2) Budget Period 2 | (3) | (4) | |
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |

# 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.

Tara Lambert
tara.lambert@algenolbiofuels.com

Applicant Name: The Dow Chemical Company Award Number:

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. DE-FOA-0000096 | 81.087 | | | $4,625,118 | Exemption 4 | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $4,625,118 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity (1) | (2) | (3) | (4) | Total (5) |
|---|---|---|---|---|---|
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |

**Section C - Non-Federal Resources**

| (a) Grant Program | (b) Applicant | (c ) State | (d) Other Sources | (e) **Totals** |
|---|---|---|---|---|
| 8. DE-FOA-0000096 | $1,996,280 | Exemption 4 | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. **Total** (sum of lines 8 - 11) | $1,996,280 | | | |

**Section D - Forecasted Cash Needs**

| | Total for 1st Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th quarter |
|---|---|---|---|---|---|
| 13. Federal | $2,150,008 | $1,156,280 | $1,156,280 | $1,156,280 | $1,156,280 |
| 14. Non-Federal | Exemption 4 | | | | |
| 15. **Total** (sum of lines 13 and 14) | | | | | |

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

| | **Future Funding Periods (Years)** | | | |
|---|---|---|---|---|
| (a) Grant Program | (b) First | (c ) Second | (d) Third | (e) Fourth |
| 16. DE-FOA-0000096 | $1,454,642 | $428,295 | $292,522 | $299,651 |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. **Total** (sum of lines 16-19) | $1,454,642 | $428,295 | $292,522 | $299,651 |

**Section F - Other Budget Information**

21. Direct Charges

22. Indirect Charges

23. Remarks

Applicant Name: The Dow Chemical Company Award Number:

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. DE-FOA-0000096 | 81.087 | | | $2,150,008 | Exemption 4 | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $2,150,008 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity (1) | (2) | (3) | (4) | Total (5) |
|---|---|---|---|---|---|
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |

| Section C - Non-Federal Resources | | | | | |
|---|---|---|---|---|---|
| (a) Grant Program | | (b) Applicant | (c ) State | (d) Other Sources | (e) **Totals** |
| 8. DE-FOA-0000096 | | $537,502 | Exemption 4 | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. **Total** (sum of lines 8 - 11) | | $537,502 | | | |

| Section D - Forecasted Cash Needs | | | | | |
|---|---|---|---|---|---|
| | Total for 1st Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th quarter |
| 13. Federal | $0 | | | | |
| 14. Non-Federal | $0 | | | | |
| 15. **Total** (sum of lines 13 and 14) | $0 | $0 | $0 | $0 | $0 |

| Section E - Budget Estimates of Federal Funds Needed for Balance of the Project | | | | |
|---|---|---|---|---|
| | **Future Funding Periods (Years)** | | | |
| (a) Grant Program | (b) First | (c ) Second | (d) Third | (e) Fourth |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. **Total** (sum of lines 16-19) | $0 | $0 | $0 | $0 |

| Section F - Other Budget Information | |
|---|---|
| 21. Direct Charges | 22. Indirect Charges |

23. Remarks

Applicant Name: The Dow Chemical Company Award Number:

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. DE-FOA-0000096 | 81.087 | | | $1,454,642 | Exemption 4 | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $1,454,642 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity (1) | (2) | (3) | (4) | Total (5) |
|---|---|---|---|---|---|
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |

**Section C - Non-Federal Resources**

| (a) Grant Program | (b) Applicant | (c ) State | (d) Other Sources | (e) **Totals** |
|---|---|---|---|---|
| 8. DE-FOA-0000096 | $573,661 | Exemption 4 | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. **Total** (sum of lines 8 - 11) | $573,661 | | | |

**Section D - Forecasted Cash Needs**

| | Total for 1st Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th quarter |
|---|---|---|---|---|---|
| 13. Federal | $0 | | | | |
| 14. Non-Federal | $0 | | | | |
| 15. **Total** (sum of lines 13 and 14) | $0 | $0 | $0 | $0 | $0 |

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

| (a) Grant Program | **Future Funding Periods (Years)** (b) First | (c ) Second | (d) Third | (e) Fourth |
|---|---|---|---|---|
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. **Total** (sum of lines 16-19) | $0 | $0 | $0 | $0 |

**Section F - Other Budget Information**

| 21. Direct Charges | 22. Indirect Charges |
|---|---|

23. Remarks

Applicant Name: The Dow Chemical Company Award Number:

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. DE-FOA-0000096 | 81.087 | | | $428,295 | Exemption 4 | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $428,295 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity (1) | (2) | (3) | (4) | Total (5) |
|---|---|---|---|---|---|
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |

**Section C - Non-Federal Resources**

| (a) Grant Program | (b) Applicant | (c ) State | (d) Other Sources | (e) **Totals** |
|---|---|---|---|---|
| 8. DE-FOA-0000096 | $317,074 | Exemption 4 | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. **Total** (sum of lines 8 - 11) | $317,074 | | | |

**Section D - Forecasted Cash Needs**

| | Total for 1st Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th quarter |
|---|---|---|---|---|---|
| 13. Federal | $0 | | | | |
| 14. Non-Federal | $0 | | | | |
| 15. **Total** (sum of lines 13 and 14) | $0 | $0 | $0 | $0 | $0 |

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

| | **Future Funding Periods (Years)** | | | |
|---|---|---|---|---|
| (a) Grant Program | (b) First | (c ) Second | (d) Third | (e) Fourth |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. **Total** (sum of lines 16-19) | $0 | $0 | $0 | $0 |

**Section F - Other Budget Information**

21. Direct Charges

22. Indirect Charges

23. Remarks

Applicant Name: The Dow Chemical Company  Award Number:

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. DE-FOA-0000096 | 81.087 | | | $292,522 | Exemption 4 | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $292,522 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity (1) | (2) | (3) | (4) | Total (5) |
|---|---|---|---|---|---|
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |

**Section C - Non-Federal Resources**

| (a) Grant Program | (b) Applicant | (c ) State | (d) Other Sources | (e) **Totals** |
|---|---|---|---|---|
| 8. DE-FOA-0000096 | $283,131 | Exemption 4 | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. **Total** (sum of lines 8 - 11) | $283,131 | | | |

**Section D - Forecasted Cash Needs**

| | Total for 1st Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th quarter |
|---|---|---|---|---|---|
| 13. Federal | $0 | | | | |
| 14. Non-Federal | $0 | | | | |
| 15. **Total** (sum of lines 13 and 14) | $0 | $0 | $0 | $0 | $0 |

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

| | **Future Funding Periods (Years)** | | | |
|---|---|---|---|---|
| (a) Grant Program | (b) First | (c ) Second | (d) Third | (e) Fourth |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. **Total** (sum of lines 16-19) | $0 | $0 | $0 | $0 |

**Section F - Other Budget Information**

21. Direct Charges

22. Indirect Charges

23. Remarks

Applicant Name: The Dow Chemical Company  Award Number: _____

# Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|---|---|---|---|---|---|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. DE-FOA-0000096 | 81.087 | | | $299,651 | Exemption 4 | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | $0 | $0 | $299,651 | | |

**Section B - Budget Categories**

| 6. Object Class Categories | Grant Program, Function or Activity (1) | (2) | (3) | (4) | Total (5) |
|---|---|---|---|---|---|
| a. Personnel | Exemption 4 | | | | |
| b. Fringe Benefits | | | | | |
| c. Travel | | | | | |
| d. Equipment | | | | | |
| e. Supplies | | | | | |
| f. Contractual | | | | | |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | | | | | |
| j. Indirect Charges | | | | | |
| k. **Totals** (sum of 6i-6j) | | | | | |
| 7. Program Income | | | | | $0 |

| Section C - Non-Federal Resources | | | | |
|---|---|---|---|---|
| (a) Grant Program | (b) Applicant | (c ) State | (d) Other Sources | (e) **Totals** |
| 8. DE-FOA-0000096 | $284,912 | Exemption 4 | | |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. **Total** (sum of lines 8 - 11) | $284,912 | | | |

| Section D - Forecasted Cash Needs | | | | | |
|---|---|---|---|---|---|
| | Total for 1st Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th quarter |
| 13. Federal | $0 | | | | |
| 14. Non-Federal | $0 | | | | |
| 15. **Total** (sum of lines 13 and 14) | $0 | $0 | $0 | $0 | $0 |

| Section E - Budget Estimates of Federal Funds Needed for Balance of the Project | | | | |
|---|---|---|---|---|
| | **Future Funding Periods (Years)** | | | |
| (a) Grant Program | (b) First | (c ) Second | (d) Third | (e) Fourth |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. **Total** (sum of lines 16-19) | $0 | $0 | $0 | $0 |

| Section F - Other Budget Information | |
|---|---|
| 21. Direct Charges | 22. Indirect Charges |

23. Remarks

PMC123.1 - Budget Justification for SF 424A Budget

## Instructions and Summary

Award Number: DE-FOA-0000096
Award Recipient: Algenol Biofuels Inc.

Date of Submission: Jun-09
Form submitted by: The Dow Chemical Company
(May be award recipient or sub-

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

(Note: The values in this summary table are from entries made in each budget category sheet.)

| CATEGORY | Budget Period 1 Costs | Budget Period 2 Costs | Budget Period 3 Costs | Budget Period 4 Costs | Budget Period 5 Costs | Total Costs | Project Costs % | Comments (Add comments as needed) |
|---|---|---|---|---|---|---|---|---|
| a. Personnel | Exemption 4 | | | | | | | |
| b. Fringe Benefits | | | | | | | | |
| c. Travel | | | | | | | | |
| d. Equipment | | | | | | | | |
| e. Supplies | | | | | | | | |
| f. Contractual | | | | | | | | |
| Sub-recipient | | | | | | | | |
| FFRDC | | | | | | | | |
| Vendor | | | | | | | | |
| Total Contractual | | | | | | | | |
| g. Construction | | | | | | | | |
| h. Other Direct Costs | | | | | | | | |
| i. Indirect Charges | | | | | | | | |
| Total Project Costs | | | | | | | | |

Additional Explanations/Comments (as necessary)

The data contained in pages a,h, and i of this application 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. This restriction does not limit the government's right to use or disclose data obtained without restriction from any source, including the applicant.

PMC123.1 - Budget Justification for SF 424A Budget

## Instructions and Summary

Award Number: DE-FOA-0000096
Award Recipient: Algenol Biofuels, Inc.

Date of Submission: Jun-09
Form submitted by: The Dow Chemical Company
(May be award recipient or sub-recipient)

Please read the instructions on each page before starting.
If you have any questions, please ask your DOE contact. It will save you time!

**Phase 1 summary**

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

(Note: The values in this summary table are from entries made in each budget category sheet.)

| | Budget Period 1 Costs | Budget Period 2 Costs | Budget Period 3 Costs | Budget Period 4 Costs | Budget Period 5 Costs | Total Costs | Project Costs % | Comments (Add comments as needed) |
|---|---|---|---|---|---|---|---|---|
| a. Personnel | Exemption 4 | | | | | | | |
| b. Fringe Benefits | | | | | | | | |
| c. Travel | | | | | | | | |
| d. Equipment | | | | | | | | |
| e. Supplies | | | | | | | | |
| f. Contractual | | | | | | | | |
| Sub-recipient | | | | | | | | |
| FFRDC | | | | | | | | |
| Vendor | | | | | | | | |
| Total Contractual | | | | | | | | |
| g. Construction | | | | | | | | |
| h. Other Direct Costs | | | | | | | | |
| i. Indirect Charges | | | | | | | | |
| Total Project Costs | | | | | | | | |

Additional Explanations/Comments (as necessary)

PMC123.1 - Budget Justification for SF 424A Budget

## Instructions and Summary

Award Number: DE-FOA-0000096
Award Recipient: Algenol Biofuels, Inc.

Date of Submission: Jun-09
Form submitted by: The Dow Chemical Company
(May be award recipient or sub-recipient)

Please read the instructions on each page before starting.
If you have any questions, please ask your DOE contact. It will save you time!

**Phase 2 summary**

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

(Note: The values in this summary table are from entries made in each budget category sheet.)

| | Budget Period 1 Costs | Budget Period 2 Costs | Budget Period 3 Costs | Budget Period 4 Costs | Budget Period 5 Costs | Total Costs | Project Costs % | Comments (Add comments as needed) |
|---|---|---|---|---|---|---|---|---|
| a. Personnel | Exemption 4 | | | | | | | |
| b. Fringe Benefits | | | | | | | | |
| c. Travel | | | | | | | | |
| d. Equipment | | | | | | | | |
| e. Supplies | | | | | | | | |
| f. Contractual | | | | | | | | |
| Sub-recipient | | | | | | | | |
| FFRDC | | | | | | | | |
| Vendor | | | | | | | | |
| Total Contractual | | | | | | | | |
| g. Construction | | | | | | | | |
| h. Other Direct Costs | | | | | | | | |
| i. Indirect Charges | | | | | | | | |
| Total Project Costs | | | | | | | | |

Additional Explanations/Comments (as necessary)

PMC123.1 - Budget Justification for SF 424A Budget

## Instructions and Summary

**Award Number:** DE-FOA-0000096
Award Recipient: Algenol Biofuels, Inc.

**Date of Submission:** Jun-09
Form submitted by: The Dow Chemical Company
(May be award recipient or sub-recipient)

Please read the instructions on each page before starting.
If you have any questions, please ask your DOE contact. It will save you time!

**Phase 3 summary**

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.

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

(Note: The values in this summary table are from entries made in each budget category sheet.)

| CATEGORY | Budget Period 1 Costs | Budget Period 2 Costs | Budget Period 3 Costs | Budget Period 4 Costs | Budget Period 5 Costs | Total Costs | Project Costs % | Comments (Add comments as needed) |
|---|---|---|---|---|---|---|---|---|
| a. Personnel | Exemption 4 | | | | | | | |
| b. Fringe Benefits | | | | | | | | |
| c. Travel | | | | | | | | |
| d. Equipment | | | | | | | | |
| e. Supplies | | | | | | | | |
| f. Contractual | | | | | | | | |
| Sub-recipient | | | | | | | | |
| FFRDC | | | | | | | | |
| Vendor | | | | | | | | |
| Total Contractual | | | | | | | | |
| g. Construction | | | | | | | | |
| h. Other Direct Costs | | | | | | | | |
| i. Indirect Charges | | | | | | | | |
| Total Project Costs | | | | | | | | |

Additional Explanations/Comments (as necessary)

## a. Personnel

PLEASE READ!!!

**List costs solely for employees of the entity completing this form (award recipient or sub-recipient). All other personnel costs (of subrecipients or other contractual efforts of the entity preparing this) must be included under f., Contractual. This includes all consultants and FFRDCs.**

**Identify positions to be supported. Key personnel should be identified by title. All other personnel should be identified either by title or a group category. State the amounts of time (e.g., hours or % of time) to be expended, the composite base pay rate, total direct personnel compensation and identify the rate basis (e.g., actual salary, labor distribution report, technical estimate, state civil service rates, etc.).**

Add rows as needed. Formulas/calculations will need to be entered by the preparer of this form. Please enter formulas as shown in the example.

| Task # and Title | Position Title | Budget Period 1 | | | Budget Period 2 | | | Budget Period 3 | | | Budget Period 4 | | | Budget period 5 | | | Project Total Hours | Project Total Dollars | Rate Basis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Time (Hours) | Pay Rate ($/Hr) | Total Budget Period 1 | Time (Hours) | Pay Rate ($/Hr) | Total Budget Period 2 | Time (Hours) | Pay Rate ($/Hr) | Total Budget Period 1 | Time (Hours) | Pay Rate ($/Hr) | Total Budget Period 1 | Time (Hours) | Pay Rate ($/Hr) | Total Budget Period 3 | | | |
| 1. Generation 2A Receiver Design | | 10000 | | $423,000 | 600 | | $24,000 | | | | | | | 800 | | $31,000 | 11400 | $478,000 | Actual Salary |
| EXAMPLE | Sr. Engineer | 2000 | $85.00 | $170,000 | 200 | $50.00 | $10,000 | | | | | | | 200 | $50.00 | $10,000 | 2400 | $190,000 | Actual Salary |
| ONLY!!! | Electrical engineers | 6200 | $35.00 | $217,000 | 400 | $35.00 | $14,000 | | | | | | | 600 | $35.00 | $21,000 | 7200 | $252,000 | Actual Salary |
| | Technician | 1800 | $20.00 | $36,000 | 0 | $0.00 | $0 | | | | | | | 0 | $0.00 | $0 | 1800 | $36,000 | Actual Salary |

Exemption 4

| Task # and Title | Position Title | Budget Period 1 | | | Budget Period 2 | | | Budget Period 3 | | | Budget Period 4 | | | Budget period 5 | | | Project Total Hours | Project Total Dollars | Rate Basis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Time (Hours) | Pay Rate ($/Hr) | Total Budget Period 1 | Time (Hours) | Pay Rate ($/Hr) | Total Budget Period 2 | Time (Hours) | Pay Rate ($/Hr) | Total Budget Period 1 | Time (Hours) | Pay Rate ($/Hr) | Total Budget Period 1 | Time (Hours) | Pay Rate ($/Hr) | Total Budget Period 3 | | | |
| Exemption 4 | Exemption 4 | | | | | | | | | | | | | | | | | | |
| | Total Personnel Costs | | | | | | | | | | | | | | | | | | |

Additional Explanations/Comments (as necessary)

## b. Fringe Benefits

| | Budget Period 1 | Budget Period 2 | Budget Period 3 | Budget Period 4 | Budget Period 5 | Total |
|---|---|---|---|---|---|---|
| Rate applied: | Exemption 4 | | | | | |
| Total fringe requested: | | | | | | |

**A federally approved fringe benefit rate agreement, or a proposed rate supported and agreed upon by DOE for estimating purposes is required if reimbursement for fringe benefits is requested. Please check (X) one of the options below and provide the requested information. Calculate the fringe rate and enter the total amount in Section B, line 6.b. ("Fringe Benefits") of form SF-424A.**

____ **A fringe benefit rate has been negotiated with, or approved by, a federal government agency. A copy of the latest rate agreement is included with this application, and will be provided electronically to the Contracting Officer for this project.**
**In the area designated below, identify the full calculations used to derive the total fringe costs. See further information below.*

____ **There is not a current, federally approved rate agreement negotiated and available.**
*When this option is checked, the entity preparing this form shall submit a rate proposal in the format provided at the following website, or a format that provides the same level of information and which will support the rates being proposed for use in performance of the proposed project. Go to https://www.eere-pmc.energy.gov/forms.aspx and select PMC 400.2 Sample Rate Proposal. * In the area designated below, identify the full calculations used to derive the total fringe costs. See further information below.*

**Additional explanation/comments (as necessary)**

*IMPORTANT: In the space provided below (or as an attachment) provide a complete explanation and the full calculations used to derive the total fringe costs. If the total fringe costs are a cumulative amount of more than one calculation or rate application, the explanation and calculations should identify all rates used, along with the base they were applied to (and how the base was derived), and a total for each (along with grand total). The rates and how they are applied should not be averaged to get one fringe cost percentage. NOTE: The fringe benefit rate should be applied to both the Federal Share and Recipient Cost Share.

## c. Travel

PLEASE READ!!!

**Provide travel detail as requested below, identifying total Foreign and Domestic Travel as separate items. Purpose of travel are items such as professional conference, DOE sponsored meeting, project management meeting, etc. The Basis for Estimating Costs are items such as past trips, current quotations, Federal Travel Regulations, etc.**

All listed travel must be necessary for performance of the Statement of Projecct Objectives.

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

| Purpose of travel | No. of Travelers | Depart From (not required for domestic travel) | Destination (not required for domestic travel) | No. of Days | Cost per Traveler | Cost per Trip | Basis for Estimating Costs |
|---|---|---|---|---|---|---|---|
| **Budget Period 1** | | | | | | | |
| **Domestic Travel** | | | | | | | |
| EXAMPLE ONLY!!! Visit to PV cell mfr. to set up vendor agreement | 2 | | | 2 | $650 | $1,300 | Internet prices |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| Domestic Travel subtotal | | | | | | $0 | |
| **International Travel** | | | | | | | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| International Travel subtotal | | | | | | $0 | |
| **Budget Period 1 Total** | | | | | | **$0** | |

| Purpose of travel | No. of Travelers | Depart From (not required for domestic travel) | Destination (not required for domestic travel) | No. of Days | Cost per Traveler | Cost per Trip | Basis for Estimating Costs |
|---|---|---|---|---|---|---|---|
| **Budget Period 2** | | | | | | | |
| **Domestic Travel** | | | | | | | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| Domestic Travel subtotal | | | | | | $0 | |
| **International Travel** | | | | | | | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| International Travel subtotal | | | | | | $0 | |
| **Budget Period 2 Total** | | | | | | **$0** | |
| **Budget Period 3** | | | | | | | |
| **Domestic Travel** | | | | | | | |
| | | | | | | $0 | |
| | | | | | | | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| Domestic Travel subtotal | | | | | | $0 | |
| **International Travel** | | | | | | | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| International Travel subtotal | | | | | | $0 | |
| **Budget Period 3 Total** | | | | | | **$0** | |
| **Budget Period 4** | | | | | | | |
| **Domestic Travel** | | | | | | | |
| | | | | | | $0 | |
| | | | | | | | |
| | | | | | | $0 | |

| Purpose of travel | No. of Travelers | Depart From (not required for domestic travel) | Destination (not required for domestic travel) | No. of Days | Cost per Traveler | Cost per Trip | Basis for Estimating Costs |
|---|---|---|---|---|---|---|---|
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| Domestic Travel subtotal | | | | | | $0 | |
| **International Travel** | | | | | | | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| International Travel subtotal | | | | | | $0 | |
| **Budget Period 4 Total** | | | | | | **$0** | |
| **Budget Period 5** | | | | | | | |
| **Domestic Travel** | | | | | | | |
| | | | | | | $0 | |
| | | | | | | | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| Domestic Travel subtotal | | | | | | $0 | |
| **International Travel** | | | | | | | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| | | | | | | $0 | |
| International Travel subtotal | | | | | | $0 | |
| **Budget Period 5 Total** | | | | | | **$0** | |
| PROJECT TOTAL | | | | | | **$0** | |

Additional Explanations/Comments (as necessary)

# d. Equipment

PLEASE READ!!!

**Equipment is generally defined as an item with an acquisition cost greater than $5,000 and a useful life expectancy of more than one year. 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 equipment below, providing a basis of cost such as vendor quotes, catalog prices, prior invoices, etc., and briefly justifying its need as it applies to the Statement of Project Objectives. If it is existing equipment, and the value of its contribution to the project budget is being shown as cost share, provide logical support for the estimated value shown. If it is new equipment which will retain a useful life upon completion of the project, provide logical support for the estimated value shown.**

For equipment over $50,000 in price, also include a copy of the associated vendor quote or catalog price list.

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

| Equipment Item | Qty | Unit Cost | Total Cost | Basis of Cost | Justification of need |
|---|---|---|---|---|---|
| **Budget Period 1** | | | | | |
| EXAMPLE ONLY!!! Thermal shock chamber | 2 | $20,000 | $40,000 | Vendor Quote | Reliability testing of PV modules- Task 4.3 |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| **Budget Period 1 Total** | | | $0 | | |
| **Budget Period 2** | | | | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| **Budget Period 2 Total** | | | $0 | | |

| Equipment Item | Qty | Unit Cost | Total Cost | Basis of Cost | Justification of need |
|---|---|---|---|---|---|
| **Budget Period 3** | | | | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| **Budget Period 3 Total** | | | $0 | | |
| **Budget Period 4** | | | | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| **Budget Period 4 Total** | | | $0 | | |
| **Budget Period 5** | | | | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| | | | $0 | | |
| **Budget Period 5 Total** | | | $0 | | |
| **PROJECT TOTAL** | | | **$0** | | |

| Equipment Item | Qty | Unit Cost | Total Cost | Basis of Cost | Justification of need |
|---|---|---|---|---|---|

Additional Explanations/Comments (as necessary)

## 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 | Justification of need |
|---|---|---|---|---|
| **Budget Period 1** | | | | |
| EXAMPLE ONLY!!! Wireless DAS components | 10 | $360.00 | $3,600 | For Alpha prototype - Task 2.4 |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| **Budget Period 1 Total** | | | **$0** | |
| **Budget Period 2** | | | | |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| **Budget Period 2 Total** | | | Exemption 4 | |
| **Budget Period 3** | | | | |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| **Budget Period 3 Total** | | | $0 | |
| **Budget Period 4** | | | | |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| **Budget Period 3 Total** | | | $0 | |
| **Budget Period 5** | | | | |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| | | | $0 | |
| **Budget Period 3 Total** | | | $0 | |
| **PROJECT TOTAL** | | | $Exemption 4 | |

Exemption 4

**Additional Explanations/Comments (as necessary)**

# f. Contractual

| Sub-Recipient Name/Organization | Purpose/Tasks in SOPO | Budget Period 1 Costs | Budget Period 2 Costs | Budget Period 3 Costs | Budget Period 4 Costs | Budget Period 5 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 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | Sub-total | $0 | $0 | $0 | $0 | $0 | $0 |

| 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 | Budget Period 4 Costs | Budget Period 5 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 module mfg. capacity. Cost is from competitive quotes. | $32,900 | $86,500 | | | | $119,400 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | $0 | $0 | $0 | $0 | $0 | $0 |

| FFRDC Name/Organization | Purpose | Budget Period 1 Costs | Budget Period 3 Costs | Budget Period 3 Costs | Budget Period 4 Costs | Budget Period 5 Costs | Project Total |
|---|---|---|---|---|---|---|---|
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | | | | | | $0 |
| | | $0 | $0 | $0 | $0 | $0 | $0 |

| Total Contractual | | $0 | $0 | $0 | $0 | $0 | $0 |
|---|---|---|---|---|---|---|---|

AdditionalExplanations/Comments (as necessary)

# 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 | | |
| **Budget Period 4** | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| **Budget Period 4 Total** | $0 | | |
| **Budget Period 5** | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| **Budget Period 5 Total** | $0 | | |
| PROJECT TOTAL | **$0** | | |

Additional Explanations/Comments (as necessary)

| |
|---|
| |