AM	ENDMENT OF SOLICITATION	N/MODIFICATION OF C	ONT	FRACT			1. CONTRAC DE-AC07-0		PAGE 1 OF2 PAGES
2. Al	MENDMENT/MODIFICATION NO. M111	M111 See Block 16c			REQUISITION/PURCHASE NOPR				NO. (If applicable)
	SUED BY	CODE		7. ADMINIS	TERE	D BY	(If other than It	tem 6) (	ODE
	J.S. Department of Energy daho Operations Office (DOI	=.ID)	ĺ	Diane	C L	ona	Contract S	nocialist	
	Contract Management Division			(208) 5			50111.401.5	pociansi	
1	955 Fremont Avenue, MS 12		Í						
	daho Falls, ID 83415  AME AND ADDRESS OF CONTRACT	OP (No. street county State	000	Zin Codol		T 0 A	AMENDMENT	OF COLICITA	TION NO
			anu z	zip Code)		9A. A	AMENDMENT	OF SOLICITA	HON NO.
	Battelle Energy Alliance, LLC P.O. Box 1625	•				- I	DATED (SEE	ITEM 44)	
	daho Falls, ID 83415					96. [	JAIED (SEE	IIEM II)	
•						10A.	MODIFICATION	ON OF CONTE	RACT/ORDER NO.
					X	ļ	DE-AC07-0	5ID14517	
000	-	E4.00 (EV.000 E				10B.	DATED (SEE		
COD	- 	FACILITY CODE		<del></del> -	<u> </u>		November		
	11.	THIS ITEM ONLY APPLIES T	O AN	MENDMENTS	OF S	SOLICI	TATIONS		<del></del>
☐ Th	e above numbered solicitation is amended	as set forth in Item 14. The hour a	and dat	te specified for	receip	t of Offe	ers 🗌 is extend	led, 🔲 is not e	xtended.
Offer	s must acknowledge receipt of this amendm	ent prior to the hour and date spec	cified in	n the solicitation	n as an	nended	, by one of the fo	llowing methods	:
(a) B	completing Items 8 and 15, and returning	copies of the amendment; (	(b) By	acknowledging	receip	ot of this	s amendment on	each copy of the	offer submitted; or (c)
THE	parate letter or telegram which includes a PLACE DESIGNATED FOR THE RECEIPT	OF OFFERS PRIOR TO THE HO	UR AN	ND DATE SPEC	CIFIED	MAY F	RESULT IN REJI	ECTION OF YOU	JR OFFER. If by virtue
	s amendment you desire to change an offer ation and this amendment, and is received				ram o	r letter,	provided each te	elegram or letter	makes reference to the
	CCOUNTING AND APPROPRIATION				_				
	N/A								
_		ITEM APPLIES ONLY TO MO						<del></del>	<del></del>
	A. THIS CHANGE ORDER IS ISSUE	DDIFIES THE CONTRACT/OR ED PURSUANT TO (Specify a			CKIB	<u>ED IN</u>	I(EM 14.	<del></del>	
	THE CHANGES SET FORTH IN I	TEM 14 ARE MARE IN THE (	CONT	DACT ODDE	D NC	LINUT	EM 104		
	B. THE ABOVE-NUMBERED CONT							NGES (Such a	s changes in paying
	office, appropriation date, etc.) S	ET FORTH IN ITEM 14, PURS	SUAN	IT TO THE A	UTHC	RITY	OF FAR 43.10	3(b).	
	C. THIS SUPPLEMENTAL AGREEM	MENT IS ENTERED INTO PUR	RSUA	NT TO AUTH	IORIT	TY OF:		<del></del>	
X	X D. OTHER (Specify type of modification and authority):								
	IAW Part II, Section H, Co	ntract Clause H.34 entitle	ed "A	Agreements	s and	Com	mitments"		
	E. IMPORTANT: Contractor is no	ot, X is required to sign this	docu	ment and retu	ırn <u>[ 3</u>	∐ сор	ies to the issui	ng office.	
14. D	ESCRIPTION OF AMENDMENT/MOI	DIFICATION (Organized by U	CF se	ction heading	js, inc	luding	solicitation/col	ntract subject r	natter where
The	numers of this modificat	tion is to undate Bod	4 111 4	Castian I	A44	aabn	nont D to	inaluda th	o Possuros
	e purpose of this modificate mmitments Table and Res								
	ninistration Data.			and Opu	alc i	· uit	1, 00001011	o, oonaa	<b>.</b>
		(See Contin	nuati	ion)					
		•		·					
full fo	pt as provided herein, all terms and co prce and effect.								
15A.	NAME AND TITLE OF SIGNER (Type Lisa A. Sehlke		1				OF CONTRACT <b>L. ADAMS</b>	IING OFFICE	R (Type or print)
455	Manager, Prime Contract and Perf						g Officer		100 DATE GIOVES
15B.	CONTRACTOR/OFFEROR	15C. DATE SIGNE	ì	16B. UNITED	STA	IES O	F AMERICA		16C. DATE SIGNED
вү	Miss H. NodOl	7/23/0	8 .	» OW!	للملأ	1	adams		-1.1 -
_۲۵	(Signature of person authorized to s			(Sig	natur	e of Co	ontracting Office	er)	7124/08

NSN 754-01-152-807030-105

STANDARD FORM 30 (REV. 10-83)
PREVIOUS EDITION UNUSABLE
Prescribed by GSA FAR (48 CFR) 53.24

#### **CONTINUATION PAGE**

## The following changes have been made to Section J, Attachment R:

Table 3-1 Revision 3 is deleted in its entirety and replaced with the attached Table 3-1 Revision 4.

Resource Commitment Form #11-EPRI (2 pages) is deleted in its entirety and replaced with the attached Resource Commitment Form #11 - EPRI Rev. 1 (3 pages).

## The following changes have been made to Part I Section G, Contract Administration Data:

Paragraph G.1 (b) is changed to read Suzette M. Olson in lieu of Michael L. Adams.

# G.6 Contract Administration is changed to read as follows:

U.S. Department of Energy

Idaho Operations Office

Contract Management Division

ATTN: Suzette M. Olson

1955 Fremont Ave.

Idaho Falls, Idaho 83401-1240

Telephone (208) 526-7385

Fax: (208) 526-8789

Email: olsonsm@id.doe.gov

All other terms and conditions remain unchanged

#### CONTINUATION PAGE

# The following changes have been made to Section J, Attachment R:

Table 3-1 Revision 3 is deleted in its entirety and replaced with the attached Table 3-1 Revision 4.

Resource Commitment Form #11-EPRI (2 pages) is deleted in its entirety and replaced with the attached Resource Commitment Form #11-EPRI Rev. 1 (3 pages).

## The following changes have been made to Part I Section G, Contract Administration Data:

Paragraph G.1 (b) is changed to read Suzette M. Olson in lieu of Michael L. Adams.

## G.6 Contract Administration is changed to read as follows:

U.S. Department of Energy

Idaho Operations Office

Contract Management Division

ATTN: Suzette M. Olson

1955 Fremont Ave.

Idaho Falls, Idaho 83401-1240

Telephone (208) 526-7385

Fax: (208) 526-8789

Email: olsonsm@id.doe.gov

All other terms and conditions remain unchanged

Attachment CCN 214253

July 7, 2008

Page 1 of 3, Inclusive

Contract Number: DE-AC07-05ID1417

Section J, Attachment R

Modification: M111

## Resource Commitment Form #11 - EPRI - (Revision 1)

The Electric Power Research Institute, Inc. is committing the following resources to the INL:

#### 1. Resource Description

Provide technical support to Advanced Nuclear Technology Development at Idaho National Laboratory (INL). This commitment is comprised of two areas of emphasis:

- A. Advanced nuclear reactors and reactor systems, including advanced nuclear fuel cycles. This effort primarily focuses on reactor and fuel cycle systems beyond current ALWR technology, including HTGRs for process heat and hydrogen generation and closed nuclear fuel cycles (i.e., fast spectrum reactors and advanced recycling).
- B. Advanced nuclear technologies that support advances in LWR and ALWR technologies. The work primarily focuses on technology areas that fall within the definition of the Nuclear Energy Systems Support Program (NESSP) authorized in the 2005 Energy Policy Act, that: "... support R&D activities addressing reliability, availability, productivity, component aging, safety, and security of existing nuclear power plants." It is anticipated that technologies that support current plants within this scope are also equally applicable to ALWRs. This subsection could include work associated with DOE's NP2010 program, but could also include work funded by other DOE programs. This area of emphasis potentially may include additional grid work beyond that which was conducted under the previous Resource Commitment No. 11, to which the parties may mutually agree.

Resource Description for Area of Emphasis A: Advanced Nuclear Technology ("ANT"):
Provide technical support to Advanced Nuclear Technology programs, such as Generation IV, Advanced Fuel Cycle Initiative (AFCI), Next Generation Nuclear Plant (NGNP), Nuclear Hydrogen Initiative, Global Nuclear Energy Partnership (GNEP) and related advanced reactor and advanced fuel cycle programs. It also includes support for cooperative efforts between DOE's Office of Nuclear Energy and DOE's Office of Civilian Radioactive Waste Management toward achieving an integrated spent fuel management system.

- Support the development, update and implementation of INL's industry-focused Business Plan for the NGNP.
- Support the development, finalization and implementation of INL's industry-focused Business Plan for GNEP.
- Develop with INL a Consensus Nuclear R&D Strategy and seek NEI and DOE support. Revise and re-issue the Strategy in 2007 or 2008, and as necessary.
- Provide assistance for INL in its DOE-assigned tasks related to creation of Technology Development Plans, Program Plans, review of proposals, etc. Participate in INL meetings, conferences, etc. to coordinate provision of input and assistance from industry.
- Coordinate provision of perspectives of the commercial nuclear utilities to INL for matters covered in this commitment, including review by relevant EPRI advisory committees.

### Resource Description for Area of Emphasis B: NESSP:

Provide technical support to LWR technology development for current plants and near-term deployment ALWRs in areas supporting the objectives of the Congressionally-authorized NESSP.

- Provide access to selected areas of prior EPRI research that is relevant to current INL needs.
   Specific EPRI products to be provided to INL will be identified by mutual agreement.
- Conduct joint projects in areas of mutual interest as determined by both INL and EPRI, with an anticipated emphasis on:

Contract Number: DE-AC07-05ID1417

Section J, Attachment R Modification: M111

Instrumentation and Control: potential areas such as diagnostics and prognostics; digital I&C and human system interface, all-digital control rooms, technical and regulatory solutions; wireless technologies, etc.

- Non-Destructive Examination: seek development of new poolside fuel cladding NDE techniques; laser UT technology, etc.
- Advanced nuclear safety analyses, potentially including advanced plant analysis risk methods (including external event risk sources such as seismic and security threats, grid impacts, etc.), and support to INL's new Center for Advanced Modeling and Simulation.
- In support of Resource Commitment #9, facilitate steps toward recognition of advanced, high performance fuel development (high burnup) as an important element of NESSP.
- General support of INL technical efforts to improve its capabilities to support current nuclear plants, which may lead to funding support to achieve the aims of the NESSP for the benefit of the public.

#### 2. Location of Resource

3420 Hillview Avenue, Palo Alto California, 94304 and 1300 West W.T. Harris Boulevard, Charlotte, NC 28262.

### 3. Monetary Value

Total Monetary Value: \$180,000 / year (Total staff allocated to this resource will be approximately 0.45 FTE annually or approximately 824 hours per year). Total Estimated Monetary Value: \$1M per year value of EPRI research and development IP access as set forth in the Subcontract.

4. Describe which Project / Program would benefit from the Resource Commitment and why:

This commitment is intended to focus on strategic program areas that are of current highest priority to INL. Most Advanced Nuclear R&D programs (e.g., GEN IV, NGNP, AFCI, etc. are anticipated to benefit directly, as will nearer term programs such as NP2010 and NESSP (currently unfunded)).

5. Date the resource will be provided:

This resource commitment revises the initial submission. EPRI will begin to actively support the revised commitment starting upon the approval of these revisions.

6. The Resource will be provided by:

Electric Power Research Institute, Inc. (EPRI).

7. Describe any liability related to this resource, financial or otherwise:

EPRI's ability to provide this resource as currently configured will depend on levels of current funding and interest from EPRI's members in the areas covered hereunder, and also depends upon anticipated support from INL and DOE in these subject areas.

8. How the resource will be managed:

Two separate individuals, both EPRI senior staff members with management responsibility, will provide the management interface and oversight for the two areas of emphasis under this resource commitment (i.e., two management interfaces, for each of the ANT and NESSP areas of emphasis). These managers will interface internally within EPRI with appropriate engineering and scientific personnel, and will interface with the INL Associate Director, Nuclear Systems, via the Director, Technology Partnerships.

Contract Number: DE-AC07-05ID141

Section J, Attachment R

Modification: M111

### 9. How the resource will be integrated into the INL:

Initially, EPRI intends to conduct training and workshops to present the capabilities and the information that is available at EPRI. Similarly, the INL will engage EPRI staff, through the two identified EPRI managers, in its planning, programmatic, and R&D activities on programs [mutually agreed to by EPRI and INL] within the defined scope, and seek to employ EPRI resources to meet INL's obligations to the DOE. This commitment includes a strategic planning function to further integrate the R&D efforts of EPRI and the INL. The Director of Technology Partnerships will be responsible for a program of continuing awareness of IP available from EPRI and current emphasis of scientific areas of research ongoing at INL.

10. Other pertinent information (e.g., exclusive rights and control of the resource):

All EPRI background IP existing in EPRI Materials now or developed in the future remains the property of EPRI; all EPRI Materials are provided to BEA under the license set forth in Exhibit D of the Subcontract.

This resource commitment, upon its approval, replaces the old Resource Commitment #11, titled "Provisions of Technical Support at Critical Infrastructure Testbed," which is deleted in its entirety. All resources provided by EPRI to the INL during 2005 and 2006 under the previous version of Resource Commitment #11 will be carried forward and credited under this revised Resource Commitment #11.

11. Signature of responsible Corporate Official and Date of Signature:

mulle	$Q_{-}$
Michael W. Howard, Ph.D., P.E. Sr. Vice President, R&D Electric Power Research Institute, In	с.
Date: November 12, 2007	

12. Approval of Revision:

NOT APPL	Licable	 
Battelle Energy	Alliance, LLC	
Date:	2007	

Table 3-1.

			Type of Resource Commitment			Benefiting INL Area		
Provider		Resource Commitment	Direct <sup>(1)</sup>	Program <sup>(2)</sup>	Access <sup>(3)</sup>	Nuclear Energy	National Security	S&T and Education
Battelle Energy Alliance	1.	Upgrades to Advanced Test Reactor Research Capability and Fuel Line	\$20M		7.000	4	4	
	2.	Support for Education Programs	\$6M			4		4
Battelle Memorial Energy	3.	Construction Funding Support for the Center for Advanced Energy Studies (CAES)	\$8.88M	,	-	4	4	4
<b>.</b>	4.	National Security Consulting and Access to Battelle Ventures		\$2.0	\$150M		4	4
BWXT	5.	Access to BWXT Lynchburg Technology Center (LTC)		\$1.5M	\$100M	4	4	
	6.	Provision of BWXT Integrated Fuel Processor	\$14M			4		4
URS Washington Division	7.	Transfer of Smart Secure System Technology	\$0.25M	\$5M			4	
Washington Group	8.	Construction Funding Support for the CAES	\$1.12M			4	4	4
Electric Power Research Institute	9.	Establish the Center for Nuclear Fuels and Materials Research (CNFMR)		\$41.2M	\$25M	4		
	10.	Access to EPRI's Technology Application Centers	1	\$2.9M	\$20M	4	4	4
	11.	Provision of Technical Support to Critical Infrastructure Testbed	<u> </u>	\$1.8M	\$10M	4		
State of Idaho	12.	State Support for CAES	\$7.2M			4	4	4
MIT	13.	Access to the Massachusetts Institute of Technology Reactor (MITR)			\$33.9M	4		4
North Carolina State University	14.				\$25M	4		4
Oregon State University	15.	Access to the Oregon State TRIGA Reactor			\$34M	4		4
The Ohio State University	16.	Access to the Ohio State University Research Reactor			\$10M	4		4
University of New Mexico	17.	Access to the University of New Mexico Research Reactor			\$5M	4		4
Electronic Data Systems	18.	Plan for Enterprise-wide IT Development		\$.24M		4	4	4
BNFL Inc.	19.	Support the Center for Nuclear Fuels and Materials Research – BNFL Ltd.		\$1.5M		4		
Westinghouse Electric Corp	20.	Support the Center for Nuclear Fuels and Materials Research - WEC		\$1.5M		4		-
Nexia Solutions	21.	Support the Center for Nuclear Fuels and Materials Research Access Funds from 21 & 22			\$350M	4		
BEA TBD	22.	Program Funds unresolved as of 7/1/07		\$30M		4		
AREVA	23.	Support the Center for Nuclear Fuels and Materials Research (CNFMR)	\$2M	\$20 <b>M</b>	\$50M	4	-	
USRA	24.	Establish the Center fro Space Nuclear Research (CSNR)	\$1.5M			4		4
General Atomics	25.	Support the Center for Space Nuclear Research (CSNR)	1		\$150M	4		4
Burns & Roe	26.	Establish the Center for Nuclear Systems Design and Analysis (CNSDA)	\$0.36M			4		4
Studsvik	27.		\$0.25 <b>M</b>		\$101.5M	4		4
Battelle Energy Alliance	28.	Investment in Economic Development	\$0.6M			4	4	4
Total			\$62.16M	\$107.64M	\$1.064B			<del></del>

<sup>(1)</sup> Direct – funds committed to a specific purpose at INL. (2) Program – funds available for prescribed project or consulting activity. (3) Access – capital or replacement value of an asset being offered for use.