

Interoffice Memorandum

*U.S. Department of Energy
Golden Field Office*

December 18, 2007

MEMORANDUM FOR: Mary Anne Larson
NREL Administrative Analyst I – Legal/Paralegal

FROM: Anna E. Martinez-Barnish
DOE Freedom of Information Act Officer

SUBJECT: Modifications No. 201 and 205 to Prime Contract

This letter is in response to your December 7, 2007, transmittal letter regarding the aforementioned modifications to the NREL Prime Contract No. DEC36-99GO10337.

Particularly Modification No. M201 in which your recommendations for redacting certain portions of the document be withheld under Exemption 4. All green highlighted material noted by NREL to be redacted from Modification 201 has been withheld under the applicable exemption. The pink highlighted material in Modification M201 is not subject to the FOIA guidelines because this information was previously released to the public in the Appendix A Modification No. M094 currently posted on the Golden web site.

If you have any questions or comments regarding the Department of Energy's decision not to withhold certain material, please contact me at your earliest convenience. Our deadline to post the attached redacted copy of Modification No. M201 is Thursday, December 21, 2007.

Thank you for your assistance.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE _____ PAGE OF PAGES
 1 | 2

2. AMENDMENT/MODIFICATION NO. **M205** 3. EFFECTIVE DATE See Block 16C 4. REQUISITION/PURCHASE REQ. NO. 5. PROJECT NO. (If applicable)

6. ISSUED BY CODE _____ 7. ADMINISTERED BY (If other than Item 6) CODE _____
 Golden Field Office
 U.S. Department of Energy
 1617 Cole Boulevard
 Golden, CO 80401
 Golden Field Office
 U.S. Department of Energy
 1617 Cole Boulevard
 Golden, CO 80401

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)
 Midwest Research Institute
 425 Volker Boulevard
 Kansas City, MO 64110

9A. AMENDMENT OF SOLICITATION NO.
 9B. DATED (SEE ITEM 11)
 10A. MODIFICATION OF CONTRACT/ORDER NO.
 DE-AC36-99GO10337
 10B. DATED (SEE ITEM 13)
 11/09/1998

CODE _____ FACILITY CODE _____

11. THIS ITEM APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:
 (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority)
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 D. OTHER (Specify type of modification and authority)
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E. IMPORTANT: Contractor is not, is required to sign this document and return two copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)
 See Page 2 and the Attached Section C Description/Specification/Statement of Work.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) W.S. Glover Deputy Director and Chief Operating Officer	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Mary Foreman Contracting Officer
15B. CONTRACT/OFFEROR BY _____ (Signature of person authorized to sign)	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)
15C. DATE SIGNED	16C. DATE SIGNED

SECTION C

DESCRIPTION/SPECIFICATION/ STATEMENT OF WORK

C.1 – Statement of Work

1.0 INTRODUCTION

This Performance-Based Management Contract (PBMC) is for the management and operation of the National Renewable Energy Laboratory (NREL). The Midwest Research Institute (the Contractor), in collaboration with its management team, shall, in accordance with the provisions of this contract, accomplish the missions and programs assigned by the U.S. Department of Energy (DOE) and manage and operate the NREL.

NREL is a Federally Funded Research and Development Center (FFRDC) established in accordance with the Federal Acquisition Regulation Part 35 and operated under this management and operating (M&O) contract, as defined in FAR 17.6 and DEAR 917.6. NREL is the Office of Energy Efficiency and Renewable Energy's (EERE) primary national laboratory for renewable energy and energy efficiency research and development. EERE sponsors NREL's FFRDC designation.

This contract reflects the Department's effort to enable the Contractor to achieve and maintain highly effective and efficient management of the laboratory, resulting in a safe and secure environment, outstanding science and technology results, cost effective operations, and enhanced contractor accountability. Toward this end, this contract provides mechanisms that will enable the Contractor to propose alternate standards, which rely primarily on state and federal laws and regulations, and management processes based on national standards, certified systems and best business practices. The use of external standards, combined with tailoring of existing and new DOE directives, provides the Contractor substantial flexibility to structure its management systems consistent with actual operational risks.

This contract reflects the application of performance-based contracting approaches and techniques which emphasize results/outcomes and minimize "how to" performance descriptions. The Contractor has the responsibility for total performance under the contract, including determining the specific methods for accomplishing the work effort, performing quality control, and assuming accountability for accomplishing the work under the contract. Accordingly, this PBMC provides flexibility, within the terms and conditions of the contract, to the Contractor to manage and operate NREL.

Under this PBMC, it is the Contractor's responsibility to develop and implement innovative approaches and adopt practices that foster continuous improvement across all areas of responsibility. DOE expects the Contractor to produce effective and efficient management structures, systems, and operations that maintain high levels of quality and safety in accomplishing the work required under this contract, and that to the extent practicable and appropriate, rely on national, commercial, and industrial standards that can be verified and certified by independent, nationally recognized experts and other independent reviewers. The Contractor shall conduct all work in a manner that optimizes productivity, minimizes waste, and fully complies with all applicable laws, regulations, and terms and conditions of the contract.

To the maximum extent practical, this PBMC will:

- Describe the requirements in terms of outcome or results required rather than the methods of performance of the work;
- Use measurable performance standards (i.e., terms of quality, timeliness, quantity, etc.);
- Link performance with reward; and
- Use a range of monetary and non-monetary performance incentives, as appropriate.

2.0 THE LABORATORY VISION

The Contractor shall develop a compelling five (5) year vision for the NREL, along with a description of how it will accomplish this vision, supportive of EERE's mission and reflective of other mission assignments and institutional goals. Upon approval by EERE the vision statement and work description shall be captured within the Institutional Plan. Work assigned to NREL will be executed through approved annual operating plans and other authorizing documents.

3.0 PERFORMANCE EXPECTATIONS

3.1 Performance Expectations and Institutional Goals

The performance expectations of this contract are broadly set forth in this Section and reflect DOE's minimum needs and expectations for Contractor performance. Specific performance work statements, acceptable performance levels (performance expectations), acceptable quality levels (permissible deviations from performance expectations), and associated incentives will be established annually, or at other such intervals determined by the DOE to be appropriate. Specific work assignments will be conveyed through annual operating plans, field work proposals, or any other relevant document approved by the Contracting Officer.

Incentives, monetary or other, may be proposed by the Contractor, and will be assessed and approved by the Contracting Officer. To the extent practicable monetary awards will be tied directly to work performed using quantitative measures. Where this is not possible, qualitative measures will be applied and will be assessed using DOE's best judgment. Monetary incentives consisting of cost-saving sharing for extraordinary initiatives may be proposed by either party. These incentives will be considered by DOE, either separately or in conjunction with other incentives, where necessary to achieve a performance goal and may be approved by the Contracting Officer consistent with DOE policy regarding performance measurement and fee payment.

This statement of work identifies institutional goals that represent DOE's expectations of contract performance and against which the Contractor's overall performance of scientific, technical, operational, and/or managerial obligations under this Contract will be assessed. Performance objectives and indicators, which further describe the Department's expectation for each institutional goal, will be updated annually. The Contractor is expected to accomplish the following institutional goals:

MISSION ACCOMPLISHMENT

Goal 1.0: Science and Technology

The Contractor will deliver high-quality scientific and technological outcomes that advance national and DOE Program goals that result in utilization of NREL-originated technology and knowledge.

Goal 2.0: Project/Program and Intellectual Asset Management

The Contractor provides technical leadership and effective program execution.

MANAGEMENT AND OPERATIONS

Goal 3.0: Corporate Leadership and Stewardship

The Contractor will provide leadership that enhances the long-term viability of NREL and its value as a recognized national and international asset.

Goal 4.0: Environment, Safety and Health

The Contractor will foster ES&H as a core value to protect the safety and health of the NREL workforce, the community, and the environment.

Goal 5.0: Business Systems

The Contractor will deliver sound, responsive business systems and supporting processes that enable the mission.

Goal 6.0: Facilities and Infrastructure

The Contractor will effectively manage NREL's existing assets and the development of new assets.

Goal 7.0: Security and Emergency Management

The Contractor will enhance the effectiveness of security and emergency management through strong and well deployed systems.

3.2 Performance Objectives and Measures

The results-oriented performance objectives supporting the institutional goals of this contract will be approved by the Contracting Officer. These objectives shall be accomplished within an overall framework of mission, management and operational performance requirements and standards contained elsewhere in this contract. To the maximum extent practicable, these requirements and standards are structured to reflect performance-based contracting concepts.

The Contractor shall ensure that the Contractor's management systems are effective and efficient. The Contractor's assurance process benchmark NREL's performance against similar public and private sector operations, and shall reflect an understanding of the risks, maintain mechanisms for eliminating or mitigating the risks, and maintain a process to ensure that the management systems and their attendant assurance processes meet contract requirements.

4.0 SCOPE OF WORK

4.1. General

The Contractor shall furnish the necessary personnel with requisite skill and experience, facilities, equipment, materials, supplies, and services (except those provided by the Government) to accomplish the scope of work. The scope of work under this PBMC is comprehensive in that the Contractor is expected to perform all necessary technical, operational, and management functions to manage and operate NREL and perform the missions assigned to NREL. This scope of work encompasses all on-going objectives of NREL, as well as those objectives that may be assigned during the term of the contract, and includes, but is not limited to: all science and technology; program management and systems integration; technology transfer; infrastructure management and maintenance; human resources management; environmental management; health, safety, and security; and procurement, financial, and other administrative systems. The Contractor may, but only when authorized by DOE, enter into subcontracts for the performance of any part of the work under this contract.

4.2. Mission

NREL is the primary national laboratory contributor to the accomplishment of the mission of DOE's Energy Efficiency and Renewable Energy Program. It is a world-class facility with major emphasis on the advancement and adoption of renewable energy, energy efficiency, and related technologies and practices. NREL activities also include efforts to advance and transfer energy efficient end-use and derivative technologies in support of DOE's mission lines.

Near, mid, and long-term RD&D is performed consistent with DOE program guidance and includes activities important to all sectors of the nation's economy. NREL must integrate and respond to shifts in priorities that affect energy pathways, maintain and enhance its world-class competencies to carry out the associated RD&D agendas, and work as a leader and effective collaborator with EERE. EERE depends upon NREL's advice and counsel as an FFRDC, and expects NREL to continue its role of strategic advisor to EERE programs and a critical component of the Project Management Center.

The Contractor shall manage and operate NREL to conduct a spectrum of basic and applied research, development and demonstration activities and to facilitate deployment of these technologies in both U.S. and international activities. Important disciplines in which NREL must be proficient include, but are not limited to, materials science, physics, chemistry, biology, engineering, analytical support, energy economics, technology transfer, program and business planning, education, and public outreach. This proficiency must include the ability to integrate efficiency and renewable technologies with conventional fuel supply sources. The Contractor shall also serve as an advisor to the DOE on the energy issues for which it has cognizance and will serve as systems integrator as assigned.

NREL's research and development missions and programs support DOE's mission lines through efforts in fundamental and applied science, energy and environmental sciences and

technologies, and national security. The Contractor will continue to provide highly skilled staff that supports multi-disciplinary efforts to rapidly translate scientific discoveries into applications in physical, computational, and environmental sciences. The Laboratory will support the President's commitment to sustain and nurture the nation's science and technology enterprise, to support national goals in security, energy, environmental quality, human health and economic growth, to provide a systems engineering capability, and to provide significant resource for scientists world-wide to engage with Laboratory staff in accelerating the nation's progress towards these goals.

While EERE is the primary sponsor of work at NREL, NREL is expected to perform work for or with any DOE program sponsor (e.g., the Office of Science, Office of Fossil Energy, and so on), federal, state, or local entity, private sector company or research institution, or academic institution which support or is related to DOE's mission at NREL, as approved by the Contracting Officer.

NREL shall be EERE's "best-in-class" laboratory known for breakthrough science and technology and for rapidly translating discoveries into applications that solve critical challenges and benefit our nation and society. Over the term of this contract, the Contractor will conduct a broad spectrum of research and development programs in DOE's science, national security, environmental quality, and energy missions as assigned by DOE. The Contractor will make its government-funded scientific and technical research results broadly available to the public. The Contractor will continue to use its multidisciplinary capabilities and apply its expertise to conduct research for the government and the industrial sector. The Contractor will also provide technical advice and guidance to DOE in support of policy development, program planning, and other DOE activities as requested by DOE, and will bring forward recommendations for new research and development programs designed to achieve DOE mission goals.

4.2.1. Science Mission Role

In the science mission, the Contractor will deliver the scientific knowledge and discoveries for DOE's applied missions; advance the frontiers of the physical, biological, environmental, and computational sciences and supporting sciences; and provide world-class research facilities and essential scientific human capital to the nation's overall science enterprise. The Contractor will also conduct basic research programs in, but not limited to, chemistry, chemical physics, materials science, and computer and information science, and other disciplines critical to EERE and NREL's long-term viability.

4.2.2. National Security Mission Role

In the national security mission, the Contractor will support DOE efforts to strengthen United States security through the application of renewable energy, energy efficiency, associated technological developments, and other specialized experience to increase national security and/or to protect national interests. The Contractor will also support DOE efforts in arms control and nonproliferation, intelligence analysis, and counterintelligence, as approved by the Contracting Officer.

4.2.3. Energy Resources Mission Role

In the energy resources mission, the Contractor will support DOE's efforts to increase global energy security, maintain energy affordability and reduce adverse environmental impacts associated with energy production, distribution, and use by developing and promoting advanced energy technologies, policies and practices that efficiently increase domestic energy supply, diversity, productivity, and reliability. The Contractor will be a major asset to DOE and the nation in providing a balanced portfolio of secure, clean, and affordable energy systems compatible with achieving a sustainable energy future. The Contractor will provide science and engineering for developing clean, affordable technologies for transportation, energy generation, and energy efficient buildings and industrial processing. Particular areas of emphasis include solar; wind; hydropower; geothermal; distributed energy and reliability; biomass; industrial technologies; FreedomCAR and vehicle technologies; hydrogen; fuel cells; and related infrastructure; building technologies; weatherization and intergovernmental programs; Federal Energy Management Program; resource assessment; and other capabilities necessary to support EERE programs and fulfill NREL's FFRDC obligations. Tools will also be developed for transforming the energy grid into a secure and dynamically predictable transmission and distribution system, and for connecting distributed energy resources to the grid. The Contractor will also provide unique capabilities in advanced materials, processes and diagnostics critical to the development of next-generation renewable energy and energy efficiency technologies.

4.2.4. Environmental Quality Mission Role

The Contractor will provide science and technology contributions that substantially reduce the cost, time, and risk associated with DOE's cleanup, and enable site cleanup and closure decisions to have a sound, scientific basis, as approved by the Contracting Officer.

4.2.5. Other Related Work and Operation of NREL

The Contractor will plan, manage and execute other research and development programs as directed or approved by DOE. In addition, the Contractor will perform technology transfer, support regional economic development, develop university research partnerships and science education programs, and demonstrate renewable energy and energy efficiency technologies, as approved by the Contracting Officer.

4.2.6. Operating Envelope and Principles

This section summarizes the overall operating envelope for NREL. Specific provisions of this contract regarding management and operational requirements have been established so as to be consistent with this intended operating envelope, and assignment of programs with operating requirements outside the range established here may require review and modification of relevant contract terms.

Operating requirements will be graded and tailored to the risks inherent in the conduct of

work, and work will be authorized using the guiding principles and core values of integrated safety and security management. Requirements at the contractual level will be set forth in accordance with the contractual clauses.

DOE directives and/or external standards shall be tailored to mitigate operational and administrative risks. This effort shall be based on the following criteria:

- For Laboratory standards, the DOE site management and Contractor management participate in and agree on the process, including extent of stakeholder involvement and confirmation of standards.
- Standards are based on the work, the environment in which the work is performed, and the hazards or risks (operational and administrative) associated with the work.
- Laboratory processes include robust mechanisms for establishing and maintaining standards that govern the conduct of work.
- People qualified by knowledge, experience, and training select or develop and confirm the standards.
- The process is documented and the adequacy of the standards selected is justified; justification is not required for standards not selected.
- The selected standards are accepted by all as the basis for the performance of work and oversight.
- To the extent possible, standards are outcome based (i.e., establish the “what” versus the “how”).
- Preference is given to external laws and regulations, consensus standards or generally accepted standards. If consensus or generally accepted standards are not sufficient, site-specific standards based on DOE Directives are developed.
- Process efficiencies are sought through multi-site benchmarking and collaboration in the selection of standards for similar work.

To accommodate the broad range of work at NREL, and to assure proper control of medium and/or high hazard work without imposing unnecessarily burdensome requirements on low risk activities or facilities, the Contractor will identify risks and apply a risk-based graded approach to establishing work requirements and overseeing project work.

4.2.7. Facilities

The Contractor is responsible for the safe and healthful operation of all DOE assets assigned to NREL. The Contractor is responsible for continually assessing the condition of all DOE’s scientific and administrative facilities and associated site infrastructure and

reporting such to DOE. The Contractor is responsible for allocating resources within their control to maintain these assets in superior condition. The Contractor is also responsible for proposing expanded and/or new infrastructure investments that, if completed, advance DOE's mission interests and for managing the design and construction of these projects. The Contractor will promote principles of sustainable development and operations, as appropriate.

The Contractor shall assist DOE through direct participation and other support in achieving DOE's energy efficiency goals and objectives in electricity, water, and thermal consumption, conservation, and savings, including goals and objectives contained in Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management. The Contractor shall maintain and update, as appropriate, its Site Plan to include detailed plans and milestones for achieving site-specific energy efficiency goals and objectives. With respect to this paragraph, the Plan shall consider all potential sources of funds in the following order: 1) the maximum use of private sector, third party financing applied on a life-cycle cost effective basis, particularly from Energy Savings Performance Contracts and Utility Energy Services Contracts awarded by DOE; and 2) only after third party financing options are evaluated, in the event that energy efficiency and water conservation improvements cannot be effectively incorporated into a private sector financing arrangement that is in the best interests of the Government, then DOE funding and funding from overhead accounts can be utilized.

4.2.8. Hazards

The Contractor is responsible for hazards assessment, identification, and mitigation across the spectrum of work at NREL. Research and development will be conducted at a low-hazard level through the application of engineering and administrative controls. Activities exceeding the low-hazard level must be approved by the Contracting Officer.

The Contractor will conduct research utilizing a broad range of radiological and chemical agents in generally small quantities, and will maintain individual facility chemical and radiological inventories at or below occupancy code restrictions. The Contractor will conduct research involving non-ionizing radiation hazards including but not limited to infrared sources, lasers, magnetic fields, radio frequency fields, microwave fields, electric fields and ultraviolet light sources. Over the course of this contract the Contractor will conduct work involving physical hazards including, but not limited to, those associated with construction activities, electrical, pressure systems, work at heights (e.g. roofs and ladders), noise greater than 85dBA, thermal hazards, and other energy hazards.

4.2.9. Security

The contractor will provide all aspects of security required to protect persons, information, and assets associated with DOE's mission at NREL consistent with the terms of the contract. Over the term of this contract the Contractor will conduct work with a broad range of information security protections, including cyber security and export controls. The Contractor will fully support DOE's counterintelligence activities. Over the course of this contract, Contractor staff may participate in international

programs likely involving short-term and long-term staff deployments to foreign countries, including sensitive and other countries.

4.2.10. External Regulation

The Contractor will support DOE in evaluating the benefits and costs of external regulation, and in execution of a pilot program or transition if a decision to proceed with such a pilot is made. To ensure a low-risk, low-cost operating environment, the Contractor will strive to use national standards for risk assessment and mitigation in lieu of DOE Directives, when pre-approved by the Contracting Officer, on written application by the Contractor.

4.3. Core Requirements

4.3.1. General

The relationship between DOE and its national laboratory management and operating contractors is designed to bring best practices for research and development to bear on the Department's missions. Through application of these best practices, the Department seeks to assure both outstanding programmatic and operational performance of today's research programs and the long-term quality, relevance and productivity of the laboratories against tomorrow's needs. Accordingly, DOE has substantial expectations of the Contractor in the areas of: program delivery and mission accomplishment; laboratory stewardship; and excellence in laboratory operations and financial management.

4.3.2. Program Development and Mission Accomplishment

The Contractor will provide effective planning, management and execution of assigned research and development programs. The Contractor will execute assigned programs so as to have the greatest possible impact on achieving DOE's mission objectives, to aggressively manage NREL's science and technology capabilities and intellectual property to meet these objectives, and to bring forward innovative concepts and research proposals that are well-aligned with DOE missions. The Contractor will propose work that is aligned with, and likely to advance, DOE's mission objectives, and that is well matched to Laboratory capabilities. The Contractor will meet the highest standards of scientific quality and productivity, "on-time, on budget, as-promised" delivery of program deliverables, and first-rate service to the research community through officially designated user facility operation.

The Contractor will assure maximum benefit to the nation from R&D investments by transferring technology to the private sector and supporting excellence in science and mathematics education to the extent such activities are consistent with achieving the maximum possible progress towards DOE's core missions.

4.3.3. Laboratory Stewardship

The Contractor will be an active participant with DOE in assuring that NREL is renewed

and enhanced to meet future mission needs. Within the constraints of available resources and other contract requirements the Contractor, in collaboration with DOE, shall:

- Maintain a Laboratory vision and long-term strategic plan that addresses the evolution of Laboratory capabilities to meet anticipated DOE and national needs.
- Attract, develop and retain an outstanding work force, with the skills and capabilities to meet DOE's evolving mission needs.
- Maintain, renew and enhance research facilities and equipment so that NREL remains at the state of the art over time and is well positioned to meet future DOE needs.
- Build and maintain a viable portfolio of research programs that generates the resources to renew and enhance Laboratory research capabilities over time.
- Maintain a positive relationship with the broader research community, to enhance the intellectual vitality and research relevance of NREL, and to bring the best possible capabilities to bear on DOE mission needs through partnership.
- Build a positive, supportive relationship founded on openness and trust with the community and region in which NREL is located.

4.3.4 Operational and Financial Management Excellence

The Contractor will effectively and efficiently manage and operate NREL through best-in class management practices designed to enable research while assuring the protection and proper maintenance of DOE research and information assets, the health and safety of Laboratory staff and the public, and the environment. The Contractor will operate NREL to meet all applicable laws, regulations, and requirements. The Contractor will manage NREL cost-effectively, providing the greatest possible research output per dollar of research investment, and, accordingly, to develop and deploy management systems and practices that are designed to provide the optimal research productivity and mission accomplishment consistent with meeting operational requirements.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE
PAGE OF PAGES
1 | 2

2. AMENDMENT/MODIFICATION NO. **M205**
3. EFFECTIVE DATE **See Block 16C**
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425 Volker Boulevard
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15A. NAME AND TITLE OF SIGNER (Type or print)
W.S. Glover
Deputy Director and Chief Operating Officer
16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)
Mary Foreman
Contracting Officer
15B. CONTRACT/OFFEROR
BY _____
(Signature of person authorized to sign)
15C. DATE SIGNED
16B. UNITED STATES OF AMERICA
BY _____
(Signature of Contracting Officer)
16C. DATE SIGNED

SECTION C

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To the maximum extent practical, this PBMC will:

- Describe the requirements in terms of outcome or results required rather than the methods of performance of the work;
- Use measurable performance standards (i.e., terms of quality, timeliness, quantity, etc.);
- Link performance with reward; and
- Use a range of monetary and non-monetary performance incentives, as appropriate.

2.0 THE LABORATORY VISION

The Contractor shall develop a compelling five (5) year vision for the NREL, along with a description of how it will accomplish this vision, supportive of EERE's mission and reflective of other mission assignments and institutional goals. Upon approval by EERE the vision statement and work description shall be captured within the Institutional Plan. Work assigned to NREL will be executed through approved annual operating plans and other authorizing documents.

3.0 PERFORMANCE EXPECTATIONS

3.1 Performance Expectations and Institutional Goals

The performance expectations of this contract are broadly set forth in this Section and reflect DOE's minimum needs and expectations for Contractor performance. Specific performance work statements, acceptable performance levels (performance expectations), acceptable quality levels (permissible deviations from performance expectations), and associated incentives will be established annually, or at other such intervals determined by the DOE to be appropriate. Specific work assignments will be conveyed through annual operating plans, field work proposals, or any other relevant document approved by the Contracting Officer.

Incentives, monetary or other, may be proposed by the Contractor, and will be assessed and approved by the Contracting Officer. To the extent practicable monetary awards will be tied directly to work performed using quantitative measures. Where this is not possible, qualitative measures will be applied and will be assessed using DOE's best judgment. Monetary incentives consisting of cost-saving sharing for extraordinary initiatives may be proposed by either party. These incentives will be considered by DOE, either separately or in conjunction with other incentives, where necessary to achieve a performance goal and may be approved by the Contracting Officer consistent with DOE policy regarding performance measurement and fee payment.

This statement of work identifies institutional goals that represent DOE's expectations of contract performance and against which the Contractor's overall performance of scientific, technical, operational, and/or managerial obligations under this Contract will be assessed. Performance objectives and indicators, which further describe the Department's expectation for each institutional goal, will be updated annually. The Contractor is expected to accomplish the following institutional goals:

MISSION ACCOMPLISHMENT

Goal 1.0: Science and Technology

The Contractor will deliver high-quality scientific and technological outcomes that advance national and DOE Program goals that result in utilization of NREL-originated technology and knowledge.

Goal 2.0: Project/Program and Intellectual Asset Management

The Contractor provides technical leadership and effective program execution.

MANAGEMENT AND OPERATIONS

Goal 3.0: Corporate Leadership and Stewardship

The Contractor will provide leadership that enhances the long-term viability of NREL and its value as a recognized national and international asset.

Goal 4.0: Environment, Safety and Health

The Contractor will foster ES&H as a core value to protect the safety and health of the NREL workforce, the community, and the environment.

Goal 5.0: Business Systems

The Contractor will deliver sound, responsive business systems and supporting processes that enable the mission.

Goal 6.0: Facilities and Infrastructure

The Contractor will effectively manage NREL's existing assets and the development of new assets.

Goal 7.0: Security and Emergency Management

The Contractor will enhance the effectiveness of security and emergency management through strong and well deployed systems.

3.2 Performance Objectives and Measures

The results-oriented performance objectives supporting the institutional goals of this contract will be approved by the Contracting Officer. These objectives shall be accomplished within an overall framework of mission, management and operational performance requirements and standards contained elsewhere in this contract. To the maximum extent practicable, these requirements and standards are structured to reflect performance-based contracting concepts.

The Contractor shall ensure that the Contractor's management systems are effective and efficient. The Contractor's assurance process benchmark NREL's performance against similar public and private sector operations, and shall reflect an understanding of the risks, maintain mechanisms for eliminating or mitigating the risks, and maintain a process to ensure that the management systems and their attendant assurance processes meet contract requirements.

4.0 SCOPE OF WORK

4.1. General

The Contractor shall furnish the necessary personnel with requisite skill and experience, facilities, equipment, materials, supplies, and services (except those provided by the Government) to accomplish the scope of work. The scope of work under this PBMC is comprehensive in that the Contractor is expected to perform all necessary technical, operational, and management functions to manage and operate NREL and perform the missions assigned to NREL. This scope of work encompasses all on-going objectives of NREL, as well as those objectives that may be assigned during the term of the contract, and includes, but is not limited to: all science and technology; program management and systems integration; technology transfer; infrastructure management and maintenance; human resources management; environmental management; health, safety, and security; and procurement, financial, and other administrative systems. The Contractor may, but only when authorized by DOE, enter into subcontracts for the performance of any part of the work under this contract.

4.2. Mission

NREL is the primary national laboratory contributor to the accomplishment of the mission of DOE's Energy Efficiency and Renewable Energy Program. It is a world-class facility with major emphasis on the advancement and adoption of renewable energy, energy efficiency, and related technologies and practices. NREL activities also include efforts to advance and transfer energy efficient end-use and derivative technologies in support of DOE's mission lines.

Near, mid, and long-term RD&D is performed consistent with DOE program guidance and includes activities important to all sectors of the nation's economy. NREL must integrate and respond to shifts in priorities that affect energy pathways, maintain and enhance its world-class competencies to carry out the associated RD&D agendas, and work as a leader and effective collaborator with EERE. EERE depends upon NREL's advice and counsel as an FFRDC, and expects NREL to continue its role of strategic advisor to EERE programs and a critical component of the Project Management Center.

The Contractor shall manage and operate NREL to conduct a spectrum of basic and applied research, development and demonstration activities and to facilitate deployment of these technologies in both U.S. and international activities. Important disciplines in which NREL must be proficient include, but are not limited to, materials science, physics, chemistry, biology, engineering, analytical support, energy economics, technology transfer, program and business planning, education, and public outreach. This proficiency must include the ability to integrate efficiency and renewable technologies with conventional fuel supply sources. The Contractor shall also serve as an advisor to the DOE on the energy issues for which it has cognizance and will serve as systems integrator as assigned.

NREL's research and development missions and programs support DOE's mission lines through efforts in fundamental and applied science, energy and environmental sciences and

technologies, and national security. The Contractor will continue to provide highly skilled staff that supports multi-disciplinary efforts to rapidly translate scientific discoveries into applications in physical, computational, and environmental sciences. The Laboratory will support the President's commitment to sustain and nurture the nation's science and technology enterprise, to support national goals in security, energy, environmental quality, human health and economic growth, to provide a systems engineering capability, and to provide significant resource for scientists world-wide to engage with Laboratory staff in accelerating the nation's progress towards these goals.

While EERE is the primary sponsor of work at NREL, NREL is expected to perform work for or with any DOE program sponsor (e.g., the Office of Science, Office of Fossil Energy, and so on), federal, state, or local entity, private sector company or research institution, or academic institution which support or is related to DOE's mission at NREL, as approved by the Contracting Officer.

NREL shall be EERE's "best-in-class" laboratory known for breakthrough science and technology and for rapidly translating discoveries into applications that solve critical challenges and benefit our nation and society. Over the term of this contract, the Contractor will conduct a broad spectrum of research and development programs in DOE's science, national security, environmental quality, and energy missions as assigned by DOE. The Contractor will make its government-funded scientific and technical research results broadly available to the public. The Contractor will continue to use its multidisciplinary capabilities and apply its expertise to conduct research for the government and the industrial sector. The Contractor will also provide technical advice and guidance to DOE in support of policy development, program planning, and other DOE activities as requested by DOE, and will bring forward recommendations for new research and development programs designed to achieve DOE mission goals.

4.2.1. Science Mission Role

In the science mission, the Contractor will deliver the scientific knowledge and discoveries for DOE's applied missions; advance the frontiers of the physical, biological, environmental, and computational sciences and supporting sciences; and provide world-class research facilities and essential scientific human capital to the nation's overall science enterprise. The Contractor will also conduct basic research programs in, but not limited to, chemistry, chemical physics, materials science, and computer and information science, and other disciplines critical to EERE and NREL's long-term viability.

4.2.2. National Security Mission Role

In the national security mission, the Contractor will support DOE efforts to strengthen United States security through the application of renewable energy, energy efficiency, associated technological developments, and other specialized experience to increase national security and/or to protect national interests. The Contractor will also support DOE efforts in arms control and nonproliferation, intelligence analysis, and counterintelligence, as approved by the Contracting Officer.

4.2.3. Energy Resources Mission Role

In the energy resources mission, the Contractor will support DOE's efforts to increase global energy security, maintain energy affordability and reduce adverse environmental impacts associated with energy production, distribution, and use by developing and promoting advanced energy technologies, policies and practices that efficiently increase domestic energy supply, diversity, productivity, and reliability. The Contractor will be a major asset to DOE and the nation in providing a balanced portfolio of secure, clean, and affordable energy systems compatible with achieving a sustainable energy future. The Contractor will provide science and engineering for developing clean, affordable technologies for transportation, energy generation, and energy efficient buildings and industrial processing. Particular areas of emphasis include solar; wind; hydropower; geothermal; distributed energy and reliability; biomass; industrial technologies; FreedomCAR and vehicle technologies; hydrogen; fuel cells; and related infrastructure; building technologies; weatherization and intergovernmental programs; Federal Energy Management Program; resource assessment; and other capabilities necessary to support EERE programs and fulfill NREL's FFRDC obligations. Tools will also be developed for transforming the energy grid into a secure and dynamically predictable transmission and distribution system, and for connecting distributed energy resources to the grid. The Contractor will also provide unique capabilities in advanced materials, processes and diagnostics critical to the development of next-generation renewable energy and energy efficiency technologies.

4.2.4. Environmental Quality Mission Role

The Contractor will provide science and technology contributions that substantially reduce the cost, time, and risk associated with DOE's cleanup, and enable site cleanup and closure decisions to have a sound, scientific basis, as approved by the Contracting Officer.

4.2.5. Other Related Work and Operation of NREL

The Contractor will plan, manage and execute other research and development programs as directed or approved by DOE. In addition, the Contractor will perform technology transfer, support regional economic development, develop university research partnerships and science education programs, and demonstrate renewable energy and energy efficiency technologies, as approved by the Contracting Officer.

4.2.6. Operating Envelope and Principles

This section summarizes the overall operating envelope for NREL. Specific provisions of this contract regarding management and operational requirements have been established so as to be consistent with this intended operating envelope, and assignment of programs with operating requirements outside the range established here may require review and modification of relevant contract terms.

Operating requirements will be graded and tailored to the risks inherent in the conduct of

work, and work will be authorized using the guiding principles and core values of integrated safety and security management. Requirements at the contractual level will be set forth in accordance with the contractual clauses.

DOE directives and/or external standards shall be tailored to mitigate operational and administrative risks. This effort shall be based on the following criteria:

- For Laboratory standards, the DOE site management and Contractor management participate in and agree on the process, including extent of stakeholder involvement and confirmation of standards.
- Standards are based on the work, the environment in which the work is performed, and the hazards or risks (operational and administrative) associated with the work.
- Laboratory processes include robust mechanisms for establishing and maintaining standards that govern the conduct of work.
- People qualified by knowledge, experience, and training select or develop and confirm the standards.
- The process is documented and the adequacy of the standards selected is justified; justification is not required for standards not selected.
- The selected standards are accepted by all as the basis for the performance of work and oversight.
- To the extent possible, standards are outcome based (i.e., establish the “what” versus the “how”).
- Preference is given to external laws and regulations, consensus standards or generally accepted standards. If consensus or generally accepted standards are not sufficient, site-specific standards based on DOE Directives are developed.
- Process efficiencies are sought through multi-site benchmarking and collaboration in the selection of standards for similar work.

To accommodate the broad range of work at NREL, and to assure proper control of medium and/or high hazard work without imposing unnecessarily burdensome requirements on low risk activities or facilities, the Contractor will identify risks and apply a risk-based graded approach to establishing work requirements and overseeing project work.

4.2.7. Facilities

The Contractor is responsible for the safe and healthful operation of all DOE assets assigned to NREL. The Contractor is responsible for continually assessing the condition of all DOE’s scientific and administrative facilities and associated site infrastructure and

reporting such to DOE. The Contractor is responsible for allocating resources within their control to maintain these assets in superior condition. The Contractor is also responsible for proposing expanded and/or new infrastructure investments that, if completed, advance DOE's mission interests and for managing the design and construction of these projects. The Contractor will promote principles of sustainable development and operations, as appropriate.

The Contractor shall assist DOE through direct participation and other support in achieving DOE's energy efficiency goals and objectives in electricity, water, and thermal consumption, conservation, and savings, including goals and objectives contained in Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management. The Contractor shall maintain and update, as appropriate, its Site Plan to include detailed plans and milestones for achieving site-specific energy efficiency goals and objectives. With respect to this paragraph, the Plan shall consider all potential sources of funds in the following order: 1) the maximum use of private sector, third party financing applied on a life-cycle cost effective basis, particularly from Energy Savings Performance Contracts and Utility Energy Services Contracts awarded by DOE; and 2) only after third party financing options are evaluated, in the event that energy efficiency and water conservation improvements cannot be effectively incorporated into a private sector financing arrangement that is in the best interests of the Government, then DOE funding and funding from overhead accounts can be utilized.

4.2.8. Hazards

The Contractor is responsible for hazards assessment, identification, and mitigation across the spectrum of work at NREL. Research and development will be conducted at a low-hazard level through the application of engineering and administrative controls. Activities exceeding the low-hazard level must be approved by the Contracting Officer.

The Contractor will conduct research utilizing a broad range of radiological and chemical agents in generally small quantities, and will maintain individual facility chemical and radiological inventories at or below occupancy code restrictions. The Contractor will conduct research involving non-ionizing radiation hazards including but not limited to infrared sources, lasers, magnetic fields, radio frequency fields, microwave fields, electric fields and ultraviolet light sources. Over the course of this contract the Contractor will conduct work involving physical hazards including, but not limited to, those associated with construction activities, electrical, pressure systems, work at heights (e.g. roofs and ladders), noise greater than 85dBA, thermal hazards, and other energy hazards.

4.2.9. Security

The contractor will provide all aspects of security required to protect persons, information, and assets associated with DOE's mission at NREL consistent with the terms of the contract. Over the term of this contract the Contractor will conduct work with a broad range of information security protections, including cyber security and export controls. The Contractor will fully support DOE's counterintelligence activities. Over the course of this contract, Contractor staff may participate in international

programs likely involving short-term and long-term staff deployments to foreign countries, including sensitive and other countries.

4.2.10. External Regulation

The Contractor will support DOE in evaluating the benefits and costs of external regulation, and in execution of a pilot program or transition if a decision to proceed with such a pilot is made. To ensure a low-risk, low-cost operating environment, the Contractor will strive to use national standards for risk assessment and mitigation in lieu of DOE Directives, when pre-approved by the Contracting Officer, on written application by the Contractor.

4.3. Core Requirements

4.3.1. General

The relationship between DOE and its national laboratory management and operating contractors is designed to bring best practices for research and development to bear on the Department's missions. Through application of these best practices, the Department seeks to assure both outstanding programmatic and operational performance of today's research programs and the long-term quality, relevance and productivity of the laboratories against tomorrow's needs. Accordingly, DOE has substantial expectations of the Contractor in the areas of: program delivery and mission accomplishment; laboratory stewardship; and excellence in laboratory operations and financial management.

4.3.2. Program Development and Mission Accomplishment

The Contractor will provide effective planning, management and execution of assigned research and development programs. The Contractor will execute assigned programs so as to have the greatest possible impact on achieving DOE's mission objectives, to aggressively manage NREL's science and technology capabilities and intellectual property to meet these objectives, and to bring forward innovative concepts and research proposals that are well-aligned with DOE missions. The Contractor will propose work that is aligned with, and likely to advance, DOE's mission objectives, and that is well matched to Laboratory capabilities. The Contractor will meet the highest standards of scientific quality and productivity, "on-time, on budget, as-promised" delivery of program deliverables, and first-rate service to the research community through officially designated user facility operation.

The Contractor will assure maximum benefit to the nation from R&D investments by transferring technology to the private sector and supporting excellence in science and mathematics education to the extent such activities are consistent with achieving the maximum possible progress towards DOE's core missions.

4.3.3. Laboratory Stewardship

The Contractor will be an active participant with DOE in assuring that NREL is renewed

and enhanced to meet future mission needs. Within the constraints of available resources and other contract requirements the Contractor, in collaboration with DOE, shall:

- Maintain a Laboratory vision and long-term strategic plan that addresses the evolution of Laboratory capabilities to meet anticipated DOE and national needs.
- Attract, develop and retain an outstanding work force, with the skills and capabilities to meet DOE's evolving mission needs.
- Maintain, renew and enhance research facilities and equipment so that NREL remains at the state of the art over time and is well positioned to meet future DOE needs.
- Build and maintain a viable portfolio of research programs that generates the resources to renew and enhance Laboratory research capabilities over time.
- Maintain a positive relationship with the broader research community, to enhance the intellectual vitality and research relevance of NREL, and to bring the best possible capabilities to bear on DOE mission needs through partnership.
- Build a positive, supportive relationship founded on openness and trust with the community and region in which NREL is located.

4.3.4 Operational and Financial Management Excellence

The Contractor will effectively and efficiently manage and operate NREL through best-in class management practices designed to enable research while assuring the protection and proper maintenance of DOE research and information assets, the health and safety of Laboratory staff and the public, and the environment. The Contractor will operate NREL to meet all applicable laws, regulations, and requirements. The Contractor will manage NREL cost-effectively, providing the greatest possible research output per dollar of research investment, and, accordingly, to develop and deploy management systems and practices that are designed to provide the optimal research productivity and mission accomplishment consistent with meeting operational requirements.