

2. AMENDMENT/MODIFICATION NO. M002 3. EFFECTIVE DATE See Block 15c 4. REQUISITION/PURCHASE REQ. NO. RES-11-130 2/16/11 5. PROJECT NO. (if applicable)

6. ISSUED BY CODE 3100 U.S. Nuclear Regulatory Commission Division of Contracts Attn: Ashlee Bushell Mail Stop TWB-01B10M Washington, DC 20555 7. ADMINISTERED BY (if other than Item 6) CODE 3100 U.S. Nuclear Regulatory Commission Division of Contracts Attn: Ashlee Bushell Mail Stop: TWB-01B10M Washington, DC 20555

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) ENERGY RESEARCH, INC. 6189 EXECUTIVE BLVD ROCKVILLE MD 208523901 9A. AMENDMENT OF SOLICITATION NO. 9B. DATED (SEE ITEM 11) 10A. MODIFICATION OF CONTRACT/ORDER NO. GS23F0110M NRC-DR-04-10-130 10B. DATED (SEE ITEM 13) 09-07-2010 CODE 621211259 FACILITY CODE

11. THIS ITEM ONLY 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 ACKNOWLEDGMENT 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) Obligate: \$28,987.00 B&R: 2011-60-11-6-182 JOB: N6976 BOC: 252A APPN: 31x0200.160 FFS: 111730 NAICS: 541330

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

(X) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A. B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b). C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: D. OTHER (Specify type of modification and authority) FAR 52.243-3 CHANGES TIME AND MATERIALS OR LABOR HOURS Bilateral; Mutual Agreement of Parties

E. IMPORTANT: Contractor is not, is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) See continuation page for details.

Total Amount Obligated: \$146,407.62 (changed)
 Total Ceiling Amount: \$146,407.62 (changed)
 Period of Performance: 9/7/2010 - 10/6/2011 (changed)

All other terms and conditions under this contract remain unchanged.

Except as provided herein, all terms and conditions of the document referenced in item 8A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) MOHSEN KHATIB-RAHBAR President 15B. CONTRACTOR/OFFEROR [Signature] 15C. DATE SIGNED 4/7/11 16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Donald A. King Contracting Officer 16B. UNITED STATES OF AMERICA BY [Signature] 16C. DATE SIGNED 4/7/2011

NSN 7540-01-152-8070 PREVIOUS EDITION NOT USABLE

STANDARD FORM 30 (REV. 10-83) Prescribed by GSA - FAR (48 CFR) 53.243

The purpose of this modification is to allow the contractor to redo and deliver a revised Task 2, "Development of Initial Model and Calculation Notebook," due to the government receiving the licensee's (Byron) revised information later than expected. As a result: (1) the level of effort is increased by 284 hours, from 1,120 to 1,404 staff hours as follows Executive from 86 hours to 118 hours, Executive Engineer from 86 hours to 118 hours, Senior Engineer/Scientist from 476 hours to 656 hours, Engineer/Scientist from 112 hours to 152 hours, and Other Direct Costs (ODC) from \$1,200 to \$1,300; (2) the contract contract ceiling is increased by \$28,987.00 from \$117,420.62 to \$148,407.62; (3) the contract expiration dated is revised from August 6, 2011 to October 6, 2011; (4) revise the deliverables schedule; and (5) revise the price cost schedule. Accordingly the contract is modified as follows:

- Under block 17 SCHEDULE of the first page of the delivery order, CLINs 005-009 and block 17 (h) are deleted entirely and the following is substituted in-lieu thereof:

Item No. (a)	Supplies or Services (b)	Estimated Hours (c)	Unit (d)	Unit Price (e)	Estimated Amount (f)
CLIN 005	Executive Labor Rate valid from 1/01/2011 - 10/15/11	[REDACTED]	Hours	[REDACTED]	[REDACTED]
CLIN 006	Executive Engineer Labor Rate valid from 1/01/2011 - 10/15/11	[REDACTED]	Hours	[REDACTED]	[REDACTED]
CLIN 007	Senior Engineer/Scientist Labor Rate valid from 1/01/2011 - 10/15/11	[REDACTED]	Hours	[REDACTED]	[REDACTED]
CLIN 008	Engineer/Scientist Labor Rate valid from 1/01/2011 - 10/15/11	[REDACTED]	Hours	[REDACTED]	[REDACTED]
CLIN 009	Other Direct Costs (ODC)				[REDACTED]

Block 17 (h) is changed from \$117,420.62 to \$146,407.62

\$146,407.42	17 (h) TOTAL (Cont. pages)
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- Under section entitled "CONSIDERATION AND OBLIGATION paragraph (a) and (b) are deleted in its entirety and the following is substituted in-lieu thereof:

"(a) The total estimated cost to the Government for full performance under this contract is \$146,407.62."

"(b) The amount presently obligated under this delivery order is \$146,407.62. The Contracting Officer may issue orders for work up the amount presently obligated. This obligated amount may be unilaterally increased from time to time by the Contracting Officer by written modification to this delivery order. The obligated amount shall, at no time, exceed the delivery order ceiling as specified in above. When and if the amount (s) paid and payable to the Contractor hereunder shall equal to the obligated amount, the Contractor shall not be obligated to continue performance of the work unless and until the Contracting Officer shall increase the amount obligated with respect to this delivery order. Any work undertaken by the contractor in excess of the obligated amount specified above is done so at the Contractor's sole risk."

- 3) Under section entitled "LEVEL OF EFFORT," the sentence is deleted in its entirety and the following is substituted in-lieu thereof:

"The estimated level of effort for this project is 1,404 staff hours."

- 4) Under section entitled "DURATION OF CONTRACT PERIOD," the sentence is deleted in its entirety the following is substituted in-lieu thereof:

"The period of performance for this delivery order is September 7, 2010 through October 6, 2011."

- 5) Under section entitled "DELIVERABLES/SCHEDULES AND/OR MILESTONS" is deleted in its entirety the following is substituted in-lieu thereof:

Task	Item	Date (or frequency)
-	Monthly Letter Status Reports	(Once per month)
1	NRC PM identifies plant to be modeled and provides site-specific information resources	Completed
	Contractor submits a few-page letter report providing a summary of the information reviewed and identification of any needed and missing information that has been identified	Completed
2	NRC PM coordinate a site visit or suitable surrogate Information exchange	Completed
	Contractor submits a draft of the calculation notebook	8 months after contract award
3	Contractor submits a few page letter report documenting the quality assurance review process and findings, and confirming that all identified issues have been corrected	10 months after contract award
4	Contractor submits a letter report documenting the interim final shakedown analysis	11 months after contract award
5	NRC provides any significant comments on the shakedown analysis letter report or draft calculation notebook	12 months after contract award
	Contractor provides a CD or DVD containing all input models (organized in an easily identifiable manner), the final calculation notebook, and the final shakedown analysis report	13 months after contract award

- 6) Under section entitled "PRICE AND COST SCHEDULE" Summary, Task 2: Development of Initial Input Model and Calculation Notebook, is deleted in its entirety and the following is substituted in-lieu thereof:

U.S. Nuclear Regulatory Commission			
NRC RFQ: RES-10-130, "Level 1 PRA Success Criteria MELCOR Input Deck"			
SUMMARY			
PERIOD OF PERFORMANCE: September 7, 2010 – October 6, 2011			
Task 2: Development of Initial Input Model and Calculation Notebook			
Labor Category	Rate	Task 2 Hours	Total Cost
Executive			
Executive Engineer			
Senior Engineer/Scientist			
Engineer/Scientist			
System Analyst		0	\$0.00
Support Staff		0	\$0.00
Senior Consulting Engineer		0	\$0.00
Executive Consulting Engineer		0	\$0.00
Subtotal for Task 2			\$77,345.98

- 7) Under section entitled "PRICE AND COST SCHEDULE" ERI FY2011:

Task 2: Development of Initial Input Model and Calculation Notebook is deleted in its entirety the following is substituted in-lieu thereof:

U.S. Nuclear Regulatory Commission			
NRC RFQ: RES-10-130, "Level 1 PRA Success Criteria MELCOR Input Deck"			
ERI FY2011			
PERIOD OF PERFORMANCE: January 1, 2011 – October 6, 2011			
Task 2: Development of Initial Input Model and Calculation Notebook			
Labor Category	Rate	Task 2 Hours	Total Cost
Executive			
Executive Engineer			
Senior Engineer/Scientist			
Engineer/Scientist			
System Analyst		0	\$0.00
Support Staff		0	\$0.00
Senior Consulting Engineer		0	\$0.00
Executive Consulting Engineer		0	\$0.00
Subtotal for Task 2			\$61,312.58

-Summary portion is deleted in its entirety and the following is substituted in-lieu thereof:

U.S. Nuclear Regulatory Commission			
NRC RFQ: RES-10-130, "Level 1 PRA Success Criteria MELCOR Input Deck"			
ERI FY2011			
PERIOD OF PERFORMANCE: January 1, 2011 – October 6, 2011			
SUMMARY			
Labor Category	Rate	Total Hours	Total Cost
Executive			
Executive Engineer			
Senior Engineer/Scientist			

Engineer/Scientist			
System Analyst		0	\$0.00
Support Staff		0	\$0.00
Senior Consulting Engineer		0	\$0.00
Executive Consulting Engineer		0	\$0.00
Subtotal Labor			
ODCs			
Travel			
Total Cost			\$107,052.34

OBLIGATION OF FUNDS SUMMARY:

FY 2010 TOTAL.....\$94,000.00
 FY 2011 TOTAL.....\$52,407.62
 SUM OF ALL OBLIGATIONS...\$146,407.62